



KLAS – Kano State Land Administration System

*Powering a Smart, Secure & Integrated Future for Land Governance in Kano State
whilst Leveraging on Block Chain Technology and AI*

The **Kano State Land Administration System (KLAS)** is a next-generation, enterprise-grade Land Information System designed to revolutionize how land is managed, administered, and serviced across Kano State. Built with a modern, modular architecture, KLAS serves as the digital backbone of the **Ministry of Land and Physical Planning**, enabling interoperability between departments and seamless integration of core land services.

KLAS – Interoperable, Intelligent, and Future-Proof

By bringing together these features, **KLAS is not just a software—it's a statewide digital land governance ecosystem**, enabling smarter workflows, greater transparency, and improved service delivery.

Whether it's planning infrastructure, registering titles, performing legal search, or managing land disputes, **KLAS ensures every department, from Survey to Legal, works in lockstep** with synchronized data and automated processes.

Key Features of KLAS

✓ Digital Legal Search (Online & On-Premise)

- Offers official (on-premise) and commercial (online) legal search options.
- Generates complete land history from ownership to encumbrances.
- Leverages Blockchain Technology to guarantee record immutability and Artificial Intelligence (AI) to detect anomalies or duplication in land transactions.

✓ New Sectional Titling (ST) Module

- Allows original owners to apply for property fragmentation.
- Supports full application workflows including betterment billing, planning approvals, and final conveyancing.

- Nested application system for main and sub-units under a unified schema.
- ✓ **Systematic Land Titling & Registration (SLTR)**
 - Empowers mass titling of informal settlements.
 - Integrates community-based land identification with formal parcel-based mapping.
 - Outputs recognized legal documentation for untitled property owners.
- ✓ **e-Registry**
 - A digitally centralized repository of all title records.
 - Enables secure, instant retrieval, search and registration of land documents.
 - Built to ensure data integrity, audit trails, and secure multi-agency access.
- ✓ **Automated Billing and Revenue Management System (ABRM)**
 - Fully Automated Billing Workflow
 - Real-time Integration with INTERSWITCH & KIRMAS
 - Direct API-based integration with INTERSWITCH payment gateway and KIRMAS (Kano State Internal Revenue Service) ensures that:
 - All payments are tracked and validated in real-time.
 - Receipts are auto-generated and digitally attached to the customer's profile.
 - Reconciliations with state treasury accounts are seamless and auditable.
 - Transparency & Accountability
 - Customer Portal with Digital Invoicing

Applicants and property owners can:

 - View, download, and print invoices online.

- Make payments through multiple channels—bank, POS, USSD, or mobile.
 - Monitor balances, payment history, and penalties.
- Multi-Tiered Approval & Alerts
- ✓ Electronic Document Management System (EDMS)
 - Manages scanned documents, file archiving, indexing and retrieval.
 - Integrates with RFID tracking for physical files.
 - Supports bulk uploads and document workflows tied to land records.
- ✓ Customer Relationship Management (CRM) System
 - Streamlines interaction between the Ministry and stakeholders.
 - Tracks customer requests, complaints, service timelines, and feedback.
 - Fully integrated with billing, messaging, and ticketing modules.
- ✓ Enterprise GIS (Geographic Information System)
 - Multi-user access to live spatial databases of parcels, layouts, infrastructure, and encumbrances.
 - Supports spatial analysis, parcel querying, site planning, and survey integration.
 - Fully integrated with the Parcel Fabric, COGO tools, and land applications.

"KLAS: Interoperable Land Governance for a Smarter Kano."

KLAS Modules

SN	Module	Sub-Modules	Description	Use	Department(s)	Block-Chain Compliance	Status
1	Dashboard	-	Central interface for system overview, analytics, and quick access.	Monitor system performance, pending tasks, and key metrics.	All Departments		
2	Customer Relationship Management (CRM)	a. Person (Individual, Group, Family) b. Corporate c. Customer Manager (Appointment, Calendar)	Manages interactions with landowners, lawyers, and government officials.	Track customer inquiries, appointments, and service requests.	All the Departments	Yes (DID for identity verification)	
3	Programmes	a. Allocation (Governors List, Commissioners List) b. Resettlement c. Recertification d. Conversion/Regularization e. Land Property Enumeration (Data Repository,	Handles land allocation, resettlement, and Field data migration.	Manage government land allocations and property recertification.	Lands, Survey	Yes (Smart contracts for allocation; IPFS for data)	
4	Information Products	a. Letter of Administration/Grant/Offer Letter b. Occupancy Permit (OP) c. Site Plan/Parcel Plan d. Right of Occupancy e. Certificate of Occupancy (CoFO)	Generates legal land documents and permits.	Issue CoFOs, site plans, and occupancy rights.	Lands, Deeds and Survey	Yes (NFT-based CoFO; blockchain permits)	
5	Deeds	a. Instrument Capture b. Instrument Registration c. CoFO Registration (Regular, Sectional Titling, SLTR) d. Property Records Assistant e. Instrument Registration Reports	Manages land deeds, instruments, and CoFO registrations.	Register property deeds and generate reports.	Deeds	Yes (Smart contracts for deeds; DID signatures)	Active
6	Search	a. Legal Search (On-Premise Official, On-Premise Commercial) b. Online c. Reports	Facilitates legal searches for land ownership and disputes.	Verify land titles, encumbrances, and historical records.	Lands, Deeds and Legal	Yes (Public blockchain explorer)	Active
7	Revenue Management	a. Billing (Automated, Legacy) b. Generate Receipt c. Land Use Charge (LUC) d. Bill Balance	Manages land-related payments and billing.	Process land use charges, generate receipts, and track balances.	Finance, Billing	Yes (Tokenized payments; smart invoices)	
8	Sectional Titling	a. Primary Application b. Unit Application c. Field Data d. Payments e. Approvals (Other Departments, Planning, Director) f. Memo g. Certificate (RoFO, CoFO) h. e-Registry (Files) i. Reports j. GIS (System, Map)	Handles sectional titling for multi-unit properties.	Manage applications, approvals, and e-registry for sectional titles.	Sectional Titling, Deeds and Survey	Yes (NFT-based titles; DAO approvals)	Active
9	SLTR/First Registration	a. Application b. Field Data c. Payments d. Approvals (Other Departments, Planning, Director) e. e-Registry (Files, Certificate) f. Reports g. GIS (System, Map)	Manages first-time land registration under the Systematic Land Titling & Registration (SLTR).	Process new land titles and digital registrations.	SLTR, Deeds and Survey	Yes (Smart contracts; ZK proofs)	
10	Lands	a. File Digital Archive (Doc-WARE) b. File Tracker (RFID) c. EDMS (Indexing, Scanning, PageTyping)	Digitizes and tracks physical land files.	Archive documents, track file movement, and manage scans.	Lands	Yes (IPFS storage; blockchain tracking)	
11	Physical Planning	a. Planning Recommendation b. Approvals c. PP Reports	Oversees land-use planning and zoning approvals.	Review and approve development plans.	Physical Planning	Yes (VCs for permits; compliance checks)	

KLAS Modules

SN	Module	Sub-Modules	Description	Use	Department(s)	Block-Chain Compliance	Status
12	Survey	a. Records b. GIS c. Approvals d. E-Registry e. Survey Reports	<i>Manages land surveys and geographic data.</i>	<i>Conduct surveys, update maps, and approve boundary changes.</i>	Survey	Yes (Blockchain-linked GIS)	
13	Cadastral	a. Records b. GIS c. Approvals d. E-Registry e. Cadastral Reports	<i>Maintains cadastral maps and land parcel records.</i>	<i>Update cadastral data and generate reports.</i>	Cadastral	Yes (Smart contracts for disputes)	
14	GIS	a. GIS Attribution	<i>Links land attributes to geographic data.</i>	<i>Enhance spatial analysis for land management.</i>	GIS, Survey	Yes (Blockchain-anchored geodata)	
15	Systems	a. Caveat b. Encumbrance	<i>Manages legal restrictions on land titles.</i>	<i>Flag disputed lands or encumbrances.</i>	Deeds, Legal	Yes (Smart contract flags; VCs)	
16	Legacy Systems	-	<i>Integrates with older land administration systems.</i>	<i>Ensure backward compatibility with historical data.</i>	Lands, Deeds, Survey and Deeds		
17	System Admin	a. User Account b. System Settings	<i>Configures user access and system parameters.</i>	<i>Manage roles, permissions, and system configurations.</i>	ICT	Yes (DID-based roles; multisig)	Active



KANGIS Land Admin System©

0. DASHBOARD

1. CUSTOMER RELATIONSHIP MANAGEMENT

- a. Person
 - i. Individual
 - ii. Group
 - iii. Family
- b. Corporate
- c. Customer Manager
 - i. Appointment
 - ii. Appointment Calendar

2. PROGRAMMES

- a. Allocation
 - i. Governors List
 - ii. Commissioners List
- b. Resettlement
 - i. Governors List
 - ii. Commissioners List
- c. Recertification
- d. Conversion/Regularization
- e. Land Property Enumeration
 - i. Data Repository
 - ii. Migrate Data

3. INFORMATION PRODUCTS

- a. Letter of Administration/Grant/Offer Letter
- b. Occupancy Permit (OP)
- c. Site Plan/Parcel Plan
- d. Right of Occupancy
- e. Certificate of Occupancy

4. DEEDS

- a. Instrument Capture
- b. Instrument Registration
- c. CofO Registration
 - i. Regular CofO
 - ii. Sectional Titling CofO
 - iii. SLTR CofO
- d. Property Records Assistant
- e. Instrument Registration Reports

5. SEARCH

- a. Legal Search
 - i. Official (for filing purpose)
 - ii. On-Premise
 - iii. Online
 - iv. Legal Search Reports

6. REVENUE MANAGEMENT

- a. Billing
 - i. Automated Billing
 - ii. Legacy Billing
- b. Generate Receipt
- c. Land Use Charge (LUC)
- d. Bill Balance

7. SECTIONAL TITLING

- a. Primary Application
- b. Unit Application
- c. Field Data
- d. Payments
- e. Approvals
 - i. Other Departments
 - ii. Planning Recommendation
 - iii. Director's Approval
- f. Memo
- g. Certificate
 - i. Rofo
 - ii. CofO

- h. e-Registry
 - i. Files
- i. Reports
- j. GIS
 - i. System
 - ii. Map

8. SLTR/FIRST REGISTRATION

- a. Application
- b. Field Data
- c. Payments
- d. Approvals
 - i. Other Departments
 - ii. Planning Recommendation
 - iii. Director's Approval
- e. e-Registry
 - i. Files
 - ii. Certificate
- f. Reports
- g. GIS
 - i. System
 - ii. Map

9. LANDS

- a. File Digital Archive – Doc-WARE
- b. File Tracker/Tracking - RFID
- c. EDMS
 - i. Indexing
 - 1. File Indexing Assistant
 - 2. Print File Labels
 - ii. Scanning
 - 1. Upload
 - 2. Download
 - iii. PageTyping

10. PHYSICAL PLANNING

- a. Planning Recommendation
- b. Approvals
- c. PP Reports

11. SURVEY

- a. Records
- b. GIS
- c. Approvals
- d. E-Registry
- e. Survey Reports

12. CADASTRAL

- a. Records
- b. GIS
- c. Approvals
- d. E-Registry
- e. Cadastral Reports

13. GIS

- a. GIS Attribution

14. SYSTEMS

- a. Caveat
- b. Encumbrance

15. LEGACY SYSTEMS

16. SYSTEM ADMIN

- a. User Account
- b. System Settings