



LAGOS STATE GOVERNMENT

LAGOS STATE GEOGRAPHICAL INFORMATION SYSTEMS AGENCY

TERMS OF REFERENCE (ToR) FOR A DATA-CENTRIC DIGITAL ARCHIVE OF CERTIFICATES OF OCCUPANCY:

Background/Context

The current land document management system has been undergoing digitization with modest progress in recent years. However, Lagos State has yet to achieve its target of a fully automated, data-centric digital archive for land-related documents. This gap has led to delays, inefficiencies, and risks of document loss or damage.

A fully functional digital archive for Certificates of Occupancy (CofOs) will enhance efficiency, transparency, and security through:

- Swift and easy retrieval of documents.
- Streamlined search and indexing processes.
- Enhanced document integrity and security.
- Systematic organisation and tracking of updates and changes.
- Generation of evidence-based insights for policy and planning.

Transitioning to a secure digital land document management system promotes good governance, strengthens business confidence, and supports a modern, technology-driven land administration ecosystem.

Objective

To develop a secure, user-friendly, multi-user digital archive for long-term preservation and management of land ownership documents—particularly Certificates of Occupancy (CofOs)—ensuring efficiency, transparency, security, and analytical capacity in Lagos State’s land administration.

Scope

The project scope covers:

- System and user requirements (business processes, indexing, metadata integration).
- Deployment of a MERN stack application and supporting hardware.
- Comprehensive data management, migration, and archiving.

098

SPECIAL ADVISER TO THE GOVERNOR ON eGIS & Urban Development



LAGOS STATE GOVERNMENT

- Implementation of backup, failover, and disaster recovery systems.
- Training, quality assurance, and testing.
- Development of an operational manual covering access control, filing, storage, retrieval, and data-sharing protocols.

Key Requirements

1. Core Documents to be Digitized

The digital archive will capture, indexes, and stores all critical evidence and supporting land ownership documents, including but not limited to:

- Certificate of Occupancy (CofO).
- Land parcel survey diagram/location map.
- Owner's means of identification (ID).
- Allocation letter (where applicable).
- All other supporting evidence/documents, which must be:
 - Named appropriately (document name).
 - Assigned a reference number.
 - Captured with the date of issuance.

2. Indexing & Organisation

- Owner type (corporate/private).
- Owner name(s).
- Gender (for individuals).
- Ownership type (single/joint).
- Property Unique ID.
- CofO issuance date.
- CofO registration date.
- CofO reference number (linked to physical record).
- Archive organisation by property or CofO unique number (to ensure one digital file per property).

098



LAGOS STATE GOVERNMENT

3. Scanning and Archiving Standards

- File formats: TIFF/JPEG (raw), PDF (archive).
- Resolution: 200 dpi minimum; 300 dpi for poor-quality/aged documents.
- Colour depth: 1-bit bi-tonal (B/W) and 24-bit colour.
- Requirement: One multipage PDF per physical document.

4. System Security & Privacy

- JSON Web Token (JWT) for authentication.
- Token storage in cookies with secure configurations.
- Mandatory HTTPS/encryption protocols.
- Robust firewall and server-level protection (Cisco or equivalent).
- Strict role-based access control, with audit trails.

5. System Features

The CofO digital archive will be designed to:

- Generate statistical reports, including:
 - Overall number of CofOs.
 - CofOs disaggregated by gender.
 - CofOs by ownership type (single/joint).
 - CofOs by issuance dates.
 - CofOs by registration dates.
 - Summary statistics by year, quarter, or other periods.
- Operate as a multi-user system, accessible securely over the network.
- Support role-based permissions (e.g., administrator, operator, viewer).
- Guarantee that all ownership rights to the system reside with the Lagos State Land Bureau/e-Gis.

Project Team

- Commissioner of Finance
- Special Adviser, Land Bureau/e-GIS
- Senior Special Adviser on GIS

098

SPECIAL ADVISER TO THE GOVERNOR ON eGIS & Urban Development



LAGOS STATE GOVERNMENT

- Data Centre Manager
- IT Head, Bureau of Lands

Appendices

The digital archive system will be developed with a MERN Stack application, hosted on an on-premises server with failover to a secure online dedicated server. The infrastructure will be encrypted and protected by enterprise-grade firewalls.

The archive will be:

- Indexed, searchable, and organized by CofO/property unique numbers.
- Fully statistical and analytical, capable of producing summary and disaggregated reports.
- A multi-user environment with role-based access control.
- Fully owned by Lagos State Government, including source code, system rights, and data.

Project Stages

Stage	Team/Desk Responsible	Tasks	Deliverables	Timeline
Project Design/Planning	Director LAGIS, IT Head	Review existing CofO processes, design archive framework, prepare ToR, procurement & budget plans	Baseline report, approved digitization plan, ToR, procurement plan, budget	1 month
Assignment of Operational Space	Director LAGIS	Allocate operational space for digitization operations & data/server room	Assigned operational space	1 month
Deployment & Installation	IT Head	Procure/install software & hardware, configure system	Installed & configured digitization system	2 months

098

SPECIAL ADVISER TO THE GOVERNOR ON eGIS & Urban Development



LAGOS STATE GOVERNMENT

Document Sorting & Preparation	Bureau Support Staff	Review, repair, sort, and tag documents	Sorted CofO folders with index tags	2–3 months (backlog)
Scanning & Digitization	Data Entry Operators	High-resolution scanning, assign metadata	Digitized CofO documents (PDF, TIFF/JPEG) with metadata	2–3 months (backlog)
Data Entry & Indexing	Data Entry Operators, Clerks	Input metadata, assign unique IDs, validate checklist	Digitized & indexed CofO records with unique identifiers	3 months (backlog)
Storage & Management	IT Specialist, DBA, Lands Bureau Records Manager	Implement backup/disaster recovery, configure access & APIs, daily archive maintenance	Secured & backed-up digital archive with real-time retrieval access	Ongoing

Signed

A handwritten signature in green ink, consisting of stylized initials and a long horizontal line extending to the right.

Special Adviser, eGIS and Urban Development.

SPECIAL ADVISER TO THE GOVERNOR ON eGIS & Urban Development

eGIS Block, The Secreteriat, Alausa, Ikeja, Lagos, Nigeria
Tel: 0706 536 8485, Email: egisphysicalplanning@lagosstate.gov.ng www.lagosstate.gov.ng