# SUCUEUOCS'

May 2025

A PUBLICATION OF THE INSTITUTION OF SURVEYORS OF KENYA ON LAND AND BUILT ENVIRONMENT



Affordable Housing: A Key Pillar for Sustainable Urban Development Overcoming Institutional Barriers in Kenya's Land Registries and the Need for Digital Transformation Land Surveying and the Future of Smart Cities



MY MONEY IS A MONEYMAKING MACHINE.

Make your money work.

FAIDA Elite Insurance Plan

#### **FEATURES**

- Eligibility: Individuals aged 18 to 80 years.
- Premium Payments: KES 5,000 per month or KES 100,000 as a one-time single premium.
- Flexible Policy Terms: A minimum of 5 years to a maximum of 15 years.

GROSS WEIGHTED AVERAGE ANNUALIZED RETURN AS AT APRIL 2025

12.45%

Disclaimer: The rate indicated is gross of fund management fees

There's living, and there's living free.

SMS **FAIDA** to **24464** 

Live Free!

## Contents

### May 2025











Message from the President	4
Message from the Chair Editorial & PR Committee	5
Affordable Housing: A Key Pillar for Sustainable Urban Development	7
BRAND OVER PRODUCT? PRODUCT OVER BRAND!	.10
Affordable Housing Program & Smart Cities in Kenya: A Path to Sustainal	ble10
Overcoming Institutional Barriers in Kenya's Land Registries and the Nee Digital Transformation.	
Land Surveying and the Future of Smart Cities	. 17
Space Politics: Navigating Complexities in a Corporate Settings	. 18
The Case for Devolving Land Registration: Making Land Ownership Affordable and Accessible.	.22
Distinguishing Surveying as a Proffession and not a Business	20
The Case for Devolving Land Registration: Making Land Ownership Affordable and Accessible.	.22
Urban Planning Problems in Kenya: The Consequences of Ineffective Spatial Distribution	.24



#### **EDITORIAL**



Jencourage
you to actively
engage with
the journal. Your
feedback is
invaluable in
helping us
continually
improve the
content and
relevance of this
publication.

ear Esteemed Readers,
As we proudly present this edition of the Surveyors Journal, I would like to extend my heartfelt gratitude to all the authors who have contributed their knowledge, insights, and expertise. Your articles have significantly enriched the content of our journal, making it a valuable resource for the Institution. Your dedication to sharing your experiences and perspectives is what makes this publication truly exceptional.

I would also like to take this opportunity to encourage other members who have yet to contribute to consider sharing your knowledge and experiences in future editions. Your contributions are vital in ensuring that the journal remains a dynamic

and diverse platform for learning and professional development. If you are interested in submitting an article, please reach out to us at communication@ or.ke. We welcome wide range of topics look forward to receiving your contributions

Finally, I encourage you to actively engage with the journal. Your feedback is invaluable in helping us continually improve the content and relevance of this publication. Please feel free to share your thoughts, comments, and suggestions with us at communication@isk.or.ke. Your input will help us shape future editions to better serve your needs and interests.

Thank you for your continued support, and I look forward to your contributions and feedback.





#### **EDITORIAL TEAM**

Dorice Angote - Editor

Dr. Samuel Nthuni – Chair Editorial and PR Committee Augustine Munialo – Peter Kibet arap Biwott

#### COMMITTE MEMBERS

Dr. Samuel Nthuni Elizabeth Wekesa Irene Tumbo Eliud Munene Paul Nzau Maureen Mwangi Lucy Mamai Anthony Maina Carol Mundia

#### **CONTRIBUTORS**

lan Karaba Kariuki Seth Njoroge Brian Alloyce Ochieng' Felix Muema Alfred Goga Dr Mary Kaaria Paul Wainaina Ngugi Stephen G. Kamau Musya Ngei Ronald Matende Omwoma

#### COUNCIL MEMBERS

President - Eric A. Nyadimo Deputy President - Nelly Karimi Mbugua Chair, Finance and Audit Committe - Morris Okoth Chair, Professional Practice & Ethics - Joycelyn Makena Chair, Education & Research - Ayub Naburi Chair, Editorial & Public Relations - Dr. Samuel Nthuni Chair, Human Resource Committee - Peter Ouma Adipo Chair, Young Surveyors - Fridah Ngure ES Chapter Chair - Joe D. Ondulo ES Chapter Secretary - Edgar Lugonzo GIS Chapter Chair - Dr. Collins Mwange GIS Chapter Secretary - Solomon Gitau Valuation Chapter - Chair - Nicholas Mbuqua Valuation Chapter - Secretary - Patrick Munene Estate Agency Chapter - Chair - Esther Mwangi Estate Agency Chapter – Secretary Anthony Maina Property Management Chapter - Chair - Joel Simiyu Property Management Chapter - Secretary - Nancy Siror LS Chapter - Chair - Erastus Chege Mwangi LS Chapter - Secretary - Livingstone Asala BS Chapter Chair - Michael Mburu Kiarie BS Chapter - Secretary - Stephen Matete Lams Chapter – Chair - Priscilla Warigia Nyaga Lams Chapter - Secretary - Janet Aluoch Orego Coast Branch - Chair - Blaise Musau Coast Branch - Secretary - Edward Bosire

PRINT AND DESIGN

Western Branch - Chair - Daniel Madegwa

Western Branch – Secretary - Nicholas Ongwae South Rift Branch - Chair - Mungai Wa Njenga Kabitu





Message from
Editorial and Public
Relations Committee
Chairperson

elcome to the first edition of the Surveyors Journal—2025, a refreshed and reinvigorated platform that continues to bring our professional voices together under one publication.

The Surveyors Journal holds a special place within the Institution of Surveyors of Kenya. It serves not only as a record of our journey as professionals in the land and built environment sector but also as a reflection of our intellectual engagement, innovation, and commitment to best practice. This journal offers a space where experience meets inquiry, where established knowledge intersects with fresh perspectives, and where practitioners from every corner of our profession can speak, share, and learn from one another.

As the Editorial and Public Relations Committee, our role is to ensure that the journal remains a high-quality, relevant, and inclusive platform. We believe that each member—regardless of specialization or years of experience—has something valuable to contribute. Whether it's through research, technical insights, policy critique, case studies, or personal reflections, your voice is what keeps this journal alive and meaningful.

I would like to extend a warm invitation to all ISK members and professionals in the wider sector to take part in shaping the upcoming editions. If you are working on something exciting, have a solution to a recurring industry challenge, or simply want to start a conversation—this is your platform. Articles and contributions can be submitted via communication@isk.or.ke, and we also welcome your feedback on how we can improve the journal to better serve you.

I extend my heartfelt appreciation to all the contributors to this edition, to the editorial and review teams, and to the ISK leadership for their continued support of this important work. Let us keep the momentum going—through active readership, ongoing dialogue, and continuous contribution.

Enjoy this edition, and have a nice read.

Chairperson, Editorial and PR Committee

Institution of Surveyors of Kenya



## Message from the President

reetings Members,

It is with great pleasure that I welcome you to the first edition of the Surveyors Journal, for the year 2025. The journal is a publication that continues to capture the heartbeat of our profession and reflect the evolving landscape of the land and built sector in Kenya.

This edition is more than just a collection of articles—it is a powerful tool for knowledge sharing, thought leadership, and professional growth. It provides a platform for us to document our progress, interrogate the challenges we face, and highlight the innovations and best practices shaping our diverse fields.

The journal is coming out a time when we are making plans to usher in a new ISK Council following the elections to be held at the 56th Annual General Meeting on 30th May 2025. It also aligns with the ISK PreAGM Conference to be held from 28 – 29th May 2025. One of the key milestones at the AGM will be the launch of the ISK Strategic Plan 2025–2029. This plan will guide the institution's direction over the next years and align our goals with national development priorities, technological advancements, and the evolving needs of our members. The Strategic Plan represents a collective vision—one that reflects our shared aspirations for a stronger, more responsive, and more impactful institution. We will be engaging with members throughout this process, and I encourage you to participate actively as we shape this important roadmap together.

In a rapidly changing professional environment, the need for platforms like the Surveyors Journal has never been greater. As professionals, we are navigating emerging technologies, policy reforms, environmental considerations, and shifting economic realities. Staying informed and contributing to these conversations is not optional—it's essential. This journal gives us that space: to learn, to reflect, and to lead.

Finally, I would like to thank the editorial team for their hard work and commitment, our contributors for sharing their knowledge, and all our readers for being part of this journey. Let us continue to uphold the values that define ISK—professionalism, innovation, accountability, and unity.

Together, through platforms like the Surveyors Journal, we can continue building a vibrant, relevant, and forward-thinking profession that stands ready to meet the demands of a changing world.

Wishing you the very best as we forge ahead.

Happy reading,

MISK, LS(K)

President, Institution of Surveyors of Kenya



"Nurturing your dreams"

## WELCOME ABOARD!





Wakadiri sacco registered under cs/4406 is formed by professionals who are largely valuers, surveyors and affiliates of this Profession. We exist to promote thrift amongst members by affording them an opportunity to accumulate savings, to give loans to members and provide competitive dividends to members. Join us today!



#### **OUR VISION**

To be the preferred partner in wealth creation.



#### **OUR MISSION**

To be steadfast providers of innovative financial solutions to our members while offering lucrative returns on savings.



#### **OUR VALUES**

- Professionalism
- Integrity
- Leading-edge
- Accountability
- Reliable

#### **Loan Products**

- DEVELOPMENT LOAN
- EMERGENCY LOAN
- MAONO KAMPUNI LOAN
- SCHOOL FEES LOAN
- INUKA LOAN
- QUICK FIX LOAN (Mobile App - Loan)

#### **BACK OFFICE PRODUCTS**

- DEPOSITS
- CORPORATE MEMBERSHIP
- SHARES CAPITAL
- WAKADIRI MOBILE APP

Visit us today for efficient and personalised services. INTERNATIONAL LIFE HOUSE 7TH FLOOR WING A.



info@wakadirisacco.co.ke



@wakadirisaccosociety



@wakadiri-sacco



### **Affordable Housing:** A Key Pillar for Sustainable Urban Development

ntroduction Affordable housing is a critical component of sustainable urban development, ensuring that low- and middle-income families have access to safe, decent, and cost-effective living spaces. As urban populations grow, cities face increasing pressure to provide housing that balances affordability, quality, and accessibility. Without adequate affordable housing strategies, many urban dwellers are forced into informal settlements, leading to overcrowding, poor living conditions, and socioeconomic disparities.

This article explores the significance of affordable housing, the challenges associated with its implementation, and the innovative solutions that governments. developers. communities can adopt to ensure inclusive and sustainable urban growth.

The Importance of Affordable Housing Affordable housing serves as the foundation for social stability, economic productivity, and improved quality of life. Key benefits include:

- Economic Growth Providing affordable housing stimulates construction activity, job creation, and local economic development.
- Social Equity Ensures that all income groups, including lowincome earners, can access decent shelter.
- Health and Well-Being Reduces overcrowding and poor sanitation, improving public health outcomes.
- Reduced Homelessness Offers a solution to homelessness and housing insecurity by providing stable living conditions.
- Urban Sustainability Supports balanced urban expansion and prevents the proliferation informal settlements.

Challenges in Affordable Housing Development Despite its importance, several obstacles hinder the development of affordable housing, including:

- High Land Costs Rising urban land prices make it difficult to develop low-cost housing.
- Limited Financing Lack of funding options for developers and homebuyers restricts housing affordability.
- Regulatory Barriers Complex zonina laws and lengthy approval processes delay project implementation.
- Infrastructure Deficits Inadequate access to water, electricity, and transport affects housing viability.
- Speculation and Gentrification -Rapid urbanization often leads to rising property values, displacing lower-income residents.

Innovative Solutions for Affordable Housing to overcome these challenges. governments and stakeholders are adopting innovative approaches such as:

- Public-Private **Partnerships** (PPPs) - Collaboration between governments and private sector developers to finance and construct affordable housing.
- Microfinance and Housing Loans - Expanding credit access for lowincome homebuyers.
- Incentivized Zoning Policies -Implementing inclusionary zoning and tax incentives to encourage affordable housing projects.
- Sustainable Building Technologies - Using prefabricated materials, 3D printing, and modular construction to reduce costs.

Slum Upgrading Programs Improving infrastructure services in informal settlements to enhance living conditions.

#### **Case Studies in Affordable Housing**

- Kenya's Affordable Housing Initiative - A government-led program targeting 500,000 housing units under the Big Four Agenda.
- Singapore's Public Housing Model - A successful example of statesupported affordable housing development.
- Brazil's Minha Casa, Minha Vida Program - A large-scale housing initiative that provides financial assistance to low-income families.

#### **Future Trends in Affordable Housing**

- Smart Housing Solutions Integrating technology in low-cost housing for energy efficiency and sustainability.
- Community Land Trusts (CLTs) -Cooperative ownership models to keep housing affordable.
- Green Affordable Housing Ecofriendly designs to reduce utility costs and enhance livability.

#### Conclusion

Affordable housing remains fundamental requirement for sustainable and inclusive urban development. By leveraging innovative financing models, regulatory reforms, and advanced construction techniques, governments and developers can address the housing crisis effectively. Sustainable and affordable housing policies must prioritize long-term economic growth, social stability, and environmental responsibility, ensuring that every individual has access to safe and dignified living conditions.



## BRAND OVER PRODUCT? PRODUCT OVER BRAND!

enya is an interesting country, couldn't be happier to be born in this country. A new regime came in on October 2022 on a promise of change and hope from the status quo raft. A number of changes in governance have been introduced since then in the Education, Agriculture, Information and technology, Finance world and more importantly the Health Sector.

A new kid in the block has been introduced known as SHIF/SHA (Social health insurance fund & social health Authority) in the health sector primarily to solve the issues "unaddressed" by the defector insurance cover in the dissolved National hospital Insurance Fund commonly known as NHIF. The scheme highly publicized by the head of state himself down to the local administration simply tells you how its such a legacy project

for the president. All resources have been mobilized to BRAND this project to an extent of purchasing a system costing eight hundred million dollars (104 billion Kenya shillings). Yes, that's "a lot" of zeros spent on a system for a third world country struggling with jiggers and preventable diseases like malaria, cholera and typhoid.

Not my point though, the key question is does the SHA BRAND match the products and services its meant to address? Having been in operation for some time now, numerous cases have been raised from system slow down, Unpaid dues due to limit issues, Registration issues, Low cover than the immediate NHIF, lack of capacity and sensitization to users and providers in hospital and many other challenges. Prudence would dictate that the PRODUCTS would have been highlighted

first, capacity build to have a seamless transition from NHIF AND BETTER UNDERSTANDING for users and providers.

Enough of our good government, a famous "socialite car dealer" renowned to all is recently in trouble with authorities after duping clients of an ability to import motor vehicles for them. Owing to how big his BRAND is in this industry, most clients weren't too keen to have due diligence since the man was flamboyant in his ways and means and his car yard was full with new and domestically used vehicles. His BRAND was too big that he went ahead to lease a whole floor in the suburbs of Nairobi's buildings, yet unsubstantiated reports shows that he owns none of the high-end vehicles. When things crumbled, since the PRODUCT element wasn't enhanced, the empire is now coming down faster than the roman empire.

Just like when dating, most ladies are moved by how a man rolls, how he dresses, where he works, drives and lives. Most men BRAND themselves so well that when he proposes the girls' knees goes "pagasha" only much later to realize the PRODUCT i.e., character, mannerisms and general etiquette lacks in him.

PRODUCT will always supersede BRAND. If the government would have campaigned more on what SHA/SHIF solved in the health sector, they would actually not spend a dime convincing or coercing people to register actually it would be vice versa, people running to get the scheme. In business address what you really do rather than publishing the BRAND and bringing on board a million celebrities in the name of "brand ambassadors"

WANT TO JOIN A SACCO, spend some time on the actual products they have how with ease it'd make your life better rather than care its national presence or how many branches they have. And oooh, you want a husband or wife, care on the nitty gritty which is the PRODUCT like how he treats you, does one have integrity, the beauty and "TDH" fades with time. PRODUCT over BRAND.

That's my view, what's yours?

SETH NJOROGE K CHIEF EXECUTIVE OFFICER





## Affordable Housing Program & Smart Cities in Kenya: A Path to Sustainable



#### **Urban Development**

Introduction

enya's urban landscape is rapidly evolving, driven by population growth, economic expansion, and increasing rural-to-urban migration. However, this growth has outpaced housing development, leading to an acute housing shortage, particularly for low- and middle-income earners. In response, the government has prioritized the Affordable Housing Program (AHP) under the "Big Four Agenda," aiming to provide dignified, sustainable, and cost-effective housing. At the same time, the concept of smart cities is gaining traction, with urban planners leveraging technology and data-driven solutions to enhance urban living standards. Integrating affordable housing with smart city principles presents a transformative opportunity to address housing deficits while fostering sustainable, technology-enabled urban environments.

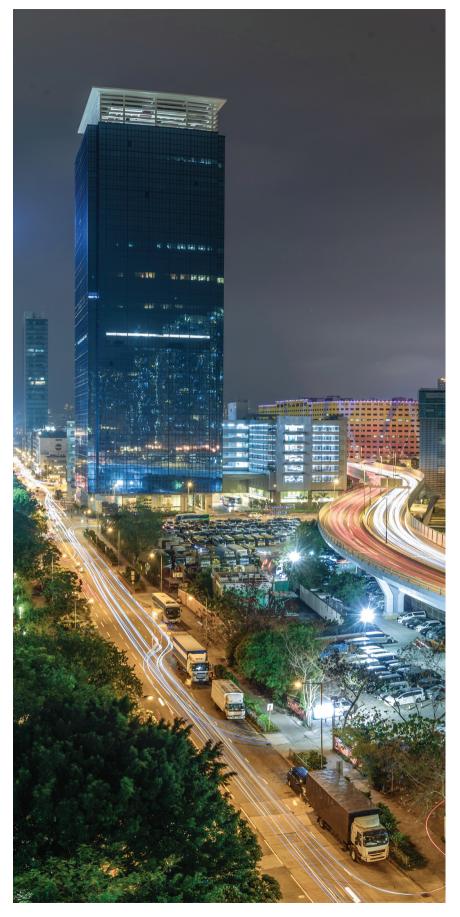
#### The Affordable Housing Program (AHP) in Kenya

The Affordable Housing Program seeks to bridge the housing deficit, which stands at approximately 250,000 units per year, with only about 50,000 units being constructed annually. The initiative targets the development of at least 200,000 affordable housing units per year, focusing on accessibility, inclusivity, and sustainability. It operates under a public-private partnership (PPP) model, where the

government collaborates with real estate developers, financial institutions, and international investors to accelerate housing delivery.

One of the core pillars of the program is cost efficiency. The government has undertaken measures such as tax incentives, infrastructure subsidies, and reduced land costs to lower construction expenses.

Additionally, innovative financing mechanisms, such as the Kenya Mortgage Refinance Company (KMRC), provide low-interest home financing to middle- and low-income earners, enabling them to own homes under structured payment plans. The housing units are categorized into social housing, low-cost housing, and mortgage-



accessible housing, ensuring that different economic segments benefit.

However, challenges persist in land acquisition, project financing, and stakeholder engagement. Some developers have expressed concerns over the program's financial viability, while citizens remain skeptical about affordability. Nonetheless. sustained policy support and regulatory improvements, AHP has the potential significantly improve housing accessibility, creating vibrant and wellplanned urban communities.

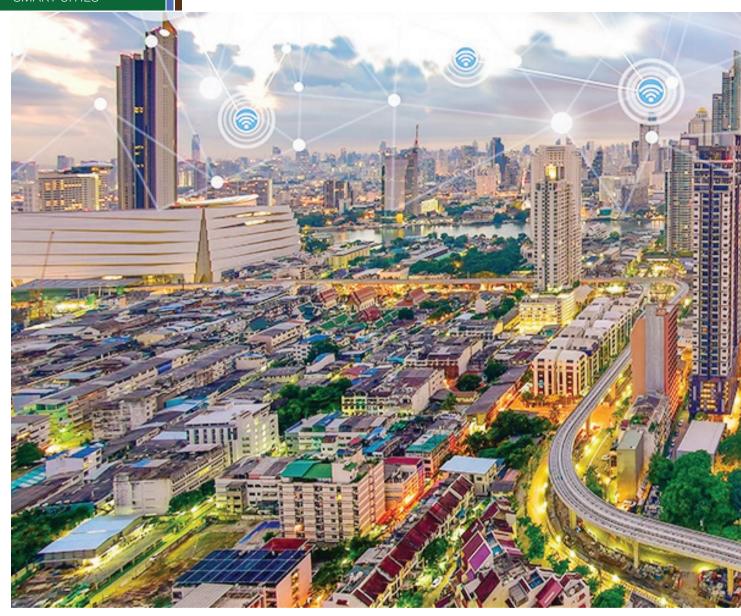
#### Integration of Smart Cities in Kenva's **Urban Development**

As Kenya advances towards urban modernization, the smart city concept is becoming an integral part of urban planning. A smart city leverages technology, data analytics, and digital infrastructure to optimize urban services, enhance efficiency, and improve the quality of life for residents. Kenya has embarked on several smart city initiatives. with Konza Technopolis standing out as the flagship project.

Smart cities incorporate intelligent infrastructure, including IoT-enabled utilities, smart transportation systems, and automated waste management. In the context of affordable housing, integrating smart technologies can significantly improve energy efficiency, water conservation, and security. Smart metering systems allow residents to monitor electricity and water consumption, reducing wastage and lowering utility costs. Similarly, incorporating solar energy and rainwater harvesting into housing projects aligns with Kenya's sustainability goals while reducing household expenses.

Urban mobility is another critical component of smart cities. Traffic congestion remains a persistent challenge in Kenya's urban areas, causing economic losses and environmental pollution. Intelligent transportation systems, such as Al-driven traffic management, smart parking solutions, and electric public transit, can enhance efficiency while reducing carbon emissions. Nairobi, for instance, has started implementing digital traffic control systems to optimize traffic flow and minimize gridlock.

Additionally, digital governance plays a crucial role in smart city development.



E-governance platforms enable residents to access public services online, reducing bureaucratic inefficiencies and enhancing service delivery. Mobile-based applications for reporting infrastructure issues, accessing housing finance, and participating in urban planning decisionmaking further strengthen citizen engagement in city management.

#### Challenges in Affordable Housing and Smart City Implementation

Despite its potential, Kenya's affordable housing and smart city agenda faces several obstacles. Infrastructure constraints, including inadequate road networks, water supply systems, and drainage facilities, hinder large-scale housing development. Informal settlements continue to expand due

to affordability concerns, undermining planned urbanization efforts. Addressing these challenges requires comprehensive urban planning that integrates housing projects with essential infrastructure upgrades.

Financial sustainability also remains a concern. The cost of deploying smart technologies is high, and without adequate funding mechanisms, implementation may be slow. Private sector involvement is crucial in bridging the financial gap, necessitating policies that attract investors while ensuring affordability for end-users.

Additionally, data security and digital literacy pose challenges in smart city adoption. As cities become more connected, cybersecurity threats

increase, requiring robust frameworks to safeguard residents' information. Simultaneously, digital inclusion efforts must ensure that all citizens, regardless of socio- economic background, can effectively use smart city services.

#### The Future of Affordable Housing and Smart Cities in Kenya

For Kenya to successfully implement affordable housing and smart cities, a multi-stakeholder approach is essential. Strategic partnerships between government agencies, technology firms, financial institutions, and community organizations can drive sustainable urban development. Continued investment in infrastructure, including fiber-optic networks, smart grids, and resilient transport systems, will



accelerate the transition to intelligent urban spaces.

Policy reforms should also focus on landuse planning, regulatory streamlining, and incentive

frameworks that encourage innovation. Emphasizing environmental sustainability through green building codes, energy-efficient designs, and climate-resilient housing will ensure long-term urban viability.

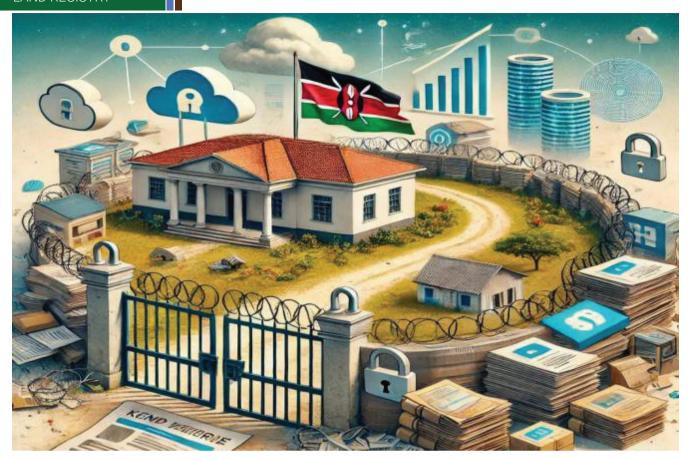
Moreover, community engagement remains a fundamental pillar. Housing initiatives should not only be about providing shelter but also about fostering inclusive neighborhoods with accessible social amenities, green spaces, and economic opportunities. Incorporating resident feedback in smart city designs

will enhance acceptance and usability of digital urban services.

#### **Conclusion**

Kenya's Affordable Housing Program and smart city agenda represent a bold step towards sustainable urbanization. By addressing housing deficits while integrating technology-driven solutions, the country can create livable, efficient, resilient cities. Overcoming challenges related to infrastructure. financing, and digital adoption will require sustained policy commitment, innovative approaches, and collaborative partnerships. With the right strategies, Kenya can set a precedent for future urban development, ensuring that cities are not only habitable but also smart, inclusive, and future-ready.

Financial sustainability also remains a concern. The cost of deploying smart technologies is high, and without adequate funding mechanisms, implementation may be slow.



## Overcoming Institutional Barriers in Kenya's Land Registries and the Need for

## **Digital Transformation**

#### **Breaking Institutional barriers with** digital tools

and transactions play a crucial role in economic activity, growth, and development in Kenya. The land registration system, however, has traditionally been manual, dating back to the colonial era, with the country's land laws still primarily recognizing paper-based transactions. Despite the government's efforts to modernize and automate land transactions, including initiatives such as President

Uhuru Kenyatta's push for digital land registration, challenges persist. Key among these challenges is resistance from stakeholders like lawyers and bureaucratic hurdles, which have delayed the full adoption of a digital system.

Kenva's land transaction system suffers from inefficiencies that affect service delivery and hinder economic progress. One of the major issues is the lack of a centralized repository for land records, with data stored in various formats, making it difficult to access and manage.

This fragmentation has led to confusion and inefficiencies, especially in the face of an antiquated, paper-based system. Landowners and buyers are often caught in long queues due to the extensive paperwork required for transactions, and many resort to using brokers to speed up the process. The poor quality of some records leaves them susceptible to manipulation and fraud, undermining the confidence of citizens in the integrity of their land titles. These issues are compounded by the vast physical space needed to store records, many of which

are old and poorly maintained.

The World Bank has highlighted land transfer challenges as a significant barrier to attracting investment in various sectors of the Kenyan economy. Despite improvements in areas like tax declaration, land registration continues to be a bottleneck. The 2018 Ease of Doing Business Report placed Kenya 122nd out of 190 countries in land registration, with the average time to complete a transfer taking 49 days. This slow pace of land transactions continues to hinder economic development and investment in the country.

In light of these challenges, the need to modernize the land transaction system is evident. The digitization of land records has the potential to address many of these issues by improving service delivery, ensuring secure storage, and making information more accessible. The adoption of technologies like blockchain could significantly enhance the transparency and security of land transactions. Blockchain, known for its role in cryptocurrencies like Bitcoin, offers a decentralized and immutable system to track land transactions, reducing fraud and enhancing trust in land ownership records.

Despite the clear advantages of digitization, the potential impacts of a comprehensive digital solution for land transactions in Kenya include the institutional factors that influence the quality of land service delivery. The four key factors are financial resources, record management technologies. legislative frameworks, and staff competencies. While the Kenvan government has invested in digitization, persistent challenges such inefficiencies, corruption, and outdated procedures continue to plague land registries, especially at the county level.

Understanding the impact institutional factors on service delivery is essential for improving the efficiency and effectiveness of land registries in Kenya. Financial resources, for instance, play a pivotal role in determining the quality of services provided by the registry. Adequate funding is necessary to invest in modern technologies, train staff, and ensure the availability of resources to handle the vast volume of land transactions. Similarly, record management technologies are crucial for streamlining operations ensuring the integrity and accessibility of land data. In most County registries,



The World **Bank has** highlighted land transfer challenges as a significant barrier to attracting investment in various sectors of the Kenyan economu.

outdated record management practices, coupled with a reliance on paperbased documentation, contribute to inefficiencies and slow service delivery.

The legislative framework governing land registration also significantly influences service delivery. The Land Registration Act (2012) and other related regulations provide the legal basis for land transactions. However, these laws must be adapted to accommodate digital processes and technologies to facilitate smoother, faster transactions. Inadequate legal provisions for digital land transactions or inconsistent enforcement of regulations could hinder the effectiveness of digitization efforts.

Staff competencies also play a critical role in enhancing service delivery. Even with the right technology and legal framework in place, without skilled and well-trained staff, the full benefits of digitization cannot be realized. Registry employees must be equipped with

the necessary knowledge and skills to navigate digital systems, handle customer gueries effectively, and ensure that land transactions are processed accurately and efficiently.

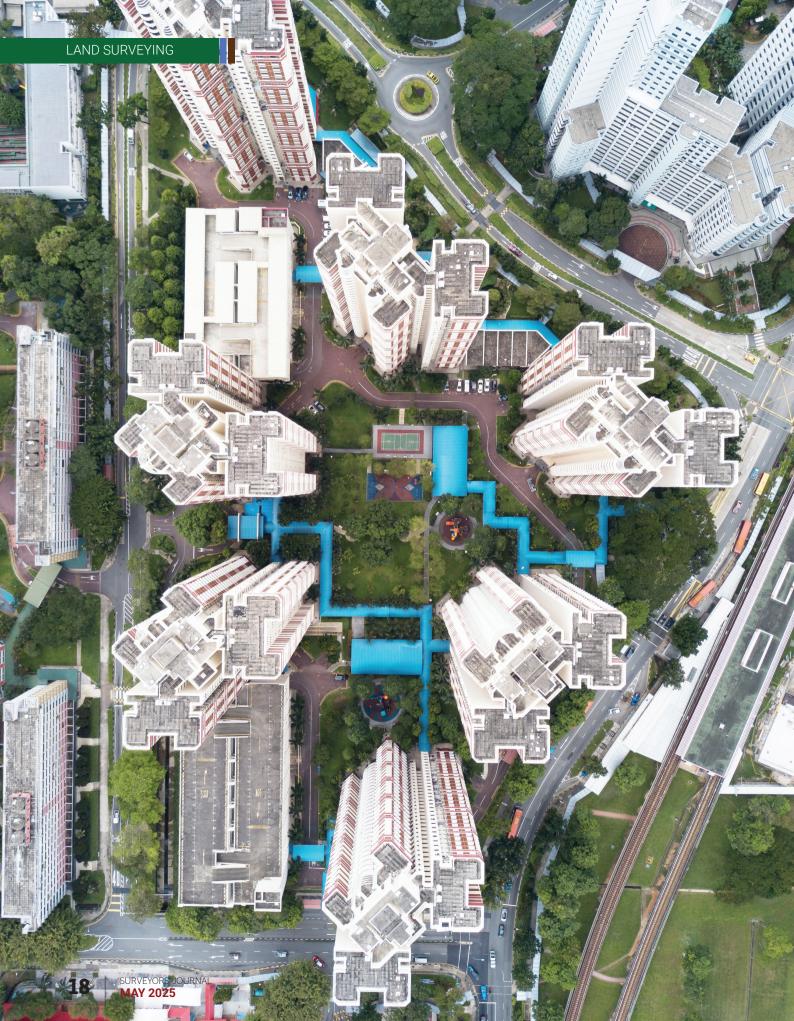
The implementation of a more efficient land registration system in Kenya could alleviate several issues currently facing landowners, such as unnecessary litigation, difficulties in accessing credit facilities, inefficient searches. time-consuming processes, and data integrity problems. By automating land records and improving the transparency of transactions, the government could reduce the risks of fraudulent land deals and enhance public trust in the system. Digital records would allow for faster and more accurate searches, reducing the time spent manually locating records and ensuring that changes are reflected consistently across all copies of land documents.

However, the digitization of land registries in Kenya is not without its challenges. Legal, social, and technical barriers persist, and the pace of reform has been slow. The decentralization of land management to county governments has further complicated matters, as many counties continue to struggle with manual record-keeping and inadequate technological infrastructure. To address these challenges, there is a need for targeted interventions, including policy reforms, investment in technology, and capacity-building for staff at the county

Addressing the institutional factors affecting service delivery at land registries is crucial for improving the efficiency and quality of land transactions in Kenya. Financial resources, record management technologies, legislative frameworks, and staff competencies all play a significant role in shaping the performance of land registries. While the digitization of land records offers

significant benefits, the implementation of digital systems must be accompanied by comprehensive reforms in the legal, social, and institutional frameworks. By tackling these challenges head-on. Kenva can enhance the effectiveness of its land registration system, improve service delivery, and create a more conducive environment for economic growth and development.

Felix Muema, MISK, Land Surveyor



# Land **Surveying** and the Future of Smart **Cities**.

and surveying has long served as an indispensable discipline in urban development, providing the necessary spatial data for infrastructural planning and boundary delineation. The discipline is evolving into a fundamental component in integrated digital systems that would contribute to pillars of smart cities-urban environments that employ advanced technology to boost efficiency, sustainability and livability. Modern advancement including Unmanned aerial vehicles (UAVs), Light Detection and Ranging (LiDAR), and Geographic Information Systems (GIS) have transformed traditional surveying techniques providing unprecedented precision and enabling the creation of comprehensive digital representations of urban landscapes.

In smart cities, accurate and detailed spatial data is paramount. High-resolution 3D models, generated through laser scanning and dronebased photogrammetry, serve as digital twins that mirror the physical environment. Such models form the basis for real time resource management; for example, for applications in optimized traffic systems, energy efficient building design, and resilient infrastructure planning. More importantly, precise topographic data enables the formulation of effective flood mitigation strategies, while detailed site mapping helps deployment of renewable energy. The speed and safety in data collection have also improved as UAVs replace labor-intensive manual methods hence reducing operational risks.

In Kenya for instance, the future of Nairobi's smart

city vision — for instance Konza Technopolis, 60km from the city centre — will depend on surveying innovations. Integration with the Internet of Things (IoT) could enable dynamic mapping through sensors embedded in infrastructure, supporting applications like autonomous vehicle navigation or predictive maintenance in areas like Mlolongo, bolstered by the Nairobi Expressway. Vertical expansion will also require surveying innovations, as high rises and underground utilities continue to grow in response to population pressure in the Nairobi Metropolitan Area, with a 1.6% increase in the suburban land price of Nairobi in 2024.

However, these advancements introduce challenges as a result of the advance of complex technologies. Surveying is gradually becoming reliant on professionals who have experience with geospatial principles and those who know how to apply data analytics. Additionally, the proliferation of detailed spatial information raises concerns about data security and privacy, necessitating robust governance frameworks. Despite these hurdles, the benefits are significant: smarter cities that optimize resources, reduce environmental impact, and improve quality of life.

Land Surveying is now an important component of creating intelligent, adaptive urban ecosystems. As smart cities continue to evolve, surveyors will play an essential role in bridging the physical and digital realms, ensuring that technological innovation is grounded in accurate, actionable data.

Alfred Goga, MISK



### **Space Politics:**

## Navigating Complexities in a Corporate Settings

Dr Mary Kaaria explores of the political nuances of managing physical spaces within organizations and offers strategies for effective navigation.

n the realm of facility management, the layout and organization of physical spaces within a corporate setting carry significant weight. These spatial configurations are not mere arrangements of furniture and walls; they are potent symbols that communicate a myriad of messages about hierarchy, authority, and social interactions within an organization.

#### The Symbolism of Space

Where individuals sit, who they sit next to, and the nature of their environment can speak volumes. These elements can subtly convey one's rank, formal or informal authority, and responsibilities. My doctoral research revealed that space arrangements are a critical tool in communicating and enforcing power relationships within the workplace. Adjustments to these spaces, therefore, have the potential to impact individuals' perceptions of their status, either positively or negatively.

In today's corporate environments, space planning is more than just placing desks and chairs. The arrangement of workspaces can significantly influence employees' perceptions and interactions. A well-thought-out layout can foster collaboration and innovation, while a poorly designed one can create friction and hinder productivity.

#### **The Emotive Nature of Space**

Space is finite, and any reconfiguration can disrupt the personal customizations

and familiarities emplovees that have established. Such disruptions can create new power dynamics, challenging the status quo and altering the organizational landscape. Space arrangements can thus be perceived as promotions or demotions, embodying a physical representation of changes in power and status. Facilities managers must be acutely aware of these dynamics and consider the emotional and psychological impact of their decisions.

Reconfiguring office spaces is not merely a logistical challenge; it is a politically charged task that can alter the perceived power dynamics within an organization. For instance, moving a senior executive to an open-plan area may signal a shift towards a more egalitarian culture but could also be interpreted as a demotion.

Similarly, giving prime window-side offices to certain employees can be seen as favouritism, affecting team morale and cohesion

#### **Strategies for Effective Space** Management

To navigate the political nuances of space planning effectively, stakeholder engagement is crucial. Involving stakeholders in the planning process can yield buy-in and facilitate smoother implementation. However, engagement can also extend timelines and introduce complexities due to conflicting and competing uses of space. As facilities managers, the responsibility is on us to navigate these challenges, champion change, and safeguard the optimal use of space while providing an appropriate corporate environment.

Key strategies include:

Transparent Communication: Clearly articulating the reasons behind space changes and how they align with organizational goals.

Inclusive Planning: Involving a diverse group of stakeholders to gather varied perspectives and foster a sense of ownership.

Adaptive Solutions: Being flexible and willing to adjust plans in response to feedback and changing needs.

Consistent Monitorina: Regularly assessing the impact of space arrangements and making adjustments as necessary to maintain a positive and productive work environment.

#### **Navigating space planning** complexities

#### Stakeholder engagement

I have often found that stakeholder engagement during space planning yields buy-in and makes the implementations easier as the change is accepted. However, engaging stakeholders can extend space planning timelines and complicate the process due to

conflicting and competing preferences. It falls on the facilities manager to navigate the pitfalls that come with competing and conflicting uses and champion change that incorporates the stakeholder's perspectives while safeguarding the attainment of the intended objectives and providing the appropriate physical work environment.

#### The Role of Technology

Incorporating technology into space planning can also mitigate some of



the complexities. Tools like Computer-Aided Design (CAD) software and Building Information Modelling (BIM) can help visualize potential layouts and assess their impact on workflow and communication. Additionally, data analytics can provide insights into how space is currently used, identifying inefficiencies and areas for improvement.

#### **Embracing Flexibility**

With the rise of remote and hybrid work models, flexibility in space planning has become more critical than ever. Organizations need to create adaptable spaces that can be easily reconfigured

to meet changing needs. This may involve designing modular workstations, creating multi-functional areas, and incorporating movable walls furniture

#### Conclusion

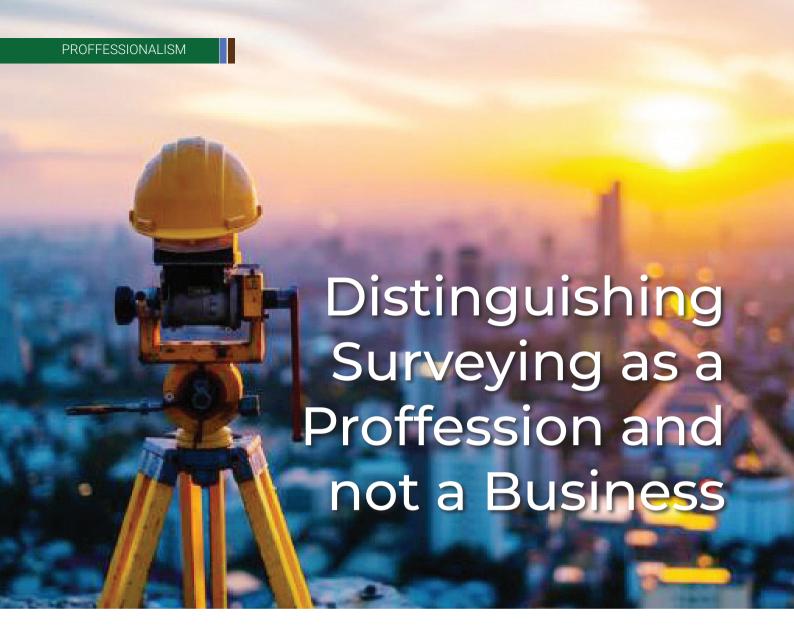
The politics of space planning in a corporate setting are intricate and multi-faceted. By recognizing the symbolic power of space and engaging stakeholders thoughtfully, facilities managers can navigate these complexities effectively, creating environments that support organizational success and employee well-being.

In our roles as facilities managers and corporate real estate managers, we must remain vigilant and empathetic to the emotive nature of space. The decisions we make about space planning have farreaching implications, and it is our duty to ensure that these decisions foster a positive and productive workplace and catalyse attainment of corporate objectives.

#### About the author

Mary Kaaria, PhD, MRICS

A Chartered Facilities Management Surveyor, built environment researcher and expert in Corporate Real Estate Management.



Members are expected to have high ethical standards beyond what is expected of an ordinary citizen.

urveying is one of the oldest professions which people even practiced without their knowledge. Long time ago some communities used to build their houses in a circular way with a certain radius, they had to draw an arch to come up with a circle. With the coming of modern technology surveying has developed very much which should go hand in hand with the changes in law.

#### 1. WHAT QUALIFIES SURVEYING AS A PROFESSION?

An occupation requiring advanced education and specialized training, and often involving mental rather than manual work.

Every technological move should be followed by legislation to protect the gains of the surveying profession. The

following distinguish surveying as a business and a profession

Surveying is regulated by the survey act Chapter 299 which have a clear way how a surveyors should conduct themselves in the profession.

- Members identification is through a register kept by the institution of surveyors of Kenya(ISK)
- All members should adhere to certain ethical standards which are binding on the members of the Profession
- Members possess special skill and knowledge which is only acquired through the training of the surveyor.
- There exists an enforcement mechanism for the code of conduct through a committee set under the ISK



the focus is on serving the public good and helping clients by providing expert knowledge and guidance; in contrast, a business is focused on making a profit and maximizing revenue.

- Members are expected to have high ethical standards beyond what is expected of an ordinary citizen.
- Members of the profession offer their services to the public.
- Restrictions on entry and operations. For one to be a surveyor there are set entry requirements and operations in a certain way according to the profession.
- A surveyor in the profession is expected to act in the best interests of the client in his work.
- Professional advancement in the surveying profession offers opportunities for professional advancement, such as promotion to a higher level of practice or the opportunity to specialize in a particular area of the profession. This is from a technician to honorary member of the profession.

#### 2. WHAT QUALIFIES SURVEYING AS A PROFESSION AND NOT A BUSINESS?

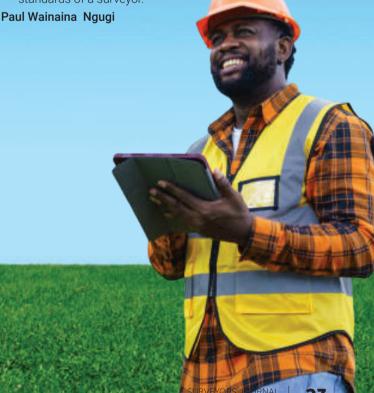
- In surveying profession, the focus is on serving the public good and helping clients by providing expert knowledge and guidance; in contrast, a business is focused on making a profit and maximizing revenue.
- Surveyors are bound by codes of professional conduct set clearly in survey act Cap 299 that outline their ethical obligations and responsibilities; in contrast, the focus of a business is on maximizing revenue and generating profits.

 While businesses may have ethical obligations, these are often driven by considerations of reputation and legal liability, rather than a duty to serve the public good.

#### 3. MEASURES THE SURVEYING PROFESSION CAN TAKE TO UPHOLD PROFESSIONALISM IN KENYA

- By strengthening the surveyor's professional ethics committee.
- Timely hearing and determination of cases at the Professional ethics committee.
- Continuous professional education programs with annual registration of members pegged on CPDs.
- Having a comprehensive Mentorship program for young lawyers.
- Addressing and avoiding corruption in the surveying profession.
- Regulation of advertising of surveying services in the country.
- Promote transparency in client relations.

 Regular updates and training workshops on ethical standards of a surveyor.





and ownership is a fundamental right that provides security, economic empowerment, and investment opportunities. However, for many Kenyans, securing a leasehold title remains an expensive and time-consuming process, especially in urban and peri-urban areas. The current centralized land registration system, which requires most leasehold titles to be processed at Ardhi House in Nairobi, is inefficient, costly, and inaccessible for ordinary citizens.

Having worked as a land surveyor for over 20 years, primarily in Nyahururu town and its surrounding counties (Nyandarua, Laikipia, Nakuru, and Nyeri), I have witnessed firsthand how bureaucratic delays and high costs hinder land registration. A classic example is Maina village in Nyahururu Municipality, where many residents occupy land with only allotment letters issued by former land commissioners or local authorities. Due to the lack of proper registration, multiple allocations of the same parcel of land are common, leading to disputes and uncertainty over ownership.

#### The High Cost of Leasehold Titles

One of the biggest barriers to securing leasehold titles is the high cost of processing. In a new grant situation, obtaining a leasehold title can cost up to Ksh. 150,000 or more, an amount that is beyond the reach of most landowners.

In contrast, a freehold title—which grants absolute ownership of land—is significantly cheaper and faster to process.

This disparity is difficult to explain to clients. In some cases, a 5-acre freehold parcel can be registered within 90 days, while a 50x100 ft leasehold plot—just across the road—takes over a year and must be processed through Nairobi's Ardhi House. This inconsistency raises critical questions about fairness, efficiency, and the need for devolution in land registration.

The Need for Decentralization in Land Registration

The previous administration under President Uhuru Kenyatta made In a new grant situation, obtaining a leasehold title can cost up to Ksh. 150,000 or more, an amount that is beyond the reach of most landowners. In contrast, a freehold title—which grants absolute ownership of land—is significantly cheaper and faster to process.

commendable efforts to address these challenges, particularly through the regularization of colonial villages, such as the White Highlands urban centers in Nyandarua County. This was done by introduction of the titling Centre, however, more needs to be done to simplify and localize land registration processes.

The Ministry of Lands has the capacity and personnel to devolve leasehold title processing to counties or regional offices. Doing so would:

 Enhance efficiency – Counties can process titles faster, reducing unnecessary bureaucratic delays.

- Reduce corruption Eliminates middlemen and the monopoly of Ardhi House and SOK Ruaraka, ensuring transparency.
- Ease congestion at Ardhi House Decentralization would free up national offices to focus on policy and oversight.
- 4. Lower costs More people would afford land registration, preventing illegal allocations and ownership disputes.

#### A Call to Action

If Kenya is to achieve sustainable land development, devolving land registration must be a priority. The current centralized

system is outdated, expensive, and unfair to ordinary landowners. By empowering county governments or regional land offices to process leasehold titles, the government will make land ownership faster, more affordable, and accessible to all Kenyans.

The time for change is now. Let the land sector fully embrace devolution to ensure that every Kenyan has the opportunity to legally own and develop their land without unnecessary delays or excessive costs.

Stephen G. Kamau Land Surveyor, Nyahururu

## Urban Planning Problems in Kenya:

# The Consequences of Ineffective Spatial Distribution



rban planning is a critical part of sustainable development in which the urban areas and the towns are equipped with adequate spaces for variegated socio-economic activities. Previously, the colonial Kenyan urban cities of Nairobi and Mombasa were designed with planned spaces for cemeteries, schools, markets, and open spaces to cater to long-term sustainability. However, urbanization and population growth have been more rapid than such allocations, thus creating enormous urban management problems.

This paper explores the consequences of inadequate planning in Kenyan cities, citing the failures of contemporary planning institutions and consequences of unplanned urbanization. Urban planning has a key influence on making cities more livable and functional.

In the colonial era, cities were planned with caution to fit specific functions, so that settlements would be sustainable in the long run (Njiru & Letema, 2018). The initial allocations, however, were based on previous



Urban planning in the majority of Kenyan towns is an afterthought rather than a quiding principle. The majority of infrastructure development initiatives begin without any planning, and this leads to inefficiency and cost escalations.

population estimates, which have been overtaken. Nairobi and Mombasa cities have grown very fast, outgrowing the initial infrastructural plans. The failure of modern urban planners to continuously revise and embrace feasible planning strategies has resulted in uncoordinated urban expansion, congestion, and environmental hazards (UN-Habitat, 2020). Ineffectiveness of urban planning in Kenva is seen in a number of diverse ways. Open spaces, public amenities, and basic infrastructure in cities like Nairobi have not been transformed since the early 20th century.

Despite Nairobi's population doubling in recent decades, there have been minimal new allocations for open spaces and public amenities (Kenya National Bureau of Statistics, 2021). Omission of expansion plans has resulted in congestion and strained resources. The commercial and cultural city that the Mombasa Old Town was in the past is, in the present, hindered due to poor planning for the town. Omission of coming up with sustainable plans for conserving and developing historic towns has been behind economic collapse as well as city decay (Githuku, 2019). This is a common issue whereby the government fails to renovate and modernize old urban spaces to accommodate today's needs. This has led to private sector-initiated urbanization, where profit interests can guite readily override considerations of sustainability and public interest (Anyamba, 2011). In the suburbs like Kitengela, lack of control in sanitation management and lack of harmonized waste disposal facilities have resulted in environmental degradation. Landlords dispose of untreated sewage in open spaces during rainy seasons in what is an illegality. This is unsafe for public health.

Urban planning in the majority of Kenvan towns is an afterthought rather than a guiding principle. The majority of infrastructure development initiatives begin without any planning, and this leads to inefficiency and cost escalations. Plans tend to be modified mid-course by the authorities, leading to second-best solutions (World Bank. 2017). This is a reflection of the broader governance issue of implementing longterm urban strategies. Urban planning must be a recurring and dynamic process instead of a one-off exercise. The authorities need to revise urban master plans at regular intervals to

adjust for growth in population and evolving socio-economic forces (UN-Habitat, 2019). The planning must be inclusive, involving all stakeholders such as local communities, to bring about equitable development (Mugambi & Owuor, 2020). Compliance with zoning and building regulations can prevent unmanaged urban sprawl and ensure the right use of land (Kenya Institute of Planners, 2021).

Provision of adequate investment in sewerage infrastructure, garbage collection, and public amenities is required to tackle urban problems (World Bank, 2017). The failure to plan urban strategies for the realities of Kenva's urbanization has resulted in unsustainable urban expansion, environmental hazard, and deteriorating livability. Cities will be haunted by the severe infrastructure and socioeconomic crises if there is no proactive and continuous planning or intervention. Urban planning institutions must embrace a long-term, dynamic system to enable cities to be functional, resilient, and sustainable.

Musya Ngei, MISK, Valuer at Interurban **Property Consultants** 

ngeimusya@gmail.com





#### Institution of Surveyors of Kenya (ISK) Offices

#### **Head Office**

10th Floor, Reinsurance Plaza, Taifa Road, Aga Khan Walk, P.O. Box 40707-00100, Nairobi Tel: 0724929737 0737929737

Email: info@isk.or.ke Website: www.isk.or.ke

#### **Coast Branch Office**

9th Floor, NSSF Building

Nkrumah Road,

P.O. Box 80325-80100,

Mombasa

Tel: 0728038700

Email: coastbranch@isk.or.ke

#### **Western Branch Office**

2nd Floor, Sifa House,

Kibuye Mission Road,

P.O. Box 2072-40100,

Kisumu

Tel: 0724717608/0724232600 Email: westernbranch@isk.or.ke

#### **South Rift Valley Branch Office**

1st Floor,

OJ Building, Door No.7,

P.O Box 10239-10200.

Nakuru

Tel: 0723586216

Email: Southriftbranch@isk.or.ke