EDO STATE GEOGRAPHIC INFORMATION SERVICE

Terms of Reference

FOR THE "CREATION AND IMPLEMENTATION OF A DIGITAL ARCHIVE SYSTEM"

A. OBJECTIVE

The objective of this TOR is to guide in the creation and implementation of a Data Centric Digital Archive for warehousing (Archival) of Digital Certificates of Occupancy (C of Os), which fully meets the minimum requirements outlined in section D of this TOR. The digital archive may be implemented using existing commercial products and a perpetual license should be provided and included in the overall cost.

The Consultant is expected to deliver the digital archive system, introduce it in the sole Agency for Land Administration, Edo Geographic Information Service office headquarters, train local staff, handover the system with all relevant documentation and provide technical support services within the period of Nine (9) months.

B. SCOPE OF WORK

In undertaking the assignment, the Consultant shall work in close collaboration with the Management of EDOGIS, plan and agree required activities for the implementation of the digital archive system. The specific tasks to be performed are as follows:

- To review existing workflows, rules and procedures of managing C of O records. It should be noted whether any information system currently been used for processing C of O records and how it can be potentially integrated with the digital archive system.
- To review and gather the statistics of C of O paper archives in the Registry of Lands Department to understand the required hardware to run and operate the

digital archive system.

- To draft technical specifications for computer hardware required for the digital archive implementation.
- To consult with the Management of Edo State Geographic Information Service and prepare the final list of requirements for the digital archive system.
- To develop and test the digital archive system as per System Requirement
- To prepare user and administration guides on operating and administration of the digital archive system.
- To introduce the digital archive system in the management of EDOGIS for testing and training
- To prepare the training plan and program
- To deliver user and administrator training for all the Staff especially Staff of the Archive Unit.
- To introduce the digital archive system into production in Edo State Geographic Information Service.
- To handover the system and documentation.
- To draft the final report.
- To provide technical support online (and offline) for One Year (12 months) after the system introduction.

C. SYSTEM REQUIREMENTS

The system requirements described below should be considered as a minimum set of system functions and capabilities, required for the implementation. Existing products can deliver more features.

General requirements

1) The system shall allow multi-user access over the network.

2) The system should be a Web or Desktop application with server-side component, implementing business logic and database access.
3) The system can be supplied as a commercial, open-source or custom development solution.
4) If the system is supplied as a commercial solution, it shall have perpetual licenses for a minimum of 50 users.
5) If the system is supplied as a custom development, Edo State Geographic Information Service shall have full ownership rights and unrestricted access to the source code. If a custom development is using any licensed components, it shall be agreed with Edo State Geographic Information Service prior to using them and a required number of licenses provided, allowing access to (50) users at least.
6) The system shall be supplied with the user and administration guides, as well as system documentation in case of custom development (e.g. database description, system architecture).
7) In the case of a custom development, the supplier shall provide a warranty for 6 months, covering bug fixing.

Functional requirements

1) The user shall be required to log into the system using the username and password, assigned by the administrator.
2) The main screen shall have a list of folders (or categories or workflow steps) on the left side and relevant list of records on the right side, allowing quick filtering of records in the system.
3) The displayed list of records shall allow sorting by visible columns and ordered by the registration date by default.
4) The list of records shall be displayed in paged format (e.g. 20 records per page) and allow pages navigation.
5) The system shall allow records search by the key attributes (e.g. document type, range of registration dates, C of O number, owner name, folio number, status, etc.).

6) The system shall allow viewing of C of Os and relevant evidence through the search results or by opening it from the main screen.
7) The system may implement workflow steps for the data entry and its processing.
8) The system shall allow capturing of various documents and recording them under C of O cases. Those have to include, but not limited to:
    a. Certificate of Occupancy (C of O)
    b. Land parcel survey diagram / location map
    c. Owner's ID
    d. Allocation letter, if applicable
9) All document types shall be defined with relevant metadata fields, which have to include, but not limited to the following:
    a. Document type
    b. Document date
    c. Document number
10) For C of O documents, the following fields shall be captured, but not limited to these fields:
    a. Owner type (mandatory)
    b. Owner(s) name (mandatory)
    c. Owner(s) gender (mandatory)
    d. Ownership type (mandatory)
    e. Property unique ID / Survey number (mandatory)
    f. C of O issuance date (mandatory)
    g. C of O registration date (mandatory)
    h. C of O reference number (mandatory)
11) The system shall allow scanning and attaching of paper copies. It shall allow selecting file format, scanning resolution, color mode and pages setting (single or multi page). It shall also allow editing of a scanned document, adjusting its brightness/ saturation, rotating, and cropping scanned images. Native scanner

applications can be used, but it shall be integrated with the user interface of the digital archive system.

12) Captured and committed documents shall stay read-only in the system. They can be enabled for editing by a user with a dedicated role and the system should request and record the reason for modification.
13) In the case of multi-department/ office access to the digital archive, the system shall allow configuration of user access by department/ office. Only records relevant to user's department/ office shall be displayed and accessible.
14) The system should track the history of record creation and modification, capturing user's name, device used, event type, date and time of such events. Recording modified fields and their previous values would be beneficial.
15) Every record shall display its modification log in a simple way.
16) The system shall allow generating of parameterized reports (by dates), for statistical reports, including, but not limited to the following:
    a. Overall number of C of Os
    b. C of Os by gender
    c. C of Os by ownership type
    d. Captured documents by types
17) The system shall implement various user roles, defining their access to system features.
18) A dedicated system administration role shall be implemented for managing user accounts and system settings.

Non-functional requirements

1) The system shall be easy to use and require minimum training for the end users.
2) All elements on the page shall have a clear style and proper spaces between them, not overcrowding page and placed into logical groups if needed.
3) Fonts and colors shall be consistent for the same UI elements throughout all pages.

4) Navigation elements shall be clear and help easy navigation between pages.
5) Horizontal scrolls shall be avoided to keep maximum width to 1024 pixels.
6) Form elements, which are not supposed to be modified, shall be displayed in different colors to distinguish from editable elements and be disabled for user input.
7) Before submitting page results, simple fields check shall be done and highlight occurred errors instantly with a clear description or appropriate alert message displayed.
8) Partial page updates shall be implemented where appropriate, to avoid a full-page reload and get faster feedback.

D. DELIVERABLES

- Technical specification for hardware to run the digital archive system (including, server, computers, scanners, network equipment). This is subject to the equipment availability in Edo State Geographic Information Service.
- Digital archive system and its source codes (if custom development).
- System documentation (user guide, administration guide). Other technical documentation in the case of a custom development (data base catalog, architecture description).
- Training plan and program.
- Training
- Final report.

E. LINE MANAGEMENT

The Consultant shall report directly to the Managing Director of Edo State Geographic Information Service. The Consultant shall closely collaborate with the staff of Edo State Geographic Information Service to elicit system requirements and introduce the system.

F. PROPOSED TEAM COMPOSITION FOR CUSTOM DEVELOPMENT

- Team leader / Business Analyst (1)
- Senior Software Developer (1)
- Software Developer (1)
- Tester/Technical support (1)

G. QUALIFICATION AND SKILLS (TEAM LEADER/BUSINESS ANALYST)

- A master's degree in Computer Science, business or related field
- A minimum of 5 years of proven work experience as a business analyst
- Exceptional analytical and conceptual thinking skills
- The ability to convince stakeholders and work closely with them to determine acceptable solutions
- Proven experience in stakeholder analysis, requirements engineering, costs benefit analysis and processes modeling
- Understanding of networks, databases and other IT technologies
- Advanced technical skills and knowledge of CASE tools
- Experience creating detailed reports and delivering presentations
- A track record of following through on commitments
- Excellent planning, organizational, and time management skills
- Experience leading and developing top-performing teams
- A history of leading and supporting successful projects
- Experience and knowledge of digital archive systems is an additional advantage
- Proficient English and excellent technical writing skills. Ability to write in technical English clear and correct

H. QUALIFICATION AND SKILLS (SENIOR SOFTWARE DEVELOPER)

- Masters or similar degree in Information Technology

- A minimum of 10 years of proven work experience as a software developer
- Managerial experience is an additional advantage
- Advanced knowledge of programming languages including JavaScript, HTML5, Java, SQL, ASP.NET and PHP
- Knowledge of system frameworks including .NET, Git, AngluarJS
- Ability to use version control software such as GIT and SVN
- Experience designing and maintaining databases
- Experience working with Agile development technologies
- Understand emerging web and mobile development models
- Experience with digital archive systems is an additional advantage
- Proficient English and excellent technical writing skills. Ability to write in technical English clear and correct.

I. QUALIFICATION AND SKILLS (SOFTWARE DEVELOPER)

- Bachelor or similar degree in Information Technology
- A minimum of 5 years of proven work experience as a software developer
- Solid knowledge of programming languages including JavaScript, HTML5, Java, SQL, ASP.NET and PHP
- Knowledge of system frameworks including .NET, Git, AngluarJS
- Ability to use version control software such as GIT and SVN
- Experience designing and maintaining databases
- Experience working with Agile development technologies
- Experience with digital archive systems is an additional advantage
- Proficient English and excellent technical writing skills. Ability to write in technical English clear and correct.

J. QUALIFICATION AND SKILLS (TESTER/TECHNICAL SUPPORT)

- Bachelor or similar degree in Information Technology

- Five years of proven knowledge and experience in performing system and performance testing
- Knowledge of best practices, methodologies and tools for conducting testing
- Experience in preparation of test plans
- Experience with Microsoft.Net, Java and databases
- Experience of similar assignments in 3 different projects
- Experience in providing technical support
- Experience with digital archive systems is an additional advantage
- Proficient English and excellent technical writing skills. Ability to write in technical English clear and correct.

K. DURATION OF THE ASSIGNMENT

The assignment will be fully implemented in Three (3) months, starting from the contract signing date; and will be primarily conducted in the office of Edo State Geographic Information Service, Benin City, Edo State.

L. INPUTS BY THE CLIENT

Edo State Geographic Information Service will provide the Consultant with all available information and materials, relevant to the implementation of the digital archive system. The Client will provide access to the paper archive for their review and quick assessment. The Client will provide required equipment for the installation and testing of the digital archive system and arrange office space for conducting user trainings.

The Client will assist in arranging required meetings and delegate a focal person to work with the Consultant. If required, the Client will provide an adequate office space, located at the premises of Edo State Geographic Information Services.

M. REPORTING REQUIREMENTS

All reports will be shared with the management of Edo State Geographic Information Services. Reports shall be delivered in electronic form and hard copies for the final versions. Comments, provided by the Client will be discussed at physical or virtual meetings. Required report amendments will be incorporated not later than 2 weeks after receiving these comments.

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ESV. (Mrs.) Osaro G. Aihie
Managing Director
20th November, 2023