AAK Urban Thinkers Campus 9.0

Holistic Housing Solutions for Inclusive and Sustainable Urban Futures

30th and 31st October 2024

Table of Contents

1.0 | BACKGROUND

300 Day One Attendees

13 Speakers

170 Day Two Attendees

1.1 Introduction

The Urban Thinkers Campus 9.0 brought together industry professionals, government officials, academia, and students to explore comprehensive housing solutions that will ultimately influence inclusivity and sustainable urban development.

The campus was held in collaboration with the Department of Urban and Regional Planning (DURP) of the University of Nairobi during the 3rd Annual Urban and Regional Planning Conference. It tackled climate change, addressing inequality in urban settings, transforming informal settlements, and providing stable housing solutions in line with the national and global sustainable housing agenda. As Kenya continues to experience rapid urban growth, there is an urgent need for resilient solutions that promote climate justice and sustainability by reducing and mitigating natural disasters.

Holistic housing should be comprehensively approached by ensuring that the needs of the communities are assessed and taken into account. This can be successfully achieved by ensuring that housing is easily accessible to all, is affordable, promotes community integration and social interaction, is safe, and reduces environmental impacts and disasters. All these considerations in the planning of cities aid in ensuring that cities are inclusive, healthy and sustainable.

The campus was intended to provide a platform for dialogue in relation to the journey towards resilient and safe neighborhoods which is aligned with the Sustainable Development Goals, particularly, SDG 9 on industry, innovation and infrastructure through building resilient infrastructure to promote inclusive and sustainable industrialization and foster innovation, SDG 11 on sustainable cities and communities and SDG 13 on Climate Action.

1.2 Objectives

The primary objectives of the campus include:

i) Exploring the latest advancements in technology, Artificial Intelligence, data analytics and how to leverage these tools in enhancing city designs, planning and informing decision making.

ii) Building collaborative relationships, coordination and partnerships within our various professions and with communities and other stakeholders.

iii) Developing appropriate policies, strategies and measures necessary for achieving urban resilience, especially in their world countries.

1.3 Keynote Speakers:

Florence Nyole
President, Architectural Association of Kenya (AAK)

Arch. Tsalwa Waburiri
President East Africa Institute of Architects (EAIA) Chairperson of the AAK Architects Chapter

Dr. Arthur Munyua Mwaura
Chairman, Department of Urban and Regional Planning, University of Nairobi

Dr. Plan.Karisa Dadu
Urban Planning, Development and Management Subcommittee Chair, Taskforce on Re-Engineering and Transformation of Urban Development

Aside from this, the campus entailed one virtual session and two physical sessions with 13 different speakers.

Total number of attendees:
Day 1: approximately 300 attendees
Day 2: Approximately 170 attendees

2.0|UTC DAY ONE

LOCATION: X SPACE

Youth, Climate Action, and the Housing Agenda X Space

Moderator:
Arch. Tsalwa Waburiri
President EAIA & Chair- AAK Architects Chapter

Rapporteur:
Mr. Alex Otieno
Research and Advocacy, AAK

Panelists:
Mr. Naftal Nyabuto
CEO, M-Zawadi Group
Arch. Etta Madete
Founding Director, Zawadi Homes Kenya
Mr. Dennis Wakaba
Consultant, Sustainable Transport & E-Mobility

2.1 Expanding Access to Affordable Housing Solutions through Accessible Financing
Mr. Naftal Nyabuto, CEO, mZawadi Group

Young people in Kenya are faced with limited access to affordable housing options, primarily due to restricted financing. The session underscored the importance of adopting incremental housing solutions tailored to the diverse needs of Kenyan communities such as Nyumba Mkononi. The platform offers innovative construction solutions, including incremental housing options, that cater to a variety of needs.

Expanding access to such financing opportunities, especially for young aspiring developers is paramount in promoting their access to affordable construction materials for their future projects. The integration of blockchain technology as a form of secure financing can ensure the security of transactions.

The home forms the foundation of a city

2.2 Housing beyond Shelter Provision
Mr. Dennis Wakaba, Consultant - Sustainable Transport & E-mobility

The connection between clean mobility solutions and the housing agenda was explored. By advocating for the integration of e-mobility into sustainable housing, Kenya is setting the pace towards climate change mitigation and adaptation, particularly in the East African region. The recent rollout of electric vehicles (EVs) into the ride-hailing industry by the youth marks significant progress. In addition, they're now capable of charging at home via grid or solar power, and some also serve as backup power providers through bi-directional chargers utilizing vehicle-to-home technology.

Innovations such as net metering and microgrids have enabled energy sharing between homes. Other notable resolutions include expanding on-street charging stations, policy support for zero-emission zones, and promoting affordable financing for EVs. Young entrepreneurs are at the forefront of advocating for sustainable mobility, with new micro-mobility solutions such as e-bikes and battery-swapping stations paving the way for a cleaner, more

2.3 Translating Affordable Housing Concepts and Designs into Affordable Homes
Arch. Etta Madete, Founding Director Zima Homes Kenya

The home is the foundation of a city, playing a crucial role in shaping land values, social and physical infrastructure, and employment opportunities. Zima Homes Kenya was recognized as a key player in this, having built 140 homes in Wangige, Kiambu County, with two blocks set to be ready for occupancy by December 2024.

Housing is a fundamental human right, a key factor in shaping identity, and an essential asset for placemaking and sustainable development. Zima Homes also received significant praise for collaborating with e-mobility service providers and offering rent-to-own schemes, empowering the youth to become homeowners and actively contributing to sustainable urban development.

3.0|UTC DAY TWO

LOCATION: A.D.D. (UNIVERSITY OF NAIROBI)

Safe and Resilient Neighborhoods – Crime Prevention and Disaster Preparedness

Moderator:
Plan. Cyrus Mbisi
Chairperson, Town Planners Chapter

Rapporteur:
Meshack Ochieng Omondi

Panelists:
Plan. Karisa Dadu
Taskforce on Re-Engineering and Transformation of Urban Development in Kenya
Mr. Humphrey Otieno
Safer Nairobi Initiative
Ms. Charity Mwangi
Urban Nature Based Solutions Associate - World Resources Institute
Ms. Beatrice Hati
Doctoral Researcher, International Institute of Social Studies (ISS) of Erasmus University Rotterdam
Ms. Maxwell Ngayu
Kilimani Project Foundation Hackathon Project Presenter

3.1 Welcoming Remarks

Opening Remarks:
AAK President,
Arch. Florence Nyole

This year's theme aligns with Kenya's growing urbanization needs and we recognize the importance of connecting housing with essential infrastructure. As cities expand, we are faced with the challenge of ensuring that housing solutions are affordable, resilient, climate-responsive, and socially inclusive. The UTC serves as a unique platform for collaboration among built environment professionals, policy makers, students and the community members to explore actionable strategies for sustainable urban development.

Convenor's Remarks
Plan. Christine Muchiri,
Convenor, UTC 9.0 & Vice Chair, Town Planners Chapter

The theme, *Holistic Housing Solutions for Inclusive and Sustainable Urban Futures,* addresses Kenya's rapid urbanization, projected to reach 44 million urban residents by 2050, highlighting the need for resilient neighborhoods, integrated planning, and climate-adaptive solutions. The discussions explore inclusive development, particularly in informal settlements, innovative grassroots efforts, and the transformative potential of smart cities. Let us engage in shaping sustainable urban policies, fostering collaboration, and driving action for a livable, connected future. Thank you for your participation and expertise.

Remarks by East Africa Institute of Architects
(EAIA) President,
Arch. Tsalwa Waburiri

Every person has a role to play in ensuring that we achieve sustainable and holistic housing solutions for inclusive and sustainable urban design therefore we should not underestimate the need and the impact of collaborations among different professionals in the construction industry.
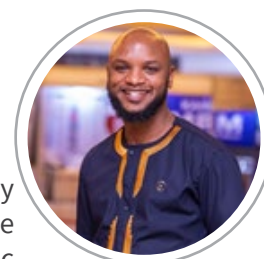
### 1. Collaborative Efforts on the Nairobi River Regeneration

The Nairobi river basin is a vital blue-green network that shapes the region's land-use economics. There is a dire need for collaboration and advocacy for stronger ties with professionals and academia. This would be integral in achieving the commission's mandate towards revitalizing the Nairobi River.

3.2. The Role of Artificial Intelligence (AI) in promoting Safe and Resilient Neighborhoods
Presentation by Maxwell Ngayu KPF Hackathon Project Presenter

AI was widely recognized as fundamental in the future of sustainable cities and communities. KiliSpeaks, a software that leverages AI to address various urban issues, was praised for its efforts as a neighbourhood watch, and in promoting the efficient delivery of emergency services, coordination of emergency responses, waste collection and mitigating natural disasters. While still under development, it was envisioned as a platform for disseminating information to local community members, with planned future integrations with mobile applications such as WhatsApp.
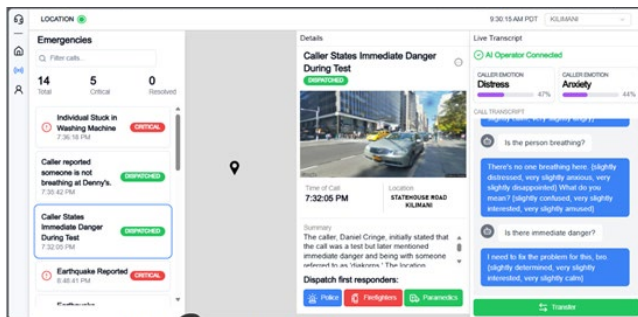
Source: Maxwell Ngayu's kiliSpeaks Presentation

3.3 Panel discussion: Safe and Resilient Neighborhoods, Crime Prevention and Disaster Preparedness

Crime prevention and disaster preparedness should be prioritized through the activation of public spaces, regular safety audits, and coordinated efforts between the government and police to ensure inclusive safety. Disaster preparedness can be strengthened by implementing data-driven policies, conducting flood-risk mapping, and involving communities, particularly in informal settlements. Resilient urban planning should be emphasized across all phases of development, construction, occupation, and demolition to mitigate the impacts of flooding.

Additionally, fostering disaster governance is essential, incorporating frugal innovation, addressing the needs of urban youth, and integrating informal governance systems into planning processes. Energy access should also be improved through initiatives such as electric cooking systems, in line with the Kenya National Electric Cooking Strategy. Lastly, cultural beliefs must be recognized and incorporated into disaster response planning to ensure inclusive and effective disaster management strategies.

Informal settlements and Disaster Risk Management

Current disaster risk factors such as fires and floods have been exacerbated by the fact that development in Nairobi usually precedes planning which has led to an array of problems. Informal settlements are often not considered as legal settlements therefore creating room for radical solutions to disasters such as the demolition of housing units constructed in Riparian Lands and other restricted areas.

These demolitions are often unjust to vulnerable communities who often have nowhere else to relocate to therefore the need to understand the coping mechanisms of urban poor communities during disasters to establish a holistic disaster management approach and understand the difference between resilience and coping mechanisms.

Integrating Nature-Based Solutions in River Regeneration: A Case for Nairobi River

Ms. Charity from the World Resources Institute highlighted the urgent need for integrated, nature-based solutions to restore the Nairobi River and revitalize surrounding communities. Reflecting on the tragic May 2024 floods that claimed over 200 lives, she emphasized the importance of holistic urban planning to create cities that not only function efficiently but also harmonize with natural ecosystems. The expansion of industries and informal settlements along Nairobi's rivers has created severe health and environmental issues, especially in areas like Mukuru. Contaminants from industrial waste and inadequate sanitation in densely populated settlements contribute to significant health risks, such as stunted growth in children and pervasive air pollution. These informal settlements also face complex land tenure issues and lack adequate infrastructure, with limited space making it difficult to implement improvements.

We need to incorporate a nature-based approach to river regeneration—one that integrates sustainable urban design, mitigates flood risks, and addresses the environmental health impacts of urban encroachment. Through collaborative design studios and partnerships, Nairobi can work towards restoring the Nairobi River as a green corridor, fostering resilience and sustainability for its communities.

Is Nairobi Safe? A Study by Safer Nairobi Initiatives

According to a 2024 study conducted by the Safer Nairobi Initiative, 95% of Nairobi residents perceive the city as

85%

of Nairobi residents avoid the central business district past 5 pm

unsafe, with 85% avoiding the central business district past 5 p.m. and 98% reporting experiences with crime or violence. In response, the Initiative was established to develop a citywide crime prevention strategy focused on vulnerable groups, including youth, children, people with disabilities, and migrants.

The initiative recommends analyzing crime patterns in specific areas, improving safety through design, and adapting safety policies to be more community-centered. Mr. Humphrey Otieno of the Initiative further highlighted the need for capacity-building in informal settlements, where 63% of Nairobi's population resides without adequate infrastructure, such as housing, sanitation, roads, and access to essential services. Strengthening support in these underserved areas is critical to enhancing safety and resilience.

How then, can we make cities safe?

Strategies that can be implemented in reducing and preventing crime in cities include:
- Turning public places into active spaces to encourage use and interaction.
- Conducting a safety audit from planning and promoting crime prevention through environmental design e.g., bus stages, neighborhoods, squares etc.
- Embracing participatory planning to design the spaces, led by the community and CBOs.
- By thinking long term instead of short term on how

to take crime prevention to the next level, considering the cycle of politics since the politician's priorities keep shifting.
- Lighting up of open spaces/ places at night
- Frequent garbage collection to avoid the creation of unusable places and
- Activation of pockets of spaces by encouraging artists to take them up among many others

Call to Action on Crime Prevention, Safety and Disaster Management
- There's a need to identify the role that everyone has to play including professionals, government, citizens etc. in safety and disaster management practices.
- There is a crucial need to develop a petty crimes handbook for the country.
- There is a need to avoid discrimination and profiling of individuals due to appearance e.g., of people with dreadlocks to prevent extrajudicial killings, and bodies being dumped along rivers and other public spaces.
- The youth should be involved in activities such as Kazi mtaani to keep them engaged.
- The conversation of safety and resilience in disaster-prone areas should be broad and all-inclusive.
- Researchers are encouraged to Join LEARN - A research network that brings together industry practice and Academic "pracademics
- Emphasis should be placed on data & Knowledge to ensure that they translate into actionable insights.
- The planning process should focus on society and culture

4.0 | SESSION THREE

Integrated Urban Planning and Development– Connecting Housing with Infrastructure

Moderator:
Engineer Kennedy Kiunga

Rapporteur:
Olivanta Mwenda

Panelists:
Rehema Kabare
GoDown Urban
Kilion Nyambuga
Data and Planning Manager at Slum Dwellers International Kenya (SDI Kenya)
Jayne Ngugi
Communications Consultant and Secretary Link Road Residents Association
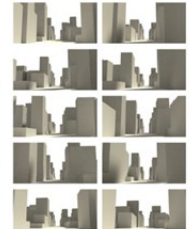**Keziah Ojal**
Community Associate at KDI Kenya

time leak detection and CCTV installations aimed at engaging residents in the maintenance and security of infrastructure are integral in supporting the sustainability of community infrastructure. Insights on implementing gender-sensitive approaches promoted by the Her Cities Toolkit were also identified as paramount in designing safe, inclusive, and accessible urban spaces.

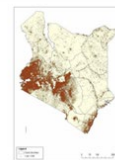*Source: Plan. Karisa Dadu presentation on the Taskforce for Re-engineering and Transformation of Urban Development in Kenya*

4.1 Task-force on Re-Engineering and Transformation of Urban Development in Kenya
Presented by Architect-Planner Karisa Dadu

Kenya's urban development needs to be re-engineered with balanced urbanization, smart cities, and financially self-sustaining urbanism while aligning planning with legal mandates, fostering transparency and accountability, and eradicating barriers to sustainable development. Innovations such as real-

4.2 Integrated and Inclusive Infrastructure Framework(3IF)
Presentation by Keziah Ojal

The 3iF Framework focuses on the community to promote inclusivity and sustainable development, particularly in informal settlements such as Kibera. It promotes collaboration and equity in upgrading infrastructure for vulnerable populations. Other slum-upgrading initiatives such as the Mukuru Special Planning Area (SPA) were largely praised for promoting community-driven planning that prioritizes safety and sanitation and minimizes displacement.

nairobi - kibera

before   after

Source: 3iF Presentation by Keziah Ojal

4.3 Panel Discussion

Approaches to Slum Upgrading Projects: A Case of the SDI

Kilion Nyambuga

SDI (Slum Dwellers International) has been instrumental in upgrading informal settlements while ensuring vulnerable populations are not unfairly displaced. Their approaches include assisting with secondary data verification and agenda setting, building movements by organizing communities to advocate for their issues, facilitating peer-to-peer learning among different communities, and partnering with various organizations to achieve sustainable solutions.

One of SDI's notable projects is the Mukuru Spatial Planning Area Project in Nairobi, covering the settlements of Mukuru Kwa Reuben, Mukuru Kwa Njenga, and Viwandani. Covering 689 acres and home to over 100,000 people, the project highlighted key challenges such as poor infrastructure, inadequate housing, and public health risks, with sanitation being a critical issue.

Research revealed that approximately 67 people shared a single toilet, posing safety risks, particularly for women accessing toilets at night. SDI led a community-driven campaign, supported by women in Mukuru, to petition the Ministry of Lands and Health and succeeded in having Mukuru declared a Special Planning Area in 2017. Collaborating with 44 organizations, they developed a plan that lowered conventional planning standards, such as reducing road widths to ensure functional infrastructure while minimizing displacement. The project demonstrated the importance of inclusive, data-driven planning and community engagement in informal settlement upgrades.

Integrating Gender-Sensitive Approaches in Urban Planning

To ensure housing and public spaces are safe, accessible, and inclusive, integrating gender-sensitive approaches like those in the Her City Toolkit is essential. This involves understanding gender-specific needs through a people-centric approach and innovative methods, such as using Minecraft to visualize ideas and creating inclusive meetings for diverse participation. These strategies emphasize collaboration and creativity to design urban spaces that address the unique needs of all, especially women and marginalized groups.

Ways in Which Communities Can Collectively Enhance Infrastructure Sustainability

1. **Community Champions:** Identify local leaders to safeguard infrastructure, ensuring long-term benefits for all residents.
2. **Road Network Planning:** Develop and secure road networks collectively, preventing unauthorized work and preserving service lanes.
3. **Sustainable Infrastructure:** Integrate service ducts for essential systems like sewers and promote active resident involvement in area greening.
4. **Collaborative Advocacy:** Encourage community cooperation, lobbying, and advocacy for shared infrastructure goals.
5. **Enhanced Security:** Install CCTV surveillance and implement a community-wide security policy for safer neighborhoods.

The project demonstrated the importance of inclusive, data-driven planning and community engagement in informal settlement upgrades.

Conclusion

There was a consensus that resilient, climate-conscious planning is vital to foster homes that are beyond just shelter provision but rather safe spaces that enhance connectivity and promote sustainable development. Initiatives such as Nyumba Mkononi by the M-Zawadi Group and the KiliSpeaks app exemplify how innovation can empower communities while bridging the gap between technology and sustainable urban development, climate mitigation and adaptation, and the housing agenda in an integrated manner. As cities grow, a holistic and integrated approach to urban planning ensures that every home is supported by sustainable physical and social infrastructure, equitable service provision, and climate-responsive solutions that future generations can sustainably rely on.

UTC 9.0 Call to Action

We call you to join us in shaping a future where every home is built on the foundation of sustainable, resilient, and inclusive planning. Whether you're a professional, student, or community member, your voice matters in creating spaces where we can all live, work, and thrive. Be a part of the change, advocate for thoughtful planning, connect with initiatives such as Nyumba Mkononi and KiliSpeaks, and champion resilient neighborhoods.

Furthermore, let's harness the potential of AI in building safe, inclusive, and resilient neighborhoods that stand strong in the face of climate change and associated disasters, foster a genuine transformation in the housing agenda, and create cities that are not only livable but also adaptable. Together, let's build homes that support vibrant, sustainable communities.

UTC Group Photo

Final anecdote

When we start with thoughtful planning, we build not just homes but the foundations of resilient communities for tomorrow.
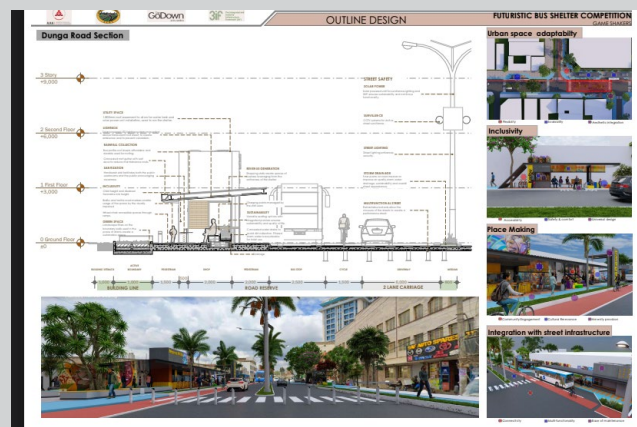
4.0|ANNEXES

1.0 | Speaker presentations

[Arch. Florence Nyole- AAK President Opening remarks](#)

[Taskforce on Re-engineering and Transformation of Urban Development in Kenya](#)- **Plan. Charles Dadu Karisa**

[kiliSpeaks Presentation](#)- **Mr. Maxwell Ngayu**

[3iF Framework Presentation](#)- **Ms. Keziah Ojal**

2.0 | KURA Futuristic Bus Shelter Design Competition (Winning Designs)

Winners - Game Shakers

AAK-KURA Futuristic Bus Shelters Design Finalists

Winners - Game Shakers

Stood out for its comprehensive analysis and alignment with design requirements, incorporating essential amenities such as toilets, shops, green roofs, and ramps. The design presents three adaptable typologies, showcasing a modular approach that emphasizes flexibility and the integration of sustainable materials. Jurors praised the innovative transformation of urban streets into multi-modal transportation nodes, highlighting the simplicity of the concept amidst its complex execution. The focus on user-friendliness, sustainability, and potential for scalability further underscores its potential impact. Overall, Game Shakers demonstrated advanced ideas that prioritize both functionality and environmental considerations, setting a high standard for future designs.
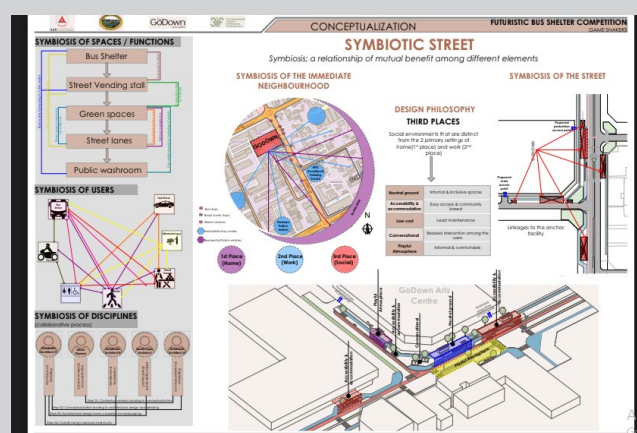

Winners - Game Shakers

1st Runner Up - Mtaa Sync

Their elegant design proposals utilize timber and steel, featuring adjustable vending stalls that enhance urban interaction. The standout first module particularly captured attention, with its potential for scalability and effective prioritization of non-motorized transport (NMT) traffic.
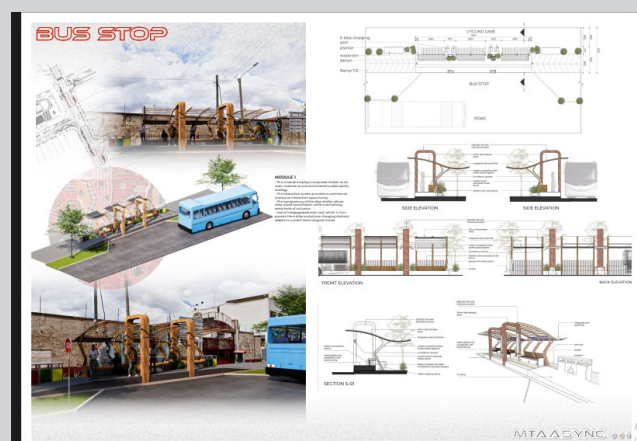

1st Runner Up - Mtaa Sync
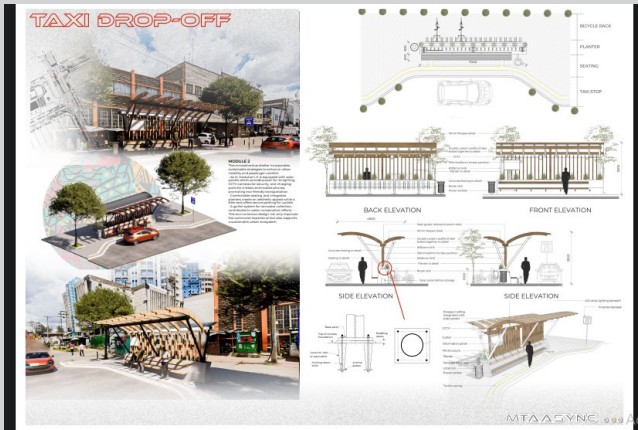
1st Runner Up - Mtaa Sync

2nd Runner Up -Kaa Rada Design

Showcased sustainability and innovative ideas, making it a strong contender for urban place-making. The design emphasizes materials that can be adapted for circularity, ensuring easy replication across various sites. Jurors appreciated the project's focus on integrating multiple street activities and promoting scalability, which could lead to a vibrant urban environment.
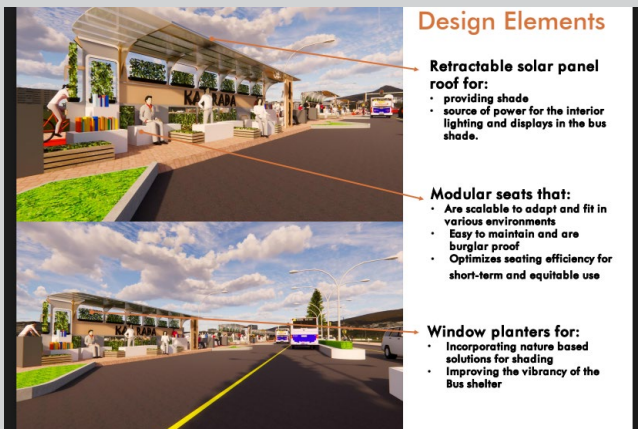

2nd Runner Up -Kaa Rada Design
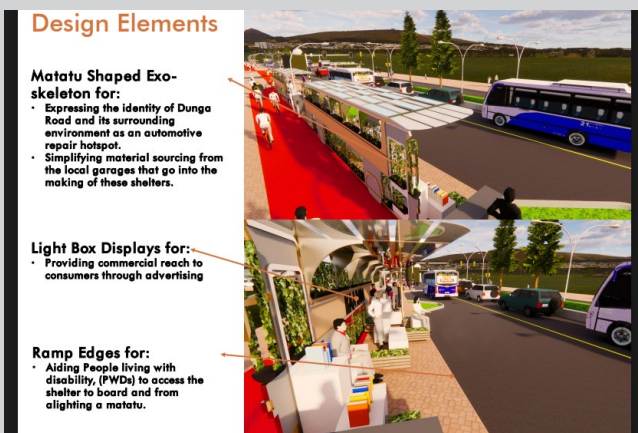
2nd Runner Up -Kaa Rada Design

Special Mention - Mzazi Africa

Presented a bold and fresh perspective on bus shelter design, characterized by its iconic aesthetic alongside commendable material choices. Although the scale may be ambitious, the potential for adaptability across various sites remains a noteworthy aspect. This design serves as an inspirational entry, prompting further exploration of its practical applications in urban settings.

Special Mention - Mzazi Africa
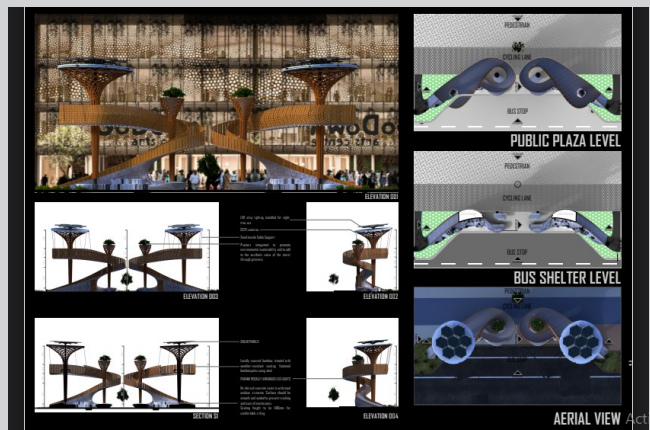
Special Mention - Mzazi Africa

Judging criteria

Urban Place Making (25)
Universal access, comfort, Safety, and Info

Infrastructure Adaptability (20)
Flexibility, Scalability, Replicability

Integration with the Street (20)
Connectivity, Functionality, and Vandal resilience

Materials and Circularity (20)
Green construction, local re-usable materials

Co-Design Approach (15)
Interdisciplinary Collaboration and Innovation

Head Office

Architectural Association of Kenya,
Blue Violets Plaza, Kamburu Drive,
off Ngong Road.
P.O. Box 44258 Nairobi, 00100
Telephone: +254-020-2420806, 2420582
Mobile: +254 721 691 337
Email: aak@aak.or.ke • Website: www.aak.or.ke

ArchKE   @arch_ke   @arch_ke   @aak_kenya

Architectural Association of Kenya (AAK)