**Republic of Serbia**

**Republic Geodetic Authority (RGA)**

**Real Estate Management Project**

**Terms of Reference**

**for**

Consultant Services – Company

Supervision, Monitoring, Quality Assurance and Quality Control of the successful implementation of all proposed components of the Information System for Human resources management, business intelligence module, material accounting and financial management with BI modules

# Contents

## I. Background

The Republic of Serbia and the International Bank for Reconstruction and Development (Hereinafter: IBRD) concluded the Loan Agreement (Hereinafter: LA) for the Real Estate Management Project in Serbia (Hereinafter: The Project), signed by the two parties on April 17th, 2015 and ratified by the Parliament of the Republic of Serbia in its session on Jun 24, 2015 (Official Gazette of the Republic of Serbia – International contracts, No. 13-15).

The Law on State Surveys and Cadaster (LSSC, 2009) with appropriate amendments provides a solid foundation for the project. A viable single agency, the Serbian Republic Geodetic Authority (RGA), is implementing the LSSC. A Project Council and Project Steering Committee are supervising the Project Implementation.

The Project consists of four components: (A) Valuation and Property Taxation; (B) E-governance for Enabling Access to Real Estate Information; (C) Institutional Development of the RGA; and (D) Project Management and Support Activities.

The objective of the Project is to improve the efficiency, transparency, accessibility and reliability of the Republic of Serbia's real property management systems.

A full description of the Project is provided in the document "Project Appraisal Document" (PAD) and Loan Agreement (LA). The PAD is considered as a part of the necessary background materials to be understood by Consultants.

Implementation is entrusted to the Project Implementation Unit (Hereinafter: PIU) of the Republic Geodetic Authority.

The Information System for Real Estate Cadastre is being developed under the Project's Component B, through multiple phases, namely:

**DMS (ISREC Phase 1)**

Implementation of the RGA DMS system on Therefore DMS platform is the first phase of the ISREC system, which had established a centralized electronic system for recording and managing documents, processes, users and code lists, impacting the improvement of work efficiency and effectiveness, while establishing the foundations for improvement and setting up of the entire electronic system for the RGA – the ISREC.

**DQI (Data Quality Improvement)**

The Data Quality Improvement is the process that will entail data checks and correction of errors, followed by verification of data quality and consistency.

**Address Register and Administrative Units (ISREC Phase 2)**

The purpose of the address module is to manage all types of addresses in Serbia in a unified, centralized system, and to distribute up to date address information to the other information systems in Serbia.

The administrative units' module is a centralized system for managing the information on types, boundaries, names, official ID's, hierarchy and other data pertaining to the administrative units in Serbia, as well as distributing the current information about administrative units to the other information systems in Serbia.

**Real Estate Cadastre Software (ISREC Phase 3)**

Development of software for the Real Estate Cadastre (textual and graphical data module and persons' module).

**ISREC Phase 4**

Refers to: (i) completing ISREC system, namely (1) develop the remaining modules: Utility Cadastre, HR and Financial system modules and integrate them with ISREC, and (2) roll-out the ISREC countrywide; (ii)

implementation of NSDI; (iii) implementation of sustainable business model for managing the NSDI and RGA IT systems.

## II.  General objectives

The main objective of this Supervision, Monitoring, Quality Assurance (Hereinafter: **QA**) and Quality Control (Hereinafter: **QC**) is to ensure that the software implementation under the "Real Estate Management Project" - Information System for Human resources management, business intelligence module, material accounting and financial management with BI modules (Hereinafter: ERP and BI) meets the functional requirements as outlined within Technical Specification.

The firm (hereinafter: Consultant) will serve as a support to the RGA team during development and implementation of the ERP and BI as well as with contract management, review of the business processes, workflow, performance, etc. Additionally, the consultant must to assist the RGA team in avoiding pitfalls in project. The consultant will provide early warnings and recommendation to the RGA team, thereby increasing the chance of success.

Development and implementation of the ERP and BI is divided into two entireties:

- **E**nterprise **R**esource **P**lanning (Hereinafter: **ERP**) systems are software packages composed of several modules, such as human resources, sales, supplies, finance and accounting, etc. providing cross-organization integration of data through embedded business processes;
- **B**usiness **I**ntelligence (Hereinafter: **BI**) systems combine operational data with analytical tools to present complex and competitive information to planners and decision makers. Inputs to BI in this case is graphics, images, spreadsheets, text, web pages, databases, maps and business processes.

The providing advisory by the consultant to the RGA team is threefold. Advisory by the consultant are considered because: 1) they are related to all necessary aspects of the ERP implementation; 2) demonstrate the different ways in which business processes can be improve at either the Local Cadaster Offices or RGA  headquarter; 3) contribute to informing the overall understanding of the possibilities of organizing and introducing BI in the RGA.

### ERP

Quality Assurance and Quality Control is the most important point for successful and effective ERP system. Quality Control of ERP system mean detecting and removing defects from the system and Quality Assurance mean plan and systematic approach to ensure the ERP system process.

The concept of providing advisory by the consultant to the RGA team is providing review, validation/verification and reporting services and leave it on to the RGA team in order to improve quality of the intended ERP system. For purpose of the ERP implementation the consultant wiil ensure the success of ERP project launched by the RGA. The consultant will ensure that any particular facet is accomplished as originally envisioned.

The consultant will develope QA model (plan). This QA model will help RGA to implement ERP system and to better understand the facets of ERP implementation and hence achieve better control of the ERP project implementation.

**B**usiness **P**rocesses

From the above, it is clear that main focus will be on process identification, process analysis and process improvement. This refers to the analysis and design of workflows and processes within and between organizations. Business activities should be viewed as more than a collection of individual or even functional tasks (as is the practice now); they should be broken down into processes that can be designed for maximum effectiveness, in both „manufacturing" and service environment. The consultant should concentrate on *processes* rather than functions as the focus of the (re-)design and management of business activity.

**BI**

In a near future BI can gives a sense of clairvoyance for the RGA (only the perception is not fuelled by extra-sensory ability but by facts), if introduced properly, it will be a process of gathering, analysing, and transforming raw data into accurate, efficient and meaningful information which can be used to make good business decisions and refine business strategy of the RGA. Additionally, BI system will combine data gathering, data storage, and knowledge management with analytical tools to present complex internal and competitive information to planners and decision makers in RGA.

The consultant role is pivotal to ensuring that business processes are systemically set up and that data created and contained in them is accurate, consistent, reliable and available for the RGA (for the business). The consultant will be the interface within and for the RGA (BI) team, driving data accuracy across the RGA.

The consultant will develop plan for QA/QC, acceptable for RGA, based on previously adopted plans for the development and implementation of the ERP&BI.

## III. Specific objectives

The **ISO/IEC 25010:2011** and **ISO 9000:2015** (or some of other version of the standards, e.g. ISO 9126 or FURPS and ISO 9001:2015 / ISO 9004:2018) define the specific objectives of the assignment. In addition, the consultant will:

1. Make recommendation to RGA how to maintain compatibility between ERP&BI with DQI, Phase I, Phase II, Phase III and Phase IV;
2. Determine where and how monitoring and measuring should be applied. Should be applies to both, for control and improvement of the processes and the intended process outputs.
3. Determine the resources needed for the effective operation of each business process.
4. Confirmation that the business process is effective and that the characteristics of the processes are consistent with the purpose of the ERP&BI implementation.
5. Recommendation for changes of the processes and/or the resources needed to ensure that the processes they continue to deliver the intended outputs.
6. Provide written recommendation for operational acceptance of each separate component of the system as well as recommendation for operational acceptance of the entire system.
7. Support in finalization of Contract for implementation of ERP&BI.
8. Assist the RGA team with final reporting to the World Bank.

## IV. Tools for audit and parameters

The Consultant should specify the most appropriate tools and parameters for quality analysis in the initial Quality Audit Work plan. Those described below can be used as a guide.

### *4.1 Perform Analysis of ERP&BI*

Commercial software (vendor-provided) it will be implemented in the RGA. Scope of all activities (development, delivery, and installation, support during warranty period) it will go through implementation of ERP Microsoft Dynamics 365 Business Central and its Add-on's (SR Localization/ HR & Payroll/ B14ERP) and accompanying BI solution.

The Consultant will advise and reflect on the type of metrics and their threshold to be used in the Quality Profile, and assess the actual values for the ERP&BI in analysis. The Consultant must to ensure the successful completion of ERP&BI project in terms of aforementioned goals. These four (4) facets require to provide review, validation/verification, reporting and advisory services. These are:

a) Project management
b) Change management
c) Solution management
d) Services management

#### a) PROJECT MANAGEMENT

› *Program Management:* The goal of the program management is to provide effective monitoring and controlling, using appropriate tools and techniques based on the standard(s) followed, of the ERP&BI implementation program and report on the overall program status on a regular basis throughout the duration of the project. The purpose of monitoring and controlling is to ensure that the project is progressing as per the schedule, and is delivering the required products while satisfying the acceptance criteria. In addition, control ascertains if the project remains aligned with the business case direction and enables course correction if deviations are found.

› *Risk Management:* The activities that can be performed for risk management are:
- Review, evaluate and advise on risk assessment and mitigation plans submitted by the Implementer.
- Review risks on a periodic basis.
- Raise risks against the project when necessary.

› *Status Reporting:* This is required to:

- Report performance of the program on predefined basis.

- Raise a summary report in circumstances which have caused or may cause a negative impact on the project, its design, development, implementation, cost, or time for completion.

#### b) CHANGE MANAGEMENT

The ERP&BI project involves a transformative journey from the as-is state to the desired state. Business transformation to the to-be structure is accomplished through the implementation of changes in different areas, and on multiple fronts including people, business processes and systems. The transformation work is primarily comprised of building the systems and the business processes that will enable the new ways of business, but the tasks needed to prepare the people for the change ahead is also important.

Consultant role in change management is to recommend and confirm transformation with RGZ and Implementation partner before the change will be implemented in the project.

### c) SOLUTION MANAGEMENT

The various areas of solution management are:

› *Solution Design.*
› *Application Customization.*
› *System Test.* Because of their critical nature, special attention must be given to the system integration, performance, security and user acceptance plan.
› *Data Migration.* The data migration scope covers data conversion strategy, standards and programs.

Consultant role in solution management is to provide necessary assistance to RGZ in order to conduct all project phases in sufficient manner to fulfill quality goals for the implementation project.

### d) SERVICES MANAGEMENT

Services management ensures readiness for the roll-out of the ERP System, smooth Go Live and an assessment of post Go live operations.

› *Pre Go-live Check*: This activity meant to ascertain full readiness of the target to-be system or module for "production" operations. This assessment is an audit to check if the associated environment and products are ready and that processes and people are in place to manage, operate and maintain the new system.
› *Post Implementation Assessment:* The post-implementation checks covers three categories: Quality, Availability and Usage monitoring. Quality monitoring covers those parameters that indicate the quality of service, while Availability monitoring provides information on the availability of resources. Together they provide an efficient mechanism to determine the performance of the system. Usage monitoring helps in the analysis of the ERP&BI system from a utilization perspective.

### 4.2 Model for carrying out change for developing a new or improvement design of an existing business process of RGA

The Consultant can to build, improved and control the processes by applying the Plan/ Do Check Act Cycle (PDCA)[1]. **PDCA** is a tool that can be apply equally to the system as a whole, to individual business processes and to operational activities.

**PDCA** stands for: **P-**Plan: set the objectives of the system and processes to deliver results ("What to do" and "how to do it") **D-**Do: implement and control what was planned **C-**Check: monitor and measure processes and results against policies, objectives and requirements and report results **A-**Act: take actions to improve the performance of processes.

Steps in the process approach:

| Steps in the process approach | What to do? | Guidance |
|---|---|---|
|  |  |  |

| | PLAN | |
|---|---|---|
|  |  |  |
| **Define the context of the organization** | The organization should identify its responsibilities, the relevant interested parties and their relevant requirements, needs and expectations to define the organization's intended purpose. | Gather, analyses and determine external and internal responsibilities of the organization to satisfy the relevant requirements, needs and expectations of the relevant interested parties. Monitor or communicate frequently with these interested parties to ensure continual understanding of their requirements, needs and expectations. |
| **Define the scope, objectives and policies of the organization** | Based on the analysis of the requirements, needs and expectations establish the scope, objectives and policies that are relevant for the organization's quality management system. | The organization shall determine the scope, boundaries and applicability of its management system taking into consideration the internal and external context and interested party requirements. Decide which markets the organization should address. Top management should then establish objectives and policies for the desired outcomes. |
| **Determine the processes in** | Determine the processes needed to meet the objectives and policies and | Management shall determine the processes needed for achieving the intended outputs. These processes |

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[1] ISO https://committee.iso.org/home/tc176sc2

| the organization | to produce the intended outputs. | include management, resources, operations, measurement, analysis and improvement. |
|---|---|---|
| **Determine the sequence of the processes** | Determine how the processes flow in sequence and interaction. | Define and describe the network of processes and their interaction. Consider the following:<br><br>•The inputs and outputs of each process (which may be internal or external).<br><br>•Process interaction and interfaces on which processes depend or enable.<br><br>•Optimum effectiveness and efficiency of the sequence.<br><br>•Risks to the effectiveness of process interaction.<br><br>*Note:* As an example, realization processes (such as those needed to provide the products or services delivered to a customer) will interact with other processes (such as the management, measurement, procurement in the provision of resources).<br><br>Process sequences and their interactions may be developed using tools such as modelling, diagrams, matrices and flowcharts. |
| **Define people or remits who take process ownership and accountability** | Assign responsibility and authority for each process. | Top Management should organize and define ownership, accountability, individual roles, responsibilities, working groups, remits, authority and ensure the competence needed for the effective definition, implementation, maintenance and improvement of each process and its interactions. Such individuals or remits are usually referred to as the Process Owners.<br><br>To manage process interactions it may be useful to also establish a management system team that has a system overview across all the processes and may include representatives from the interacting processes and functions. |
| **Define the need for documented information** | Determine those processes that need to be formally defined and how they are to be documented. | Processes exist within the organization. They may be formal or informal. There is no catalogue or list of processes that have to be formally defined. The organization should determine which processes need to be documented on the basis of risk-based thinking, including, for example:<br><br>•The size of the organization and its type of activities. |

| | | |
|---|---|---|
| | | •The complexity of its processes and their interactions. |
| | | •The criticality of the processes. |
| | | •The need for formally accountability of performance. |
| | | Processes can be formally documented using a number of methods such as graphical representations, user stories, written instructions, checklists, flow charts, visual media or electronic methods including graphics and systemization. However, the method or the technology chosen are not the goals. They can be used to describe processes, which are the means to achieve the goals. Effective and organized processes can then deliver consistent and accountable operations and the desired objectives and results which can then be improved. |
| | | Note: For more guidance see the ISO 9000 Introduction and Support Package Module Guidance on the documented Information Requirements of ISO 9001:2015 |
| **Define the interfaces, risks and activities within the process** | Determine the activities needed to achieve the intended outputs of the process and risks of unintended outputs. | Define the required outputs and inputs of the process. Determine the risks to conformity of products, services and customer satisfaction if unintended outputs are delivered. Determine the activities, measures and inherent controls required to transform the inputs into the desired outputs. Determine and define the sequence and interaction of the activities within the process. Determine how each activity will be performed. Ensure that the management system as a whole takes account of all material risks to the organization and users. Note: In some cases the customer may specify requirements not only for the outputs but also for the realization of a process. |
| **Define the monitoring and measurement requirements** | Determine where and how monitoring and measuring should be applied. This should be both for control and improvement of the processes and the intended process outputs. Determine the need for recording results. | Identify the validation necessary to assure effectiveness and efficiency of the processes and system. Take into account such factors as:<br><br>•Monitoring and measuring criteria.<br>•Reviews of performance<br>•Interested parties' satisfaction.<br>•Supplier performance.<br>•On time delivery and lead times. |

| | | |
|---|---|---|
| | | •Failure rates and waste.<br>•Process costs.<br>•Incident frequency.<br>•Other measures of conformity with requirements. |

| | | |
|---|---|---|
| | **Do** | |
| **Implement** | Implement actions necessary to achieve planned activities and results. | The organization should perform activities, monitoring, measures and controls of defined processes and procedures (which may be automated), outsourcing and other methods necessary to achieve planned results. |
| **Define the resources needed** | Determine the resources needed for the effective operation of each process. | Examples of resources include:<br>• Human resources.<br>• Infrastructure.<br>• Environment.<br>• Information.<br>• Natural resources (including knowledge).<br>• Materials.<br>• Financial resources. |

| | | |
|---|---|---|
| | **Check** | |
| **Verify the process against its planned objectives** | Confirm that the process is effective and that the characteristics of the processes are consistent with the purpose of the organization. | The organization should compare outputs against objectives to verify that all the requirements are satisfied.<br>Processes are needed to gather data. Examples include measurement, monitoring, reviews, audits and performance analysis. |

| | | **ACT** |
|---|---|---|
| **Improvement** | Change the processes to ensure that they continue to deliver the intended outputs | Act on the findings to ensure improvement of process effectiveness. (NOTE: Organizations may also wish to improve process efficiency, though it is not a requirement of ISO 9001 to do so).<br><br>Corrective action as a result of process failure should include the identification and elimination of the root causes of the problems. 'System Thinking' recognizes that an event in one process may have a cause or effect in a dependent process. Causes and the effects may not be within the same process.<br><br>Problem solving and improvement typically follows the essential steps of:<br><br>•define the problems or objectives<br>•collect and analyse the data on the problem and relevant processes<br>•select and implement the preferred solutions<br><br>•evaluate the effectiveness of the solutions<br><br>•incorporate the solutions into the routine<br><br>Even when planned process outputs are being achieved and requirements fulfilled, the organization should still seek to improve process performance, customer satisfaction and reputation. This can be achieved, for example, by small-step continual improvement ("Kaizen"), breakthrough improvements and/or by innovation. |

### *4.3 Provide Conclusion on Deliverable Quality*

The Consultant will recommend how the system should proceed from the time of the evaluation.

This risk register will detail a unique description of each risk, the likelihood of the event occurring, the severity and impact of the effects of the potential event, and the steps which could be taken (and who should be responsible) to reduce or eliminate each risk.

## V. Scope of work and tasks

In case if it's not present in RGA premises the consultant must be available for communication via email, chat or phone, during the working hours within the contract duration.

The consultant will support RGA in contract management, project management, monitoring, supervision, quality assurance and quality control for the implementation of the ERP&BI.

The consultant must assess the adequacy and effectiveness of the RGA governance, risk management and control processes in providing reasonable assurance regarding the effectiveness of the implementation activities in accordance with the Technical specifications and implementation schedule for the ERP&BI.

RGA requires harmonization of business practices as it is essential for efficiency. The most relevant business practices in RGA will need to be identified, mapped out, analysed and re-designed.

Consultant will perform following tasks:

1.  Support RGA in contract management.
2.  Review the ERP&BI specifications and design documents.
3.  Ensure that the RGA requirements are reflected accurately in the specification and design document.
4.  Validate the Implementer's proposed solution against requirements and provide recommendations.
5.  Review, evaluate and report on ongoing risk management performed by the Implementer.
6.  Deliver project status presentation to the RGA team.
7.  Contribute to the development of the change management plan.
8.  Evaluate the execution of change management plan and recommend improvements when necessary.
9.  Validate and review the solution architecture.
10. Validate and review the design and implementation of security profiles.
11. Validate the functional setup of the proposed solution in proposed environments.
12. Review, evaluate and advise on business process developed under ER&BI Implementation.
13. Verifying end-to-end business process.
14. Confirm that all business rules are working correctly and when any deviation is found the defects are logged by the consultant.
15. Validate any customization against the clarity of code, the fulfilment of the requirements, and the usage of the recommended application APIs, database packages, and applications packages.
16. Review test plan developed by the Implementer to ensure conformance with the business requirements, quality policies, procedures and standards.
17. Review the outcome of system tests conducted by the Implementer and report exceptions and trends.
18. Review and validate training plans and knowledge transfer plans, report findings and provide recommendations for improvements.
19. Production of procedures for final acceptance and providing support RGA team to prepare the final acceptance after the RGA's in final testing of the ERP&BI in RGA's HQ premises for a period of 4 weeks after completed implementation and training (System commissioning, with post-support - stabilization phase).

## VI. Deliverables and Expected Outcomes

Consultant will be responsible to deliver the following reports for each phase:

- **Work plan** - within the first weeks of the Contract start date. Work plan is subject to approval of RGA officials.
- **Inception report.**
- **Ad Hoc reports** – when urgent issues must be addressed (if problem arise, or when risk for implementation is visible).
- **Monthly reports**:
    i. Summarizing progress of work under this project outlining key challenges and recommendations for their outcome in the implementation;
    ii. Reports how the team is complying the Project plan.

     iii. Written document that contains recommendations and methodology for Training;
     iv. Reports to RGA staff about the progress of the testing;
     v. Progress report to the Steering committee;
     vi. Risk Management plan for the ERP&BI project. It documents the general quality policies, procedures and practices to be followed by partners throughout the duration of the project;
     vii. Change requests (focuses on the changes that need to be made in the Project plan or executing processes so as to produce better quality products and prevent defects),

- **Business Process Reengineering Recommendations Report**, Draft rules required to give effect to the accepted recommendations for business processes developed under ERP&BI implementation.
- **Audit report will include[2]:**
  i. Report to RGA in technical quality audit of the software architecture and technical documentation of the ERP&BI.
  ii. Report regarding Database design and its compliance with the ISREC Data model (already implemented under Phase I, Phase II and under implantation of Phase III);
  iii. Certificate of testing which is a written document that contains Consultant confirmation that the delivered IT system and BP is in accordance with the prescribed technical specification and fulfils all necessary functions for smooth operation of the ERP&BI as a part of ISREC system;
  iv. Written document that contains procedure for the final ERP&BI acceptance.
- **Final report**, containing the following sections: Project Summary; Introduction; Objectives Statement; Methods and Resources; Project Results (quantitative and qualitative results, with proper visualizations); Conclusions and Discussion (findings, project usefulness, challenges and limitations, future work directions, lessons learned); Outreach (describing very briefly the type of outreach that the project did, or expect to do); References; Addenda (project-related materials and resources).

The audit report should state the scope, objectives, period of coverage and the nature, timing and extent of the audit work performed.

The report should state the findings, conclusions and recommendations and any reservations, qualifications or limitations in scope that the Consultant has with respect to the audit.

Consultant should discuss the draft report contents with management in the subject area prior to finalization and release and includes management's comments in the final report wherever applicable.

Reports should be addressed to the appropriate management for necessary action. A final report listing all issues raised during the review can be issued.

## VII. Methodology and Approach

The following table provides detailed (but not limited to) key tasks and activities to be performed by the consultants at each phase of the assignment, timelines and the deliverables thereof.

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[2] Consultant will produce contract requirements tracking table with all contract requirements and indication of the status: met/not met, accepted/rejected/conditionally accepted or cancelled with a ref. to the contract amendments for any changes of the contract requirements. Recommendations on how to proceed with the requirements, which are not met are important part of the report;

| No | Task | Start date | Duration | Finish | Acceptance |
|---|---|---|---|---|---|
| 1. | Work plan | W1 | 2 WEEKS | W2 | W2 |
| 2. | Inception report | W1 | 2 WEEKS | W2 | W2 |
| 3. | Audit Report ( CoreBI solution setup ) delivery | W3 | 3 WEEKS | W3 | W3 |
| 4. | Business Process Reengineering Recommendations Report | W4 | 6 WEEKS | W9 | W10 |
| 5. | Audit Report ( Business processes analysis for the ERP ) delivery | W4 | 7 WEEKS | W10 | W11 |
| 6. | Audit Report ( Design and Development ) delivery | W12 | 12 WEEKS | W23 | W24 |
| 7. | Audit Report ( Final verification of solution and user training )  delivery | W24 | 10 WEEKS | W33 | W34 |
| 8. | Audit Report (  System commissioning ) delivery and  Procedure for the final acceptance  of ERP solution delivery | W34 | 5 WEEKS | W38 | W39 |
| 9. | Audit Report (  BI setup for the ERP solution and review of the CoreBI solution established )  delivery - Acceptance of the BI4ERP solution | W39 | 4 WEEKS | W42 | W42 |
| 10. | Final Report delivery, review and revision ( ERP&BI ) | W43 | 2 WEEKS | 43W | W44 |

**Table 1** - Key tasks and activities

The Consultant will deliver a **Work Plan** and **Inception report** in the first 2 weeks of the Contract start date.

The Client will provide comments and/or accept the Work Plan and Inception report within 4 days of delivery.

The **Audit Report (CoreBI solution setup)** will detail the quality of the application and business analysis as determined by the Consultant's analysis. The Audit Report will be delivered in the first 3 weeks of the Contract start date.

The Client will provide comments and/or accept the Audit Report within 4 days from delivery.

**The Recommendation** will detail the existing processes developed under ERP&BI implementation for both Core and Support functions and will contain written procedures (way to accomplish a business process) with clear recommendations of the possible changes and will detail present the BPR Recommendations for RGA as determined by the Consultant's analysis. The recommendation   will be delivered within 8 weeks of Work Plan being accepted.

The Client will provide comments and/or accept the Audit Report within 10 days from delivery.

The **Audit Report (Business processes analysis for the ERP)** will detail the quality of the ERP Core Process Analysis in sense to define the Business Requirements of the New ERP Application System aligned to the Future Business Model as conceived by the Client, as determined by the Consultant's software analysis. The Audit Report will be delivered within 9 weeks of Work Plan being accepted.

The Client will provide comments and/or accept the Audit Report within 5 days from delivery.

The **Audit Report (Design and Development)** will detail the quality of the application and supporting software as determined by the Consultant's analysis. The Audit Report will be delivered within 19 weeks of Work Plan being accepted.

The Client will provide comments and/or accept the Audit Report within 10 days from delivery.

The **Audit Report (Final verification of solution and user training)** will detail the environment configuration and testing, software installation, setup and check list, end user training as determined by the Consultant's analysis. The Audit Report will be delivered within 30 weeks of Work Plan being accepted.

The Client will provide comments and/or accept the Audit Report within 10 days from delivery.

The **Audit Report (System commissioning)** and Procedure for the final acceptance of ERP solution delivery **-** Acceptance of ERP solution will detail the quality of the application and supporting software in post-support (stabilization) phase as determined by the Consultant's analysis. The Audit Report and Procedure for the final acceptance of ERP and BI4ERP solution delivery will be delivered within 36weeks of Work Plan being accepted.

The Client will provide comments and/or accept the Audit Report within 10 days from delivery.

The **Audit Report (BI setup for the ERP solution and review of the CoreBI solution established)** - Acceptance of the BI4ERP solution - will detail the quality of the application and supporting software as determined by the Consultant's analysis. The Audit Report will be delivered within 39 weeks of Work Plan being accepted.

The Client will provide comments and/or accept the Audit Report within 10 days from delivery.

**The Final Report (ERP&BI)** shall summarize all activities undertaken within the project and will show how the project objectives and outputs were achieved.

All reports and documentation, in English and Serbian language, are to be submitted in electronic format, together with signed paper copy in both languages to RGA management. The prepared reports shall be concise and concentrated on the particular phases of implementation. Based on this document RGA officials will sign or reject the acceptance certificate for the delivered IT system.

## VIII. Period of Performance

Assignment duration is 44 weeks (covers contract duration of the ERP&BI system). The duration of the assignment may be extended, depending on duration of implementation of the ERP&BI system.

The assignment is expected to start immediately after Contract signing. The expected duration of the assignment is same as the duration of the project in accordance with the planned implementation schedule for ERP&BI system implementation.

A Consultant will be selected in accordance with the selection method: A Consultant will be selected in accordance with the CQS procedure set out in the World Bank's "*Procurement Regulations for IPF Borrowers*" *(July 2016, Revised November 2017, August 2018 and November 2020)*.

## IX. Schedule of activities

Schedule of activities will be in accordance with the Implementation schedule for ERP&BI software as stated above.
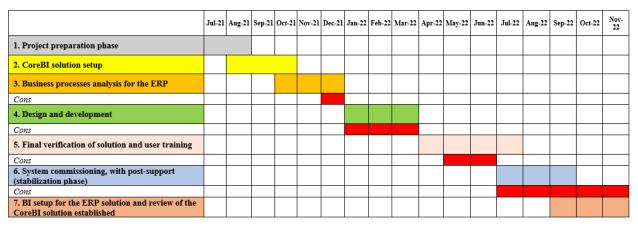
| | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Project preparation phase | ■ | ■ | | | | | | | | | | | | | | | |
| 2. CoreBI solution setup | | ■ | ■ | ■ | | | | | | | | | | | | | |
| 3. Business processes analysis for the ERP | | | | ■ | ■ | ■ | | | | | | | | | | | |
| Cons | | | | | | ■ | | | | | | | | | | | |
| 4. Design and development | | | | | | | ■ | ■ | ■ | | | | | | | | |
| Cons | | | | | | | ■ | ■ | ■ | | | | | | | | |
| 5. Final verification of solution and user training | | | | | | | | | | ■ | ■ | ■ | | | | | |
| Cons | | | | | | | | | | | ■ | ■ | | | | | |
| 6. System commissioning, with post-support (stabilization phase) | | | | | | | | | | | | | | ■ | ■ | ■ | |
| Cons | | | | | | | | | | | | | | ■ | ■ | ■ | ■ |
| 7. BI setup for the ERP solution and review of the CoreBI solution established | | | | | | | | | | | | | | | ■ | ■ | ■ |

**Table 2** - ERP&BI: Schedule of Consultant activities/visits by months (red color)

## X. Qualifications of the Consultant

10 years of international experience (proved by company references) in Business process (mapping, development, reengineering) and ICT consulting services in carrying out business process reengineering and quality audits on multi-agency information systems including:

› ISO20000 or equivalent certification

› ISO9000 or equivalent certification

› Process re-engineering

› ERP knowledge

› Business process design

› System analysis

› Software architecture analysis

› Application performance testing

The Consultant should demonstrate proven experience in Implementation of ERP software and business process development or reengineering, quality assurance and quality control, performed during the last 3 years, where the system has similar complexity and size.

The consultant should have strong and relevant track record concerning similar projects with public sector institutions, entailing contract management, business process reengineering, oversight of implementation of software solutions, staff training, handover and acceptance of the products.

In addition to the ICT project management skills, the Consultant should have experience with international cooperation projects, with emphasise on the understanding of the quality standards, monitoring and reporting.

Previous experience with QA/QC of Cadaster and property registration systems as an advantage.

It is expected that the core team of key experts and the desired number of suitable consultants shall be available on-site as needed during the entire duration of the project. This core team will be duly supported by off-site teams of senior consultants, subject matter and/or domain experts, etc.

The Consultant must provide a team that covers the following requirements:

| | |
|---|---|
| | **Senior Software Quality Audit Expert** |
| M | Minimum 10 years of IT background with proven accomplishment record of IT audit, IT Quality Assurance, IT strategy and IT assessment and planning projects. |
| M | Solid experience with quality control of ERP software implementation projects. |
| M | At least three accomplished ERP quality assurance and quality control projects performed during the last 3 years, where the system has similar complexity and size. |
| M | Solid experience in the technical quality audits of multi-agency information systems. |
| M | In-depth understanding of the software development lifecycle and be able to communicate on project status, issues, and resolutions. |
| D | At least one accomplished project for Cadaster and property registration systems in the area of IT Quality assurance, IT planning or IT strategy. |
| D | Written and verbal communication, with documented track record of technical reporting skills in line with best standards of international cooperation projects. |
| D | Comprehensive knowledge of web application/service related hardware and software configuration. |
| D | CISA (Certified Information Systems Auditor) and ITIL (IT service management) certificates |
| D | Knowledge of Serbian language and Cyrillic alphabet is an advantage. |
| M | Minimum 10 years of IT background with proven record of accomplishment and experience in software development/implementation |
| | **Senior Expert for Business Process Design and re-Engineering** |
| M | Deep knowledge of standard and widely-accepted business process modeling methods, techniques, tools, languages and notations. |
| M | Experience in analysis in static terms and simulation in dynamic conditions. |
| M | Comprehensive knowledge of process bottlenecks detection. |
| M | Relevant experience in study of the government processes and knowledge of government process reengineering. |
| M | Experience in program management and change management. |
| M | Minimum 10 years of large scale Change Management and Process improvement and experience in Business Process Design. |

**Table 3** - Company requirements

**M = Mandatory; D = Desirable**

## Annex 1 - Implementation schedule of ERP&BI

| Task Name | Duration | Start | Finish | Resource Names |
|---|---|---|---|---|
| **Implementation of BI&ERP** | **363 days** | **Tue 06/29/21** | **Wed 11/30/22** | |
| The beginning of work according to contract | 1 day | Tue 06/29/21 | Tue 06/29/21 | |
| Kick-off meeting | 1 day | Wed 07/07/21 | Wed 07/07/21 | RGA; Supplier |
| **Inception Phase including Project Plan** | **36 days** | **Mon 07/12/21** | **Tue 08/31/21** | |
| Project plan preparation | 35 days | Mon 07/12/21 | Fri 08/27/21 | Supplier |
| Project plan delivered | 0 days | Fri 08/27/21 | Fri 08/27/21 | Supplier |
| Acceptance of Project plan | 0 days | Tue 08/31/21 | Tue 08/31/21 | RGA |
| Inception Report preparation | 35 days | Mon 07/12/21 | Fri 08/27/21 | Supplier |
| Inception Report delivered | 0 days | Fri 08/27/21 | Fri 08/27/21 | Supplier |
| Acceptance of Inception Report | 0 days | Tue 08/31/21 | Tue 08/31/21 | RGA |
| **Core BI solution setup** | **76 days** | **Mon 07/19/21** | **Mon 11/01/21** | |
| **Business analysis** | **25 days** | **Mon 07/19/21** | **Fri 08/23/21** | |
| Meetings with Katastar nepokretnosti i Katastar vodova | 1 day | Fri 07/23/21 | Fri 07/23/21 | RGA; Supplier |
| Meeting with HR and Finance sectors | 1 day | Tue 07/20/21 | Tue 07/20/21 | RGA; Supplier |
| Meeting with Adresni registar | 1 day | Tue 07/27/21 | Tue 07/27/21 | RGA; Supplier |
| Additional meetings of business analysis | 6 days | Mon 08/16/21 | Mon 08/23/21 | |
| Design of the system | 15 days | Mon 08/23/21 | Fri 09/10/21 | Supplier |
| Development | 30 days | Mon 09/13/21 | Fri 10/22/21 | Supplier |
| Rollout | 16 days | Mon 10/11/21 | Mon 11/01/21 | RGA; Supplier |
| **Progress reports and Steering committee** | **108 days** | **Mon 08/09/21** | **Mon 01/10/22** | |
| Progress report #1 | 1 day | Mon 08/09/21 | Mon 08/09/21 | Supplier |
| Progress report #2 | 1 day | Thu 09/09/21 | Thu 09/09/21 | Supplier |
| Progress report #3 | 1 day | Fri 10/08/21 | Fri 10/08/21 | Supplier |
| Steering committee meeting | 1 day | Fri 10/08/21 | Fri 10/08/21 | RGA; Supplier |
| Progress report #4 | 1 day | Tue 11/09/21 | Tue 11/09/21 | Supplier |
| Progress report #5 | 1 day | Thu 12/09/21 | Thu 12/09/21 | Supplier |
| Progress report #6 | 1 day | Mon 01/10/22 | Mon 01/10/22 | Supplier |
| Steering committee meeting | 1 day | Mon 01/10/22 | Mon 01/10/22 | RGA; Supplier |
| **Business process analysis for the ERP** | **65 days** | **Fri 10/01/21** | **Fri 12/31/21** | |

| | | | | |
|---|---|---|---|---|
| **Delivery and installation of licenses** | **1 day** | **Mon 01/31/22** | **Mon 01/31/22** | |
| **Design and development** | **61 days** | **Mon 01/03/22** | **Thu 03/31/22** | |
| **Final verification of solution an user training** | **83 days** | **Fri 04/01/22** | **Fri 07/29/22** | |
| Environment configuration and testing | 15 days | Fri 04/01/22 | Thu 04/21/22 | RGA; Supplier |
| Software installation | 15 days | Fri 04/22/22 | Mon 05/16/22 | Supplier |
| Setup and check list | 10 days | Tue 05/17/22 | Mon 05/30/22 | Supplier |
| End user training | 25 days | Thu 06/02/22 | Wed 07/06/22 | Supplier |
| **System commissioning, with post-support (stabilization phase)** | **66 days** | **Fri 07/01/22** | **Fri 09/30/22** | |
| Acceptance of ERP solution | 0 days | Fri 09/30/22 | Fri 09/30/22 | RGA; Supplier |
| **BI setup for the ERP solution and review of the CoreBI solution established** | **64 days** | **Thu 09/01/22** | **Wed 11/30/22** | |
| Acceptance of the BI4ERP solution | 0 days | Wed 11/30/22 | Wed 11/30/22 | RGA; Supplier |
| **Final report** | **0 days** | Wed 11/30/22 | Wed 11/30/22 | RGA; Supplier |

The Consultant has obligation to participate and support the RGA team in all phases of the project.