REPUBLIC OF CROATIA
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State Geodetic Administration
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Terms of Reference

DEVELOPMENT OF A STUDY OF IMPLEMENTATION OF THE CADASTRE OF BUILDINGS IN THE REPUBLIC OF CROATIA

June 2015

1. Introduction

1.1. Beneficiary Country

Republic of Croatia

1.2. Contracting Authority

State Geodetic Administration (SGA)

1.3. Relevant background about the country

As a follow-up to the national achievements related to the implementation of the Copenhagen criteria and the political criteria set forth by the Stabilisation and Association Agreement (SAA), the European Commission (EC) has given a positive opinion about the Croatia's candidacy for the EU membership in June 2004 (see: http://www.pravosudje.hr). The opinion offers a detailed overview and assessment of the ability of Croatia to meet the political and economic membership criteria as well as the ability of Croatia to adjust and implement the *acquis communautaire.*

The SAA, concluded between the Government of the Republic of Croatia (RoC) and European Community, determines that the signatories to the Agreement shall cooperate in promoting the rule of law and that special attention shall be paid to the independence of the judiciary, improvement of their efficiency and training to the judiciary personnel.

One of the key priorities of the political criteria stated in the Accession Partnership in the public administration is “full implementation of the measures of the public administration reform in administrative proceedings” while, in the judiciary sector, it is “significant reduction of backlog at courts and ensuring acceptable duration of court proceedings.”

The report on the progress of Croatia of 2011, under the economic criteria, states that the land registration had been improved but continued to be incomplete in some parts of the country. The investors continue to suffer due to lengthy procedures related to real property registration.

30. June 2011, all 35 chapters were closed and the negotiations for the accession of Croatia to the European Unit formally ended. 1. July 2013, Croatia became a full-fledged member of the European Union.

In the Republic of Croatia, the system of the real property registration and its titles comprises two registers: the cadastre in which the real property is recorded according to the technical specifications on the real property, and the land registry holding the evidence of real property titles. The present cadastre relies on the Austro-Hungarian system set up in the 19th century. Cadastral maps from that period drafted on the basis of graphic surveys are still in official use in 80% of the territory of the Republic of Croatia. After the Second World War and the introduction of socialized property, a period began wherein very little attention was paid to the status of the data in both registers. Although the status of the data in the cadastre is far from being ideal, the data has been updated periodically. A long-standing disregard of the cadastre and the land registry in the period of socialized property rights, as well as a great influx of cases into land registry departments have increased the existing discrepancy between the cadastral and land registry data and, most importantly, the inaccuracy of captured data with the actual situation on the ground.

In the past ten years, the Ministry of Justice (MoJ) and State Geodetic Administration (SGA) have invested significant efforts in this reform in order to significantly improve the land administration (cadastre and land registry) status. The average registration time has been reduced from over 900 days in 2001 (according to the information from *Doing Business*) to 73 days. However, the stated figure on the average time of 73 days required for the registration still speaks about the land administration reform being halfway through, along with the fact that a large number of data is still not standardized and harmonized and that the level of serviced provision and their efficiency have still not reached the level of the European countries.

Having recognised the key importance of the reform aimed ensuring the rule of law and the economic development of Croatia, the Republic of Croatia has decided to provide additional funds for its implementation. A Loan Agreement was signed in 2002 for the Real Property Registration and Cadastre Project (RPRCP) with the International bank for Reconstruction and Development (IBRD). The realisation of this project started in January 2003 and ended on 15 December 2009. Apart from the loan funds and additional funds of the European Union (CARDS 2002, CARDS 2003 and CARDS 2004), the project was also funded through the State budget.

The achievements are as follows: land registry offices (LRO) and cadastre offices have been renovated and equipped; cadastral maps have been digitized; legislative framework has been amended in order to improve and simplify the laws related to the cadastre and land registers and about 8,000 LRO and cadastre employees have been trained. The Public Awareness Campaign has raised the awareness of the public and understanding of the land administration system and reform programs. The number of queries directed towards the land registry significantly increased in 2006 and 2007 and the field reports testify about the growing number of people coming to the cadastral and land registry offices with the intent of double-checking the records on their real property and undertaking the actions necessary to update the records, which was the goal of the Campaign. The positive impact of the Campaign, especially its information and education content (brochures, leaflets, Internet, press clippings, etc.) is also visible in more complete applications filed by the parties or rather in the reduction of the number of rejected or refused applications. Finally, perhaps the best indicator of the system transparency and openness are greatly used free web browsers (e-Cadastre and e-Land Registry) that have recorded since their launching in 2005, a total of over 70 million queries in the databases. A new and improved SGA Geoportal has been established and published on the internet, offering the services of viewing, WMS, searching, and using the application Permanent geodetic points (www.geoportal.dgu.hr). In the course of 2014, 412,073,958 hits have been registered on the Geoportal. During 2007, the SGA built its own Data Centre. The Data Centre provides the required preconditions for hosting the SGA servers and communication equipment for proper functioning of all central applications and databases, ensuring electrical energy, cooling and fire protection. During 2004, a new referential system of the RoC – HTRS 96 was introduced as part of the Joint European Referential System - ETRS 89. For the purpose of integrating the new referential system into all types of geodetic and cadastral activities, the Croatian Positioning System called "CROPOS" was established as part of the PHARE 2005 Project. By using the most advanced technology of the Global Navigation System (GNSS), CROPOS has enabled faster and more efficient geodetic surveying and, at the same time, increased accuracy, reliability and homogeneity of the survey results.

The main goal of the land administration reform is to, by implementing adequate technology and developing business processes, establish the Real Property Registration and Cadastre Joint Information System (JIS). The cadastral offices and land registry offices (LRO) have so far kept separate databases which were maintained locally. The data in the local databases are mismatching between the cadastral and LR offices and at the national level. The JIS is an ambitious undertaking which includes integrated business processes and a single database for both cadastral and land registry data. The JIS is a centralized system and database that all courts and SGA offices will be connected to at the state level. The JIS is being

implemented and is currently partially implemented (part of the registration module and cadastral modules for non-harmonized data) in 16 LROs and 13 cadastral offices.

The JIS infrastructure is composed of two physically separated parts: the first, larger part is intended for in-house application by authorized MoJ and SGA personnel having access to the system while the other part is intended for the application with the full public information access (PIA). The technologies currently used by the JIS are, although not limited to, the following: Oracle Weblogic Portal Server, Oracle Weblogic application server, Record and Database Management System - RDBMS with an internal sub-program for spatial data: Oracle DB EE, ESRI SDE, GIS server, desktop and IBM FileNet.

With the full JIS application, the citizens will be able to see in one place the ownership structure of a real property, its location in the new referential system and numerous other functionalities that could be upgraded (one stop shop). This system is one of the key instruments in the development of e-Croatia and entrepreneurship, and in securing public trust in the correctness of registers.

1.4. Current situation in the relevant sector

Pursuant to the Law on State Survey and Real Property Cadastre (*Official Gazette* no. 16/07; 124/10), the State Geodetic Administration is a state authority performing geodetic and cadastral operations and, in particular, the production, renewal and maintenance of surveys and real property cadastre, introduction of the information technology in the cadastral and geo-spatial system, development of official State maps, maintenance of geodetic data, maintenance of the statistical data on the real property cadastre and utilities cadastre, geodetic and cadastral operations related to the State border, development and application of the geodetic surveying technology in the field of science, economy and other activities serving as the basis for intervening in the space. The SGA organisational chart is defined by the Decree on the SGA Internal Structure (OG 39/12, 22/14) (hereinafter: Decree) stating that the administrative and other professional tasks within the SGA scope of work are executed by the Head Office located in Zagreb as well as 20 regional offices and 92 branch offices. Nine internal organizational units have been established at the SGA Head Office. Four services have been established at the Sector for Cadastral System.

As part of its authority, the State Geodetic Administration is tasked with maintaining the Spatial Units Register (SUR). Article 78 of the Law on State Survey and Real Property Cadastre states that the SUR contains the data on the following spatial units: the State, counties, the City of Zagreb, cities, municipalities, settlements, the delivery area of a post office, local government units, protected areas, cadastral municipalities, statistical divisions, census divisions, streets and squares, buildings with corresponding house numbers, and other spatial units specified by special regulations. Pursuant to the same Law (Art. 81), this data must be used as the official dataset for recording, gathering, expressing, exchanging and linking various types of spatial data. The SGA forwards ex officio the SUR data to the Central Bureau of Statistics.

All data from the SUR alphanumerical part are digitally stored in the spatial units database: on the State, counties, the City of Zagreb, cities, municipalities, settlements, the delivery area of a post office, local government units, protected areas, cadastral municipalities, statistical divisions, census divisions, streets and squares. The data on house numbers is stored in the "Buildings and House Numbers" database. The spatial unit data is maintained at the SGA Head Office and the data on house numbers at the regional cadastral offices and their branch offices.

SUR data are kept in the Oracle database while data on house numbers in the Microsoft SQL Server 2008. The Graphical Spatial Unit Register is maintained on the ESRI platform ArcGIS 9. The data is stored in the “personal geodatabase“ in MDB format. The central SUR GIS database stores the following classes: State, county, town/municipality, settlement, local government unit, cadastral municipality, statistical circle, settlement centroid and delineation lines at sea. The types of object geometry are point, line and polygon and the attributes are identical to the alphanumerical base. As part of the technical

documentation for the Population of Households and Apartments Census in the RoC for 2011, all graphical data of the SUR up to the level of the statistical circle have been revised in April 2011 and, as necessary, additionally digitized. Furthermore, the accuracy of the spatial unit border illustration has been improved and the content of the graphical database has been extended by digitizing the borders of census circles, streets, squares and house numbers that have also been revised. All data is geo-referenced and the graphical base for geo-referencing all spatial data was the digital orthophoto plan in the scale of 1:5,000. The establishment of a web service for availability of the SUR data will be completed in 2015.

As the RoC has not established a cadastre of buildings yet, however it is necessary to efficiently process legal and property-related issues, and the JIS implementation, the SGA decided to initiate the project Cadastre of Buildings in the RoC.

1.5. Related programs and other donor activities:

EU CARDS Grant for the Real Property Registration and Cadastre Project in the Republic of Croatia (started in March 2004, completed in June 2007). The funds were managed through the World Bank trust funds intended for the Borrowers (TF051781). The purpose of the Grant was to assist the Borrower in financing the Real Property Registration and Cadastre Project (4674-HR) whose main objective was to build an efficient land administration system aimed at contributing to the development of an efficient real property market. The Grant was conceived as an integral part of the Project.

The grant funds were used for the following:

- Development of a multi-purpose spatial information system used in the programs of the land registration, spatial planning, IACS (Integrated Administration and Control System) and demining;
- Strengthening the SGA management structure and technical capacities by training the staff in the fields of quality control, IT and management skills;
- Strengthening legal and technical skills of the Ministry of Justice land registry offices by training the staff in the fields of legal procedures and IT system management and maintenance;
- Informing the public about the registration procedures, document requirements, fees and timelines for deliverables as well as where to find expert assistance in order to accelerate the registration procedure;
- Informing the public about the benefits from the title registration, rights and obligations of the citizens to register their property as well as the project objectives.

EU CARDS 2004 – Support to the Real Property Registration and Cadastre Project implementation (Phase 2) (started in May 2006, completed in December 2008). The CARDS funds were managed through the World Bank trust funds intended for the Borrowers (TF055104). The purpose of the Grant was to assist the Borrower in financing the Real Property Registration and Cadastre Project (4674-HR) and represents a logical continuation of the project financed by the CARDS 2002 grant. Its main objective is to establish an efficient land administration system aimed at contributing to the development of an efficient real property market.
The grant funds were used for the following:

- Supporting the development of a multipurpose spatial information system, including the production of digital orthophoto maps, technical assistance and equipment
- Constructing the State Geodetic Administration Data Centre where the Geoportal system as well as the other SGA IT systems are located
- Professional training and technical assistance to SGA in the field of IT, quality control, management skills and professional topics in the area of cadastre
- Education and technical assistance to MoJ and LR departments in the field of IT, quality control, management skills and professional topics in the area of real property registration

- Further support to the implementation of the public information campaign
- Scanning and geo-referencing cadastral maps
- Scanning of archive documentation

Swedish International Cooperation Development Agency (SIDA) – „Capacity building for Croatia: Real Property Registration and Cadastre Project" (started in June 2004, completed in March 2008)
The Project objective was to provide support to the sustainable organization development of land administration in Croatia, capable of implementing the Real Property Registration and Cadastre Project and efficiently maintaining the results, as well as operating as harmonized leading organizations within the land administration sector in Croatia. The Project results are the following: Greater capability within the organizations for project management and completion of institutional development, the staff within MoJ and SGA, including the Municipal Courts, has been educated regarding project management, ICT, data protection, data exchange and distribution, while the process of establishing a real property and registering a real property and its titles has been defined and described; also the digital archive system has been developed and implemented in four offices at the local level, of which two are land registry offices at Municipal Courts, and two are cadastral offices of SGA (Vinkovci and Split).

PHARE 2005 - Modernisation of the Land Administration in Croatia and Pilot Project for 324 Municipalities in North-Western Slavonia (started in December 2007, completed in November 2009)

The Project consisted of three closely related contracts:

1) Technical Assistance for the Integrated Land Administration System in Croatia (started in February 2008, completed in July 2009). The scope of this project was to assist the State Geodetic Administration and Ministry of Justice to improve the status of the data in both the cadastre and land registers by mutual harmonisation and matching the data with the situation in the field. The project was composed of 4 components: 1) vectorisation of 6,901 cadastral map; 2) standardisation of 4,043 vectorised cadastral maps; 3) compare cadastral maps with the real situation with the alphanumeric parts of the register and performing field production of the necessary documentation; 4) harmonisation of the data in the cadastre and land registers and defining the procedure leading to the establishment of a unique ID number of the parcel in the cadastre and land registers.

2) Technical assistance in harmonising the data in the cadastre and land registers in a selected area (started in January 2008, completed in November 2009).
The project was composed of 4 components: a) assessment of the generic cabling at municipal courts and cadastral offices and preparation of the technical specification for further improvements; 2) support to the NSDI implementation and further development of the Geoportal; 3) GPS procedures and education; 4) training and capacity building for the staff of municipal courts and cadastre.

3) Establishment of the Croatian Positional Service (CROPOS) network (started in December 2007, completed in February 2009). The scope of the Project was to: carry out the procurement and installation of the goods required for the establishment of a national, permanent network in order to improve the accuracy and efficiency of all geodetic and cadastral measurements.

ILAS Project (IBRD Loan 8086-HR) – (WB ILAS Project) (started in November 2011, will be completed in October 2015)
The International Bank for Reconstruction and Development (Bank) has granted to the Republic of Croatia (RoC) a Project Loan for the Integrated Land Administration System (ILAS) Project. The Ministry of Justice (MoJ) and State Geodetic Administration (SGA) are implementation institutions and project beneficiaries. The funds have been approved based on the past successful cooperation and completion of the Real Property Registration and Cadastre Project (2003 to 30 June 2010) also recognized as the pillar of the "Organized Land" National Land Administration Reform Program and the completed preparation of the

new project funded under the Project Preparation Advance Agreement concluded between the RoC and Bank on 3 August 2010.
The objective of the ILAS Project is to modernize the land administration system in order to improve on the civil service from the point of view of efficiency, transparency and cost. The Project will ensure the continuity of the land administration reform as one of the priority reforms in the Republic of Croatia.
The Project consists of the following four components:
Component A - Land Registration System Development
Component B – Spatial Information and Cadastre System Modernisation
Component C – Improving Digital Services
Component D – Project Management, Training and Public Awareness
By the end of the project, the Real Property Registration and Cadastre Joint Information System should be functioning at land registry offices and cadastral offices in RoC.
At the operational level, the Project is managed by a separate Project Implementation Unit (WB ILAS PIU) while the Project Steering Committee monitors and manages the Project.
Some of the ILAS Project activities are: continued homogenisation of cadastral maps and further development of land registration archival documents based on the ILAS IPA 2010 Project results. Accordingly, the ILAS IPA 2010 PIU and WB ILAS PIU will jointly supervise the Project activities and regularly update the Project plan for both projects.

Development of the IPA 2008 One Stop Shop of the Real Property Registration and Cadastre Joint Information System (JIS) and consolidation of the land registry data of Croatia (started in October 2011, planned close in May 2015, the project was suspended between January 2012 and September 2013).

The purpose of this contract is as follows:

- Improve the quality and speed of providing the land registry services to key beneficiaries and citizens through the establishment of One-Stop-Shop, within the subsystem of real property registration and Cadastre sub-system i.e. JIS.
- Improve the quality by analyzing the data and preparing the recommendations to improve the data quality from the systems of all land registry offices of 23 municipal courts as a precondition for migrating the data into the JIS (land registration data consolidation).
- Prepare, implement and manage the JIS training program which is being developed throughout the country in order to satisfy the needs of MoJ and SGA employees at land registry and cadastral offices. The participants will be the staff of cadastral offices and land registry offices.

Expected project results are: One Stop Shop established and functional; land registration data consolidated; capacity building for future JIS use performed – MoJ and SGA staff prepared for future efficient and effective JIS use. These results will be achieved by implementing the three groups of activities envisaged under Component 1. (One Stop Shop Sub-System Establishment), Component 2 (Land registry data consolidation) and Component 3. (Capacity Building for future JIS use).

Within one component of the IPA 2010 ILAS Program, the following two contracts have been concluded:

Component (contract) 1: "Support to sporadic transformation, establishment of the digital archives and LR document management for the purpose of establishing the Integrated Land Administration System (ILAS)" whose start date is planned for 2013 and completion by the end of 2015, and composed as follows:

1. Sporadic transformation whereby the business processes will be proposed to implement sporadic transformation of land registry data ex officio, for which a corresponding application shall be developed, and

2. Digital land registration archives whereby the land registers shall be digitized, a central database of the digital land registry archives will be established, an internal and external application shall be developed for the digital archives and users shall be trained to use the Digital Archives System.

Component (contract) 2: "Support to the establishment of the Integrated Land Administration System (ILAS) components at SGA" whose start date is planned for 2013 and completion by the end of 2015, and composed as follows:

1. cadastral map homogenisation where all data relevant for homogenisation will be analyzed, cadastral maps will be homogenised for 6 cadastral municipalities, cadastral maps homogenised for 100 cadastral municipalities on the basis of regulations developed in pilot cadastral municipalities and a tender document shall be compiled for further harmonisation.
2. Production of the GIS-supported address register to support the GIS whereby the information shall be developed on the SUR status, the GIS solutions shall be developed and integrated, the data shall be migrated and the staff trained.
3. SGA Geoportal improvement and national Geoportal production where the SGA Geoportal shall be improved.
4. e-File – electronic document management in second-instance case processing where the second-instance case processes will be analyzed and the document management to process the second-instance cases will be integrated as well as the staff will be trained to use the e-file.

Component (contract) 3. "Procurement of the necessary IT equipment and development of the IT infrastructure for the Integrated Land Administration System (ILAS)" (planned start is Q1 2013, completion in 2014). The following equipment shall be procured:

1. storage system at the SGA Data Centre
2. IT infrastructure at regional land registry offices
3. IT infrastructure at selected cadastral offices
4. power generating system at the SGA Data Centre
5. central system at the MoJ digital archives system.

2. Objective of the Consultancy

The objective is to develop a study of implementation of the cadastre of buildings as an operational document to establish the cadastre of buildings at ROC that should be focused on defining the following:

- Institutional, legislative and financial framework
- Basic data
- Technical standards

The study of implementation of the cadastre of buildings shall be presented to the RoC Government and shall serve as the basis for passing a decision/law to establish the RoC institutional framework for the cadastre of buildings.

The cadastre of buildings shall be implemented in accordance with the EU ICT standards. The Cadastre of Buildings data model must be harmonised with the INSPIRE Directive, INSPIRE Implementation Rules and INSPIRE Data Specifications.

The cadastre of buildings in RoC:

- shall enable the collection, processing, display, maintenance and control of the data on buildings and parts of buildings in a unified way
- shall enable the users a simple, fast, single, cheap and safe access to the data on buildings and parts of buildings
- shall enable the data throughput from the source records by respecting the interoperability principle.

3. Scope of Work and Tasks

As part of the Study of the implementation of cadastre of buildings, the Consultant shall develop a draft model for the establishment of the cadastre of buildings in RoC, assess the needs of the users and other interested stakeholders, and propose organisation of the establishment and management of the RoC Cadastre of buildings based to the valid and proposed legislation and the best practices of the analyzed countries where the cadastre of buildings has already been successfully implemented.

The **cadastre of buildings** as one of the key registers should be built on the foundations of the existing Land Cadastre whose integral part is the real property composed of a cadastral parcel and appertaining buildings and titles over it. It is also necessary to establish a link to the address register as part of the Spatial Units Register. The keeping and maintenance of the Land Cadastre register or rather the Real Property Cadastre and the Spatial Units Register, as two key registers in the RoC, is under the authority of the State Geodetic Administration.

The strategic study of implementation of the cadastre of buildings should provide initial guidance on the tasks that are set for the purpose of securing financial resources, human resources, the architecture of the system, based on the needs of stakeholders in the process of creating the basic and additional content, the necessary legal guidelines, the benefits that this system brings, and define the implementation phases, based on the experience of the EU Member States that have already introduced such a system in everyday use.

The keeping of the cadastre of buildings must be prescribed by law. The purpose of the law is to give the cadastre of buildings a clear legal basis for the collection and maintenance of data sets. The law should guarantee that the information is always as accurate and reliable as it is described.

The law must define the body that maintains the cadastre of buildings, content of the cadastre of buildings must be precisely regulated, data of the cadastre of buildings must be relevant to the overall Public Administration and Local Self-Government, data of the cadastre of buildings must be in daily use of the citizens and the economy, and there must be a clear responsibility of the State for the cadastre of buildings as well as governmental control over the body which maintains the cadastre of buildings.

The cadastre of buildings should include all the buildings in the state, and must include the total area of the state. The registration of a building in the cadastre of buildings and the maintenance of the data of the cadastre of buildings must be prescribed, the ways of harmonization of data of the cadastre of buildings with their de facto situation must be defined, and there must be legally defined guarantees for those who act in accordance with the data of the cadastre of buildings. The regulations on the cadastre of buildings must include requirements for use of data of the cadastre of buildings (publicity, re-use), and include data protection of the cadastre of buildings that are considered as personal information (personal data protection).

The Republic of Croatia has embarked on an accelerated automation of all key registers almost entirely of water in digital record. A key step in linking IT Cadastre and Land Registry is done through the JIS. The connection with other registers, necessary for the overall functioning of the state, has not yet been established. The proposed project will provide essential support to the functioning of the JIS with the purpose registers efficiently perform their duties to the state, regional and local governments, business and citizens.

As part of its activities, the Consultant shall perform the following tasks:

Task A: Legislative, organizational and financial framework as a precondition for the implementation of the cadastre of buildings in RoC.

- screen the current situation and the availability of records of buildings and parts of buildings in Croatia, and to analyze the legacy opportunities in Croatia (organizational and legislative)
- analyze and update the document ˝Analysis of the Cadastre of Buildings in the Netherlands, Lithuania, Slovenia and situation in Croatia˝ (State Geodetic Administration, 2013), particularly focusing on data establishment and maintenance
- analyze the situation and experiences with regard to the establishment and maintenance of a cadastre of buildings in another European or global country, as selected by the Consultant
- compare the systems mentioned above in terms of adopting solutions involving the best practical solutions from functional examples in the area
- **produce draft document "Assessment of the existing legislative and organisational framework for the purpose of the establishment of cadastre of buildings"** (hereinafter: "Assessment of situation")
- make recommendations for the construction of the RoC cadastre of buildings based on the results of the comparisons between the stated systems and an overview of the situation in RoC
- identify potential customers and interested parties, as well as managers and owners of individual database on buildings and parts of buildings
- identify the specific needs of stakeholders in RoC
- Analyze the existing relevant legal regulations, and analyze the EU legislative framework to provide specific recommendations for the adjustment of the legal framework
- **create draft legislative framework for the purpose of the establishment of cadastre of buildings** (hereinafter: **"**Legislative framework")
- **create draft financial framework for the purpose of the establishment of cadastre of buildings** (hereinafter: **"**Financial framework")

Task B: Propose Data Model for the Cadastre of Buildings in RoC

- analyze documents: draft document ˝Assessment of Situation˝ and draft document ˝Legislative framework˝, and propose a data model for the RoC cadastre of buildings based on an assessment of available data types and needs of the end users, but also the future potential users, harmonised with the INSPIRE Directive, INSPIRE Implementation Rules and INSPIRE Data Specifications, and propose the initial establishment of the cadastre of buildings based on the existing data of the Land Cadastre, Land Book and Address Register

- after the initial establishment of the cadastre of buildings, offer a proposal for the methodology to collect, record, process and control the data quality, as well as for updating the cadastre of buildings
- define the criteria by which there will be some information considered relevant to be included in the cadastre of buildings at the national level
- define technical standards for the establishment of cadastre of buildings
- **produce draft document with regard to the data model for the purpose of establishment of cadastre of buildings** (hereinafter: "Data Model") and adapt it to JIS data model

Task C: A pilot project for collecting and processing the data of the cadastre of buildings

- on the selected location, implement and test the pilot-project of collecting and processing cadastre of buildings data based on the previously proposed data model, on minimum 2 mixed-use buildings with condominium units for residential, non-residential and business purpose, 5 family houses, of which minimum two with several residential units, and different types of non-residential buildings,
- test phases of the workflow, methodology for collecting data on buildings and parts of buildings, processing and quality control of data
- based on the results of the pilot project is to assess the volume of data and the scope of work to be carried out for the entire territory of the Republic of Croatia
- make an assessment of the financial funds and human resources required for the implementation of the cadastre of buildings (on the level of organisation, implementation and data level), with a calculation of costs for the establishment and maintenance of the cadastre of buildings unit in relation to the benefits expected,
- provide timelines for each phase of work
- draft a proposal for IT connection of the cadastre of buildings with the land registry, cadastre, Central Registry of Spatial Units, State Bureau of Statistics, Ministry of Finance, Central Population Register, Business Register, and the relevant registers of the Ministry of Construction and Physical Planning.

All documents shall be presented to SGA staff included in the project. **The final document – Implementation of Cadastre of Buildings in the RoC** needs to be produced.

The commissioned document must take into account and be consistent with the government's strategy for information and communication technology and the overall business and IT strategy of SGA.

During the process, the Consultant shall closely cooperate with the relevant representatives of the Client who must provide the overall guidelines and inputs.

4. Knowledge transfer

The Consultant shall conduct a workshop organised by the SGA for the representatives of the most important governmental bodies, holders of the data on buildings and parts of the buildings, users of the data on buildings and all other interested stakeholders in RoC whereby the Consultant shall present draft reports and enable the discussion. The conclusions of the discussion shall be included in the final report.

As part of the study of implementation of the cadastre of buildings, the Consultant should propose a manner and methodology to raise awareness on the necessity of the building cadastre establishment and its importance for all participants.

5. Reports and products

5.1. Language

The official languages in the tasks shall be Croatian and English, and it is recommended to produce all final reports in Croatian and English. All materials and reports compiled by the Consultant under this contract shall be at the disposal of the Client in analogue and digital format (open format) and shall be owned by the Client.

5.2. Reporting

The Consultant shall develop and submit the following reports as part of the **final product** in respective stages of the task:

	Deadline
Inception report **0.1. shall contain a detailed work plan including** methodology and schedule of works 0.2. Adoption of the inception report by the Client is a precondition for any further Consultant's activity	0.1) 2 weeks from the start of contract 0.2) 1 week from the submission of report
Task A: A1 Draft the "Status Assessment" document A2 Draft the "Legislative framework" document A3 Draft the "Financial framework" document A4. Presenting draft documents in PowerPoint .	A1) 4 weeks from the acceptance of inception report A2) 6 weeks from the acceptance of inception report A3) 6 weeks from the acceptance of inception report A4) 8 weeks from the acceptance of inception report
Task B: B1. Draft document "Data model", which will contain a proposal for initial establishment of cadastre of buildings B2. Proposed methodology for collecting, registering, processing and controlling data quality B3. Define technical standards for the establishment of cadastre of buildings B4. Presenting documents in PowerPoint to SGA staff involved in the project B5. Producing a final document – Implementation of cadastre of buildings in the RoC	B1) 12 weeks from the acceptance of inception report B2) 12 weeks from the acceptance of inception report B3) 12 weeks from the acceptance of inception report B4) 14 weeks from the acceptance of inception report B5) 16 weeks from the acceptance of inception report
Task C: C1. Pilot project – implemented and tested	C1) 22 weeks from the acceptance of inception report
D1. Proposal to conduct a workshop	D1) 24 weeks from the

	D2. Producing a final report and submitting all the Consultant's documents	acceptance of inception report, and minimum 15 days before project completion D2) In the course of project

All reports shall be delivered to the Client.

The Consultant shall submit the following reports to the Client in Croatian and English, in one original and three copies:

- Initial report of no more than 20 pages, produced two weeks after the start of the implementation. In the report, the Consultant shall describe e.g. the first results, progress in data collecting, obstacles he encountered or envisages, additional with the work schedule and staff mobilisation.
- Draft final report of no more than 30 pages (basic text without textual and graphic enclosures).
- **Final report** with the same specifications as the draft final report, encompassing all comments received by all interested parties to the draft final report. A detailed analysis serving as the basis for task recommendations shall be presented in enclosures to the main report (final draft "Assessment of Situation", draft "Legislative Framework", draft "Financial Framework", draft "Data Model Proposal" document, final "Legislative, organisational and financial framework as preconditions for the implementation of the cadastre of buildings in RoC").

All reports must be adopted by the Client.

6. Production timeline

The envisaged period to complete the task is 7 months. The Consultant shall be selected in accordance with the "*Guidelines for the Selection and Recruitment of Consultants under the IBRD loans and IDA credits and grants for the World Bank Borrowers"* issued by the Bank in January 2011, according to the *CQ-Consultant Qualifications* selection method.

7. Required Professional Experience

In order for the task to be performed, it is necessary to hire a company with 10 years of experience in providing the services in the field of land administration with the emphasis on cadastral services. The company must have experience in the projects funded by EU funds and WB loans and shall have developed at least one study in the field of land administration.

In performing the requested consultancy services, the company shall provide a team of experts to be available for the period of 7 months :as follows:

- A team leader for the period of 7 months: 50 man/days
- Legal expert – one person, 10 man/days,
- IT expert for data modelling, one person, 15 man/days,
- Cadastral expert – one person, 35 man/days,
- A translator and any other experts proposed by the company and agreed with the Client

with the following knowledge and experience:

Team Leader:

Required Professional Experience

- University-level geodetic degree with minimum 5 years of experience in cadastre and land administration tasks, knowledge of English
- Knowledge of EU legislative requirements and corresponding standards, regarding the building cadastre establishment
- Experience with the Croatian land administration system, familiarity with the RoC cadastre system and current situation in the status and availability of the data of the real property cadastre and land registers
- At least 8 years of experience working at top management functions (including the experience in coordinating a team of experts)
- Experience in implementing World Bank-funded projects will be an advantage
- Experience in managing at least two projects related to the State administration and cadastre

Legal Expert:

Required Professional Experience

- Completed law school and no less than 10 years of expert experience in the legal system related to the RoC land administration and cadastre
- Experience in the activities involving the proposal and adoption of the legislative framework
- Experience in working in the land administration in Croatia.

IT Specialist:

Required Professional Experience

- Completed IT university studies and no less than 5 years of work experience in analyzing and designing the ICT system with the domain experience in implementing the cadastral parcel model defined in the Land Administration Domain Model (ISO 19152)
- Experience in developing and implementing systems in the State administration with a special emphasis on the land administration
- Experience in developing and implementing at least 1 GIS-related project.

Cadastral Specialist with international experience:

Required Professional Experience

- University-level geodetic degree with minimum 10 years of experience in cadastre and land administration tasks, knowledge of English
- Practical experience in minimum one project of cadastre of buildings establishment
- **Knowledge of situation in the regional context (will be an advantage)**
- Experience in analyzing the designing the ICT system with the domain experience in implementing the cadastral parcel model defined in the Land Administration Domain Model (ISO 19152).
- Project management experience
- Experience in 1 GIS-related project.

8. Data, services and staff to be provided by the Client

The Client shall ensure cooperation with the Consultant during the contract execution and shall provide the overall guidelines and inputs.

The Client shall provide as follows:

- Project Manager from the SGA
- Document entitled “Status analysis of the building Cadastre in the Netherlands, Latvia and Slovenia and the situation in Croatia” of February 2013
- Cadastral documentation data necessary for producing the study.
- Land registry data necessary for producing the study.
- Contract person for the SGA:

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