THE ARCHITECTURAL ASSOCIATION OF KENYA

AAK | PROMOTING EXCELLENCE IN THE BUILT ENVIRONMENT

STATUS OF THE BUILT ENVIRONMENT REPORT

JANUARY - DECEMBER 2023

AAK | PROMOTING EXCELLENCE IN THE BUILT ENVIRONMENT

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EXECUTIVE SUMMARY

The Architectural Association of Kenya (AAK) is pleased to present the 2023 Status of the Built Environment (SBE) report. This report provides an overview of the current state of the built environment in Kenya, highlighting key trends, challenges, and opportunities.

Key findings of this year's report cover a number of challenges, including development control challenges, affordability of adequate and decent housing, cost of construction, infrastructure development, climate change and resilience, social equity and inclusion, and status of the emergent built environment professions. We have explored a number of opportunities to address these challenges, such as prioritization of resource distribution, innovative housing solutions, sustainable infrastructure development, climate-resilient and inclusive planning and design, and good governance and transparency.

AAK is committed to working with stakeholders, including national and local governments, grassroots communities, and private corporations, to address the outlined challenges and capitalize on the opportunities facing the built environment in Kenya. As the umbrella Association, we believe that working together is the only path to creating a more sustainable, equitable, and prosperous future for all citizens. The excluded urban majority must be included at the decision table of planned developments so that they, too, can meaningfully contribute to the expected socio-economic progress.

The built environment is a critical component of Kenya's social, economic, and environmental development agenda. Sustainable urban regeneration and growth will be achieved if the ease of doing business in this sector is drastically improved. All artificial hurdles must be clinically targeted and eliminated as soon as possible. AAK is committed to supporting the needs and aspirations of all Kenyans through the promotion of an inclusive and dignified built environment and a sustainable natural environment. We hope that this Report will serve as a valuable resource for policymakers, practitioners, and the public. We encourage you to read the full report for more detailed information on the state of the built environment in Kenya.

SECTION 1 OVERVIEW OF THE BUILT ENVIRONMENT IN KENYA

In 2023, the construction industry witnessed a dynamic interplay of forces, marked by notable achievements and persistent challenges. The industry experienced an influx of projects, with the National Construction Authority (NCA) receiving a total of 4,770 applications from January to October 2023. Notably, 70.3% of these applications, totaling 3,354, were successfully registered. Residential development constituted the majority, representing 54% of the total applications, reflecting a sustained demand for development.

January to October 2023

No. of project applications received

4,770

Successful registrations

3,354

The engagement of consultants in the Affordable Housing Program has been The Architectural Association of Kenya's (AAK) focus since the inception of AHP under the Big Four Agenda. With a total project pipeline of 838,876 units, the government has completed 584 units and launched 39,879 units, and some 34,355 units were waiting to be launched as of November 2023. AAK collaborated with the State Department of Housing and Urban Development (SDHUD) to establish an AHP Forum, supported by an MoU between SDHUD and professional bodies (AAK, Institute of Engineers of Kenya, and Institute of Quantity Surveyors of Kenya), which was established to advise the government and influence industry stakeholders in AHP matters. Despite challenges in the initial procurement of consultancy services, AAK members expressed support for the AHP and other government initiatives.

However, the sector faced formidable challenges, notably the escalating costs of construction. The cost surged from KES 34,650-77,500 at the beginning of 2023 to KES 41,600-100,800 by December 2023. This spike was attributed to the increased costs of construction materials and fuel, exemplified by the surge in the price of steel reinforcement bars from KES 140.60 per kg in December 2022 to KES 160.26 per Kg in December 2023, marking a 14.29% increase. Similarly, the cost of cement rose from KES 650 per 50 Kg bag in December 2022 to KES 750 in December 2023, marking an approximate increase of 15.38%. These escalations have been largely a result of the increased import costs influenced by the devalued currency.

In addition, land rates have surged by an alarming 6.41-fold since December 2007. In urban centers like Nairobi, what was valued at KES 30.3 million has now risen to KES 190.4 million in 2023. These exorbitant construction costs, hinged on the cost of building materials and land, threaten the achievement of affordable housing.

584 COMPLETED UNITS

39,879 LAUNCHED UNITS

34,355 UNITS WAITING TO BE LAUNCHED

Development control emerged as a critical challenge stressing construction industry professionals. The absence of essential planning and legal frameworks, such as local physical development plans, zoning regulations, Development Control Regulations, and Building Regulations, contributed to haphazard developments in urban areas. For instance, the Nairobi Development Control Ordinances expired in 2014, and the zoning guidelines have been arbitrary. Recognizing this, AAK surveyed its members to gauge the efficiency of Nairobi, Mombasa, Kisumu, Nakuru, Uasin Gishu, Kilifi, Tharaka Nithi, and Kiambu counties in granting development control applications.

The survey revealed that the delays in construction permitting experienced in the counties are not inherent to the systems or external factors but result from human actions and oversights. While 43% of AAK members in Nairobi noted an improvement in approval times, with an average of 8 weeks, 7% reported the most prolonged approval timeline, exceeding 32 weeks. In Mombasa County, only 16.7% of applications received approvals, with 83.3% remaining unapproved. In most cases, members have to provide facilitation to county officials for successful processing.

Kiambu County's discontinuation of the e-DAMS in November 2022, against AAK's advice, created substantial hurdles, leaving 61% of members with pending applications and making Kiambu one of the most challenging counties to acquire development permits. The Nakuru County e-DAMS system garnered dissatisfaction from 67% of AAK members, primarily due to exorbitant charges and tedious processes.

The report also addresses prevalent road safety concerns, with pedestrians identified as the most vulnerable road users. In Mombasa City, pedestrian deaths recorded the highest among all road users, maintaining a concerning rate of 49% from 2020 to 2023. Efforts to enhance road safety, especially for vulnerable users like cyclists and pedestrians, are underway in Nairobi and Mombasa, with initiatives like the upgrading of the Nairobi Lower Central Business District (CBD) and funding support from Bloomberg Philanthropies for cycling infrastructure in Mombasa.

43% of AAK members in Nairobi noted an improvement in approval times, with an average of **8 weeks,**

7% reported the most prolonged approval timeline, exceeding **32 weeks.**

In Mombasa County, only

16.7% of applications received approvals, with

83.3%

remaining unapproved.

SECTION 2

DEVELOPMENT CONTROL

61% Nairobi County

20% Kiambu County

7% Nakuru County

4% Mombasa County

2% Kisumu, Kilifi, Tharaka Nithi, Uasin Gishu Counties.

Development Applications

National Construction Authority

In the period from January 1 to October 31, 2023, the National Construction Authority (NCA) received a total of 4,770 project applications, with 3,354 being registered, constituting a 70.3% registration rate. Among these applications, residential development recorded the highest number of applications, with 1821 representing 54% of the total. This is a slight drop compared to the year 2022 when residential projects accounted for 60% of the overall development projects.

On the other hand, mixed-use development constituted 30%, while commercial development constituted 15%, both of which recorded growth compared to the year 2022, which recorded 24% and 11%, respectively.

In terms of the monetary value of the projects, residential development recorded the highest at KES 97,519,827,355.00. Table 1 below highlights the value of projects approved by NCA in the period January to October 2023:

Project Type	Value (KES)
Residential	97,519,827,355.00
Mixed Use	64,356,587,189.00
Commercial	37,620,154,875.00
Other works	15,393,130,611.00
Total	**214,889,700,030.00**

Adherence to construction standards and guidelines remains a challenge in the country, as evidenced by the number of suspended projects recorded at 7,042 (66.1%) of the 10,655 site inspections conducted by the authority.

Survey on Development Control Permits: Understanding Member Experiences

AAK conducted a survey among its members to assess their experiences in obtaining development control permits in the counties. The survey aimed to gather data on users' experiences in acquiring development approvals. The data collected included approval rates, the time taken to receive approvals, and the advantages and disadvantages associated with the processes.

AAK gathered responses from professionals in the built environment. Among them, 61% had submitted approval applications in Nairobi County, 20% in Kiambu County, 7% in Nakuru County, and 4% in Mombasa County. Additionally, 2% each came from Kisumu, Kilifi, Tharaka Nithi, and Uasin Gishu Counties.

Development Control Permitting

1. Nairobi County

Nairobi City County Government recorded the highest number of building applications, totaling 1985 from January to November 2023. The cumulative value for developments during this period amounted to KES 176,168,787,693. However, this reflected a marginal decrease compared to the same period in 2022, which saw 2078 applications valued at KES 191,627,294,248.

In the same period, the county generated revenue through approvals amounting to KES 1,881,858,234. There was a noteworthy increase of KES 1,156,354,824 in the revenue collected by the City-County in 2023 compared to the corresponding period in 2022.

Out of the 1985 applications received by the Nairobi City County Government in 2023, 1889 were approved, 86 were deferred, and 10 were declined.

Month	2022			2023		
	No. of Plans	Estimated Cost	Submission Fee	No. of Plans	Estimated Cost	Submission Fee
January	188	11,064,997,873	37,300,564	80	12,884,819,500	36,330,100
February	216	12,649,024,760	74,189,867	187	18,437,517,120	136,667,701
March	206	18,690,925,000	101,129,733	154	12,263,732,650	46,588,692
April	468	50,017,405,600	187,690,389	189	11,038,994,603	372,992,323
May	30	3,548,710,045	4,707,398	197	8,963,778,240	543,104,838
June	223	15,494,204,954	63,479,896	44	1,396,346,000	6,945,241
July	198	18,834,218,570	87,044,326	330	33,834,611,375	184,292,560
August	102	8,492,797,696	38,168,478	304	32,891,109,878	206,583,047
September	178	17,138,532,750	79,668,325	148	10,865,690,350	68,605,074
October	150	30,183,008,000	34,718,951	194	17,820,795,292	222,118,853
November	119	5,513,469,000	17,405,483	158	15,771,392,685	57,629,805
Total	**2078**	**191,627,294,248**	**725,503,410**	**1985**	**176,168,787,693**	**1,881,858,234**

Residential projects

66%

Public-use projects

10%

Residential projects constituted a substantial majority of submissions at 66% , with public-use projects following at 10%. This is indicative of the growing demand for housing, reflecting the anticipated population growth and urbanization trends.

Nairobi County Development Control Challenges

Section 111 of the County Governments Act of 2012 states that for each city and municipality, there shall be the following plans—

(a) City or municipal land use plans;

(b) City or municipal building and zoning plans;

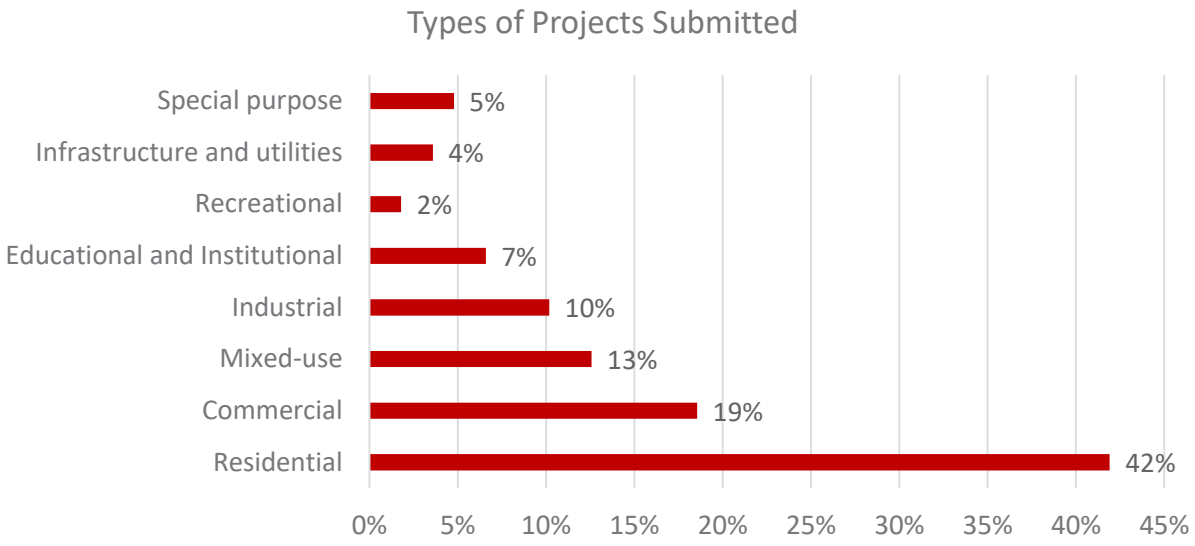
(c) City or urban area building and zoning plans;

(d) location of recreational areas and public facilities

However, none of the above plans have been developed, and development approvals are granted without legal basis. The 2004 Nairobi Development Control Ordinances expired in 2014, and the zoning

guidelines have been arbitrary. Additionally, there are no guidelines for minimum plot size for highrise development, leading to the approval of apartment blocks on very small plots of land that cannot sustain the development to ensure it is liveable and complies with planning and public health standards. This has resulted in the destruction of several estates within the city, including Kilimani, Kileleshwa, South C, and Eastleigh.

While AAK, among other stakeholders, is a member of the Urban Planning Technical Committee, our engagement with the development application is at the tail end of the approval process. The committee is usually presented with an Excel sheet with no attached drawings; hence, it has to rely on confirmation from the section heads who have comprehensively reviewed the plans and applications and satisfied the requirements.

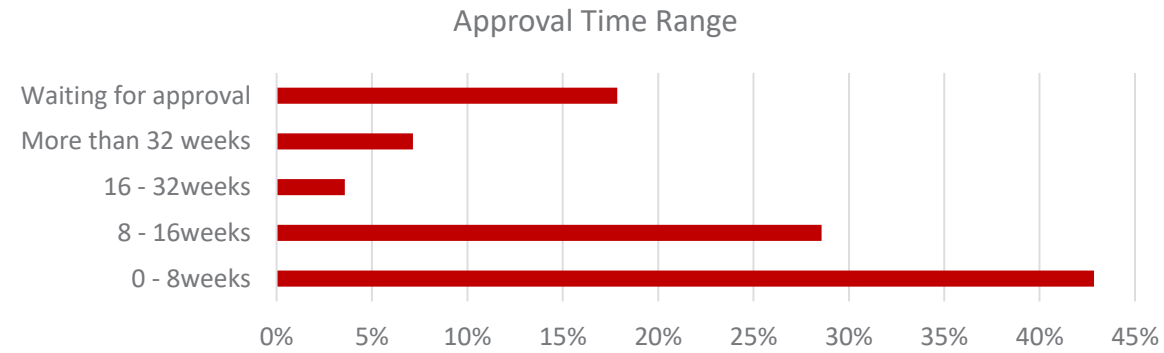


AAK Members' Experience with the Nairobi Planning and Development Management System (NPDMS)

In the survey ran by AAK among its members in November 2023 to establish their recent experiences using the NPDMS portal, respondents had submitted a total of 167 applications on the NPDMS. Most members, constituting 42%, submitted approval applications for residential projects, corroborating the data provided by the Nairobi City County Government and the NCA.

50% of the 167 development applications submitted to the NPDMS portal had received approval, while 50% were still pending.

43% of the AAK members noted an improvement in approval times, with approvals being granted within an average of 8 weeks. However, members attributed this improvement to the facilitation given to the county officials, which undermines the intended efficiency and transparency of the system.



	0 - 8weeks	8 - 16weeks	16 - 32weeks	More than 32 weeks	Waiting for approval
Series1	43%	29%	4%	7%	18%

On the other hand, 7% of AAK members reported the longest approval timeline surpassing 32 weeks. These prolonged timelines can have severe implications for projects, leading to delayed project executions and increased costs, contributing to a challenging business environment and potentially deterring local and foreign investors.

Notably, the study revealed that there were lower-value projects whose value ranged between KES 500,000 and below, yet the approval has been pending for three months now. The high-value projects exceeding KES 1 billion have the potential to create a considerable number of jobs and contribute to the county's economy. The multiplier effect of these delays also goes beyond the construction sector, where local businesses that provide goods and services such as material, equipment, and catering are deprived of such opportunities.

The majority of the pending projects (46%) are valued at KES 0-50 million, followed by 18% between KES 100-500 million, and projects valued between KES 50-100 million and KES 500 million- 1 billion, recording 14% each. The highest value of pending projects is more than KES 1 billion, or 7%.

A member cited experiencing an improvement in the time taken to get approvals, where an application took five days to be processed and approved. A streamlined approval process can achieve a lower turnaround time, making the county more attractive for development and investment. Some of the critical challenges that AAK members have been persistent over the years in regard to the approval process were as follows:

i. The approval process is slow and tedious. Bottlenecks created by county officials necessitate facilitation paid to them, without which the process is frustrated..

ii. These delays are not inherent to the system or external factors but result from human actions and oversights, particularly in updating and approving payments.

iii. The system's user interface is complex, not intuitive or user-friendly, potentially leading to errors, misunderstandings, and inefficiencies in navigating the platform.

iv. There should be established timelines for each approval process stage to foster accountability and streamline the workflow to prevent unnecessary delays.

v. The Ministry of Lands, Housing, and Urban Development does not link some land parcels with the Ardhi Sasa platform, causing delays for members.

vi. In some cases, reviewers give individual comments sequentially. Consolidated feedback that allows discussions between reviewers and applicants will eliminate the need for physical meetings.

2. Mombasa County

The Mombasa County Government reports that it received 702 applications between January and October 2023, of which 63% were approved and 37% were either deferred or rejected. These construction approval processes yielded a cumulative revenue of KES 236,804,194, with the highest revenue collected in the month of September at KES 40,756,346. This represents only 0.15% of the revenue collected by Nairobi City County.

While Nairobi continues to assert its primacy over the rest of the counties, there is an opportunity for Mombasa to enhance its attractiveness for investment further. Creating a more conducive environment in the county can stimulate economic growth, attract investors, and contribute to the overall development of the region.

Month	Revenue Collected in Construction Permitting (KES)
January	10,010,351
February	14,317,247
March	25,947,491
April	21,577,456
May	24,946,694
June	26,136,863
July	32,242,959
August	26,747,785
September	40,756,346
October	14,121,002
Total	**236,804,194**

Notably, the county received two applications for Swahili houses in June and September. These are traditional houses characterized by ground floor level, 4 to 6 rooms, and sometimes made of coral stone with a lime plaster finish. However, the applications did not proceed to the approval stage as the applicants did not make the requisite payment. This may be indicative of the current preference trend in the type of housing where people prefer more contemporary designs. The county should assess and address any impediments in the approval procedures to encourage the use of local building materials and promote traditional architectural designs that utilize local building materials.

During the same period, the county received 60 applications for a change of use, and 77% of the applications were approved. Additionally, only 10 applications for amalgamation of land were received, and 70% of them were approved.

702 applications

January & October 2023

63% - approved

37% - deferred or rejected.

Type of Application	Number of Applications	Approved	Percentage Approved
Change of Use	60	46	77%
Amalgamation	10	7	70%
Change of Use and Amalgamation	5	5	100%
Subdivision	49	26	53%
Extension of Lease	11	2	18%
Extension of User	14	9	64%
Renewal of Lease	1	0	0%

AAK Members' Experience with the Mombasa Electronic Development Application and Management System (e-DAMS)

In Mombasa County, 58% of the development applications submitted were for residential projects, 33% for commercial projects, and 8% for special-purpose developments. The high percentage of residential development is similar to that of Nairobi County, which indicates an upward urbanization trend with increasing demand for housing infrastructure to accommodate the growing population.

Most projects pending approval submitted to the county were valued between KES 50 million and KES 500 million. Out of the applications submitted, only 16.7% had received approvals, leaving 83.3% unapproved. This was attributed to the difficulty in receiving approvals, whereby the approval process would be frustrated without providing facilitation to the county officials.

Members also noted that the approval timeframe will depend on whether there was unofficial facilitation, in which case approvals will be received within eight weeks. On the other hand, without facilitation, it may take up to thirty-two weeks.

The notable differences in approval timelines significantly affect the project timelines as submitting consultants cannot schedule, budget, and manage resources effectively. These challenges can deter potential investors, deferring economic benefits such as job creation and revenue generation. This results in a snowball effect by reducing Mombasa's competitiveness, hindering its ability to respond promptly to market demands and opportunities.

3. Kisumu County

The County Government of Kisumu received a total of 581 building plan applications and 827 planning applications between January and October 2023.

4. Nakuru County

AAK Members' Experience with the Nakuru Electronic Development Application and Management System (e-DAMS)

Nakuru County launched the e-DAMS platform in August 2023 to improve development plans and construction permit approval, improve efficiency and transparency, and reduce the need for human interaction.

According to AAK members, 80% of the projects submitted to Nakuru County were residential projects, while 20% were mixed-use developments, a similar trend noted in the other counties where most applications are for residential development.

Out of all the submissions, 40% had received approvals, while 60% remained unapproved. 33% of members reported a seamless process with reasonable approval times, where they received approvals within eight weeks of application.

67% of the developments pending approval were valued below KES 15 million, while 33% were valued between KES 50 and 100 million.

However, 67% of respondents expressed dissatisfaction with the process, deeming it excessively long, and some of the charges are exorbitant compared to other counties. The system design is reportedly not user-friendly and the county ICT customer care is wanting.

80%

projects submitted were residential projects

20%

were mixed-use developments

5. Uasin Gishu County

In the period January to October 2023, the county government of Uasin Gishu received 781 development applications. Among these applications, 724 were approved, while 16 were either rejected or deferred. The county reports that the number of building occupation permits issued in the period was 71, totaling approximately KES 2.12 billion.

The recent elevation of Eldoret to city status presents a great opportunity for the county, there are inherent risks of haphazard development if the county fails to keep pace with the growth. Therefore, it is prudent to develop and implement comprehensive urban planning strategies such as zoning and development control regulations, as well as infrastructure development plans, to effectively address the increased demand. Additionally, the county should prioritize preserving green spaces to enhance the overall quality of life for its residents.

AAK Members' Experience with the Uasin Gishu County Development Approval Process

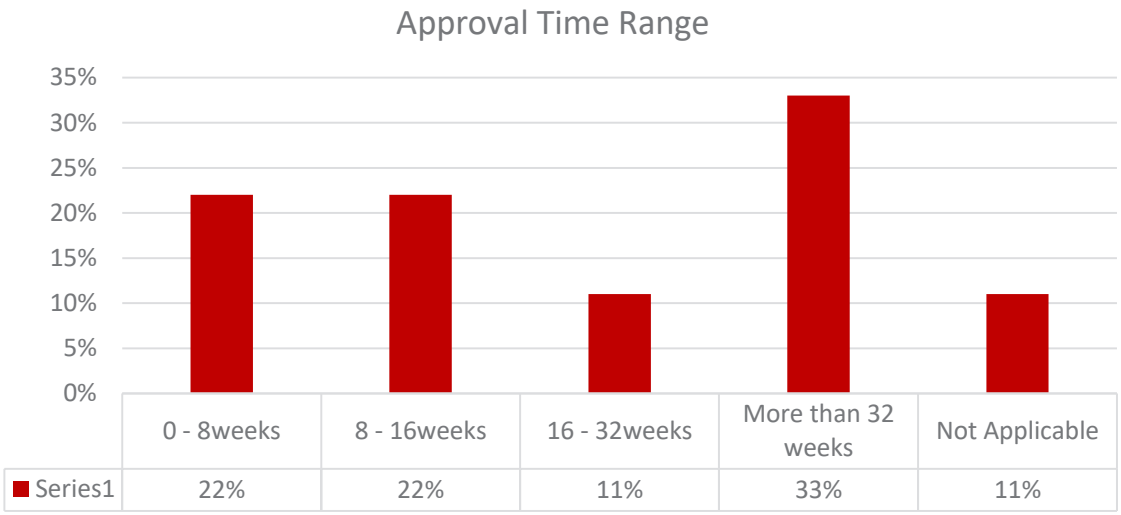
50% of the applications submitted to the county were for residential projects, 33% for commercial projects, and 17% for special purpose projects.

The pending projects were valued between KES 100 and 500 million. According to the survey, members expressed that they attained approval within a reasonable timeframe of 8 weeks.

The only concern raised was the manual nature of the process, and members recommended that the process be digitized to make it even more efficient and resilient to the projected increased development due to the Eldoret city status.

6. Kiambu County

In Kiambu County, most submitted projectwere for residential developments, accounting for 56%, followed by commercial projects at 22%. The county's proximity to Nairobi City has significantly contributed to this, where the urbanization process has driven the demand for more residential and commercial spaces. On the other hand, industrial projects accounted for 8%, while mixed-use developments and educational and institutional projects each constituted 6%. Special- purpose projects accounted for 3%.



61% of the respondents who have submitted applications to the Kiambu County Government reported that their applications were still pending, while only 39% indicated that their applications had been approved. The respondents attributed this to the noted retrogression from online to manual submission.

In a letter dated November 18, 2022, the county government of Kiambu informed AAK that the county had discontinued the Electronic Development Management Systems (e-DAMS), citing system errors that corrupted data, inactive payment codes, and frequent system downtime, which resulted in delays. AAK advised against this because the system had been working well previously and the decision would have far-reaching implications for development control, considering the county had experienced the highest number of collapsed buildings in 2022. This was followed by a consultative meeting with the Kiambu county government through the Kenya Private Sector Alliance (KEPSA) on April 7, 2023, to discuss the issues affecting the built environment in legislation and policy gaps, i.e., land use and development control policies, the suspension of the eDAMS system, the collapse of buildings, and the need to include professionals in the ongoing building audit in the County. It has been one year since Kiambu County regressed to a manual permitting system, and the county has been among the most challenging counties to process development permits.

Out of the 39% whose applications had been approved, the majority, comprising 33%, reported receiving approvals more than 32 weeks after applying. They attributed this delay to the process's slow, tedious, and complex nature. Additionally, 22% stated that their approvals were granted within 16 weeks of applying.

According to AAK members, 56% of the projects pending approval were worth less than KES 50 million. Additionally, 22% fell in the KES 100 to 500 million range, and projects valued between KES 50 and 100 million and over KES 1 billion recorded 11% each.

The main concerns raised included the observed shift from online to manual submission, which has taken the county several steps backward. Members cite this as a very retrogressive approach in the era of e-governance. Members further noted that even when the e-DAMS was in operation, the process remained slow, tedious, and complex, leading individuals to resort to manual submission.

7. Laikipia County

In Laikipia County, the most common planning application submitted to the county is land subdivision, which were recorded at 745 applications. This suggests an increase in population in the county that reflects the increasing demand for residential and commercial plots.

The prevalence of land subdivision exposes the county to the risk of over-fragmentation of land, which may heighten land use conflicts, induce pressure on the existing infrastructure, and ultimately lead to haphazard development.

DEVELOPMENT TYPE	NO OF UNITS	COST (KES)
Subdivision	745	5,401,250
Building Plan Approvals	252	26,509,914
Number of applications rejected	0	0
	997	**31,911,164**

8. Tharaka Nithi County

In Tharaka Nithi County, 31% of the projects submitted were residential, 13% were mixed-use developments, and commercial, recreational, and special-purpose projects all recorded 19%. Of all the submissions, 50% had received approval, while the remaining 50% were still pending. The delay in processing the pending projects was attributed to the manual, redundant, and slow nature of the approval process.

The approved projects had a reasonable processing time, ranging from eight to sixteen weeks from the date of application submission, and the value of the pending projects fell within the range of KES 50 to 100 million.

9. Kilifi County

Only one respondent had applied for the approval of a residential project in the county estimated at a value below KES 50 million. The member stated that the approval process was slow as they were still awaiting approvals for the project.

Counties have significant untapped potential for augmenting their Own-Source Revenue (OSR) through streamlining and expediting the approval processes for building and planning approvals. Through this, the county can incentivize and facilitate a more efficient development control system and create a conducive business environment that will contribute to sustained economic growth.

SECTION 3

AFFORDABLE HOUSING

Affordable Housing Program (AHP)

The Government of Kenya has a goal to address the annual housing deficit of 250,000 homes by initiating affordable housing projects nationwide. With an ambitious plan to elevate mortgage uptake from the current 30,000 to 1,000,000, the government aims to establish favorable ownership terms, enabling monthly payments as low as KES 5,000.

The government has further initiated the 200 Units per Constituency Program in an effort to localize the Affordable Housing Program (AHP) and stimulate local economic growth while contributing to the Bottom-Up Economic Transformation Agenda (BETA).

During the previous Jubilee administration, a total of 13,529 units were developed between 2018 and 2022, with minimal delivery in the social housing category. According to the State Department for Housing and Urban Development, the active pipeline of projects as of November 2023 is as follows:

Completed Projects	584 Units
Ongoing Projects from 2018-2022 AHP Cycle	9,477 Units
Units Launched During the Current AHP Cycle	39,879 Units
Units Awaiting Launch	34,355 Units
Total Project Pipeline	838,876 units

Engagement of Consultants in the Affordable Housing Program

Since the inception of the Affordable Housing Programme under the Big Four Agenda, AAK has continuously advocated for the involvement of professionals in the Affordable Housing Programme (AHP). In July 2023, the State Department of Housing and Urban Development (SDHUD) invited AAK to undertake the following activities to support the AHP:

- Review the Framework for the government's engagement with consultants in the AHP
- The creation of the AHP Forum with a joint secretariat will advise the government and influence the various industry players in matters of affordable housing.
- MoU between SDHUD and the professional bodies (AAK, IEK, and IQSK) to support the successful delivery of the AHP.

Consequently, the SDHUD advertised in the local dailies, inviting bids on the procurement of consultancy services for project and construction management on September 5 2023. This was, however, cancelled shortly after, with the state department citing the inherent challenges in the delivery framework in the advertisement that would have made it problematic in its implementation. The tender was readvertised in October 2023, submissions were done on November 22, 2023.

AAK conducted a survey in September 2023 among its members to express their views on the cancellation of the first tender for consultancy services in the

affordable housing program advertised by the SDHUD. Among the respondents, 59% were architects, 23% were quantity surveyors, and construction project managers were 18%.

A consensus emerged among members, with the majority supporting the decision to cancel the tender. Members believed that this action was prudent to ensure the success of the AHP and the proper engagement of consultants.

It is noteworthy that 90% of AAK members are willing to support the AAK team on a voluntary basis to offer thought leadership on the Affordable Housing Programme and other projects of national interest.

Identified Challenges with the Tender Document

The document lacked clear definitions for eligibility criteria, task allocation, and the scope of work. It is crucial to establish well-defined criteria and a clear scope to accurately allocate tasks.

The composition of the consultant teams and the number and locations of projects available for bidding were also unclear. This information is vital in making informed decisions about participation.

There was a discrepancy between the key expert qualifications outlined in the appendix to instructions to tenderers and those specified in the terms of reference. Harmonizing these requirements is crucial to preventing confusion and ensuring expectations are understood.

The tender document did not clearly stipulate the professional fees in relation to the scope of services offered, whether the fees pertain to individual firms or consortiums.

Recommendations on the Procurement Processes

The procurement process should fundamentally include compliance with the advisory issued by the Public Procurement Regulatory Authority (PPRA) under CAP 525. This ensures alignment with established regulations and best practices in public procurement.

The procurement method should be shifted to framework contracting as opposed to the least-cost selection method. Framework contracting can offer greater flexibility and efficiency, especially for projects with varying scopes and requirements. It allows for the establishment of a panel of prequalified consultants, streamlining the selection process.

The state department should allow consortia to bid based on regions. By ensuring that projects are managed by consultants with local knowledge and expertise, adopting this approach could prove beneficial. Regional bidding could enhance the effectiveness and efficiency of the program by aligning it with the specific needs and conditions of different areas.

To ensure optimal coverage and expertise, individual professional firms should be selected for designated groups of projects. This approach enables a tailored approach to project management while accommodating a diverse range of firms, including young professionals.

Individual construction project management firms should be engaged in the supervision of Public-Private Partnership (PPP) projects. This approach aligns with the specific needs of the program.

AAK survey September 2023

on the cancellation of the first tender for consultancy services in the affordable housing program advertised by the SDHUD.

Respondents

59% - Architects, 23% - Quantity Surveyors

Construction Project Managers - 18%

Bridging the Affordability Gap: Navigating Land and Construction Material Costs

The affordability of housing hinges on the relationship between property prices and income levels. Consequently, the National Housing Policy (NHP) 2016 was introduced to counter the nationwide deterioration in housing conditions and narrow the housing stock gap, particularly in urban areas. The policy specifically targeted the urgent need for affordable housing, especially among low-income households.

In light of this, the Kenyan government embarked on the ambitious Affordable Housing Program (AHP), incorporating provisions in the legislation to facilitate the availability of affordable and stable financing.

The NHP continues to face significant challenges, among them the exorbitant cost of land and construction materials. These elevated expenses threaten the government's plans to provide affordable housing. Over the years, land rates have surged by an alarming 6.41-fold since December 2007. In urban centers like Nairobi, what was valued at KES 30.3 million has now risen to KES 190.4 million in 2023.

Land prices in Nairobi's 18 suburbs witnessed a 0.4% increase in the third quarter, marking the highest quarterly growth since 2019. The escalating trend in land costs is alarming, as it directly impacts the feasibility of affordable housing initiatives. Kingsley Muwowo, Chief Finance Officer at Shelter Afrique, highlighted during the 11th World Urban Forum that market studies suggest land costs should ideally constitute 10 to 15% of the total housing unit cost. Regrettably, the current scenario paints a different picture, with land costs representing 40 to 60% of the total cost of a housing unit.

Furthermore, the rising expenses of construction materials like cement, steel, and fuel present another formidable challenge. This increase is mainly linked to elevated tax rates, the high cost of financing, and additional import-related costs. In 2023, Habitat for Humanity International (HfHI) conducted a study that identified this as the second most significant challenge mentioned by respondents when considering residential projects, leading to an overall decrease in demand.

On the supply side, the production scale has struggled to meet demand, particularly in the realm of affordable

housing. This is because developers are hesitant about achieving investment returns amid the high construction costs. As a result, they have primarily directed their efforts toward catering to high-income and upper-middle-income earners. This concentration is evident, with 83% of the existing housing supply dedicated to these more affluent segments. In stark contrast, a mere 15% caters to lower-middle-income earners, and a mere 2% addresses the housing needs of the low-income population.

Successfully managing the high costs associated with land and construction materials is critical for the success of the Affordable Housing Project. It necessitates collaborative efforts among the government, private sector, development partners, wholesale lenders, and investors to improve housing finance availability and establish a sustainable housing finance system. In addition, harnessing technology and innovation becomes crucial to devising strategies that counter these cost surges. Exploring cost-friendly building materials is equally imperative for the program's success, underscoring the need for a comprehensive and forward-thinking approach to achieve affordability and sustainability in the housing sector.

It is clear from the development control statistics that the majority of development applications made to counties are delayed or denied permits. Most of those seeking approvals are looking to contribute to the housing deficit, as is exhibited by the type of submitted projects which are residential.

Strengthening of Institutional Framework for Housing Delivery

In 2023, several key institutional frameworks for housing delivery were introduced or updated in Kenya. These frameworks aim to streamline housing development, foster coordination among stakeholders, enhance regulatory oversight, and promote private sector participation.

The National Housing Corporation serves a principal role in the implementation of the Government's Housing Policies and Programmes. It is responsible for formulating housing policies, overseeing housing programs, and regulating the housing sector.

Introduction of the Real Estate Agents Act, enacted in 2022, regulates the activities of real estate agents in Kenya. It aims to protect consumers from fraudulent practices and ensure professionalism in the real estate industry.

The National Housing Policy calls for the establishment of County Housing Committees at the county level responsible for assessing housing needs, formulating county housing policies, and implementing housing programs within their respective counties.

The NCA, responsible for regulating the construction industry, has been strengthened to enhance its oversight of housing construction projects. It has introduced stricter building standards and enforcement mechanisms to ensure the quality and safety of housing developments.

SECTION 4 COST OF CONSTRUCTION IN KENYA

Price of Construction Materials

The construction industry in Kenya has witnessed a notable surge in material costs over the past year, significantly impacting project budgets and timelines. Various economic factors, including currency devaluation and increased import costs, have contributed to this escalation.

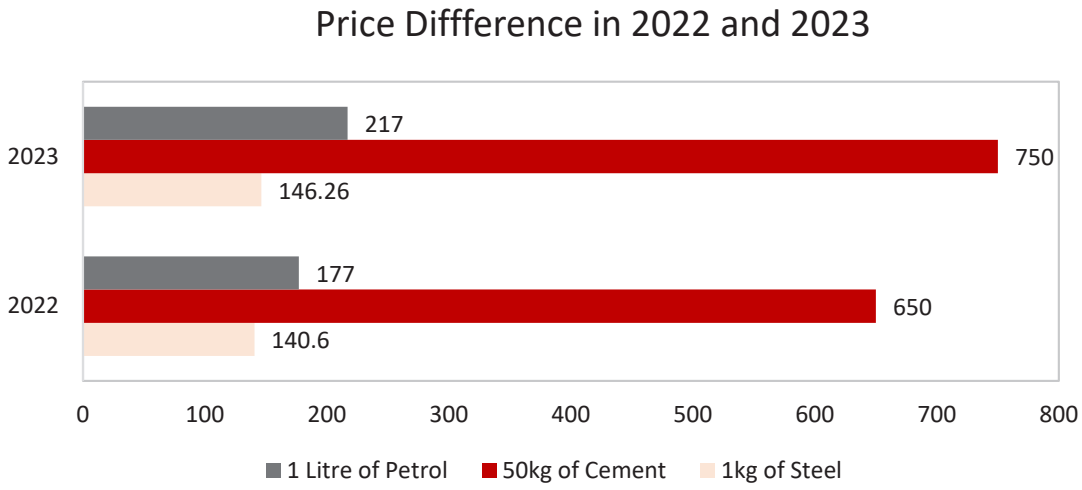
The weakening of the Kenyan shilling against major currencies, notably the US dollar, has been a pivotal factor. In December 2022, the exchange rate was 1 USD to 123.50 KES. However, by December 2023, this had surged to 1 USD, equating to KES 153.25. This currency devaluation directly impacted the cost of imported construction materials and construction equipment.

The price of steel reinforcement bars exemplifies the impact of these economic fluctuations. In December 2022, the cost stood at KES 140.60 per kilogram. Within a year, by December 2023, the price had surged to KES 160.26 per kilogram, marking an increase of 14.29%. Increased imports costs, influenced by devalued currency, notably attribute to the rise.

Similarly, the cost of cement experienced a steep rise. In December 2022, the price of cement settled at KES 650 per 50 Kg bag. However, by December 2023, the price had spiked to KES 750, representing an approximate increase of 15.38%. This significant increase in cement prices further burdened construction expenses.

The price of fuel, an essential component in construction activities, amplified the cost burdens. In December 2022, petrol was priced at KES 177 per litre. Within a year, by December 2023, the cost had escalated to KES 217 per litre. This was primarily a result of the Value Added Tax (VAT), which was doubled to 16% on all petroleum products. The rise in fuel prices added to the logistical and operational expenses of the construction sector.

A report by Integrum Construction Project Managers indicated that in 2023, the construction costs in Kenya averaged about KES 41,600 per square meter for a standard bungalow and KES 100,800 per square meter for luxurious high-rise towers in the city of Nairobi. However, in 2022, the average cost ranged from KES 34,650 to KES 77,500 per square meter, respectively. The construction cost, therefore, rose by between 20.06% and 36.22% over the past year as of June 2023.



The cumulative effect of these economic variables has substantially impacted the construction industry in Kenya. The increased costs of imported materials, exemplified by steel and cement, compounded by escalated fuel prices, have elevated construction expenses. As a consequence, construction projects are facing budgetary constraints and potential delays, posing challenges to the sector's growth and development.

Addressing these challenges necessitates strategic interventions, including exploring local alternatives for construction materials, implementing efficient cost management strategies, and potentially considering hedging against currency fluctuations. Collaboration between industry stakeholders and policymakers becomes crucial to mitigate the adverse impacts and sustain the growth of the construction sector in Kenya.

The Finance Act of 2023 and Its Impact on Kenya's Construction Industry: A Quantity Surveyor's Perspective

The Finance Act of 2023 presents a complex array of effects, offering both positive prospects and negative considerations for various participants in Kenya's construction sector. This extensive restructuring of legislation pertaining to taxation, public revenue, and government expenditure unmistakably establishes a scenario where players in the construction industry may experience contrasting outcomes.

CONSTRUCTION COST 2022

KES 34,650

-

KES 77,500

PER SQUARE METRE

CONSTRUCTION COST 2023

KES 41,600

-

KES 100,800

PER SQUARE METRE

CONSTRUCTION COST

ROSE OVER THE PAST YEAR

20.06%

-

36.22%

AS OF JUNE 2023

FUEL

INCREASED TO

KES 217

IN DECEMBER 2023

Undoubtedly, some amendments embedded within the Act ignite a glimmer of hope. The liberation from the 30% EBITDA (earnings before interest, tax, depreciation, and amortization) ceiling on local loan interest deductions emerges as a beacon of financial relief for construction entities. This stride enables construction companies to fully deduct local loan interest expenses without limit, thereby making construction more profitable.

Furthermore, the advent of the mandatory housing levy, while met with skepticism by some, could potentially become a catalyst for burgeoning construction endeavours. The infusion of steady funds earmarked for housing development has the latent power to amplify construction activities, instigating a surge in demand for labour across various skill spectrums. This could effectively bolster the construction industry's workforce, paving the way for increased job opportunities. This would also have a positive multiplier effect on the economy, given that the Construction Sector is a key driver of the economy, with strong inter-sectoral linkages, both backward and forward.

However, amidst these gleams of optimism lurk the shadows of adversity. The Act's reduction in the Turnover Tax threshold, coupled with an escalated rate, inflicts a pronounced financial strain on medium-sized construction businesses. The resultant surge in tax obligations threatens to erode profit margins, compelling these entities to contemplate rate hikes. Such an escalation in construction costs could undoubtedly impede project affordability, potentially stifling industry growth. On the other hand, despite the public perception of corruption and misuse of public funds, some would argue that the amendment to the turnover tax widens the tax income bracket, increasing government revenue and, eventually, expenditure on infrastructure projects, resulting in a more vibrant economy.

Moreover, the legislation brings in a new 15% repatriation tax specifically for branches or Permanent Establishments (PE). This levy is imposed in addition to the standard tax applied to the branch's income. Alongside this, the corporate income tax rate for branches is lowered to 30% from the previous rate of 37.5%, effective January 2024. As

a consequence, international construction firms or material suppliers with branches in Kenya will encounter supplementary repatriation taxes. This additional financial burden is likely to escalate the overall construction costs for projects involving international stakeholders.

Additionally, the reclassification of petroleum products like gasoline, kerosene, aviation fuel, and jet fuel under the standard VAT rate of 16% is a notable shift. This alteration significantly raises expenses within the construction sector due to increased fuel prices, ultimately contributing to inflation across the economy. These heightened fuel costs reverberate through various aspects of construction, impacting the prices of essential materials such as steel and cement, transportation expenses for materials, and the operational costs of machinery and equipment. These VAT amendments present a challenging scenario for the construction industry, as they directly escalate project costs and subsequently affect multiple interconnected facets within the construction ecosystem.

The revised excise duty rates, particularly the escalated rates on construction materials such as imported cement, furniture, paints, varnishes, and lacquers, are anticipated to significantly amplify the overall construction costs. This surge in costs has the potential to permeate through project budgets, potentially necessitating adjustments and influencing negotiations regarding pricing with clients. Consequently, this situation might lead to a constricted margin for profits, challenging construction companies to sustain profitability while managing heightened expenses. This might compel them to consider transferring these additional costs to clients, thereby impacting the competitive dynamics within the sector.

In conclusion, the Finance Act of 2023 has placed the Kenyan construction sector at a crossroads of opportunities and challenges. How will construction enterprises adjust to the altered landscape of taxation and costs? Will the challenges outweigh the potential benefits? As we consider these changes, it's critical to evaluate how they will affect the trajectory of the construction sector and the strategies that stakeholders will employ to navigate this shifting environment.

SECTION 5

INFRASTRUCTURE

Upgrade of Nairobi Lower Central Business District Roads

The Nairobi County Lower Central Business District (CBD) faces significant mobility challenges, including traffic congestion, air pollution, compromised pedestrian safety, and inadequate infrastructure. Consequently, the Nairobi City County Government and the UN-Habitat initiated a project to improve walking and cycling experiences and, ultimately, urban mobility. The streets covered are Tom Mboya Street, Latema Road, Kenneth Matiba Road, River Road, Ronald Ngala Road, and Racecourse Road. The specific objectives are to improve traffic circulation, provide long-term solutions for organized street vending, strengthen the connections between the Lower and Upper CBD, provide safe, attractive, complete networks for cyclists and pedestrians, and co-develop an incremental approach for implementing innovative and sustainable urban solutions in the Lower CBD.

The Institute for Transportation and Development Policy (ITDP) has developed the concept designs for the streets, incorporating elements such as wider sidewalks, protected and dedicated bicycle lanes, street lighting, improved pedestrian crossings, signalized intersections, trees, street furniture, and a flexible social program to enable organized street vending.

Segement 1: Next to Posta

Image: Ronald Ngala Street Segment 1, Scenario A

Image: Ronald Ngala Street Segment 1, Scenario A

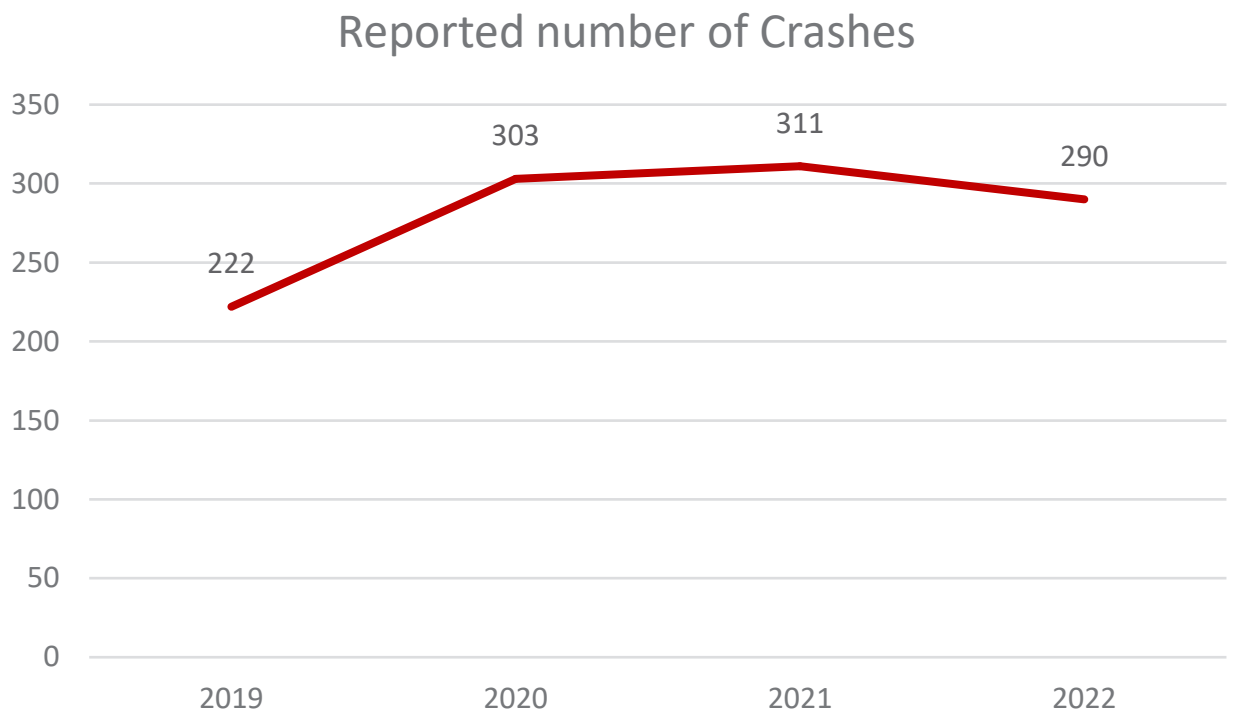
This ensures a holistic approach by transforming the physical infrastructure while creating a vibrant, sustainable, and creative district with a unique identity. The comprehensive upgrade project kicked off in the last week of November 2023.

Rehabilitation of Mombasa Road

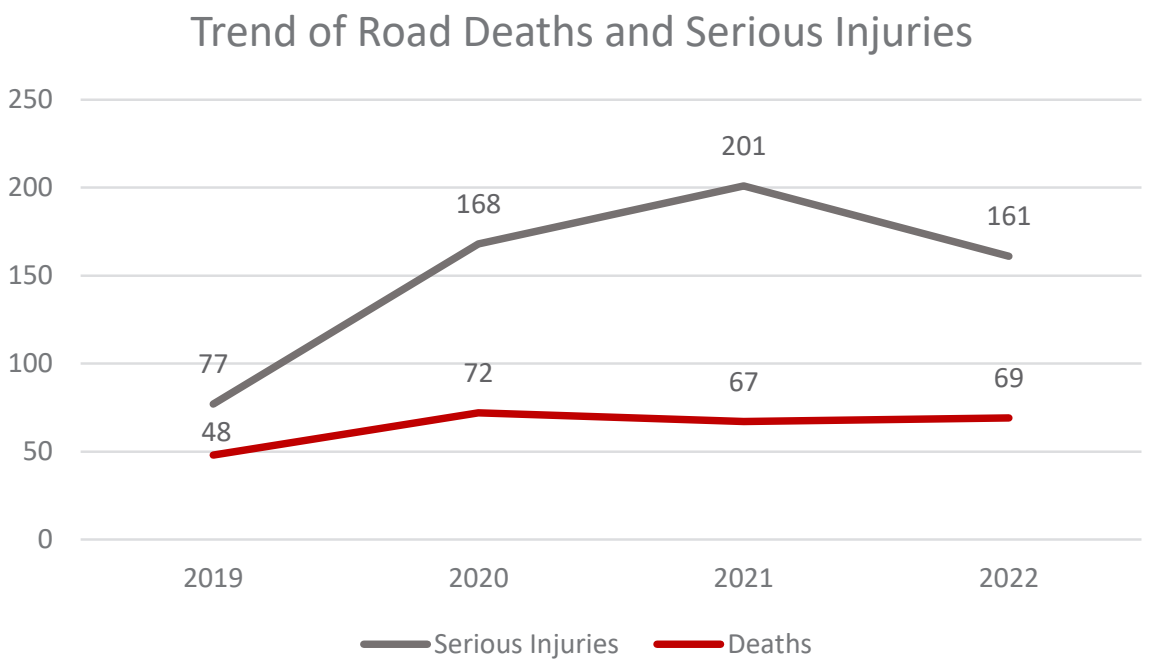
The Kenya National Highways Authority has begun rehabilitation works for Mombasa Road after its destruction during the construction of the Nairobi Expressway. The 27-kilometer section has been divided into two lots: Lot A, James Gichuru to Ole Sereni, and Lot B, Airtel to Mlolongo. Each lot has two different Kenyan contractors, with construction work anticipated to be completed in November 2025. The rehabilitation works will include recarpeting the damaged sections, compensating damaged property such as walls and boreholes, and reconstructing the University of Nairobi tunnel, which was destroyed during the construction. The tunnel is set for improvement, including enhanced drainage and lighting. Pedestrian walkways and footbridges will also be integrated, with specific areas like Airtel and Syokimau identified as priority locations needing these critical infrastructure enhancements.

Mombasa Road Safety Report 2019-2022

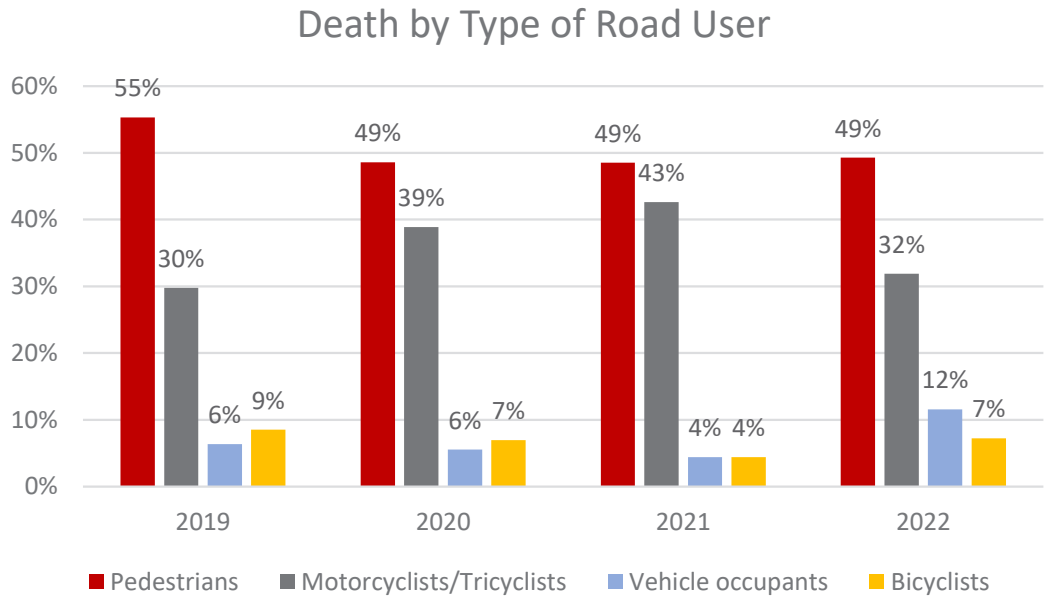
The County Government of Mombasa released its first 2019-2022 road safety report in November 2023. The report collected data from police crash records from 2019 to 2022 at all seven police stations in the county. The county recorded a 31% increase in the number of road crashes, from 222 to 290.



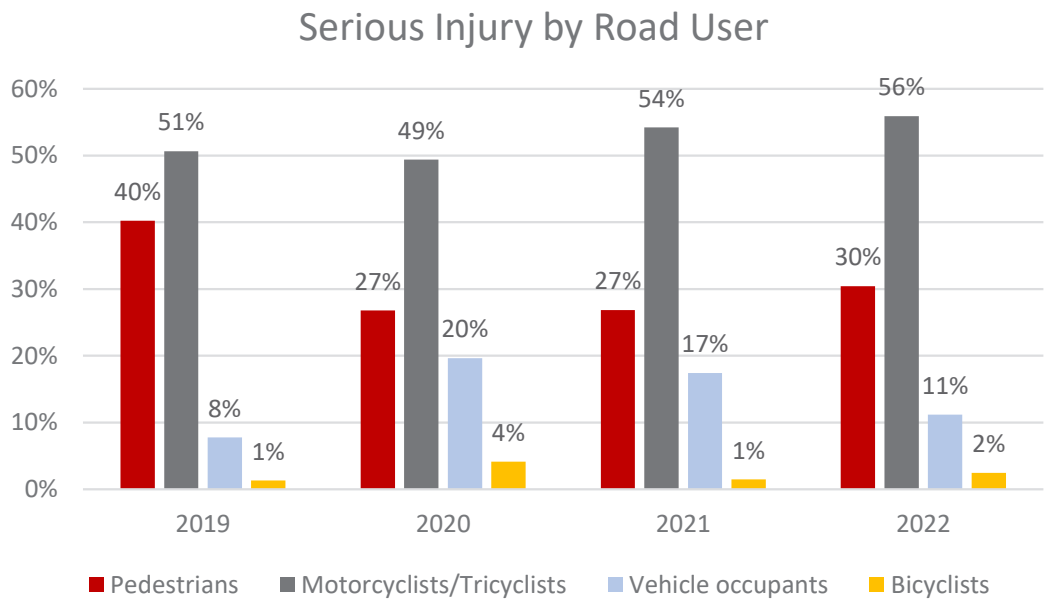
Between 2019 and 2022, the reported deaths increased by 44%, while serious injuries rose significantly by 109%.



In terms of the type of user affected, 93% of the deaths were of vulnerable road users- pedestrians, cyclists, and motorcyclists. All through the four years, pedestrian deaths recorded the highest among all road users; in 2019, pedestrian deaths were at 55% and maintained a 49% rate from 2020 to 2022.



When it comes to serious injuries, many of which result in permanent disability, motorcyclists made up the highest percentage affected from 2019 to 2022. This was recorded at 51% in 2019, 49% in 2020, 54% in 2021, and 56% in 2022.



In terms of gender, male deaths and serious injuries accounted for 86% and 76%, respectively, since 2019, resonating with the global patterns.

Mombasa County Cycling Infrastructure Improvement Project

In June 2023, Bloomberg Philanthropies announced that Mombasa City would receive substantial funding support of USD 400,000 (Ksh.5.6 million) to pioneer innovative cycling infrastructure and sustainable mobility options. The proposed project, currently in its initial phase, is in collaboration with the Institute for Transportation and Development Policy (ITDP), Bloomberg Philanthropies, and the County Government of Mombasa. The project envisions the creation of a dedicated cycling lane along Links Road, spanning from Kenol Nyali to Kengeleni. The BICI team recently visited Mombasa, engaging in surveys of the route and the city to explore the possibilities of establishing a well-connected cycling network. The tentative completion timeline for the project is set at 2.5 years. As part of the award package, Mombasa will also benefit from technical assistance from the Global Designing Cities Initiative (GDCI), covering project development, cycling facility design, data collection, and resident engagement. This holistic approach aligns with the vision of creating a safe, efficient, and sustainable transportation system for the city's residents.

Nakuru County Urban Observatory

The Nakuru County Government is establishing an urban observatory to enable efficient data collection, analysis, and information dissemination to enable data-driven decision-making and development. Its core objectives align with key urban priorities, including waste management, mobility, public spaces, the blue and urban economy, and affordable housing. It will include implementing infrastructure projects such as installing CCTV cameras and air quality sensors. These initiatives result from collaborative efforts between the Department of Environment and City Management and the Department of Land, Physical Planning, Housing, and Urban Development, who are laying the groundwork for a GIS data center. Air quality sensors strategically placed at various locations will monitor environmental parameters, aiding in identifying pollution hotspots and informing climate action policies. The urban observatory, emphasizing real-time data for decision-making, facilitates innovation and attracts economic investments, contributing to the broader goals of sustainable urban development.

SECTION 6 CLIMATE CHANGE AND RESILIENCE

Building a Sustainable Flood Management Approach for Urban Areas

As climate change continues to impact weather patterns, the frequency and intensity of extreme weather events are likely to increase, making it imperative for cities to implement proactive measures. In Kenya, the extent of floods spread to 8 regions and 22 counties, with the most affected areas being in the North Eastern part of the country as of November 26, 2023.

Poor land-use planning, and inadequate infrastructure contribute significantly to the vulnerability of cities to flooding. Rapid urban growth often leads to the conversion of natural water-absorbing areas into concrete jungles, exacerbating the impact of heavy rainfall. In the case of recent heavy downpours and El Niño, the consequences of these factors have become evident in the form of property damage, displacement of residents, and disruptions to critical infrastructure. The Kenya Red Cross Society reports that as of October 2023, over 120 people have died, 90,000 households have been displaced, more than 17,600 acres of farmland have been lost, and 13,400 livestock have been lost. The Kenya National Highway Authority (KeNHA) reports that intense rains in Marsabit County have led to the washing away or partial destruction of roads and bridges. This has created significant challenges in reaching individuals stranded by floodwaters. In addition, key link roads in areas such as Kilifi and Bamburi, among others, have been submerged, rendering them impassable.

Implementing Green Infrastructure (GI) is a fundamental component of a resilient flood management strategy. This involves creating and preserving natural spaces such as wetlands, green roofs, and permeable pavements that can absorb and slow the flow of rainwater. These green spaces act as natural sponges, reducing the risk of flooding and providing additional benefits such as improved air quality and enhanced biodiversity. For example, Jia et al. (2015) stated that GI can effectively minimize flood risks by reducing stormwater infrastructure loads, enhancing rainfall infiltration, and reducing water runoff. Goncalves et al. (2018) similarly assessed how different GI combinations can lower flood risks in areas of high-intensity rainfall. Their results demonstrate that GI can, on average, reduce total flood volume between 30% and 75%. Kenya's unique ecosystem calls for a green infrastructure strategy that aligns with its specific needs. Drawing from the Delta Programme 2024, which emphasizes the importance of nature-based solutions, Kenya can invest in restoring and preserving its wetlands, natural drainage systems, and green belts.

The Kenya Red Cross Society reports that as of October 2023, over **120** people have died, **90,000** households have been displaced,

more than **17,600** acres of farmland have been lost, and **13,400** livestock have been lost.

Kenya, like many nations, grapples with the dual challenge of water pollution and recurrent flash floods. Another approach to addressing both issues is the restoration and maintenance of clean rivers as a tool for flood mitigation. With practical steps and strategies that can be employed to clean rivers, we enhance the capacity to manage and mitigate flooding. Through partnerships between environmental entities and county governments, existing environmental regulations could be strengthened and enforced as a critical step in preventing industrial pollution and illegal dumping into rivers. Regulatory bodies can collaborate with industries to ensure the proper

disposal of waste and incentivize environmentally friendly practices. Regular inspections and penalties for non-compliance can act as deterrents.

Despite these processes being long-term and requiring a high initial investment for construction, we can eventually effectively mitigate urban flooding and create sustainable environments. According to the World Bank, water resource degradation costs the country at least KES 3.3 billion (0.5% of the GDP) annually. With the rapid onset of global warming, floods will continue to increase in the future. This calls for a sustainable transition from flood control to flood resilience. By incorporating sustainable urban drainage systems, integrating green infrastructure, engaging with communities, and leveraging technology for early warning systems, we can create room for rivers and urban spaces that are not only resilient to floods but also sustainable and adaptable to the challenges of the 21st century.

Healthy and Safe Construction Practices

AAK initiated the Mulika Mjengo Project with the aim of bringing attention to the ever-growing problem of non-compliance with stipulated building and safety regulations in the Nairobi Metropolitan area. It also integrated the Je, Una Mjengo? campaign to emphasize the importance of engaging licensed professionals in the construction process to ensure safe and healthy structures are put up.

Improper construction practices have plagued various parts of the country, posing significant safety risks to both residents and adjacent structures. In 2018, the National Building Inspectorate (NBI) conducted an audit that revealed assessments of 14,895 buildings. Out of these, 723 were deemed extremely hazardous, 10,791 required either demolition or reinforcement before occupation, 1,217 were barely meeting code standards, and only 2,194 were registered as safe. The report further revealed that approximately 80% of construction projects do not involve the services of qualified professionals, exacerbating the situation. In light of this, AAK aims to bridge the gap between the public and relevant authorities to foster collaboration while advocating for the construction of sustainable and healthy buildings.

Empowering the public to take action, Mulika Mjengo encourages individuals to identify and report buildings with structural flaws, inadequate foundations, poor workmanship, and non-compliance with statutory requirements. The initiative has received great support, with reports streaming in through anonymous email submissions and the Mulika Mjengo platform on the AAK website. Out of the received reports, 86% are from Nairobi and 14% from Kiambu.

Of particular concern is the revelation that 71% of the reported cases were linked to residential projects, indicating a widespread issue compromising the safety and integrity of homes. Zoning and land use violations were prevalent among residential properties, as exemplified by a site in Ridgeways where the construction of multi-dwellings occurred in an area designated for single-dwellings. The site also exhibited regulatory non-compliance, lacking a site board, allegedly breaching the riparian reserve, and causing significant damage through deep excavations, rendering a neighbor's property entrance inaccessible.

In the South C area of Langata, another residential site breached prescribed setbacks and building

National Building Inspectorate (NBI) audit

14,895 buildings

723	10,791	1,217	2,194
extremely hazardous	demolition or reinforcement before occupation	barely met code standards	registered as safe

lines, compromising the necessary space between structures and property boundaries essential for safety, ventilation, and emergency service access. Additionally, the insufficient use of iron sheets as a protective barrier, coupled with a poorly secured debris net, resulted in the damage of a neighbor's solar panels due to falling debris. Further negligence of structural and safety regulations was observed at a Parklands site where construction works were ongoing despite stop orders. AAK's site inspection uncovered deep excavations, posing a great threat to adjacent buildings that had begun to show signs of distress, displaying cracks as a direct result of the absence of clear mitigation measures for the site's foundations.

The remaining 29% of reported cases were linked to social projects. Land use violations were cited at a construction site in Roysambu, where it was alleged that construction works were ongoing despite the receipt of stop orders from NCA due to the breach of building regulations. Another project of concern involved the construction of a footbridge along Ngong Road by the Kenya Urban Roads Authority (KURA). The extension of hoarding onto the road was posing a threat to both pedestrians and motorists. There was also a lack of dust netting to prevent potential harm to pedestrians and damage to motor vehicles from falling debris. Upon inspection, it was recommended that KURA expedite the process but, in the meantime, prioritize public safety and avert property damage. The Mulika Mjengo Initiative, spearheaded by AAK, has significantly contributed to the conversation surrounding the construction of safe and healthy buildings in a relatively short time frame since the initiative's launch. With continued support, the initiative holds the potential to reverse the alarming trend of construction malpractices and foster positive change in the industry.

Status of Green Buildings in Kenya

The Safari Green Building Index (SGBI) is an initiative of the Architectural Association of Kenya- Environmental Design Consultants Chapter (AAK- EDC) that aims to encourage professions in the built environment to design green buildings that minimize the demand for non-renewable resources and maximize the use of renewable building materials.

The tool is designed to aid in assessing projects in the built environment, to establish their environmental performance, and to provide leadership in sustainability through subsequent reduced energy loads and minimized ecological footprints and carbon emissions.

The provisions of this tool apply to:

1. All new building works;
2. Additions or extensions to existing buildings;
3. Building works that involve major retrofitting of existing buildings;
4. Building Conservation and Heritage works.

The tool, the first rating tool in East Africa, was developed to aid in assessing the environmental performance of East African built environment projects while providing sustainability leadership in energy loads, ecological footprints, and carbon emissions.

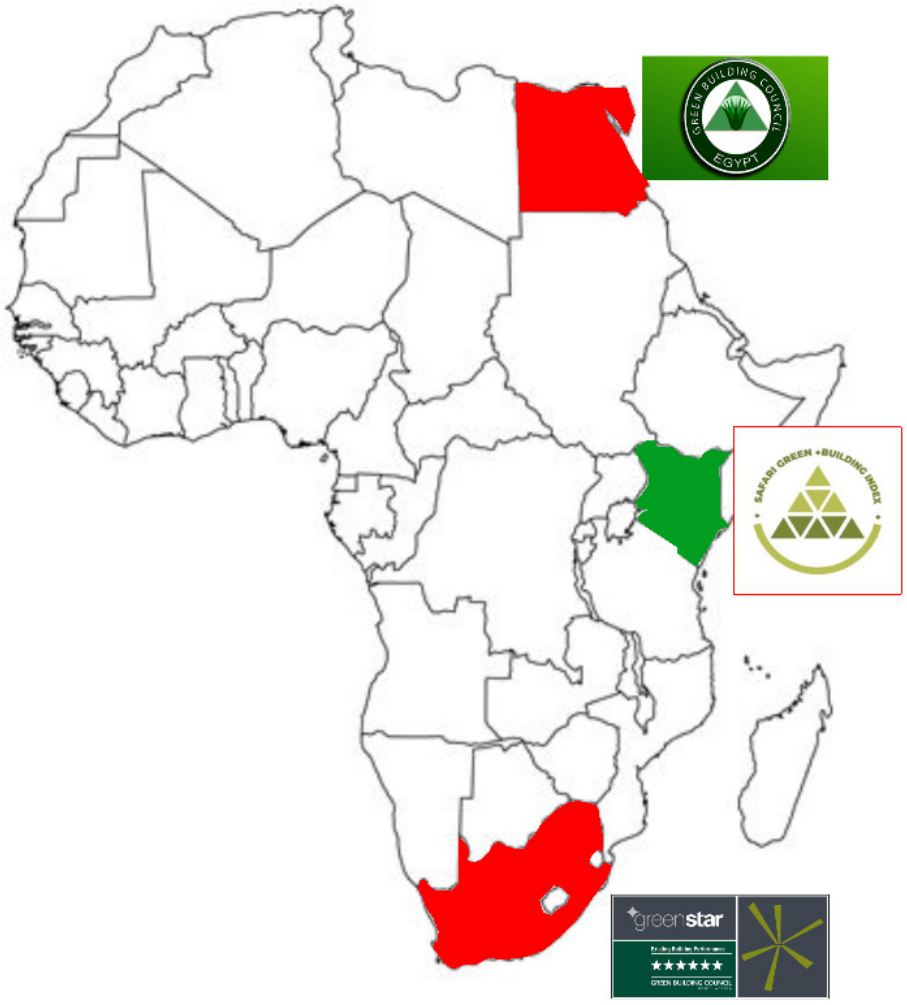


Figure 1: SGBI is the first rating tool in East Africa

Certification

The SGBI is a guiding and performance-oriented system where each criterion is assigned a number of points. Projects that observe the specified requirements shall be eligible for certification at the classification of Class A (80 to 100 points, PLATINUM), Class B (70 to 79 points, GOLD), Class C (60 to 69 points, SILVER), or Class D (50 to 59 points, BRONZE).

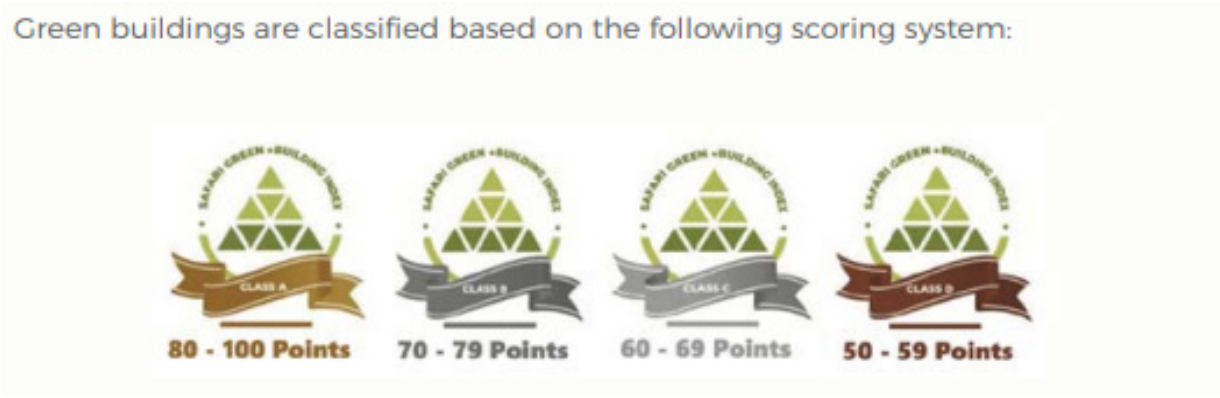


Figure 2: Green buildings are classified based on the following scoring system

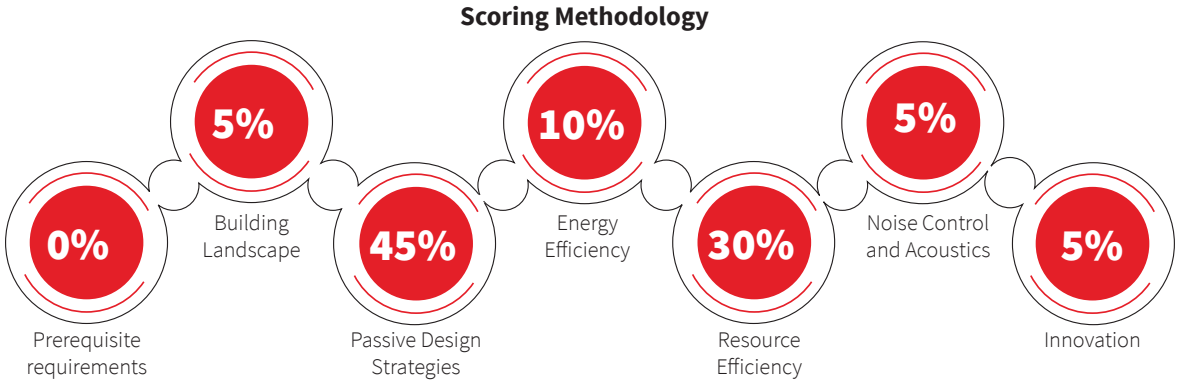


Figure 3: The scoring methodology

Status of the Tool

Significant progress has been achieved, with the tool now being a registered firm since December 2022. The tool, through the EDC chapter, has initiated strategic planning through collaborations with other organizations. Furthermore, it has begun establishing linkages with established entities, including universities and the Kenya Green Building Council, to build capacity before its official launch. SGBI is governed by a board of all AAK chapters. Further, it has four sub-committees: education and training, communication and advocacy, research committee, and strategy and business development

Status of Green Buildings in Kenya

Kenyaisslowlyjoiningtheleagueofcountriesemploying green or environmentally sustainable architecture in development. The move is largely informed by climate change and the dwindling of natural resources such as fossil fuels and water, resources which were once thought to be inexhaustible.

Several green building rating tools are already in use in Kenya. These include South African Green Star Africa, US LEED by individual accredited assessment professionals, and the International Finance Corporation's (IFC)'s Edge, all of which have been promoted by the Kenya Green Building Society (KGBS) since 2015.

In 2018, the Green Africa Foundation, USAID, UNDP, and the Government of Kenya relaunched the Green Mark Standard for Green Buildings, a modified version of the 2011 Green Africa Building Standard. As of November 2023, Kenya has just over 100 projects registered or already certified green buildings, most of which are found in the capital city, Nairobi. The SGBI

tool has ambitious plans to join the league and make the construction industry green in the East African context.

Challenges to Green Development in Kenya

In Kenya, over 80% of the developments are carried out without any professionals. This situation has greatly confronted sustainable development in the industry. Overall, the lack of awareness among building citizens has also created an industry that is unwilling to adopt sustainable construction.

The challenges must now motivate green building teams to step forward to create innovative new approaches and fight for incentives such as green funds. Stability in the built environment is possible using existing technological innovation. To be "Living," the building(s) must attain all of the challenge's environmentally crucial imperatives without exception.

SECTION 7 SOCIAL EQUITY AND INCLUSION

The City of Choice

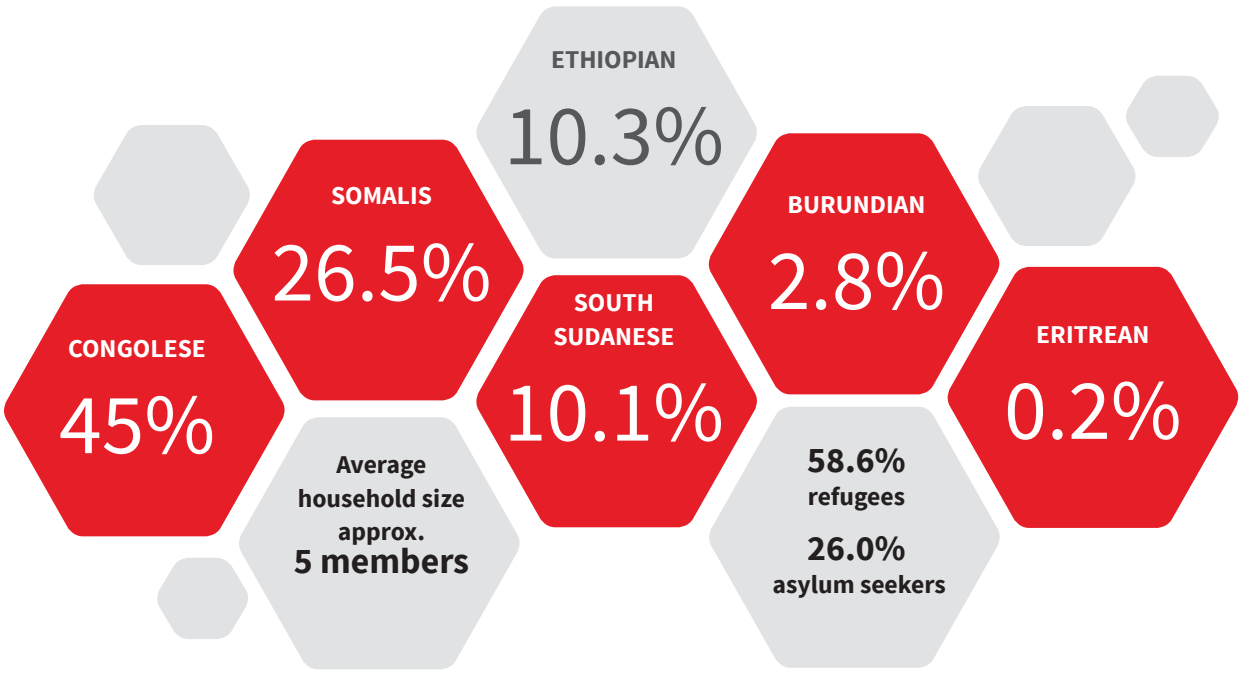
The Nairobi City County Government initiated the City of Choice Project to promote inclusive and equitable climate actions that address urban challenges of urban governance, mobility, and climate change affecting vulnerable communities such as migrants, refugees and Internally Displaced Persons (IDPs). The project seeks to empower these communities economically and socially to enhance their resilience to the impacts of climate change.

The baseline study was conducted in the Embakasi, Kamukunji, Starehe, and Ruaraka areas in 2023. The study revealed a majority of Congolese communities at 45%, followed by Somali at 26.5%, Ethiopian at 10.3%, South Sudanese at 10.1%, Burundian at 2.8%, and Eritrean at 0.2%.The average household size was approximately 5 members. It was noted that most of the households had multiple adults, with most of them being 18 years and older, while fewer members were in the 0-5 year age range. The age composition is crucial in developing targeted interventions that meet their age-specific needs.

According to the study, the majority of the sampled population, 58.6%, were refugees, while 26.0% were asylum seekers. Notably, 4.4% do not have legal documentation to be in the country, while 4.2% and 1.5% have acquired permanent and temporary residency, respectively. Migrants without legal documents face various challenges as they have limited access to basic services such as education and healthcare and opportunities such as employment. While the study found that a majority of households (55%) have access to education, 40% of the households either have some or none of their children attending school. 73% of the children are enrolled in public schools, 27% in local private schools, while some attended refugee/migrant community schools (2%) and others were homeschooled (2%)

In matters of health, migrants face challenges accessing healthcare due to low income, lack of medical insurance, registration barriers, and legislative and administrative obstacles. They also face the risk of detainment or repatriation, which often exacerbates their vulnerability. Notably, 60% of the respondents reported that they were experiencing health problems

Study conducted in the Embakasi, Kamukunji, Starehe, and Ruaraka areas in 2023



and challenges, and 93% of them sought healthcare, among whom 53% went to public health centers. While 70% received healthcare at a fee, 21% received healthcare for free, and 9% did not receive healthcare at all in the facilities they visited.

In terms of employment, 49% of the migrants had not engaged in any income-generating activities, potentially suggesting barriers to alternative means of sustenance. On the other hand, 45% are involved in an income-generating activity, where 69% operated their own account or held roles such as shopkeepers, taxi drivers, traders, carpenters, and barbers. Notably, only 2% of the migrants reported having a formal contract. This raises concerns about the rights and working conditions of the majority, who lack formal contracts.

The study went further to establish the level of perceived safety of the urban migrants, which found that 40% felt mostly safe while 48% felt either a little unsafe or not safe at all. Those who felt unsafe attributed this perception to their migrant status (46%), discrimination, and harassment by either host communities (16%) or their fellow migrants (10%). Other concerns that came up were crime (10%), armed groups (10%), and gender (3%), where women felt their gender was a source of insecurity.

67% of the migrants are not involved in any community groups, hinting at the existence of potential barriers to participation or possibly the choice of not being involved. On the other hand, 30% of the individuals are involved in community groups, with 66% of males and 59% of females belonging to mixed-gender groups. 75% of the migrants confirmed that they have spoken at a meeting in the past, and remarkably, 82% of them reported that they were taken into when decisions were made.

A majority of the migrants (62%) were not aware of government assistance programs, while only 23% knew about them. This implied a gap in communication and a lack of awareness, where most of the migrants miss out on opportunities that could improve their well-being. The assistance received includes non-food-based in-kind assistance (3%), cash-based assistance (11%), and supplementary feeding (5%).

68% of the migrants reported experiencing changes in weather patterns since the time they came to Kenya. This they categorized as more cold days at 84%; 8% reported increased rainfall, 10% decreased rainfall, and 7% drought. 57% of the migrants reported having developed health-related issues as a result of the weather patterns; 25% registered an impact on their income; 22% reported a reduction in food accessibility; and 5% agreed that poverty levels were heightened by this.

These findings underscored the need to develop targeted interventions that are tailored to the migrant community's unique needs. These include, but are not limited to, the following:

1. Create centralized help desks to conduct awareness campaigns, enhance school enrollment, and implement anti-discrimination educational programs for staff and the community.

2. Improve healthcare access for refugees and migrants by providing interpretation services and cultural training, increasing health literacy, simplifying administrative processes, subsidizing costs, tailoring healthcare systems to their needs, and establishing healthcare outposts near their communities.

3. Strengthen the economic stability and sustainability of urban refugees and migrants by supporting business ownership with collateral-free loans, ensuring fair working conditions that uphold labor rights, offering ongoing training and mentorship for sustained business success, and promoting environmentally sustainable green jobs in the community.

SECTION
8

ALTERNATIVE DISPUTE RESOLUTION IN THE BUILT ENVIRONMENT

AAK has actively participated in alternative dispute resolution by appointing arbitrators to address diverse disputes arising from construction projects. In 2023, the association experienced a notable 16% increase in the number of cases compared to the previous year. In 2022, AAK handled 26 arbitration cases, and in 2023, this number has risen to 31 in the period January to October. On the other hand, the Chartered Institute of Arbitrators (CIArb) handled 96 cases in 2023.

Geographic Distribution of Arbitration Cases

The geographical scope of arbitration management has grown over the years. The active involvement in addressing cases across the country demonstrates an expansion in scale from 2022, when cases were from seven counties, to 2023, when the reach extended to nine counties. The majority of the cases presented were associated with projects in Nairobi, constituting 65% of the total cases in both 2022 and 2023.

In 2022, the distribution of cases in other parts of the county beyond Nairobi included 8% in Mombasa and Kajiado, respectively. However, in 2023, there has been a shift, with Kiambu emerging as the second-highest contributor at 14%, following Nairobi.

Geographical Distribution of Arbitration Cases

Counties	2022	2023
Nairobi	65%	65%
Mombasa	8%	3%
Kiambu	4%	14%
Kajiado	8%	3%
Tharaka Nithi	4%	-
Kirinyaga	4%	-
Kwale	8%	-
Busia	-	3%
Kakamega	-	3%
Makueni	-	3%
Meru	-	3%
Murang'a	-	3%

CIArb

commercial projects,
41%

residential projects
31%

Project Categories

The majority of cases managed in both 2022 and 2023 were related to residential projects, showing an 8% increase in 2023. Commercial projects, which constituted 27% of the cases in 2022, experienced a slight decline to 19% in 2023. On the contrary, CIArb handled more cases that were commercial projects (41%) followed by residential projects (31%). Additionally, there was a noteworthy expansion in the spectrum of projects handled by AAK in 2023, with the inclusion of mixed-use and special-purpose developments compared to 2022.

Categories of Projects

Project	AAK		CIArb
	2022	2023	2023
Residential	50%	58%	31%
Commercial	27%	19%	41%
Public	23%	10%	-
Mixed-use	-	10%	-
Special-purpose	-	3%	-
Infrastructure	-	-	27%

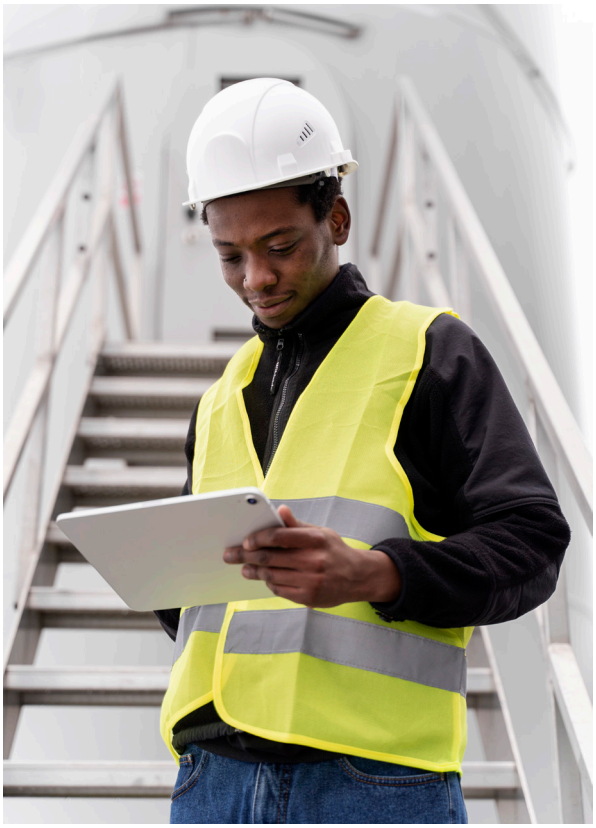
Types of Disputes Handled

The disputes primarily presented for resolution pertained to payment, design, and contractual matters. However, in 2022, a more diverse array of cases was addressed compared to 2023, encompassing issues such as defective work disputes and equipment and property disputes. In both 2022 and 2023, payment disputes constituted a significant portion, accounting for 65% and 91% of the cases, respectively. This resonated with CIArb's records, which show 72% of the disputes are on payments, followed by 23% on contractual disputes and 5% on design or construction defects.

SECTION 9

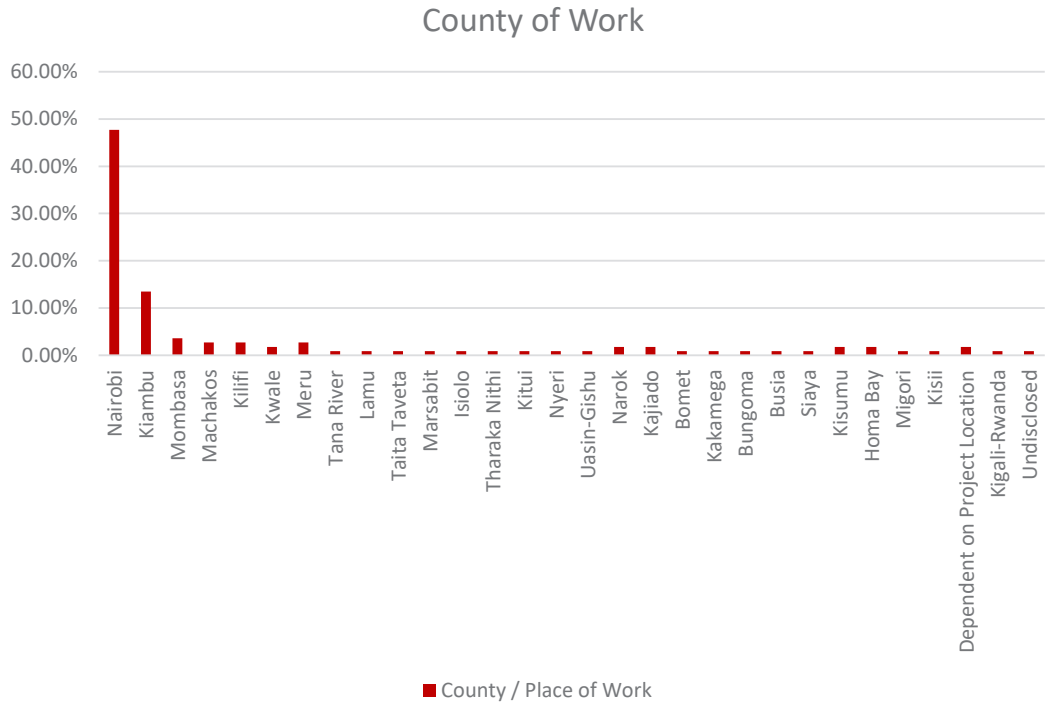
EMERGING PROFESSIONS

Status on the Proposed BORAQS Practitioners Bill 2023: Construction Project Managers Addition to the Board



The Architects & Quantity Surveyors Act, Cap 525 laws of Kenya established the Board of Registration of Architects & Quantity Surveyors as a body corporate to govern, among other things, the practice of architecture and quantity surveying in Kenya. The proposed Architectural and Quantity Surveying Practitioners Bill, 2023, has been produced by the State Department for Public Works. It replaces and repeals the current Cap 525 in order to bring it into compliance with the new trends in the practice of architecture and quantity surveying.

The proposed regulation significantly broadens the regulatory scope to cover additional specialties in the built environment in addition to the conventional disciplines of quantity surveyors and architects; Construction Project Managers, Landscape Architects, Interior Designers, and Technicians.



Distribution of Landscape Architecture Professionals per County

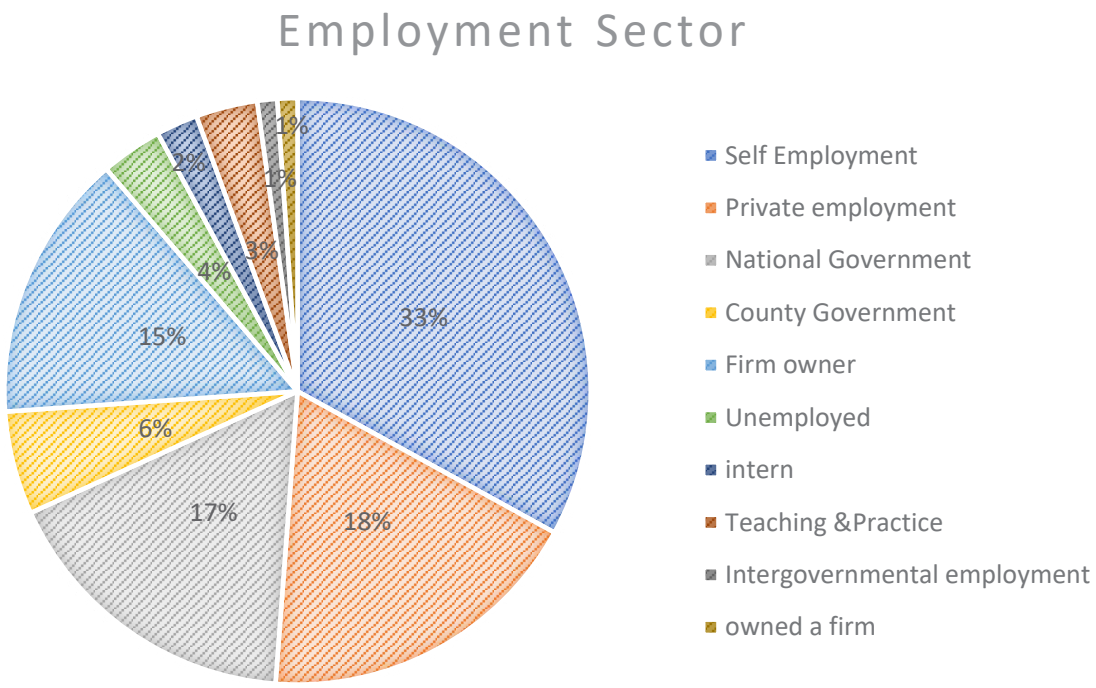
80 Landscape Architects professionals took part in research conducted by the AAK Landscape Architects Chapter in November 2023. Out of all the respondents, the following data was extracted, as indicated in the Google Form questionnaire:

Work Location per County

Out of the 47 counties in Kenya, findings indicated that Landscape Architects are distributed in only 27 counties. This makes up a cumulative of 57.4%. Others stated that their place of work was dependent on the location of the project, making up a cumulative total of 2.6%, and some respondents indicated that their place of work is outside the country but within the East African region of Kigali, Rwanda, making up 1.3% of the total geographic distribution. The findings show that the majority of landscape architects are located in Nairobi County, comprising 66.3%, followed by Kiambu County with 18.8%, and Mombasa County with 5%. Machakos and Kilifi County counties both rank fourth, each representing 3.8%. Machakos and Kilifi County counties share the fourth position, each accounting for 3.8%. Notably, some professionals work in multiple counties.

Nature of Employment

The majority of professionals are self-employed, making up 37.7%. The private sector is the second largest employer, accounting for 20.8%, and the third rank is the national government at 19.5%.



Number of Firm Owners and Employees in Private Firms

Only 35% of the professionals are firm owners. Most of the respondents indicated that their firms had employed less than four employees indicating that most firms are relatively small. The highest number of employees recorded was 18-25 at 4%, while 4% noted that employment is based on a project basis.

Years of Experience

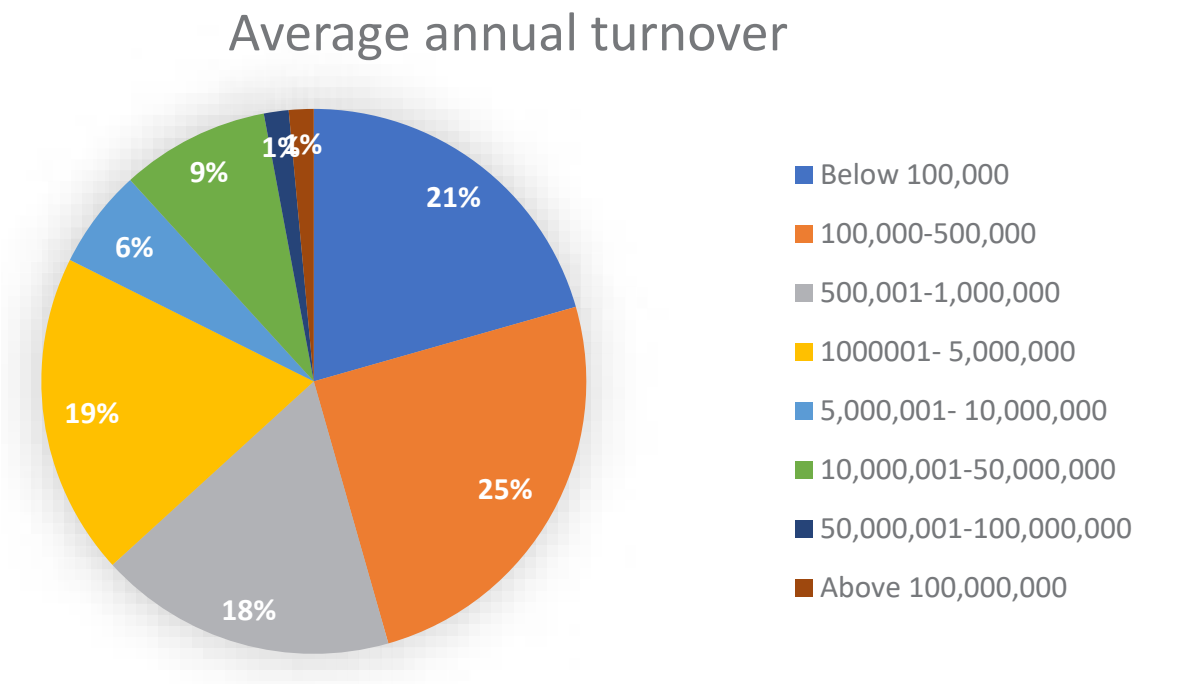
Out of the 78 responses received when asked about years of experience, 29.5% of the respondents had experience of one to four years, 24.4% had experience of five to eight years, and thirteen to sixteen years ranked third at 23.1%. The highest recorded years of experience were more than 20 years, at 1%.

Scope of Projects Handled in 2023

The largest scope of works was domiciled in residential landscapes, recording 27%, followed closely by recreational at 15%, commercial at 14%, institutional, mixed-use, and educational at 10% each, and streetscape designs at 9%. The chart below illustrates how the respondents covered the overall distribution of the project scope.

Average Annual Turnover for the Year 2023

The majority of the firm owners had an estimated annual turnover of between KES 100,000 and 500,000 at 25%, and few responses indicated an annual turnover of between KES 5,000,001 and 10,000,000 at 5.9%, as indicated in the chart below.



Opinions on the Inclusion of Landscape Architects in Approval Processes at the County Level

97% of Landscape Architects agreed that Landscape design should be included in the project development, applications, and approval process at the county level.

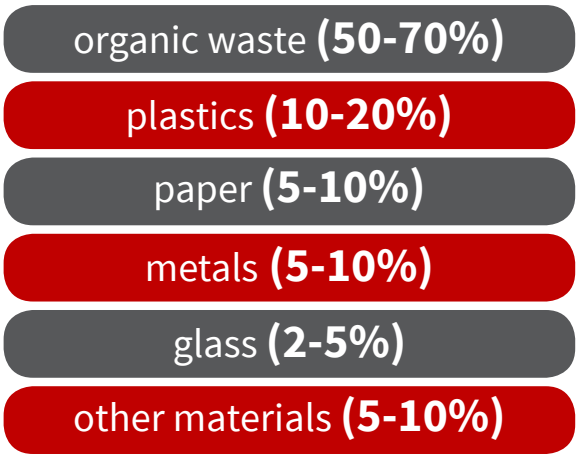
SECTION 10

CHAPTER CONTRIBUTIONS

Waste Management

According to the National Sustainable Waste Management Policy 2021, Kenya generates about 22,000 tons of waste per day, of which 60% is generated in urban areas. The composition of waste varies by region but generally consists of organic waste (50-70%), plastics (10-20%), paper (5-10%), metals (5-10%), glass (2-5%), and other materials (5-10%). The per capita waste generation rate is estimated at 0.5 kg/day in rural areas and 0.8 kg/day in urban areas. However, these rates are expected to increase with population growth, urbanization, industrialization, and changing consumption patterns.

60% is generated in urban areas



The Future of Interior Design: How AI is poised to transform the Industry in Kenya

Interior design is an ever-evolving industry that constantly seeks innovative ways to enhance spaces and improve the quality of life for individuals. In recent years, the integration of Artificial Intelligence (AI) has begun to revolutionize the interior design industry, offering new possibilities and efficiencies. This article explores the potential impact of AI on the Interior Design industry in Kenya, highlighting the opportunities and challenges that come with this technological advancement.

Artificial intelligence has the potential to significantly transform the Interior Design industry in Kenya. AI-powered tools can streamline various aspects of the design process, from conceptualization to implementation. For instance, AI algorithms can analyze vast amounts of data to identify trends in design preferences, helping designers make informed decisions about color schemes, furniture styles, and spatial arrangements. Additionally, AI can facilitate Virtual Reality (VR) and Augmented Reality (AR) experiences, allowing Clients to visualize and interact with design concepts in a more immersive manner.

Furthermore, AI-driven software can automate repetitive tasks such as space planning, material selection, and cost estimation, thereby saving time and reducing human error. This automation can also lead to more efficient project management and resource allocation, ultimately improving the overall workflow and productivity within the industry.

Special Economic Zones in Kenya

A Special Economic Zone (SEZ) is an area in a country that is designed to generate positive economic growth. SEZs are meant to promote growth in the local market without a specific focus on exports. SEZs are invariably subject to different and more favorable economic regulations compared to other regions in the same country, including tax incentives and lower tariffs. The first case of a Special Economic Zone emerged

at Shannon Airport in Clare, Ireland in the late 1950s, which was designed to attract foreign investment from multinational corporations. In the 1970s, SEZs were established in Latin American and East Asian countries. According to the United Nations Conference on Trade and Development, there were more than 7,000 SEZs globally as of 2022, with China registering the most successful ones.

The main advantage of SEZs is the increase in export levels for the implementing country and other countries that supply it with intermediate products. Nonetheless, countries may also abuse the system and use it to retain protectionist barriers in the form of taxes and fees. Equally, some SEZs have also recorded a high level of bureaucracy resulting from regulatory requirements and compliance, consequently funneling money away from the system and reducing their efficiency.

The Perceptual Dimension and Urban Design; Kenyan Context

The perceptual dimension in urban design is rooted in understanding the diverse ways in which individuals perceive, experience, and interpret their built surroundings. Urban design is the act of intentionally making changes to the physical landscape to create a liveable, functional, and sustainable environment for all its urban dwellers. Perceptual dimensions and urban design are closely linked, as the design of urban spaces can influence how people feel, behave, and interact with them. Urban design in Kenya has been shaped by a multitude of influences, including colonial history, post-independence development, rapid urbanization, and globalization. With a diverse urban landscape encompassing bustling Nairobi, vibrant Mombasa, historic Lamu, and contemporary Tatu City, there is a plethora of distinctive identities, issues, and potentials for urban design to be explored. By deepening their understanding of how people perceive and interact with their urban surroundings, urban professionals have the power to create spaces that are responsive, inclusive, and adaptable to the diverse needs and aspirations of urban dwellers.

Urbanization in Kenya

Urbanization is a global phenomenon, but it is particularly rapid in Africa. According to UN-HABITAT, the number of cities in Africa has more than doubled in the last three decades, and the number of urban dwellers has more than doubled as well, from 202 million to 563 million. Kenya is no exception to this trend. The average rate of urbanization in Kenya is 3.7 per cent, compared to Africa's 3.2 per cent. In absolute terms, the urban population in Kenya has more than doubled from approximately 6.7 million in 2002 to approximately 15.7 million in 2022. This represents 29 percent of Kenya's total population. In order to harness the opportunities of urbanization while mitigating its challenges, Kenya needs to adopt a comprehensive approach to urban planning and development by Investing in infrastructure development, Providing serviced land, Improving housing conditions, Addressing the challenges of informal settlements, and Strengthening the institutional framework for governing urban areas:

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