



LAGOS STATE GOVERNMENT
LAGOS STATE GEOGRAPHICAL INFORMATION SYSTEMS AGENCY

**TERMS OF REFERENCE FOR A DATA-CENTRIC DIGITAL ARCHIVE OF
CERTIFICATES OF OCCUPANCY:**

Background/Context:

The current land document management system has been undergoing a digitization process with modest progress recorded over the recent years. Despite this development, Lagos State is yet to achieve its target of a fully automated data-centric digital archive of land-related documents. The situation has led to avoidable delays and potential loss or damage of critical documents.

The digital archive will enhance efficiency, transparency and security by ensuring:

- A swift and easy retrieval of documents.
- Streamlined document search processes.
- Enhanced document security.
- Systematic organisation and tracking of document changes and updates.

Transitioning to a digital land document management system allows the Lagos State government to encourage good governance and facilitate smoother business operations. By establishing a data-centric digital archive for land ownership documents, we aim to address these shortcomings by offering a more efficient, secure, and technologically advanced approach to managing land-related documents.

Objective:

We aim to develop a secure, user-friendly, and easily accessible digital archive to process, handle properly, and preserve long-term land ownership documents, including Certificates of Occupancy (CofOs) in Lagos State.

Scope:

The project scope encompasses the following aspects:

- System and user requirements, including business processes, indexing, and metadata integration.
- Deployment of a MERN stack application and necessary hardware.
- Data management and migration.
- Establishment of system backup and disaster management protocols.
- Quality assurance, testing, and training initiatives.
- Development of an operations manual governing the Digital Archive's management (e.g., access control, filing and storage, data sharing protocols, etc.).

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Requirements:

1. Indexing:
 - Owner type (e.g., corporate entity/private individual).
 - Owner(s) name.
 - Owner(s) gender.
 - Ownership type (e.g., single-owned; joint/co-owned between man and woman).
 - Property unique ID.
 - CofO issuance date.
 - CofO registration date.
 - CofO reference number (matching the physical record number).
2. Scanning and Archiving:
 - Raw File format: TIFF/JPEG Standard.
 - File format: PDF.
 - Resolution: 200 dpi.
 - Colour depth: 1-bit bi-tonal (B/W) and 24-bit colour.
3. System Security and Privacy:
 - JSON web token for authentication within an API interface.
 - Strict storage of tokens in cookies with enforced security measures.
 - Utilisation of HTTPS/encryption protocols.

Project Team:

- Commissioner of Finance.
- Special Adviser Land Bureau/e-GIS.
- Senior Special Adviser on GIS.
- Data Centre Manager.
- IT Head, Bureau of Lands.

Appendixes:

The digital archive system will be developed using a MERN Stack application and will reside in an on-premises server with a failover repository in an online dedicated server. The server will undergo extensive encryption, including implementing necessary Cisco firewalls. The archive will be indexed and searchable via key alpha-numeric data and unique identifier numbers.

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Stage	Team/Desk Responsible	Tasks	Deliverables	Estimated Timeline
Project Design/Planning	Director LAGIS IT Head	Reviewing existing C of O process and document system for insights into designing the proposed digital archive	Baseline assessment report, Approved digitization plan, ToR, Procurement Plan, Approved Budget	1 month
Assignment of Operational Space	Director LAGIS	Allocate operational space for digitization operations and the data/server room	Assigned Operational Space	1 month
Deployment, configuration, and Installation of the Digitization System	Head IT	Procure, deploy, and install necessary software and hardware. Configure the system with specified perimeters	Deployed digitization system (software/hardware) Configured system	2 months
Document Sorting, Arrangement, and preparation for scanning	Bureau Office Support Staff	Review, sort and repair documents. Arrange documents with index tags	Reviewed and Sorted C of O documents/folder Documents arranged with index tags	2-3 months (for backlog clearance)
Scanning and Digitization	Data Entry Operators	Conduct high-resolution scanning as per specifications Assign metadata to scanned documents	Scanned documents ready for data entry, Documents digitized as per checklist specifications	2-3 months (for backlog clearance)
Data Entry	Data Entry Operators, Clerks	Indexing and inputting metadata into the document management system Assign automated unique identifiers	Digitized C of O Records with indexing, metadata checklist, and unique identifiers	-3 months (for backlog clearance)

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Storage and Management	IT Specialist, Database Administrator	Implement backup and disaster recovery measures Preserve and maintain digital archives	Robustly secured digital archives with backup and disaster recovery measures in place	End of the Project
Document Management	Lands Bureau Records Manager	Configure access controls and permissions for document retrieval Administer day to day EDMS operations	Assigned access controls and APIs, ongoing and updated EDMS maintenance	Real time throughout the project

Signed

Special Adviser, e-GIS and Urban Development.