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ASSESSMENT OF PROBLEMS AND PROSPECTS OF LAND MANAGEMENT DIGITIZATION IN NIGERIA

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Abstract

There is an increasing need for spatial framework reforms to support land administration and management systems in developing countries such as Nigeria. This paper explores the problems and prospects of land management digitization in Nigeria, emphasizing the importance of improved infrastructure, legislative changes and heightened public participation. Using secondary data and case studies, this article presents the current trend in the digitization of land administration in Nigeria by analyzing the challenges and evaluating successful case studies in developed and developing countries. Lessons from Rwanda, India, Sweden, Ghana, Estonia, and Singapore on land management digitization demonstrate the transformative impact of technology, strong political will, and institutional reform. The study further asserts that to achieve best practices in land management systems, sustainable land administration and management are required. The research findings indicate that Nigeria has the potential to establish a transparent, secure and sustainable digital land management system that aligns with international best practices. This can be achieved by implementing the policy recommendations outlined in this paper, which include capacity building, investments in infrastructure, and necessary legal reforms. These reforms have the potential to facilitate transformation and foster collaboration among essential stakeholders in the land management sector, thereby enhancing overall efficiency and productivity.

Keywords: *Management, Land, Nigeria, Urbanization and Development*.

Introduction

Land management includes all procedures related to land ownership, use and development. Effective land management is critical to urban planning, economic expansion and reducing land ownership disputes in Nigeria. However, inefficiencies, fraudulent activities and manual record-keeping are common problems in Nigeria's traditional methods that have sparked interest in digitalization (Abolade *et al*., 2018).The digitization of land records has demonstrated benefits such as faster transaction times, increased security and greater openness on a global scale (Deininger & Feder, 2009). The goals of digitalization projects in Nigeria are to improve accessibility, reduce corruption and speed up the process. However, there are many hurdles to overcome when switching to digital systems, such as inadequate infrastructure, legal issues and socio-cultural restrictions. In Nigeria,

land management is an essential component of economic growth since land is needed for housing urbanization, and agriculture (Braimoh and Onishi 2007; Nwokenkwo, Ike and Eze 2018).

Inefficiencies in Nigeria's land management system, governed primarily by the Land Use Act of 1978, have long hampered both safe land use and economic progress (Otubu, 2018). By placing land ownership under state control, the land use law aimed to simplify land access and reduce land conflicts. Nevertheless, implementation problems have compromised its effectiveness (Daniel, 2023). According to Mener *et al*. (2019), digitization the process of transforming paper records into digital formats that can be accessed via information technologies has been suggested as a way to address Nigeria's land management issues. The shift from manual to digital systems has the potential to increase operational efficiency, record accuracy, and transparency. This paper explores the problems and prospects of land management digitization in Nigeria, emphasizing the importance of improved infrastructure, legislative changes, and heightened public participation.

Therefore, in order to promote development and even sustainable development, the land administration system must be digitalized to enable smooth real-time communication and information sharing on land use and transactions (Atilola, 2010). A nation's infrastructure for implementing land management plans and policies is provided by its land administration system, which in turn promotes sustainable development. How well a country facilitates commerce determines how well it can open up its economy to outside interests. A key indicator of how easy it is to do business in any modern economy is the way land use and development processes, as well as transactions involving real estate, are carried out. Because prospective investors need information, especially on land titling and property rights as they are transacted, the land administration system needs a geographical structure in order to function. The land administration system must be digitalized in order to give end users accurate information about lands, including their tenure and other characteristics. Due to operational issues with manual land administration procedures, several Nigerian states have lately adopted digital land administration systems using a geographical information system, which has only slightly raised their pre-GIS performance levels (Ahmed II and Mansor 2018).

Methods

The study investigated the challenges and prospects of the digitization of land administration systems in Nigeria. A comprehensive list of challenges and corresponding solutions related to the digitization of land management systems was compiled from both primary and secondary data across several countries, including Nigeria, Rwanda, India, Ghana, Estonia, Singapore, and Sweden, using case study analysis. The data sources included scholarly articles, textbooks, online materials and outcomes from the implementation of land management digitization.

Results and Discussions

Background and Context of Land Management in Nigeria

Historically, Nigeria's land management system has been plagued by pervasive corruption, inaccurate record-keeping and lengthy bureaucratic procedures (Alagbe&Ojo, 2021). Inadequate technology infrastructure and the lack of a digital record-keeping system have hindered the effectiveness of the Land Use Act of 1978, which centralized land regulation under state governments (Daniel, 2023). Ownership issues, lengthy court cases, and inaccurate land records are the results of this (Adeyinka, 2020). Several states have responded to these inefficiencies by launching digitalization projects. Lagos State, for instance, has improved openness and shortened

transaction times in digital land registration (Adekola, 2020). However, due to budgetary and technical constraints, certain states are trailing behind the rest of the nation in adopting digital systems.

Nigeria might simplify its land management system by utilizing digital tools like online databases, block chain and Geographic Information Systems (GIS). The successful digitization of land management systems in other African countries, such as Rwanda, has decreased conflict and increased revenue collection (Kuppuswamy *et al*., 2023). Nigeria, however, has particular difficulties, such as socioeconomic inequality, poor digital infrastructure, and low public awareness of digital land administration procedures (Abraham, 2023). Geographical information systems, which were first introduced by the Federal Capital Territory's Ministry in the late 1980s as a way to handle the complex issues of handling land titling and transaction-related violations, are now the most sought-after technique for Nigerian states (Babalola, Hull and Whittal 2023; Ogbonna and Ike 2008). The necessity to create an open, effective land management system typically serves as justification for the high expense of obtaining and establishing GIS-based land administration in Nigeria. It is necessary to investigate the difficulties facing the construction of GIS-based land administration since beneficiaries are now burdened with extremely high service delivery fees, which goes against the objective of attaining transparency in land administration.

Digitalization of Land Administration and Management

The introduction and implementation of appropriate technologies that enable the capture and conversion of all data generated in the course of land management activities into digital form can be considered as digitalization of the land management system. The process of storing, processing, presenting and sharing the resulting Geo-data is automated. Adeoye and Mensah (2008) define it as a computer-based tool that uses specialized software to capture, edit and display geographical and land-related data. The state governments of Nigeria, like those of most other countries today, have an office or ministry that handles land administration functions as part of its mandated land administration functions. The organization's responsibilities include processing land title applications, maintaining records of public and private land transactions, valuing properties for a variety of public uses, using governmental powers for compulsory acquisition, administering and/or collecting taxes in connection with land-based transactions and more. As a result, the Land Bureau creates and maintains a large amount of land-related data, primarily including: Cadastral information on layouts; personal information on land parcel owners and applicants for statutory titles; additional land information management data, including acquisition, assessments, allocations, valuations, consent, assignment and land registration (Paixao 2023).

Therefore, digitizing land-related records, building land databases, providing software tools to compile personal data of applicants for land titles and other transactional requirements, and creating a powerful management information system for analyzing land records are necessary to convert these land data into a geographic information system format (Mensah &Adeoye, 2008). Computerization of land administration systems as a tool for good governance has been studied by Adeoye & Mensah, (2008), who noted that the information technology revolution, globalization and changing societal goals require the digitalization of the land management system. As a result, they found that some of the factors driving land digitalization are**:**

- **a.** Increasing the use of land documents; providing access to land administration technology;
- **b.** Adhering to international best practices;
- **c.** Supporting continuous microeconomic reform;
- **d.** Implementing e-government reforms;

e. Addressing capacity building difficulties; and making conducting business easier.

In addition, Adeoye & Mensah (2008) determined that the following infrastructures were required for the digitization of the land management and administration system: satellite imagery; GIS software; **a**nd the conversion of analog land records into digital formats. They also noted that the main objectives of digitizing land management and administration systems are to be able to create a geo-information system that will make land administration processes easier, like:

i. **Land Valuation:** This involves figuring out goals, values, and the legal framework related to managing land as a physical, legal, and economic entity. This will serve as the foundation for the construction of reliable land administration assets.
ii. **Cadastral Systems:** Support sound land administration by facilitating land registration, land valuation, and land-use control; identifying land parcels and protecting land rights.
iii. **Land Administration Systems:** Administration of land tenure, land value, land use, and land development administration; support prudent land management; and enable efficient land markets and land-use management.
iv. **Land Management:** This is the administration of procedures that ensure the effective use of land resources. Promotes sustainability in the social, economic and environmental spheres supports and carries out sensible land policies.

Problems of Land Management Digitization in Nigeria

While, the potential benefits of digitization are significant, several issues hinder its implementation.

1. Inadequate Infrastructure

Inadequate digital infrastructure is one of the biggest obstacles to Nigeria's land digitization (Abolade, Dugeri and Adama 2018). For effective digital land management, digital devices, electricity, and internet access are necessary. However, many parts of Nigeria experience weak internet connectivity and frequent power outages, which restricts the use of digital systems (Akingbade *et al*., 2021).An important barrier to successful digitization in Nigeria is the country's infrastructure. A digital land management system requires dependable internet connectivity, a steady power supply, and safe data storage facilities, all of which are still scarce, especially in rural regions (Okonkwo *et al*., 2024). Significant resources and cutting-edge technology are needed for the first stage of transforming paper land records into digital versions, which presents extra logistical and financial difficulties (Abraham, 2023).Another issue is data security. Strong cyber security measures are necessary for effective digital land systems in order to guard against unwanted access and guarantee data integrity. Unfortunately, there is a risk of data breaches because Nigeria's current digital infrastructure is not sophisticated enough to handle these security issues (Iorliam, 2019).

2. Expensive and Insufficient Funding

The implementation of digital land management systems entails significant upfront expenditures for training, software, and hardware. A lack of funds prevents many states from making the entire shift to digital systems. Though they have been investigated, international funding choices frequently contain requirements that make local implementation difficult (Dener *et al*., 2021).

3. Regulatory and Legal Framework

Digital processes have not been sufficiently accommodated by the Land Use Act of 1978's current legal framework. The absence of data protection regulations and provisions for digital signatures,

which are necessary for safe online land transactions, are examples of legal obstacles (Babalola *et al*., 2023).One major obstacle is the lack of a thorough legislative framework that supports digital land records (Ibrahim *et al*., 2021). A large number of land-related regulations in Nigeria are out-of-date and do not acknowledge the legal force of digital data. Furthermore, because a digital system would probably eliminate the requirement for some traditional bureaucratic functions, there is resistance within government agencies due to worries about job relocation and diminished influence (Ekebuike & Igbokwe, 2024). In land administration, local, state, and federal entities frequently function autonomously with little cooperation, which exacerbates bureaucratic resistance. The adoption of a single digital system throughout Nigeria is made more difficult by this decentralized approach (Akingbade, 2012).

4. Challenges in Technology and Human Resources

Another major problem is the lack of qualified staff to oversee and preserve digital land records. A large number of government employees lack current technology training, which leads to inefficiencies and possible mistakes in digital record-keeping (Fateye et al., 2021).

5. Cultural and Social Barriers

Since many communities in rural Nigeria still use traditional land tenure systems, digital documents can be treated with suspicion. The digital skills required to engage with online land management systems are also lacking for many people, and literacy rates differ (Ameyaw & De Vries, 2023). Nigeria's socio-cultural environment creates particular challenges for digitization. Both the government and private residents are impacted by financial limitations; rural communities may not have access to the digital resources required for digitizing land records (Adesola, 2024).Additionally, a digital land management system's accessibility and acceptance are restricted by the population's low level of computer literacy (Aja *et al*., 2024).Digitization is also hampered by public mistrust regarding the security of digital records and data privacy. Gaining broad adoption and trust in a digital land system is difficult since many Nigerians have doubts about the security and veracity of online records (Babalola, 2023).

Prospects of Land Management Digitization in Nigeria

Notwithstanding these obstacles, a number of encouraging elements point to a bright future for the digitization of land management:

1. Enhanced Security and Openness

Because digital records are more difficult to falsify, digitization lowers the chance of document corruption and tampering. In Lagos, for example, digitization has reduced corruption related to land transactions and boosted public confidence (Adekola *et al*., 2020).By making land records traceable, accessible, and challenging to alter, digitization has the potential to improve transparency (Williams *et al*., 2022). To prevent corruption and illegal land purchases, for example, a digital record-keeping system may register every transaction, establishing a visible trail (Edovia, 2023).

2. Increased Accessibility

Accessing digitized land records online eliminates the need to physically visit government offices. Government representatives, investors, and property owners all benefit from this improved accessibility, which speeds up land-related transactions (Abolade, 2018).

3. Enhanced Revenue Generation

A computerized system increases tax collection and assures appropriate recording of property transactions, which can lead to higher revenue for municipal and state governments. Proper digitization guarantees that property owners pay correct taxes and helps identify properties that are undervalued (Dener, 2021).The national economy could gain from increased tax money that is reinvested in regional development initiatives (Emiru & Wajebo, 2023).

4. Assistance with Urban Development and Planning

Digitization enables improved urban planning by giving accurate and up-to-date records on land use and ownership. This data can inform urban development projects, alleviate land conflicts, and promote strategic planning (Fateye *et al*., 2021).By integrating Geographic Information Systems (GIS) into digital land management, policymakers can monitor land use patterns, manage urban sprawl and implement strategies to prevent environmental degradation (Enoguanbhor et al., 2019). This can improve urban planning efforts and enable more effective monitoring of land use and environmental protection (Merem *et al*., 2021).

5. Enhanced Efficiency and Reduced Transaction Time

By automating record searches and document verification, digital systems can remove bureaucratic delays, making land transactions more efficient and user-friendly (Ono & Ekebuike, 2023). Digital land management can expedite registration, transfer, and verification procedures, significantly cutting down on transaction times (Chiemelu & Onwumere, 2013).

6. Legal Security and the Defence of Property Rights

With verifiable proof of ownership, fewer disputes, and a dependable way to protect property rights, digitization improves landowners' legal protections (Edovia, 2023). For vulnerable groups that might not otherwise be able to defend their land rights because they lack official documentation, this is especially advantageous.

Case Study

The KADGIS Initiative

In order to promote good land administration in the state, the Kaduna Geographic Information Service (KADGIS) was established on December 23, 2015, under Kaduna State law No. 15, and it has been in operation ever since (Abolade *et al*., 2018). With the use of Geo-ICT, KADGIS has been able to**:**

- **i.** Determine landowners, land use, land values, and extent of ownership in areas where land consolidation is planned.
- **ii.** Use GIS to design new parcels.
- **iii.** Determine compensation levels when necessary or when land must be expropriated for state purposes.
- **iv.** Maintain records of state land held in anticipation of future needs.

v. Help prepare plans for the allocation of land to landless or otherwise dispossessed individuals.
vi. Provide assistance in the planning of new infrastructure, including roads, subsurface services like drainage, and other subsurface and above-surface utilities.
vii. Use aerial photography to map informal settlements in order to plan any upgrades.

In addition to directly assisting in the implementation of several other Restoration Master Plan components, (Ritchie, 2017) claimed that "KADGIS operate in a strategic manner that quickly delivers professional and efficient land administration, secure land titles, and generate much needed revenue".

The Geo-ICT Concept in Land Administration

Geographic (or geographical, geologic, geodetic and geometric,) information and communication technology (ICT) are combined to create Geo-ICT (Navarra, 2011). Geographic Information Systems (GIS), Land Information Systems (LIS), Spatial Data Infrastructures (SII), and Spatial Decision Support Systems (SDSS) are all included in geo-ICT.

When it comes to land governance, geo-ICT is useful. According to Antai (2017), landowners who want to register and obtain Certificates of Occupancy for their properties, conduct searches, and process the governor's consent for subsequent transactions will receive faster service delivery if Geo-ICT (Geographic Information and Communication Technology) is used wisely. The state receives enormous cash from leases, transfers, taxes, mortgages, and ground rents paid for these services, among other advantages.

In order to achieve efficiency, openness, accountability, and user-friendliness in all of the transactions that individuals and businesses have with the government, geo-ICT provides a number of factors in the governance process. In particular, it refers to utilizing IT resources to improve government organizations' productivity, efficiency, and service delivery quality across a range of domains (Nidhi & Sagarike, 2008).

Education, training, and geo-information science research sustain the use of Geo-ICT. According to (Acharya, 2009), the system should be built so that it may be reused or adapt to the constantly changing needs of consumers of geo-information once a service model is available. Building capacity requires a large investment. Large-scale Geo-ICT contract management is a long-term endeavour that should be incorporated into project design from the outset, together with human resources to implement and maintain land administration reforms. 27 In land administration, geo-ICT encourages development and good governance in ways like: gender equality, fair access to land and natural resources, tenure security for all societal members, openness in land and resource decision-making, decentralized, effective, and efficient land administration, and the rule of law (Akingbade, 2012). Additional goals of Geo-ICT include**:**

i. It promotes transparency by discouraging corruption in land administration.
ii. Discrimination against minorities and women is discouraged. This is accomplished by keeping an eye on the demographics of participants in land transactions, including their gender.
iii. A single location provides access to all pertinent land and property data.
iv. Use an orthophoto picture to map the property's location.
v. Monitor changes in land use that may have an impact on the taxable value of property and compare property values as part of a mass assessment for land and property taxes (UNECE, 2002), as referenced in McLaren & Stanley (2011).

Good governance is supported by efficient land administration. Geo-ICT is therefore, indispensable. The success of this technology depends on the capacity building, institutional reforms, devolution of functions and services, education and continuous training, and ultimately the commitment of the government and other stake holders (Acharya, 2009). McLaren & Stanley (2011) stated that the rationale for the increasing use of Geo-ICT is that complex transactions with expected processing times can no longer be handled effectively and transparently through manual processes.

Geo-ICT enables improved access and exchange of information, improves data completeness and quality, increases operational and information security and transparency (and potentially reduces the risk of domestic corrupt dealings), increases revenue generation and provides a basis for surveillance and evaluation (Akingbade 2012). Until recently, land register entries in internal offices could only be found on paper.

Access to these documents is now possible via SMS-based information services or the intranet. These information services initiatives provide excellent opportunities to leverage private sector investment and expertise through public-private partnerships. Simple, transparent and easily accessible services that can quickly increase public trust are provided through SMS-based real estate services via mobile phones, eliminating the need for intermediaries to access and manage services. While this is good practice, establishing and maintaining reliable power and efficient internet access is very costly. The Geo-ICT Monitor compares prices paid for comparable properties and tracks changes in land use that may affect a property's value. Additionally, it can serve as a catalyst for improved integration and interoperability with other government agencies, but this requires political will.

Lessons from International Experiences

Nigeria may learn a lot from nations like Rwanda, India, Sweden, Estonia, Ghana and Singaporewho have made great strides in digitizing land records. With significant assistance from the government and foreign donors, Rwanda, for instance, successfully digitalized its land management system by emphasizing public awareness campaigns and training (Deininger & Feder, 2009). Similar difficulties were encountered by India as well, but they were resolved by implementing mobile applications to solve connectivity problems in rural regions (Gebrihet & Pillay, 2021).

Rwanda: Strong Political Will and Centralized Reforms

Strong political wills a clearly defined policy direction and centralized land administration are the reasons for Rwanda's success in digitizing its land administration system. In just a few years, the government's Land Tenure Regularization Program (LTRP) managed to systematically digitize over 11 million land parcels. Strong leadership, legislative changes and public participation supported the program. Nigeria can take a cue from Rwanda by implementing a gradual, methodical approach to digitalization, reducing fragmentation in domestic governance and ensuring political commitment at all levels of government.

India: Leveraging Technology, Innovation and Federal Coordination

India's National Land Records Modernization Program (NLRMP) is a comprehensive program to digitize land records in several states. To ensure accurate mapping, recording and public accessibility, the program integrated technologies such as geographic information systems (GIS), satellite imagery and e-governance platforms. India's experience shows the importance of innovation, affordable technologies and federal-state collaboration in creating a unified system.

Similar technological tools can significantly improve management in Nigeria when used in conjunction with federal, state and local government coordination.

Sweden: Data Security and Institutional Efficiency

The Swedish Landmäteriet (the national land survey agency) uses block chain technology to ensure secure and immutable land records and has been a leader in digital governance for decades. The system is characterized by technological resilience, high public trust and institutional efficiency. The Swedish model emphasizes the value of promoting trust in digital systems through secure platforms, carefully curated collections and clearly defined institutional roles. Nigeria can adopt similar strategies by guaranteeing data accuracy, putting block chain technology into practice for security, and promoting trust in digital systems.

Estonia: Integrated Digital Plat Forms and E-Governance

Estonia's digital revolution serves as a blueprint for integrating land management into a broader governance structure. The e-Estonia initiative seamlessly links land administration with national databases, allowing citizens to access land records and conduct transactions online with minimal bureaucratic barriers. This method highlights the importance of integrated digital platforms and cross-agency collaboration. Nigeria could benefit from the introduction of a unified platform that links land records with other national databases such as tax systems, identity registries and financial services.

Ghana: Stakeholder Engagement and Customary Land Integration

The digitalization of land management in Ghana highlights the importance of integrating customary land tenure systems into formal legal frameworks. Ghana actively engaged traditional leaders and communities to ensure inclusion while digitizing records under the Land Administration Project (LAP). The experience highlights the need for digital systems to take cultural and social ownership practices into account. Ghana's lessons for Nigeria emphasize the importance of maintaining community participation, encouraging cooperation among stakeholders, and striking a balance between formal and customary rights.

Singapore: Comprehensive Land Data Management and Urban Planning

Singapore's digital management system combines strategic urban planning with cutting-edge technology. The city-state guarantees accurate land use planning, real estate valuation and sustainable urban development through tools such as 3D cadastral mapping and real-time spatial databases. Singapore's success shows the value of linking digital land records to broader national development goals such as housing, infrastructure and environmental planning. Nigeria can support sustainable growth and urbanization by integrating technology and digitalization into long-term national plans.

Broader Insights from International Experiences

The experiences from Ghana, India, Sweden, Estonia, Rwanda and Singapore provide additional insights for Nigeria. These findings are discussed below**:**

i. **Political Commitment and Policy Alignment**; strong leadership and clear policy direction are essential for successful implementation of digital land systems.

ii. **Technological Integration**; leveraging advanced technologies such as GIS, block chain, satellite imagery and cloud computing ensures accuracy, efficiency and security.
iii. **Institutional Efficiency**; establishing a single, transparent agency for land administration minimizes duplication, bureaucratic delays and corruption.
iv. **Stakeholder Engagement**; active involvement of traditional leaders, local communities and private sectors players fosters trust and inclusivity.
v. **Cost-Effective, Phased Implementation**; a phased rollout of digitization, beginning with pilot programs, ensures scalability and adaptability to local contexts.
vi. **Data Integration and Accessibility**; Cross-sector collaboration will be improved, governance and service delivery will be improved and land records will be linked to national databases. Adopting these broader guidelines will help Nigeria overcome its current obstacles and create a strong, open and inclusive digital management system.

Policy Recommendations

To address Nigeria's challenges and leverage global lessons, the following recommendations are proposed**:**

1. **Stakeholder Engagement:** To integrate customs into digital records, work with local communities and traditional leaders. Promote public-private partnerships (PPPs) for funding and expertise.
2. **Financial Sustainability:** Increase funding allocations for land digitization. Look for foreign funding from institutions like UN-Habitat and the World Bank.
3. **Monitoring and Evaluation:** Provide a solid framework for tracking progress, evaluating performance, and guaranteeing accountability.
4. **Investing in Digital Infrastructure:** Increasing internet connectivity and setting up secure data centres are important first steps for digitizing land management effectively (Milala, Ishiyaku & Ali, 2019). Increasing funding for ICT infrastructure and dependable power is crucial, especially in rural areas.Prioritize investments in electricity, internet connectivity and cloud-based data storage systems. Employ cutting-edge technologies such as block chain, GIS and satellite mapping. Capacity building, training land managers, surveyors and local governments on digital tools. Collaborate with international organizations and universities to provide technical assistance.
5. **Modernizing Legal and institutional Frameworks**: A modernized legal framework that supports digital records as legally binding would reduce legal ambiguities and facilitate digital transitions (Thontteh & Omirin, 2015). It is imperative to update laws to accommodate digital processes, such as digital signatures and data privacy protections. The Land Use Act of 1978 to support digitization and accommodate customary land tenure. To establish a National Land Digitization Authority to centralize polices and implementation.
6. **Capacity Building and Training**: Training government employees, surveyors, and community leaders on digital processes will be crucial for effective implementation (Abolade *et al*., 2018). Government staff should receive training in digital record-keeping and management.
7. **Private-Public Partnerships**: Working with private technology firms can bring additional expertise and resources.
8. **Public Awareness and Education**: Initiatives to educate the public on the advantages and security of digital land records can build trust and facilitate wider adoption (Adesola, 2024).

Conclusion

Nigerian land management digitization faces several obstacles, such as public mistrust, administrative opposition, and technical constraints. Nevertheless, these difficulties are outweighed by the possible advantages, which include improved legal safeguards, shortened transaction times, and greater transparency. Nigeria can establish a digital land management system that is secure, effective and sustainable by making infrastructural investments, revising regulatory frameworks, and raising public awareness. In addition to promoting social stability and enhancing land tenure security, such a system would have long-term positive effects on the economy and represent a major advancement for the country.

Digitalizing land management in Nigeria is a critical path to eliminating inefficiencies, promoting tenure security and driving economic growth. Lessons from Rwanda, India, Sweden, Ghana, Estonia and Singapore demonstrate the transformative impact of technology, strong political will and institutional reform. Nigeria can create a transparent, secure and sustainable digital land management system that is in line with international best practices by putting the policy recommendations in this paper such as capacity building, infrastructure investments and legal reforms into practice.

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