REPUBLIC OF KENYA

REPORT ON ELECTRONIC LAND TRANSACTIONS, REGISTRATION, CONVEYANCING AND OTHER RELATED ACTIVITIES UNDER THE LAND REGISTRATION ACT, 2012 THE LAND ACT, 2012 AND THE COMMUNITY LAND ACT, 2016

PRESENTED TO

FARIDA KARONEY, OGW
CABINET SECRETARY
MINISTRY OF LANDS AND PHYSICAL PLANNING

PRESENTED BY

ERIC NYADIMO
CHAIRMAN

FEBRUARY 2019

Republic of Kenya

TASKFORCE ON ELECTRONIC LAND TRANSACTIONS, REGISTRATION, CONVEYANCING AND OTHER RELATED ACTIVITIES UNDER THE LAND REGISTRATION ACT, 2012 THE LAND ACT, 2012 AND THE COMMUNITY LAND ACT, 2016

LETTER OF TRANSMITTAL

Ref. DT/MOLPP/122/0119 **Date: 1st February, 2019**

Farida Karoney, OGW
Cabinet Secretary
Ministry of Lands and Physical Planning
NAIROBI

Dear

RE: TASKFORCE REPORT ON ELECTRONIC LAND TRANSACTIONS, REGISTRATION, CONVEYANCING AND OTHER RELATED ACTIVITIES UNDER THE LAND REGISTRATION ACT 2012, THE LAND ACT, 2012 AND THE COMMUNITY LAND ACT, 2016.

The Taskforce appointment vide Gazette Notice No 7859 of 3rd August, 2018 by yourself in respect of the above subject refers.

We are glad to inform you that the Taskforce has completed its task as manifested in the Taskforce Report and Draft Guidelines duly annexed herewith for your humble review and action.

Yours Faithfully,

……..
ERIC NYADIMO, MISK
CHAIRMAN

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LIST OF ACRONYMS

AAK	Architectural Association of Kenya
AFIS	Authoritative Control Point Information System
ALKIS	Automated Real Estate Cadastre Information System
ASAL	Arid and Semi-Arid Lands
ATKIS	Topographic Cartographic Information System
CAMA	Computer Assisted Mass Valuation System
CAPS	Computerised Application Processing Systems
CAS	Chief Administrative Secretary
CEC	County Executive Committee
CoG	Council of Governors
CORS	Continuous Operating Reference System
CRM	Citizen Relationship Management
CS	Cabinet Secretary
CSO	Civil Society Organization
DBMS	Database Management Systems
DCDB	Digital Cadastral Database
DLA	Director Land Administration
DMS	Document Management System
DOS	Director of Surveys
DP	Development Plan
DSDM	Dynamic Systems Development Method
eDAMS	Electronic Development Application Management System
EDMS	Electronic Document Management System
FAO	Food and Agriculture Organization
GBO	Grundbuchordnung
GELIS	Ghana Enterprise Land Information System
GIS	Geospatial Information System
GLA	Government Land Act
GNSS	Global Navigation Satellite System
GOK	Government of Kenya
GOK	Government of Kenya
GPS	Global Positioning System
HMLS	Her Majesty's Land Registry
ICT	Information Communication Technology
ILMIS	Integrated Land Management and Information System
IPPD	Integrated Payroll and Payroll Database
IPRS	Integrated Population Registration System
ISK	Institution of Surveyors of Kenya
ISN	Integrated Survey Network
ISO	International Standards Organization
IT	Information Technology
KARMA	Kenya Association of Records Managers and Archivists
KBA	Kenya Bankers Association

KeNHA	Kenya National Highways Authority
KEPSA	Kenya Private Sector Alliance
KeRRA	Kenya Rural Roads Authority
KHRC	Kenya Human Rights Commission
KICA	Kenya Information Communications Act
KIP	Kenya Institute of Planners
KNSDI	Kenya National Spatial Data Infrastructure
KPDA	Kenya Property Development Association
KRA	Kenya Revenue Authority
KURA	Kenya Urban Roads Authority
LADM	Land Administration Domain Model
LAIS	Land Administration Information System
LAP	Land Administration Project
LAPSSET	Lamu Port-South Sudan-Ethiopia-Transport Corridor
LDGI	Land Development and Governance Institute
LIMS	Land Information Management System
LINZ	Land Information New Zealand
LRA	Land Registration Act
LRRA	Land Registration Reform Act
LRSP	Land Reform Sector Programme
LSK	Law Society of Kenya
LTA	Land Titles Act
LTR	Land Tenure Regularization
MoLPP	Ministry of Lands and Physical Planning
MPAC	Municipal Property Assessment Corporation
MZO	Ministry Zonal Office
NCPWD	National Council for Persons with Disability
NEMA	National Environmental Management Authority
NLC	National Land Commission
NLIMS	National Land Information Management System
NLIS	National Land Information System
NSDI	National Spatial Data Infrastructure
NTC	National Titling Centre
OTP	One Time Password
PDF	Portable Document Format
PDOK	Public Services on the Map
PDP	Part Development Plan
PEXA	Property Exchange Australia
PID	Preliminary Index Diagram
PILAK	Programme for Improvement of Land Administration in Kenya
PIN	Personal Identification Number
PLIMS	Public Land Information Management System
POLARIS	Province of Ontario Land Registration Information System
PPP	Public Private Partnerships
PS	Principal Secretary

PWD	Persons with Disability
RIM	Registry Index Maps
RLA	Registered Land Act
RRI	Rapid Results Initiative
RTA	Registration of Titles Act
RTK	Real Time Kinematic
SDG	Social Development Goals
SGR	Standard Gauge Railway
SLA	Service Level Agreement
SMS	Short Message Service
SPRO	Survey Plan Records Office
SRM	Strategic Road Map
TCPAK	Town & County Planners Association of Kenya
TOR	Terms of Reference
UK	United Kingdom
UML	Unified Modelling Language
UPI	Unique Parcel Identifier
VOTS	Victorian Online Titles System
WARMA	Water Resources Management Authority

DEFINITION OF TERMS

Term	Definition
Cabinet Secretary	Means Cabinet Secretary in charge of the Ministry Lands and Physical Planning.
Cadastre	Refers to a parcel based, and up-to-date land information system containing a record of interests in land i.e. rights, restrictions and responsibilities.
Commission	Means the National Land Commission
Conveyance	The process of transferring the right of ownership of land from one person to another
Data Custodian	Refers to a person or institution responsible for the collection, maintenance and review of data and information.
Digitization	Data capture through online forms or by scanning of paper records and subsequent extraction of data for processing on a software application
e-Citizen	Official Digital payments platform that enables Kenyan citizens, residents and visitors access and pay for government services online.
e-Conveyancing	Land conveyance workflow automation through online platforms/portals and online payments
Interoperability	Refers to the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged. In other words, the ability of systems to have seamless integration.
i-Tax	An online Kenya Revenue Authority portal through which citizens are able to file tax returns
Land Information Management System	Refers to an information system that enables the capture, management, and analysis of geographically referenced land-related data in order to produce land information for decision-making in land administration and management.
National Spatial Data Infrastructure (NSDI)	NSDI refers to the technologies, policies, and people necessary to promote sharing of geospatial data throughout all levels of government, the private and non-profit sectors, and the academic community. The goal of NSDI is to reduce duplication of effort among agencies, improve quality and reduce costs related to geographic information, to make geographic data more accessible to the public.
Open Standards	Refers to standards that are publicly available, can allow integration with other applications and systems; and has various rights to use associated with it.
One Time Password	Password that is valid for only one use and for a specific period after which it becomes invalid and cannot be used again.
Records Management	Field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records
Registry	Refers to a government body that deals with registration of land and is the custodian of the land register. The registry, in this case, is under the Ministry of Land and Physical Planning.
System	Refers to Land Information Management System or in case of the whole country, a National Land Information Management System.
Taskforce	Taskforce on Electronic Land Transactions, Registration, Conveyancing and other related activities under the Land Registration Act 2012, the Land Act, 2012, and the Community Land Act, 2016.

FOREWORD

From the onset, the management of land information in Kenya has been kept and managed manually through paper records. The same applies to land registration services and conveyancing which is largely paper based. This system as then designed served its purpose well. However, over time, this system and processes have been subjected to various forms of capacity stress largely driven by rapid increase in volumes of land transactions across the country. Continued reliability on the manual system translates to increased stress on the physical records that leads to: wear and tear; production of more paper records that require more storage space; lengthy and indeterminate transaction turnaround times; loss and misplacement of records, increased cases of fraud and forgery; low productivity of service providers; and frustration to the members of the public to mention but a few.

To address the above challenges, it has become imperative for the Ministry of Lands and Physical Planning (MoLPP) to leverage on advancements made in the information technology field with a view to developing a digital Land Information Management System (LIMS). This process commenced by scanning of land records at the Nairobi and Central Registries. Subsequently, an information system accessed through the e-citizen government portal was developed and rolled out for use by members of the public. The system enabled citizens to access services on an online platform in respect to the Nairobi Registry whose records have been fully digitized. Land registry services such as conducting searches, payment of duty and revenue were made available online.

In a notice issued in April 2018, the Ministry directed that all land transactions in Nairobi be conducted on line. The Law Society of Kenya (LSK) opposed the move in a case filed in court arguing that relevant stakeholders were not consulted. Furthermore, that there was no legal framework in place for the implementation of the process; no input of the National Land Commission (NLC) or Parliament and that the process was not subjected to public participation as required by law. Following negotiations between the LSK and the Ministry, it was mutually agreed that the Cabinet Secretary do appoint a Taskforce comprising of all stakeholders with a view to recommending an approach acceptable to stakeholders. In view of this, the Cabinet Secretary appointed a Taskforce on electronic land transactions, registration, conveyancing and other related activities under the Land Registration Act, 2012, the Land Act, 2012, and the Community Land Act, 2016 vide Gazette Notice No. 7859 dated 3rd August, 2018. The taskforce was tasked to come up with a report and formulate draft guidelines for electronic registration of land transactions and conveyancing systems.

After inauguration by the Cabinet Secretary on the 27th August, 2018, the taskforce set out to execute its mandate. This involved review of relevant literature accessed from the internet and the library; meeting various stakeholders including the Ministry, NLC, Counties and other external players with a view to understanding the role played by each so as to inform the workflow process and conducting public participation exercise that involved visits to different regions within the country to get views of

the members of the public. Through the postal, physical and email address shared with the public, the taskforce received written memoranda from both members of the public and professionals. Subsequently the above process informed the zero draft report and guidelines that were shared with various stakeholders such as the Ministry, NLC, professional bodies and Counties through the Council of Governors (COG).

The whole process culminated into this final report, which among others contained schedules of proposed amendments in respect of various statutes to pave way for a digital LIMS.

Finally, the Taskforce drew key conclusions from the studies and analysis during the course of delivering its mandate and made recommendations to spearhead the digitization and e-conveyancing processes to the benefit of all stakeholders as documented in Chapter 6.

Eric Nyadimo, MISK
CHAIRMAN

ACKNOWLEDGEMENTS

The Taskforce wishes to extend its gratitude and appreciation to all persons who in one way or another contributed to the success and delivery of this exercise.

First and foremost, we express our gratitude to the Cabinet Secretary, Ministry of Lands and Physical Planning, *Farida Karoney, OGW*, for appointing this Taskforce and for the unwavering support that went a long way to enable members deliver on their mandate. Our appreciation also goes to *Dr. Nicholas Muraguri* the Principal Secretary, Ministry of Lands and Physical Planning, who not only availed financial resources to the Taskforce, but also made sure that all other critical needs were met. Support accorded by departmental heads and all the officers at the Ministry by way of shared expertise and other logistical support cannot be gainsaid.

Our utmost appreciation also goes to the Chairman, NLC, *Prof. Swazuri A. Muhammad*, the Commissioners, Chief Executive Officer, Directors and Heads of Departments of NLC for their support and contribution that ensured the success of this exercise.

To the Council of Governors, Experts and Civil Society Organizations, we are forever grateful for heeding our call to various consultative forums and for your valuable insights and proposals. In particular, we wish to thank the LSK; Institution of Surveyors of Kenya (ISK); Kenya Bankers Association (KBA); Kenya Private Sector Alliance (KEPSA); Architectural Association of Kenya (AAK); Town and County Planners Association of Kenya (TCPAK); Kenya Institute of Planners (KIP); Martien Tomberg, Regional Manager Kadaster International; Kadri Humal-Ayal, Honorary Consul of Estonia in Kenya; Land Development and Governance Institute (LDGI); Kenya Property Development Association (KPDA); Kenya Human Rights Commission (KHRC); Hakijamii; Nakuru County Public Opinion Consultative Initiative; Kenya Association of Records Managers and Archivists (KARMA); and the National Council of Persons With Disability (NCPWD) for your invaluable inputs to the Taskforce. Our public hearings across the country were largely successful due to the logistical support we got from County Governments (through their County Executive Committees (CEC) Members for Lands & Physical Planning), MoLPP County Registrars, NLC County Co-ordinators and County Commissioners.

We would also like to thank: Steve Russell *(Landonline – New Zealand);* Craig Sandy and Richard Jefferson *(Department of Environment, Land, Water and Planning – Victoria, Australia);* Dr Russell Priebbenow *(Department of Natural Resources, Mines and Energy, Brisbane - Queensland, Australia);* Dr. Daniel Steudler *(Swiss Federal Office of Topography, Switzerland);* Martin Baya *(Ministry of Transportation, Ontario, Canada)*; Graham Farrant, Victoria Abbott and Marion Depaty *(Office of the Chief Land Registrar, United Kingdom)* for their response to our questionnaires which provided useful data and information for our comparative analysis.

To the secretariat staff, namely: *Victor Ajuoga; Wahome Murakaru; Neddie Eve Mamra; Dolphine Awuor; Hannah Githuku; and Irene Kiwool,* we are indeed thankful for your helping hand in this venture.

Above all, the Taskforce acknowledges the Almighty God for the opportunity, wisdom and grace to deliver its mandate.

EXECUTIVE SUMMARY

The Constitution of Kenya, 2010 (the Constitution) vests the management and administration of land to both the National and County Governments. An effective and efficient LIMS is critical towards the fulfillment of the Big 4 Agenda and attainment of Kenya's Vision 2030. Though land is regarded as a major factor of economic activity in Kenya as manifested in the exponential increase in the value of land and increased pressure from population growth, this sector has not been spared by challenges associated with ownership. Cases of inconsistencies to do with land records and ownership documents, increased land disputes due to the opaque nature of keeping land records, increased fraud and forgery cases touching on land and other connected vices to mention but a few give an insight about the magnitude of the problem at hand.

The above challenges have informed the reform agenda of Government through the Ministry as far as management and administration of the land sector is concerned. Section 7 of the Land Act sets out this agenda well by assigning the Cabinet Secretary in charge of land to come up with a National Land Information Management System (NLIMS) in consultation with the National Land Commission. In line with this, the Ministry has therefore engaged in the processes of actualizing the above Government agenda and requirement of the law by appointing this Taskforce to come up with recommendations on how to set up NLIMS. It is expected that after the system is put in place, management of land will greatly improve thus translating to increased and quick service delivery to the citizens and increased revenue collection to the Government. The main objective of the Taskforce was to: analyze and review existing policy, legal and institutional framework with a view to formulate draft guidelines for electronic registration transactions and conveyancing system; establish status of electronic registration transactions and conveyancing system; and to formulate guidelines for electronic registration transactions and conveyancing system.

This report covers a detailed review of the efforts that have been put in place to digitize land records and conveyancing processes as well as an analysis of the prevailing legal framework. Comparative studies from other jurisdictions across the world have also been considered and the same has been taken on board by the Taskforce while arriving at conclusions and making recommendations which are anticipated to steer the envisaged reforms. To guide this process, the Taskforce also drafted guidelines, which are expected to set the pace and provide navigational acumen of the desired transformation. The draft guidelines are available in a separate document.

In the course of delivering its mandate, the Taskforce identified the need for a stable policy and legal framework to guarantee development of NLIMS in a stable environment. To facilitate compliance with emerging technologies, the Taskforce identified several statutes i.e. Land Act and Regulations; Land Registration Act and Regulations; Stamp Duty Act; and Kenya Information and Communication Act (KICA), just to mention but a few as key statutes that need review to give room for a digital environment. For instance, the Stamp Duty Act specifies the need for franking, which is a manual process that is not necessary in a digital environment owing to in-built checks and balances

that verify status of payments. Proposed amendment to the same as is evidenced in the Schedule of Proposed Amendments ensures that processing of documents electronically do not require stamping. Similarly, documents of title being one of the categories of documents, which cannot be processed electronically as is evident under the KICA, it ise proposed to have such documents excluded from the list under Section 83B of the Act so as to allow electronic processing. In addition, the Taskforce notes that the Access to Information Act set a 3-year deadline with effect from September 2016 to ensure that all government records are converted to digital records.

In terms of policy, the Taskforce identified the need to harmonize multi-agency roles citing the cases of duplicity between the MoLPP, NLC and County Governments in certain land transactions. The Taskforce also recommends the operationalization of the Community Land Act to facilitate registration and administration of community land, which covers more than 60 percent of the country.

To ensure consistency and growth in the development of NLIMS, the Taskforce recommends the need to have in place a strategic roadmap. This is informed by the fact that digitization is not an event but a process that will be rolled out over time; and further the need to streamline and consolidate the digitization process especially in cases where donors and development partners offer financial support to the cause. Furthermore, a robust data model emerged as a key component of the development of NLIMS, within a highly scalable Enterprise Systems Architecture capable of integrating with other government systems. The Taskforce also recommends that the envisaged NLIMS should consist of distinct interoperable sub-systems i.e. Cadastre, Valuation, Physical Planning, Land Adjudication & Settlement, Land Administration and Land Registry, which populate a separate public facing NLIMS database in real-time.

To ensure rapid system uptake, strategic investments in the national Information, Communication and Technology (ICT) infrastructure will need to be made in terms of: training & capacity building for officers within the MoLPP, NLC and Counties as well as professionals in the private sector; access to electricity; and reliable connectivity for the lands offices across the country. To address the concerns of data security and integrity, NLIMS will be expected to conform to international data security and disaster recovery standards.

While noting that some of these recommendations may take time to implement, the Taskforce has identified some quick wins or immediate action points that the Ministry should consider such as: amending existing laws as per the proposed schedule of amendments; rollout of digital cadastral surveys; finalize the digitization of correspondence files; facilitate electronic lodgment of documents by digitizing all forms provided under the Land Registration Act (General Regulations) 2017; and archive existing manual records. The Taskforce finally recommends the need to have in place, a Multi-stakeholder Standing Committee to steer the development, deployment and commissioning of NLIMS

CHAPTER ONE

1 INTRODUCTION AND BACKGROUND

1.1 Introduction

The Ministry of Lands and Physical Planning has hitherto maintained a manual system of land records management. Initial efforts towards computerization were disparate and driven by each of the departments within the Ministry. Details of these early initiatives have been documented in the Report on the Ministerial Land Information Systems, 2004[1]. After formulation of the National Land Policy, there was a push for a comprehensive and coordinated approach towards establishing a modern LIMS. This was to provide the core datasets for a National Spatial Data Infrastructure (NSDI) for the country. The Ministry, in consultation with stakeholders, prepared a road map for LIMS development as detailed in the Land Reform Sector Programme (LRSP), 2006. In 2007, the Rapid Results Initiative[2] programme identified some of the data capture activities listed in the workplan of some departments for fast tracking.

As part of the land reform programme and as an aspect of development and implementation of NLIMS, the MoLPP entered into a twining arrangement with the Swedish Authority for Survey and Mapping – Lantmateriet - in 2009 to implement a "Project for Improving Land Administration in Kenya (PILAK)". The overall objective of this Project was to contribute towards a Kenya with a well-functioning land administration with correct, accessible and reliable information that would contribute to social and economic development. More specifically, the purpose of the Project was "Improved procedures and operating environment at the MoLPP, leading to accessible and reliable information". The Project aimed at safeguarding land paper records; developing business and information technology architecture; modernizing the geodetic network; parcel identification reform; developing a land rent collection system; conversion of titles from Government Land Act (GLA), Registration of Titles Act (RTA) and Land Titles Act (LTA) to the Registered Land Act (RLA)[3]. It was also meant to develop other land administration systems and creating public awareness. The components of the project were to be

[1] Development partners have been supporting the land reform process in Kenya for some years, including the Policy Formulation Process and the preparation of the implementation framework for the Land Reform Support Programme (IF – LRSP) in October 2006, which set out a framework for further support from August 2006 to May 2009. LRSP was restructured as a Land Reform Project and an implementation Project Document was prepared to guide implementation and funding agreements over a two-year period (October 2007 to September 2009).

[2] Includes: Reconstruction of GLA Volumes; Property Valuation Database; Physical Development Plan; Cadastral Survey Plans; File Tracking System for Settlement Plot Files; Document Management System for Land Records (Deed Files, Land Rent Cards and Green Cards); Land Rent Information Database; Settlement Fund Trustee Billing System; Land Information for Informal Settlements; KNSDI metadata discovery facility; Physical Development Plan Production; and Digital Topographic Map and Digital Township Map Production as well as Digital Photogrammetry.

[3] These Acts i.e. GLA, RTA, LTA and RLA have since been repealed.

implemented within a period of three years, that is, from 2009 to 2012. The current state of the land management system does not, however, exhibit success that may have been intended.

Similar efforts by the NLC carried prior to 2016 when amendment to the Land Act shifted the responsibility of setting up a Land Information Management System to the Cabinet Secretary, Ministry of Lands and Physical Planning, did not bear much fruits on account of the process having been at infancy stage. However, what the NLC went on to develop in respect to public land i.e. a Public Land Information Management System (PLIMS) is now complete and is awaiting integration with land parcel data from Survey of Kenya and subsequent roll out.

More recently, the Ministry commenced on a programme of automation and digitization of the land registries across the country. The initiative was designed to ensure efficient and effective service delivery, enhance access to information, increase customer confidence, reduced business timelines, and enhanced revenue collection. Major activities involved in the digitization of land registries have included: implementation of local area networks; establishment of interconnectivity between the registries and Ardhi House; Setting up of ICT equipment, that is, desktop computers, network printers, servers, scanners and photocopiers; capacity building of Registry staff; conversion of analogue records to e-records through scanning of the green cards, white cards and parcel files; Indexing of all scanned images for serialization; data extraction from green cards and white cards; verification of the data captured; uploading verified data to the Electronic Document Management System (EDMS) for online transactions; training of the officers on online transactions; and online transaction of the registration process.

Most of the computerization projects within the lands sector have delivered what could be termed as proof of concept or initial implementation projects that are not robust and which do not offer adequate operational solutions. Many of these systems are standalone solutions either due to the choice of the Database Management System (DBMS) or lack of interconnectivity between departments.

1.2 Current Status

Kenya lacks a digital LIMS, a fact that has contributed to several problems. The present manual system seems to have been tailored to support only land registration. It only contains information related to the dimensional measurements of a land parcel and is largely oriented for internal use by the MoLPP to the extent that the present system could be mistaken as having been designed purely for the producer of the information rather than for the benefit of the user**.**

Kenyans expect various agencies charged with land matters to leverage on information technology to improve service delivery. The system is expected to, among other things, reduce bureaucracy and

corruption, improve on the turnaround time needed for delivery of service, increase transparency and openness, increase revenue collection for government through the online payment, improve on security, and save money spent on logistics since services will be virtually available.

1.3 Weaknesses of Current System and Need for Change

1.3.1 Poor Land Records Management

The Ministry has accumulated massive land information records, dating back to over 100 years. These records have since increased to unmanageable proportions largely due to continued use of outdated manual systems, which is both inefficient and time consuming. The current system is beset with inadequate storage which hampers cross-referencing of records and constrains the orderly and timely updating of the databases in use. In this state, data and information are not easily accessible thus likely to lead to wrong decisions and unreliable outcomes. This challenge was noted by the Standing Committee on e-Government which on 11th May 2008 directed the MoLPP to establish a Taskforce to spearhead the automation of the entire land records.

1.3.2 A Non-Integrated Approach

The lack of collaboration between the various spatial information stakeholders across the country results in duplication in the management of land information systems. This problem arises because spatial information is being collected and or maintained by different government organizations. The crucial aspect is that all the databases used by the various organizations are supposed to be based on the cadastre maintained by the Director of Surveys. The obvious resultant effects of this kind of arrangement include data redundancy and wastage of resources. Even in instances where digital databases have been created, standard data sets have not been agreed upon. Lack of a standard data model creates problems in the integration of the data into one common database.

1.3.3 Opaque to current advances in Technology

In its present state, the LIMS has been slow in adopting new technologies. Surveyors are still required to present their work using computational procedures that do not conform to technological advancement. This has forced surveyors who use relatively new technologies such as Global Navigation Satellite Systems (GNSS) or Total Stations, to convert the electronic data to paper (analogue data) before presenting their work. The process of conversion is not only time consuming but is also prone to errors. There is therefore need to change to digital technology to improve on efficiency and effectiveness.

1.3.4 Inefficient System Administration

The administration of the current LIMS is highly centralized and bureaucratic. This leads to delays in land transactions including the processing of survey documents, issuance of title deeds and registration of documents. The processing of cadastral surveying documents that support registration of land, for

instance, takes an average of six months from the time of survey to the production of deed plans or amendment of Registry Index Maps (RIM).

1.3.5 Low Cadastral Coverage

Kenya has about 20% of its land covered in the formal cadastral (fixed boundaries) system. This is complicated by informal land tenure in most urban areas and community land ownership. There is an urgent need for the government to fast track the adjudication programme in the rest of the country in order to bring all the land onto the register[4].

1.3.6 Efforts to Address the Challenges

To address the aforestated challenges, it became imperative for the Ministry to leverage on advancements made in the information technology field with a view to developing a digital LIMS. This process commenced by reorganizing and scanning of land records at the Nairobi and Central Registries. Subsequently, an information system accessed through the e-citizen online portal was developed and rolled out. The system enabled citizens to access services in respect to the Nairobi Registry whose records have been fully digitized. Land registry services such as conducting searches, payment of duty and revenue were made available online.

The above partial migration to the digital platform was, however, disputed by the LSK through a case filed at the High Court. The premise of the case is that LSK and the members of the public were never consulted in the process of developing the information system and its eventual rollout. Following negotiations between LSK and the Ministry, the Cabinet Secretary appointed a Taskforce, vide Gazette Notice[5] No. 7859 dated 3rd August 2018 with a mandate to study and review the Land Registration Act, 2012 and the Land Registration (General) Regulations 2017 as well as land sector related laws with a view to formulate guidelines for electronic registration, transactions and conveyancing systems.

1.4 Terms of Reference

The terms of reference (ToR) for the Taskforce were to:

a) Analyze and review existing policy, legal and institutional framework with a view to formulate guidelines for electronic registration transactions and conveyancing system;
b) Establish status of electronic registration transactions and conveyancing system; and
c) Formulate guidelines for electronic registration transactions and conveyancing system.

[4] A case of reference is the system in the United Kingdom (UK) where the general boundary concept holds sway and the coordinates in the map do not have legal significance but are used to develop the land information system.
[5] Annex 11

1.4.1 Interpretation of ToR

The Taskforce interpreted its ToR as follows:

a) To review existing systems and make recommendations to address gaps and way forward in the establishment and operationalization of an integrated NLIMS so as to satisfy the users, stakeholders and the general public;
b) To outline a detailed end to end workflow for NLIMS;
c) To identify and review the laws applicable to the implementation of electronic registration of transaction and conveyancing system, and those that hinder the same with a view to proposing suitable changes; and
d) To prescribe draft rules and procedures of electronic conveyancing within the law as well as provide guidelines for the establishment of NLIMS.

1.5 Methodology

The methodology adopted by the taskforce ranged from: desktop research[6] and reviews of different information materials; interviews (of various stakeholders); receipt and review of memoranda and correspondence from all categories of stakeholders; engaging experts and various professionals; and public hearings at various parts of the country.

Desktop research and analysis was important when it came to establishing the background and existing comparatives seen as an opportunity to borrow from existing best practices. This involved the review of the available data from the land registries, government departments, institutional reports, published articles, books and the information from the internet.

An email address - digitizationtaskforce@ardhi.go.ke - was set up specifically for the Taskforce through which stakeholders and members of the public were advised to send their views and proposals through written memoranda. In addition, a consultative forum bringing together members of professional bodies[7] was held from 17th to 18th of September 2018. Views received from the expert forum have enriched this report.

Other engagements were as follows:

a) Public participation hearings[8] were conducted from 2nd to 11th October 2018 across the country. The public was informed of the public participation forums through newspaper notices, National Government administrators at county levels and county government administration.

[6] The information was gathered through primary and secondary data collection.
[7] ISK, KBA, KEPSA, LSK, AAK, LDGI, KPDA, TCPAK, and KIP.
[8] The Taskforce approached this exercise in three groups to enable a wider coverage of collecting views and recommendations across the country.

b) Meeting with various County Government Officials (including CEC Members for Lands and Physical Planning; Land Surveyors; and Physical Planners) held on the 26th of September 2018.
c) A further engagement with the CEC Members in charge of Lands & Physical Planning was held on the 2nd of November 2018 in Nairobi.

The Taskforce conducted a series of validation meetings on the interim report and draft guidelines as follows:

a) Ministry of Lands and Physical Planning and the National Land Commission - 11th December 2018;
b) Physical Planning - 8th January 2019;
c) Land Valuation - 9th January 2019;
d) Land Administration, Land Adjudication & Settlement - 10th January 2019;
e) Law Society of Kenya (LSK) - 15th January 2019;
f) Professional Bodies and Civil Society Organizations - 16th January 2019; and
g) County Governments - 17th January 2019.

These validation meetings sought to verify the information gathered, build consensus on the issues under consideration and polish the report and draft guidelines.

1.6 Justification and Relevance

Technological advancement and the global move towards digitization of land records, informed the decision to establish a digital LIMS in Kenya. The digital LIMS will provide an efficient and effective land administration system as envisaged under Article 60 of the Constitution of Kenya. Given that land plays a pivotal role in the achievement of the Sustainable Development Goals, the Kenya Vision 2030 and the Big 4 Agenda, one cannot overemphasize the importance of establishing an Enterprise[9] LIMS, upon which all land administration and management are anchored.

Advances in ICT and Geographic Information Systems (GIS) continue to change the way in which information is structured, stored, managed, delivered and used. New capabilities for data collection, storage and processing, together with the expanding requirements of users continue to direct attention to the need for improved land information management strategies. Already, user needs have fostered developed countries to review their land administration systems.

[9] An Enterprise system is an integrated system available to an entire organization or across organizations in order to allow large number of users to manage, share, and use spatial data and related information to address a variety of needs, including data creation, modification, visualization, analysis, and dissemination.

The proper management of land in Kenya is crucial for the attainment of economic growth, and poverty reduction. Without an efficient LIMS, managing the flow of land from those who own it to those who need it for development becomes very difficult both for governments and for private developers. The success of a digital LIMS is highly dependent on the information structure, analysis and conceptual data modelling. Within the realm of a LIMS, the data including the data model, has the longest life span and is the most expensive. These, however, hardly get priority during LIMS establishment, especially when compared to the software component. It is this issue that this report seeks to redress. Data modelling[10] is considered a basic tool facilitating appropriate systems development and reengineering. Modelling also forms the basis for meaningful communication between different (parts of the) systems. Data modelling is, therefore, instrumental to the establishment of a digital LIMS; it would fill in legislative gaps and document emerging relationships between man and land, thus, improving the integrity of the database by maintaining logical, temporal and topological consistency.

There is, thus the need to improve the present LIMS to make it simple, secure, efficient and up to speed with modern and emerging technologies. The result should be a solid foundation in an integrated digital land records system, which would be important for the prompt and comprehensive land administration, land management and rational land use planning. The establishment of a digital LIMS for Kenya will offer an invaluable contribution towards the integration of the LIMS into NSDI. This will in turn ensure effective, efficient and transparent service delivery to Kenyans. A systematic data modelling approach is, therefore, required for determination of requirements, analysis, design and implementation of a digital LIMS in Kenya. This approach would ensure consistency within and between phases of development thus avoiding gaps and mismatches.

1.7 Organization of the Report

This report is organized into six chapters. Chapter 1 provides a general introduction. Chapter 2 presents an analysis of the legal framework and the amendments that are necessary to institute electronic land transactions and conveyancing. Chapter 3 presents comparative studies made on other countries that have implemented electronic land transactions and conveyancing or those that are in the process of implementing the same. Chapter 4 presents the report on the Taskforce findings from stakeholder consultations as well as public participation. Chapter 5 gives an overview of the land transactions and analyses the same to identify the actors and the processes. Chapter 6 presents the conclusions and recommendations. The Annex section contains associated reference materials that have been used to support the compilation this report.

[10] Data modeling refers to the analysis of data objects and their relationships to other data objects. Data modeling is often the first step in database design and object-oriented programming as the designers first create a conceptual model of how data items relate to each other.

CHAPTER TWO

2 LEGAL ANALYSIS

2.1 Introduction

The entrenchment of an electronic LIMS cannot exist in isolation without the necessary legal framework. The switch to this system should, therefore, be preceded by an accommodative legal environment. This requires a review of the current legal framework to ascertain whether or not it facilitates electronic transactions and if it contains provisions which impede the switch to electronic LIMS. In view of the foregoing, the Taskforce reviewed the land sector statutes and related laws and has, consequently proposed amendments as per the Schedules for Proposed Amendments. This Chapter highlights the statutes reviewed and proposed amendments.

2.2 The National Land Policy

The National Land Policy was passed in 2009. The policy addresses issues of land management in Kenya and it, particularly, recognizes security of tenure for all categories of residents. To achieve this, the policy recognizes the need to improve the quality and quantity of land information through computerization both at the national and local levels. This is because information on land in Kenya is currently manually held, thus, occasioning inefficiency, delay, fraud, and loss of revenue. The policy proposes establishment of an efficient LIMS, which is computer-based, efficient, user friendly, accessible, affordable, transparent and gender sensitive. The current process of digitizing LIMS is, therefore, in line with the National Land Policy.

2.3 The Constitution of Kenya, 2010

Chapter Five of the Constitution is dedicated to the Land and Environment sector. It prescribes that land be held and managed in a manner that is equitable, efficient, productive and sustainable. Particularly, equitable access to land; security of land rights; sustainable and productive management of land resources; sound conservation and protection of ecological areas; elimination of gender discrimination; alternative dispute resolution, should be the principles to guide land management through a deliberate national land policy which may be subject to review from time to time.

For ease of land management, the Constitution classifies land into three categories, that is, public, private, and community land. In this respect, Article 67 creates the National Land Commission for the

purpose of managing public land among other functions. Further, the Constitution mandates Parliament to legislate on land by revising, consolidating and rationalizing existing land laws. The enactment of the Land Registration Act, 2012; the Land Act, 2012; the Community Land Act, 2016 among other statutes was in line with this mandate.

2.3.1 The Land Act, 2012

This statute gives effect to Article 68 of the Constitution that provides for revision, consolidation and rationalization of land laws, and sustainable administration and management of land in Kenya. Perusal of the Act does demonstrate under Section 6 (h) that electronic processes are recognized by providing that Cabinet Secretary has power to coordinate the development and implementation of a National Land Information Management System (NLIMS) in collaboration with the National Land Commission (NLC). Coming up with an electronic systems is, thus, a function that needs to be exploited.

Section 38 of the Act provides that no suit can be brought against any contract unless the contract is in writing, signed and witnessed by a competent witness. There is need to amend this section so as to accommodate contracts entered electronically (see schedule of proposed amendments).

2.3.2 Land Registration Act, 2012

The Land Registration Act, 2012 has revised, consolidated and rationalized the registration of titles to land by repealing the Indian Transfer of Property Act, 1882; the Government Lands Act (Cap 280); the Registration of Titles Act (Cap 281); the Land Titles Act (Cap 282); and the Registered Land Act (Cap 300).

Electronic maintenance of documents at the Land Registries and access to electronic registers is appreciated in the Land Registration Act (Sections 9 and 10). Section 9(1) (b) and (c) provides that the Registrar shall maintain the register and any document required to be kept under this Act in a secure, accessible and reliable format including electronic files and an integrated land resource register. Section 10 guarantees the public access to the register.

The aforementioned requirements have been escalated by the Land Registration (General) Regulations, 2017 specifically Regulation 90. Under this Regulation, provisions have been made on a number of issues in relation to electronic transactions. Issues like the keeping of records in electronic form, transactions in electronic form, setting up of an electronic system, access of electronic platform, electronic payment system, recording and registration in an electronic register have been set out for implementation by the Cabinet Secretary. The Cabinet Secretary is, therefore, given leeway to formulate guidelines to entrench an electronic system of conducting land transactions.

A careful review and analysis of the Land Registration Act, however, reveals that there are a number of provisions that may need amendment so as to allow a seamless flow of transactions electronically as highlighted in the Schedule of Proposed Amendments.

2.3.3 The National Land Commission Act, 2012

The National Land Commission is established under Article 67 of the Constitution. The National Land Commission Act makes further provisions on the functions and powers of the Commission and other connected purposes. One of the functions assigned to the Commission under Section 5 of the Act is to develop and maintain an effective land information system for management of public land.

2.3.4 Community Land Act, 2016

The Community Land Act gives effect to Article 63(5) of the Constitution to provide for the recognition, protection and registration of community land rights; management and administration of community land; the role of county governments in relation to unregistered community land, and for connected purposes. The Act provides for the recognition, protection and registration of community land rights; the management and administration of community land; and, the role of county governments in relation to unregistered community land and related matters. Section 10 of the Act provides that there shall be maintained for each registration unit, a community land register in accordance with Section 8 of the Land Registration Act, 2012.

Essentially, the Community Land Act secures the interest of communities as far as ownership of community land that is under control of a community is concerned. The interest of communities is secured by bringing all community land under a registration regime as provided for by the Land Registration Act. This process involves registration of communities and putting in place the Community Land Management Committees, by the Community Land Registrar as provided under Section 7 of the Community Land Act. What then follows is the process of recognition and adjudication of community land as provided under Section 8 of the Act. This involves survey of the all unregistered community land and eventually bringing it under registration as provided under the Land Registration Act. This entire process and how it should be achieved is comprehensively provided under the Community Land Regulations, 2017.

The Community Land Regulations were amended and published in September 2018. There is a general concern that implementation of the Community Land Act through the Community Land Regulations has delayed against expectations of communities and even some County Governments. There is, therefore, need to commence the process of implementing the Act by, inter alia, conducting public awareness,

recognition and adjudication of community land, designation of Land Registrars as Community Land Registrars and eventual registration of community land.

2.3.5 The Kenya Information and Communications Act, 2013

The Kenya Information and Communications Act provides for electronic commerce and for connected purposes. Specifically, under Section 83G, it is provided that where any law provides that information or other matter shall be in writing then - notwithstanding anything contained in such law - such requirement shall be deemed to have been satisfied if such information or matter is rendered or made available in an electronic form; and accessible so as to be usable for a subsequent reference. The electronic format of doing documents and data has, through this Act, been made to rank the same as if such documents or data are physically rendered. It is therefore instructive to note that section 83G supersedes contrary provisions of other statutes.

However, under Section 83B, any rule or law requiring writing or signatures in the creation or execution of a will; negotiable instruments; and documents of title will be exempt from the provision of 83G unless the Minister[11] by order modifies by removing or adding any class of transactions or matters. Processing of electronic titles may not be possible unless title documents are excluded from the list of class of transactions by the Minister hence the proposed amendment as captured in the Schedule of Proposed Amendments.

Under Part VI, functions of the regulator (the Communications Authority of Kenya) in relation to transactions and cyber security; licensing requirements; formation and validity of contracts entered electronically; recognition of parties of electronic messages; attribution of electronic records; the manner and acknowledgement of receipt of electronic messages; manner of securing electronic records; compliance with requirement for a signature; legal recognition of electronic signatures; under what circumstances a system can be declared a protected system; regulations for electronic signatures; use of electronic records and electronic signatures in Government and its agencies; electronic gazette, among others, have been provided.

It is worth noting that even though electronic signatures and advanced electronic signature are provided for in the Act, the same cannot be actualized unless the Cabinet Secretary for ICT develops regulations in line with Section 83R. Under this section, the Cabinet Secretary prescribes the process of making an

[11] Minister here means the Cabinet Secretary in charge of Information Communication Technology

electronic signature. Development of these regulations will allow for seamless migration to electronic land transactions.

2.3.6 The Law of Contract Act (CAP 23)

The law that regulates the making of contracts between parties in Kenya is the Law of Contract Act. Section 3(3) of the Act is proposed for amendment as per the Schedule of Proposed Amendments.

2.3.7 Stamp Duty Act (CAP 480)

The Stamp Duty Act provides for the procedure and requirements for stamping instruments. Currently, the stamp duty fees are payable online through the e-citizen portal. The fixing of the stamp denoting payment of the duty is, however, done manually by presentation of the documents to the registry.

Under Section 2 on interpretation, 'stamp' means a stamp embossed or impressed by means of a dye or a franking machine or adhesive stamp; and *stamped* and *duly stamped* ***"mean that the instrument referred to is stamped with the required and sufficient stamp and that the stamp has been cancelled, if necessary, in accordance with the provisions of this Act".***

This implies that documents must be physically availed at the registry for stamping. There is need, therefore, to expand this interpretation to cover instruments processed and duty paid for electronically.

2.3.8 The Evidence Act (CAP 80)

The Evidence Act makes provisions and recognizes use of electronic evidence in Kenya. In detail, Section 78A of the Act sets out conditions for the admissibility of electronic evidence. This Act reflects the enthusiasm of Government in creating and embracing the digital environment. The provisions of this Act as far as evidence is concerned, therefore, resonate well with this Taskforce.

2.3.9 Survey Act (CAP 299)

The Survey Act provides for surveys and geographical names and the licensing of land surveyors, and for connected purposes. A review of the Act reveals that there is need to amend Sections 5, 30 and 32 to allow for an electronic LIMS.

2.3.10 The Sectional Properties Bill, 2018

The Sectional Properties Act that came into effect in 1987 is currently under review and thus the Taskforce also considered the Sectional Properties Bill, 2018 that has gone through cabinet approval for presentation to Parliament. Both the Act and the Bill provide for the division of buildings into units to be owned by individual proprietors and common property to be owned by proprietors of the units as tenants in common and to provide for the use and management of the units and common property for connected purposes.

Since the individual units in a building are defined in a sectional plan, preparation of the sectional plan and registration thereof are critical elements informing registration of sectional interests in a building. Part II of the Bill is dedicated to this. Under this part, a sectional plan is prepared by a surveyor on confirmation of ownership of the parcel of land the plan will apply. Attributes preceding registration of a sectional plan is that the same should describe two or more units and that the same should be in quadruplicate. To aid electronic processing and registration, it is necessary to require the sectional plan to be prepared in electronic form. This necessitates an amendment to Section 4(2) of the Bill to accommodate the electronic version of the sectional plan as a pre-requisite for registration of the sectional plan. The same will apply to Section 9(1) of the Bill, which sets out the requirements of sectional plans

2.3.11 The Computer Misuse and Cyber Crimes Act, 2018

Digitization of land sector operations and transactions in Kenya obviously comes with unique challenges and risks. Safeguarding operations under the digital environment is critical hence the Computer Misuse and Cyber Crimes Act which seeks to guide and regulate electronic transactions in Kenya. Safety of the systems as far as human interface is concerned is guaranteed by this Act. Risks associated with digitization of transactions and computer related offences, investigation, prosecution, sanctions and penalties are provided in the Act. This statute is, therefore, critical since it serves as a deterrent to those who may have the intent of committing computer related offences such as unauthorized interference, unauthorized interception, cyber-espionage and phishing attacks. The least liability attaching to anyone convicted of a crime under the Act is a fine or imprisonment or both.

2.3.12 Registration of Documents Act (CAP 285)

The Registration of Documents Act provides for registration of documents conferring, or purporting to confer, declare, limit or extinguish any right, title or interest, whether vested or contingent to, in or over immovable property in Kenya. The statute in its current form does not envisage digital registration of instruments hence there is need to incorporate filing of documents electronically.

Section 7 provides circumstances under which the Registrar may refuse to register a document. Amending the same to include electronic documents will suffice. Section 19 sets out the type of books to

be kept by the Registrar. The Taskforce recommends an amendment of the same to allow keeping of electronic books to accommodate electronic registration of documents.

2.3.13 Access to Information Act, 2016

Access to Information Act gives effect to Article 35 of the Constitution, which provides that every citizen has the right of access to information held by the State; and, information held by another person and required for the exercise or protection of any right or fundamental freedom. The Act creates a framework to facilitate access to information held by public and private bodies and promote routine and systematic information disclosure by both public service and private sectors.

The right of access to information under the Act is, however, not absolute as Section 6 of the Act places certain limitations to the enjoyment of this right. Limitations include disclosure of information that is likely to undermine the national security of Kenya; impede the due process of law; or endanger the safety, health or life of any person.

Section 17(3)(c) of the Act, which resonates well with the mandate of the Taskforce, requires that every public entity shall not later than three years from the date[12] from which this Act begins to apply to it, computerize its records and information management systems in order to facilitate more efficient access to information. This requirement by the law is critical since it is meant to fast track computerisation and switch to electronic systems in Government. The appointment of the Taskforce is, therefore, in line with the general Government policy to computerise all public records. There is therefore need to fast track the digitisation process so as to be within the timelines prescribed by the Act.

2.3.14 Physical Planning Act, 2010; Urban Areas and Cities Act, 2011; and County Governments Act, 2012

There are a number of land transactions that require the input of County Governments as far as planning is concerned. Transactions such as rates clearance certificates and development control applications are a preserve of the County Governments. It is therefore expected that these transactions should be processed electronically and be compatible with NLIMS.

The procedural law providing for development control application is the Physical Planning Act, which is currently under review. Part V of the Act has provided in detail concerning development control applications. The Part, among other things, points out the extent of the power of local authorities (now County Governments) to control development according to approved plans; development permission; manner of making development applications; approval of the same; registration of documents that touch

[12] Commencement date was 21st September 2016

on development control. The above procedures are replicated in the Physical Planning Bill that is currently before Senate.

Whereas Parts XI and V of the County Governments Act and the Urban Areas and Cities Act respectively provide for processes of planning in respect to planning authorities/cities and urban areas/sub-counties and wards, the development control procedural aspects found in the Physical Planning Act as well as the Bill are not provided for. It is generally provided under Section 104 (3) of the County Governments Act that the County Government shall designate county departments, cities and urban areas, sub-counties and wards as planning authorities of the county. Likewise, under Section 12 of the Urban Areas and Cities Act, the management of a city and a municipality shall vest in the County Government and administered on its behalf by a board; a manager or such other staff or officers as a County Public Service may determine. Further, these two statutes generally vest development control function on the County Government as well as boards and managers without providing the procedural mechanism of implementation.

Without necessarily recommending where the procedural aspect to do with development control should be anchored amongst the County Governments Act and the Urban Areas and cities Act, it is critical to have a legal framework providing for a comprehensive procedural aspect concerning development control. It is important to note that the Physical Planning Bill, though providing for a comprehensive procedure on development control, requires harmonization with the County Governments Act and the Urban Areas and Cities Act in many respects.

The procedural law providing for development control and other land transactions happening at the County level should as well require that all Counties as a unit have an e-Planning System that integrates with NLIMS.

2.3.15 Valuation for Rating Act (CAP 266) and the Rating Act (CAP 267)

Valuation for Rating Act is an Act of Parliament that empowers local authorities (now County Governments) to value land for the purposes of rates and other connected purposes. The Act applies to any area of a local authority in respect of which any rate on the valuation of land save for agricultural land. The rates in respect to land are premised on the Valuation Rolls and Supplementary Valuation Rolls that are to be prepared under Section 3 of the Act. It is required that Valuation Roll should from time to time be prepared at least once in every ten years or such longer period as the Minister[13] may approve.

[13]Minister formerly in charge of Local Government

It should be noted that this Act was enacted in 1956 and up to date the same has not been aligned with the Constitution so as to reflect the devolved system of government. Few County Governments have put in place appropriate legislation to enable them effectively value land for property rating purposes. As such, there is a vacuum in so far as Valuation for Rating Act is concerned. For this reason, the Taskforce proposes that the national rating legislation should declare counties as rating areas.

In instances where a county prepares its own valuation roll as is the case in the present scenario, it becomes impossible to have uniformity in the country. In addition, handling such exercises separately is cumbersome and time wasting. Moreover, optimum use of limited pool of experts within the country may not be realized.

A new piece of legislation on property taxation is necessary to repeal the outdated Valuation Act and Valuation for Rating Act so as to be in conformity with constitutional provisions relating to devolution. The same should be enacted at the national level.

2.3.16 The Land Control Act (CAP 302)

The Land Control Act was enacted for the purpose of controlling land transactions including sale, transfer, lease, mortgage, exchange, partition and disposal in respect to agricultural land. This law provides for the establishment of the Land Control Area, the Land Control Board, the Provincial Land Control Appeals Board and the Central Land Control Appeals Board. It also provides for the detailed application process for acquiring consent from the Land Control Board as well as the appeal process.

Section 9 of the Act provides for circumstances under which the Board will refuse to grant consent in respect of the controlled transaction. These include where the division would likely reduce the productivity of the land; or in a case where an intended disposition by way of sale, transfer, lease, exchange or partition to a person who is not a Kenyan citizen, or a private company/ cooperative society where the shareholders/members are not Kenyan Citizens.

This Act has been a subject of litigation in *Basil Criticos V Attorney General & 8 Others & 4 Others (2012) eKLR* where orders of repeal of the same were sought on the grounds that the Hansard report of 26th April 2012 shows that Parliament repealed the Act. After hearing and final determination of the case, Justice Lenaola directed the Attorney General to move with speed and address the non-repeal of the Act. This issue has not been resolved to date despite the sentiments of the Court and concerns that have come up during public participation.

The Land Control Act is meant to control land transactions such as uneconomic sub-divisions in respect to agricultural land. It is also meant to safeguard against foreigners owning agricultural land in Kenya. This notwithstanding, it is increasingly evident that purposes for which this statute was enacted have not

been achieved for various reasons. Consents processed by Land Control Boards, for instance, do not in many respects comply with the requirement of the law. The now common practices of issuing special consents do not take into account factors such as the size of sub-divisions and other imperatives that inform issuance of consents.

Article 65 of the Constitution provides that a person who is not a citizen cannot hold land in Kenya except on leasehold tenure not exceeding 99 years. Since this control aspect has been provided for in the Constitution, what is contained in the Land Control Act is rendered superfluous.

The County Governments Act and the Urban Areas and Cities Act assign planning and land control function to the County Governments. This means that counties exercise development control function in respect to agricultural land and all other types of land. The County Governments Act, nonetheless, stops short of providing for the procedural aspect in respect to control on agricultural land. Review or repeal of the Land Control Act to bring it into harmony with the Constitution and other statutes is necessary to have a streamlined agricultural land control approach that is devoid of the above anomalies.

2.4 **Proposals**

2.4.1 Migration / Conversion to one Register under the Land Registration Act, 2012

The Land Registration Act has repealed the Government Lands Act, the Registration of Titles Act; the Registered Land Act; the Land Titles Act; and, the Indian Transfer of Property Act whose existence required that different modes of keeping registers were maintained at various registries. For instance, Central and Coastal registries respectively at Nairobi and Mombasa maintain registers under GLA, RTA and LTA. They also keep registers under the Registration of Documents Act. In addition, registers under the Registered Land Act are still kept at the Nairobi Registry and other registries across the country. Though the enactment of the Land Registration Act was meant to consolidate the above registration regimes by way of a migration process as envisaged under Section 6 of the Land Registration Act and the Land Registration (Registration units) Order, 2017, the same has not been actualized. It is critical to fast track the above process since success of the electronic land registration system largely depends on the harmonized register manifest by the migration process.

2.4.2 Community Land Act, 2016

The Community Land Regulations having been amended and published in September, 2018, there is a general concern that the implementation of the Community Land Act through the Community Land Regulations has delayed against expectations of communities and even some County Governments. There is, therefore, need to commence the process of implementing the Community Land Act through

the public sensitizing exercises, recognition and adjudication of community land, designation of Land Registrars as Community Land Registrars and eventual registration of community land.

2.4.3 Regulations for Electronic Signatures

However, though electronic signature and advanced electronic signature has been provided in the Act, the same cannot be actualized without the Cabinet Secretary for ICT making regulations in terms of section 83R. Under this section, the Cabinet Secretary prescribes the process of making an electronic signature. It is worthwhile to note that such regulations contemplated under section 83R have not been made. There is need therefore to make these regulations so as to allow seamless migration to electronic land transactions.

2.4.4 Deadline to Digitise Government Records

Section 17(3)(c) of the Access to Information Act which in our view resonates well with the mandate of the Taskforce requires that every public entity shall not later than three years from the date from which this Act begins to apply to it, computerize its records and information management systems in order to facilitate more efficient access to information. The act came into operation in September, 2016. This requirement by the law is critical since it is meant to fast track computerization and switch to electronic systems in Government. In light of this, it is important to fast track the digitization process in order to meet the timelines prescribed by the Act.

2.4.5 Physical Planning Bill

The County Governments Act and the Urban Areas and Cities Act though vest development control function on Counties in line with the Constitution, the statutes have however stopped short of providing for a comprehensive procedure on how such control on developments should be done. However, we note that the physical Planning Bill in its current state do provide for a comprehensive procedure on development control. It is critical that the Physical Planning Bill be fast tracked so as to fill the current as far as development control processes are concerned.

2.4.6 Valuation for Rating Act (CAP 266) and the Rating Act (CAP 267)

Valuation for rating Act is an act of parliament that empowers local government authorities to value land for the purposes of rates and other connected purposes. The act applies to any area of a local authority in respect of which any rate on the valuation of land save for agricultural land. This Act was enacted in 1956 and up to date the same has not been reviewed to align it with the Constitution and to reflect the devolved system of Government. Few County Governments have put in place appropriate legislation to enable them effectively value land for property rating purposes. There is therefore a vacuum as far as valuation for rating Act is concerned. It is therefore proposed that the national rating legislation be enacted to apply to all Counties for the sake of uniformity in the country as far as rating is concerned. It

shall also be necessary to fast track the enactment of the Land Value Index Bill into law. The Bill seeks to provide criteria for the assessment of land value in respect of compulsory acquisition of both freehold and leasehold land.

2.4.7 The Land Control Act (CAP 302)

The Land Control Act was enacted for the purpose of controlling land transactions in respect to agricultural land including sale, transfer, lease, mortgage, exchange, partition and disposal and other connected purposes. The passing of the Constitution and advent of devolution behooves that this Act be reviewed to align it accordingly. Through litigation and pressure by many stakeholders agitating for repeal of the this Act on the ground that the same has outlived its purpose as evidenced by the Constitution on matters to do with development control of agricultural land, the same has still remained in the statute books. Further, there is evidence that the Act is prone to abuse thus leading to subdivision of land into uneconomic parcels and other related vices. There is therefore need to either repeal this Act or review the same to align it to the Constitution and other relevant statutes.

SCHEDULE OF PROPOSED AMENDMENTS

THE LAND ACT SCHEDULE OF PROPOSED AMENDMENTS			
Sec.	**Content**	**Proposed Amendment**	**Justification**
38	1) Other than as provided by this Act or by any other written law no suit shall be brought upon a contract for the disposition of an interest in land: a) the contract upon which the suit is founded: i. Is in writing ii. is signed by all the parties thereto; and b) the signature of each party signing has been attested to by a witness who was present when the contract was signed by such party. (2) Subsection (1) shall not apply to— (a) a contract made in the course of a public action; (b) the creation or operation of a resulting, implied or a constructive trust; or (c) any agreement or contract made or entered into before the commencement of this Act, provided that— (i) the verbal contracts shall be reduced to writing within two years from the date of enactment of this Act; and	Amend sub-section (2) by including contracts entered electronically as one of those sub-section 1 cannot apply to read: Contracts entered electronically and executed by parties by way of electronic signatures.	To accommodate contracts entered electronically.

	(ii) the Cabinet Secretary shall put a notice of the requirement to reduce the contracts in writing, in a newspaper of nationwide circulation.[Act No. 28 of 2016, s. 55.]		

LAND REGISTRATION ACT, 2012 SCHEDULE OF PROPOSED AMENDMENTS			
Sec.	**Content**	**Proposed Amendment**	**Rationale**
2		Insert new definition in correct alphabetical order to read: **"advanced electronic signature"** means an electronic signature which meets all the following requirements— (a) is uniquely linked to the signatory; (b) is capable of identifying the signatory; (c) it is created using means that the signatory can maintain under his sole control; and (d) it is linked to the data to which it relates in such a manner that any subsequent change to the data is detectable; "electronic signature" means data in electronic form affixed to or logically associated with other electronic data which may be used to identify the signatory in relation to the data message and to indicate the signatory's approval of the information contained in the data	To provide electronic means of authenticating and signing documents

		message;	
11	every registry shall have an official seal and every instrument bearing the imprint of the seal shall be received in evidence and shall be deemed without further proof to be issued by or under the direction of the Registrar	Make a proviso to Sec. 11 to read: Provided that instruments processed electronically by any registry shall be deemed to bear the seal of that registry.	So as to give legitimacy to instruments processed electronically.
38(1)	The Registrar shall not register any instrument transferring or vesting any land, a lease of land, situated within the area of a rating authority unless, a written statement, by the relevant government agency, certifying that all outstanding rates and other charges payable to the agency in respect of the land including rates and charges for the last twelve months and up to the date of request for transfer have been paid there is produced to the Registrar.	Add as subsection immediately after (1) to read as: Where a written statement from a rating authority is received electronically, the same shall be considered by the registrar as a valid certificate of payment of rates.	To give legitimacy to electronic certificates of payment of rates
39(1)	The Registrar shall not register an instrument purporting to transfer or create an interest in land, unless a certificate is produced with the instrument, certifying that no rent is owing to the national or county governments in respect of the land.	Add as subsection after subsection (1)-Where a certificate of clearance of rent is received electronically, the same shall be considered by the registrar as a valid certificate of clearance of rent.	To legitimize the electronic certificate of clearance of rent
39(2)	The Registrar shall not register an instrument effecting a transaction unless satisfied that any consent required to be obtained in respect of the transaction has been given	Add as subsection after subsection (2)-Where consent on use of land by the National or County government is electronically presented to the registrar, the registrar shall consider	To give legitimacy to consents processed electronically

	by the national or county government on the use of the land, or that no consent is required.	the same a valid consent.	
44	1) Except as otherwise provided in this Act, every instrument effecting any disposition under this Act shall be executed by each of the parties consenting to it, in accordance with the provisions of this section. 2) The execution of any instrument referred to in subsection (1), by a person shall consist of appending a person's signature on it or affixing the thumbprint or other mark as evidence of personal acceptance of that instrument. 3) The execution of any instrument referred to in section (1) by a corporate body, association, cooperative society or other organization shall be effected in accordance with the provisions of the relevant applicable law and in the absence of provisions on execution of instruments, the execution shall be effected in the presence of either an advocate of the High Court of Kenya, a magistrate, a	Add sub-section to Sec. 44 to read: "Where practicable, an instrument processed and executed electronically by persons consenting to it by way of advanced electronic signature shall be deemed an instrument validly executed"	

	Judge or a notary public. 4) An instrument executed outside Kenya shall not be registered unless it has been endorsed or is accompanied by a certificate in the prescribed form completed by a notary public or such other person as the Cabinet Secretary may prescribe. 5) The transferee shall in addition to executing the instrument, attach the following— (a) a copy of an identity card or passport; and (b) a copy of a Personal Identification Number certificate; (c) passport size photographs; (d) where applicable, a marriage certificate; (e) a copy of the certificate of incorporation, in the case of a corporate entity; or (f) such other identification documents as the Cabinet Secretary may prescribe.		
45	1) Subject to subsection (3), a person executing an instrument shall— (a) appear before the Registrar, public officer or other	Introduce a paragraph under subsection (3) as one of the circumstances under which the registrar can dispense with personal appearance to be paragraph c to read: If the registrar can verify that the	So as to include verification of electronic instruments

	person as is prescribed; and (b) be accompanied by a credible witness for the purpose of establishing identity, unless the person is known to the Registrar, public officer or other person. (2) The Registrar, public officer or other person shall identify the person and ascertain whether the person freely and voluntarily executed the instrument, and shall complete thereon a certificate to that effect. (3) The Registrar may dispense with verification under this section— (a) if the Registrar considers that it cannot be obtained or it can only be obtained only with difficulty and is otherwise satisfied that the document has been properly executed; or (b) if the Registrar knows the document has been	instrument has been electronically processed and executed by parties consenting to it.	

	properly executed, and shall record on the document the reasons for dispensing with the appearance of the parties.		
46	An instrument required by law to be stamped shall not be accepted for registration unless it is stamped in accordance with the Stamp Duty Act	Introduce proviso to section 46 to read: "provided that instruments stamped or deemed stamped under the Stamp Duty Act shall be accepted for registration"	To appreciate instruments processed and executed electronically and in respect of which payments are made electronically and consider them as duly stamped.

KENYA INFORMATION AND COMMUNICATIONS ACT SCHEDULE OF PROPOSED AMENDMENTS			
Sec.	**Content**	**Proposed Amendment**	**Rationale**
83B	This Part shall not apply to any rule or law requiring writing or signatures in any of the following matters— (a) the creation or execution of a will; (b) negotiable instruments; (c) documents of title. The Minister may by order modify the provisions of subsection (1) by adding or removing any class of transactions or matters.	It is proposed that the Minister should exclude title documents under subsection (2)	To include title documents processed and signed electronically

THE LAW OF CONTRACT ACT SCHEDULE OF PROPOSED AMENDMENTS			
Sec.	**Content**	**Proposed Amendment**	**Rationale**
3	(3) No suit shall be brought upon a contract for the disposition of an interest in land unless— (a) the contract upon which the suit is founded— (i) is in writing; (ii) is signed by all the parties thereto; and (b) the signature of each party signing has been attested by a witness who is present when the contract was signed by such party: Provided that this subsection shall not apply to a contract made in the course of a public auction by an auctioneer within the meaning of the Auctioneers Act (Cap. 526), nor shall anything in it affect the creation of a resulting, implied or constructive trust.	A contract rendered electronically and signed by parties by way of advanced electronic signatures shall not require attestation of witnesses, and shall be deemed a valid contract for this purpose.	To accommodate electronic contracts and dispense with requirement to have witnesses attest to contract.

STAMP DUTY ACT SCHEDULE OF PROPOSED AMENDMENTS			
Sec.	**Content**	**Proposed Amendment**	**Rationale**
2	**"stamped"** and **"duly stamped"** mean that the instrument referred to is stamped with the required and sufficient stamp and that the stamp has been cancelled, if necessary, in accordance with the provisions of this Act;	Expand the definition to include electronic documents in whose respect online payments of duty are made, to form second limb. Means that: the instrument referred to: (2) The instrument is processed electronically and duty paid electronically.	To ease processing of electronic documents by exempting them from the manual process of stamping.

THE SURVEY ACT			
Sec	**Content**	**Proposed amendment**	**Rationale**
5	(1) The Director shall have and use a seal of office bearing the impression of the badge of the Survey Department and having inscribed thereon "Survey of Kenya", and the imprint of such a seal shall be valid whether impressed or made in wax, ink or any other substance. (2) The seal of the Survey of Kenya shall not be used or affixed except by the Director or by some person authorized by the Director in writing in that behalf.	Introduce a sub-section to read- ***"Document or plans processed electronically shall be deemed to bear the imprint of such a seal and therefore valid and shall bear a security feature."***	To include electronic documents or plans
30	0. All survey plans and records to be deposited with Director and to become property of Government (1) Every surveyor who executes any survey in accordance with the provisions of this Act and of any regulations made thereunder shall send to the Director all plans, field notes and computations relating thereto, and all such	Add sub-section to read- ***"Survey plans and records electronically presented at the survey office shall be deemed duly deposited in the survey office."***	To take into account plans processed electronically

	plans, field notes and computations shall be deposited in the Survey Office and shall become the property of the Government. (2) No plan deposited in the Survey Office in accordance with subsection (1) shall be altered or amended in any way without the permission of the Director.		
32	Authentication of plans No land shall be deemed to have been surveyed or resurveyed until the plan thereof has been authenticated by the signature of the Director or of a Government surveyor authorized in writing by the Director in that behalf, or by the affixing of the seal of the Survey of Kenya.	Add sub-section to read- "***A plan which is electronically processed shall be deemed duly authenticated, signed and sealed by the director and shall bear a security feature."***	To include plans processed electronically

SECTIONAL PROPERTIES BILL, 2018 SCHEDULE OF PROPOSED AMENMDNETS			
Sec.	**Content**	**Proposed Amendment**	**Justification**
4	(2) The Registrar shall not register a sectional plan unless— (a) the sectional plan describes two or more units in it; and (b) the sectional plan is presented for registration in quadruplicate.	Add paragraph c to read as: "the sectional plan is in electronic form"	To accommodate and ease electronic processes
9	(1) Every plan presented for registration as a sectional plan under this Act shall— (a) Be described in the heading of the plan as a sectional plan (b) Shall be geo-referenced	Amend to add paragraph after (b) to read: "Be in electronic form"	

REGISTRATION OF DOCUMENTS ACT SCHEDULE OF PROPOSED AMENDMENTS			
Sec.	Content	Proposed Amendment	Justification
7	7. When registrar may refuse to register (1) The registrar may refuse to accept for registration any document in which any interlineation, blank, erasure or alteration appears, unless the persons executing the document attest with their signature or initials such interlineation, blank, erasure or alteration. (2) If he registers such document, he shall, at the time of registering the same, make a note in the register of such interlineation, blank, erasure or alteration.	Amend to introduce another subsection after sub-section (2) to read: The registrar may refuse to accept a document that is not presented in electronic form	To entrench electronic registration of documents.
19	Books to be kept by registrars The following books shall be kept in both registries— (a) register of documents of which the registration is compulsory; (b) register of documents of which the registration is optional; (c) register of reasons for refusal to register (d) register of reasons for cancellation of the registration of a document.	Amend to make this section a sub-section and thereby introduce another subsection to read: The books under (1) shall be kept in electronic form by the registrar.	To entrench electronic filing of documents.

CHAPTER THREE

3 COMPARATIVE ANALYSIS

3.1 Introduction

Many countries are increasingly are shifting away from manual handling of land records to specialized and sophisticated information processing methods. These changes are making countries to redefine their comparative advantage to reap the benefits of information and communication technology. This Chapter examines the transformation of e-platforms dealing with land transactions in selected countries to establish the context under which they were developed, how they were developed, success factors and pitfalls to guide the development of NLIMS in Kenya. The speed and scale of the changes are varied and present many challenges. Of particular concern are the risks to the security and integrity of the documents during the transformation and the value addition in the technological advances.

These reviews are laid out into three parts. Part One looks at the stages pursued, whether in partnerships, in developing the system and the subsequent management; Part Two looks into the accessibility, data security and integration with other systems; Part Three looks into the legal frameworks (enactments and/or amendments) and finally the general findings that can support or inform our situation in coming up with guidelines for developing a resilient and sustainable system. The collation of information in this Chapter is a result of a combination of desktop review and research, presentations from subject matter experts and representatives of other jurisdictions with success stories, and data collection from questionnaires filled up by selected experts in countries of interest.

This Chapter reviews case studies of New Zealand, Estonia, Netherlands, England & Wales, Australia, Canada, Singapore, Tanzania, Uganda, Ghana, Germany and Rwanda. These countries were chosen because of historical similarities with Kenya i.e. commonwealth countries with similar land tenure and registration systems or the fact that they have developed or attempted to develop LIMS. **Annex 1** shows the questionnaire that was used for these case studies while **Annex 2** lists the persons who responded to the questionnaire.

3.2 Case Studies

3.2.1 New Zealand

3.2.1.1 System Development and Management

The Land Information New Zealand (LINZ) was formed in 1996 out of the Ministry of Justice's Land Title Division and parts of the Department of Survey and Land Information. The development of the system was done in two stages. Stage one involved conversion of title records and surveys into digital form and converting all existing land titles and most survey parcels (approximately 1.4 million or 70

percent of the total) to digital form[14]. The conversion was carried out by a private company known as Electronic Data Systems (New Zealand) which partnered with a state-owned enterprise, Terralink, with the objective of bringing historic land records into the system alongside the "live" records. Stage two on the other hand focused on granting surveyors and conveyancers remote access to the electronic survey and title records maintained in the LINZ database i.e. Landonline.[15]

On completion of stage two towards the end of 2002, lawyers and surveyors were able to conduct electronic transactions directly with LINZ, in processes now known as *e-survey* and *e-dealing*. While all surveys must be lodged electronically and conveyancers are required to lodge dealings (transactions) electronically, there are some exceptions, which entail instruments that must be lodged manually, and also to allow members of the public to lodge dealings. All manual dealings are scanned into Landonline and processed electronically. The system provides for the use of digital signatures. Records are scanned and uploaded and the manual records are kept separately. It is worthwhile to note that there was a transitional period of approximately three to four years before the use of Landonline was made mandatory.

3.2.1.2 System Access

LINZ is accessible from a web portal from which one can carry out land transactions. It is accessed by internal staff and external users (surveyors, conveyancers, search users, local authorities). Internal user access is controlled by the users' login to the local network, external users have a Digital Certificate to allow access, and different profiles control what users can do once logged in[16]. Detailed instructions are made available on the portal to guide users on how to obtain Maps, access Land Records, Land Registration, Surveying and e-Conveyancing services via Landonline. On this portal, separate interfaces for access to the system are provided i.e. for Property Professionals (surveyors, lawyers, conveyancers and other professionals) and for Non-Professionals.

Property Professionals are able to access Landonline directly and securely carry out searches, lodge and update title dealings and survey data in real time; whereas Non-Professionals have the option to order copy of title or other land records through an online order form with the results being delivered electronically as email attachments. It is interesting to note that an option is available for *manual dealing* for those who wish to present physical instruments, which are in actual sense processed and recorded electronically on Landonline.

[14] Margot Schwass, Michael Vitale (2006). Case program on LINZ and the development of Landonline. The Australia and New Zealand School of Government.
[15] The transaction centre for property professionals and local councils to carry out land dealings efficiently and securely online
[16] Steve Russell, Senior Landonline Application Specialist Property Rights. Questionnaire response. December 2018

3.2.1.3 Laws Enacted / Amended

The implementation of stage two required the amendment of two key pieces of legislation (the Land Transfer Act 1952 and the Survey Act 1986) to legally empower the switch from manual to electronic transactions. This legislative change was contentious, as automation was seen by some to weaken the security of the land title system.

3.2.1.4 Findings / Observations

a. Upon commissioning of the LINZ, a poor system uptake was noted. It was noted that beyond systems development, there was need to allocate enough budget for "system uptake" i.e. marketing – promotions, communications and relationship management among others. In 2003, the contracted company commenced but two years down the line only 1.4% of title transactions and 2.3 percent of surveys had been transacted using the system. It is notable that the contractual obligations were not well structured leading to many variations of time and budgets. The key partner Terralink Company went under in the process;
b. There was a problem with the database which led to loss of data, and threatened the integrity of the database for the South Island offices. To avoid such incidents, it is important to invest in robust Enterprise Relational Database Management Systems coupled with a sound Data Model Design capable of seamlessly and efficiently hosting survey plans and survey data, which is dynamic in nature;
c. There was a gap in technological capacity and ICT skills of the target end users. Some had sophisticated IT networks, while others (chiefly lawyers) still ran largely paper-based offices. There were many authentication steps where the digital signatures required 37 steps, whose security process was not convincing to the users. Resistance from professionals was, therefore, experienced;
d. The system is largely electronic but few instrument types required to be lodged manually and also to allow for members of the public to lodge manual dealings;
e. A phase period of approximately three to four years was allowed where both manual and digital transactions were conducted concurrently before making use of Landonline mandatory except for a few instruments;
f. All titles are digital and nothing is printed on paper; and
g. Landonline was developed over three to four years in the late 1990s. Alongside the development of Landonline was a conversion project to ensure the data from old paper systems and databases was converted to a suitable electronic format. Enhancements are done every 6 months since development[17].

[17] Margot Schwass, Michael Vitale (2006). Case program on LINZ and the development of Landonline (A). The Australia and New Zealand School of Government. (Already stated in No. 14 above)

3.2.2 Estonia

3.2.2.1 System Development and Management

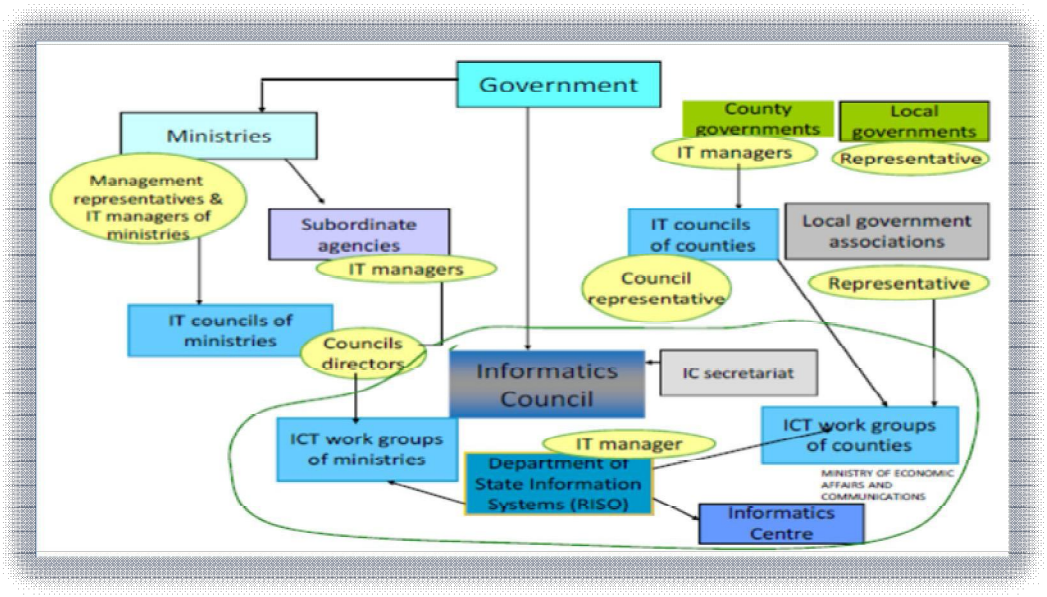
Estonia is one of the most progressive and ambitious countries in ICT services making it one of the highly rated countries on e-governance. In Estonia, access to internet is considered a social right and as a result, 99 percent of the residents have access to internet, which facilitates access to a wide range of government e-services.[18] The e-services system was developed in phases with a citizen services orientation starting with the basic official individual documentation. Every child born acquires a lifelong identification that is used in all transactions ranging from health services, education, marriage, driving license, banking and property ownership among others.

The first intervention was the establishment of an e-database of identification cards for all citizens that culminated into a population registry. This is a once-only registration exercise that allows all citizens to access and transact business in public and private sector services. In 1997, this system was escalated and linked up to the electoral process and tax payments and car parking in 2000. In 2003, the system progression allowed the establishment of a gateway to access the various web-based databases, known as the X-Road. The X-Road delivers an interoperability architecture, which operates on a set of standards and guidelines aimed at ensuring the provision of services for public administration. The systems architecture offers a combination of confidentiality, accessibility and integrity through Blockchain technology[19].

Whereas the X-Road has personalized portals, public sector agencies are free to develop their own information systems, but which must comply with the requirements of the interoperability framework. In Estonia, the central command for the land and property registry lies with a Land Board which comprises the government central implementation and the Informatics Council which is made up of representation drawn from the National Government, County Government and Municipal Authorities under the framework illustrated in Figure 3.1

[18] Honorary Consul Kadri Humal Ayal presentation to the Taskforce on 27th November 2018.
[19] ibid

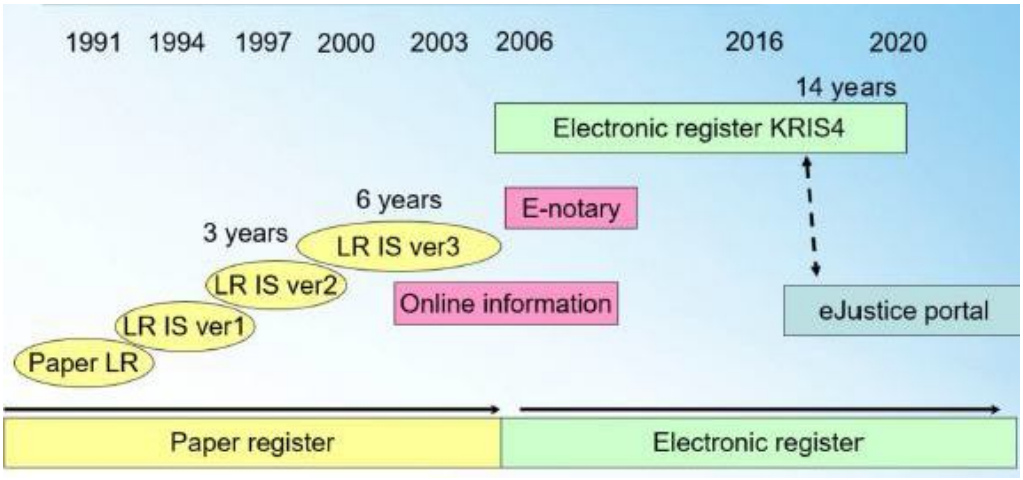
Figure 3.1: Agencies sharing Land Information



Source: https://ega.ee/ (2nd November 2018)

The data-mining project which involved converting paper titles to the electronic register started in 2000 and ended in 2008 with legal recognition. Deed scanning began in 2008 up to 2015 during which more than 900,000 files were processed. On completion of the exercise, an electronic signature was added to guarantee the integrity of documents. The budget for the exercise was approximately 1.1 Million Euros. Figure 3.2 provides a history of Land Register Information Systems in Estonia.

Figure 3.2: History of Land Register Information System

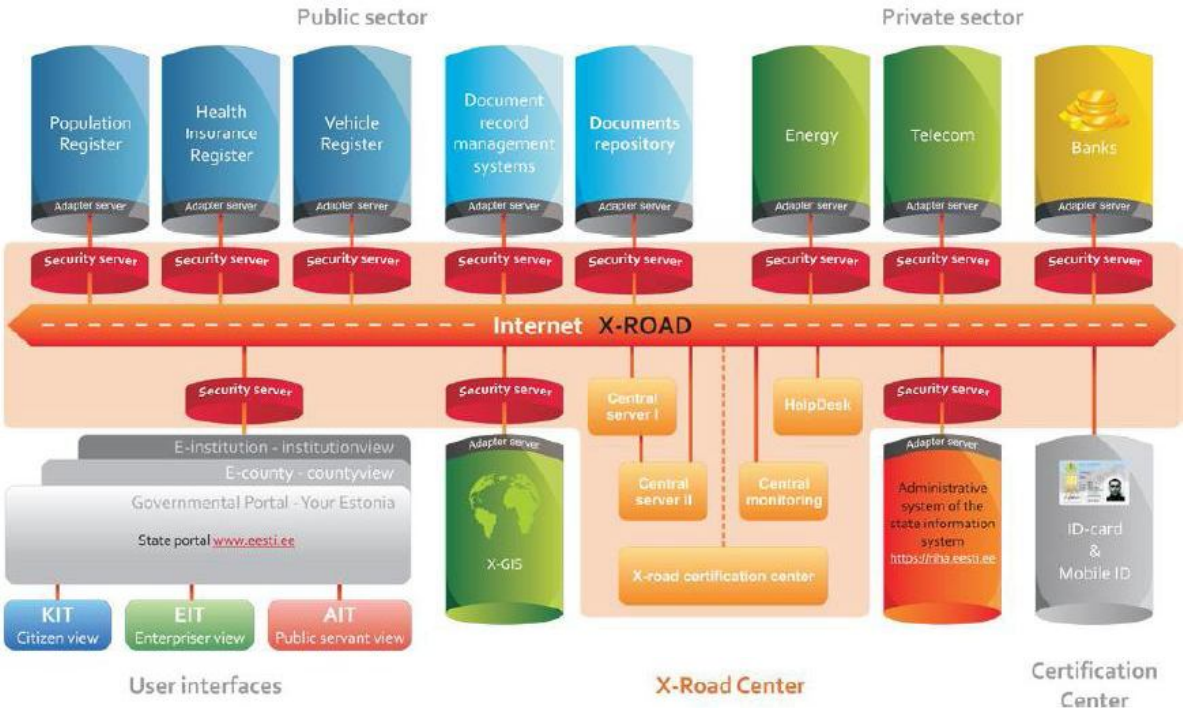


Source: www.rik.ee (accessed 25th November, 2018)

3.2.2.2 Access

The system is accessed through the Land Board Geoportal which offers links to thematic web map applications which are based on the Cadastral Register i.e. there are three different user interfaces provided as illustrated in Figure 3.3 governed by predefined user rights and privileges i.e. Citizen, Enterprise and Public Servant Views. User authentication is based on the use of digital signatures.

Figure 3.3: Estonia System design[20].



3.2.2.3 Laws Enacted / Amendments

The laws amended were: Databases Act (1997/repealed 2006), Public Information Act (2001), Digital Signatures Act (2000), Act on Intellectual Property (applicable also for state databases), Principles of Estonian Information Policy (1998, 2004), Action Plan of Estonian Information Policy – (e-Estonia) (1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006) and Personal Data Protection Act[21]

[20] ibid
[21] ibid

3.2.2.4 Findings / Observations

a. The top political leadership championed and remained committed to the initiative, with properly structured goals driven at all levels of government:
b. The Estonian law requires all government institutions, including the Land Board, to accept digitally signed documents, which has promoted the successful adoption of e-services to over 90 percent;
c. Turnaround time for land conveyancing reduced from 90 to 5 days;
d. Digital transactions eliminated data mining from paper, resulted in personnel reduction, service room and archive room rent reduction, and less office space requirement;
e. Data is entered at source only; and
f. Blockchain technology has been incorporated to enhance the system's security and reliability.

3.2.3 Netherlands

3.2.3.1 System Development and Management

Netherlands has a deed based land registration system[22]. The deed works by proving that the land transaction took place and if transactions are not legal, they can be rolled back. The government provides a platform known as Public Services on the Map (PDOK) for sharing data on open data policy where data is free for download.

PDOK is a central platform which stores and distributes (nationwide) datasets provided by government organisations. Every organisation updates their data and takes full responsibility of the dataset. Datasets are distributed via web services and direct downloads.

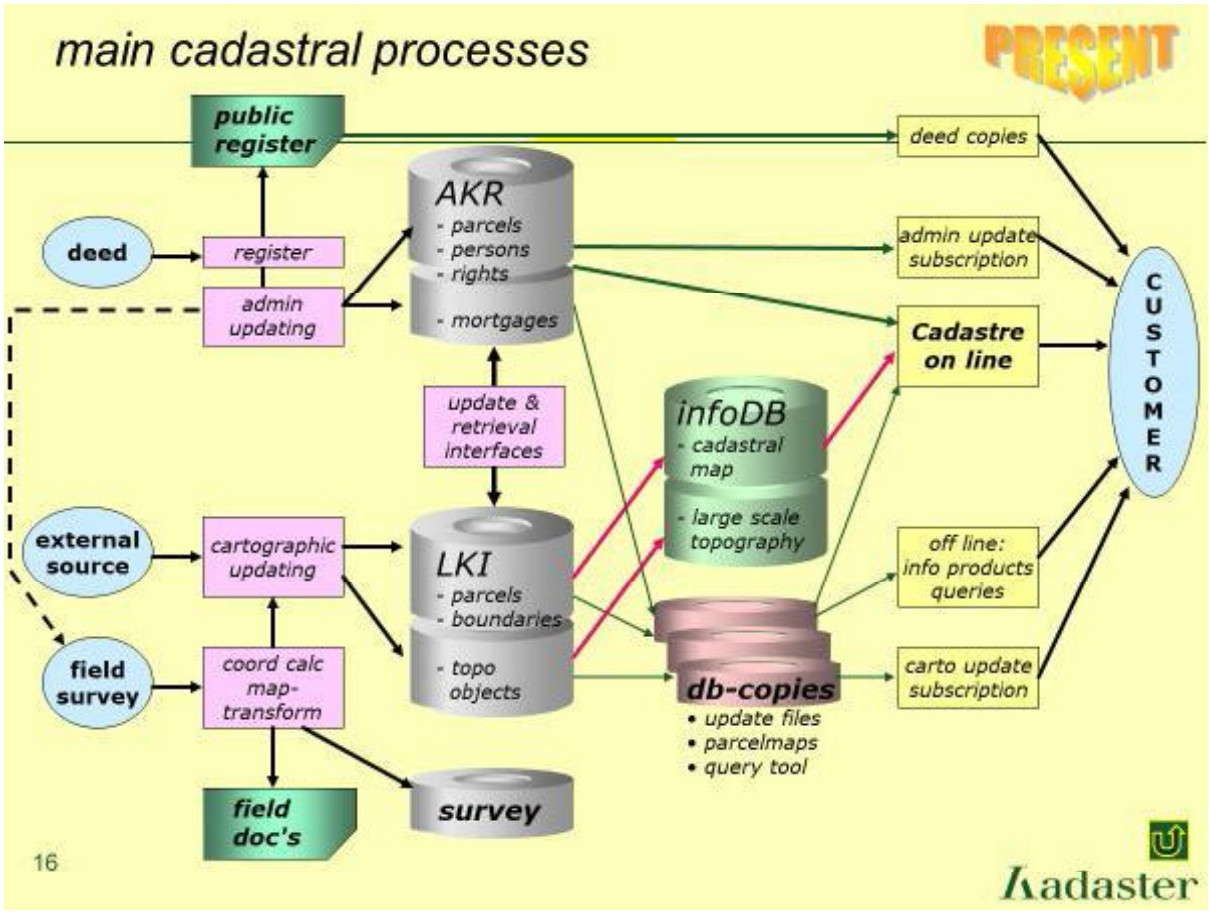
PDOK organisation consists of two parts. The functional and technical management part is executed by Kadaster Netherlands. It is responsible for delivering the PDOK IT distribution platform, the web and download services, and supporting the users by providing a Customer Contact Centre. The Steering Board, on its part, is responsible for the control and consists of representatives of all partner organisations. They monitor the quality of service and are responsible for the long-term development of PDOK. The system was rolled out at once and is supported and maintained by a large group of experts.

[22] Deeds registration system is merely a registration of all important instruments related to that land. In order to establish one's title to the land, a person (or usually their purchaser's attorney) will have to ascertain, for example, all the title documents are properly executed; "a chain of title" is established, i.e. the proper ownerships from the granting of the land from the government to the present owner; and that there are no encumbrances on the land that probably will undermine the title of the land.

3.2.3.2 System Access

PDOK is accessible by internal employees, professionals, stakeholders and all citizens worldwide based on pre-defined access control rules and privacy regulation policy. The system has one nationwide database for the registry which is closely harmonised with the nationwide cadastral database. The information from the registry and cadastral database is accessed from the information database as shown in Figure 3.4.

Figure 3.4: Information Access



Source: Dutch Kadastre[23]

The system has an Electronic Document Management System (EDMS) and is linked to a payment collection system, the banks and the revenue authority. All the key registers are connected such as vehicles, income, employees, companies, real estate, buildings, topography, subsoil and addresses as shown in Figure 3.5. Figure 3.6 shows the cadastral update process. In this system, the Land Surveyors are able to directly work with the system to update cadastral records.

[23] Martien Tomberg's presentation to the Taskforce on 16th November 2018.

Figure 3.5: System of Key Registers

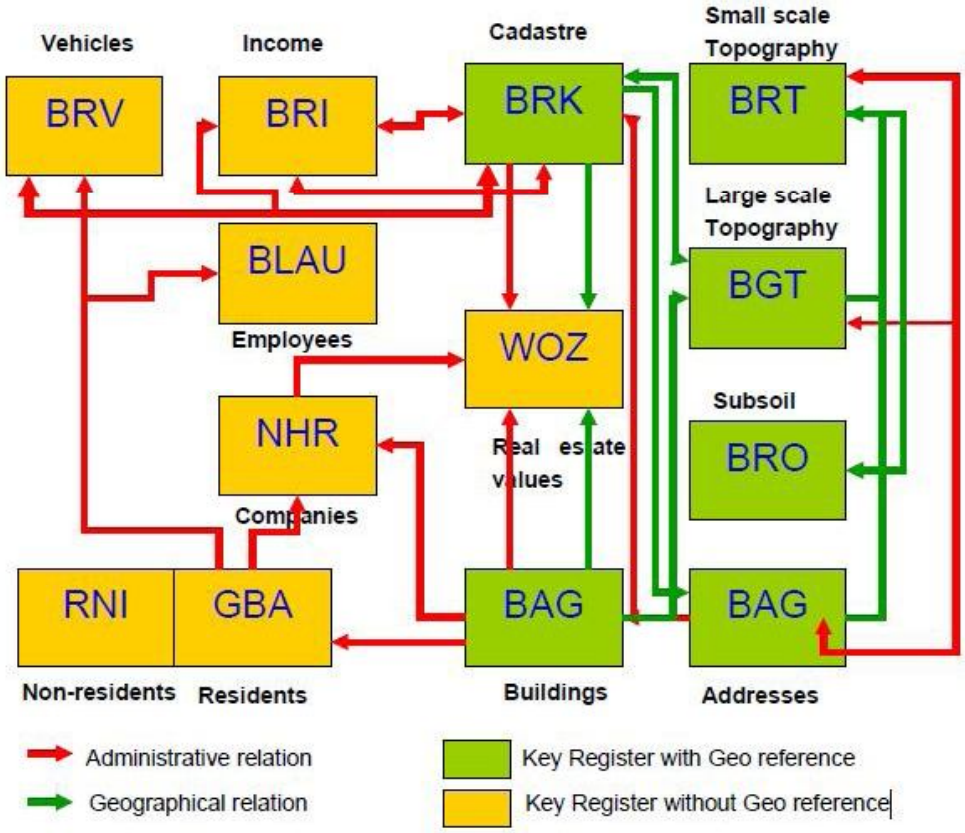
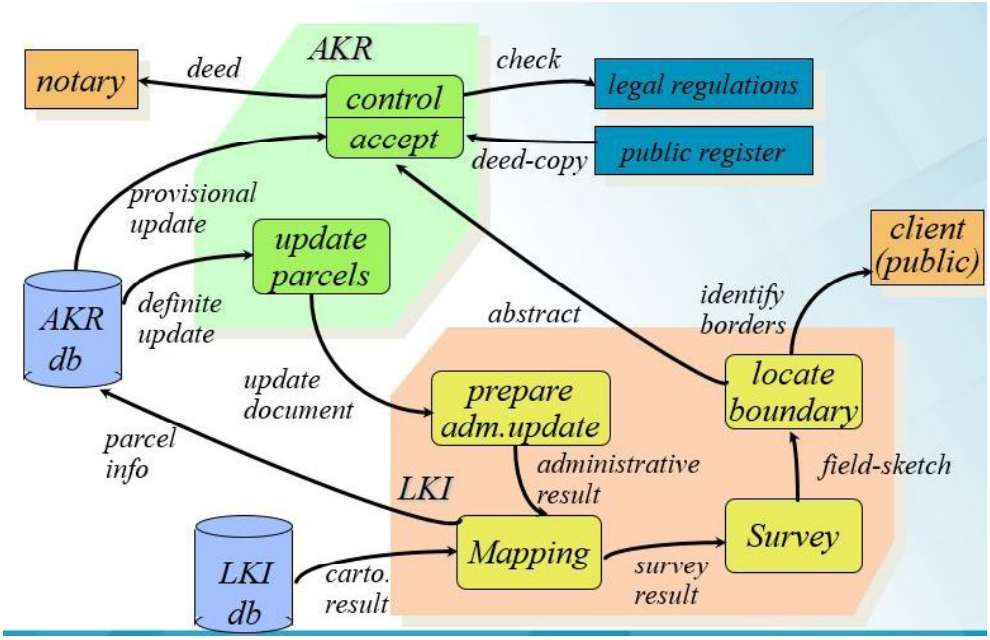


Figure 3.6: Cadastral Update Process



Source: Dutch Kadastre[24]

[24] ibid

3.2.3.3 Laws Enacted / Amended

A major revision of the Civil Code was effected in 1992 (symbolically called the "new" Civil Code), together with the Cadastre Act as a specific elaboration of the parts pertaining to the system of property rights, and its aspects of registration and cadastre. This constituted the land registers and cadastral maps as a multi-purpose system aimed at providing legal security of tenure, facilitating the land market, and supporting many government activities such as physical planning, development control, public acquisition of land, land taxation, and management of natural resources.[25]

3.2.3.4 Findings / Observations

a. Trusted third parties (the Notary Public) are mandated to keep the original documents and the government uses the copies to transact. The data-owners are responsible for the content and they decide (if) when and how data is provided via PDOK;
b. The system is simple, agile and allows survey checks for quality control by use of modern digital surveying field instruments that update data directly into the system by way of digital signatures; and
c. A mirror production environment approach is applied so that when updating it does not affect the availability of service.

3.2.4 England and Wales

3.2.4.1 System Development and Management

The use of computers to enhance land transactions started in the 1970s; computers were then used for storing data, run internal processes and deliver information to customers. However, electronic conveyancing towards an e-Land Registry and the Law Commission began working together on the necessary changes in 2000. The first phase of computerisation focused on the conversion of the manual register to the land register online service that allows citizens to view registers at a small fee. The result was the Land Registration Act 2002, which provided for the use of electronic documents. Interestingly, the e-conveyancing plans were put on hold in 2007 primarily due to cost implications and also to allow for further review of the conveyancing process with the view of stimulating the housing market.[26] The Act was designed to allow for the introduction of electronic conveyancing, and following the introduction of the Land Registration (Electronic Conveyancing) Rules 2008. Her Majesty's Land Registry (HMLR) team aims to register all land and property in England and Wales by 2030 but so far just under 86 percent of the freehold land area, constituting about 26.5 million individual titles, has been registered in England and Wales.

Digital Mortgage service allows homeowners to re-mortgage their property without having to sign paper documents in front of a witness. The service allows homeowners to sign their documents in a few simple

[25] Kees de Zeeuw, Director , Kadaster International, Country, Report September 2018
[26] https://mundays.co.uk/news/news/land-registration-and-e-conveyancing/ - (accessed 26th November 2018)

steps at a time that suits them, using the portal gov.uk. Looking ahead, the HMLR's Research and Development Project (Digital Street) team is consulting with representatives from across the industry to explore how technologies like blockchain, smart contracts and artificial intelligence could be used to make it simpler, faster and cheaper for conveyancers to do their jobs.

3.2.4.2 Access

Her Majesty's Land Registry has the head office in London and 14 regional offices with a Computer Centre in Plymouth in the South West of the country. Each regional office provides land registration services for defined geographic area. At Plymouth District Land Registry, a Computerised Application Processing System (CAPS) was introduced in 1986. Between 1988 and 1992 CAPS was extended to the remaining offices countrywide. The land registry direct services became available in 2003. The Dynamic Systems Development Method (DSDM)[27], which emphasises the need for the end user involvement in the development process, was used. Business turnaround time was reduced from two weeks to a day and customer satisfaction improved drastically.

Presently, with limited exceptions, a legal interest in land cannot be created or conveyed without a deed in writing and properly executed. Once the title is registered, it is guaranteed by the state. The Land Registry Rules 2003 were amended to allow for documents to be signed electronically.

3.2.4.3 Laws Enacted / Amended

Changes were made to Sections 91 to 95 and Schedule 5 of the Land Registration Act 2002, the Land Registration Rules 2003, and the Land Registration (Network Access) Rules 2008.

Changes were required to the Land Registration Rules 2003, with the revocation of the Land Registration (Electronic Conveyancing) Rules 2008 and the Land Registration (Proper Office) Order 2013, in order to allow the Land Registry to continue with its digital transformation programme, and modernise and simplify its services.

Furthermore, the Land Registration (Amendment) Rules 2018 (SI2018/70) were made on 22nd January 2018 and came into force on 6th April 2018. The new rules were geared towards reinforcing the provisions on the development of digital land registration (e-conveyancing) as well as lodging of digital instruments and use of electronic signatures (e-signatures)[28].

[27] Dynamic Systems Development Method (DSDM) is an agile software development methodology. It is an iterative, incremental approach that is largely based on the Rapid Application Development methodology

[28] http://www.legislation.gov.uk/uksi/2018/70/pdfs/uksi_20180070_en.pdf - (accessed 26th November 2018)

3.2.4.4 Findings/Observations

a. There was reorganisation of business units to provide for optimum staffing levels and to facilitate the introduction of multi skilling and team-based working methods, which entailed the re-engineering of business processes to streamline activities and take benefits of ICT;
b. A Public Private Partnership approach was the best way by using customer surveys and focus groups in order to establish and measure the effect of operational and technological changes;
c. The Dynamic Systems Development Method (DSDM) has been used with emphasis on the need for the end user involvement and call centres to handle customer queries and provide land related information on the online services. This approach heralded a business turnaround time from two weeks to a day and customer satisfaction improved drastically;
d. There is an Electronic Document Management System in place and most documents are scanned and uploaded. Once scanned and uploaded the originals are destroyed and no hardcopy backups are kept; and
e. E-conveyancing is restricted to lawyers but citizens can be given access to read and sign their e-mortgages with digital signatures.

3.2.5 Australia

As a federation of six states and two large territories, Australia has two principal scales based on the Torrens system of titles registration i.e. a national-scale land use mapping for baseline setting and evaluating regional development programmes that provide a continent-scale picture of land use activity at a coarse resolution, and a state-scale mapping in each of the Australian states and territory jurisdictions that provides finer details supporting the development of policy and change monitoring programmes at this level. Each state develops its register and cadastre but efforts are ongoing to integrate all to the national register and cadastre[29].

3.2.5.1 System Development and Management

3.2.5.2 Victoria

In the state of Victoria, contemporary detailed state-wide land use mapping commenced in 1996 with full coverage completed by 2005. The land register resides in an electronic system known as Victorian Online Titles System (VOTS)[30]. Within VOTS, once the information from a paper instrument is processed, an image of the paper instrument is linked to the register information and is made available through Landata[31].

[29] Rohan Bennett questionnaire response on 8th November 2018
[30] Richard Jefferson, Executive Director Land Registry Services, Land Use Victoria, Department of Environment, Water and Planning. Questionnaire response on 27th November 2018.
[31] Landata-an online search service which provides access to title and property information

Stakeholders were involved and new practical and efficient methods for generation and integration of land information data was established. This mapping allows annual or biennial data renewal, and links the data directly to a common framework based on cadastral (or land) parcel units, which are the smallest unit of land ownership in Victoria. It also separately describes land tenure (ownership), land use (type of property) and land cover (surface cover type). Derived from three different sources, the dataset is an integrated combination of spatial and non-spatial, raster and vector data.

The electronic land register was introduced in 2001, after a programme of data capture conducted over the preceding 3 years. In 2008, the Council of Australian Governments (COAG) had committed to creating a single, national e-Conveyancing solution to the Australian property industry. In 2010, National e-Conveyancing Development Limited, now known as Property Exchange Australia (PEXA), was formed which has now rolled out its electronic platform across New South Wales, Victoria, Queensland, Western Australia, and South Australia. The development of the e-conveyancing system began in 2011, with the first transaction types introduced in 2015. The land register is now fully electronic. Today, 12 major transaction types are capable of being lodged electronically and, since 1st October 2018, these have been mandated for electronic lodgement where a lawyer, licensed conveyancer or financial institution is involved.

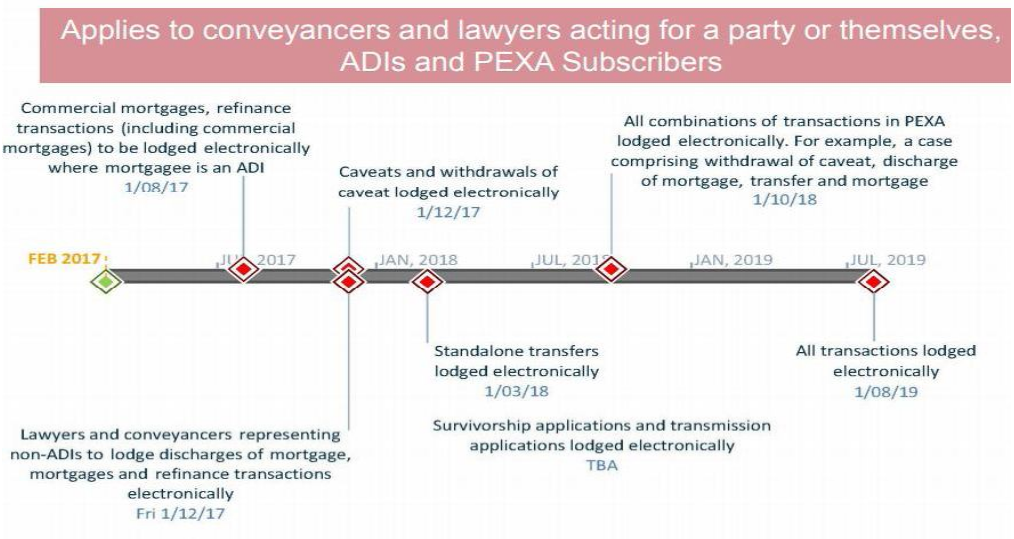
A Certificate of Title (in paper format) can be issued following a transaction, but major financial institutions have agreed with the State that they do not require a Certificate to be printed from registration of mortgage transactions. For non-mortgage transactions lodged electronically, the subscriber can elect to have a Certificate printed, or to simply hold electronic control. Only approximately half of all titles in the Register have a paper Certificate. A subscriber must destroy the paper Certificate and convert to electronic control before an electronic transaction can be lodged. It is intended that, within the next two to three years paper Certificates of Title would be phased out[32].

3.2.5.3 System Access

PEXA is a subscriber-only system. The main subscribers are lawyers, licensed conveyancers and financial institutions. There are fairly strict entry requirements to become a subscriber, mainly around professional indemnity and fidelity insurance, licensing by relevant authorities as well as 'good character' obligations. All combinations of transactions available in PEXA were to be lodged electronically by 1st October 2018. That is, if any instrument or combination of instruments signed on or after 1st October 2018 was available in PEXA, it had to be lodged electronically. This requirement applies to conveyancers and lawyers acting for a party or themselves and PEXA Subscribers. Figure 3.7 shows the proposed roadmap for lodging transactions for e-conveyancing on PEXA.

[32] Richard Jefferson, Executive Director Land Registry Services, Land Use Victoria, Department of Environment, Water and Planning. Questionnaire response on 27th November 2018.

Figure 3.7: Roadmap on lodging transactions for e conveyancing PEXA[33]



3.2.5.4 Laws Enacted / Amended

In the state of Victoria, Electronic Conveyancing (Adoption of National Law) Act 2013 was enacted. The main purpose was to adopt a national law relating to electronic conveyancing and to make consequential amendments to the Transfer of Land Act 1958 and other Acts such as Property Law Act 1958, which was amended to provide for rights of purchasers as to execution in electronic conveyancing, National Law Act 2013 (No.7 of 2013) was amended to accommodate electronic conveyancing, and interpretation of Legislation Act 1984, was amended to accommodate Electronic Conveyancing.

3.2.5.5 Findings / Observations

a. The process to produce the initial mapping was both time consuming and labour intensive, requiring nine years of field and office work;
b. Currently, there is only one authorised electronic lodgement network, operated by PEXA, but other network operators will shortly enter the market;
c. An electronic information exchange exists between the land register system and the revenue authority system. A land transaction on which stamp duty is payable cannot be lodged for registration in the land register unless the duty payment has been made. There is no linkage between the land register and banks;

[33] Source: Source for PEXA Image – "Conveyancing Transformed – End to end e-conveyancing has arrived" August 2017 www.community.pexa.com.au – (accessed 12th November 2018)

d. All execution in PEXA is now electronic. If the subscriber is a lawyer or licensed conveyancer, the subscriber digitally signs instruments on behalf of clients. Where a subscriber is a party in the transaction (e.g. a bank is incoming mortgagee), authorised officers of the subscriber sign; and
e. There are several levels of access from basic search (viewing information in the register – no changes can be made) through to making significant changes to information (ownership changes, creating new lots/titles etc.)

3.2.6 Canada

Each Province in Canada has its own land administration arrangements (including cadastral survey and land registry arrangements) with a unique history and Bar Associations that play prominent roles. The Federal Government is responsible for surveys on Crown Lands (public land). The following discussion gives some salient points regarding Ontario, one of the Provinces in Canada.

3.2.6.1 Ontario

There are essentially two databases that are linked: A titles database containing land registration data, and a mapping database, which serves as an index to find property. The system also provides online access to Ontario's Writs database – for purposes of searching and retrieving details of writs filed with any sheriff/enforcement office in Ontario against a debtor. It is virtually 100 percent digital. Some exceptions to electronic registration include: documents related to the expropriation of land, Crown grants, condominium documents and other documents that may still be registered under the Registry Act.

3.2.6.2 System Development and Management

The Government of Ontario initiated the system in 1985 as a pilot project for the purposes of records automation and for the conversion of properties from the Registry System to the Land Titles System. Automation of records (approximately 7.5 million parcels) and electronic registration was completed by around 2010. Conversion from Registry (Deeds) to Land Titles (Torrens system) is approaching 100 percent; only a few properties with significant title issues to be settled remain to be converted.

The long-term goal of Province of Ontario Land Registration Information System (POLARIS) is to integrate fully all land related information and databases into one centralised, automated, online land information system.

The system is managed by a private company on behalf of the government in a long term contract. Fees and charges (e.g., Land Transfer Tax) are collected through the system on behalf of government; Property Tax (collected by municipalities) is not directly linked to the system, but municipalities have access to the database through the Municipal Property Assessment Corporation (MPAC). MPAC is a

not-for-profit corporation funded by the Government of Ontario and Municipalities for purposes of assessing properties.

Almost all conveyancing is done electronically; the system (e-Reg) allows conveyancing documents (e.g., transfers, charges, discharges and documents general) to be prepared electronically. The documents are made available electronically to the party's lawyers and signed through electronic signatures. The electronic signature is accomplished by logging into the secure system and indicate the document is complete and ready for release. Evidence of client consent and authorisation is provided by an *acknowledgement* and *direction document* produced electronically by the system and signed by the client and kept by the lawyer.

3.2.6.3 System Access

The system is accessed through a web portal for people who have a *user account.* The system is accessed through a personalised, specially encrypted electronic Key Fob[34] and a corresponding user pass phrase. The Fobs generate an authentication code (number) at fixed intervals which is then used to provide secure login access. Both the electronic Fob and pass phrase must be used in conjunction to access the system. The authentication code generated by the Fob (number) along with the pass phrase is required when one signs the electronic instruments for completeness/submission. A smart phone App can also be used in the place of a key Fob. In addition, the integrity and security of the system is maintained through an audit trail of all transactions and the person (identified by the pass phrase) who performed the transactions.

Other people working in the office of the Account Holder can be given a Personal Security License to be able to access the system as a licensed user (e.g., law clerks within a law firm). Only people who meet certain criteria can apply to the Director of Land Registration for authorisation to access the system to: (i) to perform a search of title, (ii) to electronically register land, and (iii) view and print instruments, plans and parcel registers. Generally, the following categories of people can apply for authorisation to access the system: lawyers or legal professionals and those working under them, financial institutions, Title insurers, search houses, the Municipal Property Assessment Corporation (MPAC) and the government. Surveyors are also able to obtain authority to access the system for purposes of performing a search of title, view and print instruments and plans, and lately (2018) for the electronic submission of legal (cadastral) survey plans.

Other professionals in the land sector, such as Surveyors, mainly use the records search function. However, in theory, only people meeting certain criteria (financial resources, good character and

[34] A Key Fob is a small security device with built-in authentication used to control and secure access to network services and data.

accountability) and standards (regulated professionals, financial institutions and mortgage brokers) can be authorised by the Director of Land Registration to register electronic documents in the system. However, certain functions within the process, e.g., making certain legal statements related to a transaction can only be performed by lawyers. In the paper system, some title documents must be accompanied by supporting evidence (e.g., a transfer under a Power of Sale). In electronic registration, the supporting evidence is replaced by compliance with law statements – this is only performed by lawyers.

3.2.6.4 Laws Enacted / Amendments

a) **The Land Registration Reform Act** of 1990 was first enacted in 1984 to provide for the implementation of POLARIS. The Act has been amended several times over the years through the phases of the implementation. Current version is Revised Statutes of Ontario 1990. Another goal of POLARIS was to convert all properties registered under the Registry system to one registration system – Land Titles System. To implement electronic registration under Part III of the Land Registration Reform Act (LRRA) the Land Titles Act, and the Registry Act have also been substantially amended.

b) **The Land Titles Act of 1990** was amended to allow for automated recording, property mapping and assigning of property identifiers (Property Identification Number, Personal Identification Number - PIN) as provided in Part II of LRRA. Amendments also provided for the creation and maintenance of a property index in automated form known as a Parcel Register.

c) **The Registry Act of 1990** was amended to provide for conversion of properties registered under the Act to Land Titles Act. The Act was also amended to allow for bringing land under the automated system as provided by Part II of LRRA.

d) **The Electronic Land Registration Services Act**, of 2010 was amended to allow the Government to enter into agreements with service providers to provide land registration and related services. For example, POLARIS is currently run and managed by a private company (Teranet Inc.) on behalf of the Government. Teranet facilitates the delivery of electronic land registration services on behalf of Government of Ontario.

e) Other statutes enacted or amended include: the **Electronic Registration Act** to permit filing of information in electronic format and transmission to an electronic database.

3.2.6.5 Findings / Observations

a) The roll out was not done in all Registry Offices (Counties) at once, it was done gradually in phases. Conversion of Registry to Land Titles and digitizing of paper records lasted almost two decades – 1990 to 2010. Digital tool (Terraview) was launched in 1995 to enable users to search and view records remotely. The Electronic Land Registration System came last. Electronic transactions were launched in 1999 in some Registry Offices. The key components were: Conversion (Registry to Land Titles), Automation of Paper Records and Electronic Registration;

b) Although the 1990 Land Registration Reform Act authorized the Minister responsible for land matters to issue Regulations making electronic registration mandatory, this was implemented gradually in order to give lawyers and conveyancers time to adjust;
c) Once a Registry Office's records were almost fully converted, the Minister filed a Regulation making electronic registration optional. After a transition period (approximately one year initially), a second Regulation would be filed making electronic registration mandatory in that specific Registry Office; and
d) The transaction period was reduced gradually to approximately two months by 2010.

3.2.7 Germany

3.2.7.1 System Development and Management

Germany has 16 states and each state has the responsibility for legislation in the field of cadastre, though the laws governing surveying are basically uniform across the country. The State Survey Offices and the responsible Ministries of the state cooperate through Working Committee of the Surveying Authorities of the States of the Federal Republic of Germany to form uniform regulations.

The initial LIMS was rolled out at once and updated regularly. For a long time, the Land Registration System consisted of Automated Real Estate Book (ALB) and Automated Real Estate Map (ALK) systems. However, all the data of the real estate cadastre was combined into Authoritative Real Estate Cadastre Information System (ALKIS). ALKIS is nationally standardised and formulated in the AAA[35] model together with the Authoritative Topographic-Cartographic Information System (ATKIS) and the Authoritative Control Point Information System (AFIS). Automated Property Register is harmonised for the whole country and has a history dating more than 10 years. The Automated Cadastral Map is fully operational for most urban areas and was automated from 1975. The Grundbuch[36] is automated in only few states.

3.2.7.2 System Access

E-conveyancing is limited to state authorised notaries. The system allows e-conveyancing but contracts have to be handed in manually. The individuals can also request for information. None of these stakeholders, however, has a direct access to the data, except state authorities, which are involved in land exchange, for example, the Department of Rural Development.

[35] Refers to AFIS-ALKIS-ATKIS-Data model. The model defines the standards and relationship of spatial data. AFIS is the Official Control Station Information System and contains descriptive and illustrative data. ALKIS is the Official Real Estate Cadastre Information System and contains real estate descriptive and illustrative data. ATKIS is the Official Topographic and Cartographic Information System of the German state survey.

[36] German Land Register

There are systems that are outside the application that are manual. There are service fees for each request unless it is coming from a state institution. Grundbuch and cadastral maps are kept in both manual and digital. The system is linked to the payment collection system arranged by the Ministry of Finance which collects taxes based on the LIMS. Banks are not directly connected to LIMS but they can request information when they prove valid reasons to access information.

3.2.7.3 Laws Enacted / Amended

Germany passed the Digital Signature Law in 1997. Additionally, on 1st October, 2009, the law for introduction of e-conveyancing in the Land Registry Procedure became effective. The following Articles of the Land Register Code (that is, Grundbuchordnung or GBO) make specific provisions for e-conveyancing:[37]

a. E-conveyancing and Electronic Files, Article 135, GBO **-** provides for applications to be conveyed as electronic documents;
b. Receipt of Electronic Documents, Article 136, GBO - an electronic document is received by the Land Registry, as soon as the technical facility meant for receipt has recorded it;
c. Form of Electronic Documents, Article 137, GBO – regulates the form of the electronic documents and their equivalence with regard to the paper documents;
d. Transfer of Documents, Article 138, GBO - regulates carrying on the electronic files and the conversion of incoming documents and/or documents which are already completed;
e. Inspection of the Files and Data Recall, Article 139, GBO - inspection of the electronic file can also take place at another Land Registry to spare citizens from the inconvenience of long distance; and
f. Electronic Decisions, Article 140, GBO - If the file is managed electronically, the decisions (interim provision or refusal) can also be issued in electronic form and have to be provided with a qualified advanced signature.

3.2.7.4 Findings / Observations

a. Not everyone is permitted to view the land register, only those who demonstrate a legitimate interest have this permission;
b. The German Land Register is decentralized, each district having its own department; and
c. The architecture takes the form of an integrated LIMS powered by seamless data transfer processes between Automated Cadastral Map, Automated Property Register and Automated Land Register to ensure consistency of the contents of cadastre and land register.

3.2.8 Ghana

In 1999, the Government of Ghana launched a new National Land Policy that sought to address some fundamental problems associated with land administration and management, and provide the overall

[37] The German "Grundbuchordnung": History, Principles and Future about Land Registry in Germany, Harald Wilsch

policy framework for land administration in the country (MLF[38], 1999). To steer the implementation of the key policy actions of the National Land Policy, Land Administration Project 1 (2003 – 2010) and Land Administration Project 2 (2011 – January 2019), dubbed LAP-1 and LAP-2, were launched. Other than legislative reforms, digitisation of land records featured prominently in LAP-2 with the objective of implementing a fully integrated land administration system to support registration, surveying and cadastral works and generate all the data needed for valuation and revenue collection.

Specifically, the proposed solution was the development of Ghana Enterprise Land Information System (GELIS) and the preparation and implementation of a National Geospatial Policy i.e. the adoption of computer-aided information systems in the lands sector to solve the challenges of building encroachments, paucity of reliable datasets and lack of standards and many more.

Once complete, the GELIS will present a one-stop-shop for all stakeholders, including the general public, irrespective of where they are to digitally transact on land. GELIS will, therefore, form a vital component of implementing the geospatial policy and the achievement of NSDI.[39]

3.2.8.1 System Development and Management

GELIS software is currently at the first stage of development. A partnership between two private companies, Sinergise and Airbus Defence & Space, was awarded the contract for implementation. However, budget restrictions have reduced the scope for now; but its enhancement will be building on previous success stories and moving along the road to a spatially enabled society. The policy fundamentals are in place for building the comprehensive system that the Lands Commission needs for the future.

GELIS will have links with other initiatives such as the Client Service Access Units that the Lands Commission has been developing, and other software systems, such as Land Use Planning and Management Information System, already being used in Ghana.

[38] Ministry of Lands and Forestry

[39] GELIS as a component of National Geospatial Policy, Graham Deane, Robert Owen, Benjamin Quaye, March 2017

3.2.8.2 Laws Enacted / Amended

One of the activities within the Land Administration Programme (LAP) -2 involved the review of the statutes on land in light of digitization of land records among others. The Land Bill 2017 introduces the concept of e-conveyancing from clauses 70 to 76. Clauses 70 and 71 provide for conveyances to be made electronically and for the structures for facilitating electronic conveyance. Clauses 72 and 73 provides for persons who are qualified to undertake electronic conveyancing and the conditions for conveyancing. Access granted by the Lands Commission to provide electronic conveyancing service is not transferable (Clause 74). Clause 75 stipulates the mandatory contents of an electronic conveyance.[40]

3.2.8.3 Findings / Observations

a) The project was undertaken in two phases: Land Administration Project 1(LAP-1_2003-2010) and Land Administration Project 2 (LAP-2_2011-2016);
b) There were delays in capturing detailed requirements and preparation of the required hardware infrastructure;
c) The roll out of GELIS is being phased with the initial roll-out in one Pilot Area already done in late 2018;
d) The development of GELIS is part of the NSDI infrastructure which is a way of enforcing standards and interoperability;
e) Training and capacity building was essential in achieving full operationalisation of the system; and
f) Involvement of professionals in development of the system was key in capturing user needs.

3.2.9 Singapore

Singapore is a small island country in South East Asia with an area of about 712 Sq. Km. Rapid land development is a result of government's continuous effort in sustaining high economic growth. The Singapore Land Authority is a statutory board formed by an Act of Parliament in June 2001. The Authority is made of the land office, survey, land registry and land systems support unit. The role of this Board is to regulate cadastral survey and registration; manage state land and properties; as well as create and provide land information. Singapore uses the Torrents system of land registration.

3.2.9.1 System Development

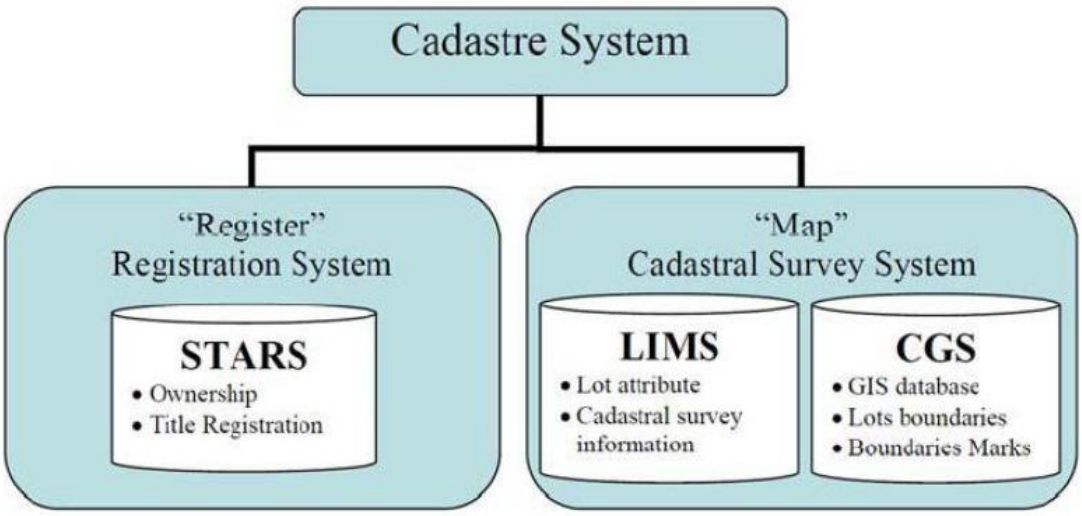
The cadastral survey information has become the most critical land base information to support development and planning work in government. This cadastral GIS layer data is widely known as the Digital Cadastral Database (DCDB). In Singapore, the DCDB is shared through the NSDI platform and

[40] Ghana Land Bill 2017

many government agencies heavily depend on this layer for their planning and operation work to serve businesses, communities and individuals.[41]

The digital Land Information Management System started in 1984 with the aim of providing online access of land data by government departments and the public[42]. The Land Office, Registry and Survey departments each update the data items under their responsibility. The system has two databases, the Register and the Cadastre. This is illustrated in Figure 3.8.

Figure 3.8: Land Information Management System in Singapore



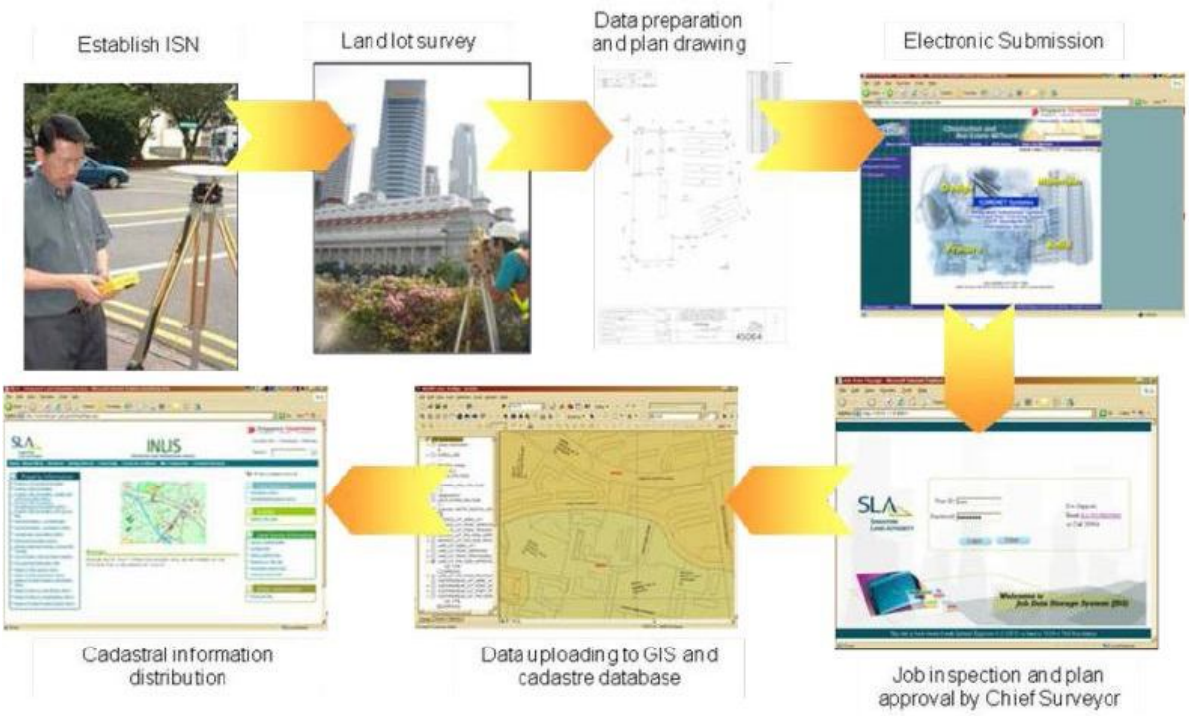
Source: Victor Khoo. 3D Cadastre in Singapore. Singapore Land Authority presentation.

The LIMS was developed in three phases. Phase One focused on setting up the national geodetic control network. Since Singapore is geographically small, it was done using Global Navigation Satellite System (GNSS) as a one off exercise setting the primary network and secondary network, which is called the Integrated Survey Network (ISN). Phase Two focused on implementing new survey procedures and amendments of the laws to suit the land information management system. The Land Surveyors Rules contained in the Lands Surveyors Act were redrafted to provide for the structural and procedural changes. All cadastral boundaries were to be tied to the ISN and hence converted to "legal coordinates". The conversion was a 10 year programme looking at broad based conversion programme involving public and private surveying related work, where the conversion burden was fairly borne by the users of the system and the conversion cost was defrayed. Phase Three focused on integration of other processes

[41] Victor H.S. Khoo. Towards Smart Cadastre that supports 3d parcels. 3rd International Workshop on 3D Cadastres; Development and Practices October, 2012, Shenzhen China.
[42] Low Oon Song. The Development of Cadastral Surveying in Singapore.

and this required inter-ministerial effort[43]. The cadastral survey workflow based on electronic submission was introduced in 2004. This workflow supports paperless submission via a web portal. The workflow which is known as the SVY21 system is illustrated in Figure 3.9.

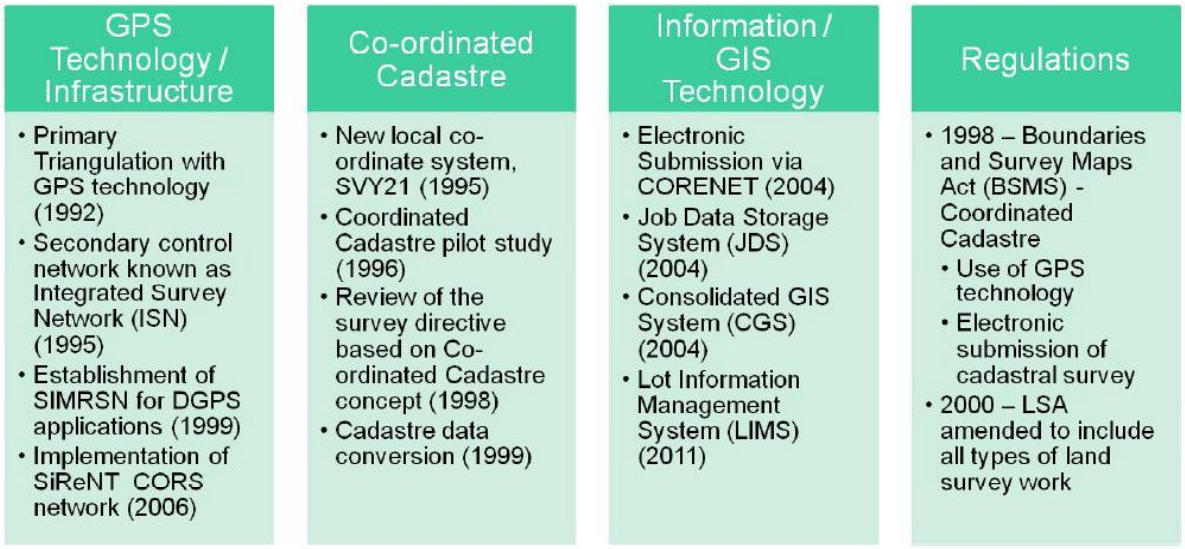
Figure 3.9: Survey workflow in Singapore[44]



By 2011 electronic transmission and paperless processing of Cadastral Survey jobs was achieved; homogeneous reference frame for all survey work was done; digital cadastral maps were being shared by agencies and approval of Land (including air space and subterranean) and Strata Lots[45] was reduced to 10 days. Figure 3.10 shows the development of the Cadastral Survey System.

[43] Goh Pong Chai. An Implementation Strategy for a Coordinated Cadastre in Singapore. FIG International Congress Melbourne, Australia 1994.
[44] Victor H.S. Khoo. Towards Smart Cadastre that supports 3D parcels. 3rd International Workshop on 3D Cadastres; Development and Practices October, 2012, Shenzhen China.
[45] Lot refers to parcel unique identifier

Figure 3.10: Cadastral Survey Development



Source: Soh Kheng Peng Chief Surveyor, Singapore

3.2.9.2 Laws Enacted / Amended

a) Regulations on Boundaries and Survey Maps Act 1998 to adapt use of Global Positioning System (GPS) technology and electronic submission of cadastral survey; and
b) The Land Survey Act amendment 2000 to include all types of land survey work.

3.2.9.3 Findings / Observations

a) The differences in coordinates had to be resolved before the data of each lot was loaded into the system;
b) The Land Office, Registry and Survey departments each updates the data items under its responsibility;
c) The system has two databases, the Register and the Cadastre;
d) Land Information Management System was developed in three phases;
e) Main challenges in maintaining the cadastral survey system is the ability to stay relevant and progress fast enough to support the needs of the industry and the general public. That is why the Singapore Land Authority is constantly looking for ways to further improve the system and one of the main thrusts moving forward is development of 3D cadastre; and
f) Data conversion took around 10 years.

3.2.10 Rwanda

The Land Reform Process in Rwanda has already gone through two phases. Phase One commenced in November 2005 and was a three-and-half year programme ending in May 2009, which set out to develop a feasible approach resulting in a Strategic Road Map (SRM) with the objective of improving land tenure security; facilitate economic growth; encourage good land use practices and soil conservation; and contribute significantly to land conflict management. The SRM was accepted in March 2008[46].

The support for Land Tenure Regularization (LTR) or Phase Two, was from February 2010 to August 2013 and set out two primary objectives; register all land in Rwanda for the first time which resulted in surveying all land parcels thereby providing land titles to all rightful claimants nationwide using the "General Boundary Principle". The result was 10.3-million parcels registered through a one-off, low-cost community-based LTR process. Secondly, it sought to support the design and implementation of a new Land Administration System. This allowed extensive capacity building and the development of people in land administration and led to 20 Land District Offices being refurbished and newly equipped[47].

The existing Land Administration Information System (LAIS) has a spatial and job-based component. The spatial component was built on Esri's Spatial Database Engine technology. There is a heavy reliance on a manual workflow from office to field and back to the office. The resulting hand-drawn field work in the current workflow is dependent on in-house interpretation and digitizing to update the spatial parcels layer. The current process is slow, tedious and can introduce errors throughout, and the accuracy, both attribute and positional, cannot be guaranteed. The long-term value and dependence on this data will become compromised if it is allowed to continue.

3.2.10.1 System Development

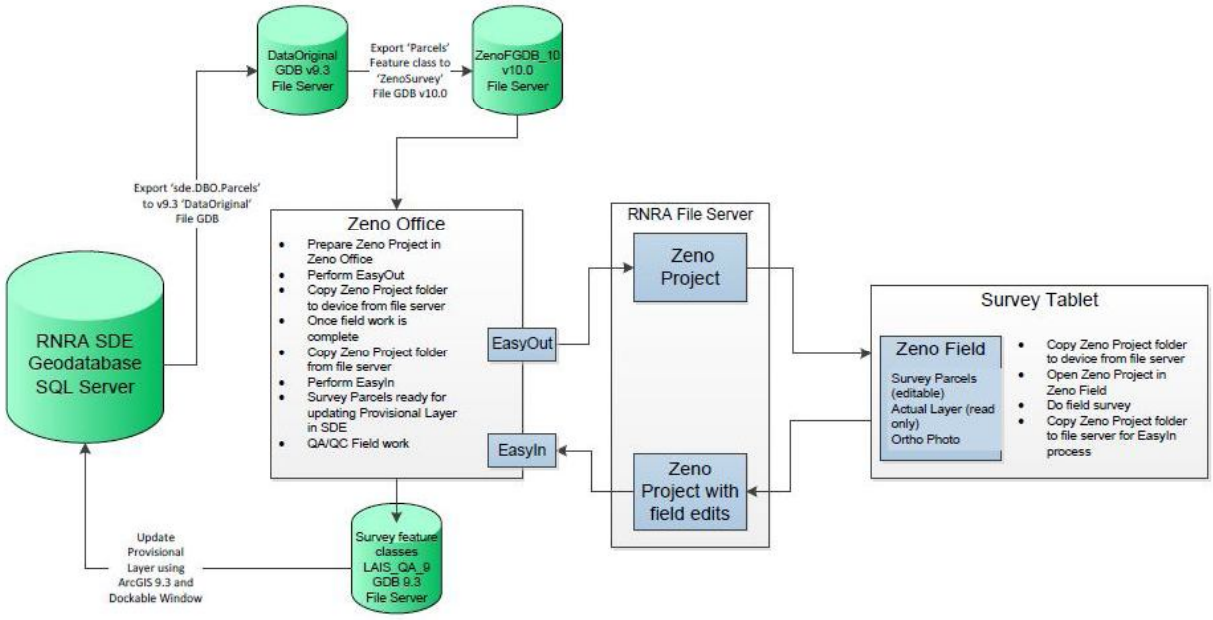
The Land Administration Information System (LAIS) was developed by Kadaster International under the support of Rwanda Investment Climate Project for the National Land Centre/ Office of the Registrar of Land Titles. The information is gathered into a single database called Land Register. The spatial land information comprises the geometry of the land parcel and its location; a Unique Parcel Identifier (UPI); parcel size and its land use. The non-spatial land information is about land rights and rights holder; the UPI (that links the spatial to non-spatial land information) and evidences on how the rights are attached to the right holder[48].

The system development had two main stages. The first Stage was concerned with the establishment of the Land Information Management System with a systematic land registration, started in 2005. Before

[46] Kendall James (2016).Improving Rwanda Land Administration Information Systems. Geomatics Indaba.
[47] ibid
[48] Biraro, M., Bennett, R.M., Lemmen, C.H.J (2014). Land Information Updating; Assessment and options for Rwanda.

this, land belonged to the State and the citizens only had rights on improvements (The World Bank, 2010). The second Stage was the updating of the LIMS. During system updating, a contributing factor to the project opportunity was the implementation of a Leica SmartNet or Continuous Operating Reference System (CORS) network covering Rwanda with eight base-stations that went live in 2015. The Rwanda Geonet as it has been named, provides high accuracy Real Time Kinematic (RTK) corrections to GNSS-enabled devices thereby providing a platform to deliver high accurate positional data seamlessly and efficiently. Figure 3.11 shows the Rwanda Natural Resources Authority Workflow.

Figure 3.11: Rwanda Natural Resources Authority Workflow



3.2.10.2 Laws Enacted / Amended

In the case of Rwanda, a Strategic Roadmap for Land Tenure Reforms was guided by the National Land Policy (2004) and Organic Land Law (2005). This provided the framework within which the Land Tenure Regularization (from customary ownership to obligatory registration) was implemented and included the use of a Land Tenure Regulation Support System and a Land Administration Information System.

3.2.10.3 Findings / Observations

a) Systematic land registration started in 2005;
b) The first stage was the development of the Land Administration Information System from 2005 to 2009. Later, stage two involved update and workflow development which took two years from 2014 to 2016;
c) A contributing factor to LIMS success was the implementation of a Leica SmartNet or CORS network covering Rwanda with eight base-stations that went live in 2015;

d) The information is gathered into a single database called the Land Register;
e) There is a heavy reliance on a manual workflow from office to field and back to the office which has to be interpreted and digitized so as to update the spatial parcels layer;
f) The Rwanda Natural Resources Authority underestimated the storage space that would be required so a quick support workaround had to be sourced;
g) The mobile internet performance in Rwanda was not as good as expected thus slowing the implementation; and
h) The Rwanda Natural Resources Authority implemented a cloud-based file server architecture to facilitate the delivery of the Zeno project folders remotely using 3G on their tablets. This has negated the need to physically go into a district office and connect to the Rwanda Natural Resources Authority network as these offices can be remote to the field worker.

3.2.11 Tanzania

Land information in Tanzania is kept under two systems i.e. the manual file/record keeping system and the GIS/Cadastral system.

3.2.11.1 System Development and Management

During the last decade, the Ministry of Lands has undertaken efforts to modernise land administration and develop institutional transformation. The objective of the Integrated Land Management and Information System (ILMIS) was to integrate the spatial aspects of land administration data managed by district offices. The initiative commenced in July 2016 and was scheduled to run for two years until July 2018 followed by a one year maintenance period before being up-scaled nationally in the next phase. The design, supply, installation, and commissioning of the ILMIS project was to fully integrate all aspects of land management in two stages: the Pilot Stage and the Development Stage.

The focus was to computerise the attribute data of the cadastral parcels, and registration data (certificates of occupancy, customary rights, and land administration dossiers) managed by the Ministry in Dar es Salaam and the zonal offices. The development is through a consortium led by IGN FI, a private company in partnership with the Ministry under the World Bank Funded Private Sector Competitiveness Project.

3.2.11.2 Findings/Observations

a. The project is phased and is currently on a pilot phase; and
b. The initiative is a Public Private Partnership.

3.2.12 Uganda

Land Administration and Management in Uganda faced serious challenges in the 1980s with a significant deterioration in delivery of land services. The land sector reforms were anchored on the 1995 Constitution, a new legislative regime and also development and implementation of the Land Sector Strategic Plan I (2002-2012). A key strategy under the Land Sector Strategic Plan I (LSSP I) through the PSCP-II to help scale-up critically needed land sector reforms in several priority areas establishing the Competitiveness and Enterprise Development Project (CEDP) was the introduction of a unified, relevant and accessible Land Information System (LIS) to increase accessibility, affordability and use of land information for the planning and implementation of development programmes[49].

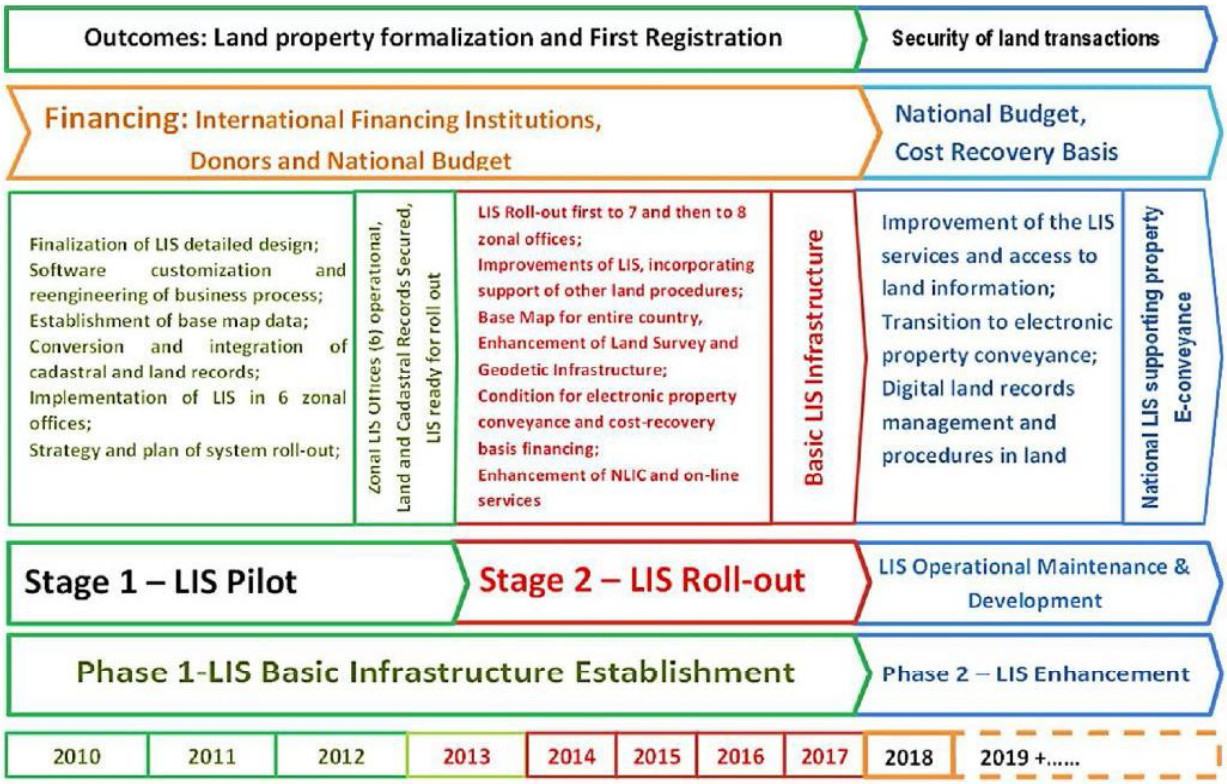
3.2.12.1 System Development and Management

The pilot project started in 2010 to 2013 funded by the World Bank, the project was titled Design, Supply, Installation, Implementation of the Land Information System and Securing of Land Records (DeSILISoR)[50]. In 2015, the Government of Uganda with support from the World Bank commenced the implementation of a five-year initiative known as the Design, Supply, Installation and Implementation of National Land Information System Infrastructure (DeSINLISI) Project to scale up the computerisation of an integrated LIMS nationally. The Ministry of Lands, Housing and Urban Development in conjunction with the consortium IGN FI/IGN (The French National Institute of Geographical and Forestry Information) is currently implementing the second phase of the computerisation of the Land Registry. The computerisation of the land information system has already been completed and is functional in seven Ministry Zonal Offices (MZO) established in Kampala, Jinja, Mukono, Masaka, Mbarara, Wakiso and Lira. New MZOs are currently being established in Kabarole (Fort Portal), Kibale, Masindi, Arua, Gulu, Mbale, Mityana, Luwero, Mpigi, Tororo, Soroti, Moroto, Kabale and Rukungiri. Once completed, the project will fully integrate physical planning, surveying, valuation, land administration and land registration and finalise the process of transformation of land records into digital format. Once completed, a comprehensive, decentralised, self-contained one stop Ministry Zonal Offices will be operational in 21 locations across Uganda. Figure 3.12 shows the Uganda Land Information Project Management.

[49] Oput R.,Milledrouges, A., Stimpson, P.,Lizenko, S., Roffer, C., & Burke, C. (2017) Scaling up a pilot land management initiative in Uganda to a National Land Information System (NLIS). Annual World Bank Conference on Land and Poverty, Washington DC, March 20-24, 2017.

[50] ibid

Figure 3.12: Uganda's Land Information Project Management[51]



The National Land Information System (NLIS) is a secure, scalable and sustainable system configured around an Open-Source and full-web global land and property management solution. The new system comprises of 1) the modification and enhancement of existing functionalities, 2) a new critical functionality, and 3) the utilisation of new technologies and InnoLA software framework by Innola Solutions, Inc. It is composed of the modules implemented during the Pilot Stage and reengineered software framework for optimisation of performance and rewritten using Open Source components and the Land Administration Domain Model (LADM) data model. The effort and resources required for roll-out, training, maintenance and upgrades are all eased by the fully web-based NLIS (utilising HTML5/CSS3/JavaScript). Integration with external systems is supported by an Open API and the design of exchange file formats to which are added land valuation and physical planning modules as well as mobile office, mobile money services for fees and Daily Case Management system.

[51] Source: Richard Oput, Nadege Orlova & Gasant Jacobs (2014). Development and Implementation of the Land Information System in Uganda (achievements and results after 1 year). Integrating Land Governance into the Post-2015 Agenda, harnessing synergies for implementation and Monitoring Impact. Annual World Bank Conference on Land and Poverty Washington DC, March 24-27, 2014.

In order to ensure database consistency, full web architecture for the system implementation, excluding scanning module, which will be implemented using desktop application, improved operations & modules so as to reflect the user experience.

3.2.12.2 Laws Enacted / Amended

It is not very clear the exact amendments made to provide for digitisation of land transactions in Uganda. However, there are several past studies that have identified several legislations that needed to be reviewed and amended to provide for technological interventions in land transactions. Specifically, recommended amendments to: the Registration of Titles Act 1924; National Records and Archives Act 2001; Land Act; Evidence Act 1909; and the Survey Act 1939.

Uganda made transferring property easier by eliminating the need to have instruments of land transfer physically embossed to certify payment of stamp duty. In the judicial scene, a review of the Evidence Act was necessary to determine admissibility of electronic records in a court of law. The National Land Policy 2013 was very explicit about the setup of a Land Information System. It has also been reported that with an enactment of the Land Information System Law, there would be provision of a special online access to Courts, banks and financial institutions and Real Estate Agents.

3.2.12.3 Findings / Observations

a) The LIMS is making use of the Land Administration Domain Model (LADM);
b) The project is phased and is being funded by World Bank;
c) There are large volumes of data that need to be converted to digital records; and
d) Information, Education and Communication campaigns have been carried out to support the LIS development and implementation

3.3 Conclusions

a. Before embarking on digitisation it is important to reorganise the registries / cadastre and review the manual processes and workflows to remove duplicities while enhancing efficiencies;
b. In most jurisdictions, there exists a separate cadastre and land registry database which are then linked to other databases like in Netherlands and Estonia;
c. Most countries have adopted a phased approach to the systems development and deployment with a pilot area or region and then scaled up to the rest of the offices and regions like in New Zealand;
d. In most countries, there was a private company involved in either system development or infrastructure management. This is the case in New Zealand, England & Wales and Canada;
e. Searches are open to public upon payment of some fee in most countries, however historical searches are restricted, and more fees are chargeable. To be able to request for the searches one has to register in the platform for authentication;

f. Digitisation of land records and e-conveyancing is bound to be relatively budget intensive. As such financial planning for short term (quick wins), mid-term and long term outcomes is key for the successful implementation. Inadequate budgetary allocations affected implementations in New Zealand, Canada and the UK;
g. Countries have done complete overhaul of their systems once overtaken by technology by providing better performing copies of the database and a solid data migration plan. System renewal and upgrades due to technological changes must follow a well-planned strategy. Netherlands had to do this in order to leap to more suitable technologies rather than do patching to obsolete technologies;
h. The world is adopting the blockchain technology. The UK and Netherlands are exploring on the use while Estonia is already using it;
i. Most countries that successfully digitised land transactions adopted an all-inclusive consultative multi-sectoral user driven approach. Stakeholder participation is very important to eliminate incidences of resistance as was witnessed in countries like Australia, New Zealand and Estonia;
j. It emerged that strong political will is necessary to ensure focussed development of LIMS as was the case in Rwanda, Estonia and Netherlands;
k. Systems development needs to be guided by a documented NLIMS strategy/roadmap to ensure consolidated advancements in the digitisation and e-Conveyancing process e.g. the case of Ghana which built on progress of LAP 1 and LAP 2;
l. Owing to the critical and sensitive nature of land transactions, efforts to ensure systems security, intrusion detection and prevention are key to facilitate data integrity and confidence by the citizens and other stakeholders;
m. To avoid duplicated efforts within government it is important to align e-government initiatives within an elaborate enterprise system architecture/infrastructure with the holistic view of interoperability of developed systems (both public and private). This ensures that digitisation and e-conveyancing aligns to such strategies since this is bound to inform or impact other government functions. The Estonian case which rides on the X-Road is one worth emulating;
n. E-Conveyancing in most countries was enabled through the use of digital signatures backed by supporting legislation. One cannot overemphasise the fundamental role of digital signatures in e-conveyancing as it facilitates a paperless process; and
o. Reliable connectivity to the NLIMS will be crucial in ensuring faster uptake and adoption i.e. both at the institutional level (for internal institutional staff) and for external end users and professionals. In most countries where digitisation and e-conveyancing is successful, Internet Service Provider infrastructure and coverage is widespread and reliable e.g. Estonia, New Zealand, Australia etc.

3.4 General Observations

a. Systems Access

Universal access to the system should be provided governed by predefined user rights and privileges for various categories of users.

b. Systems Architecture

Given that this forms the framework on which digitised transactions will run, a robust and scalable enterprise software architecture design guided by interoperability, high availability and e-governance strategy awareness, is recommended.

c. Systems Development

An Agile strategic approach to systems development, which turned out to be successful as in the cases of Netherlands and Estonia is a proven methodology that should see a swift development of NLIMS. This allows for regular review of business requirements and objectives during development while deploying and commissioning modules for immediate impact, faster implementation and lower Total Cost of Ownership.

d. Systems Implementation

This should be done in a phased manner starting with a pilot phase then scheduled regional roll-out while building on lessons learned throughout the process.

e. Systems Security

Security is one of the key requirements for all the stages of the conveyancing and registration processes to guard against fraud; and vulnerability to cyber-attacks and identity theft. A detailed approach to ensuring security of NLIMS is provided in **Annex 3 and 4**.

f. Legal Reforms

A stable and responsive legal framework is key to the adoption and implementation of digitization. Most countries had to enact and amend existing laws to make provisions and anchor e-conveyancing into Law. These statutes will bring forth rules and regulations, which govern the relationship between the NLIMS, operators and participants in the system as in the case of the Australian Model. *Chapter 2 has provided a detailed analysis and proposals for the Kenyan context.*

CHAPTER FOUR

4 TASKFORCE FINDINGS ON PUBLIC PARTICIPATION

4.1 Introduction

Public participation is a constitutional right granted by many Articles of the Constitution. The text and spirit of the Constitution sets out the principle that all sovereign power belongs to the people of Kenya. This power is what entitles the people to unfettered access to the process of making public decisions through their involvement. This ensures transparency in the formulation of policy. It is for this reason that the Taskforce organized various public participation fora with a view to obtaining and gathering views from members of the public and industry players concerning the task at hand.

4.2 Extent of Public Participation

The Taskforce embarked on public participation by holding stakeholder consultations and public hearings. The Taskforce met with Departments at the Ministry of Lands and Physical Planning, National Land Commission, Industry Experts, County Governments and Civil Society Organizations. Invitations were sent out to the stakeholders specifically requesting them to make structured submissions/presentations to the taskforce on the Status of Digitization; Challenges; Workflows; Quick Wins; Existence of a Document Management System; Security of Records; and Proposals for e-Conveyancing. Additionally, the Taskforce members made visits to the respective institutions for a first-hand experience and situational analysis i.e. Land Registries (Central & Nairobi), Land Administration, Valuation, ICT, Survey of Kenya, National Titling Centre and the Kenya National Archives and Documentation Service. In addition to the stakeholder consultative forum, the Taskforce conducted public hearings in the counties across the country from 2nd to 11th October 2018. **Annex 5** shows the Public Participation Schedule.

4.3 Findings

4.3.1 Ministry of Lands and Physical Planning

The departments from MoLPP made presentations and submissions to the Taskforce. These included Registration; Survey; Physical Planning; Land Adjudication and Settlement; Valuation and Land Administration. The key observations made by the Taskforce are summarized in Table 4.1.

Although there have been significant strides made towards digitization and automation of land transactions at MoLPP, several challenges seems to plague the process including:

a. a deficient legal framework;
b. lack of end to end visibility of processes/transactions;

c. insufficient resources (both human and ICT);
d. vulnerability of records to fraud;
e. duplicated efforts across departments leading to long transactions;
f. loss of institutional memory through staff turnover/redeployment; and
g. non-sharable information held within the "siloed" departments.

Most of these challenges can be addressed by a properly executed digitization and automation strategy. A case in point is the National Titling Centre (NTC), where bulk processing of titles is done in a fairly fast and efficient manner due to the tight integration of Survey, Adjudication and Registration; and an elaborate automated Title Printing System. Having delivered over 840,000 titles in as span of five (5) years since 2013, if replicated across the country, the impact is expected to be phenomenal. It is important to note that the end products from NTC such as RIM and Titles are available in digital format but have to be printed out for onward processing.

4.3.2 Analysis of the system at MoLPP

The automation of the MoLPP functions has been attempted many times from as early as 2004. In 2012 EDMS was installed in an initiative sponsored by the Swedish Survey Agency – Lantemateriat. In 2014, an enhanced EDMS, with three different instances of the same application were implemented in the departments of Registration, Land Administration and the National Titling Center. In 2017, the current LIMS with semi-automated customer facing application and back office processing was implemented in the Registry with a focus on electronic collection of revenue. In addition, the system has modules that support valuation, lease processing, land rent and stamp duty processing. Some of the functions of the LIMS includes:

a) Online application of services via e-citizen such as online searches;
b) Land owners have access to their properties and may initiate applications on the Public Online Self Service LIMS portal;
c) Online payments –e.g. land rent, stamp duty etc. that have resulted in reduced queues at the banking hall;
d) Provision of a portal for lawyers, that is, LSK portal;
e) Provision of a banks portal; and
f) Internally, several workflows within Land Rent, Land Administration, Land Valuation, Collector of Stamp Duty, Land Registration (Nairobi & Central) Departments have been automated.

The following system security measures have been implemented:

a) Online properties must be verified by the Registrars before any transaction is allowed;
b) The use of audit trails;
c) Regular backups;
d) Verification of approvals through One Time Password (OTP);
e) Use of inbuilt system security and firewalls;
f) Use of SMS and email notifications; and
g) Owners and sellers verified through IPRS.

Future aspects of the system include:

a) Total automation of the land processes, that is, . end to end processes;
b) Full implementation of cashless collection of 100% due revenue;
c) Upgrading of the system to ease transfer of property;
d) Integration with the cadastre data from Survey of Kenya; and
e) Scaling up the system to all registries across the country.

The following are discernible about the system that is in place at MoLPP:

a) The system was rolled out before adequate infrastructure resourcing was done resulting in capacity and stability challenges;
b) There is need for additional public awareness, sensitization and civic education on the system;
c) To enhance efficiency in the system usage and scaling, continuous staff training, and incorporation of online user manuals and tutorials will be required;
d) System is accessed through e-citizen platform with an implementation of a One Time Password (OTP, which is an added security layer;
e) The system allows use of forms repealed under the Registered Land Act (RLA and the Registration of Titles Act (RTA. The Land Registration Act (LRA harmonised all registers and introduced uniform forms for land transactions which should be used instead of the forms which have already been repealed;
f) All registries and survey offices should be resourced adequately to ensure that the system being put in place can be used; and
g) The system needs enhancement to include live cadastre information from Survey of Kenya.

Table 4.1: Ministry of Lands and Physical Planning

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
Central Registry & Nairobi Registry	• Efforts have been made to organize the manual records with restricted and controlled access • A management system has been deployed which relies on manual records for verification and validation of processes • Most of the land records have been scanned except for those that have been damaged and those that are missing • Workflows have not been documented	• Difficulties in the reconstruction of the GLA volumes as most of the old ones are in tatters • No Document Management System in place as physical files are stored in the strong room and sensitive ones are locked in a safe. • Strong room has space constraints • The system is occasionally slow and non-responsive • Data loss due to system failure • Reconciliation of titles issued under the repealed land laws to the Land Act (2012) and the Land Registration Act (2012, Government Land Act	• Searches are now available online for Registered Land Act RLA	• E-conveyancing is the way to go and will bring efficiency. At the beginning there may be a need for both manual and automated processes. The e-conveyancing needs to be well thought out if it is provide an end-to-end solution.

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
		(GLA is still manual since most of the GLA documents are in tatters it is taking long to reconstruct the records.		
Collector of Stamp Duty	• LIMS is available for processing Stamp Duty with inputs from the Director of Valuation • Payments are done online via i-Tax or e-Citizen platforms • Refunds, exemptions, endorsement, assessment and franking are still done manually. • Workflows not documented	• iTax platform is not linked to LIMS unlike the case of e-Citizen platform slowing down verification of payments • Franking must be manual by law • LIMS is at times slow and non-responsive[52]	• Online payments • Integration of iTax and LIMS	• Provision of e-Franking or removal of Franking as a process requirement by law
Land Administration	• Process of digitization has been initiated through scanning of land records /correspondences • Verification of digitized records is ongoing • Workflows have been documented • Security of the documents, is ensured through security seal and a computer generated bar code	• Errors in scanning slowing down digitization • Vulnerability of the scanning process to fraud since it is outsourced	• Completion of current phase of digitizing and verification of the land records	• Systems integration with other departments to avoid instances where Titles are issued before the conditions given/appended are met by the land owner, that is, incorporation of verification mechanism such as a compliance

[52] The main issue is that the LIMS in place is running on one server which is also being used for testing and data entry.

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
				certificate before registration
Physical Planning	• Approved Development Plans (DPs) scanning is in progress • About 65% of PDPs have been scanned • No system in place to process scanned Part Development Plans (PDPs) • Workflow documentation not immediately available	• Need to provide direction at county level through harmonizing the National Spatial Plan and County Spatial Plan. • Slow adoption of technology by officers • Proliferation of fake PDPs, use of outdated drumhead scanner and lack of development control mechanisms.	• Incorporation of security features on PDPs identified as a possible solution to address PDP verification and to deal with fake PDPs.	• Need for integration with other departments to facilitate efficient exchange and processing of information
Survey of Kenya	• Scanning and vectorization of geospatial data for Nairobi, Mombasa, and Kiambu is complete. Machakos is ongoing • Workflows have been documented	• Insufficient ICT resources i.e. servers, scanners, plotters etc. • Requirement by law to receive and process manual documents yet Surveyors already have	• Upscale of ICT infrastructure • Legal reforms to allow for submission of electronic documents • Re-organisation of records at the Survey	• Integration with other departments at MoLPP • Conversion of registration maps from the repealed laws to the new land laws • Geo referencing of all

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
		capacity for digital submissions • Damaged manual records • Lack of connectivity to other departments resulting in disjointed operations • Vast geospatial datasets in analogue format. • Vast non georeferenced maps	Headquarters and field stations. • Digital data capture involving Scanning, vectorization and attributing should be undertaken • Establishment of digital file tracking system and intranet	Land parcel boundaries and cadastral maps. • Digital updating of geospatial data. • Web-based interlinkage between various directorates for approvals and dissemination of products including land registration maps • Digital platform through which online submission and tracking of Surveys can be done
Valuation	• Process was started in 2018 • Valuation information summarized in valuation cards. 78,327 cards have been scanned, data extracted and uploaded to LIMS • Valuation reports (48,000) have been scanned and uploaded onto LIMS, pending data extraction • Additional efforts to scan acquisition files have also been made • Workflows for Stamp Duty and Rent Determination have been documented	• Experiencing challenges in scanning and extraction of data from manual records. To address this, a data capture template has been designed to enhance the valuation process • The court case slowed down digitization efforts and resulted in	• Legal reforms to facilitate digitization. Current efforts on digitization in LIMS, if allowed by law would reduce the turnaround time from 21 days to 3 days. • Procurement of a GIS platform to enhance their valuation process by provide visibility of cadastral maps and	• The need to link records from Survey, Physical Planning and Land Administration would be ideal.

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
	• No DMS in place i.e. Manual document management done traditionally using physical files and secured by normal locks and keys	duplicated (manual and online) valuation efforts. • Lots of cross-cutting data is yet to be digitized • Server capacity and access constraints were noted • Manual analysis and document retrieval pauses a challenge in terms of difficulty in retrieval of information and time consuming • Lack of capacity at the counties is an impediment to proper execution of the valuation function at the county level. • Delays in processing of applications due to loss of up to 15 days between scanning and allocation to officers. • Data capture is marred by errors and	vector maps	

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
		incompleteness making the process tedious and inefficient		
Senior Plans Record Officer (SPRO)	• SPRO has the broad function of updating and maintenance of maps and property records; • Specifically, SPRO: confirms status of land i.e. community, public or private; makes notes of plot files; cleans adjudication sections before commencement of adjudication process; confirms status of PDP's/DPs before approval by the Cabinet Secretary; carries out site inspection for the purpose of issuing consent to transfer/charge etc. • Currently data capture has been done by keying in information from parcel cards	• Difficulty in drawing maps – manual and tedious • Tedious process of searching for records • Physical damage on the maps and cards. • Inadequate staffing • High staff turnover leading to loss of institutional memory • Metal drawers occupy a lot of space and are no longer being manufactured thus presenting a problem for data storage	• Provision of additional staff and ICT resources • Equipping the office with a modern GIS workstation complete with software and hardware for data capture; • Retraining of staff to equip them with skills on data capture, manipulation, editing and storage; • Restoration of damaged maps and cards	• Linking with other departments within MoLPP to enable verification of authenticity of documents and sourcing of information from these departments
Land Adjudication and Settlement	• The department has developed a system i.e. Land Settlement Fund Billing Module to automate some of their operations in land settlement and end users have been trained with one of the key outputs of the system	• Inadequate IT resources and staff • Slow access to servers making it difficult to adequately use the developed applications	• Full adoption of Land Settlement Module • Systems integration with e-Citizen	• Need to review the legal framework in place with reference to predominantly unregistered in Northern Kenya and North Rift

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
	being Settlers Biannual Statements. • Cash received sheets and capturing of settlers discharge data before 1995 still pending digitization • Systems have not yet been integrated with e-citizen. • This system is currently available only at the headquarters (Nairobi office) with plans to deploy the same in 57 field offices. • Workflows have been documented	especially for the ongoing data capture. This has necessitated falling back to manual processes in some cases. • Dependency on other departments at slows down internal processes as there is no infrastructure for efficient information sharing		• Systems integration with other departments to facilitate quick processing of land transaction

4.3.3 National Land Commission

The heads of departments/directorates from the National Land Commission made presentations to the Taskforce as summarized in Table 4.2.

4.3.4 Analysis of the System at NLC

The Public Land Information Management System (PLIMS) developed by NLC involved the automation of identified land processes and workflows; integration of the system with relevant land records and documents; and integration of the system with other Commission systems. The guiding principles of the system implementation included:

i. Single point of access to all systems – single sign on;
ii. Unified system implementation (integrated systems);
iii. User centric (focused) design and development;
iv. Corporate image enhancement;
v. Efficiency in service delivery;
vi. Implement complex features and present them in simplified forms; and
vii. Follow a phased implementation pathway – core functions of Commission first – growing into other systems – to collaborating organizations.

The following workflows have been implemented:

1. **Land Administration**
   a) Development application process including: Extension of a lease that has not expired; Renewal of lease; Change of use e.g. from residential to commercial; and Extension of use.
   b) Allocation of public land
   c) Regularization of land allocated by County Government
   d) Processing applications for subdivision of land
   e) Issuance of consent to transfer, charge and lease Government land
   f) Preparation of a new grant/lease
   g) Approval of building plans
   h) Issuance of land rent clearance certificate

2. **Land Valuation:** The following workflows have been automated: Valuation for purchase or lease of land; Valuation of land for compensation on compulsory acquisition; Valuation for stamp duty; Valuation for ground rent upon alienation, subdivision, lease extension and change or extension of user; and valuation for land rating.

Land Adjudication and Settlement workflows were also automated prior to the amendment of the land laws in 2016. However, these were not finalized. Due to limited budgetary allocation, system

implementation is being done through a phased approach. Phase I of the system implementation is now complete and undergoing internal testing before being rolled out to the public. The system has public and internal modules. The public module provides a gateway through which the public can access the system and submit their applications. Internal portal provides a platform through which the authorised officer can receive and process applications. The applicants are able to track their application online. Integration with public land inventory is currently ongoing. Phase I included:

a) Procurement of solution - GIS servers, Database servers, scanners, plotters and software;
b) Establishment of GIS and data conversion laboratories;
c) System design and development;
d) Processes codification and workflow automation for land administration, valuation, adjudication and settlement processes; and
e) System integration - This component focused on integration of the system with the Commission systems, namely the Enterprise Resource Planning (ERP), Citizen Relationship Management (CRM) and the Electronic Document Management System (EDMS). The system is also expected to integrate with the Integrated Population Registration System (IPRS) allowing authentication of the citizens/users details.

Table 4.2: Presentations from National Land Commission

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
Land Use Planning	• The mandate of the directorate is to monitor and have oversight responsibilities over land use planning throughout the country; • Some processes have been captured in the on-going workflow automation through the Public Land Information Management System (PLIMS • Workflows have been documented but are yet to be re-engineered to facilitate digitization of land records	• Duplicated efforts between NLC and MoLPP such as circulating development applications for comments. • Delays in receiving information from planning authorities, particularly the Director of Physical Planning at MoLPP • Inadequate storage space for filing the plans	• GIS based county spatial plans will play a key role in informing subdivisions in freehold areas; • Setting up a digital document management system platform	• Possible duplicities in the segregated digitization initiatives at NLC, MoLPP and County Governments need to be addressed by harmonizing the efforts. • Part Development Plans (PDPs) need to be digitized in a standardized format to enhance and secure the planning process • There is need for coordination between the Physical Planners, Surveyors and Valuers through a comprehensive end-to-end workflow automation system.
Survey	• Some processes have been captured in the on-going workflow automation through PLIMS • Workflows have been documented	• Inadequate personnel	• Document processes to support the land acquisition and vesting of public land to the government. • Operationalize public land vesting	• Direct link with Survey of Kenya. • Access to digital maps from Survey of Kenya • Submission of acquisition plans in soft format

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
				• There is need for coordination between the Surveyors, Land Administration and Valuers through a comprehensive end-to-end workflow automation system.
ICT	• Currently driving the workflow automation process via PLIMS based on workflows provided by various departments e.g. valuation, compensation, lease preparation, issuance of consent, land allocation, development application etc. • ICT security measures in place i.e. firewalls, encryption and antivirus • PLIMS yet to go live for use by the public	• Lack of collaborative digitized data from other government agencies such as Cadastre from the Survey of Kenya is a major impediment to the realization of full deployment and commissioning of PLIMS	• Harmonization of digitization efforts between NLC and MoLPP to avoid duplications	• Systems integration with other departments at MoLPP for synergy

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
Valuation	• Ground rating, stamp duty, ground rent and purchase workflows have been automated • Workflows are documented and available for review • No DMS in place, so everything is manual in files	• Lack of access to maps/cadastral models required for valuations and rent determination. • The space for data storage is insufficient since system is currently paper based, • Lack of data integrity due to inadequate security measures • Lack of final surveys and vesting • Some files are physically damaged, prone to loss, not sharable and present difficulty of access and retrieval of information. As a result, there is no one stop shop for records of previous acquisitions. • Loss of institutional memory during staff turnover.	• Minimize duplication of workflows between NLC and MoLPP • Increase personnel; • Capture data electronically and the same to be stored in disks .	• Need to incorporate computer aided map appraisal to aid valuation for stamp duty • Land value maps and index will need to be developed in advance • Need for a robust software application/system with – sufficient storage capacity, secure cross-data sharing capabilities (between NLC, MoLPP and Survey of Kenya), controlled access to information and protected with Firewalls.

Department/Directorate	Status of Digitization	Challenges	Quick Wins	Proposals for e-Conveyancing
Land Administration	• Workflows have been documented and made available for automation on PLIMS	• Duplicity of functions with MoLPP and NLC, such as reports by Land Administration Officers.	• Interconnectivity with MoLPP and clarification of roles between NLC and MoLPP so as to remove duplicity and provide certainty of processes and procedures.	• Interconnectivity for a one-stop shop for the players in land transactions i.e. advocates, private individuals/firms, planners, financial institutions etc. • Verification and authentication of documents uploaded on the system should be mandatory • The system should develop alerts for the workflow • There is need for an interactive system based on functions and roles and not persons and or institutions

4.3.5 Civil Society Organizations (CSOs)

The Taskforce sought views and proposals from selected CSOs focused on land related issues. Specifically invitations were sent as per **Annex 6**. The following CSOs' presented views or proposals to the Taskforce: Kenya Human Rights Commission, Land Development and Governance Institute, Kenya Property Developers Association, Hakijamii, Nakuru County Public Opinion Consultative Initiative, National Council of Persons With Disability, Grassroots Organizations Operating Together in Sisterhood, and the Kenya Association of Records Managers and Archivists.

4.3.5.1 Key Messages from CSO's

a) <u>Current Challenges with Land transactions</u>

The following were identified as current challenges with land transactions:

1 Current manual systems are vulnerable to fraud;
2 Frustrations in long transactions marred by unclear circumstances;
3 Difficulty in tracking revenue leakages;
4 Missing files that provide avenues for corruption;
5 Rampant duplicity of titles resulting in disputes that impede development;
6 Non-existence of a backup for the physical paper based files which are exposed to absolute loss in the unfortunate case of fire;
7 Unreliable helpdesk/customer care, which can be frustratingly difficult to reach even by phone; and
8 Inefficiencies in information retrieval and processing of land transactions leading to high transactional costs.

b) <u>Views and Proposals</u>

The following are the summarized views and proposals:

1 There is need for clear linkages with other relevant systems at the County and National level (i.e., land survey, land adjudication, and land registration services) as well as with Banks;
2 Consider the delicate balance between the right to privacy and access to information while sharing and disseminating land related information within the digital platforms;
3 Learn from case studies or benchmarking from other countries that have made efforts to digitize their land transactions such as Botswana, Estonia, UK, Canada and Australia;
4 The need for civic education on guidelines and access to digital platforms ought to be done in a simplified format to ensure concise communication to all;
5 Digitization should guard against fraud especially in identity theft/impersonation of owners/professionals and authorized agents;
6 The need for an Information Security Policy to curb intrusion through hacking and other cyber-attacks so as to ensure integrity and public trust;
7 The digitization process should ensure that a clear records and document management policy is in place based on international standards and best practices such as International Standards

Organization (ISO) standards. This should also inform how existing land records can be archived for longevity and ease of reference;

8 Consider setting up an Assurance Fund[53] to hedge land owners against losses due to fraud and erroneous entries/omissions in the digital platform;

9 Establishment of an electronic deed file for all pieces of land to improve efficiency of processing land transactions;

10 NLIMS should be accessible to legal practitioners, individuals, companies, foreigner's societies etc.;

11 Guidelines should be very clear on electronic witnessing and drafting of conveyance instruments by advocates, and, provide for the requirement of physical appearance by parties to the Registrar;

12 Timelines and workflow tracking should be defined in form of publicly declared Service Level Agreements (SLAs) to ensure transparency of the e-conveyancing process;

13 The Ministry should meticulously and conclusively address concerns or issues and perceived errors raised by external end users of the current NLIMS e.g. inconsistencies in Land Search Results;

14 Any fees levied on for services on the NLIMS should be gazetted for clarity and accountability;

15 The Ministry should initiate the mapping, documentation and registration of community land in accordance with the Community Land Act 2016 –under Sections 8, 9, 10, 11 and 13.

16 To accommodate Persons with Disability (PWD) it will be important to make provisions for barrier free and disability-friendly environment for easy access to land registry buildings across the country, where dedicated helpdesks for PWD will need to be setup;

17 In case of specialized equipment required by PWD to access NLIMS, concessions/exemptions from import taxes will need to be considered;

18 Transition to digitization should be gradual to allow for a phase where both manual and digital processes run concurrently;

19 The need for government to promote ICT literacy among citizenry to facilitate uptake of NLIMS;

20 There should be a plan to include land transaction services at Huduma Centers across the country;

21 The MoLPP will need to be adequately funded to facilitate rollout of NLIMS; and

22 Officers at the MoLPP will need to be retrained on ICT to equip them with skills to process land transactions on NLIMS.

4.3.6 Public participation with Professional Bodies

The Taskforce formally invited experts drawn from various professional bodies and government agencies who have successfully automated their functions, to make presentations at the event. The list of organizations invited has been annexed as **Annex 7** while **Annex 8** shows those who attended the forum. Outlined below is a summary of their views and proposals presented.

[53] An Assurance Fund would enable compensation of land owners in the rare cases where they are deprived of title to land either because of an error in the administration of the land title system or because they are the innocent victims of forgery e.g. as a result of identity theft.

a) Current Challenges with land transactions

1. Missing/lost documents leading to lengthy period within which transactions are completed;
2. Instances of fraud and corruption;
3. Difficulty in access to data which is in different locations/institutions;
4. Unmanageable archives due to the manual storage in place;
5. Escalating land resource conflicts in community lands hindering/stalling implementation of government projects such as Lamu Port, South Sudan, Ethiopia Transport Corridor (LAPSSET) and the Standard Gauge Railway (SGR).

b) Potential Benefits of Digitization of Land Transactions

1. Availability of timely and accurate information,
2. Convenient archiving of records leading to ease in accessing of documents;
3. Reduction or elimination of duplicity and redundancy leading to cost savings;
4. Improved capacity leading to reduced errors and mistakes;
5. Streamlined processes leading to reduced turnaround times and more revenue;
6. Preventing / Redressing Historical Injustices
7. Fast track mapping and titling of community land hence reduce conflicts and spur productive potential in Arid and Semi-Arid Lands (ASALs) in Kenya

c) Views and Proposals

1. Preference to have qualified professionals within the land sector to handle land transactions, registration and conveyancing. Any unqualified persons should only be granted a read only access or capability to track applications;
2. Professionals will need to be trained adequately to handle the envisaged digital LIMS;
3. The digital LIMS will need to be reliable, secure, transparent, sustainable and accessible;
4. The need to consider either fully digital or digital/analogue hybrid deployment for the LIMS;
5. Land use planning, town planning, county planning should be part of the electronic LIMS to avoid conflicts and demolitions;
6. Digital LIMS will ensure efficient and effective management and promote sustainable revenue to National Government/County Governments;
7. To enhance efficiency in operations for users, it will be useful to consolidate systems into a one-stop access to all government agencies registering projects and/or issuing construction permits which include National Environment Management Authority (NEMA), Kenya Urban Roads Authority (KURA) and Kenya Civil Aviation Authority (KCAA) among others;
8. The Taskforce should consider drawing lessons from case studies of Sweden, United Kingdom, Rwanda, New Zealand, Singapore, Rwanda and Canada;
9. System should be able to protect users' data, allow interoperability with other systems, should use open source software as opposed to proprietary software;
10. Reforms on the legal framework to facilitate digital land transactions were proposed in the form of review of legislation including Physical Planning Act, Sectional Properties Act, Kenya

Information & Communications Act, Urban Areas & Cities Act, Survey Act, Built Environment Bill, Built Environment Professional Bill, Valuers Act etc.;

11. To avoid duplicity and user resistance, a federated systems architecture was proposed from a design perspective;
12. A phased approach to digitization was proposed preceded by piloting the system as a proof of concept;
13. Transition to the digital platform should be structured to avoid halting or delaying new and ongoing transactions; and
14. Banks proposed the need to incorporate into NLIMS a function that would allow a bank to authorize a firm of advocates to act for it in the various stages of perfection of the securities.

d) <u>Recommendations</u>

Below is a summary of the key recommendations that emerged from the experts presentations.

1. Systems design should take a distributed but integrated approach without replicating existing inefficiencies in lengthy processes such as change of user and titling.
2. In the establishment of NLIMS the following aspects ought to be considered:
   a) The need to establish a unified Land Information System through the introduction of advanced NSDI system and the relevant administrative process;
   b) Accurate land information registration and management;
   c) Improvement of citizen services by providing all land information and deed related services online; and
   d) Incorporation of a detailed user manual to guide end users on requirements and processes for conducting transactions online;
3. Land transactions on LIMS will need to be restricted to the relevant professionals while limiting access for simple tasks such as searches to the public.
4. Roles of MoLPP, NLC, County Government and the National Government Agencies in land transactions will need to be clearly defined to avoid duplicity and conflicts in mandates.
5. Systems Architecture must be robust, responsive to disruptive changes in technology and highly scalable to accommodate provision of world-class enterprises services. To this end, a federated systems approach was proposed.
6. The envisaged system should incorporate deliberate efforts to enforce professional responsibility for all actors in land transactions with close cross-referencing with professional umbrella bodies on status and professional standing. These efforts are informed by the need to mitigate fraud perpetrated by quacks.
7. In proposing guidelines and strategies in developing NLIMS, case studies from countries such as Sweden, United Kingdom, Rwanda, New Zealand and Canada among others, would provide useful insights.
8. NLIMS will need to be protected from emerging trends in cyber-crimes and hacking by design and practice in form of elaborate Intrusion Prevention and Detection Systems.

9. Cryptography and the use of Digital Certificates as e-signatures came out strongly as fundamental components of workflow automation design for land transactions.
10. The need to provide relevant linkages/visibility between LIMS and other government agency systems such as (iTax – Kenya Revenue Authority (KRA) and IPRS) would go a long way in enriching and reducing turnaround times in land transactions.
11. Deliberate efforts will need to be made to ensure integrity and confidentiality of personal data throughout the land management cycle. This should be done in full compliance to the Data Protection Bill, which ought to be passed into law.
12. Careful considerations will need to be made when procuring LIMS software in terms of Intellectual Property Rights in the case of open source vs proprietary software, ensuring the Government's rights and interests are adequately covered.
13. The success of NLIMS will be hinged on capacity building and sensitization of both the operators and end-users. Adequate training will therefore be necessary before and after deployment of LIMS.
14. Piloting of NLIMS before full-scale deployment was proposed to ensure teething problems are addressed in a manageable manner before mass roll out.
15. Credibility of the NLIMS solution vendor(s) will be a key consideration given the sensitive nature of Land records.
16. Workflow automation designs will need to incorporate mandatory feedback inputs to the system to ensure in-built checks and verification around land use vs planning/regulations on parameters such as building densities i.e. ensuring that professionals provide and upload complete information on what has been done on the ground for approval purposes.
17. Workflow automation will need to instill Service Level Agreement (SLA) adherence and Jeopardy Management by public officers handling transactions within NLIMS e.g. the case of title verification for transfers, charges and discharges
18. The Cabinet Secretary should consider transforming the Taskforce into a standing committee that meets regularly during the transition period from manual to digital land registration processes.
19. NLIMS should make provisions for foreign non-resident investors to carry out land transactions given the existence of current property owners who are not necessarily Kenyan.
20. NLIMS should consider and incorporate different currencies and not limit the currency recognized in the system to Kenya Shillings.

4.3.7 County Governments

County Governments - being critical stakeholder in this process - were invited to participate in giving their views. Specifically in recognition of the critical role played by officers at the county level in respect to processing development applications, the Taskforce organised a County Governments Forum at Panafric Hotel, Nairobi on the 26th of September, 2018. CEC Members for Lands & Physical Planning; County Directors of Survey; and County Directors of Physical Planning were invited.

A further engagement was made possible courtesy of the Council of Governors in a workshop held on the 2nd of November 2018, at Azure Hotel, in Nairobi where CEC Members for Lands & Physical Planning from various counties had the opportunity to present their views and proposals to the Taskforce. The main concerns and observations that came out of these consultations are outlined below:

a. While some counties have made efforts to provide resources (skilled personnel and ICT infrastructure), most of the counties lack resources that would be necessary to drive the e-conveyancing agenda;
b. There is an apparent lack of clarity amongst county government officials on their role in land transactions resulting in duplicated efforts in Valuation, Physical Planning and Land Survey;
c. Revenue leakages are common due to lack of accountability and inefficiency of existing manual processes;
d. Slow and long transactions associated with the current manual processes have resulted in frustrations to members of the public;
e. Cost implications of the setting up GIS labs at the counties was cited as a major challenge that needs to be addressed as a priority
f. County governments representatives complained that land records under the Ministry of Lands and Physical Planning were not accessible and/or available;
g. Prevalent fraud and corruption at the county level has led to cases of duplicated allocations and titles. This has resulted in a lack of trust by the public and a digitized regime would provide an opportunity to restore public trust; and
h. Encroachment and irregular acquisitions on Community Land has been aided by the non-transparent manual process. In addition, invasion and claim of ownership among the ethnic groups within the community land is very rampant. This promotes perpetual conflicts as well as grabbing of community land by elites and cartels for speculative purposes.
i. County governments representatives in the forum were pessimistic about the Taskforce activities terming it as work in futility and will never see the light of the day. They alleged that 80 % of the land lies within the Counties, therefore, they should have been the ones driving the process as opposed to the National government. Hence there is need to clarify roles, responsibilities and functions of County governments, NLC and MoLPP with respect to digitalization of land records and conveyancing process. It is desirable to develop a system that links existing databases at national and county governments.

4.3.7.1 Recommendations

a. To harmonize operations between the county governments and MoLPP, it is necessary to give specific directions on separation of functions in line with Schedule Four of the Constitution of Kenya on devolved functions. This will go a long way in ensuring co-ordination, collaboration, efficiency and synergy in land transactions and ultimate service delivery to the public;
b. Capacity building and investment on ICT resources will be necessary to facilitate the digitization process;

c. To avoid sanitizing fraudulent transactions, caution should be taken to ensure contentious land parcels are not uploaded onto the envisaged NLIMS before conclusive resolution;
d. The NLIMS should be specifically designed to guard against fraud, hacking and identity theft.
e. There is need to fast-track the process of identification, adjudication, mapping and registration of community land countrywide so that the community land register be in tandem with public and private land registers. This will facilitate digitization and unlock productive potential of 68 percent of land in Kenya, open unlimited opportunities for investments in terms of irrigation for food security as well mining of underground resources
f. Digitization should be used as a tool to uncover irregular registrations within community land as a measure to safeguard and assure community interests;
g. The digitization process should go hand in hand with transfer of Titles (for Public and Community Land) from the MoLPP to the County Governments;
h. There is need to incorporate County Governments in the conveyancing workflow with regard to consents to extension or renewal of leases issued by counties.

4.3.8 Public Hearings

The Taskforce collected views from the public through public hearings. Views were collected from people's representatives drawn from all parts of the country. The Taskforce organized itself into three teams and clustered the country into twelve (12) strategic clusters covering all the forty seven (47) Counties. Each team was allocated four (4) clusters. The teams visited their respective counties and held public meetings at places as per Table 4.3. A standard power point presentation was used by all teams to open the meeting and trigger discussions. **Annex 9** shows the Public Hearing Programme. The public meetings were well attended and speakers gave their views on various issues on land even beyond the scope of the inquiry. Random selection of speakers at these meetings was adopted to give a chance to a cross section of all participants to raise their issues orally. Written memoranda, where available, were also received. Members of the public were invited using the following media:

a) Public notices through newspaper advertisements (Daily Nation of 14th September 2018 and 29th September 2018);
b) Invitation letters sent out to the Counties through the County administration and National government administration at the counties;
c) Road shows sensitizing the local residents and inviting them to attend the meetings;
d) Oral invitations to stakeholders, especially professionals;
e) Invitation letters to Registrars and NLC County Coordinators via email seeking assistance for mobilization of colleagues and other stakeholders within the region; and
f) Follow up phone calls to County Commissioners, Registrars and NLC County Coordinators.

Table 4.3. Public Hearings Schedule

Date	Host County	Target Counties	Venue
2nd October 2018	Mombasa	Mombasa, Kilifi, Kwale, Tana River, Lamu, Taita-Taveta	Kenya School of Government
	Uasin Gishu	Uasin-Gishu, Tran-Nzoia, Nandi, Baringo, Elgeyo-Marakwet, West Pokot, Turkana	Medical Education Conference Centre Hall –College of Health Science
	Nakuru	Nakuru, Narok, Bomet, Kericho	RiftValley Institute of Science and Technology
4th October 2018	Nairobi	Nairobi, Kiambu, Kajiado	Bomas of Kenya
	Kakamega	Kakamega, Bungoma, Vihiga, Busia	Kakamega Golf Hotel
	Embu	Embu, Meru, Tharaka Nithi	Embu University
5th October 2018	Kisumu	Kisumu, Siaya, Homa-Bay	Kisumu Hotel
	Machakos	Machakos, Kitui, Makueni	Machakos Teachers College
8th October 2018	Kisii	Kisii, Nyamira, Migori	Kenya Institute of Highways and Building Technology
	Garissa	Garissa, Wajir, Mandera	Garissa Government Guest House
	Nyeri	Nyeri, Laikipia, Murang'a, Nyandarua, Kirinyaga	Nyeri Polytechnic
11th October 2018	Marsabit	Marsabit, Samburu, Isiolo	Catholic Social Hall

For the purposes of submitting memoranda, the Taskforce made public designated email, physical and postal addresses i.e.

The Secretariat, Digitization Taskforce,
Ministry of Lands and Physical Planning,
Ardhi House, 1st Ngong Avenue
P.O Box 30450 – 00100, NAIROBI.
digitizationtaskforce@ardhi.go.ke

Collation of Materials and Findings

Upon conclusion of the public hearings, the Taskforce retreated and shared experiences, observations and findings from the three teams. The Taskforce noted that there were several cross-cutting issues identified from the diverse counties as recorded below.

4.3.8.1 Manual System

The manual system has been the medium that has been used for conveyancing since independence. There have been adverse reports of missing or lost documents, rampant corrupt practises at the Land's registry and registration of land transactions taking too long. The resultant effect is loss of revenue and public trust in the land registration and conveyance system.

4.3.8.2 Execution and verification of signatures

Traditionally, and under present land laws, it is mandatory for conveyancing documents such as transfers and charges to be executed by the parties and the signatures attested in the same breath. The question arose as to how the electronic infrastructure would address attestation to execution; and ensure compliance with the statutory provisions that maintain the current high threshold of validating conveyance instruments.

4.3.8.3 Identifying the costs of establishment: setting up transition systems

One of the main determinants in ensuring traction of policy changes is making it possible for the public to respond to the reviewed service delivery by government institutions. In this section, the focus will be on how to harness the available factors of production in land conveyancing to ensure that the resultant systems are both robust and sustainable. The public participation drive identified the following parameters as the main concerns that the public found to be possible impediments to the traction of e-conveyance in the country.

a) **Training**: As digitization is rolled out, there was general consensus that there ought to be training of staff to gain both operational efficiency, and to cope with potential problems with the proposed system. A challenge may arise where the training of staff is overlooked or in cases where the staff is unfamiliar with digital platform. That may result in a situation where the benefits of enhanced conveyance systems do not translate into improved service delivery.

b) **Corruption and fraud:** One of the principal concerns that the Taskforce's public participation drive unearthed was the fear of a rise in fraud cases: particularly where identity of personnel is shared or where there is impersonation of owners or professionals by colleagues. From the public's perspective, the apprehension that the digital system would be a vehicle for theft and fraud was real: with close parallels, being drawn with the recent upsurge in cyber-crimes targeted at financial institutions and telecommunications service providers. Furthermore, the public was apprehensive on the intended digitization of land transactions because other systems introduced by government such as the Integrated Financial Management Information System and e-Procurement have been prone to fraud and abuse in the recent past. The various meetings voiced the fear that manual records already seem to be aiding theft and if left unchecked, the transition to what is expected to be a safer digital platform will only transfer and entrench fraud in the digital system.

c) **Data Input Errors During Digitization**: There were concerns that in the manual and paper based system some records particularly Titles have been falsified. Hence the existence of apprehension that during scanning of documents at the Lands Registry in preparation of digitization, some of the falsified documents could be validated by being scanned.

d) **Computer Literacy versus Automation:** There was concern on the level of computer literacy in the country. To the respondents in the public participation forums, the benefits of digitization would be lost if computer literacy was not addressed. This brought to light the fact that there must be drives to ensure computer literacy for at least a critical mass of conveyance participants in the country for the benefits for digitization to be translated to common usage.

e) **Insecurity and technology failure:** Members of the public noted that digital processes are susceptible to cyber-attacks and hacking. In addition, they observed that Technology is susceptible to failure as seen globally.

f) **Preparation in embracing digitization:** The public questioned whether staff and stakeholders in the lands sector were prepared to embrace the electronic system for they were of the view that less man-power will be needed to manage the system as opposed to the manual and paper based medium, thereby jobs may be at stake.

g) **Court Cases:** The Environment and Land Court has too many land dispute cases hence apprehension on digitization and automation of the land transactions. If done, a Land dispute in Kenyan Courts is a case that needs physical documents hence the more reason to consider a hybrid system. The digitized process needs to capture issues and unresolved cases on a parcel of land and not only the details of the owner as registered. Lengthy land related litigation slows down land transactions and likely to hinder transactions on a digital platform as well.

h) **Land Adjudication:** The public was apprehensive that the process of land adjudication has not been completed in a number of areas. They questioned how the Taskforces proposes to deal with situations where it is not clear whether the land is Private, Public or Community As such, there was concern that an innocent buyer would then be at risk of losing portions of their land with no compensation with the restructuring of lands and land owners not inducted/consulted during adjudication.

i) **Historical injustices:** The public was concerned that there are too many historical injustices that are yet to be resolved and as such they should be addressed to conclusion before digitization. It is however notable that digitization is merely a process of service delivery, it seems unusual to use it to address historical injustices and legal interventions.

j) **Lack of Title Deeds:** The public informed the Taskforce that digitization without title deeds will not be useful. They pointed out that most of the land in Marsabit, Lamu, Tana River, Garissa, Mandera, Wajir, Samburu and other unregistered lands in Kenya lack titles. The public wondered how the country can transition to digitization before addressing the challenge of lack of Titles, as well as cases where people have bought land with fake or illegal titles.

k) **Civic Education:** The issue of how the digitization platform and information would reach the common mwananchi particularly those in the village and the illiterate was a common issue raised in the public hearings.

l) **Decentralization and integration of the digital system**: Members of the public wondered whether the digitization system would be decentralized and to what extent it would decentralization. It was further noted that the system needs to be integrated in order to ensure all the players in land transactions are in the system, that is, from the MoLPP, county governments, to the National Lands Commission as well as the Professionals in private practice (Land Surveyors, Valuers, Advocates, Physical Planners, and Architects etc.)

m) **Access of the digitization platform:** Members wondered how easily accessible the system will be considering the lack of (or poor coverage) internet access in many parts of the country. Secondly, members of the Taskforce were urged to suggest innovative ways to accommodate

persons with disability and consider recommending provision of both Swahili and English in the digital platform. Members were apprehensive that the system especially in the villages would be difficult to access accordingly proposed the need to have a back-office support akin to the Huduma Centers.

n) **Land Control Board:** Members of the public raised an issue with the Land Control Boards (the Boards). It was reported that there is increased level of corruption in obtaining consents and this is attributed to the Boards being manned by quacks. The public sought to know whether the process of obtaining consents will be digitized and what the modalities of the digitization process would be.

4.3.8.4 Issuance of Title

Members of the public inquired on the following:

a) Whether the system will allow double registration of titles
b) What form of title the system will issue i.e. an e-title or physical title
c) The minimum and maximum acreage of land allowed under the system.
d) Whether the system will allow for replacement of lost titles.
e) A differentiation between what inherited, purchased or leased property is and information on what constitutes a genuine title to purchased property.
f) Whether there would be a database for disputes over land titles.
g) Whether there will be an option for colour coding titles e.g. according to the land classification i.e. Public, Private or Community Land

4.3.8.5 Scope of Digitization

A number of questions were raised on the scope of digitization as enumerated below:

a) Will the system digitize all elements of the conveyancing process?
b) How will government earn revenue from the digital system?
c) Access fees on the system will need to be clearly spelt out.
d) User manuals detailing the procedures of subdivisions and searches in the digital system will need to be provided.
e) Will digitization cover land not yet adjudicated?
f) How long will the process take? Will it follow the same path as the issue of e-citizen[54], which is currently embroiled in court wrangles and battles?

4.3.8.6 Succession

Succession and inheritance of land was brought to the attention of the Taskforce. Members of the public sought to find out how succession and the requirement for *viva voce* evidence for beneficiaries would fit in with the digital system

[54] The official digital payments platform that enables *Kenyan citizens*, residents and visitors to access and pay for government services online.

4.3.8.7 Community Land

The Taskforce noted sentiments raised by representatives from North Rift (Baringo, Elgeyo Marakwet, West Pokot and Turkana), northern Kenya (Garissa, Mandera and Wajir) as well as Upper Eastern Kenya (Marsabit, Samburu and Isiolo). These Counties occupy over 60% of the total unregistered land in Kenya, which is referred to as community land formerly Trust lands. The members of the public raised the following concerns:

a) What would be the purpose of digitization without title deeds?
b) How will the planned compensations and benefit sharing on LAPSSET project be handled?
c) Will digitization reduce ethnic conflicts on issues related to community land such as perpetual boundaries disputes?
d) Will digitization help to speed up land adjudication processes and kick start implementation of Community Land Act 2016? Reference is made to the Community Land Act Regulations and establishment of community land governance structures?
e) Pastoralist communities within the Community Land areas have no idea about the provisions in the Community Land Act, 2016, hence the need for sensitization and civic education before digitization.
f) What effect would digitization have on the lifestyle of the communities given that the majority of the land falls under community land? (For instance, what would happen to traditional sharing of grazing land, watering points, livestock movement and salts licks would once sections of community land have been allocated to different pastoralist communities?).
g) How will digitization sort out confusion/lack of clarity in community land transaction procedures i.e. between County Government, NLC, and MoLPP.

4.3.9 Foreign Experts' Consultation

In an effort to gain insights from other counties who have digitized their land transactions and processes, the Taskforce was privileged to listen to and have detailed discussions with an expert from the Netherlands' Cadastre, Land Registry and Mapping Agency (Kadaster) and the Honorary Consul of Estonia in Kenya.

CHAPTER FIVE

5 LAND TRANSACTIONS AND PROCESSES

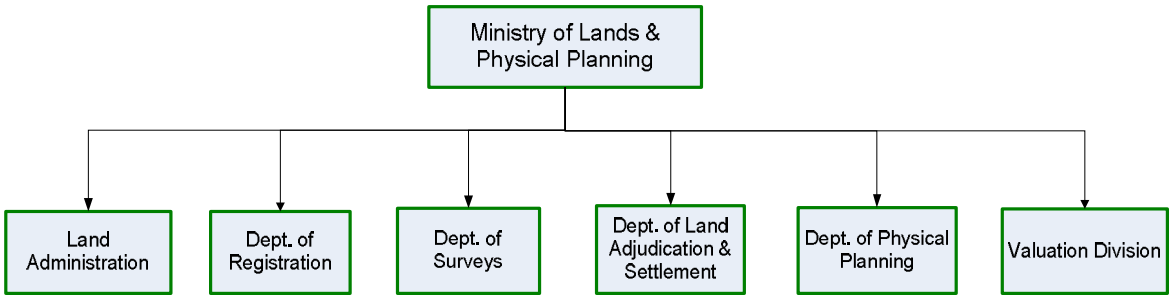
5.1 Introduction

This chapter analyses the roles and responsibilities played by various actors in various land transactions. The processes involving the departments/sections/units within the Ministry of Lands and Physical Planning, National Land Commission, County Governments as well as professionals have been set out. These agencies depend on each other for the supply of information needed for their day-to-day operations. This includes updating of their information base for policy formulation and decision-making. For example, the Counties rely on the Department of Surveys for the supply of spatial information needed to prepare Physical Development Plans[55]. In turn, these policy documents form the basis for development control and guiding allocation of land to various development projects through the preparation of appropriate part development plans. The part development plans, in turn form a basis for title surveys by the Director of Surveys to facilitate registration of land by the Chief Land Registrar. Finally, the surveyed part development plans are used to update the initial physical development plan by the Counties for the purposes of monitoring land use throughout the country.

5.2 Functions of Ministry of Lands and Physical Planning

The Ministry of Lands and Physical Planning is responsible for land administration in Kenya through its various departments of Surveying, Registration, Land Administration, Valuation, Physical Planning and Land Adjudication & Settlement. Figure 5.1 shows the organogram of the Ministry. The following section discusses the functions of the various departments within the ministry, each headed by a Director.

Figure 5.1: Organogram of the Ministry of Lands & Physical Planning



[55] Physical or Part Development Plans (PDPs) refer to base maps that are prepared for land use planning

5.2.1 Department of Physical Planning

The department coordinates and guides the preparation of national, regional and urban land use plans. In addition the department:

a) Advises the government on matters of strategic physical planning that impact on the whole country;
b) Formulates national physical planning policies, guidelines and standards;
c) Coordinates planning at the counties; and
d) Undertakes capacity building and technical support for county planning authorities.

5.2.2 Department of Surveys

The Department of Surveys is the official agency of the government on all matters affecting land surveys and mapping. The main functions of the department include:

a) Production, maintenance and distribution of accurate spatial data in analogue and digital forms in all range of scales;
b) Establishment and maintenance of a national geodetic control network covering the whole country to facilitate surveying and mapping;
c) Production and maintenance of survey plans/records for purposes of land registration;
d) Production and updating national topographical base maps for purposes of development and planning;
e) Inspection and maintenance of national and international boundaries; and
f) Preparation and publishing of the National Atlas of Kenya, as a documentation of National Heritage and promotion of the Nation's identity.

5.2.3 Department of Land Adjudication and Settlement

The department has two divisions: the division of Land Adjudication that deals with the ascertainment of rights and interests in community land and transformation of ownership from customary tenure to individual ownership through demarcation, survey and registration. The Settlement division deals with the settlement of landless citizens through the acquisition, planning, demarcation, survey and allocation of economically viable agricultural land for settlement of landless and poor Kenyans on loan basis. Other functions of the department include: Hearing and determination of land disputes in adjudication sections; and issuance of letters of offer and legal documents and collection of land loans as well as issuance of discharges and transfer documents.

5.2.4 Department of Land Administration

The Department is responsible for land administration and management of private and community land in the country. In consultation with other government departments and organizations, the department ensures that land rights for all are ascertained and security of tenure confirmed through the titling process and other related functions. The functions include:

a) Preparation of leasehold and freehold titles on alienated National/County Government Land;
b) Consents for various transactions on land transfers, charges and subleases;
c) Custody and maintenance of land records;
d) Establishment and management of Land Control Boards;
e) Coordinating the land administration process of planning, survey, valuation and registration for development applications and titling; and
f) Preparation of appropriate iinstructions to the Attorney General and availing of documents in support of the Department representation in court.

The department has the following distinct sections:

a) **Correspondence Records Section**; - this section is charged with the responsibility of opening and custody of all correspondence files for both registered and unregistered land in the country;
b) **Land Rent Section**; this section is the custodian of all land rent records of leasehold land. Their duties entail updating of land rent records to enable online payments, advise on the outstanding rent as well as the issuance of land rent clearance certificates; and
c) **Plan Records Office**; the section is charged with the responsibility of custody, updating and maintenance of survey plans, development plans, boundary plans and property cards. This section keeps records on status and planned users of all land in the country.

5.2.5 Department of Valuation

The department is responsible for valuation of land and landed properties for various purposes. Common types of valuations carried out include valuation for stamp duty; valuation for subdivision (rent apportionment); valuation for lease extension, change of user and extension of user; valuation for rating; valuation for alienation; valuation for government purchase, sale and leasing; valuation for purchase of freehold interest; valuation for compulsory acquisition; and valuation for estate duty/public trustee administration. In addition, the department values land and property for collection of revenue (Stamp Duty, Ground Rent and Rates). The department also determines appropriate market rents and market values for leasing, sale or purchase by National or County Government, Commissions and other government agencies.

5.2.6 Department of Registration

The department is responsible for:

a) Issuance of title documents;
b) Receiving applications for registration and registration of the following documents under the Land Registration Act – including but not limited to: Registration of leases, long term and short term leases, subdivisions/partitions/amalgamations or consolidations, transfer, charge, discharge of charge, restrictions, inhibitions (court orders), easements, withdrawal on restriction surrender, grant of letters (transfer by transmission), deed of rectification (correction of name), trust deeds, deed poll, indemnity, building plan, agreements, wills,

Power of Attorney and Revocation of Power of Attorney, building contracts, bonds, Deed of guarantee Commission, caution hearing).

c) Resolving land boundary disputes;
d) Keeping and maintaining custody of land records and documents;
e) Providing official searches in respect of registered land.

The department operates the Central, Coastal, Nairobi and other Land Registries across the country. The Central and the Coastal Registry registers titles and documents under the Registration of Titles Act (Cap 281) (Repealed), the Government Lands Act (Cap 280) (Repealed), Land Titles Act (Cap 282) (Repealed) and the Registration of Documents Act (Cap 285) (Repealed) while the Nairobi District registry handles documents registered under the Registered Lands Act (Cap 300) (Repealed).

5.3 Functions of NLC

The National Land Commission is an independent government commission whose establishment is provided in the Constitution of Kenya to, amongst other things, manage public land on behalf of the national and county governments, initiate investigations into present or historical land injustices and recommend appropriate redress, and monitor and have oversight responsibilities over land use planning throughout the country. The functions of the Commission are established under the National Land Commission Act, 2012 and include the following:

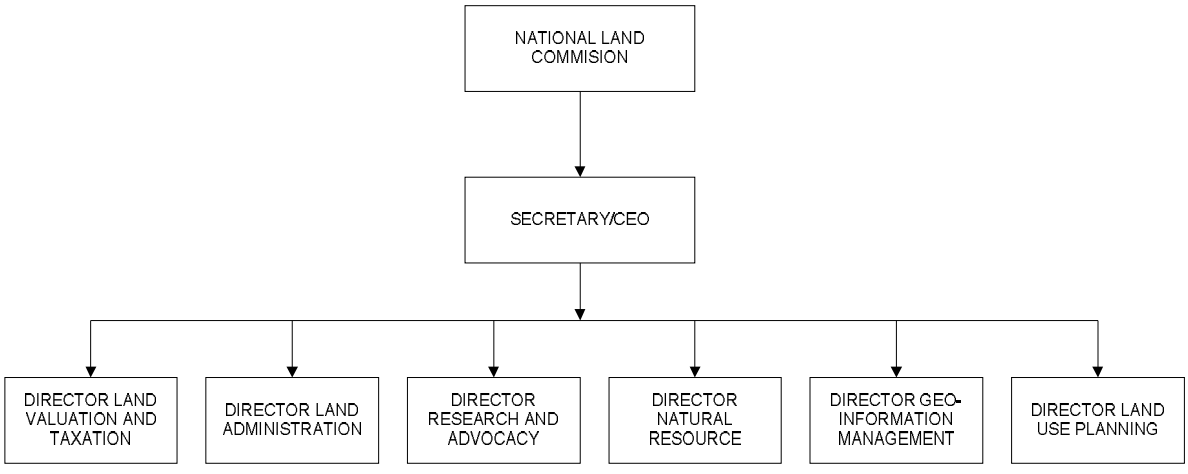
a) Managing public land on behalf of the National and County Governments;
b) Recommending a National Land Policy to the National Government;
c) Advising the National Government on a comprehensive programme for the registration of title in land throughout Kenya;
d) Conducting research related to land and the use of natural resources, and make recommendations to appropriate authorities;
e) Initiating investigations, on its own initiative or on a complaint, into present or historical land injustices, and recommend appropriate redress;
f) Encouraging the application of traditional dispute resolution mechanisms in land conflicts;
g) Assessing tax on land and premiums on immovable property in any area designated by law;
h) Monitoring and have oversight responsibilities over Land Use Planning throughout the country; and
i) Performing any other functions prescribed by national legislation.

Table 5.1 gives a description of directorates within NLC with specific roles and functions for land information management.

Table 5.1: Directorates within NLC and their Functions

Directorate	Function
Land Administration and Management	Responsible for the efficient organization, direction, control and co-ordination of the functions of land administration.
Geo-information Management	Responsible for developing and maintaining spatial, legal and environmental databases that are relevant to real property throughout the country.
Land Use Planning	Develops and prepares an effective and efficient system for overseeing land use planning throughout the country.
Land Valuation and Taxation	Undertakes valuation for taxation on land and premiums on immovable property. The directorate also undertakes compulsory acquisition of private land on behalf the National and County Governments. In addition, the directorate assesses annual ground rents, computes stand premiums and offers advisory on valuation services.
Natural Resources	Takes stock of natural resources, monitors use and management and ensures that land use policies are consistent with sustainable resource utilization.
Research and Advocacy	Promotes dialogue, interaction, inquiry, and participatory research between researchers, communities and policy makers with a view of enhancing the impact of research on land reforms and sustainable development. In addition, the directorate is responsible for the coordination and administration of research, partnerships, linkages, civic education and advocacy functions on land matters.

Figure 5.2: NLC Organogram – Departments with specific reference to LIMS



5.3 Functions of County Governments

The Constitution, the County Government Act, the Physical Planning Act and the Urban Areas and Cities Act provide the functions of the County Governments to include:

a) County planning and development including statistics, land survey and boundaries and fencing and housing;
b) Preparation of the following plans:- County Spatial Plans; County Integrated Development Plans; Sectorial Plans; Integrated Urban Development Plans; City/ Municipal/ Urban Areas Land Use Plans;
c) Prohibiting or controlling the use and development of land and buildings in the interests of proper and orderly development of its area;
d) Controlling or prohibiting the subdivision of land or existing plots into smaller areas;
e) Considering and approving all development applications and grant all development permissions;
f) Ensuring the proper execution and implementation of approved physical development plans;
g) Formulating by-laws to regulate zoning in respect of use and density of development; and
h) Reserving and maintaining all the land planned for open spaces, parks, urban forests and green belts in accordance with the approved physical development plan.

5.4 Private Sector Involvement

Land administration activities in Kenya are largely restricted to the government departments in the Ministry of Lands and Physical Planning, the National Land Commission and the County Governments. Private Sector involvement is however noticeable in the preparation of development applications by Practising Registered Physical Planners, the conduct of title surveys including new grant and subdivision surveys by Licensed Surveyors, and the involvement of Advocates of the High Court of Kenya in the land conveyancing processes. Private sector involvement is also found through professional bodies such as the Institution of Surveyors of Kenya (ISK), the Kenya Institute of Planners (KIP), the Town and County Planners Association of Kenya (TCPAK) the Architectural Association of Kenya (AAK), the Law Society of Kenya (LSK) and the Kenya Bankers Association (KBA). The involvement of these professional bodies has mainly been at policy level, advocacy and for advisory purposes.

5.3.1 Land Surveyors

The Land Surveyor's duties include:

1) Mapping surveys for preparation of topographic maps and establishment of high order control networks;
2) Cadastral/title surveys to support title registration including sectional property surveys;
3) Photogrammetric and remote sensing surveys through the use of aerial photography and satellite imagery respectively;
4) Topographic surveys for large-scale maps for the preparation of base maps for planning and infrastructure designs;
5) Engineering surveys mainly for civil works (roads, railways, pipelines, tunnels) and architectural designs;
6) Hydrographic surveys mainly to map the sea, river and lake beds; and
7) Land use and land condition surveys mainly for agriculture and related uses.

5.3.2 Advocates

The Advocates duties include:

a) Conducting due diligence:
   1.1 Where the property is owned by an individual, conduct a search at the Registrar of Persons and in a physical meeting confirm that the physical appearance of the client matches the photograph on their identification documents.
   1.2 Where the property is owned by a company; conduct an official search of the company at the companies' registry to confirm the directors and that the company has capacity to enter into the transaction as evidenced by the constitutive documents of the company and a board resolution.
   1.3 Conduct an official search of the title in the respective registry to ascertain ownership and the existence of encumbrances registered against the title and obtain rent demand notes.
   1.4 Conduct further searches on the Deed Plans/RIM (registered mutations) at the survey office.
   1.5 Conduct searches at the County offices and obtain the rates demand notes.
   1.6 Visit the site to ensure that there are no squatters or trespassers and ensure survey beacons are on the ground.
b) Preparing the contracts, transfer documents, witnessing and execution;
c) Issuing professional undertakings (when required);
d) Obtaining completion documents such as land rates clearance certificates, land rent clearance certificates, and consents to transfer;
e) Submitting documents for valuation and assessment and payment of duty; and
f) Submitting documents for registration.

5.3.3 Banks/Financial Institutions

Banks ordinarily interact with the Lands Registry through their appointed agents i.e. Advocates. Through the Advocates, banks are involved in carrying out searches on title documents; charges where a purchase of property is being financed by the bank; discharge of charge and charges where bank is taking over facilities of a customer from another bank; Transfers where a purchase of a property is being financed by a bank; creation of trusts; and surrenders.

5.3.4 Physical Planners

The role of physical planners is to create plans that envision the future by making choices and options that balance between development and environmental protection. These strategies translate to implementation frameworks for provision of essential services that offer efficiency, convenience, equity and attractive environment to the present and future generations. Physical Planners coordinate and manage development using comprehensive planning tools that include land use, development densities, transportation and infrastructure services, environmental conservation and open spaces and urban design.

5.3.5 Architects and Engineers

Architects and Engineers play the role of the actual implementation of the physical planning strategies by changing and transforming the nature of the land cover into new landforms through construction of buildings, infrastructure and other components of the urban fabric. They make the built environments more pleasant, safe and valued by their inhabitants.

5.5 Processes within a Land Information Management System

Table 5.2 summarizes the actors and processes involved in a Land Information Management System. The NLIMS should provide clear and seamless workflows between the various institutions and agencies.

Table 5.2: Processes and Products within a Land Information Management System

Actor	Processes	Submission	Approving Authority	Products
Surveyor/ Survey of Kenya	National Mapping	• Topographic Maps • Navigational Charts	Director of Surveys	Topographic Maps Navigational Charts
Registered Physical Planner	• Subdivision of Land • Amalgamation of Land • Change of Use • Extension of Use • Extension of Lease • Renewal of Lease	• Scheme Designs • Planning Brief • Location/Site Plan PPA-1	County Government (County Director Planning/Technical Committee)	• Planning Permit PPA-2 • Certificate of Compliance PPA-5
Registered Architect	• New building design • Alteration or Extension of existing building	• Location/Site Plan • Plans, sections and & Elevations • Application Form	County Government (County Director Planning/Technical Committee)	• Construction Permit • Occupation Permit
Licensed Surveyor	• Cadastral Survey i.e. subdivisions, mutations etc. • Change of Use • Extension of Lease • Renewal of Lease • Subdivision of buildings – Sectional Plans • Amalgamation • Boundary re-establishment	• Computations • Survey Plans	Director of Surveys	• RIMs & Deed Plans[56] • Cadastral Map
Land Administrator	• Change of Use • Extension of Use • Extension of Lease • Renewal of Lease • Land Allocation • Amalgamations	• Approved Plans • Planning Briefs • Original Lease • Original Title	• Director Land Administration • Land Registrar	• Consents • New Lease • Letter of allotment • Licence
Land Adjudication	• Mapping • Demarcation/survey • Publication of the adjudication register • Resolution of objection cases	• Area Lists • Registry Index Map • Members' Register	• Director of Survey • Chief Land Registrar	• Adjudication Register • Area list • Registry Index Map
Valuer	• Land rent determination • Stamp duty on land/property • Assessment • Endorsement/ Franking • Audits • Exemptions • Payments	• Valuation Requisition Form • Stamp Duty Requisition Form	• Director Land Valuation • Collector of Stamp Duty • Land Registrar	• Valuation Report • Revenue

[56] RIM and Deed Plans are transitional and are to be replaced by the Cadastral Map under the Land Registration Act

	• Refunds			
Registrar	• Transfer • Charges • Discharge of Charge • Leases • Surrenders • Inhibitions (Court Orders, Restrictions)	Registrable instruments	Chief Land Registrar	Registered documents
Advocates	• Instructions to prepare contract documents • Conducting due diligence • Witnessing of written documents • Conducting search on titles ; deed plan and/or cadastral plan	• Title details • Transfer • Charges • Discharge of Charge • Leases • Trusts • Surrenders	Land Registrar	Registrable instruments

The functions or processes within a Land Information Management System are dynamic and include a number of functions as shown in Table 5.3.

Table 5.3: Functions of the LIMS

Functions List: Land Information Management System		
ID	**Name**	**Description**
F1	Establishing Spatial Plans and Strategies	Guidance on land uses and zoning regulations.
F2	Approve Survey	Authentication of Title Surveys.
F3	Establishing new parcels and land uses	Land subdivisions and establishment of new land uses.
F4	Development Permission	Issuance of development permission to carry out development activities on land such as land subdivision, change/extension of land use or extension/renewal of lease period.
F5	Parcel Numbering	Allocation of unique identifiers to land parcels.
F6	Allocate Land	Alienation and distribution of public land.
F7	Value & Tax Land	Valuation of land based on Unimproved Site Value (USV[57]).
F8	Undertake property search	Find, retrieve and present parcel information identifying status of land.
F9	Transfer of property	Transfer of property from one owner to another.
F10	Register Land	Registration of Land.
F11	Charge & Mortgage Property	Effect a charge or mortgage on a property.

[57]The Unimproved Site Value (USV) as defined in Section 8(2) of the Valuation for Rating Act, is the market value of unencumbered freehold in possession, ignoring any improvements, but accounting for comparable lands and factors and statutory restrictions influencing land value.

5.6 Actors within a Land Information Management System

A look at the activity diagrams indicates that there are a number of actors within the LIMS. The roles of the actors vary with the land process in question. In that respect certain functions are shared thus showing how closely knit and dynamic the LIMS is. Tables 5.4 identifies the actors and gives a summary of their functions.

Table 5.4: Actors within the LIMS

Actors		
ID	**Actor / Department**	**Functions**
A1	Cabinet Secretary	Incharge of the Ministry of Lands & Physical Planning, serving as the political head directing policy and advising the government.
A2	NLC	Manages public land on behalf of the National and County Governments.
A3	Chief Land Registrar	Is responsible for effecting changes in the register and issuance of title deeds as supported by Deed Plans or amended Registry Index Maps.
A3	Land Registrar	Works under the Chief Land Registrar and is responsible for the registration of land under general boundaries in the districts.
A4	Director of Valuation	Determines value of property for rating, insurance, ground rent and stamp duty purposes.
A5	Director of Surveys	Manages the Department of Survey and is responsible for defining the geodetic control network, authentication of title surveys, preparation of Registry Index Maps, Deed Plans, Base Maps and storage of survey records.
A6	Regional Surveyor	Coordination of county offices in the region and RIM amendments including quality control of mutation surveys for registration maps.
A7	District Surveyor	Incharge of mutation surveys undertaken at the District level, receives, approves and registers the surveys.
A8	Licensed Surveyor	Authorised by the government to carry out title and mutation surveys and thereafter lodge records with Director of Surveys for authentication and subsequent registration.
A9	National Director of Physical Planning	Preparation of National Physical Development Plan, Coordinate the preparation of Regional/Inter-County Physical Development Plans and process their statutory approval
A10	County Director of Physical Planning	Manages the County Directorate of Physical Planning and is responsible (in liaison with National Director of Physical Planning) for County Physical Development Planning. Responsible for development control (planning approvals and ensure planning compliance for orderly development).
A11	Registered Physical Planner,	Authorised to prepare and submit development applications for approval (subdivisions, amalgamation, change/extension of use, extension/renewal of lease).
A12	Registered Architect	Authorised to prepare and submit development applications for Building Plans (all category of buildings on registered parcels of land).
A13	Registered Engineer	Authorised to prepare and submit development applications for Civil Engineering plans for infrastructure on approved subdivisions and structural plans for approved building plans.
A14	Director Land Adjudication & Settlement	Manages the Department of Land Adjudication and Settlement and is in charge of the adjudication of trust lands.

A15	Land Control Board	Provide statutory approvals for dealings in agricultural land.
A16	County Director of Valuation and Rating	Responsible for preparation of County Valuation Roll and determination of Land Rates.
A17	Qualified Advocate	conducts due dilligence, prepare contracts and conveyancing instruments, witnesses execution and submits instruments for registration.
A18	Bank/Financial Institution	Advances loans to members of the public and organisations.
A19	Land/Property Owner	Owns land, has rights to subdivide, develop or transfer property.
A20	Collector of Stamp Duty	Assesses and collects stamp duty.

The following subsections give a detailed description of the processes identified in Table 5.3. The Activity Diagram of the Unified Modelling Language (UML) is then used to model the various processes so as to illustrate the dynamic nature of a system by modelling the flow of control.

The workflows described in this section, are a generalisation of common processes encountered in the day-to-day activities. The processes described conform to the legal framework. For example the Land Control Act provides that any sale, transfer, partition, lease of or other dealing in agricultural land will be null and void unless the parties to the transaction have obtained consent from the Land Control Board (GoK, 1989b).

5.6.1 Process of Acquiring Title to Land

There are various methods through which title to land may be acquired. Under Section 7 of the Land Act, title to land may be acquired through: allocation, land adjudication, settlement programmes inter alia. Allocation of land means the legal process of granting rights to public land and is carried out by the National Land Commission on behalf of the either the National or County Governments. Land adjudication refers to the process through which land held under customary tenure (Community Land) is individualised and granted in individual names. This section focuses on creation of titles through allocation and the land adjudication processes. Table 5.5 presents the two scenarios.

In Figure 5.3, the activity diagram for actors involved in the allocation of public land process is presented. Under Section 12 of the Land Act, the process of allocation of public land is initiated by the National or County Governments, as the case may be, through their respective Cabinet Secretary or County Executive Committee Member responsible for matters relating to land whenever they are satisfied that it is necessary to allocate the whole or a specific part of public land. Once satisfied, the respective Cabinet Secretary or CEC Member is then required to submit a request to the National Land Commission for allocation of the said land. The Commission may allocate public land by way of public auction, notice of tenders, public drawing of plots, public exchanges, public request for proposals or by way of application confined to a targeted group of persons. Once allocated, the recipient of the grant has to pay one year land rent in addition to stamp duty before registration can

occur. The Land Registrar then opens a property file for the new land parcels. Before public land is allocated, it is by law required to be planned, surveyed and serviced and guidelines for its development prepared. This implies that the Physical Planning, Surveying, Valuation and Land Registry Departments play various roles in the process of allocation of public land.

Figure 5.4 depicts the process of establishing parcels through land adjudication. The model provides for appeals in situations where the land owners dispute the boundary positions. The model also provides for changes to be made to the Preliminary Index Diagrams (PID) that are used as the basis for land registration. Title deeds are then issued by the Land Registrar.

Table 5.5: Process of acquisition of title to land

Function Description: Land Acquisition	
Function	**Allocation of public land (F1)**
Actors	Lessor (National or County Government), Ministry of Lands & Physical Planning, National Land Commission, County Government, Director of Surveys, Director of Physical Planning, Chief Land Registrar, Land Owner, Land Adjudication Committees, Land Adjudication Officer, Director of Land Adjudication, Land Registrar, Cabinet Secretary (Ministry of Lands and Physical Planning), CECM (Lands)
First Scenario: Allocation of public land	
1. The Lessor determines that it necessary to allocate the whole or part of a public land vested in its favour. 2. The respective Cabinet Secretary or CEC member in charge of matters relating to land, as the case may be, submits a request to the National Land Commission for allocation of the identified public land. 3. Once the request is handed in to the National Land Commission and approved, the National Land Commission commences the process of having the public land planned, surveyed and serviced and guidelines for its development prepared. 4. The Director of Surveys prepares a general base-map showing the specific public land in a defined region. 5. The Lessor uses the base-map to prepare a Part Development Plan (PDP) as a comprehensive land use scheme. 6. The PDP is approved by the Cabinet Secretary/CEC Member in charge of matters relating to land and forwards it to the Lessor. 7. The Lessor appoints a Licensed Surveyor who relies on the approved PDP as a basis for Survey of the comprehensive scheme and sets out the parcels and lodges the survey with the Director of Surveys for authentication. 8. Director of Survey checks and authenticates the survey and proceeds to prepare a cadastral plan. 9. The Director of Survey signs and seals the cadastral plan and forwards it to the Chief Land Registrar and the National Land Commission. 10. The National Government and County Governments ensures that the planned and surveyed land is serviced through provision of water, electricity, roads and other basic amenities. 11. Once planned, surveyed and serviced, the National Land Commission issues a public notice of action, to the public and interested parties, of the intention to allocate. 12. The National Land Commission proceeds to allocate the public land through any of the means identified in law through issuance of a letter of allotment – which provides conditions to be fulfilled and requisite payments in stand premium and ground rent. 13. Once all the conditions in the letter of allotment have been met and payments done, the NLC prepares a lease to be executed by the NLC on behalf of the National or County Government, as the case may be, on the one part and the allottee on the other part. 14. The lease is then forwarded to the specific County Registry where the public land is situated for registration. 15. The Chief/County Land Registrar effects registration and issuance of Certificate of Lease titles.	

Second Scenario: Land Adjudication (Community Land to private land)
1. A formal written petition is delivered to the Cabinet Secretary in charge of matters relating to land with a request to have an area earmarked for adjudication. This petition is copied to the County Governments. 2. A Land Adjudication Board convenes at the Ministry of Lands and Physical Planning to deliberate and approve the adjudication petition. 3. A directive is issued to the Department of Survey based on the results of the Board deliberations to visit the site, conduct reconnaissance of the terrain, and give recommendations. 4. The reconnaissance mission provides its professional recommendations to the Land Adjudication Board for consideration. 5. Based on these recommendations, the Board deliberates and, if satisfied, approves the adjudication request. 6. Land adjudication committees are set-up to ascertain and arbitrate rights and interests in the land. 7. The Survey Department proceeds to formally survey the areas earmarked for adjudication (adjudication areas). The fieldwork for the Adjudication Section is done by officers of the Department of Land Adjudication and Settlement, with supervision from Survey of Kenya[58]. After the survey work is complete, the Survey Department generates a Cadastral Map of the area which contains parcel numbers, size of land and a map sheet number. 8. The Adjudication Record and the Map of the area are made available to the community for public examination. 9. Objections to the Adjudication Register are heard by the Land Adjudication Officer. 10. Any parties dissatisfied with the decision of Land Adjudication Officer, can make appeals to the Cabinet Secretary. 11. After hearing and determining of objections and appeals to the Adjudication Register, the Director of Land Adjudication signs the certificate of finality and forwards the Adjudication Register (Adjudication Record and the Cadastral Map) to the Chief Land Registrar for registration and finally issues title deeds.

[58] Landowners in presence of Land Adjudication Officers identify their land boundaries. The boundaries are demarcated by Adjudication officers using enlarged aerial photographs, ground survey methods or both; and

Figure 5.3: Allocation of Public Land

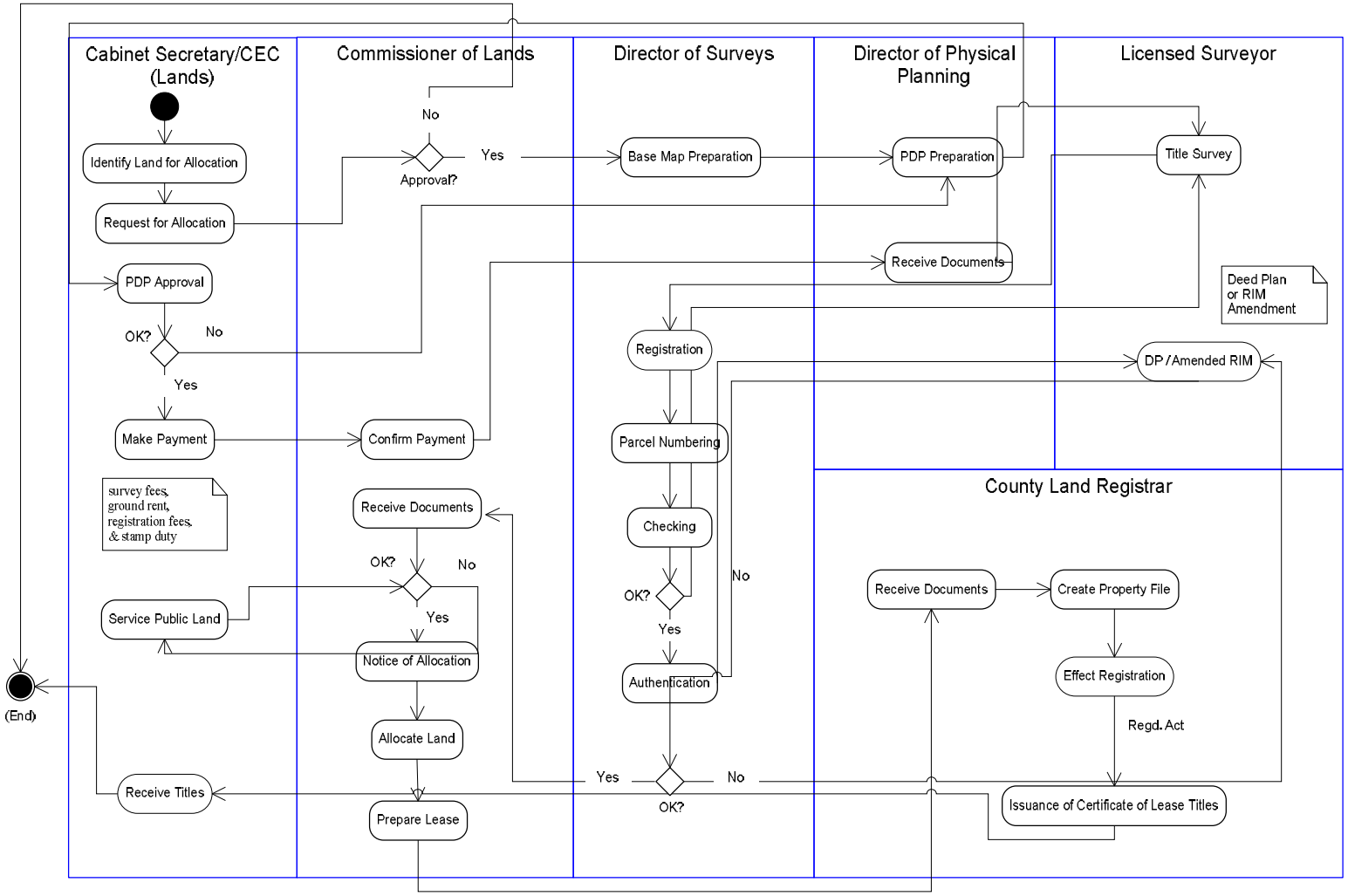
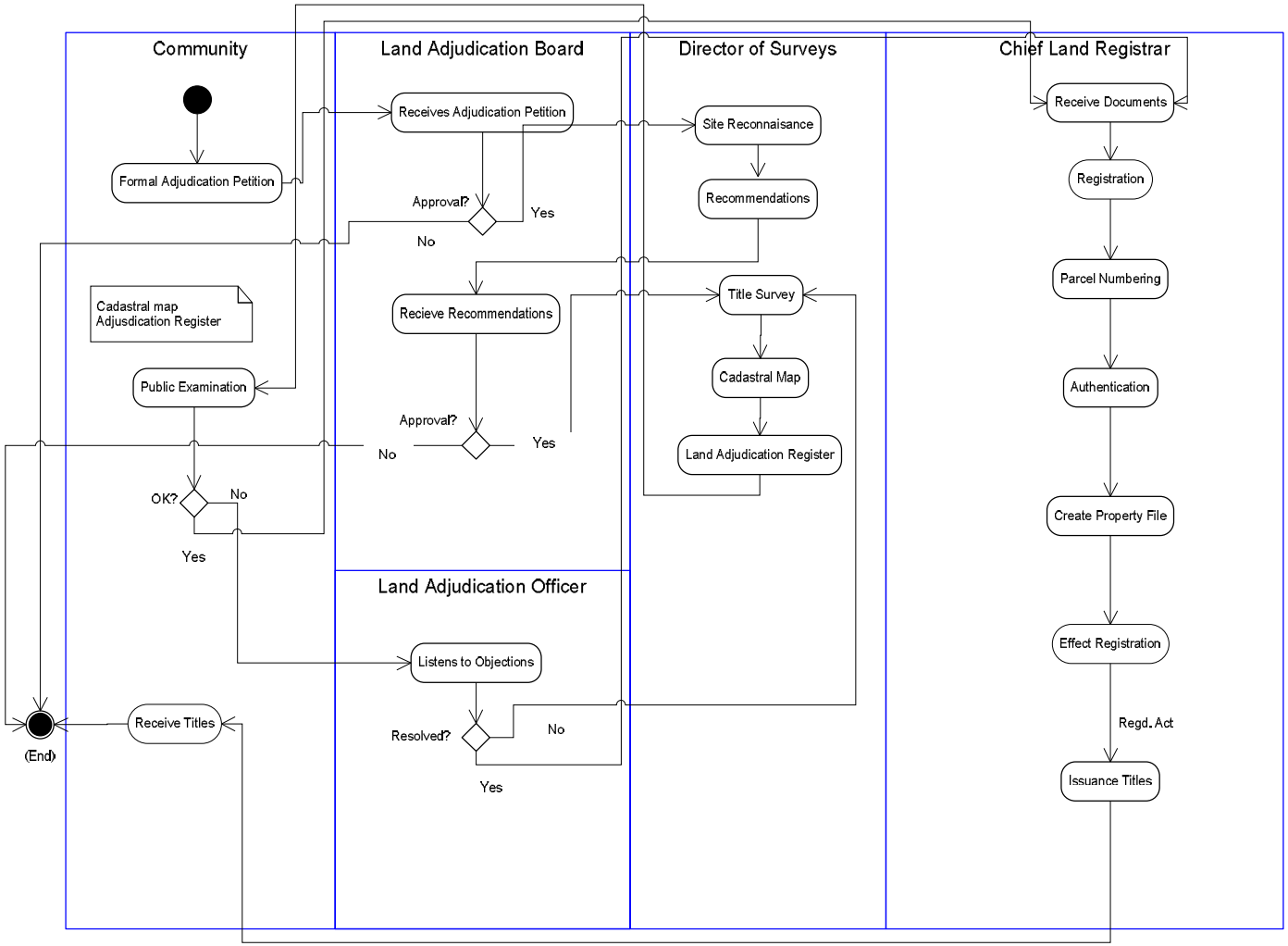


Figure 5.4: Land Adjudication (Community Land to Private Land)



5.6.2 The Land Subdivision / Development of Multiple Units

The subdivision of land as interpreted in section 3 of the Physical Planning Act means the "division of any land held under single ownership into two (2) or more parts" (GoK, 1996). This definition is applicable whether the subdivision is by conveyance, transfer or partitioning for the purpose of sale, gift, and lease or for any other purpose (ibid). The Physical Panning Act further classifies this as Class A development[59] requiring the lodgement of a development application[60] for approval under the provision section 29 (b) of this Act. In Kenya, a distinction is made if the subdivision applies to land parcels under the fixed boundary or the general boundary systems. Table 5.6 depicts this distinction.

Figure 5.5 depicts the Land Subdivision Process where eight (8) Actors are identified. Land subdivisions have to be approved by the County Governments through the issuance of a planning permit (PPA.2) before any title survey can be carried out. This approval as specified under section 42 (1) of the Physical Planning Act, is to ensure that any new development conforms to the relevant Physical Development Plan. Approvals, where granted, may make modifications to the initial application and subject the development permission[61] to such conditions as may be deemed necessary.

Title surveys are undertaken by Licensed Surveyors and then lodged with the Director of Surveys. Once received, title surveys are registered i.e. the computations and survey plans are numbered and the parcels given unique numbers. The plans and computations are then checked for consistency before they are authenticated. After authentication, the Director of Surveys sends an authentication letter to the Licensed Surveyor. The authentication letter contains a demand for checking fees and asks the Licensed Surveyor to submit deed plans (for sealing and signing) or request for RIM amendment by the Director of Surveys. The Licensed Surveyor is required to prepare the deed plans on linen paper. These documents together with the checking fees are then submitted to the Director of Surveys.

[59] Class A development is defined under Section 3 of the Physical Planning Act as the making of any material change in the use or density of any buildings or land or the subdivision of any land.

[60] Development Application means an application made under Section 31 of the Physical Planning Act for any development in land and which must be accompanied by such plans and particulars as are necessary to indicate the purposes of the development showing the proposed use and density.

[61] Development Permission refers to the permission, which is granted under Section 33 of the Physical Planning Act with or without conditions. Where development permission is refused the applicant may appeal to the relevant physical planning liaison committee.

Table 5.6: The Process of Land Subdivision

Function Description: Land Subdivision	
Function	**Subdivide Land Parcels (F2)**
Actors	Director of Survey, Registered Physical Planner, County Government, National Land Commission, Licensed Surveyor, Chief Land Registrar, Land Owner (Property Owner), Land Registrar, District Surveyor, Regional Surveyor, Land Control Board
First Scenario: Fixed Boundaries	
1. Land Owner engages a Registered Physical Planner to prepare a subdivision scheme. 2. County Government approves the development application after circulating to relevant department/agencies for comments/clearance and issues Planning Permit (PPA.2) with necessary performance conditions. 3. Licensed Surveyor undertakes ground survey based on the approved development permission. 4. Licensed Surveyor lodges title survey with the Director of Surveys for authentication; 5. Director of Surveys checks survey, authenticates and requests Licensed Surveyor to prepare deed plans or request for amendment of RIM. 6. Director of Survey seals and signs amended RIM or deed plans and forwards the same to the Chief Land Registrar. County Government monitors implementation of the performance conditions and issues Compliance Certificate. 7. Chief Land Registrar effects registration based on the Compliance Certificate and the amended RIM or deed plans and issues Title Deeds.	
Second Scenario: General Boundaries	
1. Land Owner makes an application to the Land Control Board (LCB) for consent to subdivide. 2. The Land Control Board considers and approves the application to subdivide. 3. Registered Physical Planner prepares subdivision scheme. 4. County Government approves the subdivision scheme after circulating to relevant department/agencies for comments/clearance and issues Planning Permit with necessary performance conditions. 5. Licensed Surveyor undertakes mutation survey based on the approved development permission. Licensed Surveyor lodges mutation survey with the District Surveyor. 6. District Surveyor receives numbers and approves the mutations. 7. Regional Surveyor amends the existing RIM by inserting the mutation. 8. Land Registrar effects registration based on the amended RIM and issues Title Deeds.	
Third Scenario: Multiple Building Units	
1. Property Owner engages a Registered Architect to prepare building designs. 2. County Government approves the building plans application after circulating to relevant department/agencies for comments/clearance and issues Construction Permit with necessary performance conditions. 3. County Government monitors implementation of the performance conditions and issues Occupation Certificate. 4. Property Owner engages a Licensed Surveyor to re-survey the land and geo-reference the individual building units. Licensed Surveyor submits sectional plan to the Director of Surveys for checking, approval and authentication. 5. The Director of Surveys forwards sectional plan to the Chief Land Registrar. 6. Chief Land Registrar effects registration based on the Occupation Permit and the geo-referenced Survey Map and issues Unit Title Deeds. 7. County Government values the individual unit to determine the rates payable and enters the new parcel in the Valuation Roll.	

Figure 5.4: The Land Subdivision – Fixed Boundaries

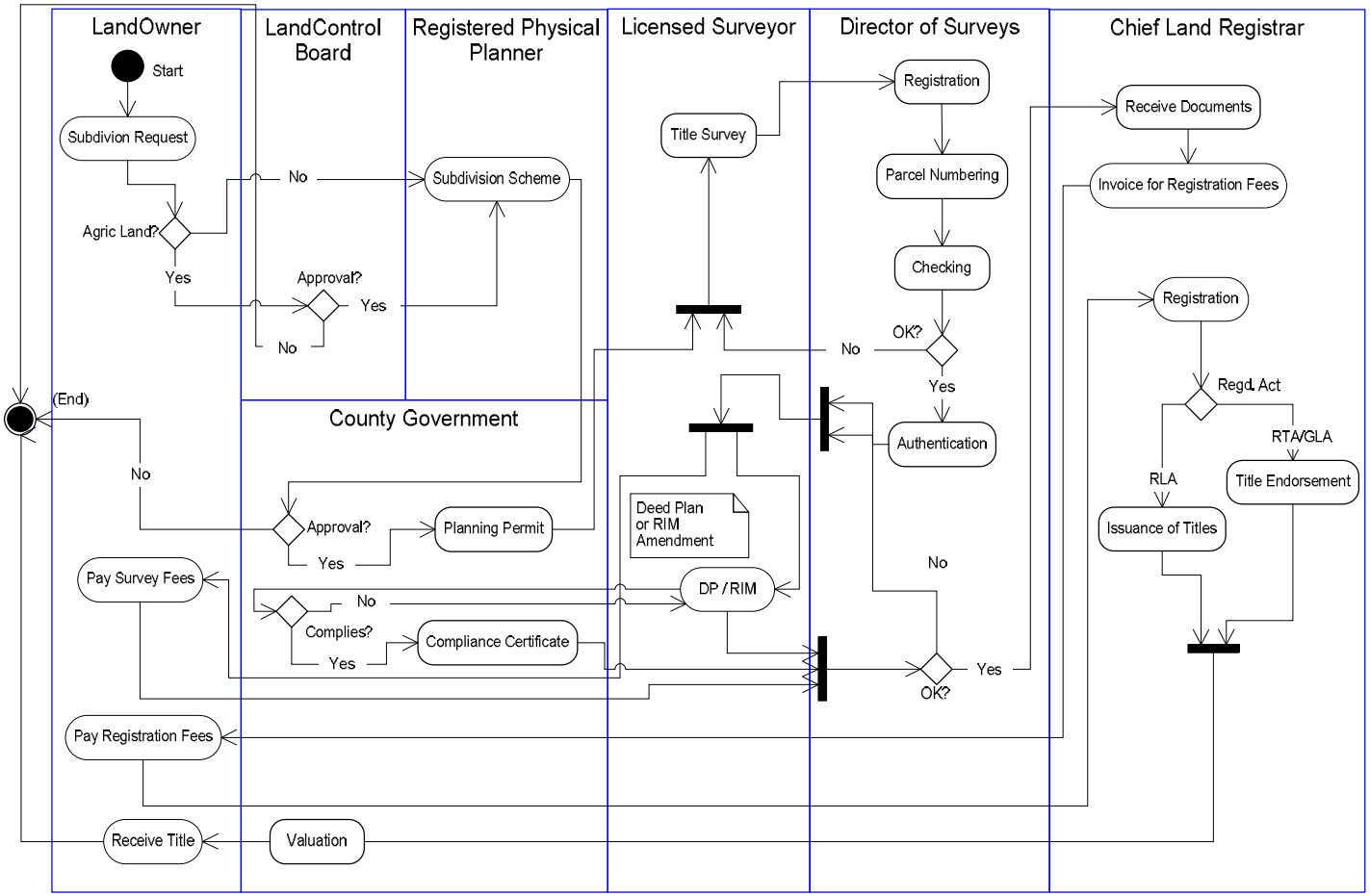


Figure 5.5: The Land Subdivision – General Boundaries

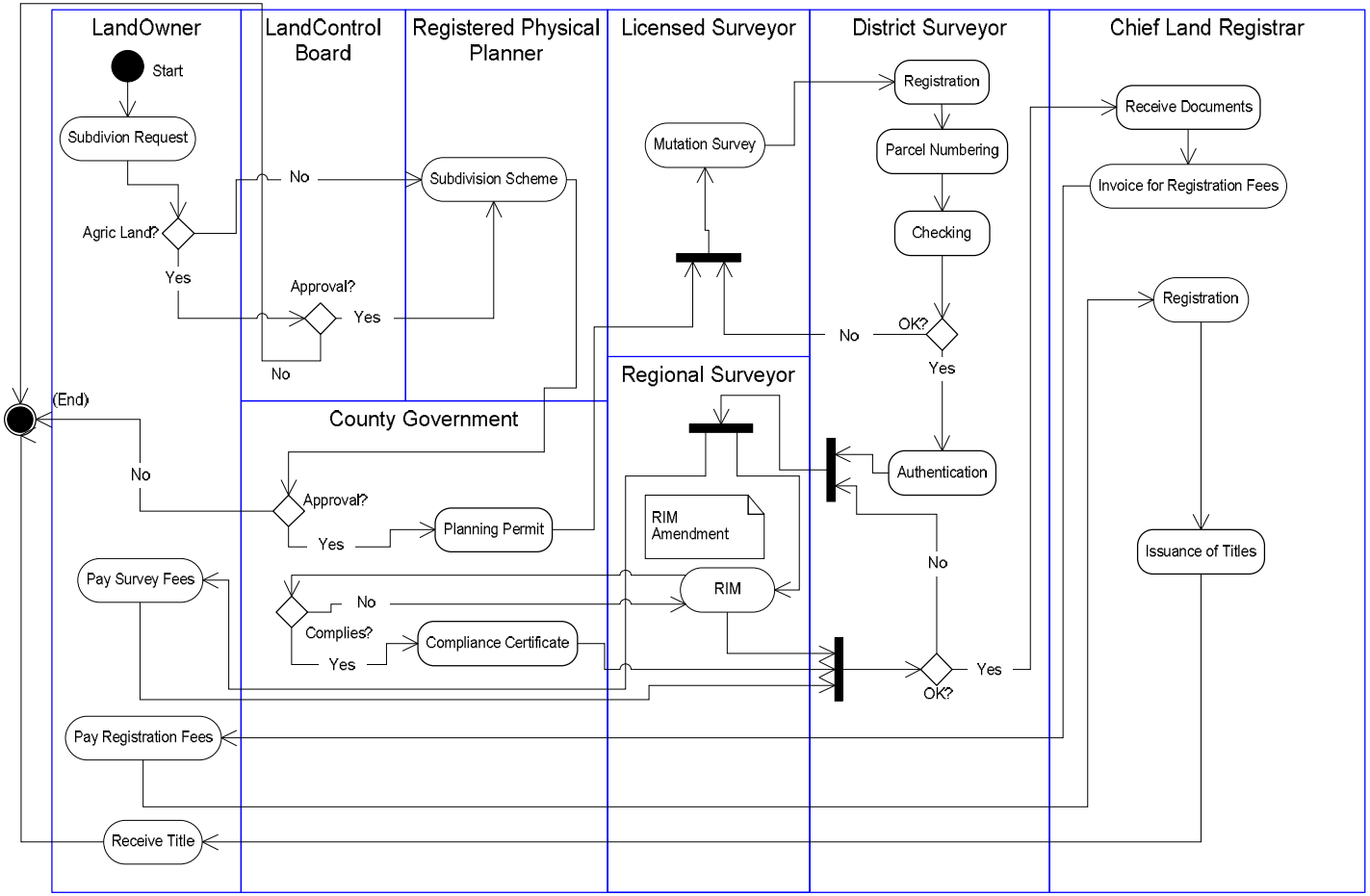
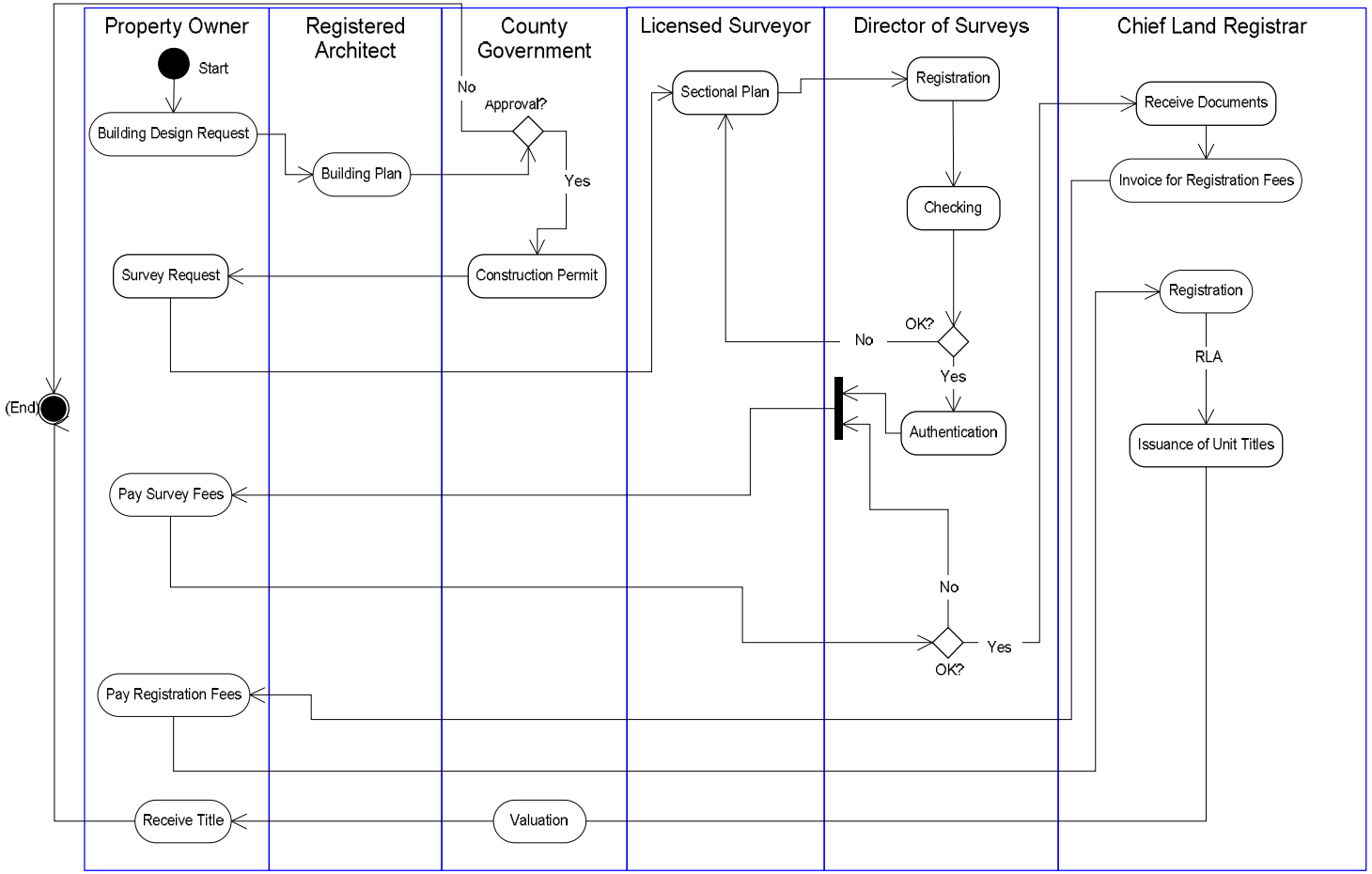
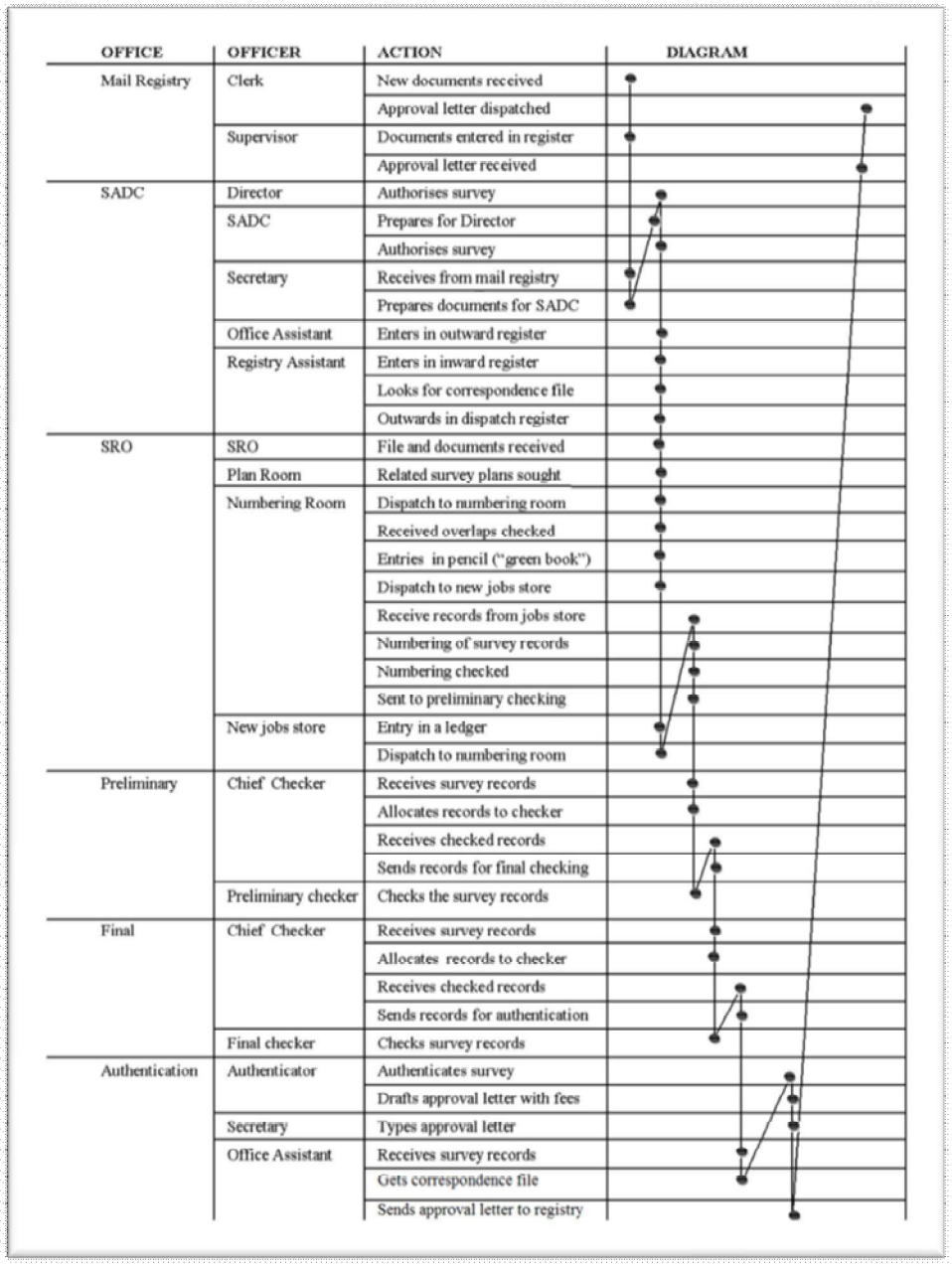


Figure 5.6: Subdivision – Multiple Building Units



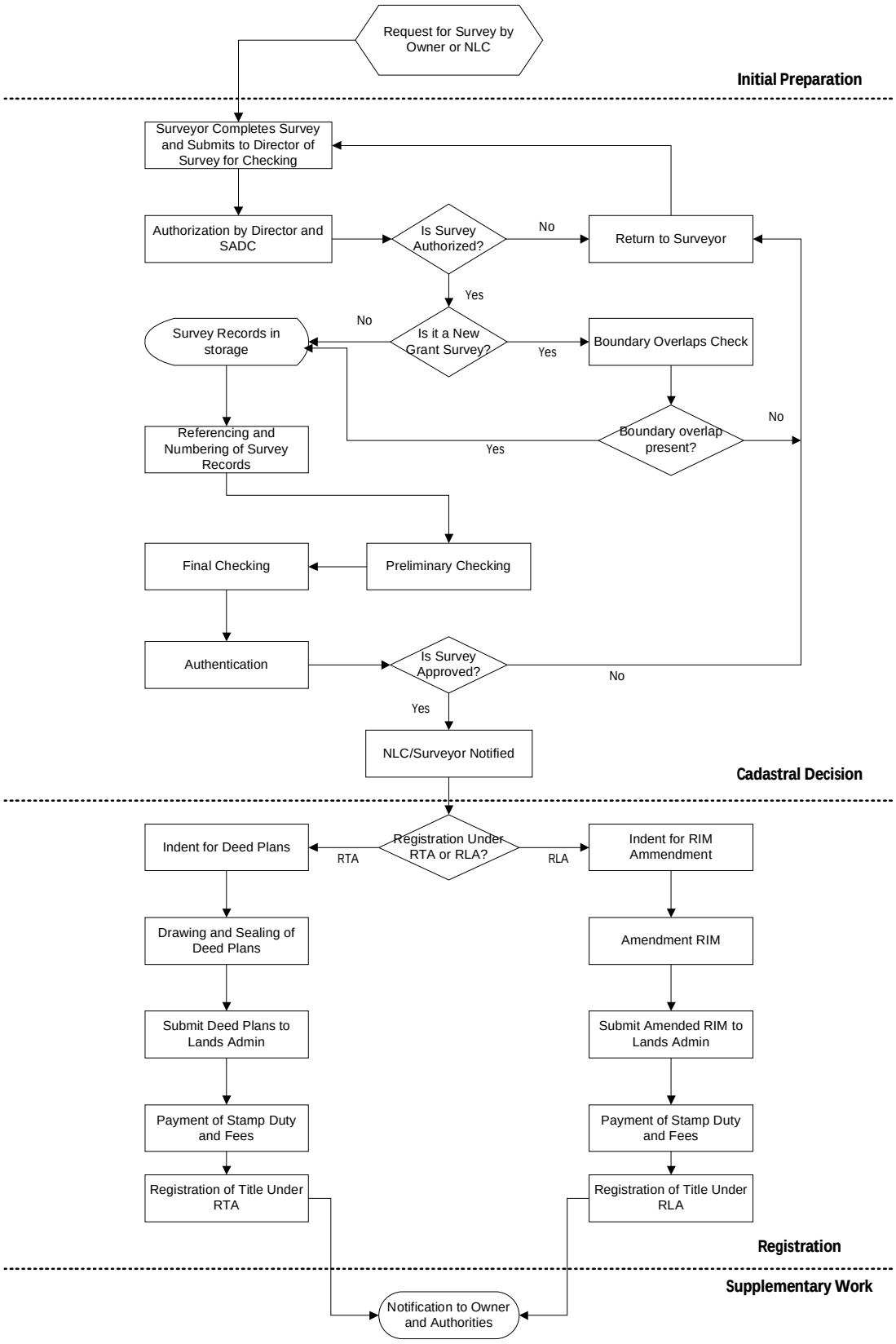
It is notable that there are a total of 41 steps in receiving and checking of fixed boundary surveys as shown in Figure 5.7. The average duration from receipt to the end is estimated at 115 days. As indicated above, work submitted by a Licensed Surveyor goes through preliminary checking, final checking and authentication before being submitted to the Land Registry as either deed plans or RIM. It is estimated from previous studies that 71 percent of Licensed Surveyors have to follow up progress of over 60 percent of their jobs while 29 percent follow up between 30 percent and 60 percent of their work. This points out to the need for a better system to manage the submission of cadastral data and processing of the work. Figure 5.8 shows the workflow in the Survey checking process.

Figure 5.7: Steps in Checking Fixed Boundary Surveys



OFFICE	OFFICER	ACTION
Mail Registry	Clerk	New documents received
		Approval letter dispatched
	Supervisor	Documents entered in register
		Approval letter received
SADC	Director	Authorises survey
	SADC	Prepares for Director
		Authorises survey
	Secretary	Receives from mail registry
		Prepares documents for SADC
	Office Assistant	Enters in outward register
	Registry Assistant	Enters in inward register
		Looks for correspondence file
		Outwards in dispatch register
SRO	SRO	File and documents received
	Plan Room	Related survey plans sought
	Numbering Room	Dispatch to numbering room
		Received overlaps checked
		Entries in pencil ("green book")
		Dispatch to new jobs store
		Receive records from jobs store
		Numbering of survey records
		Numbering checked
		Sent to preliminary checking
	New jobs store	Entry in a ledger
		Dispatch to numbering room
Preliminary	Chief Checker	Receives survey records
		Allocates records to checker
		Receives checked records
		Sends records for final checking
	Preliminary checker	Checks the survey records
Final	Chief Checker	Receives survey records
		Allocates records to checker
		Receives checked records
		Sends records for authentication
	Final checker	Checks survey records
Authentication	Authenticator	Authenticates survey
		Drafts approval letter with fees
	Secretary	Types approval letter
	Office Assistant	Receives survey records
		Gets correspondence file
		Sends approval letter to registry

Figure 5.8: Workflow in the Survey Checking Process



5.6.3 Land Development Process

Under section 3 of the Physical Planning Act, any change in land use and the extension of lease once the period of lease has drawn to an end are classified as Class A development (GoK, 1996). A development application is therefore required before any changes in the status of the land can be effected. The Change or Extension of Use is deemed to occur on private land and as such the role of NLC is minimal if any. Table 5.7 depicts the change or extension of use process while Table 5.8 shows the extension of lease or renewal of lease process.

Table 5.7: The Change/Extension of Use Processes

Function Description: Change of Use	
Function	**Update Parcels (F3)**
Actors	Director of Surveys, Licensed Surveyor, Land Owner (Property Owner), Registered Physical Planner, County Government, Chief Land Registrar; Directors of Physical Planning and of Land Administration (Ministry of Lands), Director Valuation in the Ministry of Lands; Property Owner
First Scenario: Change of Use	
1. Property owner engages a Registered Physical Planner to prepare a Planning Brief in support of the desire to change or extend land use. 2. The Registered Physical Planner prepares Public Notices (on-site billboard and two newspapers that have countrywide circulation) inviting representations/objections addressed to the County Government. 3. At the expiry of the 14 days Public Notice, the County Government approves or disapproves the application. This is followed by approvals by Directors of Physical Planning, Survey and Land Administration as per their areas of expertise i.e. land use, survey and ownership/status/history. 4. If approval is granted, the property owner engages a Licensed Surveyor to prepare change or extension of user deed plan. 5. Licensed Surveyor forwards change or extension of user deed plan to the Director of Surveys for checking, authentication and approval. 6. After re-survey the land is revalued by the Director Valuation so as to incorporate the enhanced rent in the title/lease. 7. Property owner lodges change of user documents to the Director of Land Administration in the Ministry for processing of a new lease incorporating the new user/extension of user and the new land rent after re-valuation, surrenders the title and gets a registration with the desired use. 8. The Chief Land Registrar executes the lease. 9. The Land Registrar registers the change - for deed plans this is done in the Central Land Registry in Nairobi and Coast registry in Mombasa while for RIMs this is done by the County Land Registrars. 10. County Government re-values the land to determine the rates payable and enters in the Valuation Roll.	

Figures 5.8, 5.9 and 5.10 model the processes for extension of lease, change of use and renewal of lease respectively.

Table 5.8: The Extension/Renewal of Lease Processes

Function Description: Extension and Renewal of Lease	
Function	**Update Parcels (F3)**
Actors	Director of Surveys, National Land Commission, Licensed Surveyor, Land Owner (Property Owner), Registered Physical Planner, County Government, Chief, (Principal) Land Registrar, and Director of Land Administration (National Government); Property Owner.
Scenario 1: Extension of Lease	
1. Within five years the National Land Commission issues notices to land owner on the expiry date of the lease and advises on their pre-emptive right to apply for an extension of lease and whom to apply to. 2. If within one (1) year after the notice is issued there is no response, the land owner engages Registered Physical Planner to publish Public Notices in 2 newspapers that have countrywide circulation. 3. Registered Physical Planner prepares an application and a planning brief to the National or County Government (the lessor) giving justification for the extension. 4. National or County Government approves the lease extension application after circulating to relevant offices for comments and specification of conditions as necessary. 5. National or County Government extends the lease for a specified time and forwards their decision to the National Land Commission for implementation. 6. If approval is granted, the property owner engages a Licensed Surveyor to re-survey and geo-reference the land. 7. Licensed Surveyor forward extension of lease deed plan to the Director of Surveys for checking, authentication and approval. 8. The Director of Surveys prepares and submits a new signed and sealed deed plan or RIM to National Government (Ministry). 9. The National Government (Chief Valuer) re-values the land considering the extended lease and assigns a new enhanced annual rent. 10. The Director of Land Administration (National Government) prepares a new lease document after the lessee surrenders the existing title. 11. The Chief Land Registrar executes the lease. 12. The new lease is registered by the Land Registrar (for those with deed plans this is done in Nairobi and Mombasa while for RIMs, it is at the County Registry Offices). 13. National or County Government re-values the land to determine the rent/rates payable.	

Scenario 2: Renewal of Lease[62] (Expired Lease)
1. An application for renewal occurs where prior notice of expiration by the National Land Commission has not been given as required under Section 13 of the Land Act No. 3 of 2012.
2. The land owner engages Registered Physical Planner to lodge an application and prepare a Planning Brief to the National Land Commission giving justification for the renewal.
3. The National Land Commission approves the renewal of lease application after circulating to relevant offices for comments and specification of conditions as necessary.
4. If approval is granted, the property owner engages a Licensed Surveyor to re-survey and geo-reference the land.
5. The National Land Commission re-values the land to determine the stand premium and rent payable and issues Letter of Allotment.
6. Property owner engages a Licensed Surveyor to re-survey and geo-reference the land.
7. Licensed Surveyor forward extension of lease deed plan to the Director of Surveys for checking, authentication and approval.
8. The Director of Surveys prepares and submits a new signed and sealed deed plan or RIM to National Government (Ministry).
9. The National Government (Chief Valuer) re-values the land considering the renewed lease and assigns a new enhanced annual rent.
10. The Director of Land Administration (National Government) prepares a new lease document after the lessee surrenders the existing title.
11. The new lease is registered and issued by the Land Registrar (for those with Deed plans this is done in Nairobi and Mombasa while for RIMs it is done at the County Registry Offices).
12. The National Government issues a new lease certificate.

[62] Leases that have expired are deemed to have reverted to government and are therefore Public Land. The National Land Commission thus approves/renews such applications but implementation in terms of preparing the new lease is done by the Ministry (National Government). The Director of Land Administration prepares the lease for registration by the Registrar.

Figure 5.8: Change of Use

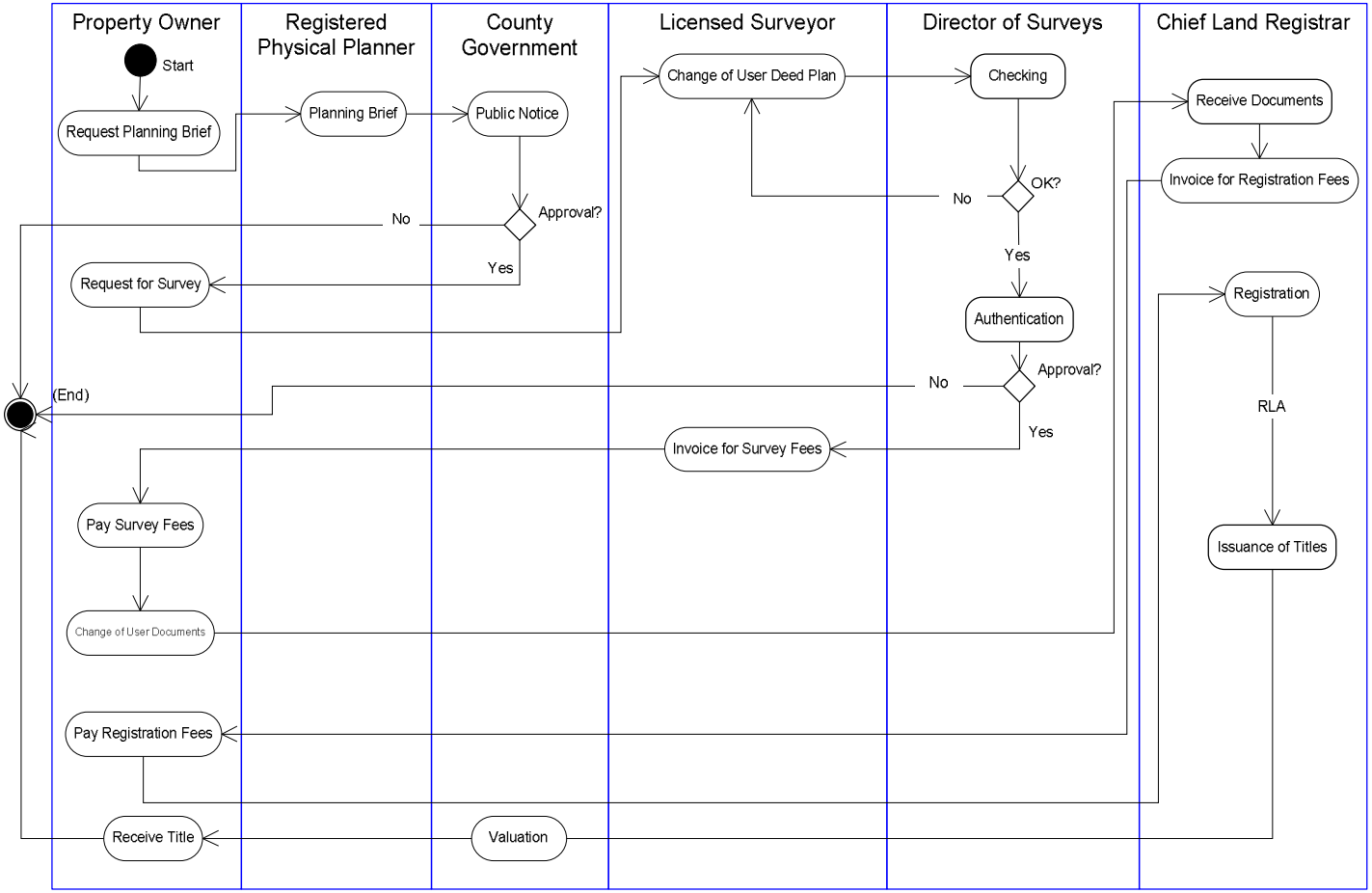


Figure 5.9: Extension of Use

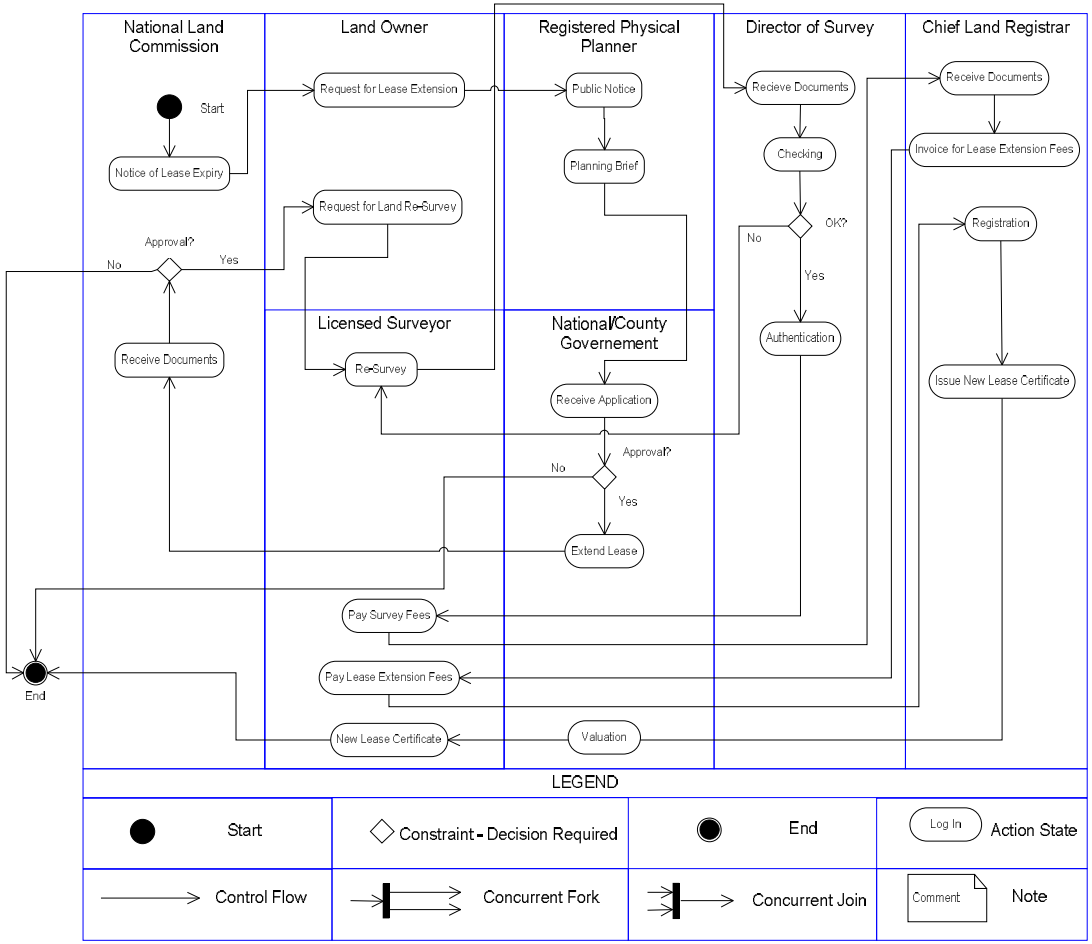
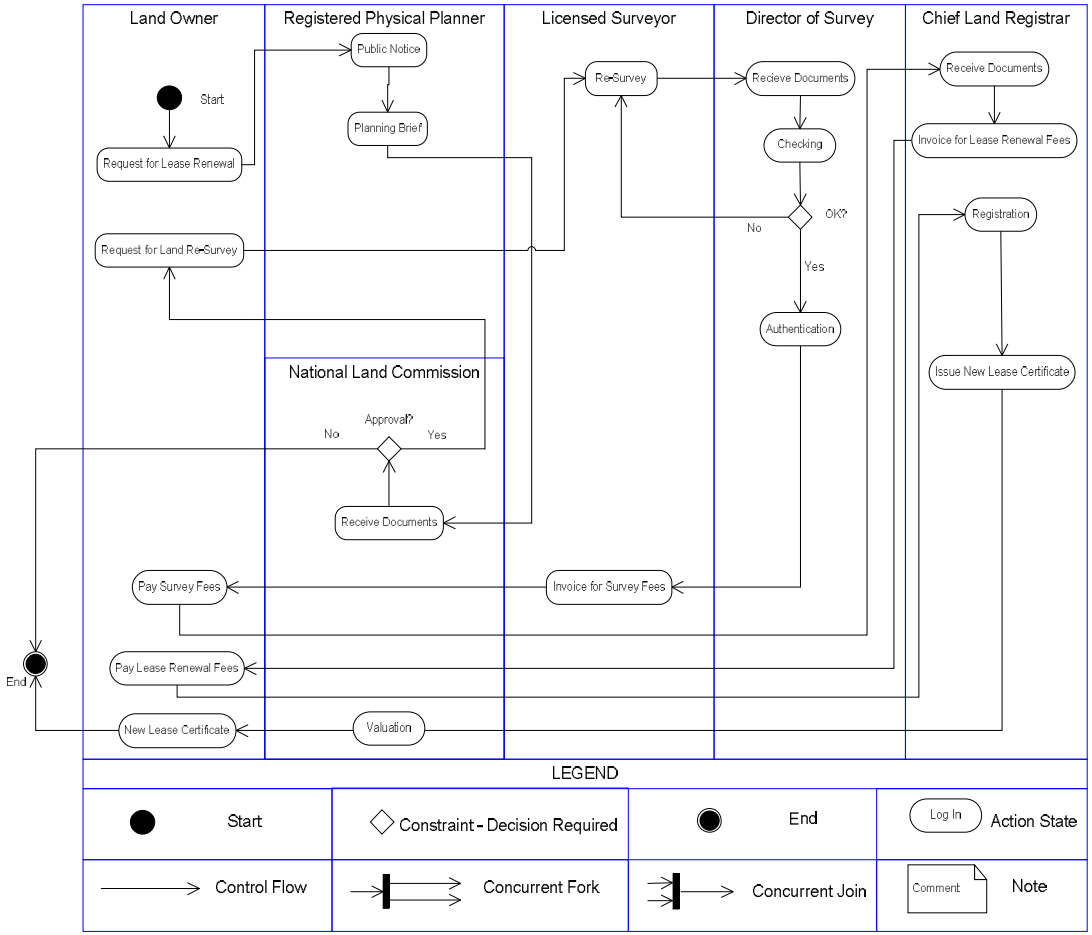


Figure 5.10: Renewal of Lease



5.6.3.1 The Challenges of Physical Planning Legislative Transition

It is notable that the Physical Planning Act of 1996 was prepared with a national outlook. Planning was clearly structured along a central model of governance where planning policy formulation was coordinated at the national level. The Act under Part II Section 5, empowers the Director of Physical Planning to formulate national, regional and local physical development policies, guidelines and strategies. The role of implementing these policies and plans (development control) was a delegated function to local authorities (Part V of this Act). Under the current constitution, the physical planning function has been largely devolved and operationalized by the County Government Act (Part XI) which states clearly the objectives of county planning and the obligations of the county governments. Further, under the Urban Areas and Cities Act, the Urban Management Boards now have the responsibility of preparing detailed and integrated plans (Part V) and assume much of the development control and service delivery functions of former local authorities. This further complicates the transition because all these levels of governance have a planning role to play.

To-date there has not been a clear transition of Physical Planning to these devolved units. The Physical Planning Bill that has attempted to address this transition remains in limbo. It is apparent that the duty of securing continuity and consistency in the transition of Physical Planning functions from the previous dispensation is not clear.

5.6.4 The Land Conveyancing / Transfer Process

Land transfer or conveyancing is defined as the process of moving the legal ownership of land from one person to another (Onalo, 1986: 221). Table 5.9 depicts the land transfer process.

Table 5.9: The Process of Land Conveyancing/Transfer

Function Description: Cadastral and Land Registration System	
Function	**Transfer Property (F4)**
Actors	Land Owner, Vendors Advocate; Purchaser's Advocate; Purchaser; Government Valuer; Collector of Stamp Duty; Auditor; Registry Superintendent; Investigation Officer; Land Registrar; Land Control Board; Dispatch Officer; Director Land Administration
Scenario 1 – Transfer of Freehold / Leasehold Titles	
1. Vendor's Advocate prepares the sale agreement and forwards it to the Purchaser's Advocate for approval, engrossment, execution by the Purchaser and witnessing. The duly executed agreement is then forwarded to the Vendor's Advocate for execution, witnessing and stamping. 2. The Purchaser's advocate prepares the instrument for registration[63] and obtains the completion documents (where applicable) Rent clearance certificate, Rates Clearance Certificate, Land Control Board Consent to transfer; and consent to transfer from the Director Land Administration MoLPP; 3. The Purchaser's advocate books the instrument for valuation by the Government Valuer who determines the value for purposes of stamp duty; 4. The instrument is forwarded to the Collector of Stamp Duty for endorsement (where applicable) and assessment of stamp duty payable; 5. Assessment and payment of Capital Gains Tax is done by Vendor's advocate (where applicable); 6. Stamp duty is paid by the Purchaser's advocate and the instrument is submitted for franking (to confirm payment of stamp duty); 7. Upon payment of the registration fee by Purchaser's advocate, the instrument is submitted to the registry for booking and registration; 8. At the registry the document is booked by Registrar and forwarded to the Auditor to confirm payment of land rent and stamp duty; 9. After auditing, the files are retrieved from the strong room for matching of instrument with title by Registrar; 10. After matching, documents are allocated by the Registry Superintendent to the Investigation Officers for verification for compliance on all the registration requirements; 11. If compliant, entries are made and if not the document is rejected with reasons. Upon rejection, documents are dispatched to the presenter (the advocate who booked the document for registration) who must comply before resubmitting the documents for registration once again; 12. After entries have been made by the Investigation Officer, the documents are forwarded to the Land Registrar for signing; 13. The documents are photocopied and forwarded to the Registry Superintendent, for sealing. The Photocopied documents (which are also sealed) are retained in the deed file for future reference; and 14. The Registry Superintendent dispatches sealed documents in the "A" book, and forwards them to the dispatch officer who records them in a register and dispatch to the pigeon holes for storage and eventual collection by the presenter.	

[63] The instrument in this case is either a transfer, transfer to Lease, Conveyance, Charge, and Lease.

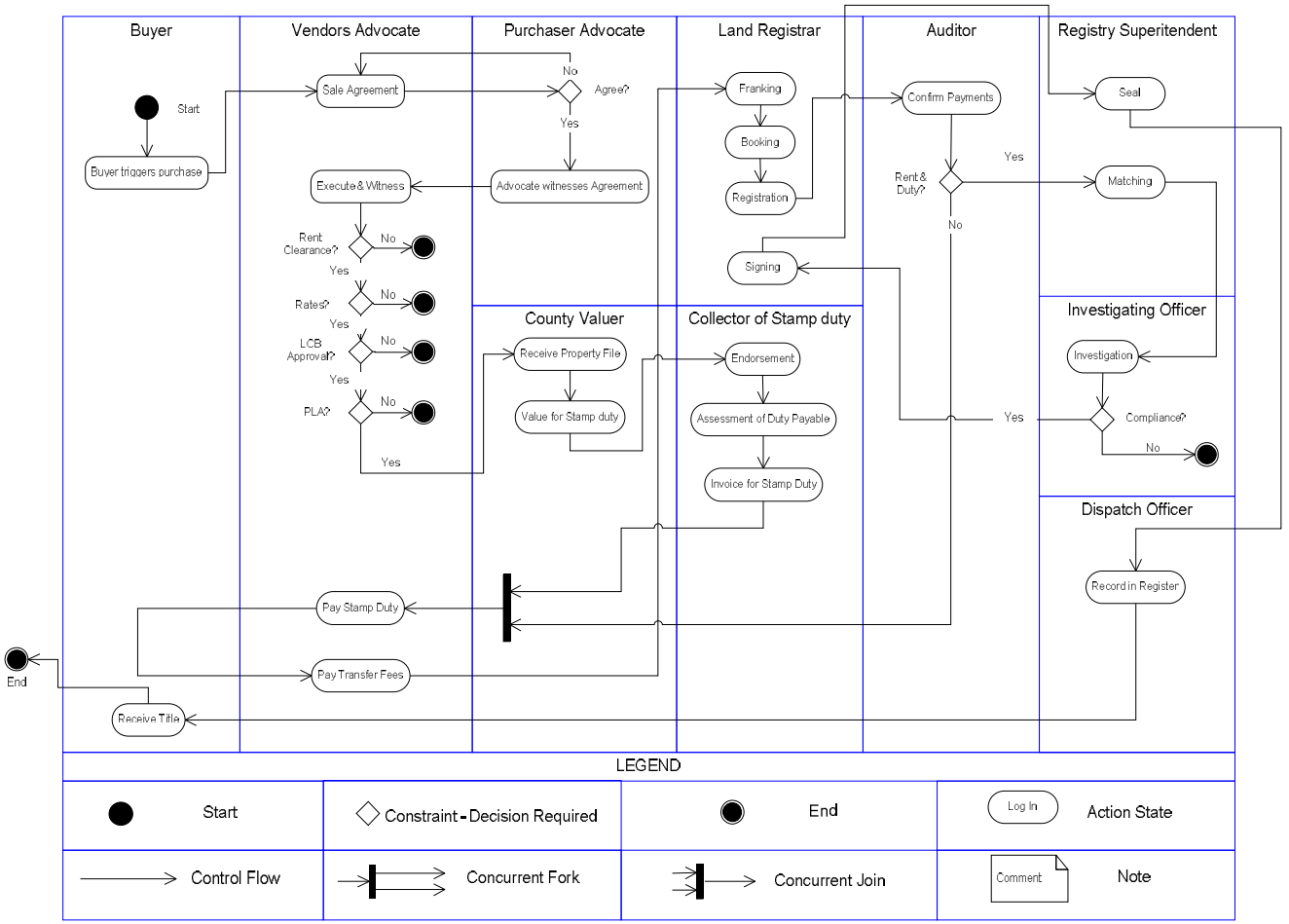
The process of sale and purchase of land transfer is initiated by a willing seller and a willing buyer. It is essential for the parties to a land transaction to enter into a written sale agreement and sign the same in the presence of a witness. This is based upon the provisions of the Law of Contract Act which provide that no suit shall be brought upon a contract for the disposition of an interest in land unless the contract upon which the suit is founded is in writing, signed by all the parties thereto; and the signature of each party signing has been attested by a witness who is present when the contract is signed by such party. Upon fulfillment of the obligations of the sale agreement, the parties are required to sign a transfer of land.

While the Law of Contract Act does not define who or what the qualifications a person attesting a contract for disposition of land should have, and while the Land Registration Act of 2012 is silent on who should prepare and attest instruments relating to disposition of Land, the Advocates Act provides that no unqualified person shall, either directly or indirectly take instructions or draw or prepare, *inter alia,* any document or instrument relating to the conveyancing of property or for which a fee is prescribed by any order made by the Chief Justice under Section 44 of the Advocates Act (Section 44 provides for the Advocates' remuneration).

Once the Land Registrar receives the documents purporting to transfer land, he or she must make certain checks before the transfer can be effected. Firstly, the Land Registrar confirms that all rates are paid up to date (for properties within a rateable area) by requiring the production of a current rates clearance certificate and that all land rent is paid up to date (for leasehold hold properties) by requiring the production of a current land rent clearance certificate. These conditions do not apply to land held as freehold. In addition, with respect to leaseholds the Land Registrar must verify that the proprietor of the land in question has met the prescribed conditions of allotment or grant. These conditions include the permitted user, and plot coverage. The breach of such conditions could result in cancelation of the title.

Secondly, for agricultural land, the Land Registrar must verify that consent to transfer has been obtained from the Land Control Board. Lastly, the Land Registrar would request for assessment of the property to determine if stamp duty is payable. Where stamp duty is deemed payable, this has to be paid together with the land transfer fees before the transfer can be effected. Figure 5.11 models the land conveyancing processes.

Figure 5.11: The Land Sale and Transfer Process



5.6.4.1 Manual Registration Process of Documents at the Central Registry

The process of Registration starts with collection of Stamp duty and other prescribed fees. Once the document is booked, it becomes an accountable instrument. After booking, deed files are matched, investigations done and ' entered in the "A" Book. The Registrar of Titles signs the document and eventually it is copied and dispatched. A document follows the procedure described here below for its registration.

Documents that have been received from the stamp duty section which have duly been assessed, payment made and franking done are presented at the central registry booking for registration. The documents are accompanied with clearances (rent and rates), bank slips and valuation reports where necessary. Booking forms (application for registration forms) are filled in quadruplicate with details of the presenter, nature of documents and annexures. The first booking form (green in colour) has revenue stamps affixed on it[64]. Different documents attract varying registration fees. All four forms are stamped with the booking stamp which reflects day and date of booking. The booking officer will assign a day book number to the documents which will be indicated on both the forms and the conveyance instrument. The remaining three counterparts of the booking form (pink, white and yellow) are for assigning to the officer, for dispatch with document and presenters copy respectively. Presenter uses the yellow form to trace and collect document after registration or rejection.

After booking, documents are audited then matched with their deed files for those with titles and forwarded to the Registry Superintendent for allocation. Matching entails listing down title numbers on a 'morning list' then retrieving files from the strong room and merging the same with the booked documents. Documents under Registration of Documents Act and Powers of Attorney are taken straight to the RS for allocation as they do not have to be matched with deed files. New leases/allocations and perpetual succession (trust) documents are also sent straight to the Registry Superintendent for allocation to the Investigation Officers (land registration officers and assistant land registrars). The Registry Superintendent then assigns documents to Investigation Officers in the "A" book which is a register that shows status of documents from allocation to completion and dispatch.

Investigation Officers work on the documents by checking whether all necessary annexures have been attached, whether they are valid, whether payment receipts have been attached and whether documents have been duly drawn, witnessed and executed by Advocates. Entries are either made or documents rejected with full reasons for rejection indicated on the two booking forms (pink and white). Making entries entails stamping the document with a wooden stamp (various documents have their unique stamps) that has been inked on a violet ink pad. Details such as date, booking number, volume number, entry number, folio number, file number and provision for signature are provided for in the impression of the stamp.

[64] Standard registration fee is Kenya Shillings Five Hundred Only

Documents are then forwarded to the registrars for signature. The documents are either signed or sent back to the Investigation Officer for further action. Documents that have entries and have been signed are forwarded for copying, while those that have been rejected and signed are sent straight to the Registry Superintendent for dispatch in the 'A' book. Rejected documents are then recorded in the dispatch register and sent to the pigeon holes for eventual return/collection to the presenter.

After copying, documents are sent to the Registry Superintendent for sealing. Upon dispatch, sealed copies are retained by the office while original and counterparts are sent back to the presenter. The registry also retains the completion documents, but returns the payment slips to the presenter. The presenter uses the yellow form to check status of the document from the "A" book counter then collects the document from the dispatch counter if status reads dispatched. Rejected documents may be resubmitted upon compliance with the reasons for rejections.

5.6.4.2 Challenges with Registration

It is notable that there are challenges at the registry enumerated as below.

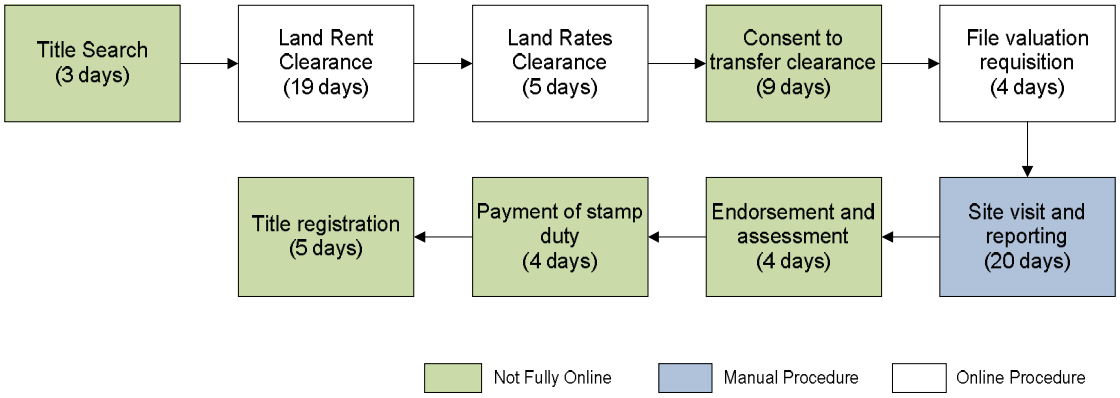
a) Documents are booked manually making the process tedious and time consuming;
b) Documents are physically inspected by the Internal Auditors in their offices which is time consuming;
c) The documents are manually matched with the deed files which are also retrieved manually and which are at times unavailable due to misfiling.
d) The documents are manually entered into the "A" book and manually allocated to the investigation officers thus time consuming.
e) The documents have to be photocopied after registration which, again, lengthens the time for processing documents; and
f) The GLA volumes and Kalamazoo binders are torn and are in tatters making registration impossible necessitating and reconstruction which is time consuming and prone to incorrect entries.

5.6.4.3 Property Registration

One of the key objectives of digitization of land transactions is to enhance efficiency and in doing so, contribute towards the ease of doing business in Kenya. As previously stated in this report, the Ministry will achieve this through the implementation of a digital LIMS and by ensuring that the relevant legal provisions are amended to facilitate digital transactions. In addition, it will be necessary to re-engineer the various land related processes by eliminating the steps that will be rendered obsolete by the amendment of laws and the processing of transactions in a digital format.

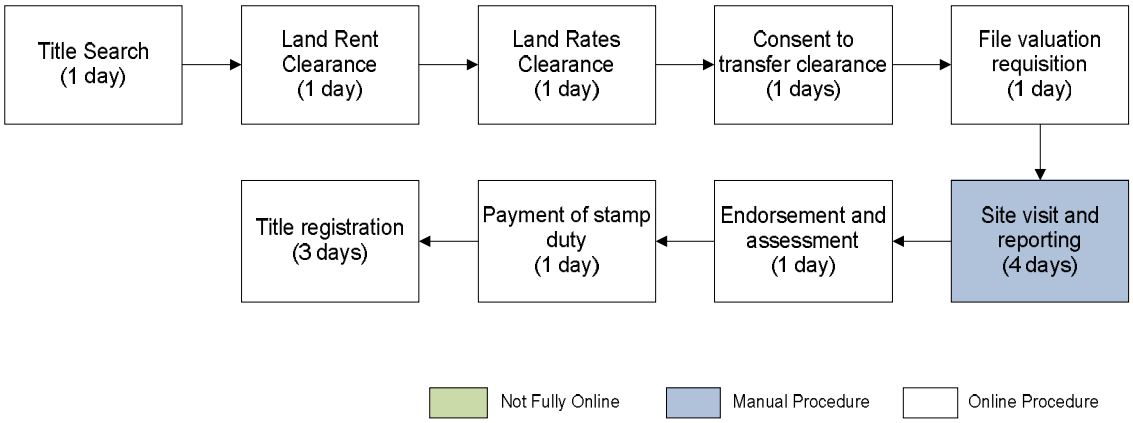
According to a study conducted by the World Bank and published in the report titled Doing Business 2019, and by way of example as shown in Figure 5.12, it is noted that it takes approximately 49 days to complete registration of a transfer of land in Nairobi.

Figure 5.12: Current Property Registration Process in Nairobi



In our analysis, the introduction of digital LIMS and the elimination of unnecessary steps can reduce the duration to register property to 14 days (as illustrated in Figure 5.13) and that the duration could go even lower upon amendment of the relevant laws as discussed in Chapter 2.

Figure 5.13: Proposed Property Registration Process in Nairobi



5.7 Conclusions

The entire processes as outlined in this chapter depict a complex and highly involving sub-activities straddling various levels of government and across departments with different approaches with some linkages. The common denominator in all these activities and processes is land. The chapter has demonstrated the roles and responsibilities of each actor in the current form and attempts to connect the cycle of activities and linkages to the documentation process.

At the institutional level, there are the devolved and centralized functions. The most fundamental and core ingredient is land data. The cadastre information is critical for both planning at the counties and documentation at the national level. Planning at both levels of government provides guidance on sets of interrelated decisions on land uses, linked to specific contingencies anticipated in the future. The maintenance and distribution of this dynamic land data is the preserve of the Director of Surveys office, which also maintain a national geodetic control network.

An analysis of the survey workflows shows the number of steps and time that it takes to process and authenticate surveys. From this, it is clear that, there is need for the development of a Cadastral Workflow Management System that would allow Licensed Surveyors to submit their data in digital format and to track their work remotely. This would aid a great deal in reducing the time it takes to process the survey work and in so doing greatly contribute to the ease of doing business.

The workflows highlighted in this chapter clearly show the interplay between the various actors. Further, they demonstrate that a seamless end-to-end processes requires reliable cadastre information which ensures accountability of decision makers in safeguarding the interests of the community is essential. Land registers on their part should be regularly updated to reflect the spatial dynamics and related social and economic activities in order to have a complete land information management system. An analysis of the processes show the need for process reengineering before embarking on digitization so as to ensure that the digital processes are leaner and focused on the need to deliver spatial information.

Our analysis has shown the lack of clear roles played by the National Land Commission and the Ministry of Lands & Physical Planning on planning functions. Both the Ministry and NLC have fully fledged planning departments i.e. Land Use Planning and Physical Planning departments respectively. This is further complicated by a third department of Housing and Urban Development domiciled at the Ministry of Transport, Infrastructure, Housing and Urban Development whose role is to lend support on urban development to County Governments.

A glaring example of duplication is the publication by the Land Use Planning and Physical Planning departments of parallel guidelines for the preparation of County Spatial Plans. To complicate this further the NLC has a document guiding the process for the preparation of integrated urban land use plans under the Urban Area and Cities Act. All these aspects create duplicities, which lead to confusion, which must be addressed. There is a clear expectation that the framing and approval of strategic policy remains pivotal for both national government and counties in their explicit planning functions. The National Land Use Policy (Session Paper no 3 of 2009) and the National Spatial Plan (2015-2045) have been prepared by Department of Physical Planning, which bear significant contribution to county and inter-county interests.

There is urgent need to address these duplicities and eliminate any contradictions on the national planning linkages. The national government planning synergies must translate into best practices to individual counties or coalition of county governments – in concept and processes.

CHAPTER SIX

6 CONCLUSIONS & RECOMMENDATIONS

This Chapter presents conclusions while identifying quick wins or immediate action points and recommendations.

6.1 Conclusions

Land registration is one of activities in the final stages of the land administration processes. For the successful implementation of electronic land transaction, all the land management processes including Surveying, Valuation, Physical Planning, Land Administration, Land Adjudication & Settlement etc. should also be considered. The processes should be able to integrate seamlessly and be available to both internal and external users. This will facilitate end-to-end land transactions and processes.

6.1.1 Developing a National ICT Strategy and Platform

In order for NLIMS to be successful, it should be founded on a National ICT strategy, which provides for the objectives relating to the development of ICT infrastructure and implementation, management and coordination of the various component of ICT.

Comparative studies have revealed that Estonia ranks among the most digitally advanced societies in the world. For example X-Road is the backbone of e-Estonia as it allows the nation's various public and private sector e-Service databases to link up and function in harmony. Estonia's e-solution environment includes a full range of services for the general public, and since each service has its own databases they all use X-Road. To ensure secure transfers, all outgoing data from X-Road is digitally signed and encrypted, and all incoming data is authenticated and logged.

Originally X-Road was simply used to send queries to different databases. Now it has developed into a tool that can also write to multiple databases, transmit large data sets and perform searches across several databases simultaneously. X-Road was designed with growth in mind, so it can be scaled up as new e-services and new platforms come online.

Today, X-Road is also implemented in Finland, Azerbaijan, Namibia and Faroe Islands. X-Road is also the first data exchange platform in the world that allows data to be automatically exchanged between countries. Since June 2017, automatic data exchange capability has been established between Estonia and Finland. Our recommendation is that the Ministry of Information Communication and Technology takes up the responsibility of developing a platform upon which other state departments can rely for the implementation of their respective digital platforms.

6.1.2 NLIMS Roadmap

It is notable that over the years a number of attempts have been made to develop a LIMS without much success. A number of donors and development partners have been involved and continue to be interested in helping MoLPP achieve a digital NLIMS. It is however notable that most of these efforts are uncoordinated and often lead to a waste of time and resources. There is therefore the urgent need for the MoLPP to develop a NLIMS roadmap. This road map should outline the plan to reach short-term and long-term goals through the use of appropriate technology solutions. This roadmap should provide development of policies to govern key information, which would help the MoLPP make better decisions around technology investments and interventions by different donors, development partners, County Governments and the National Land Commission.

6.1.3 Data Model

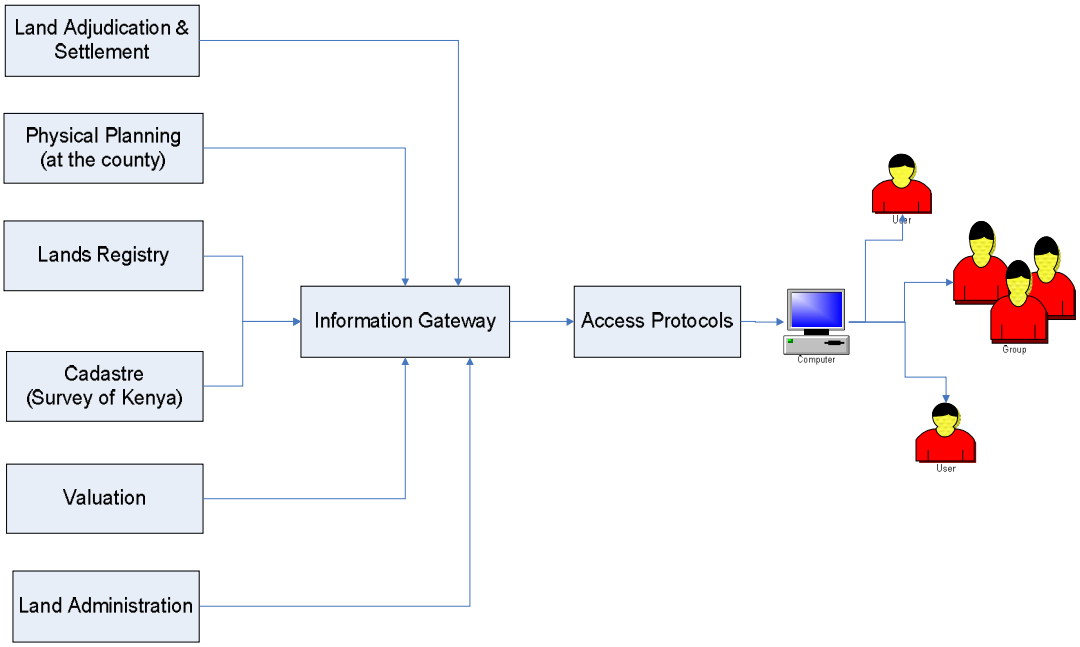
a) There is need for the Ministry to develop a data model to support the NLIMS;
b) The data model should include but not limited to ownership, spatial dimensions, encumbrances, land use, tenure and category of land for all land to facilitate easier identification, processing and access by relevant authorities.

6.1.4 System

a) At the minimum, there should be a separate database for the Land Registry, Cadastre, Physical Planning, Land Valuation, Land Administration and Land Adjudication and Settlement which copy information to a public information database (information gateway) to allow for public access;
b) A great number of institutions are involved in LIMS having a centralized database[65] would be important so as to reduce instances of data duplication and therefore redundancies as the case is today. However, the establishment of a one-stop-shop through a centralized database, while desirable, is a monumental task. The opposition noted thus far is mainly because of the different sectoral interests. Certain organizations fear that they may lose the power they wield if they share or make available the data under their control. A Distributed Database[66] architecture with several nodes representing various stakeholders is one way to solve such a problem. Figure 6.1 depicts a distributed database architecture, which could be adopted. Each node (Physical Planning, Land Registry, Cadastral, Valuation, Land Administration and Land Adjudication) supports its own maintenance activities and supplies data or information as represented in the data model. This kind of arrangement helps to deal with the fear that having a digital land record system would in essence declare certain actors irrelevant. Furthermore, the mistrust arising from handling of data by multiple actors will be eliminated as each actor will be responsible for the authenticity and security of the data that they create.

[65] A centralized database refers to a database in which all data resides on one computer at a single location. This data can then be accessed by users via DBMS.
[66] A distributed database is defined as a logically interrelated collection of shared data, physically distributed over a computer network (Connolly and Begg, 2005: 731).

Figure 6.1: Proposed Distributed Database Architecture for the NLIMS



The distributed database architecture in addition, gives weight to the NSDI concept and the view expressed in the Cadastre 2034 model, that is, the categorization of data into layers and management by the most capable organization.

6.1.5 Legal Framework

The entrenchment of a digital Land Information Management cannot exist in isolation without the necessary legal framework. The switch to this system should therefore be preceded by an accommodative legal environment. This therefore requires review of current legal framework so as to provide for the intended changes. The current legal framework either do not contain provisions permitting electronic transactions, or have provisions, which impede the switch to digital Land Information Management System. In view of the foregoing, this Taskforce has reviewed the land sector statutes and related laws and has consequently proposed amendments as per the schedule in Chapter 2.

6.1.6 Infrastructure

a) There is need to have necessary capacity (software, hardware, human resource) at the land offices (MoLPP, NLC and Counties) so as to facilitate the NLIMS. Notably the hardware and software will need regular maintenance, upgrades and replacement as necessary so as to ensure that the system functions optimally. This implies that there should be in place a maintenance culture to ensure that the software and hardware are up to date and running at all times;

b) Access to reliable internet/connectivity is crucial for the successful implementation of a digital NLIMS. Redundant links that ensure near 100 percent availability with necessary Service Level

Agreements (SLA) will need to be put in place. Efforts must also be made to ensure internet and electricity availability across the country to ensure that users can make use of the NLIMS.

c) The various regulatory bodies (i.e. Land Surveyors Board, Valuers Registration Board, Planners Registration Board, Law Society of Kenya etc.) need to acquire cryptographic infrastructure (public key infrastructure) to enable them to manage the professionals under their jurisdiction.

6.1.7 System Rollout

There is need for piloting of the NLIMS before full-scale deployment so as to ensure that teething problems are addressed before actual rollout is done. The pilot phase would allow for testing and improvement of the user experience. During the pilot phase, it would be necessary to run both manual and digital processes, however at the time of actual roll out there would be need for some compulsion to ensure that items that can be handled digitally are handled digitally with no recourse to manual systems.

It is notable that in most jurisdictions where e-conveyancing has been rolled out, the initial step was always to convert manual records into digital records[67]. The functionality to allow e-conveyancing has then been introduced progressively over a period of years. For example in Victoria in Australia, there are currently 12 major transaction types capable of being lodged electronically. These transaction types account for more than 90 percent by volume of all transactions lodged. The remaining transaction types (approx. 140 in number) will be progressively introduced during the first half of 2019.

6.1.8 Financing of the System

The development of a digital NLIMS incorporating all the land in the country into one system is bound to have substantial financial demands. These demands would range from investment in the education and training of personnel, equipment purchase and the development of the associated ICT infrastructure (internet, software, hardware and database development). The question then arises as to whether Kenya is in a position to finance such a development. An analysis of the public participation shows that Kenyans are supportive of a digital NLIMS. We note that there are millions of land records, the question then changes to whether Kenya can afford not to institute a digital NLIMS. There is need for the cultivation of a land information market through which revenue can be realised from the sale of information products to maintain the NLIMS. Alternatively, efforts should be made towards:

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[67] The digitizing of paper records in Ontario, Canada lasted almost two decades i.e. from 1990 to 2010. Electronic transactions were launched in 1999 in some Registry Offices. Although the 1990 Land Registration Reform Act authorized the minister responsible for land matters to issue Regulations making electronic registration mandatory, this was implemented gradually in order to give lawyers and conveyancers time to adjust. Once a Registry Office's records were almost fully converted, the minister filed a Regulation making electronic registration optional. After a transition period (approximately one year initially), a second Regulation would be filed making electronic registration mandatory in that specific Registry Office. The transition period was reduced gradually to approximately two months by 2010.

a) Public Private Partnerships;
b) Internal funding as a flagship project through the national budgetary process as well as appropriation in aid from revenue generated from services;
c) External funding from donors and development partners;
d) Funding supplemented by revenue from appropriation-in-aid from the NLIMS services; and
e) A determined percentage of the revenue generated from the fees could be used for system sustainability and service enhancement.

6.1.9 Valuation

Currently registrable instruments must be stamped or franked as proof of payment of stamp duty. There is need to make this process fully digital so as to reduce the amount of time it takes. There is need to do away with franking since safeguards have been provided via proof of online payment.

While Private Valuers have been allowed to carry out valuation for stamp duty, it is still not clear on how issues such as payment of fees and accountability will be handled. There is need to provide guidelines on how the same should be actualized.

It is notable that a lot of properties are not on the valuation roll, a fact that continues to deny County Governments critical revenue in terms of property taxes. There is need to consider the deployment of Computer Assisted Mass Valuation Systems (CAMA[68]). The outcome of CAMA models would be a valuation roll and property taxation map. There is also need for comprehensive development of valuation function databases that are readily available to support registration processes (land rates; stamp duty; land acquisition and compensation; new grants; land rent; renewal of leases; charges and mortgages etc.)

6.1.10 Implementation of Plans and Development Management

Spatial planning has consequences not just for plan making but for implementation too. Most forms of development are subject to the prior approved spatial plans and encompass an end-to-end development process of individual land parcel approval, development and monitoring of outcomes. As a natural resource and factor of production, land resonates powerfully socially and economically with the community. Land owners have to engage a series of professionals who have to navigate the institutional processes. The process are often lengthy cumbersome and bureaucratic and have evolved over the years creating a cycle of relationships that require a comprehensive, coordinated and improved land governance.

This has heralded the concept of managing development at the county level requiring focused governance reforms at the county level and manpower professionalization. A development team

[68] CAMA is the systematic appraisals of a group of properties as of a given date using standardized procedures and statistical testing.

approach with high levels of trust and involving all the enforcement agencies but remembering the county planning regulatory function.

Ideally, a County Directorate of Planning should be the hub or the "one-stop shop" for citizens in ease of doing their business on planning and land transactions. These directorates should be manned by qualified and competent personnel. There is urgency to address the sharing of information during the approval process and development management processes to ensure all material considerations are captured. The following enforcement and compliance agencies should play a role in the determination of the outcomes:

a) Land Control Boards in the land development process (subdivisions, change of user etc.);
b) National and County government departments touching on land and development;
c) National Government Agencies (National Environmental Management Authority, – NEMA; Water Resources Management Authority, – WRMA; Kenya National Highways Authority, – KeNHA; Kenya Rural Roads Authority, – KeRRA; Kenya Urban Roads Authority, – KURA; and Kenya Electricity Transmission Company Ltd. - KETRACO);
d) Utility companies (Kenya Power, Water Supply, Sewerage Reticulation); and
e) Urban/Municipal Boards.

6.1.11 Country wide mapping and geo-referencing

In order for the NLIMS to succeed there is need to ensure that all land parcels have the necessary coordinates to enable all such records to be digitized. Notably areas under fixed boundary do not have a problem however; large parts of the country are under general boundaries. The Director of Surveys should therefore develop a comprehensive programme for systematic geo-referencing of land, including co-ordination of setting up of Continuous Operating Reference Systems (CORS) that would speed up data capture in the field thus making it easier to digitize the land records. This means that Survey of Kenya should be adequately resourced to enable them carry out this task that requires country wide mapping as well as a budget to build and maintain the CORS. Country wide mapping can be undertaken using a mix of aerial imagery for the urban areas and high resolution satellite imagery for the rural areas. In addition, there is need for the government to undertake mapping at defined intervals say every 5 years or 10 years. There is also need for the Director of Survey to come up with a homogeneous datum and coordinate system that would allow for all the maps to sit on one platform away from the current status where we have numerous datum and coordinate systems in use making it difficult to have one system for mapping.

In addition, the Director of Surveys should develop a standard for the exchange of land parcel data electronically. This standard shall enable surveyors to submit or retrieve complete data including approvals and digital signatures in one job file. Examples include the New Zealand LINZ data format based on the LANDXML standard or Finland's InfraModel also based on LandXML as well as SOSI, the Norwegian Format. The standard should be developed in collaboration with the local national

standards body and international partners such as Open Geospatial Consortium (OGC) and International Federation of Surveyors (FIG).

6.1.12 Electronic Signatures

Executing and authenticating certain documents require that they be signed. When such documents are in electronic form, it behooves that they be signed electronically by way of an electronic signature.

Section 2 of the Kenya Information and Communications Act (KICA) defines the terms **"**electronic signature" and "advanced electronic signature" the latter being an advanced version of the former. Electronic signature is therefore data in electronic form affixed to or logically associated with other electronic data, which may be used to identify the signatory in relation to the data message and to indicate the signatory's approval of the information contained in the data message.

Whereas, advanced electronic signature, is an electronic signature, which meets all the following requirements:

(a) It is uniquely linked to the signatory;
(b) It is capable of identifying the signatory;
(c) It is created using means that the signatory can maintain under his sole control; and
(d) It is linked to the data to which it relates in such a manner that any subsequent change to the data is detectable.

Deliberately so, Section **83P** provides that where any law provides that information or any other matter shall be authenticated by affixing a signature or that any document shall be signed or bear the signature of any person, then, notwithstanding anything contained in that law, such requirement shall be deemed to have been satisfied if such information is authenticated by means of an advanced electronic signature affixed in such manner as may be prescribed by the Minister.
From the attributes of the advanced signature, it is evident that the same is more secure as far as authenticating documents that by law require to be signed hence official and accepted method of authenticating documents. Land documents that require signing and authentication will therefore be executed by way of advanced electronic signature as opposed to the electronic signature, which is of a simpler version.

6.2 Quick Wins/ Immediate Action Points

The following are seen as quick wins or immediate action points:

a) Amend existing laws as per Chapter 2 through an omnibus bill to save time required to amend each law on its own;
b) Rollout digital cadastral surveys by developing an appropriate infrastructure that can capture and store cadastral survey data for onward transmission to the registry - this can be achieved through regulation 26(4) of the Survey Act.

c) Rollout NLIMS using cadastral data that has been done using fixed boundary surveys and integrate areas under general boundaries over time through a geo-referencing program as provided for under LRA (2012);
d) The Department of Land Administration should finalize on the scanning and digitization of correspondence files and avail the same to NLIMS;
e) Facilitate electronic lodgment of documents by digitizing all forms provided under the Land Registration (General) Regulations, 2017;
    1. The user shall then:
        i. Populate the online form(s) and attach photos (if required) and other relevant documents;
        ii. Print the form, execute and have it attested before an Advocate;
        iii. Scan and upload the form(s) to the system;
        iv. Once the registrar receives the electronic document, the system will send notification to the applicant indicating the date and time when it was received.
        v. The electronic should then be forwarded for valuation (if required) and once this is done the user should receive an acknowledgment message from the Director of Valuation;
        vi. On completion of Valuation the user should proceed to assess and pay duty and other fees electronically before registration;
        vii. For documents that cannot be lodged electronically e.g. certificates of title, which the Registrar requires the production of the original, the same should be lodged manually.
        viii. The system should then notify the user upon successful registration or otherwise.
    2. Documents bearing original signatures and seals must be retained by the approved person/user for a specified period to be prescribed by the Registrar; and
    3. The provisions of Section 34 of the Advocates Act shall apply to the lodgment of documents.
f) **Archive records:** We do not have to immediately scan all records into the system, we can archive and digitize progressively and on a need basis. Some documents may not be relevant currently but should be stored in such a way that they can be retrieved easily. All old records should be well kept for archiving and referencing while new records should be captured, stored and managed on a digital platform.
g) Establish a Public Key Infrastructure for all concerned Ministry, NLC and County staff as well as the other professionals that need to use the NLIMS. Each of the actors should be issued with a digital certificate with authorisation from their respective statutory registration board.

6.3 Recommendations

The following recommendations from the Taskforce are drawn from the situational study and conclusion drawn therefrom.

6.3.1 Integration and Institutional Roles

a) There is need to clearly define the roles of the MoLPP, NLC, County Government and the National Government Agencies in land transactions so as to clarify mandates and operational roles.

b) There should be separate system modules for the Land Registry, Cadastre, Physical Planning, Valuation, Land Administration and Land Adjudication & Settlement which copy information to a public information database;
c) It should be responsibility of respective agencies generating data to have custody and protect their data i.e. the intellectual property remains with developers or producers in this regard it is necessary for the different agencies to develop interoperable systems.
d) There is need to provide relevant linkages/visibility between NLIMS and other government agency systems such as (iTax – KRA and IPRS) this would go a long way in enriching and reducing turnaround times in land transactions. In addition, the integration of the various systems will enhance efficiency, transparency, accountability and avoid interagency conflicts.
e) To enable integration and interoperability with other systems the NLIMS should use interoperable platforms that provide clear forward and backward linkages with other relevant systems at the County and the National level (land survey, land adjudication, and land registration services) as well as with Banks, under the guidance of relevant laws, policies and regulations.
f) The Ministry in collaboration with the NLC and County Governments should coordinate the integration of land information systems at all levels including linkage to the Kenya National Spatial Data Infrastructure (KNSDI);
g) KNSDI should define the data interchange formats and protocols.

6.3.2 System Development

6.3.2.1 System Access

a) The electronic system should be reliable, secure, transparent, sustainable and accessible
b) There is need to develop a system that gives access to users according to defined hierarchy of access rights-the following categories of persons may have user access rights.
    (i) Various agencies that have user rights
    (ii) Professionals who are members of a regulated professional organization involved in land management processes e.g. Surveyors, Advocates, Physical Planners, Valuers, and Estate Agents etc.
    (iii) Registered owners/proprietors
c) Access to the system should be through biometrics, National ID, Alien ID, Military ID, and certificate of incorporation in case of corporate entities and business registration number for businesses that are not incorporated; Plus a Personal Identification Number (PIN). As a minimum, the system should implement two factor authentication (e.g. password plus one time password) to ensure that access is still restricted incase of loss of password;
d) The system should maintain a comprehensive audit trail of all processes capable of being retrieved by authorized officers.
e) System offences including but not limited to: unauthorized access; unauthorized interference; unauthorized interception; unauthorized disclosure of password or access code; cyber-espionage; computer forgery; computer fraud; identity theft and impersonation; phising; and fraudulent use

of electronic data will be penalized in accordance with the provisions of the Computer Misuse and Cyber Crimes Act;

f) The system should have a robust system security commensurate with sensitivity of land registration information e.g. data security will need to employ encryption and access should have rigorous user access authentication;

6.3.2.2 System Scale and Capacity

a) There is need to ensure that the system has enough capacity to handle the large number of transactions to avoid stagnation and losses;
b) The system design should take a distributed but integrated approach i.e. there should be a uniform way of accessing the system even with the servers at different locations;
c) The system should be available nationwide and not experience any downtime arising from breakdown of some components or crash. It should be able to recover itself using backup;
d) The system should be developed using open and interoperable standards;
e) The system should be scalable and capable of being upgraded;
f) System development should adopt a simple and phased approach (Agile approach) as opposed to fixed price comprehensive system. As may be dictated by necessity the system may use open source or commercial off the shelf software;
g) The N*LIMS* should operate an electronic mail system able to identify users by codes or pseudonyms, or identifier addressees from a distribution list or directory and should retain the information to ensure accurate identification of the sender and addressee(s) of messages that are in the records;
h) While transmitting the data, the system should be able to retain and preserve specific information for each electronic mail message including sender details, date, message metadata, attachment to message and any necessary data for the purpose of providing context of the record; and
i) The need to have a user manual, demos and tutorials in place for better user experience.

6.3.2.3 System Security

a) The digital platform will need to be protected from emerging trends in cyber-crimes and hacking by design and practice in form of elaborate Intrusion Prevention and Detection Systems. As such there will be need to develop an information security policy. Security of the system will ensure integrity and public trust.
b) Deliberate efforts will need to be made to ensure integrity and confidentiality of personal data throughout the land management cycle. This should be done in full compliance to the Data Protection Bill, which ought to be passed into law.
c) To ensure security of the records there is need for in built checks and verifications of the documents lodged into the system.
d) Develop system with security features that guard against internal and external threats. The system must implement intrusion detection systems as well as extrusion detection and management.

e) The system should have security features that minimize unauthorized addition, modification, alteration, erasure, or deletion of data, records, and documents.
f) There is need to explore the use of blockchain or any emerging tested technology to protect the NLIMS data.

6.3.2.4 System Availability

a) The system should guarantee 99.9 percent availability with no or minimal down time;
b) The system should use available up-to date hardware and software technologies to ensure nationwide availability;
c) The system should have continuous backup.
d) The system should have a business continuity plan that ensures the system continues to run even if some components are completely or temporarily broken down. In the event whole system crashes, it should be capable of recovering itself using backup hardware and data with fault tolerance approaches.

6.3.2.5 System Updates and Upgrades

a) System upgrade shall be done to address prevailing technological changes, vulnerabilities and problems that might occur in an existing system component;
b) Updates shall be performed based on the review of posted security flaws or patches for each type of update applicable to the computer system;
c) The system should be scalable and allow future changes or improvements; All changes made to the system should be documented to keep track of updates made;
d) All updates and upgrades made to the system and server should be performed by authorized system administrator; computing infrastructure supporting the system should be upgraded as required.

6.3.2.6 System Implementation Approach

a) Piloting of NLIMS before full-scale deployment is proposed to ensure teething problems are addressed. As such the manual system should not be completely and immediately phased out. It ought to run concurrently with the digital system during the pilot study. However once the digital system is rolled out, the manual processes should stop.
b) It is recommended that the NLIMS adopts a Distributed Database Management System (DDBMS) within the confines of a National Spatial Data Infrastructure (NSDI. In this way, the organizations involved in the NLIMS maintain ownership of their data and avoid data duplication and redundancy.
c) It is further recommended that the NLIMS data and information be presented to the user through a unified interface.

6.3.2.7 System Liability

The envisaged system should incorporate a deliberate effort (in the form of an agreement or digital certification) to enforce professional responsibility and liability for all actors in land transactions with close cross-referencing with professional bodies on the status and professional standing. This effort is informed by the need to mitigate errors due to omission or commission, fraud etc.

6.3.3 Supporting Legal Framework

There is need to cultivate a stable policy and legal framework upon which a stable NLIMS shall be premised. To achieve this, the following should be done:

a) Review the National Land Policy so as to provide a better road map for a digital NLIMS;
b) Finalize on the KNSDI policy so as to provide clear guidelines on data sharing and data custodianship; and
c) Amend the land laws as per the schedule provided in chapter 2 of this report.

6.3.4 Survey and Mapping

a) There is need of reorganizing the records and workflows at Survey of Kenya as well as the field stations so as to ensure that the data is converted to digital data in order to improve on data storage, access and cross referencing of records;
b) There is need to develop a programme for systematic or sporadic mapping of the country and to ensure that this can be done at regular interval say every 5 years;
c) There is need to fast track the geo-referencing of the general boundary maps so as to ensure all land parcels can have defined coordinate systems;
d) There is need to develop and use one coordinate system and datum across the country to ensure that all the maps can be put in one platform; and
e) There is need for the densification of the CORS network so as to reinforce real time digital positioning in the field through the use of GNSS technology.

6.3.5 Change Management

6.3.5.1 Training & Capacity Building

a) The success of the electronic system will be hinged on capacity building and sensitization of both the operators and end-users. Adequate training will therefore by necessary before and after deployment of the digital LIMS.
b) There will be need to carry out capacity building for the professionals, public servants and relevant stakeholders to ensure seamless and smooth operations, borrowing from most of the case studies.

6.3.5.2 Civic Education

a) There ought to be mass civic education on the guidelines and the online platform. Members of the public and stakeholders need to be sensitized on what is digitization, what documents would

be lodged and registered in the electronic form, how to transact electronically among others. Hence an information and user manual ought to be developed

b) The civic education exercise ought to be conducted in a simplified format to enable the general public understand and easily comprehend electronic conveyancing and the system.

6.3.6 System Financing

There is need for the MoLPP to consider the following options for funding the system development:

a) Public Private Partnerships,
b) Internal funding as a flagship project through the national budgetary process as well as appropriation in aid from revenue generated from services.
c) External funding from donors and development partners
d) Funding supplemented by revenue from appropriation-in-aid from the NLIMS services.

6.3.7 Benchmarking

In proposing guidelines for electronic conveyancing, case studies from other jurisdictions that have embraced and implemented electronic conveyancing such as Netherlands, United Kingdom, Estonia, New Zealand, Singapore and Canada among others, would provide useful insights. There is need for the Ministry to undertake benchmarking studies with clear queries formulated so as to ensure answers that would be important for the development of the NLIMS.

6.3.8 Proposed Road Map

The system development should adopt a phased approach with four main stages as follows:

Stage 1: Situational Analysis

a) Analyse the land transactions and processes in terms of actors, use cases, workflows, infrastructure, organisational structure and human resource capacity;
b) Define roles as well as responsibilities to avoid conflicts and duplication;
c) Identify areas of integration for the processes;
d) Re-engineer the processes, where necessary, and align the legal framework to fit to the re-engineered processes; and
e) Undertake system scoping and rationalisation of resources so as to know what exists (hardware, software, human resource) and then rationalise existing resources so as to leverage what has been done in the past.

Stage 2: Database Development

a) Develop a data model that includes but not limited to: ownership information; encumbrances; tenure; spatial dimensions; land use; and land category;
b) Develop a digital cadastral database i.e. converting all manual land parcel data to digital records;
c) Digitise registry documents as necessary;
d) Connect and integrate to relevant databases such as IPRS;

e) Test the system;
f) Conduct end user and system administration training
g) Pilot the system; and
h) Rollout the system.
i) System monitoring and evaluation

Stage 3A: Development of a Digital Cadastral Workflow System

a) Develop a Digital Cadastral Workflow System;
b) Test the system;
c) Conduct end user and system administration training
d) Pilot the system; and
e) Rollout the system by allowing surveyors to submit digital data rather than paper/PDF based survey plans (i.e. ePlans).
f) System monitoring and evaluation

Stage 3B: Development of an Electronic Development Application Management and Permitting System

a) Develop an Electronic Development Application Management and Permitting System at each County;
b) Test the system;
c) Conduct end user and system administration training
d) Pilot the system; and
e) Rollout the system by allowing Registered Physical Planners, Architects and Engineers to submit digital development application and track the status of their work.
f) System monitoring and evaluation

Stage 3C: Development of a Digital Land Valuation and Revenue Collection Module

a) Develop a Digital Land Valuation and Revenue Collection Module
b) Test the system;
c) Conduct end user and system administration training
d) Pilot the system; and
e) Rollout the system by allowing Registered Valuers to submit valuation online and track the status of their work.
f) System monitoring and evaluation

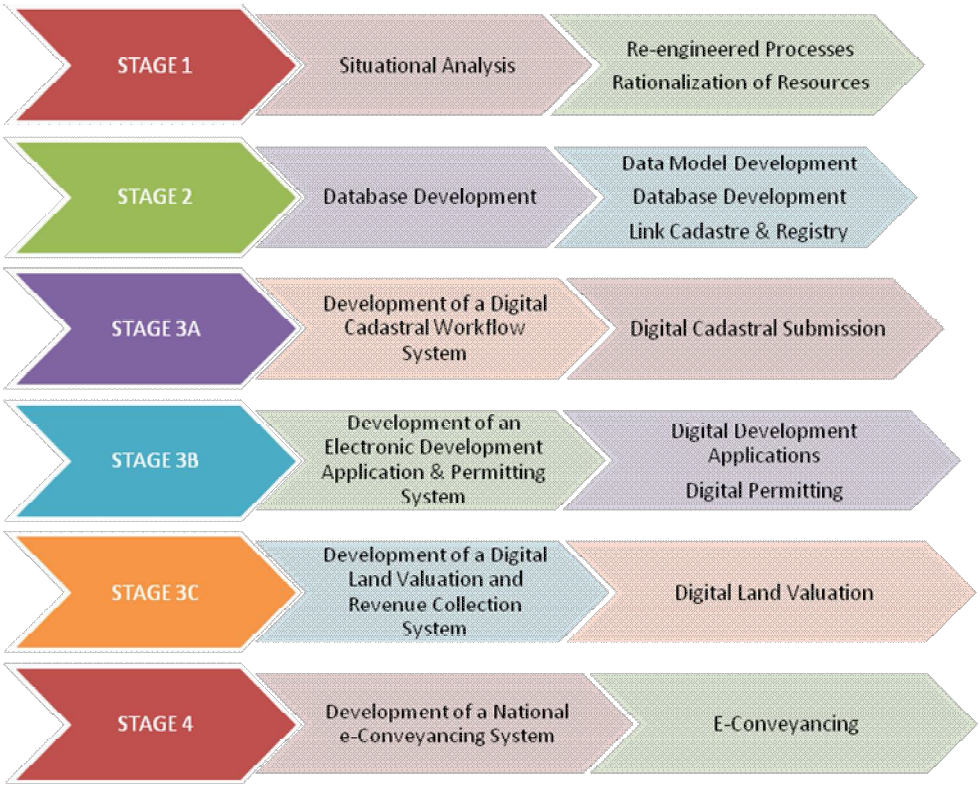
Stage 4: Development of a National e-Conveyancing System[69]

a) Identify all the land conveyancing processes;
b) Analyse and re-engineer the conveyancing processes where necessary;
c) Prioritise and develop e-conveyancing modules;

[69] Includes land administration and registration.

d) Test the system; and
e) Conduct end user and system administration training
f) Pilot the system;
g) Rollout the system by allowing for transfer of property via an online platform; and
h) System monitoring and evaluation.

Figure 6.2: Proposed Roadmap



6.3.9 Guidelines

The Taskforce has developed draft guidelines that would facilitate electronic transactions and conveyancing. However, the application of the guidelines would in some instances require that the application be preceded by the amendment of legislation as indicated in Chapter Two of this report.

The guidelines relating to the following matters have been forwarded in advance under a separate report outline:

a) the setting up of an electronic communications system under the Chief Land Registrar's management and control, for maintaining the register in an electronic form and for enabling the carrying out of transactions under the Land Registration Act which are capable of being effected electronically;
b) the access to the public of information maintained electronically;
c) the creation of electronic documents and instruments;
d) the recording or registration of electronic documents in the register;
e) the electronic generation and communication of applications for registration in the register;

f) the provision for a system of electronic payments in relation to transactions involving payment of fees; and
g) other ancillary matters necessary for improving the land registration system and service delivery generally.

However, the application of some of these guidelines may commence based on the existing system that has been developed by the Ministry.

Further, during the development of the guidelines, it was considered necessary to also develop guidelines for Valuation, Physical Planning, Surveying, Land Administration and Land Adjudication and Settlement in order to facilitate those processes relating to land. In this regards, the Taskforce developed draft guidelines for the processes that can be developed further after the necessary amendments in the respective laws relating to valuation, surveying, physical planning and Land Adjudication. These draft guidelines have been annexed as **Annex 10**. These guidelines are necessary if we are to develop a resilient NLIMS that offers end-to-end seamless operations for the Ministry and other stakeholders such as NLC and the counties.

6.3.10 Establishment of a Multi-Stakeholder Standing Committee on NLIMS

There is need for the establishment of a multi-stakeholder standing committee comprising of major stakeholders (Ministry, NLC, Counties and Professional Bodies). The committee should meet regularly during the transition from manual to digital LIMS until full functionality is achieved. The committee would also be necessary for system improvement in light of a dynamic environment particularly technological changes and policy regimes among others. In addition, the committee will need to conduct regular reviews of the system so as to ensure continuous improvement in response to challenges, dynamics and structural changes. This proposed committee can be made up of: an Executive Committee, Steering Committee and Technical Working Groups.

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ANNEX

Annex 1: Questionnaire

Republic of Kenya

TASKFORCE ON ELECTRONIC LAND TRANSACTIONS, REGISTRATION, CONVEYANCING AND OTHER RELATED ACTIVITIES UNDER THE LAND REGISTRATION ACT, 2012 THE LAND ACT, 2012 AND THE COMMUNITY LAND ACT, 2016.

Introduction

The Cabinet Secretary, Ministry of Lands and Physical Planning appointed the Taskforce on Electronic Land Transactions, Registration, Conveyancing and other related activities under the Land Registration Act, 2012 the Land Act 2012 and the Community Land Act, 2016 vide Gazette Notice No. 7859 of 3rd August 2018. The Taskforce is mandated to study and review the Land Registration Act, 2012 and the Land Registration (General) Regulations 2017 and land sector related laws with a view to formulate guidelines for electronic registration transactions and conveyancing systems and submit draft guidelines on the same within two months. The Taskforce is benchmarking with countries that have implemented Land Information System to assist it come with a road map that will guide on developing integrated solution for Kenya which is cadaster based. In line with this, we are requesting you kindly to respond to the following questions that would assist us on designing Land Information System:

Questionnaire

1. Is the management of the Land Information System in your country centralized or distributed i.e. do you have separate databases say for the registry and the cadastre?
2. Is the Land Information System linked to a payment collection system?
3. Is the Land Information System linked to the banks or the revenue authority?
4. Is there an Electronic Document Management System in place?
5. How is the system accessed and by whom and to what extent?
6. Does the system integrate manual processes or is it fully digital?
    a. How do you deal with attestations
    b. How do you deal with charges?
    c. Do you maintain separate manual records?
    d. What records are maintained as manual?
7. Does the system allow for e-conveyancing?
    a. Is e-conveyancing restricted to Lawyers?
    b. What Laws have been amended to facilitate digital land transactions or e-conveyancing?
8. How was the Land Information System rolled out? For example, was it phased out or was it rolled out at once?
9. Do you have in place digital Title Deeds?
10. Do you frank or emboss documents as proof of payment?
    a. Does your system allow for e-franking?
11. How long has it taken to develop the Land Information System?

Thank you for taking your time.

Yours sincerely,
Eric Nyadimo, MISK
Chairman, Digitization Taskforce

Annex 2: Persons Consulted

New Zealand

Steve Russell
Senior Landonline Application Specialist
Property Rights
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PO Box 5501, Wellington 6145, New Zealand | T 04 460 0110
W www.linz.govt.nz |data.linz.govt.nz

Australia

Victoria

Craig Sandy, Surveyor-General of Victoria
Chair, Surveyors Registration Board of Victoria
Registrar of Geographic Names
Surveyor-General Victoria
Land Use Victoria | Department of Environment, Land, Water and Planning
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T: 03 919 40284 | M: 0418 387 183 | E: craig.sandy@delwp.vic.gov.au

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Queensland

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Switzerland

Dr. Daniel Steudler, Licensed Cadastral Land Surveyor
Chair of EuroGeographics-CLRKEN
Swiss Delegate to FIG-Commission 7
Swiss Federal Office of Topography swisstopo
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Canada
Ontario

Martin Baya, OLS, OLIP |
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Her Majesty's Land Registry for England and Wales

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Chief Executive Officer
HM Land Registry for England and Wales
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United Kingdom
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E-mail : Graham.Farrant@landregistry.gov.uk

Annex 3: Systems Security

The introduction of technologies and systems aimed at improving the process of conveyancing is crucial for both clients and the property industry. E-conveyancing services offer unrivalled efficiency compared with traditional conveyancing practices. While there have been some teething problems, e-conveyancing is a positive step for the future of conveyancing

Security is one of the key requirements for all the stages of the conveyancing and registration processes. This includes physical, logical and procedural security measures, as well as the security of e-documents or data. Data stored by the component services must be protected against loss, corruption and access by unauthorized personnel. The e-Conveyancing service must gain the confidence and trust of users by strict adherence to an appropriate level of security.

It must be capable of achieving security accreditation through the production of, and demonstrable adherence to, an appropriate accreditation document set that details the risks and countermeasures to be taken. The e-Conveyancing service must strike a balance between security, usability and cost. Access must not be irksome or onerous, but equally security must not be compromised. However, security must not be cumbersome such that it reduces usability and scalability.

Levels of System Security

There are five major level of security that must be implemented to safe guard the digitized and automated environment. The current situation at the ministry may require update including all levels of security control as follows:

(i) **Administrative or procedural controls** - consisting of approved written policies, procedures, standards and guidelines regarding information access, responsibility for editing and maintenance, responsibility for data back-up, maintenance of registers, use of personal devices in work environment etc.

(ii) **Technical or logical controls** – the use of software and data to monitor and control access to information and computing systems including passwords, network and host based firewalls, network intrusion detection systems, access control lists, and data encryption etc.

(iii) **Data access controls** -include clear and strictly enforced procedures of identification, authentication and authorisation of the access to data including different levels of access (view, copy and print, editing) to different types of the data and different users;

(iv) **Data integrity controls** -procedures and technical system features to ensure that changes to the data are executed only by authorized personnel or processes, based on proper

documentation or registered requests and to ensure that any alteration of the data is properly documented and can be traced back.

(v) **Physical controls** – control of the work environment and computing facilities, access to and from such facilities as well as appropriate doors, locks, heating and air conditioning, smoke and fire alarms, fire suppression systems, security cameras, barricades, fencing, security guards, cable locks, separating the network and work place into functional areas etc.

System security is concerned with implementing various measures that complement each other in the five levels identified above.

Information Security

A **key aspect of Information Security** is to preserve the confidentiality, integrity and availability of an organization's information. Loss of one or more of these attributes, can threaten the continued existence of even the largest Organization.

Data security refers to protective digital privacy measures that are applied to prevent unauthorized access to computers, databases etc. **Data security** also includes protection of data from corruption. It is an essential aspect of IT for organizations.

The CIA triad of information security is an **information security benchmark model** used to evaluate the information security of an organization.

Confidentiality is a set of rules that limits access to information, integrity is the assurance that the information is trustworthy and accurate, and availability is a guarantee of reliable access to the information by authorized people (from www.techopedia.com/definition)

Integrity: The service must ensure the integrity of data and messages against accidental or deliberate malicious alteration from the point at which they are sent by the originator to the point at which they are received. Integrity of the service must be demonstrable such that any changes to any data or message between the sender and the recipient can be identified and authenticated.

Digital Signature are used to secure the integrity of information. A Digital Signature is a method for authenticating digital information, analogous to ordinary physical signatures on paper, implemented using techniques from the field of Public Key Cryptography.

Authenticity: The system must be capable of identifying and authenticating the users, conveyancers, Government Agencies with interfaces to the service, staffs and anyone else authorised to have access to the system services. Digital Signatures, encryption, user logins are some of the ways this is implemented.

Non-repudiation: The service must ensure the integrity, authentication and non-repudiation of data and information exchanged, after any agreed alterations between the parties. No party using any part of the system service must be able to deny that they had sent or received any document(s), message(s) or data that had been sent or received. Digital Signature and certificates as well as time-stamps make information or transactions undeniable.

Privacy: The system must provide assurances that privacy is maintained in documents, data, messages and information exchanged via the component services between users and any other parties that use the system. It must be capable of ensuring that unauthorized persons cannot read a document even if they gained access to it. Privacy of information can be protected through encryption and access rights control.

Audit trails: Comprehensive audit trails of all activities that take place within the system must be kept and preserved. Security aspects related to document exchange must be implemented across stakeholder systems to prevent security compromise as a result of their system interacting with the Lands systems. Stakeholders and professionals must accept responsibility for the security of their systems. Internal procedures to ensure information is obtained from legitimate sources is critical.

Annex 4: Major areas of Security Concern

a. **IT Risk Management:** There is need to identify risks to IT data and systems and put in place measures, such as SSL certificates, firewalls, passwords and anti-virus software, to protect the organization and IT systems. A risk management plan which helps to identify and manage risks has to be put in place.

b. **Business Continuity Planning:** A business continuity plan can minimize the damage, interruption and loss of business, and identify which critical business functions, equipment and data need to be restored first in case of disaster or a major system failure.

c. **Natural disasters and IT systems:** Natural disasters such as fire, and floods present risks to IT systems, data and infrastructure. Damage to buildings and computer hardware can result in loss or corruption of customer records/transactions.

d. **Procedures for using IT systems:** There must be well documented procedures about using and accessing IT data and systems, backing up data and data protection in the organization. These define how employees and other system users behave.

e. **IT data and systems protection:** Data protection and maintaining a secure online presence will build trust as well as help meet legal obligations. All IT data and systems are at risk of hacking, malware, viruses, spam and online scams that may corrupt the hardware or allow criminals to steal private data. Protection may include use of secure socket layer (SSL) certificates, cryptography, backing up data, authentication and use of passwords. Protect against human errors such as incorrect data processing, careless data disposal, or accidental opening of infected email, physical break-ins as well as online system intrusion. However whatever security measures implemented must be comply with the laws in place and take cognizance of various methods through which system and data security may be compromised.

f. **Hackers, cybercrime and information/IP theft:** Sophisticated and complex e-crime includes the theft of information or intellectual property, such as trademarks or customer credit card details by exploiting various system vulnerabilities. Hackers illegally access your hardware and data to use information such as credit card details for cyber fraud and can corrupt or compromise your online security.

Annex 5: Public Participation Schedule

Date	Stakeholder	Venue
4th – 5th September 2018	• MoLPP • NLC	Ardhi House, Nairobi
6th September 2018	• KPDA • Hakijamii	Ardhi House, Nairobi
17th – 18th September 2018	• Experts: LSK, ISK, AAK, KIP, TCPAK, KBA, KEPSA	Masada Hotel, Naivasha
26th September 2018	• County Governments	Sarova Panafric Hotel, Nairobi
31st September 2018	• Kenya Association of Record Managers and Archivists (KARMA)	Ardhi House, Nairobi
2nd – 11th October 2018	• Public Hearings (see detailed schedule in Table 4.3)	Various counties across the country
29th October 2018	• Government Digital Payments	Ardhi House, Nairobi
30th October 2018	• National Titling Centre (NTC) • Survey of Kenya	Respective offices in Nairobi
31st October 2018	• Central Registry, MoLPP • Nairobi Registry, MoLPP	Ardhi House, Nairobi
1st November 2018	• Kenya National Archives	Kenya National Archives Building, Nairobi
2nd November 2018	• CEC Members for Lands	Azure Hotel, Westlands, Nairobi
16th November 2018	• Martein Tomberg, Kadastre, Netherlands • Peter Mwangi on behalf of LSK	Ardhi House, Nairobi
27th November 2018	• Kadri Humal Ayal, Honorary Consul of Estonia in Kenya	Ardhi House, Nairobi
11th December 2018	• Validation Workshop with MoLPP and NLC	Crowne Plaza Hotel, Nairobi
8th January 2019	• KIP • TCPAK • County Physical Planners – Nyeri, Kiambu	Ardhi House, Nairobi
9th January 2019	• Valuation Department, MoLPP • ISK • County Valuation Officers – Kiambu, Kajiado and Nairobi	Ardhi House, Nairobi
10th January 2019	• Land Administration Department, MoLPP • Land Adjudication and Settlement Department, MoLPP • Surveys Department, MoLPP	Ardhi House, Nairobi
15th January 2019	• Law Society of Kenya	Crowne Plaza, Nairobi
16th January 2019	• Validation Workshop with Professionals i.e. TCPAK, LSK, KIP, ISK, KBA, AAK, KEPSA, KPDA, LDGI	Crowne Plaza, Nairobi
17th January 2019	• Validation Workshop with County Governments	Crowne Plaza, Nairobi

Annex 6: List of Civil Society Organizations

1. Consumers Federation of Kenya
2. Kenya Alliance of Resident Associations;
3. Kenya Human Rights Commission;
4. Pamoja Trust;
5. Resource Conflict Institute;
6. Hakijamii;
7. Kenya Land Alliance;
8. Land Development and Governance Institute;
9. Kenya Property Developers Association;
10. Kenya Association of Records Managers and Archivists;
11. National Council of Persons With Disability; and
12. Nakuru County Public Opinion Consultative Initiative
13. Grassroots Organizations Operating Together in Sisterhood;

Annex 7: List of Invitees to the Professionals Forum

1. Institution of Surveyors of Kenya.
2. Kenya Bankers Association.
3. Kenya Private Sector Alliance.
4. Law Society of Kenya.
5. Architectural Association of Kenya.
6. Registrar of Companies.
7. National Transport and Safety Authority.
8. Land Development and Governance Institute.
9. Kenya Property Development Association.
10. Town and County Planners Association of Kenya
11. Kenya Institute of Planners
12. Peter Mwangi - Law Society of Kenya
13. Dr. Zubeda Yusuf Mucheke - Senior Principal Land Registrar, Ministry of Lands and Physical Planning.

Annex 8: List of Participants for the Experts Consultative Forum

List of Participants – Experts Consultative Forum, 17th – 18th September 2018 at Masada Hotel, Naivasha.

No.	Name	Organization	Designation
1	Eric Nyadimo	KEPSA/ISK	Chairperson
2	Bellinda Akello	NLC	Joint Secretary
3	Pauline Pesa	MoLPP	Joint Secretary
4	Jasper N. Mwenda	ISK	Member
5	Eric M. Mugo	MoLPP	Member
6	Mary Macharia	NLC	Member
7	L. Sereu Moinket	LSK	Member
8	Mildred M. Ambani	KIP	Member
9	Edward Ole Kateiya	LDGI/Maasai Mara University	Member
10	Tom Abuta	MoLPP	Member
11	Eugene N. Lawi	CoG	Member
12	Caroline Kihara	Bankers Association	Member
13	David Gatimu	KPDA/TCPAK	Member
14	Samuel Nthuni	NLC	Member
15	Esther Omulele	LSK/MMC Africa Law	Member
16	Carolyne Menin	MoLPP	Member
17	Charles Wamae	LSK/Wamae & Allen	Member
18	Riamond Molenje	Kenya Bankers Association	Head of Legal, HR and Industrial Relations
19	Abraham Samoei	ISK	Council Chair
20	Felix Kiptum	ISK	Member
21	Emily Wawira Njeru	ISK	Chair, Professional Practice & Ethics
22	V Gikonyo Gitonga	KEPSA	Lands, Physical Planning & Housing Sector Board Chair
23	Mairura Omwenga	TCPAK	Chairman
24	James Ivia	LSK	Advocate, Member of IP & ICT Committee
25	Dr. L. Esho Salaon	KIP	Chairman, Governing Council
26	John Koyier Barreh	KIP	Reg. & Licensed Town Planner
27	Dr. Zubeda Mucheke	MoLPP	Registrar
28	George Arabbu	AAK	Member
29	Ibrahim Mwathane	LDGI	Board Chairman
30	Neddie Eve Mamra	Taskforce	Secretariat
31	Hannah Githuku	Taskforce	Secretariat
32	Victor Ajuoga	Taskforce	Secretariat
33	Wahome Murakaru	Taskforce	Secretariat
34	Dolphine D Awuor	Taskforce	Secretariat
35	Irene Kiwool	Taskforce	Secretariat

Annex 8: Public Hearings Programme

Republic of Kenya

TASKFORCE ON ELECTRONIC LAND TRANSACTIONS, REGISTRATION, CONVEYANCING AND OTHER RELATED ACTIVITIES UNDER THE LAND REGISTRATION ACT 2012, THE LAND ACT, 2012, AND THE COMMUNITY LAND ACT, 2016.

PUBLIC HEARINGS PROGRAMME

The Taskforce structured its programme to commence with courtesy call to the offices of County Commissioners, Governors, Land Registries and the National Land Commission County Coordinators, either a day to the main event or early morning as time allowed. The Officials would give an introduction of their county and apprise the Taskforce on the status of land transactions, challenges facing the people in the region.

The taskforce would then proceed to the public hearing venues to interact with and hear views and comments as well as address issues raised from the general public with regards to electronic conveyancing and the move from the physical manual system.

The taskforce employed the following format to conduct the public hearings:

1. Started with a word of prayer
2. Introduction of the members of the Taskforce and secretariat
3. Introduction of the members of the public
4. Presentation of the Taskforce mandate's, its working Terms of Reference, its rational in conducting the public hearings and its intended objectives and goals
5. Public presentations and submissions of written memoranda (if any) from: members of the public and institutional representatives
6. Members of the public and institutional representatives were given an opportunity to give their comments, views, proposals and seek clarifications Techniques used were presentation and plenary discussions. The facilitators ensured that there was clarity of subject matter, inclusive and effective representation, climate of integrity and provision of opportunity for balanced influence and ensured commitment to the process.
7. Vote of Thanks
8. Closing prayers

Annex 10: Proposed Guidelines for: Physical Planning; Survey; Land Adjudication and Settlement; Valuation; and Land Administration.

A. Physical Planning Guidelines

1. Establishment of Development Control and Planning Compliance System

a) The system shall at the very least comply with both policy and legal frameworks that govern Land Use / Physical Planning by ensuring harmony between national, inter-county, county, sub-county and urban areas planning requirements;
b) The system shall enable the submission in electronic format development applications at the county including but not limited to: Subdivision; Amalgamation; Change of Use; Extension of Use; Extension of Lease; Renewal of Lease; and Approval for construction of buildings and structures.
c) The system shall enable inter- and intra-departmental at national and county government agencies sharing and tracking of the submitted development applications for evaluation, commenting and determination;
d) The system shall generate and maintain an electronic register of approved applications, minutes of proceedings of planning determinations and logs for development compliance.
e) The planning system should be linked to the cadastre and to the land registry;

2. Access of information maintained electronically

a) The system shall be accessed by Registered and Practicing Physical Planners, Architects, and Engineers;
b) The public may access policy documents, extracts minutes of proceedings of planning determinations and other filed plans on a read-only basis;

B. Valuation System Guidelines

1. System Establishment

a) There is need for the deployment of a Computer Assisted Mass Valuation System whose outcome shall be a valuation roll and property taxation map for guidance purposes[70]
b) There is need for a valuation system that would allow interim land valuations based on approved land subdivisions or change or extension of use for provisional levying of land rates;
c) There is need for a Valuation System that allows final valuation of newly surveyed and registered parcels of land for entry into the Valuation Roll;
d) The valuation system should be linked to the cadastre and to the land registry;
e) There is need for comprehensive development of valuation function databases that are readily available to support registration processes[71]

2. Access to Information

a) Access to valuation information shall be restricted to professionals and government agencies
b) The public may access ONLY information related to their land parcels upon payment of a requisite fee.

[70] Actual valuation shall be done by a registered valuer.

[71] Land rates; ground rent, stamp duty; capital gains, land acquisition and compensation; new grants; renewal & extension of leases; sale and purchase; charges and mortgages and or any other requirement

3. Revocation or suspension of access

a) The Director of Valuation may, after investigation restrict, suspend or terminate the user's access in cases of: contravention of If a user contravenes the obligations or the terms and conditions, the obligations (terms and conditions), Fraud; identity theft; system misuse; unqualified persons assessing the system; and death.

b) The following shall be the method of appeal against suspension or revocation;

i. A person who is subject of any of the following decisions may request the **Director of Valuation** to provide, the grounds for the decision in writing,:

i. A decision by the Director of Valuation to refuse to approve the person as user.

ii. A decision by the Director of Valuation to suspend, restrict or revoke the person's approval as user.

iii. A decision by the Director of Valuation to attach a condition to the person's approval or to vary or revoke a condition to the approval.

ii. A Person who has received written grounds for the decision from the Director of Valuation may appeal against the decision to the Cabinet Secretary.

iii. The Cabinet Secretary shall within 14 days on receipt of the appeal, constitute a 5 member committee comprising of representatives from the Ministry, Institution of Surveyors of Kenya, National Land Commission, Council of Governors; any other relevant person;

iv. After the hearing of the appeal, the committee shall communicate its decision to the aggrieved party within 14 days;

v. An aggrieved party may appeal the decision of the committee to the Environment and Land Court.

C. Surveying System Guidelines

1. System Establishment

a) There shall be a Cadastral System for submission of cadastral data by Licensed Surveyors.

b) The Licensed Surveyors system shall be able to track their work in order to establish the status of their submission/application.

c) The Licensed Surveyors shall, receive a notification from the system upon approval and authentication or disapproval of the survey work by the Director of Survey.

2. Submission of Data

a) Cadastral plans and filed plans in the Registry, including sectional plans, shall be provided in electronic format.

b) Upon completion of work in an adjudication section, the adjudication register (adjudication record and map) for the registration section shall be presented to the Chief Land Registrar in electronic format.

c) Practicing Licensed Surveyors and Surveyors working under instructions of the authority responsible for land survey shall submit all survey records, accompanied by relevant planning approvals, for checking, to the authority responsible for land survey in electronic format.

d) Map and area lists of a settlement scheme shall be forwarded to the Chief Land Registrar in a digital format.

e) Transfers of land from the Settlement Fund Trustees shall be maintained in electronic format.
f) The authority responsible for land survey shall prepare electronic plan extracts, from the cadastral plan, for use in electronic conveyancing.

3. Access to Information

a) Access to survey data in the electronic database maintained by the authority responsible for land survey shall only be granted to Surveyors on a read-only basis.
b) The public may access cadastral maps, cadastral plans and other filed plans on a read-only basis and upon payment of a requisite fee.

4. Types of Searches

a) The system shall provide for Cadastre Search - the results from this search should be a spatial description i.e. Size, dimensions and Parcel Number
b) The system shall provide for document search including but not limited to: FR; Survey Plans; Control Points and Topographic Maps

5. Revocation or suspension of access

a) The Director of Survey may, after investigation restrict, suspend or terminate the user's access in cases of: contravention of If a user contravenes the obligations or the terms and conditions, the obligations (terms and conditions), Fraud; identity theft; system misuse; unqualified persons assessing the system; and death.
b) The following shall be the method of appeal against suspension or revocation;
   vi. A person who is subject of any of the following decisions may request the **Director of Surveys** to provide, the grounds for the decision in writing,:
      iv. A decision by the Director of Surveys to refuse to approve the person as user.
      v. A decision by the Director of Surveys to suspend, restrict or revoke the person's approval as user.
      vi. A decision by the Director of Surveys to attach a condition to the person's approval or to vary or revoke a condition to the approval.
   vii. A Person who has received written grounds for the decision from the Director of Surveys may appeal against the decision to the Cabinet Secretary..
   viii. The Cabinet Secretary shall within 14 days on receipt of the appeal, constitute a 5 member committee comprising of representatives from the Ministry, Institution of Surveyors of Kenya, National Land Commission, Council of Governors; any other relevant person;
   ix. After the hearing of the appeal, the committee shall communicate its decision to the aggrieved party within 14 days;
   x. An aggrieved party may appeal the decision of the committee to the Environment and Land Court.

D. Land Administration Guidelines

1. System Establishment

The Land Administration Module shall-

a) handle development applications and prepares leases and consents be capable of sending notices for lease extension etc.

b) be capable of interacting with other offices to facilitate land administration functions;
c) be linked to the Cadastre and the Land Registry;
d) facilitate tracking the of transactions.

2. Access to Information

a) Access to the Land Administration Module shall be on a read-only basis
b) The public may access and track information from the Land Administration Module.

3. Revocation or suspension of access

a) The Director of Land Administration may, after investigation restrict, suspend or terminate the user's access in cases of: contravention of If a user contravenes the obligations or the terms and conditions, the obligations (terms and conditions), Fraud; identity theft; system misuse; unqualified persons assessing the system; and death.
b) The following shall be the method of appeal against suspension or revocation;
    i. A person who is subject of any of the following decisions may request the Director of Land Administration to provide, the grounds for the decision in writing,:
    ii. A decision by the Director of Land Administration to refuse to approve the person as user.
    iii. A decision by the Director of Land Administration to suspend, restrict or revoke the person's approval as user.
    iv. A decision by the Director of Land Administration to attach a condition to the person's approval or to vary or revoke a condition to the approval.
    i. A Person who has received written grounds for the decision from the Director of Land Administration may appeal against the decision to the Cabinet Secretary.
    ii. The Cabinet Secretary shall within 14 days on receipt of the appeal, constitute a 5 member committee comprising of representatives from the Ministry, Institution of Surveyors of Kenya, National Land Commission, Council of Governors; any other relevant person;
    iii. After the hearing of the appeal, the committee shall communicate its decision to the aggrieved party within 14 days;
    iv. An aggrieved party may appeal the decision of the committee to the Environment and Land Court.

Annex 11: Gazette Notice

THE KENYA GAZETTE

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CONTENTS

GAZETTE NOTICES

SUPPLEMENT Nos. 106, 107 and 108

Legislative Supplements, 2018

CORRIGENDA

IN Gazette Notice No. 3141 of 2018, *delete* the expression printed as "for a period of three (3) years" where it appears".

IN Gazette Notice No. 4222 of 2018, Cause No. 9 of 2018 *amend* the deceased's name printed as "Samuel Megatisa Malenya" to *read* "Samuel Mugatsia Malenya".

IN Gazette Notice No. 2946 of 2018, *amend* the Title Number printed as "I.R. 63816/1" to *read* "I.R. 62823/1".

IN Gazette Notice No. 1941 of 2018, *amend* the I.R. Number printed as "I.R. 355545" to *read* "I.R. 35545".

IN Gazette Notice No. 9199 of 2017, Cause No. 160 of 2017, *amend* the deceased's name printed as "Enosh Obudho Kola alias Laurent Nyabute " to *read* "Nason Owino Ochieng alias Owino Ochieng".

GAZETTE NOTICE NO. 7853

THE KENYA CIVIL AVIATION (AMENDMENT) ACT, 2016

APPOINTMENT

IN EXERCISE of the powers conferred by section 9 *(b)* of the Civil Aviation (Amendment) Act, 2016 the Cabinet Secretary for Transport, Infrastructure, Housing and Urban Development appoints—

CAPT. GILBERT MACHARIA KIBE

to be the Director-General of the Kenya Civil Aviation Authority, for a period of four (4) years, with effect from the 23rd April, 2018.

JAMES W. MACHARIA,
Cabinet Secretary,
Ministry of Transport, Infrastructure, Housing and Development.

GAZETTE NOTICE NO. 7854

THE HIGHER EDUCATION LOANS BOARD ACT

(*No.* 3 *of* 1995)

APPOINTMENT

IN EXERCISE of the powers conferred by section 4 (1) *(i)* of the Higher Education Loans Board Act, 1995, the Cabinet Secretary for Education appoints—

DOROTHY ANGOTE (MS.)

to be a member of the Higher Education Loans Board, for a period of five (5) years, with effect from the 18th June, 2018.

Dated the 26th June, 2018.

AMINA MOHAMED,
Cabinet Secretary for Education.

GAZETTE NOTICE NO. 7855

THE HIGHER EDUCATION LOANS BOARD ACT

(*No.* 3 *of* 1995)

APPOINTMENT

IN EXERCISE of the powers conferred by section 4 (1) *(f)* of the Higher Education Loans Board Act, 1995, the Cabinet Secretary for Education appoints—

PAUL MUMO KISAU (PROF.)

to be a member of the Higher Education Loans Board, for a period of five (5) years, with effect from the 18th June, 2018. The gazettement of Timothy Wachira (Prof.) is revoked.

Dated the 26th June, 2018.

AMINA MOHAMED,
Cabinet Secretary for Education.

GAZETTE NOTICE NO. 7856

THE HIGHER EDUCATION LOANS BOARD ACT

(*No.* 3 *of* 1995)

APPOINTMENT

IN EXERCISE of the powers conferred by section 4 (1) *(e)* of the Higher Education Loans Board Act, 1995, the Cabinet Secretary for Education appoints—

FRANCIS W. O. ADUOL (PROF.)

to be a member of the Higher Education Loans Board, for a period of five (5) years, with effect from the 18th June, 2018.

Dated the 26th June, 2018.

AMINA MOHAMED,
Cabinet Secretary for Education.

GAZETTE NOTICE NO. 7857

THE KENYA INFORMATION AND COMMUNICATION ACT

(*No.* 2 *of* 1998)

EXTENSION OF TERM

IT IS notified for general information of the public that the Cabinet Secretary for Information, Communications and Technology has extended the period of appointment of the Taskforce for developing a Policy and Regulatory Framework for Privacy and Data Protection in Kenya appointed *vide* Gazette Notice No. 4367 of 2018, for a period of three (3) months, with effect from the 15th June, 2018.

Dated the 30th July, 2018.

JOE MUCHERU,
Cabinet Secretary for
Information, Communications and Technology.

GAZETTE NOTICE NO. 7858

THE KENYA INFORMATION AND COMMUNICATION ACT

(*No.* 2 *of* 1998)

EXTENSION OF TERM

IT IS notified for general information of the public that the Cabinet Secretary for Information, Communications and Technology has extended the period of appointment of the Taskforce for the exploration and analysis of upcoming digital technologies that demonstrates great potential to transform Kenya's economy including disruptive technologies that are currently shaping the global economy such as distributed ledger technologies (blockchain and hashgraph), artificial intelligence (A.I.), 5G wireless technology and the internet of things appointed *vide* Gazette Notice No. 2095 of 2018, for a period of one (1) month, with effect from the 30th July, 2018.

Dated the 30th July, 2018.

JOE MUCHERU,
Cabinet Secretary for
Information, Communications and Technology.

GAZETTE NOTICE NO. 7859

THE TASKFORCE ON ELECTRONIC LAND TRANSACTIONS, REGISTRATION, CONVEYANCING AND OTHER RELATED ACTIVITIES UNDER THE LAND REGISTRATION ACT, 2012; THE LAND ACT, 2012 AND THE COMMUNITY LAND ACT, 2016

APPOINTMENT

IT IS notified for the general public that the Cabinet Secretary for Lands and Physical Planning has constituted a Taskforce on Electronic Land Transactions, Registration, Conveyancing and Other Related Activities Under the Land Registration Act, 2012, the Land Act, 2012 and the Community Land Act, 2016.

1. The Taskforce shall comprise of the following—

Chairperson

Erick Nyadimo

Members

David Kuria
Caroline W. Kihara
Jasper Ntwiga Mwenda
Charles W. Wamae
Lucy Sereu Moinket
Esther Njiru-Omulele
David Kinyanjui Gatimu
Mildred Ambani
Eugine Lawi
Sarah Maina
Eric Mugo
Edward Lekaichu ole Kateiya
Carolyne Menin
Catherine Ochanda

Joint Secretaries

Pauline Pesa
Bellinda Akello

2. The terms of reference of the Taskforce shall be to—

(a) study and review the Land Registration Act, 2012 and the Land Registration (General) Regulations, 2017 and land sector related laws with a view to formulate guidelines for electronic registration transactions and conveyancing system;

(b) perform any other task as may be assigned by the Cabinet Secretary; and

(c) submit the draft guidelines and final report to the Cabinet Secretary within two (2) months, with effect from the date of publication of this notice.

3. In the performance of its functions, the Taskforce—

(a) shall regulate its own procedures;

(b) shall prepare and submit to the Cabinet Secretary its work plan and budget;

(c) shall hold such number of meetings in such places and at such times as it may consider necessary for the discharge of its functions;

(d) may solicit, receive and consider the views of members of the public and any interest groups;

(e) may co-opt not more than three persons who possess relevant expertise, skills or experience where the taskforce considers necessary; and

(f) shall submit the draft guidelines or rules and a final report to the Cabinet Secretary within two (2) months, with effect from the date of publication of this notice.

4. The Taskforce shall finalize its task within a period of two months from the date this notice is published in the gazette or for such longer period as the Cabinet Secretary may, by notice in the *Gazette*, prescribe.

5. The costs incurred by the Taskforce including facilitation and payment of allowances in respect of the members and joint secretaries of the Taskforce shall be defrayed from the voted funds of the Ministry of Lands and Physical Planning.

6. The Secretariat to the Taskforce shall be at the Ministry of Lands and Physical Planning, Ardhi House, 1st Ngong Avenue, P.O. Box 30450, Nairobi.

Dated the 13th July, 2018.

FARIDA KARONEY,
Cabinet Secretary for Lands and Physical Planning.

GAZETTE NOTICE NO. 7860

THE PUBLIC FINANCE MANAGEMENT ACT

(*No.* 18 *of* 2012)

THE PUBLIC FINANCE MANAGEMENT (NATIONAL GOVERNMENTS AFFIRMATIVE ACTION FUND) REGULATIONS, 2016

APPOINTMENT

IN EXERCISE of the powers conferred by section 8 (3) *(a)* of the Public Finance Management (National Government Affirmative Action Fund) Regulations, 2016, the Cabinet Secretary for Public Service, Youth and Gender Affairs appoints—

Under Paragragh (e) —

Charles Chirchir Kimutai

Under Paragraph (f)

Linda Gaceri Kinyua

Under Paragraph (g) —

Regina Ndambuki
Florence Ayabei Chepkemoi Murgor
Wanjiku Mukabi Kabira

to be members of the National Government Affirmative Action Fund Board, for a period of three (3) years, with effect from the 12th July, 2018.

Dated the 26th July, 2018.

MARGARET KOBIA,
Cabinet Secretary for Public Service, Youth and Gender Affairs.

GAZETTE NOTICE NO. 7861

THE MINING ACT

(*No* 12 *of* 2016)

APPLICATION FOR A MINING LICENCE

NOTICE is given by virtue of section 34 of the Mining Act that an application for a Mining Licence, whose details and area boundary schedule are as described here below, has been made under section 101 of the Act and the said application has been accepted for consideration.

Applicant	ARM Minerals and Chemicals Limited
Address	P.O. Box 41908–00100, Nairobi, Kenya
Application No.	ML/2017/0017
Area	4.6212 km²
Within Land Parcel(s)	Kajiado/Elangata-Wuas/609, 611–A&B
Locality	Elangata-Wuas, Kajiado County
Mineral(s) Sought	Limestone

Any objection to the grant of the Mining Licence may be made in writing and addressed to the Cabinet Secretary, Ministry of Petroleum and Mining, P.O. Box 30009–00100, GPO, Nairobi, Kenya to reach him within forty two (42) days from the date of the publication of this notice in the *Kenya Gazette*.

SCHEDULE OF THE PROPOSED APPLICATION BOUNDARIES

The proposed application's area is particularly described by the following WGS 84 co-ordinates.

Order	*Lat. Deg.*	*Lat. Min.*	*Lat. Sec.*	*N/S*	*Long. Deg.*	*Long. Min.*	*Long. Sec.*	*E/W*
1	1	56	20.04	S	36	40	33.30	E
2	1	55	14.72	S	36	39	54.60	E
3	1	54	37.75	S	36	40	37.53	E
4	1	55	23.04	S	36	41	29.36	E

The said application may also be accessed from the mining cadastre portal *vide* website: - https://portal.miningcadastre.go.ke

Dated the 18th July, 2018.

JOHN MUNYES,
MR/5156889 *Cabinet Secretary, Ministry of Petroleum and Mining.*