AAK ANNUAL CONVENTION 2024
+ HFHK NATIONAL HOUSING SYMPOSIUM
SOCIAL HABITAT FOR THE REGION
14 - 16 AUGUST | SAROVA WHITESANDS BEACH RESORT & SPA | MOMBASA

CONVENTION MAGAZINE 2024

SOCIAL HABITAT FOR THE REGION



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Habitat for Humanity® Kenya

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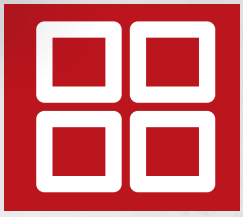


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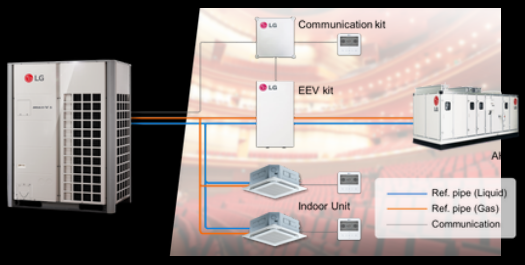
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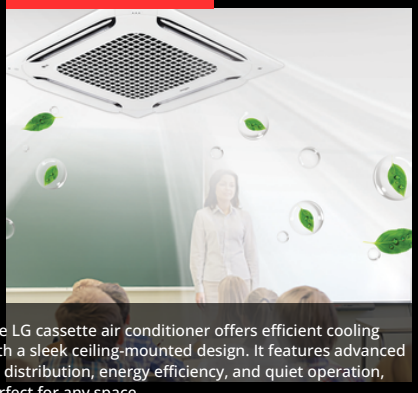
The LG RAC Wall Mounted AC delivers powerful cooling with energy-efficient performance. Its sleek design complements any home or office decor. Enjoy reliable, quiet operation for ultimate comfort.

Split ODU



The LG Split ODU offers efficient cooling and heating with advanced inverter technology. It's designed for durability and quiet operation, making it ideal for residential and commercial use.

Dual Vane Cassette



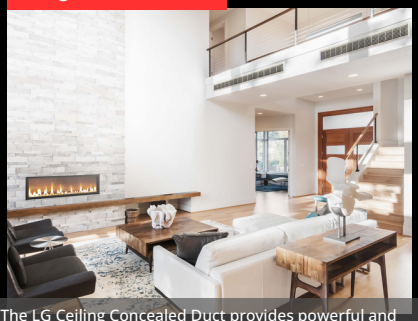
The LG cassette air conditioner offers efficient cooling with a sleek ceiling-mounted design. It features advanced air distribution, energy efficiency, and quiet operation, perfect for any space.

Round Cassette



The LG round cassette air conditioner offers efficient cooling with a stylish design for commercial spaces. It features 360-degree air distribution, energy efficiency, and quiet operation for optimal comfort.

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The LG Ceiling Concealed Duct provides powerful and discreet climate control, seamlessly blending into any interior. Its high efficiency and quiet operation ensure comfort and energy savings for both residential and commercial spaces.

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Built - in Microwave



LG built-in microwaves feature sleek designs, smart inverter technology for precise cooking, and easy-clean interiors for convenience.

Built - in Gas Cooktop



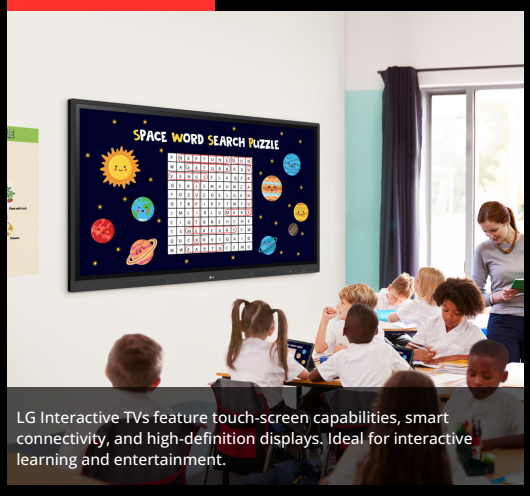
The LG Built-in Gas Cooktop features high-efficiency burners, continuous grates, and easy-to-clean surfaces. Ideal for precise and convenient cooking. Perfect for modern kitchens.

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EDITOR'S MESSAGE

L.Arch Patricia Baariu

Editor, AAK BuildPress & Convention Magazines
Corporate Member, Landscape Architect's Chapter
Lead ESIA/EA Expert

Individuality within a communal setting. Seems like such a paradox, right? Well, maybe not quite. The individual's need for basic amenities and expression of self cannot be fully attained in a world devoid of other individuals. The interactions of individuals at a personal, familial or communal level occur within a space – a social habitat. What then constitutes a healthy, inclusive, sustainable social habitat? And how do we create or re-construct our social habitats to capture these aspirations? The AAK convention/HFHK National Housing Symposium this year brings together think-tanks, policy makers, and diverse professionals to engage in discourse aimed at dissecting this topic to help us answer these questions.

This issue of the convention magazine resonates with the same and is filled with mind stimulating articles. Where health matters are concerned, one of our contributors looks at how a building affects the mental health of its inhabitants while others bring to the fore the critical role that the various professionals within the built environment play in shaping and sustaining our social habitats, especially in the face of climate change and fast-paced technological advancements. We then go on to reflect on how Kenya can address land tenure insecurity aimed at better outcomes for affordable and social habitats. What entails affordability when it comes to social habitats? The article on innovative financing models for the social housing agenda will give us a detailed overview of options and approaches to this debate.

The icing on the cake is a quick walk-through an urban regeneration project on the densification and conservation of Jericho Lumumba Estate – a housing estate that was built in colonial Kenya. All in all, we are grateful to each one of our contributors for taking the time to delve into their selected topics and used case studies to aid in contextualising the ideas therein.

To you, our esteemed member and reader, I wish you play, rest, recreation and leave you with the words of literary giant Miguel de Cervantes, '***The bow cannot always stand bent, nor can human frailty subsist without some lawful recreation.'***

Do have a recreative read, won't you!

> The interactions of individuals at a personal, familial or communal level occur within a space – **a social habitat.**



CONVENOR'S MESSAGE

L. Arch Ruth Mwai

Convenor
Assistant Honorary Secretary, AAK
Corporate Member, Landscape Architects Chapter

What is a social habitat? Why is it important? How can we create suitable social habitats? These are some of the questions we shall be answering in the next two days. In summary, social habitat refers to the context in which social interactions take place. It includes various aspects of the spaces in which relationships and interactions occur such as homes, workplaces, schools, recreational spaces, and online platforms.

> **The social habitat** concept brings forth the idea that housing is not limited to four walls but rather it is **a complex composition** that includes buildings, open spaces, and transport systems, among other land use elements.

As social beings, the physical, cultural, and social characteristics of our habitat influence the dynamics of our interactions and relationships, impacting our overall well-being.

Our region is growing exponentially and there is an urgent need for suitable and dignified housing for all. All the professionals in the built environment shape the spaces in which we live and work, for better or for worse. We must develop social habitats that are suitable for our cultural, environmental and economic context.

This year's Annual Convention is integrated with Habitat for Humanity Kenya National Housing Symposium. The event will bring together speakers and delegates from various sectors to discuss how we can build social habitats that are suitable for the unique characteristics of our region, guided by the following subthemes;

- Urban Policy Frameworks & Regulation Reforms: Delve into the evolving spectrum of policies and regulations that shape land use and tenure security.
- Building Technology for Social Habitat & Climate Resilient Housing: Discover the latest advancements in technology aimed at creating sustainable and resilient housing.
- Innovative Financing Models: Explore cutting-edge approaches to funding that drive progress in housing.
- Collaborative Partnerships/Community Engagement & Participation: Engage in conversations about fostering meaningful partnerships and enhancing community involvement.
- Gender Equality & Social Inclusion in Housing: Examine strategies and solutions to ensure that housing policies and practices promote equality and inclusivity.
- Environmental Sustainability: Gain insights from examples that highlight successful environmental sustainability efforts.

As we embark on this two-day exploration of social habitat for the region, we are delighted to have you join us for a dynamic and thought-provoking conference. We have lined up presentations, panel discussions and interactive sessions designed to challenge your perspectives and inspire new ways of thinking. We shall also have site tours that will enable us to experience real-life examples of some of the ideas. We look forward to engaging with you, learning from each other, and working together to pave the way for a more equitable, sustainable, and resilient future. Thank you for joining us for this important dialogue and we wish you a pleasant time in Mombasa, Kenya.

Karibuni to AAK Annual Convention and HFHK Housing Symposium 2024!



A WELCOME NOTE

Jacob Mwangi,
CEO AAK

As Kenya continues to grapple with rapid urbanization and a young, fast growing population, the need for sustainable and affordable housing solutions has never been more pressing. This Annual Convention of the Architectural Association of Kenya (AAK) is focused on the theme of "Social Habitat for the Region," reflecting our commitment to addressing this critical issue. Central to this discussion is the role of communities and financial innovation, particularly in a context where a significant portion of the population has irregular income patterns. I believe it is essential to explore how we can leverage innovations in building technology and financial solutions to empower communities and ensure that housing is not just a commodity but a fundamental right accessible to all Kenyans.

Kenya's housing sector faces a myriad of challenges, from a growing housing deficit to the high cost of land and construction materials. For the majority of Kenyans, particularly those in the informal sector, the dream of owning a home remains elusive. Traditional housing finance mechanisms, such as bank mortgages, are often out of reach for those with irregular incomes, leaving them with limited options. This is a significant concern, as the informal sector constitutes approximately 80% of the country's workforce, with millions of Kenyans relying on inconsistent earnings from small businesses, farming, or casual labor.

Communities play a vital role in shaping the social habitat. They are not just passive recipients of housing but active participants in its creation and maintenance. In parts of Kenya, community-driven housing initiatives have demonstrated the power of collective action. For example, housing cooperatives and self-help groups have successfully mobilized resources, pooled savings, and even undertaken construction projects. These grassroots efforts highlight the importance of community involvement in addressing housing challenges.

However, to scale these initiatives and make them more effective, we need to explore financial innovations that are tailored to the unique circumstances of these communities. This is where the intersection of finance and social housing becomes critical. We are pleased to see the strong emergence of solutions around rent to own schemes, saving, credit and housing co-operative societies and the affordable housing programme being delivered by the Government of Kenya.

As we convene around the theme "Social Habitat for the Region," we appreciate that the challenges we face in providing adequate housing for all Kenyans are complex, but they are not insurmountable. By focusing on community-driven solutions and embracing financial models that cater to the realities of irregular income earners, we can make significant strides in closing the housing gap.

At AAK, we are committed to fostering these conversations and driving the necessary innovations. We believe that every Kenyan deserves a safe, secure, and affordable place to call home. With the right financial tools and community engagement, we can turn this vision into reality.

I take this opportunity to thank you for joining us in this conversation and wish you well as you attend the AAK Annual Convention 2024, which is cordially co-hosted with our long term partners Habitat for Humanity Kenya. Please enjoy your stay in Mombasa.

At AAK, we are committed to fostering these conversations and driving the necessary innovations.



AAK PRESIDENT'S MESSAGE

Arch. Florence Nyole,

President,
AAK

Karibuni Mombasa!

It gives me great pleasure to welcome you all to the AAK Annual Convention 2024. This year, we are greatly honored to co-host this event alongside our formidable partner, Habitat for Humanity Kenya (HFHK) as they hold the HFHK National Housing Symposium. Together, we bring to you a convention themed **Social Habitat for the Region.** Within the convention, we will also be holding the East Africa Institute of Architects Council meetings and the Annual General Meeting where Kenya will take on the leadership and presidency of the Institute.

In July 2023, the Social Habitat Working Group of the International Union of Architects launched its Manifesto dubbed: *The Architecture of Social Habitat: Leave No One Behind.* The Manifesto calls on all professionals in the built environment, decision makers in government authorities, public and private entrepreneurs as well as the general public to demand that housing must follow the UN Universal Declaration of Human Rights (1948), Article 25.1 which states that, *"Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services..."*. Within our context, this includes the principles laid out in the UN Housing 2030 Agenda and the Constitution of Kenya.

These principles outline that the Right to Housing is a right to a Habitat that is universal and inalienable as an organic part of the wider built environment. It is also a right to a holistic habitat that includes community life, health, cultural and education services and social-economic opportunities within a sustainable physical environment. The right to housing is also a right to appropriate architecture and building forms. Hence, society needs to demand for the design of an inclusive social habitat, which meets all the human needs and capabilities, and guarantees at least the fundamental human rights. For the habitat to be socially inclusive, it must provide not only shelter, but also decent, sustainable and healthy facilities that assure its inhabitants privacy and individuality. Hence, the habitat should be built on four essential pillars:

1. Habitat as a home with dignity
2. Habitat as a core with involvement and participation
3. Habitat as an organism with a strong urban integration
4. Habitat as a responsible process that entrenches sustainability

The convention sessions are themed to adequately capture these principles and pillars with an aim of ensuring that all housing programs within the region meet the pre-requisites of a social habitat.

As a premier association formed in 1967 and with eight professions under its umbrella, now more than ever, we have a stronger mandate to bring forth a vibrant discussion on a social habitat for our region. As we host this event,

> The right to housing is also a right to appropriate **architecture and building forms.**

AAK has been at the forefront of working towards several advocacy initiatives to ensure that we are involved in the Affordable Housing Program. Together with our sister associations, the Institute of Quantity Surveyors of Kenya (IQSK) and the Institute of Engineers of Kenya (IEK) we signed an MoU to cement our focus towards ensuring that there is professionalism in the Affordable Housing Program rolled out by the government. We formed a forum dubbed **AHP Forum** and are awaiting to sign a drafted MoU with the State Department of Housing and Urban Development. We are focused on ensuring that the AHP work does not progress without including all the aspects and principles of housing that will remain for years to come. To this end, we have a virtual **AHP Studio** that has worked with the State Department on rationalizing the design and costs of the AHP up to the level of presenting the results of the Studio to the President of Kenya. We remain committed to providing these insights and to ensuring that the program achieves its targets through appropriate technology and innovation as well as creating social habitat which elevates the standards of living for the communities and individuals that will occupy these homes.

In working towards reducing the negative impacts of urbanization, while playing our role in Climate Action, we have a homegrown Green Building Rating Tool - the **Safari Green Building Index (SGBI),** that is focused on rating buildings based on our local context. The association is advocating for the use of this tool within projects in Kenya to ensure that our work as built environment professionals meets international standards using local criteria. We plan to map out the character of the existing building stock in a bid to improve living conditions and encourage the uptake of Green Buildings by developers and homeowners. Alongside this, through a partnership with Habitat for Humanity International we carried out a study and developed a ***Healthy Homes Guidelines and Checklist*** that aims at giving the citizens a 15-point reference to ensure that the buildings they occupy are healthy. Simple items such as daylighting, cross ventilation, thermal comfort, noise control and vector proofing are key items within the checklist.

We also launched several programmes and initiatives such as the ***Grow-A-Classroom Program*** where we aim to populate public schools with micro-forests that increase the tree cover within their existing large parcels of land. The trees will be sustainably harvested and used to build classrooms, offer natural shade that is suitable for outdoor learning, and provide fruit trees for nutrition of school going children. We invite you to be part of this initiative by offering your professional input and leveraging on your alumni associations to provide better education facilities for our future leaders.

We continue to advocate for the increase in the uptake of professional services among the general populace and push for recognition of all professionals to bring order in the industry. To this end, we have been running two campaigns – the ***Je, Una Mjengo? Campaign*** (do you have a building? engage professionals) for the 7th year now and the ***Mulika Mjengo Initiative*** (If you see something, say something). Through the support of the Kenya Community Development Foundation (KCDF), we have expanded our reach and carried out a 2-day public awareness clinic and a road show in Eastlands Nairobi. We also had an engaging outreach in Ngong, Kajiado County and will be heading to Kiambu in the coming weeks.

In our ongoing collaborations, we have worked with the Konquey Design Initiative on the ***3IF (Integrated and Inclusive Infrastructure Framework),*** The Kilimani Project Foundation on the ***Local Physical Development Plan*** through a rapid planning process, as well as the PMI-Kenya to create opportunities for training of our members towards certification in the ***PMP courses.*** We are also in talks with the Global Building Performance Network (GBPN) in partnership with the State Department of Public Works to work towards ***decarbonization of buildings*** in Kenya and are now signing an Mou with Kenya Green Building Society to help push for the use of ***SGBI in rating of Buildings in Kenya.***

Finally, we look forward to an exciting and interactive convention for all delegates, invited guests, speakers, panelists and our valuable partners in attendance. We have curated the sessions to give you a unique experience by combining local and international speakers, our regional brothers and sisters from East Africa and several leaders from across the globe, whom we have invited to attend and interact with during this event.

Once again Karibuni Mombasa and be sure to enjoy the Swahili cuisine, the white sandy beaches and the ocean waves!





NATIONAL DIRECTOR HABITAT FOR HUMANITY KENYA MESSAGE

Anthony S. Okoth,

National Director Habitat for Humanity Kenya

As we gather for the Housing Symposium/ AAK Annual Convention 2024, we stand at a pivotal moment in our nation's journey towards providing decent and affordable housing for all Kenyans. This symposium is not just an event but a clarion call to action, bringing together diverse stakeholders committed to solving one of our most pressing challenges – the housing deficit.

Kenya's housing needs are significant and growing. With an annual demand of 250,000 units, we are currently only meeting 20% of this need, leaving a deficit of 200,000 units annually. This shortfall is exacerbated by an urbanization rate of 4.4%, adding 500,000 new city dwellers annually. These statistics underscore the urgency and scale of the task before us.

The Government of Kenya has recognized this challenge and responded with the affordable housing program, aiming to bridge the gap between housing demand and supply. This initiative, alongside the concerted efforts of development partners and the private sector through Public-Private Partnerships, is a testament to our collective commitment to ensuring that every Kenyan has access to decent and affordable housing.

At Habitat for Humanity Kenya, we have been dedicated to this cause for over four decades. Our experience implementing diverse affordable housing programs uniquely positions us to convene this National Housing Symposium. This event provides an invaluable platform for stakeholders from government, civil society, the private sector, academia, and international partners to discuss, learn, and collaborate on sustainable housing solutions.

The objectives of this event are clear:

- **Fostering Partnerships and collaborations by facilitating dialogue among diverse stakeholders, we aim to address housing challenges comprehensively.**
- **Promoting the exchange of best practices, innovative solutions, and research findings related to affordable housing.**
- **The discussions focus on policy advancement that will contribute to developing and improving housing policies and strategies.**
- **Highlighting innovative housing designs and technologies, we aim to inspire new approaches in the sector.**
- **We seek to engage corporates and empower young entrepreneurs and small businesses in the housing sector through exhibitions and networking opportunities.**

Through this symposium, we expect to produce tangible outputs such as research reports on innovative housing solutions, policy recommendations, and enhanced networking opportunities. Ultimately, our goal is to strengthen collaboration among housing stakeholders, improve housing policies for vulnerable populations, and increase awareness of affordable housing solutions.

We are grateful for the support and partnership of the Kenya State Department of Urban Development and Housing, county governments, real estate developers, financial institutions, and many others. Your involvement and commitment are crucial to the success of our shared mission.

As we move forward, let us keep in mind the broader impact of our work. Investing in affordable housing is not just about economic growth; it significantly improves health, safety, and overall well-being through better living conditions and access to essential services.

Thank you for your dedication and collaboration. Together, we can build a brighter future for all Kenyans.



MESSAGE FROM THE PRESIDENT, EAST AFRICA INSTITUE OF ARCHITECTS (EAIA)

Arch. Jacqueline C. Namayanja

President, East Africa Institute of Architects
President, Uganda Society of Architects

I have come to discover, in my interactions with the Architectural Association of Kenya (AAK), the passion and zeal that drives this group of built environment professionals. It therefore does not surprise me that this year, the focus is on an issue so demanding and in urgent need of action. An issue that does not only affect Kenya but the entire East African region and the world at large. The strategic collaboration with a partner who has the same vision, Habitat for Humanity Kenya (HFHK), illustrates the AAK's commitment to pioneer and drive a change that is overdue.

We all know that great strides start with an idea, and a coming together of great minds to identify, and visualize matters differently to cause 'unusual' results. Based on the lined up themes of discussion, it is evident that this year's Convention is poised to scratch beyond the surface in being a forum for developing strategies, finding solutions and inspiring actions to matters affordable, inclusive and sustainable habitats.

Social habitats are about dwelling spaces, shelters of variety that are inspired by and respond to environmental context, cultures and traditions, and patterns of change economically and emotionally. Social habitats start to register a measure of success when the users can imagine and shape them around themselves and vice versa, an unspoken symbiosis between user and space, creating peaceful communities and transforming mindsets. Of course we cannot ignore all the current factors of influence that are indeed imposing limitations to this success among so many communities such as financial capability, material availability, skills and capacity.

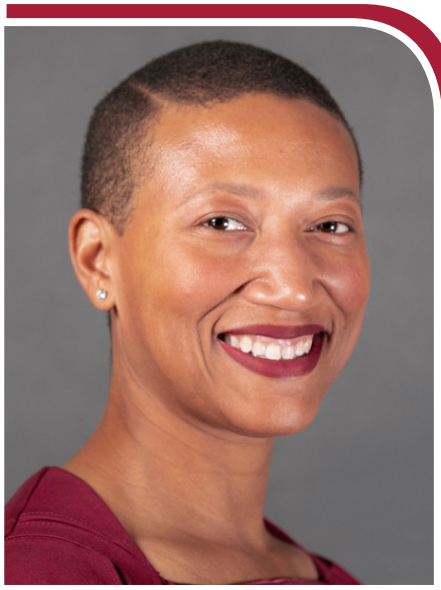
Therefore when I think about all this, as a professional of the built environment, I am excited to be part of this very dynamic, stimulating and much-needed event, not only to learn and contribute but also, as I foresee, experience the provocation of some self-examination among we as professionals, community leaders and stakeholders. I envision that at the end of these three days, there is a beginning of a great movement that cannot be ignored, not only in Kenya but in Africa.

I wish to thank AAK for hosting the EAIA's second council meeting of the year and the Annual General Meeting 2024! In the same breath, I congratulate Kenya, who will be taking up the Presidency of the EAIA at the end of the four days! We wish you great conquests and greater territories!

Now if you are like me, a traveler to Mombasa-Kenya, an attendee of this great Convention that has brought cross-border brethren together only for a time, WELCOME TO KENYA, on behalf of the East Africa Institute of Architects (EAIA). It is my hope that through this event, you will experience the bond and collaborations of the East African people, the atmosphere of the coast and the beautiful people of Kenya. I wish you all a great time. Ensure to make new friends, see new things, learn and explore beyond your comfort zone!

Congratulations, the Architectural Association of Kenya! Juu na mbele!

Social habitats are about dwelling spaces, shelters of variety that are inspired by and respond to environmental context, cultures and traditions, and patterns of change economically and emotionally.



MESSAGE FROM THE PRESIDENT, THE AMERICAN INSTITUTE OF ARCHITECTS (AIA)

Kimberly Dowdell, AIA, NOMAC

AIA 2024 President

The Architectural Association of Kenya Annual Convention 2024 + Habitat for Humanity Kenya National Housing Symposium is an important event that embraces a vital theme: *Social Habitat for the Region.* The American Institute of Architects (AIA) salutes the organizers of this dynamic convening for directly addressing issues that not only impact their region, but also deeply resonate with communities across the globe. AIA believes access to housing is a basic human need and our advocacy for fair housing policies reflects our commitment to architects providing safe, healthy, and sustainable housing for all.

The various sub themes of this convention align with work that we are advancing at AIA, which underscores the importance of collaboration with our colleagues across the globe. AIA strongly believes that the building industry has a responsibility to support environmental justice and social equity, restoring ecosystems and creating a healthier future for generations to come through thoughtful design solutions for housing and other building typologies that contribute to the fabric of our habitats.

While beauty remains a principal element of good design, we recognize that design excellence extends beyond aesthetic qualities. To support our members and the larger design community in addressing our collective challenges in the built environment, we developed the AIA Framework for Design Excellence. Comprised of 10 principles, the Framework challenges architects to design through the lens of integration, equitable community, ecosystems, water, the economy, energy, well-being, resources, change and discovery. The Framework informs progress toward a zero-carbon, healthy, just, resilient, and an equitable built environment. This resource clearly identifies actions that design teams can use and includes high impact items for each principle.

AIA congratulates AAK and HFHK on your convention and we look forward to learning more about your approach to designing solutions for a better future.

The American Institute of Architects (AIA) **salutes the organizers of this dynamic convening** for directly addressing issues that not only impact their region, but also deeply **resonate with communities across the globe.**

SCAN THIS QR CODE FOR THE FULL PROGRAMME

THE PROGRAM AT A GLANCE

TIME	ACTIVITY		
DAY 01: WEDNESDAY 14TH AUGUST 2024			
ALL DAY		0700 - 1400	1000 - 1400
	• Arrival and Registration of Delegates • Exhibition	Golf Tournament	Low-cost housing in Likoni, Mombasa Neighborhood tour and engagement with home-owners
0900 - 1100	East Africa Institute of Architects (EAIA) Board Meetings		
1100 - 1130	TEA BREAK		
1130 - 1700	East Africa Institute of Architects (EAIA) Council Meeting		
DAY 02: THURSDAY 15TH AUGUST 2024			
0800 - 1055	**SESSION ONE: OFFICIAL OPENING**		
1055 - 1110	Health Break		
	SESSION TWO: Urban Policy Frameworks & Regulation Reforms: Land Use & Secure Land Tenure		
1055 - 1145	Presentations		
1145 - 1245	Panel Discussion		
1245 - 1315	Q & A Session, Sponsor Presentation		
1315 - 1430	Lunch Break		
1430 - 1530	**Breakout Session** Session 01: Slum Reforms & Environmental Sustainability Session 02: PechaKucha presentation		
1530 - 1730	Social and Networking Activities		
1800 - 2200	Evening Cocktail		
DAY 03: FRIDAY 16TH AUGUST 2024			
	SESSION THREE: Building Technology for Social Habitat & Climate Resilient Housing		
0800 - 0950	Presentations		
0950 - 1040	Panel Discussion		
1055 - 1125	Health Break		
	SESSION FOUR: Innovative Financing Models		
1125 - 1155	Presentations		
1155 - 1300	Panel Discussion		
1300 - 1335	Q & A Session, Sponsor Presentation		
1335 - 1430	Lunch Break		
1430 - 1800	East Africa Institute of Architects (EAIA) Annual General Meeting		
1430 - 1800	**Breakout Sessions:** Session 01: Collaborative Partnerships/ Community Engagement & Participation Session 02: Gender Equality & Social Inclusion Housing:		
1800 - 2200	Gala Dinner		

SPEAKER PROFILES

SESSION ONE: OFFICIAL OPENING



ANTHONY STEPHEN OKOTH

National Director, Habitat for Humanity Kenya

Anthony Okoth is a distinguished leader with over 30 years of expertise in various leadership capacities, including 12 years in senior leadership roles, amassing extensive experience notably in the housing sector across Africa and beyond. Currently he serves as the National Director, Habitat for Humanity Kenya.

In his role, Anthony provides overarching leadership and management to Habitat for Humanity Kenya, guiding the development and implementation of strategic initiatives aimed at enhancing access to decent and adequate housing in Kenya. Under his leadership, HFHK is overseeing the construction of many safe and adequate homes, establishment of sustainable community development programs, reducing overcrowding significantly, increasing access to clean water and sanitation, thereby improving living conditions and health outcomes for beneficiary families.

Previously, he has held key positions such as the East African Regional Director and Kenya Country Director for the Africa Resource Centre, where he focused on improving health supply chains and fostering partnerships with governments and donors. He also worked as an Associate Director at Medicines for Malaria Venture in Geneva, addressing market penetration barriers for antimalarial products in Africa.

With his extensive experience, strategic acumen, and commitment to Habitat for Humanity's mission, Anthony Stephen Okoth continues to make significant contributions to the advancement of access to decent and adequate housing in Kenya and beyond.

ARCH. DEBATOSH SAHU



Principal Architect & Partner of ESPACE, India
Region IV Council Member (Asia & Oceania), International Union of Architects (UIA)

Arch. Sahu, who has been rated one of the leading Architects in Eastern India, is the Principal Architect and Partner of Espace, an architectural consultancy house which has been in practice for more than 30 years in India and abroad. He is an Architecture graduate and holds a Master's in Urban Design. A recipient of several awards, Arch. Sahu is an active member of Indian Institute of Architects (IIA), ARCASIA and UIA. He is Past Chairman of ARCASIA Committee for Green and Sustainable Architecture (ACGSA) as well as a Council Member of IIA.

Over the years, Debatosh has articulated himself in the language of contemporary architecture within tropical climates. His passion is to create green buildings through design and not only with mere application of modern technology. He has dealt with many heritage projects in the urban context wherein, there is adaptive reuse of heritage structures with addition of new constructions. His firm has completed and is currently undertaking many affordable housing projects in India. His key interests are in Green & Sustainable Architecture and Housing.

SESSION TWO: URBAN POLICY FRAMEWORKS & REGULATION REFORMS: LAND USE & SECURE LAND TENURE



ENG. LAWRENCE NJUE

Civil Engineer at FRAME Consultants Limited (Resident Engineer at Tatu City)

Lawrence, who has over 13 years professional experience is a Resident Engineer at Tatu City Infrastructure Projects. He is a Senior Highway and Municipal Infrastructure Engineer at FRAME Consultants Limited.

PLANNER DAVID GATIMU



Chief Executive Officer, Salute Spatial Solutions Limited

David Gatimu is an Oxford Brookes University trained planner with a wealth of experience in urban planning in the public and private sector. He started his career with the Nairobi City Council (now the Nairobi City County Government) where he served in several roles for over 25 years. He last served within public service as a Chief Officer in Kiambu County Government, in 2017.

During his entire public service career, Planner Gatimu has been involved in urban policy formulation, urban governance and urban development management in the most dynamic urban environments in Kenya. His vast experience has continued to keep him constantly engaged within the private sector, professional bodies' networks development partners and community-based organisations. He is the founder and CEO of Salute Spatial Solutions Ltd, a member of Kenya Property Developers Association, Affordable Housing Task Force and represents the Kenya Private Sector Alliance in the National Physical and Land Use Liaison Committee.



SAMUEL OLANDO

Executive Director, Pamoja Trust

Sam is a seasoned human rights advocate and has contributed to development of Right to Land and Housing Policies, resource rights and alternative justice system. Sam also has footprints in the development of legislation on land and urbanization, human rights, as well as community participation affecting the urban space and the nexus between urban and rural communities. He has also engaged with regional and international reporting mechanisms advocating for an end to forced evictions. Olando is a trained Urban Sociologist and a lawyer, having earned a Masters Degree from Maseno University and a Law degree from the University of Nairobi.



BREAKOUT SESSIONS:
SESSION 01: SLUM REFORMS CASE STUDY
ENVIRONMENTAL SUSTAINABILITY CASE STUDY



L.ARCH SYLVIA MUTUA

Lecturer in the Department of Landscape Architecture at Jomo Kenyatta University of Agriculture and Technology (JKUAT)

Sylvia holds a Bachelor of Landscape Architecture degree and a master's degree in planning (Urban and Regional). She is currently pursuing her PhD studies in Landscape Architecture at JKUAT. With fifteen (15) years of professional experience, she is a seasoned Landscape Architect and a Corporate Member of the Architectural Association of Kenya (Landscape Architects Chapter). Moreover, she is a Lead EIA expert with the National Environment Management Authority (NEMA-Kenya), where she has gained 14 years of invaluable experience in the same. Since 2016, she has been actively involved in teaching and training student Landscape Architects at both the undergraduate and master's levels. Her research interests are focused on environmental psychology, open space planning and design, and environmental assessments.

SESSION THREE: BUILDING TECHNOLOGY FOR SOCIAL HABITAT & CLIMATE RESILIENT HOUSING



VINCENT KITIO

Lead, Urban Energy Solutions, UN-HABITAT

Vincent Kitio is a graduate of the Institute of Architecture, Venice and holds a PhD in Appropriate Energy Technologies (energy efficiency and renewable energy) for Developing Countries, from the University of Rome la "Sapienza" in Italy. He leads the Urban Energy Solutions of UN-HABITAT, a section that works on three focus areas: universal energy access for the urban poor; energy efficiency in the built environment (including adequate and affordable housing) and renewable energy systems (both generation and consumption) in urban areas.

Vincent Kitio develops and implements regional energy programs in Africa and is currently involved in the development of a program for sustainable management of municipal waste and recovery of value-added resources that include energy, composts and recycling materials. He is also developing renewable energy projects to improve clean energy access for secondary towns using available renewable energy sources across sub-Saharan Africa. Vincent is overseeing the development of two city projects: the Harare Sustainable City Initiative with funding from SIDA and the Nairobi Sustainable City program funded by GEF-8. He is also the UN-Habitat focal point for SDG 7.

SESSION FOUR: INNOVATIVE FINANCING MODELS

DAVID PANETTA

Technical Advisor, Community Finance Habitat for Humanity International



David is the Technical Advisor- Community Finance at Habitat for Humanity International, leading the strategic and program development of the organisation's initiatives in community finance. His mandate includes evaluating and proposing strategic directions for the organization to influence housing finance solutions through Savings Groups; Leading the identification, cultivation, and management of partnerships at the global, regional, and national levels; Identifying, synthesizing and transferring best practices and tools across country offices and partners, as well as Coordinating training and organizational capacity-building interventions.



DR. ROBERT SANGORI

Director of Climate, Biodiversity and Food Systems
United Cities and Local Governments of Africa (UCLG Africa), Morocco

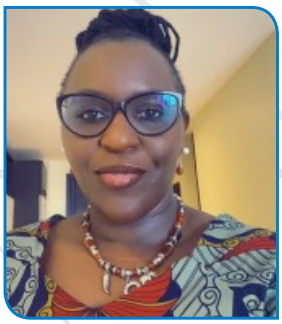
Dr. Sangori is a graduate of the University of Nairobi and holds a PhD in Environmental Planning and Management, Masters' Degree in Environmental Planning and Management, and a Postgraduate Diploma in Housing Administration. He has served in the public service for the past 15 years and has expertise in the areas of sustainable urbanization at the local and subnational levels. His focus is on innovative housing solutions with a bias on Energy Efficiency of Building Technologies and Climate Change. He is a Lead EIA/EA Expert and has experience in housing administration, urban infrastructure and local economic development. He has previously served at the UNDP/UN-Habitat (UN Volunteer), as an Assistant Director of Urban Development in Kenya, Chief Research Officer at Kenya Building Research Centre, and Chief Officer (Lands, Physical Planning, Housing and Urban Development) in the County Government of Homa Bay. In addition to being the Director of Climate, Biodiversity and Food Systems at the UCLG Africa in Morocco, he is also currently the Building Climate Resilience of the Urban Poor (BCRUP) Lead. His career interests are in sustainable urbanization strategies, urban revenue streams and financing, and Building Climate Resilience of the Urban Poor including climate resilience financing and implementation of Climate Resilience Spatial Plans.

BREAKOUT SESSIONS:

SESSION 01: COLLABORATIVE PARTNERSHIPS / COMMUNITY ENGAGEMENT & PARTICIPATION

GRACE ANANDA

Policy and Advocacy Manager, Habitat for Humanity International



With over 10 years of experience in gender, governance, and human rights, Grace is passionate about making a positive impact on the lives of marginalized communities in Africa and beyond. As a Policy and Advocacy Manager at Habitat for Humanity International, she contributes to the continental networking, positioning, policy/ advocacy work and partnership initiatives that promote decent housing and housing eco-system for vulnerable groups. Grace has a proven track record of conducting policy research and advocacy activities, creating and maintaining strategic advocacy alliances, and facilitating capacity building and campaign programs on land rights, climate change, DRR2, and basic services. She has worked/ interfaced with various regional and international stakeholders, such as UN-HABITAT, GLTN, the African Union, AU-ECOSOCC, AUDA-NEPAD, the African Development Bank, UN bodies, regional economic bodies, communities, INGOs, grassroots organizations, academia, and the Africa Land Policy Center.

OUR BUILDS, INNOVATIONS, AND TECHNOLOGY: Transforming Affordable Housing in Kenya

By Naserian Kantai

As Kenya grapples with the effects of rapid urbanization, the need for affordable, sustainable housing becomes more urgent. Habitat for Humanity Kenya (HFHK) is leading the charge with innovative building technologies and groundbreaking approaches that provide safe, durable, and cost-effective homes for families in need. Our commitment to innovation ensures that every project not only meets the housing demand but also promotes environmental sustainability and economic resilience.





Production of Interlocking Stabilized Soil Blocks (ISSB) on site during construction

Innovative Building Materials

At the heart of our building strategy is the use of environmentally friendly and cost-effective materials. One such innovation is the interlocking stabilized soil blocks Interlocking Stabilized Soil Blocks (ISSBs). These blocks, made from locally sourced sandy soil and minimal cement, offer superior durability and thermal insulation. The use of Interlocking Stabilized Soil Blocks (ISSB) significantly reduces the need for mortar, lowers construction costs, and enhances the energy efficiency of homes. Additionally, ISSB highlights the traditional building technology in Kenya which used earthen materials for house construction.

Community Engagement and Skill Development

Sustainable housing solutions are incomplete without community involvement. HFHK conducts training programs and workshops to equip local artisans and builders with modern construction techniques. These training programmes are designed to ensure that local artisans used in the projects are certified by technical training institutes. This increases their employability, while ensuring that the houses are built to high quality standards and hence stimulate local economic growth.

Incorporating Renewable Energy

Energy sustainability is a critical aspect of our housing projects. We integrate renewable energy solutions, such as solar panels into our builds. This significantly lowers energy costs for families.

Showcasing Success: Our Projects

Construction of a house in Machakos with Insulated Concrete Forms









The Affordable Housing Project, which features **Insulated Concrete Forms and solar energy systems,** has provided over **200 families** with eco-friendly and durable homes. Similarly, the Housing Initiative has drastically cut down construction times, enabling more families to move into their new homes faster.

The Future of Housing with HFHK

In offering sustainable solutions to housing, Habitat for Humanity Kenya remains dedicated to pioneering new building technologies and innovative financing solutions. Our builds, innovations, and technology reflect our unwavering mission to build strength, stability, and self-reliance through shelter. Through sustainable construction practices, renewable energy integration, and active community participation, we are not just addressing the housing crisis but also paving the way for a more sustainable and equitable future for all. HFHK aims to ensure that every Kenyan family has access to safe, decent, and affordable housing.

Website: https://hfhkenya.org/get-involved-2/campaigns/giving-habitat-to-humanity/



AUTHOR BIO

Naserian Kantai is a seasoned Communication and Public Relations Lead with over half a decade of experience in the nonprofit sector. Currently working at Habitat for Humanity Kenya(HFHK), Naserian co-ordinates the development and implementation of the organization's internal and external communication strategies. She is also responsible for shaping and maintaining the organization's public image and brand reputation. Moreover, Naserain is deeply curious about the transformative potential of technology and has a keen interest and passion for Artificial Intelligence, Data Science, and Cybersecurity leadership.



Mission:

Provide safe, decent homes for low-income and vulnerable families in Kenya

Impact:

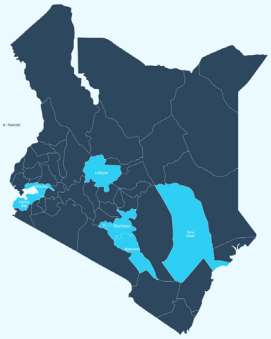
Since 1982, Habitat for Humanity Kenya has helped over 500,000 people in 250+ communities.

Goal:
Raise funds to build **100** homes in **3** years.

Projections:
Year 1: **30** Homes
Year 2: **35** Homes
Year 3: **35** Homes

Cost per house:
KES **950,000**

How to Get Involved:
Financial contributions and **In-kind** contributions



Habitat for Humanity Kenya

Complete House (KES 950,000): Build a 33 sqm house with two bedrooms, a sitting room, a store, gutters, a 2000-litre water tank, and a pit latrine block.

Foundation (KES 70,000): Fund the digging of the foundation.

Floor Slab (KES 235,000): Lay the foundation floor slab.

Walling and Finishing (KES 180,000): Complete the walls and finishing touches.

Roofing (KES 170,000): Provide roofing for the house.

Doors, Windows, and Painting (KES 80,000): Complete the installation of doors, windows, and painting.

Latrine (KES 60,000): Build a two-door ventilated latrine.

Water Tank and Gutters (KES 45,000): Pay for a 2000-litre water tank and gutters.

Construction Water (KES 10,000): Buy water needed for construction.

*Enabling Low Income Families Access **Decent** & **Affordable** Shelter*

Habitat for Humanity® Kenya

Giving Habitat to Humanity



DONATE NOW

LEARN MORE



SICK HOMES, SICK PEOPLE

By Michelle Ouma

Access to affordable, accessible, culturally appropriate, habitable, and safe housing is a fundamental human right. Yet, numerous vulnerable populations experience precarious housing disproportionally. Homes play a critical role in fetal and early childhood exposure, as children spend 80-90% of their time indoors (Chambers et al., 2014). Improved housing conditions save lives, increase the quality of life, reduce disease, and mitigate climate change. Housing improvements have also been identified as key contributors to the achievement of Sustainable Development Goals (SDGs), particularly SDG 3 on Good Health and Well-being and SDG 11 on Sustainable Cities and Communities. With the world's population expected to double by 2050 and 90% of the urban growth taking place in developing countries, improving housing conditions and reducing health risks at home is thus critically important (World Health Organization, 2018).

Poor housing conditions can be traced to several health risks responsible for considerable disease and deaths globally. Sick Building Syndrome (SBS) refers to a situation in which a building's occupants experience severe health or comfort-related effects that can be directly linked to the time they spend in the building. Symptoms of SBS include dizziness, headaches, nausea, dry cough, eye, nose, or throat irritation, allergies, dry cough, and dry or itchy skin, among others. SBS has also been proven to increase the incidences of asthma attacks and personality changes (Joshi, 2018). Building-related diseases are disorders connected to a particular indoor environment or building. The causative agent may not always be identifiable, as illnesses often result from prolonged exposure. In many cases, symptoms are a reaction to a combination of several factors.

Ventilation is a leading cause and has been found to account for 60% of indoor air quality problems. Poor ventilation leads to the accumulation of pollutants such as mold, dust, smoke, allergens, cleaning products, and other chemicals. To achieve desirable air quality levels, ventilation rates must consider the size and usage of the space, the volume of the room, the number of occupants, and the duration of occupancy (Chambers et al., 2014). A general guideline is that a ventilation rate of 25L/second per person is necessary for health and comfort to be realized. Additionally, ventilation rates of 10 L/second per occupant or below are associated with increased symptoms among occupants (Kaliwon, 2023).

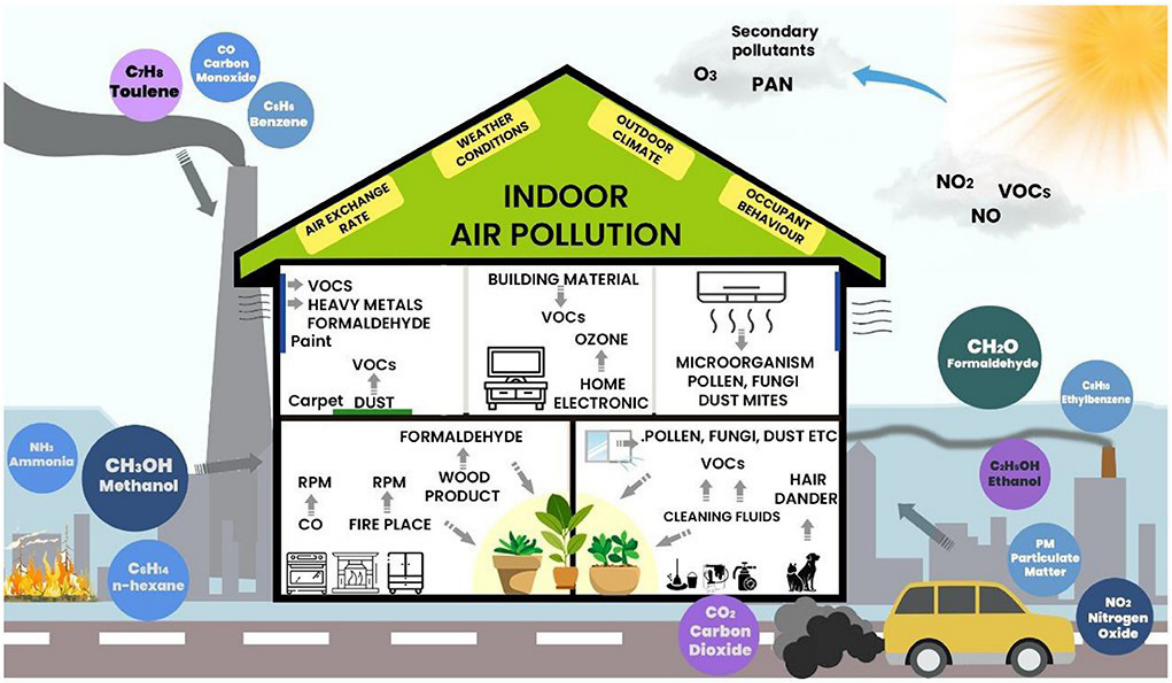
Temperature and humidity also contribute to the ventilation problems. Damp indoor environments and excessive moisture from floods and leaks catalyze the growth of microbial agents such as molds, which are among the most common sources of building-related illnesses (Joshi, 2018). These factors may cause new disorders or exacerbate pre-existing conditions and vary in severity and acuteness. Such diseases include occupational asthma, rhinitis, dermatitis, conjunctivitis, hypersensitivity pneumonitis, legionella infection, and carbon monoxide poisoning. In addition, individual perceptions of comfort vary and are influenced by factors such as gender, age, and smoking habits. Temperatures above 22 to 230 C are linked to increased symptoms such as nasal irritation, headache, and fatigue (Kaliwon, 2023).

Indoor humidity is mostly linked to outdoor humidity due to outdoor air circulation through ventilation. Low indoor relative humidity of <20 to 30% has been found to cause upper respiratory symptoms, ocular dryness, and skin symptoms. Conversely, high relative

humidity of >60 to 65% can promote the growth of microbial agents such as mold and lead to excessive water condensation. The US Environmental Protection Agency (EPA) recommends maintaining indoor humidity within 30 to 60% range for optimal comfort. EPA further advises keeping relative humidity <60% to control mold growth and <50% to manage dust mites (Kaliwon, 2023).

Adequate natural lighting is essential for visual performance and safety and for reducing falls and injuries. Additionally, incorporating natural lighting leads to an overall energy saving of 15 to 40% (Rana, 2018). Beyond these immediate benefits, natural light significantly impacts bodily functions by regulating the nervous and endocrine systems and producing hormones such as melatonin, which maintains the body's circadian rhythm, promoting healthy sleep patterns and ensuring alertness during daylight hours. A lack of exposure to natural light during the day, coupled with excessive exposure to artificial light at night, disrupts these rhythms and negatively impacts health. Moreover, natural light has therapeutic effects, alleviating symptoms of seasonal affective disorder and other forms of depression (Osibona, Solomon, & Fecht, 2021). Thus, incorporating natural lighting into building design not only enhances visual and aesthetic comfort but also fosters significant health benefits for occupants.

Various exposures, including building materials, heating and combustion, water systems, leaks and condensation, furnishings and decorations, and cleaning agents influence indoor air quality. Key factors contributing to the overall quality of the indoor environment include acoustic conditions, lighting, temperature, humidity, and visual comfort.



Source: https://www.frontiersin.org/journals/sustainable-cities/articles/10.3389/frsc.2022.1039710/full

Key factors contributing to the overall **quality of the indoor environment** include acoustic conditions, lighting, temperature, humidity, and visual comfort.

Several building materials contain chemicals that can affect occupants' health. Asbestos, commonly used in ceiling and floor tiles, adhesives, roofing, fireproofing, and cement, is a proven carcinogen known to cause respiratory problems and lung diseases such as asbestosis, Mesothelioma, and lung cancer after prolonged exposure. Additionally, lead, often used in roofs, cornices, paint, and electrical conduits, can affect the nervous and respiratory systems, blood, and kidneys and cause muscle and joint pain. Other toxic materials include formaldehyde, found in several wood products and insulating materials, and Volatile Organic Compounds (VOCs) found in paints, varnishes, tiles, furniture, and cleaning products (National Center for Healthy Housing, 2022).

The green building revolution is a result of the appreciation that buildings can impact people and the environment positively and negatively, and there is a need to mitigate the negative impacts and enhance the positive ones. Green buildings offer a sustainable solution to these health risks by utilizing non-toxic, eco-friendly materials and promoting an improved indoor environment (Allen, et al., 2015). For indoor environmental quality, green buildings minimize exposure to harmful VOCs, allergens, formaldehyde, and nitrous oxides, among others. Designing homes for health constitutes a significant share of what a green building is, underscoring the need for Health Performance Indicators to measure and optimize the impact of building designs on human health and well-being.



> Designing homes for **health** constitutes a significant share of what a **green building** is



AUTHOR BIO

Michelle Ouma is an urban planner and a licensed Environmental Impact Assessment (EIA) associate expert, currently pursuing a Master of Arts degree in Environmental Planning and Management. Michelle leads the research and advocacy initiatives at the Architectural Association of Kenya (AAK), where she spearheads significant projects such as the Status of the Built Environment Report, the Healthy Homes Guidelines and Checklist, the Integrated and Inclusive Infrastructure Framework for Kenya, the Grow A Classroom Initiative, and AAK's advocacy campaigns, Je, Una Mjengo? and Mulika Mjengo.

JE, UNA MJENGO?

PROFESSIONALS IN THE BUILT ENVIRONMENT & THEIR ROLES IN THE CONSTRUCTION PROCESS

ARCHITECT

Definition:
A professional trained in the design and construction of buildings and structures that primarily provide shelter.

Role in the construction process:
Prepares building plans and designs; clarifies (any) design details to the contractor; and certifies that construction works have been completed in the correct manner.

ENVIRONMENT DESIGN CONSULTANT

Definition:
A trained professional concerned with the environmental issues related to a construction project including air, land, water, renewable energy, and waste management matters.

Role in the construction process:
Assesses the suitability of new developments and their impact on the environment.

TOWN PLANNERS

Definition:
A Town Planner or Urban Planner is a trained professional who develops plans and programs for the use of land.

Role in the construction process:
Reviews building plans submitted by an architect (usually on behalf of the developer); assesses the feasibility of building proposals and identifies needed changes; recommends whether building proposals should be approved or denied; presents projects to communities, planning officials, and planning commissions; and stays current on zoning or building codes, environmental regulations, and other legal issues.

ENGINEER

Definition:
A trained professional concerned with the design and physical integrity of buildings. A structural engineer's mandate is to ensure the safety and durability of a building.

Role in the construction process:
Prepares detailed structural designs and drawings; and carries out investigation on the construction site.

CONSTRUCTION PROJECT MANAGER

Definition:
A professional who oversees the planning, design and construction of a project from start to finish.

Role in the construction process:
Carefully plans out the construction project; manages construction time and quality standards.

QUANTITY SURVEYOR

Definition:
A professional who provides expert advice on construction costs ensuring that proposed projects are affordable and offer good value for money for the client. They also manage costs as the project progresses.

Role in the construction process:
Prepare and submit estimates for construction and development work; negotiate and support construction dispute resolution activities; and advise on a range of legal and contractual issues.

LANDSCAPE ARCHITECT

Definition:

A professional who plans, designs and manages outdoor spaces such as public parks, streetscapes and private gardens, to address ecological sustainability, quality and health of landscapes.

Role in the construction process:
Arrange existing and proposed land features and structures; and select appropriate landscaping materials

INTERIOR DESIGNER

Definition:
A trained professional who designs functional and aesthetically pleasing interior spaces. Interior designers must have a strong understanding of design principles, space planning, and building codes.

Role in the construction process:
Collaborate with the client, and other professionals to understand and incorporate the client's needs and preferences; coordinate the selection and installation of materials, finishes, furniture, and fixtures, ensuring that they meet building codes and standards.

Why Do You Need Qualified Professionals When Building?

1. Consulting professionals in construction projects guarantees that the building quality is not compromised.
2. Professionals also ensure optimal safety for building occupants and help prevent building collapse.
3. Professionals can work within a budget and are experienced in managing resources.
4. They work within the law and help avoid situations where developments must be demolished.
5. Professionals take care of necessary details, making the project painless for clients.
6. They are customer-focused and make strategic adjustments that benefit the project.
7. Professionals are experts at identifying hazards and unforeseen obstacles early on and prescribe the right action to prevent wasting time and materials.
8. They have experience in completing projects on time, even when facing supply delays.
9. Professionals can be held accountable for their work and help ensure environmentally friendly design and construction processes.

AAK EVENTS HIGHLIGHTS

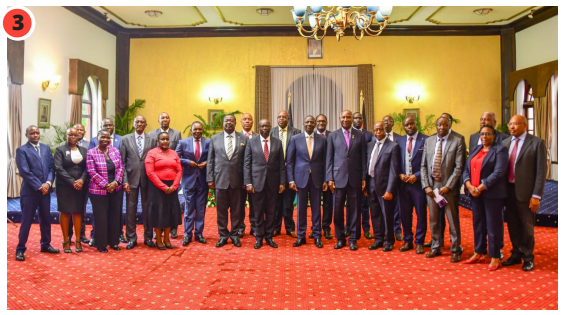
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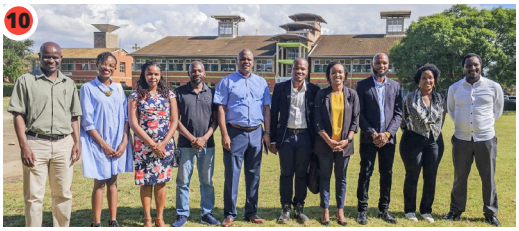
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CAPTIONS

1. The Interior Designers Chapter Build Talk and Membership Drive event at the Nairobi Institute of Technology.
2. AAK Annual convention 2023 + IFLA World congress
3. Hon.Treasurer QS Patience Mulondo and fellow professionals appointment to the Pending Bills Verification Committee by H.E. President William Ruto.
4. AAK's Grow A Classroom initiative at Iiani Primary School Ngwata
5. AAK Hosts Key Discussions on Healthy Homes with Roland Pearson, Vice President of Habitat's Terwilliger Center for Innovation in Shelter, and Jacob Simwero, Construction Practices Specialist at Habitat for Humanity International.
6. AAK Governing Council Hosts MentorshipTalk at University of Nairobi
7. AAK presents its memorandum to the Taskforce on Re-engineering and Transformation of Urban Development.
8. Architectural Association of Kenya (AAK) team career talk for the girls at Kenya High School
9. Highlights from AAK Duracoat Awards Gala Dinner 2024

AAK EVENTS HIGHLIGHTS





































CAPTIONS

10. AAK team, led by the Architect's Chapter at JKUAT Department of Architecture Exhibition for a mentorship session with the architecture students.
11. AAK AGM 2024
12. AAK Team at a workshop on the Safari Green Building Index
13. The AAK Quantity Surveyors Chapter career talk session at the University of Nairobi for CRESA UON students.
14. The AAK and BORAQS team at the BORAQS CPD Seminar
15. AAK Presents Key Recommendations for a Just City to Nairobi Governor H.E. Sakaja Johnson
16. AAK Discusses One Stop Shop Model with CS Eliud Owalo
17. AAK president Arch. Florence Nyole's courtesy call to the President of Kenya National Chamber of Commerce and Industry, Dr. Eric Rutto to Explore Collaboration Opportunities
18. Je, Una Mjengo? and Mulika Mjengo Campaign.

EXECUTIVE COMMITTEE 2023-2025



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President



Arch. George A. Ndege
Vice-President



Arch. Brenda Nyawara
Hon. Secretary



Qs. Patience Mulondo
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Chief Executive Officer



Michelle Ouma

Research & Advocacy Manager



Kelvin Munene

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Rodah Boyani

Communications Officer



Mary Ngaruiya

Advocacy Officer



Lenah Waweru

Administrative Secretary



Eric Ochieng

Office Assistant

MRM
MABATI ROLLING MILLS

In the dynamic landscape of Kenya's construction industry, one company stands out for its remarkable achievements and unwavering commitment to excellence in innovative steel building & roofing solutions - Mabati Rolling Mills Limited (MRM).

Mabati Rolling Mills (MRM) has been providing steel roofing & building solutions to Kenya and the East Africa market since 1961. This has been successfully achieved by huge investments in an excellent manufacturing facility with world-class processes supported by a wide distribution network and customer centric services through its partners and retail outlets.

The steel building solutions are rolled to deliver value and the highest quality to customers with focus on solutions for diverse application areas including residential, commercial, industrial and institutional buildings as well as raw materials for other sectors like storage, packaging & steel fabrications.

The MRM brand stands for trust, integrity and performance in all its processes and is the only steel manufacturer offering written product warranty issued for all its brands. MRM continues to assure customers of the excellent product performance, quality and durability of its steel roofing, building solutions and other allied by products.

Some of the MRM innovative Trusted roof & building solutions include:

- **SAFLOK700®** a concealed fix roofing system in an angular interlocking trapezoidal rib profile that can be rolled on site to lengths of up to 100metres. Sheets are locked onto fixing clips and therefore no piercing.
- **Lifestile®** stone-coated steel roofing tiles combining impeccable artistry, unmatched durability, and aesthetic appeal, Lifestile® has become the epitome of architectural excellence.
- **Versatile®, Orientile®, Elegantile®** range of steel roofing tiles.
- **Resincot®, Covermax®, Maxcover®** range of colored steel roofing sheets available in a variety of colors.
- **DumuRangi®** and **Dumuzas®** normal corrugated steel roofing sheets.
- **SAFBUILD®** A Pre-engineered steel building (PEB) solution easily assembled and constructed in just 4 weeks while maintaining the quality & aesthetics standards adorned by MRM.
- **Ultraspan®** Pre- engineered steel trussing systems giving flexibility in designs.
- **SAFCOOL®** Insulated panels used in both structural & temperature control storage for cold rooms.

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INNOVATIVE FINANCING MODELS FOR SUSTAINABLE HOUSING

by Tsalwa Waburiri

In 2008, the global urban population surpassed the rural population, thereby starting a new 'urban millennium' (United Nations, n.d.). By 2050, two-thirds of the world's population will live in urban areas. With cities growing by nearly 73 million people annually, the demand for sustainable housing is rising. Innovative financing models are now crucial to overcoming economic barriers for meeting housing needs, as traditional financing often fails to address the diverse needs of low-income populations (Makachia, 2015). Similarly, they fall short of mitigating climate risks and ensuring long-term sustainability. This paper explores various innovative models, highlights benefits and challenges, and lists a few case studies.

Microfinance

Microfinance provides small loans and financial services to low-income individuals lacking access to traditional banking (Finca, n.d.). It includes microloans for home construction, improvement, and purchase, microsavings, as well as microinsurance to support housing needs for underserved populations. This approach improves living conditions, promotes asset accumulation, and fosters sustainable housing development in communities with limited formal financial services. In Kenya, 14 institutions are licensed by the Central Bank to offer microfinance. Challenges include high costs, credit risks, scaling difficulties, and dependency on external funding. Addressing these requires integrating financial literacy, supportive policies, and partnerships to maximize benefits.

Community Land Trusts (CLTs)

Community Land Trusts (CLTs) are nonprofits that acquire and manage land to ensure affordable housing and sustainable development by separating land and building ownership (UN Habitat, 2012). CLTs retain land control, leasing or selling buildings while setting resale price restrictions to maintain long-term housing affordability for low- and moderate-income families. Governed by community members, CLTs prioritize local needs and promote community empowerment.

Key advantages of CLTs include stabilizing housing costs, empowering local governance, and promoting sustainable land use. CLTs also protect land from speculative market forces, ensuring it remains a community asset. Challenges include securing initial funding for land acquisition, navigating legal complexities, and educating communities about the CLT model. Despite these, CLTs offer a sustainable, community-driven approach to housing affordability and inclusive neighborhoods.

Public-Private Partnerships (PPPs)

Public-Private Partnerships (PPPs) leverage government and private sector collaboration to develop and manage housing projects. They combine public resources with private sector expertise and capital to enhance project efficiency, innovation, and speed of delivery (London Premier College, 2022). While PPPs offer benefits such as access to additional funding and improved project quality, they also entail complexities in legal, financial, and regulatory management. Balancing public objectives with private sector goals, ensuring long-term commitment, and addressing affordability concerns are key challenges. Effective governance and stakeholder engagement are critical for maximizing the advantages of PPPs while mitigating risks throughout the project lifecycle.

Blended Finance

Blended finance for housing combines public, private, and philanthropic funds to address housing challenges, particularly in underserved areas. It boosts funding availability by attracting private investors with reduced risk through public and philanthropic contributions (Tew & Caio, 2016). This approach encourages innovation and efficiency in housing solutions while promoting sustainability and local economic growth. However, managing diverse funding sources and ensuring financial viability can be challenging. Dependency on external funding and regulatory barriers also pose challenges, requiring careful coordination and supportive policies to maximize social impact and long-term sustainability.

Crowdfunding

Crowdfunding raises funds from numerous individuals or organizations via online platforms, bypassing traditional financing channels like banks. This method democratizes real estate investment, allowing individuals to support specific projects and offering developers alternative funding sources. Crowdfunding connects project developers or homeowners directly with potential investors, promoting community engagement and supporting innovative housing initiatives (Zahid, 2023). This approach poses challenges such as regulatory compliance, ensuring investor protection, and managing expectations regarding returns and project risks. Successful crowdfunding campaigns programs emphasize transparency, community engagement, and clear communication to build trust and attract backers. By diversifying financing beyond traditional channels, crowdfunding makes real estate investment opportunities more inclusive and accessible. However, they require careful navigation of market dynamics and financial viability to achieve funding goals.

Green Bonds

Green bonds also referred to as sustainable or climate bonds, are financial instruments designed to finance projects that deliver environmental benefits. These projects typically include renewable energy, energy efficiency improvements, sustainable transportation, pollution control, conservation, sustainable water management, and green buildings meeting international standards (Raj M. Desai, 2018). In Kenya, the Green Bond Programme is a collaborative effort involving the Kenya Bankers Association, Nairobi Securities Exchange, Climate Bonds Initiative, Financial Sector Deepening Africa, and FMO - Dutch Development Bank, aimed at fostering financial innovation and developing a domestic green bond market (Makachia, 2015).

Green bonds attract environmentally conscious investors by promoting sustainability and potentially reducing financing costs, while also hedging against risks associated with climate change, such as carbon taxes (Financial Sector Deepening, 2022). They offer

“Green bonds attract **environmentally conscious investors** by promoting sustainability and potentially reducing financing costs, while also **hedging against risks associated with climate change, such as carbon taxes**

stable long-term financial returns and align investments with climate-friendly projects and long-term financial obligations, making them attractive for retirement planning and institutional investors seeking to diversify portfolios (Nairobi Securities Exchange, n.d.). Despite their advantages, the verification and certification process of environmental benefits can be complex and costly, adding administrative burdens for issuers. Nevertheless, recent years have seen strong demand for green bonds globally, driven by increasing investor interest in sustainable investment opportunities and the growing importance of environmental considerations in financial decision-making.

Social Impact Bonds (SIBs)

A Social Impact Bond (SIB) is a financial mechanism designed to achieve sustainable social outcomes by attracting investors who fund social services up front (Geral, 2016). Investors are repaid by government or private funders if pre-agreed outcome targets are met. SIBs improve resource allocation efficiency for governments and donors, particularly during fiscal constraints, through public-private partnerships.

SIBs tie financial returns to achieving specific social goals, such as reducing homelessness or enhancing education. They promote efficiency and innovation in service delivery while sharing risks between investors and government agencies. This collaboration aims to solve social problems effectively while ensuring accountability and financial sustainability (Social Finance Ltd, 2009).

However, SIBs can be complex to administer, carry financial loss risks if outcomes are unmet, and may overly focus on measurable results. They also require ongoing funding commitments from governments or donors and may not be suitable for all social interventions (Social Finance Ltd, 2009). Despite these challenges, SIBs foster collaboration and innovation in addressing social issues, striving for effective and sustainable outcomes.

CASE STUDIES

Affordable Housing Finance in India

The Pradhan Mantri Awas Yojana (PMAY) scheme in India combines government subsidies, interest subsidies, and PPPs to provide affordable housing for low-income families, leveraging innovative financing mechanisms to meet ambitious housing targets (Government of India, n.d.).

Green Bond Issuance in Mexico

Mexico City issued green bonds to finance sustainable urban projects, including energy-efficient housing and public transportation, demonstrating the potential of green bonds to support climate-resilient infrastructure (International Finance Corporation, 2023).

A Social Impact Bond in Practice

In 2010, Peterborough Prison in the UK issued one of the first social impact bonds, raising £5 million from 17 social investors to fund a pilot project (Chen, 2022). The issue aimed to reduce re-offending rates among short-term prisoners. Over six years, the re-conviction rates of released prisoners were compared to a control group. If Peterborough's rates were at least 7.5% lower, investors would receive returns proportional to the difference, capped at 13% annually over eight years.

Community Land Trusts in the United States

The Champlain Housing Trust in Burlington, Vermont, is one of the largest and most successful CLTs in the US, providing affordable housing and preventing displacement through community ownership and control of land.

Conclusion

Innovative financing models are crucial for addressing the complex challenges of sustainable housing development. By leveraging diverse financing mechanisms such as green bonds, social impact bonds, microfinance, community land trusts, public-private partnerships, blended finance, and crowdfunding, stakeholders can promote inclusive, affordable, and climate-resilient housing solutions. Implementing supportive policies, building capacity, raising public awareness, fostering collaboration, and ensuring rigorous monitoring and evaluation are essential strategies for the successful deployment of these innovative financing models.

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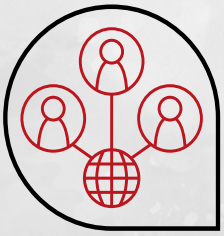
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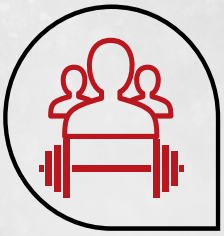
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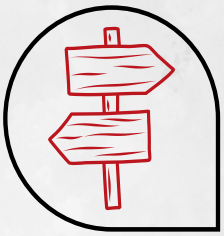
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SOCIAL HABITAT AND TECHNOLOGY: OUR CONNECTION TO PLACE

By Griffiths Ochieng'

We live in a time that challenges our connection to place and space. Despite our achievements in internet connectivity, we are losing our connection to Mother Earth at a rapid pace each day. Today, the alarming figures of demographic growth show that 50% of the world's population is currently urban and by 2050, 70% will become so. This in turn poses dire urbanisation challenges, especially for cities in developing countries.

This requires us to observe the social connections between the layers of our current urban fabric. What does social mean? It could mean connectedness, unity, or the ability to live with others in our natural habitats. The need for effective social habitat solutions is more pressing than ever today. Social habitats are communities designed to provide safe, affordable, and accessible housing for people of all backgrounds. Integrating advanced building technologies with climate resilience is crucial to ensure these habitats are sustainable and equitable for future generations.

The future of our cities relies heavily on our quick response to changes, and adaptability to environmental, social, and economic transformations. This leads us to urban regeneration which is mainly about never undoing but reinforcing, improving, and adding. The sooner we understand this the closer we come to building agile and responsive cities. Hence the need to, for instance, construct flexible homes that can evolve as the inhabitants evolve. An agile city simply anticipates destruction, and cushions inhabitants against the consequences. "The right to the city, which is about ordinary people's ability to inhabit, shape, and enjoy their environment, linking the rural to the urban, is a political project. The notion of a right to the city unsettles the status quo of capital-driven spatial change." By Henry Lefebvre, HIC.

The architect is uniquely positioned to address the urgent need for housing due to their training, knowledge, techniques, vision, ability to manage space, and art of synthesis. Today, an estimated 200 million people are homeless, and nearly 2 billion live in inadequate housing worldwide. Furthermore, with urbanization accelerating, cities face significant challenges in managing this growth. While housing is defined as a basic need that provides the family access to shelter, it also demands resources, physical infrastructure, labor, technology, finance, and land. Thus, housing refers not only to the physical structure of a house but also its forward and backward linkages to job creation, resource requirements, institutional and regulatory systems, supporting infrastructure, services, and social cohesion.

Habitat for Humanity has developed the concept of owner-driven housing, which is currently helping communities to get access to micro finances to build their house in Kenya and around the world. For this to continue to work, it is essential to get governments to establish policies on affordability and access to low-cost housing. We need to be very careful about the human rights dimension to ensure the process of private sector engagement does not lead to more inequalities in cities.

The future of our cities relies heavily on our quick response to changes, and adaptability to environmental, social, and economic transformations.

When it comes to building technology for social housing, traditional methods reliant on local materials and manual labor have transitioned to **modern techniques prioritizing efficiency, and sustainability,** while still relying on the availability of local materials and cost-effectiveness. Prefabrication, modular construction, and 3D printed houses, for instance, enable quicker assembly and lower costs while reducing waste, making them environmentally friendly and climate-resilient. Innovative materials like green concrete, which absorbs carbon dioxide, and advanced insulating materials enhance energy efficiency and durability.

The **integration of building technology and climate resilience** offers numerous benefits. The 'Floating Houses' in the Netherlands are an excellent example of climate-resilient design. These houses are designed to rise with water levels during floods, equipped with renewable energy systems and sustainable water management. The houses ascend when waters rise and descend when waters recede. With the recent flood in our country, and the huge number of families displaced, it's about time built environment professionals started

thinking of not only homes built on land but also homes that are adaptable to land and floods.

This brings us to **Government policies** which play a crucial role in promoting building technology and climate resilience. Incentives such as tax breaks, grants, and subsidies can encourage the adoption of sustainable practices. Additionally, building codes and standards should be updated to reflect the latest advancements in technology and climate resilience. In Kenya, the National Housing Policy promotes the use of green building technologies and climate resilience. The policy includes incentives for developers who incorporate sustainable practices and provides guidelines for climate-resilient construction. Additionally, the East African Community (EAC) has developed a regional strategy for climate-resilient infrastructure, emphasizing the need for sustainable housing solutions across member states.

Community involvement is equally important. Local knowledge and participation can significantly enhance the effectiveness of housing projects. Engaging communities in the planning and implementation phases ensures that the solutions are culturally appropriate and widely accepted. Financial mechanisms, including microfinance and public-private partnerships, can also provide the necessary funding for these projects.

In conclusion, Integrating advanced building technologies and climate resilience is essential for creating sustainable and equitable social habitats. These innovations can significantly improve the quality of life for residents while protecting them from the adverse effects of climate change. Future efforts should focus on multi-stakeholder collaboration, continued research, and policy support to overcome challenges and scale up successful models. By adopting these practices, we can build a world where everyone can access a safe, affordable, and social habitat, driven by technology built for the people.

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AUTHOR BIO



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LANDSCAPE ARCHITECTS' CONTRIBUTION TO SOCIAL HABITATS

By Anthony Kimondo

When I think about social habitats, I pause to reflect how life was for my great grandfather under the forests of Mt. Kenya, surrounded by lush greenery, bubbling rivers, and abundant wildlife. He would not understand our struggles for his commune with nature was direct, unfiltered and divine.

Social habitats in Africa play a crucial role in shaping the lives and interactions of its inhabitants. These habitats encompass a wide range of environments, from rural villages to urban centres, each with its own unique social dynamics and challenges. One of the most prominent social habitats in Africa is the rural village. These villages are often characterized by close-knit communities where individuals rely on each other for support and sustenance. In rural villages, social relationships are based on kinship ties and communal values, with individuals working together to meet the needs of the community. This sense of community and interconnectedness fosters a powerful sense of belonging and identity among villagers, creating a supportive and cohesive social environment.

However, rural villages in Africa face numerous challenges, including poverty, lack of access to basic services, and environmental degradation. These challenges can have a significant impact on the social dynamics of the village, leading to increased social inequality and marginalization of certain groups within the community. For example, women and children in rural villages often bear the brunt of poverty and lack of access to education and healthcare, leading to higher rates of maternal and child mortality.

In contrast to rural villages, urban centres in Africa present a diverse set of social habitats. Urban centres are characterized by high population density, diverse populations, and complex social structures. In urban centres, individuals often interact with a wide range of people from divergent backgrounds and cultures, leading to increased social diversity and opportunities for social mobility. Urban centres in Africa also face challenges such as overcrowding, inadequate infrastructure, and elevated levels of unemployment, which can lead to social tensions and conflict.

City spaces can be used to support active lifestyles, sustain businesses, and build communities. Careful landscape and urban planning ensure all these features are added safely within a given area. As we become more aware of the potential environmental impacts of increased development, we can build sustainable features into city plans.

Urban policy framework and regulation reforms play a crucial role in shaping the social habitats of our cities. Landscape Architects have a unique perspective and skill set that can greatly contribute to the development and implementation of these policies. Landscape Architects are trained to consider the social, environmental, and economic aspects of a project when designing outdoor spaces. They have the expertise to create sustainable and inclusive environments that promote community well-being and quality of life. By incorporating principles of urban design, ecology, and social equity into their work, Landscape Architects can help address the complex challenges facing our cities today.

One of the key roles of Landscape Architects in urban policy framework and regulation reforms is to advocate for green infrastructure and sustainable design practices. Green infrastructure, such as parks, green roofs, and rain gardens, can help mitigate the impacts of climate change, improve air, and water quality, and enhance biodiversity in urban areas. By incorporating these elements into city planning and development regulations, Landscape Architects can help create healthier and more resilient communities.

In addition to promoting green infrastructure, Landscape Architects can play a role in advocating for policies that promote social equity and inclusivity in urban spaces. By designing public spaces that are accessible to people of all ages, abilities, and backgrounds, Landscape Architects can help foster a sense of community and belonging. This can help reduce social isolation and improve mental health outcomes for residents. Furthermore, Landscape Architects can help shape urban policy frameworks that prioritize pedestrian and cyclist-friendly design, mixed-use development, and affordable housing options. By advocating for policies that promote walkability, active transportation, and access to public transit, Landscape Architects can help reduce car dependency and promote healthier, more sustainable lifestyles.

By incorporating principles of **green infrastructure, social equity, and sustainable design** into city planning and development regulations, **Landscape Architects can help shape the future of our urban environments for the better.**

Social interaction and Community engagement.

Social habitats are an essential aspect of landscape architecture, as they play a crucial role in shaping the way people interact with their environment. Landscape Architects are responsible for designing and creating spaces that not only enhance the natural beauty of an area but also promote social interaction and community engagement.

One of the key roles of Landscape Architects is to design spaces that encourage social interaction and community engagement. By creating social habitats, Landscape Architects can help to strengthen the bonds between individuals and create a sense of belonging within a community. These spaces can range from public parks and plazas to community gardens and urban green spaces, all of which are designed to bring people together and promote social cohesion.

In order to create successful social habitats, Landscape Architects must consider a variety of factors, including the needs and preferences of the community, the surrounding environment, and the overall goals of the project. By conducting thorough research and engaging with stakeholders throughout the design process, Landscape Architects can ensure that the social habitats they create are both functional and aesthetically pleasing.

An example of a successful social habitat is the High Line in New York City, which was transformed from an abandoned railway into a vibrant public park that has become a popular gathering place for locals and tourists alike. By incorporating elements such as seating areas, green spaces, and public art installations, the designers of the High Line were able to create a space that not only enhances the natural beauty of the area but also promotes social interaction and community engagement.

Social habitats are an essential aspect of landscape architecture that play a crucial role in shaping the way people interact with their environment. By creating spaces that encourage social interaction and community engagement, Landscape Architects can help to strengthen the bonds between individuals and create a sense of belonging within a community. Through careful research and thoughtful design, Landscape Architects can create social habitats that not only enhance the natural beauty of an area but also promote social connections and foster a sense of community.

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SECURING LAND TENURE THROUGH COMPREHENSIVE URBAN PLANNING: A PATH TO AFFORDABLE HOUSING IN KENYA

By Plan. Cyrus Mbisi and Mary Ngaruiya

The relationship between land tenure security and affordable housing is intricate and profound (Byrne & Diamond, 2007). When individuals or communities lack certainty about their land rights, it creates a ripple effect that impacts various aspects of urban development. This insecurity discourages long-term investment in housing improvements, hampers the ability of low-income residents to access formal credit, and often results in informal settlements that lack basic services and infrastructure.

The current state of home ownership in Kenya further underscores the urgency of addressing these issues. According to a research report by the Kenya Mortgage Refinance Company, home ownership in Kenya remains low, particularly in urban areas. As of 2020, only 21.3% of urban dwellers own their homes, with the vast majority being renters. This low rate of home ownership not only affects individual financial security but also has broader implications for community stability and urban development.

The root cause of these issues can be traced back to lack of proper urban planning and the inconsistent implementation of physical and land use development plans. The uncontrolled urban sprawl witnessed today directly results from this oversight. As cities haphazardly expand outside of a planned framework, valuable land is consumed by the resultant developments, driving up land prices and making land generally expensive for future expansion and provision of public infrastructure (Museleku, 2013). Further, the sprawling cities and urban areas have been known to increase exponentially the cost of supplying physical infrastructure and social amenities. A study from Smart Growth America (SGA), which surveyed 17 studies of compact and sprawling development scenarios across the country, finds that compact development costs, on average, 38% less in up-front infrastructure than conventional suburban development for things like roads, sewers and water lines while also producing, on average, about 10 times more tax revenue per acre (SGA, 2013).

To address these challenges and create a more equitable urban landscape, Kenya must prioritize the development and implementation of physical and land use development plans at all levels of governance as mandated by the Physical and Land Use Planning Act, 2019. This approach starts with the National Spatial Plan, which provides the overarching vision for the country's spatial development; articulating strategies for balanced regional growth, identifying corridors for major infrastructure projects and also laying out key flagship projects for development in line with a country's economic blueprint.

At the county level, county physical and land use development plans must translate the national vision into more detailed strategies that account for local contexts and needs, designating areas for different types of development, including specific zones for industries, commercial areas, housing and social amenities. By clearly defining these zones in advance, county governments can better control land speculation and ensure that sufficient land is available for such critical social and economic development initiatives.

At the city and neighbourhood level, Local Physical Development Plans have the power to shape the immediate environment in which people live. These plans should reserve land for future public use, implement mixed-use zoning to create vibrant communities and incorporate social and affordable housing units within diverse neighbourhoods. By doing so, they can help break the cycle of segregation often associated with large-scale social housing projects that are only targeted at the middle to high-end market.

The implementation of comprehensive physical and land use development plans across all governance levels can yield multifaceted benefits for urban development and land management.

- Stabilization of land prices through strategic designation of development areas and preservation of low-density zones (Habitat III, 2016).
- Reduction of costs related to compulsory land acquisition by clear delineation of land for future public use (World Bank, 2017).
- Facilitation of efficient and cost-effective infrastructure development, crucial for affordable housing provision (UN-Habitat, 2015).
- Enhancement of community integration by integrating affordable housing into well-planned neighborhoods, reducing stigma and promoting social cohesion (Arthurson, 2010).
- Increased certainty to investors through consistent enforcement of development plans, potentially attracting more private sector involvement in affordable housing (Buckley & Kalarickal, 2005).
- Strengthening of land tenure security by clearly defining land use and ownership rights, vital for sustainable urban development (Durand-Lasserve & Selod, 2009).

These interconnected benefits underscore the importance of rigorous physical and land use planning in addressing urban challenges and promoting equitable development.

To achieve these benefits, Kenya must overcome several challenges. First, there needs to be a shift in political will to prioritize long-term planning over project-based focus for short-term gains. This requires educating both policymakers and the public about the importance of physical and land use planning and its impact on quality of life.

Second, there must be a concerted effort to streamline and digitize land registration processes. This will help clarify existing land rights, reduce conflicts, and provide a solid foundation for future planning efforts.

Third, capacity building within planning departments at all levels of government is crucial. This includes not only technical training but also fostering a culture of transparency and public participation in the planning process.

Lastly, there needs to be a robust legal framework that supports the implementation and enforcement of physical and land use development plans. This may require reforms to existing laws to give planning authorities more authority in enforcing zoning regulations and land use policies.

In conclusion, addressing land tenure insecurity through comprehensive physical and land use planning is not just about creating order – it's about building the foundation for sustainable, equitable, and livable cities. By developing and implementing physical and land use development plans at all levels, from national to neighbourhood, Kenya can create a framework that not only secures land tenure but also guides smart growth, preserves valuable resources, and enhances the quality of life for all urban residents. The path forward requires commitment, resources, and a shared vision for the future of our cities. It's a challenging journey, but one that promises immense rewards for generations to come, potentially transforming the lives of millions of Kenyans currently living in inadequate social economic and environmental conditions.



AUTHOR BIO

Mary Ngaruiya is a graduate Urban Planner currently serving as the Advocacy Officer at the Architectural Association of Kenya (AAK). She has extensive experience in community mobilization and policy analysis. Mary is passionate about shaping urban development policies, through stakeholder engagement, content creation, and driving social change through effective advocacy strategies.



COLLABORATIVE PARTNERSHIPS AND COMMUNITY ENGAGEMENT IN SOCIAL HABITATS IN EAST AFRICA

By Meshak Omondi

In East Africa, community involvement and cooperative partnerships are essential elements of successful social habitat initiatives. To ensure the long-term viability and efficiency of housing developments, construction professionals must give these factors great priority. The article looks at the role of collaborative partnerships and community involvement in the creation of social habitats in the East African region.

A variety of parties are involved in collaborative partnerships, including local communities, government agencies, non-governmental organizations (NGOs), and private sector investors. These collaborations have the potential to promote creativity, efficacy, and resource mobilization by using each stakeholder's unique skills.

To be successful, social habitat projects require collaboration between the government and non-governmental organizations. For example, if non-governmental organizations (NGOs) provide technical competence and community mobilization, the government could provide project funding as well as regulatory frameworks through favourable regulations for such projects.

Ethiopia's Integrated Housing Development Programme (IHDP) provides an excellent example of effective government-NGO partnership. Several foreign non-governmental organizations (NGOs) have supported the program, which aims to enhance urban living conditions and provide cheap housing (The Integrated Housing Development Program: Identifying Strengths and Gaps, n.d.). It has the ability to significantly improve the living conditions of low-income families and reduce urban poverty, both as a result of effective collaboration between the government and non-governmental organizations (NGOs).

Private Sector Involvement

The expansion of social habitat initiatives necessitates the involvement of the private sector, including construction businesses, private developers, and financial institutions, which give capital, experience, and new solutions that are crucial in project implementation. Successful collaboration with the private sector can help to speed up project delivery and reduce costs.

In Kenya, the Boma Yangu initiative exemplifies the benefits of private sector involvement. The project engages with commercial developers and financial institutions to provide affordable housing units to low- and middle-income families *(Affordable Housing Program - Boma Yangu, n.d.).* The private sector's involvement broadened the project's scope and improved project delivery.

The long-term survival of social habitat projects relies heavily on community involvement and participation. Involving the community in the planning, design, and implementation stages of housing solutions guarantees that the solutions suit their needs and desires. Furthermore, it fosters a sense of accountability and ownership, resulting in better maintenance and longevity. Participatory planning and design engages the community in all decision-making processes, from site selection to house design. This strategy ensures that housing options are environmentally friendly, appropriate for the local culture, and responsive to community needs.

Slum Dwellers International (SDI) has used participatory planning and design in several Ugandan slum rehabilitation projects. SDI has successfully designed housing solutions that are not just affordable but also reflect the residents' interests and lifestyles by incorporating the community at all levels *(Uganda - Slum Dwellers International, n.d.).*

Community-Based Organizations (CBOs)

Community-based organizations, or CBOs, play an important role in encouraging community participation. CBOs serve as community representatives and mediators between the community and other parties. They improve communication, make sure the community's voice is heard, and resolve issues. CBOs now have the power to actively take part in slum upgrading activities thanks to a grant from Tanzania's Centre for Community activities (CCI). By enhancing CBOs' capabilities, CCI has raised community ownership and engagement, leading to more fruitful and durable programs *(CCI Tanzania | Our Programmes, n.d.).*

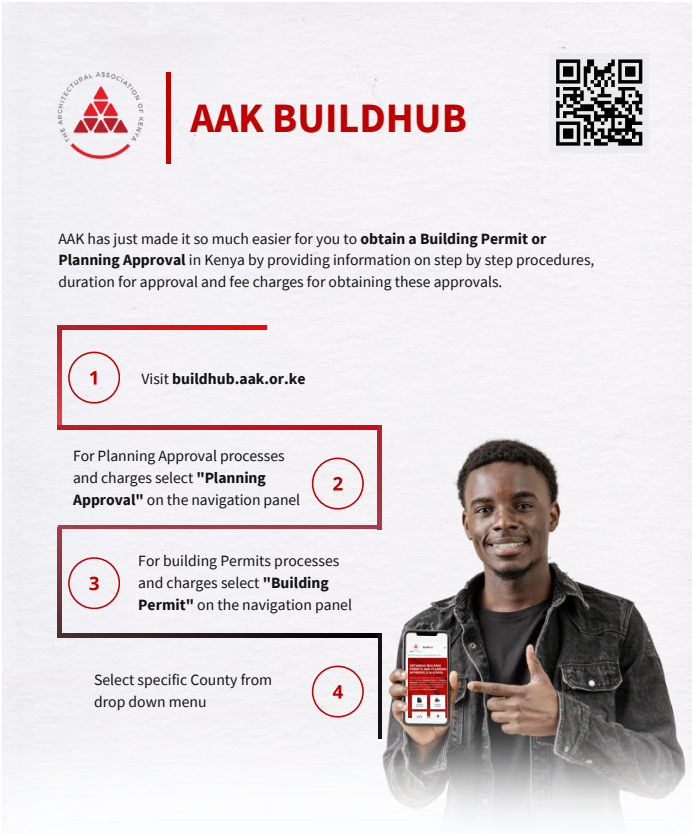
Social habitat projects can benefit greatly from cooperative collaborations and community involvement. They guarantee the sustainability of housing solutions, encourage creativity, and improve project efficacy. Additionally, they empower communities and promote social cohesion, which advances overall development goals.

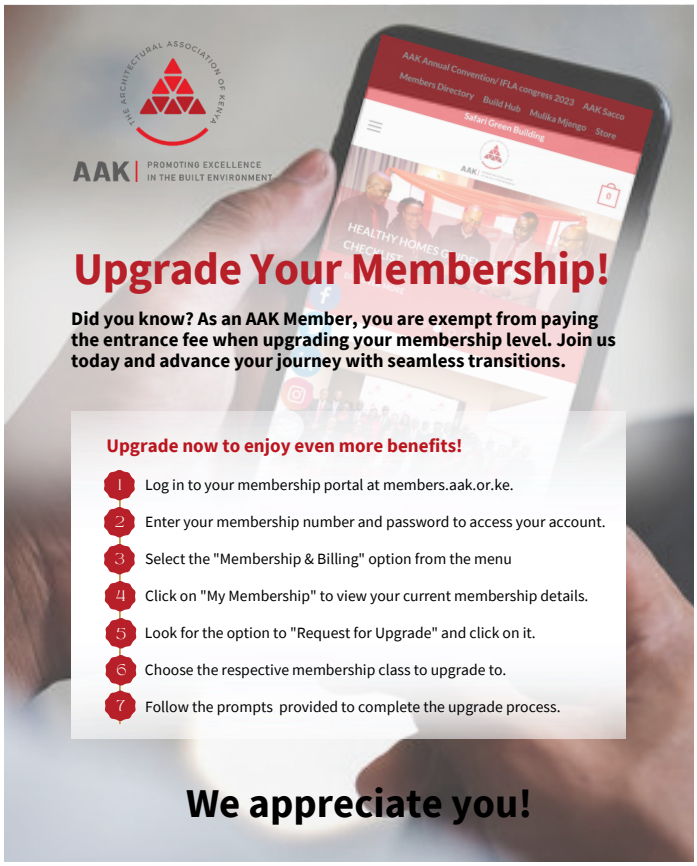
Conclusion

The success of social habitat projects in East Africa depends on cooperative relationships and community involvement. Prioritizing these factors is vital for quantity surveyors, as they are crucial stakeholders in ensuring the sustainability and efficacy of housing developments. Through the utilization of the varied strengths of stakeholders and community participation in decision-making procedures, East Africa may establish social environments that cater to the requirements of its susceptible populations and foster equitable development.

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AUTHOR BIO



Meshack Ochieng Omondi is a graduate Quantity Surveyor, a Council Member of the AAK QS Chapter and Organising Committee Member for the AAK QS Chapter. He is an enthusiastic practitioner of quantity surveying, who is well-known for his meticulous attention to detail and unwavering dedication to quality. He is eager to provide his expertise and time to any initiative that aims to raise the standard of living in the community. Aside from his career, Meshack is an entrepreneur who loves to travel to exciting new places, an avid sports fan and an artist.

MAXIMIZING DILAPIDATED & INCOMPLETE INFRASTRUCTURE:

The Potential of Repurposing Abandoned and Unfinished Buildings into Affordable Housing in Kenya



By Michael Otechi

Addressing the Housing Shortage

As the demand for affordable housing in Kenya grows and the availability of low-cost properties diminishes, stakeholders must innovate in their approach to social housing development. One promising opportunity lies in restoring and repurposing abandoned buildings. Constructing new houses remains the primary strategy, but rehabilitating derelict and incomplete buildings can be more economical and sustainable. This approach maximizes the use of dilapidated infrastructure and provides an economic opportunity to increase affordable housing within urban areas. Repurposing derelict residential, commercial, institutional, or historical buildings into social housing can significantly address Kenya's housing shortage and contribute to climate action.

Urban Policy Frameworks & Regulation Reforms - Land Use & Secure Land Tenure

To effectively repurpose abandoned and incomplete buildings, Kenya needs robust urban policy frameworks and regulation reforms. Secure land tenure is critical to ensure that repurposed buildings remain accessible and affordable for the intended beneficiaries. National and county governments can introduce legislation compelling developers to complete their structures within specified timelines. These regulations should ensure that incomplete structures are promptly connected to essential utilities such as water and electricity.

Building Technology for Social Habitat & Climate Resilient Housing

The built environment significantly contributes to climate change, responsible for 35% of global energy use and 38% of global greenhouse gas emissions. The future of buildings in a climate-affected world lies in adopting climate-resilient designs and sustainable construction practices. By repurposing abandoned buildings for social housing, we can reduce the need for new construction, thus minimizing greenhouse gas emissions and resource consumption. Sustainable materials such as recycled steel, bamboo, and low-carbon concrete can reduce emissions. Using locally sourced materials also minimizes transportation-related emissions and supports the local economy. Advanced tools like Building Information Modeling (BIM) and Life Cycle Assessment (LCA) can optimize energy use, material selection, and overall building performance.

Innovative Financing Models

Financing the conversion of abandoned and incomplete buildings into social housing can be a hurdle. Innovative financing models such as the Credit Guarantee Scheme (CGS) launched by Kenya's National Treasury can enhance credit access for Micro, Small, and Medium Enterprises (MSMEs). By partnering with financial institutions, CGS offers partial loan guarantees, making it easier for MSMEs to secure funding for repurposing projects. This government initiative can benefit developers and contractors involved in converting existing structures into social housing. Subsidies, grants, and favorable loan terms from the government and financial institutions can support these initiatives.

Collaborative Partnerships / Community Engagement & Participation

Community collaboration is crucial in the repurposing process. Engaging local communities in planning and development ensures that their needs and sentiments are considered. This collaborative approach fosters a sense of ownership and enhances the sustainability of the projects. Private sector partnerships are also essential. Collaborations with private developers, investors, and non-governmental organizations can provide the necessary funding and expertise for successful conversions. For instance, the Kenya Kwanza government's Bottom-Up Economic Empowerment (BETA) Agenda encourages private-public partnerships to address housing shortages.

Gender Equality & Social Inclusion in Housing

Ensuring gender equality and social inclusion in housing is essential for creating equitable and sustainable communities. Women and marginalized groups often face significant barriers in accessing housing. Policies and programs should be designed to address these disparities, ensuring that repurposed housing projects are inclusive and accessible to all. This includes involving women and marginalized groups in the planning and decision-making processes and ensuring that housing solutions meet their specific needs.

Case Studies and Local Context

In Nairobi, the conversion of old office blocks and disused government buildings into residential units shows substantial promise. The Nairobi Railway Station precinct, for instance, contains several disused buildings that could be converted into affordable housing. Similarly, Mombasa, with its rich colonial history, has numerous abandoned structures that can be repurposed. The Old Town area, known for its historical architecture, has buildings that, if restored and converted, could serve as a blend of cultural preservation and modern social housing.

Challenges and Solutions

Repurposing historical and institutional buildings in Kenya presents unique challenges. These structures often hold significant cultural and historical value, which can lead to resistance from the community. Innovative design solutions are required to preserve the character of these buildings while adapting them for residential use. Beyond public structures, numerous private buildings have remained incomplete for years. These structures represent untapped potential for addressing housing shortages. By crafting partnerships between the owners of these buildings and financiers, it is possible to complete these projects for their originally intended use or convert them into affordable or social housing.

Community Involvement and Collaborative Efforts

Community involvement is key to the success of repurposing projects. Engaging local communities in the planning and development stages ensures that their needs and sentiments are considered. This collaborative approach fosters a sense of ownership and enhances the sustainability of the projects. By involving residents in the rehabilitation process, projects can benefit from local knowledge and foster community cohesion. Private sector partnerships are also essential. Collaborations with private developers, investors, and non-governmental organizations can provide the necessary funding and expertise for successful conversions.

The Broader African Context

While the focus here is on Kenya, the concept of repurposing abandoned buildings for social housing is relevant across Africa. Cities like Lagos, Accra, and Dakar face similar challenges and opportunities. These urban areas have numerous abandoned or underutilized buildings that could be transformed into housing solutions, addressing significant housing deficits and improving living conditions.

Government-Led Initiatives

In response to the COVID-19 pandemic, the Kenyan government's initiative to engage local artisans in making desks for schools exemplifies how Recognition of Prior Learning (RPL) can transform the built environment sector. This project boosted local craftsmanship, stimulated the economy, and improved educational infrastructure, highlighting the untapped potential of skilled workers lacking formal qualifications. By implementing RPL, Kenya can bridge the gap between existing skills and formal recognition, promoting an inclusive and skilled workforce.

> Repurposing **abandoned and incomplete** buildings into **social housing in Kenya** presents a viable and **innovative solution to the country's housing crisis.**



Conclusion

Repurposing abandoned and incomplete buildings into social housing in Kenya presents a viable and innovative solution to the country's housing crisis. By leveraging existing infrastructure, fostering community involvement, implementing robust legislative measures, and engaging in private sector partnerships, Kenya can create sustainable, affordable housing solutions that meet the growing demand and improve the quality of life for its residents. This approach will not only revitalize urban areas but also preserve cultural heritage and promote economic development. Moreover, it aligns with climate action goals by reducing the need for new construction and minimizing environmental impacts.

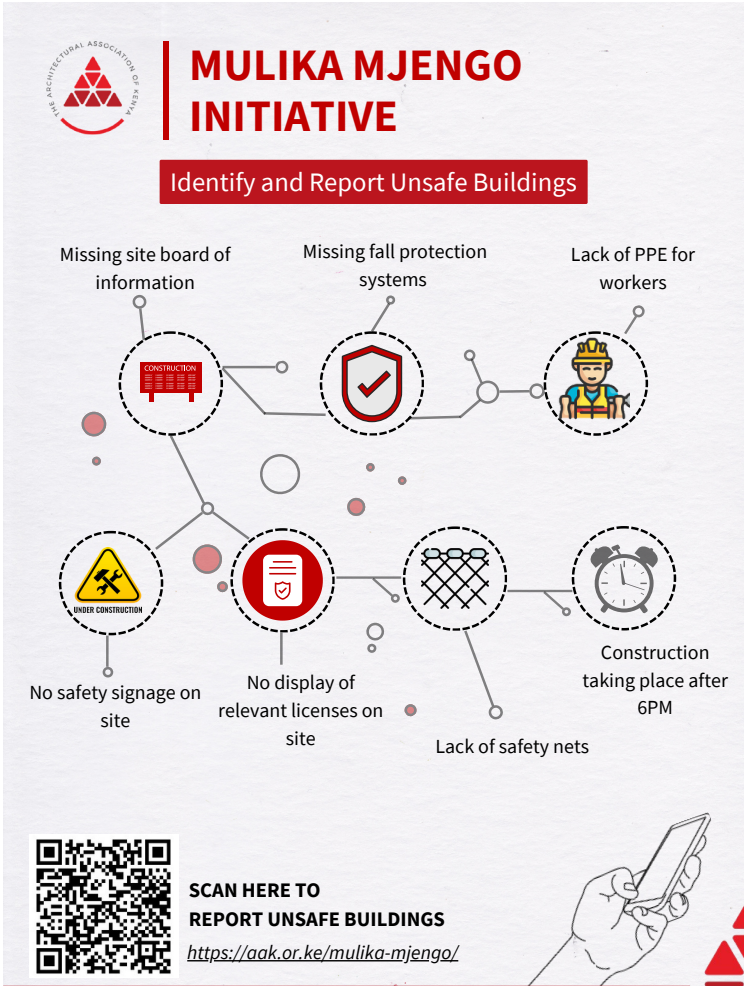
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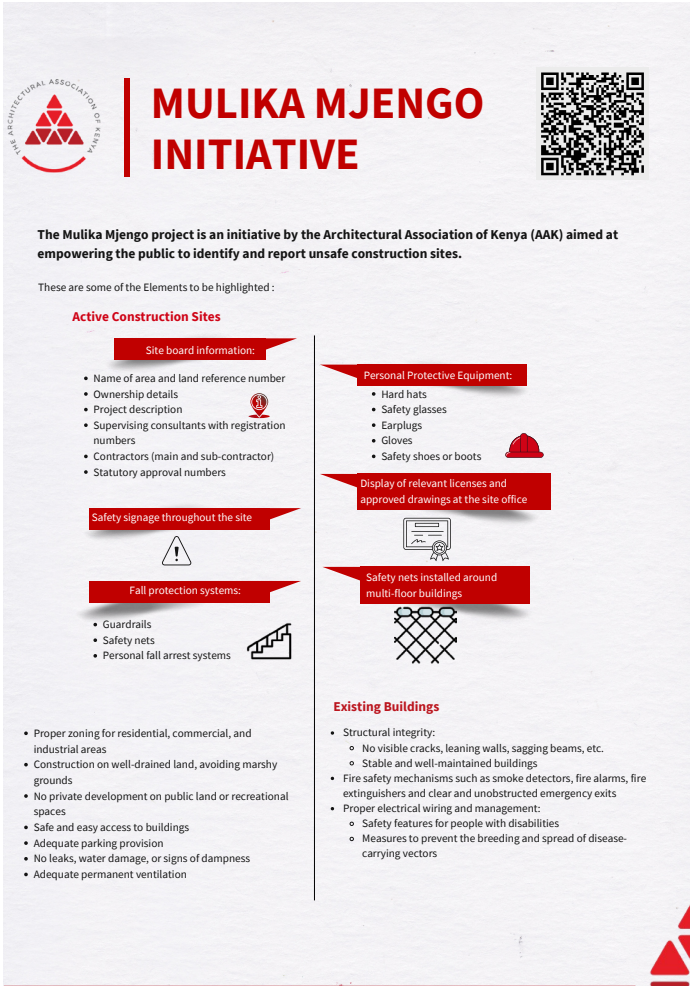
This article is an adapted and revised version of a piece originally authored with a European focus by Paul Yakubu, which was published on ArchDaily. We express our gratitude to Paul Yakubu and ArchDaily for their contributions to the core concept of repurposing buildings for affordable housing. The content has been meticulously tailored for a Kenyan audience, emphasizing local challenges, solutions, and examples.



AUTHOR BIO

Michael Otechi is a seasoned construction and real estate professional with over 25 years of experience in the industry. His expertise spans property management, building and construction, architectural design, and project administration. As a licentiate architect and active member of the International Code Council (ICC), he promotes the adoption and use of building codes in various projects. He is currently serving as the Director at Contract Service Associates Ltd.







BUILDING TECHNOLOGY FOR CLIMATE RESILIENT HOUSING

By Ndindiri Waweru

Social Habitat in the Context of Climate Change

Social habitat refers to the setting where people live and interact. It includes the buildings and roads around them and relationships between people. Climate change refers to the long-term shifts in global temperatures and weather patterns. These shifts may occur naturally or as a result of the negative impacts of human activities. It is widely acknowledged that since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil and gas), which produce heat-trapping gases.

The role of built environment professionals

Housing is a key driver for achieving social and economic development. As such, adequate, safe and affordable housing is at the core of Goal 11 of the 2030 Agenda for Sustainable Development i.e. Sustainable Cities and Communities. Furter, it is widely acknowledged that climate change will affect the socioeconomic development trajectory of Africa, therefore threatening the region's attainment of the 2030 Sustainable Development Goals and the objectives of the Africa Union's Agenda 2063.

Climate change cannot be solved without delivering climate resilient housing and tackling building emissions, as buildings account for an estimated 19 percent of the world's Green House Gas (GHG) emissions. According to the United Nations Intergovernmental Panel on Climate Change special report, by 2030, the global target is for all new buildings to be zero net carbon, and for existing buildings to be zero net carbon by 2050. This is aimed at adequately mitigating the negative impacts of climate change. Built environment professionals must play their role in ensuring that housing responds to and addresses the impacts of climate change through implementation of climate resilient housing.

What is climate resilient housing

Resilient housing can be described as housing that can resist, recover and adapt to adverse effects of climate change or natural disasters. It is the capacity of human settlements to cope with shocks (environmental, economic and social) and respond to these shocks over time. Therefore, resilient housing must be planned, designed, built, operated and maintained to reduce vulnerability to these indicated threats.

Fortunately, progress is being made by the relevant stakeholders in the housing industry in Africa to tackle the challenges of climate change. In Kenya, climate change is considered a cross-cutting theme that is being mainstreamed in the medium-term plans of the County Integrated Development Plans (CIDPs), which in turn inform the country's development blueprint - Vision 2030. Under these plans, the Government has mandated that all affordable housing projects be aligned with Global Green Certification requirements.

Elsewhere in Africa, Nigeria recently promulgated the 2021 Climate Change Act which encapsulates critical components of the country's climate change policies; this is the first standalone climate change legislation in West Africa. In Mozambique, the Government has implemented a climate resilient housing initiative through the Coastal City Adaption Project (CCAP) aimed at alleviating the challenges faced by citizens

Resilient housing can be described as housing that **can resist, recover and adapt to adverse effects of climate change or natural disasters**

residing in low lying coastal areas, estimated to be about 60 percent of the country's population. Sea-level rise and frequent intense storms which cause flooding, erosion and landslides have threatened communities, homes and economic activities in the affected areas. In Malawi, compressed earth stabilised blocks, which are made using a combination of affordable and locally sourced materials, are increasingly being used as a sustainable alternative to the traditional burnt clay bricks thereby curbing deforestation and carbon emissions while also building local technical capacity..

Climate Resilient Housing: Technology, Techniques and Strategies

Passive cooling techniques are aimed at minimizing reliance on artificial climate control. Such techniques include optimizing building layout and orientation, building shading, natural ventilation including cross ventilation, cooling by convection, insulation.

Flooding resilience may be achieved by lowering vulnerability through appropriate site selection i.e. avoiding areas with high exposure to flooding, raised foundation i.e. elevated platform above the maximum level of flooding, reinforced wall e.g. construction done with durable materials such as coconut or bamboo wood, rainwater harvesting in order to harness excess rainwater.

Industrialization of building processes - to facilitate more accessible / affordable mass housing while improving quality, speed and predictability of outcomes, industrialization of building processes is recommended. Large scale and quality-controlled production of building material components ensure that costs are minimized while still ensuring high quality is achieved.

Sustainability / green building considerations include using locally available materials, using building materials that do not have volatile organic compounds (VOCs) in order to avoid harmful health effects, designing for energy and water-use efficiency, providing for renewable energy use, maximizing natural lighting and ventilation, green building certifications such as the locally developed Safari Green Building rating tool by AAK.

In conclusion, as Africa continues to experience unprecedented rates of urbanization coupled with increasing climate related incidences, it is pertinent for construction and project managers and other built environment professionals to put in more deliberate efforts in making housing safe and resilient to climate change related impacts. This will in turn help protect lives and livelihoods from disasters and build sustainable communities for the benefit of all.



AUTHOR BIO

Ndindiri Waweru is a Construction & Project Manager by training with over 15 years experience in the industry within the public and private sectors. He is the Chairperson, AAK Construction Project Managers Chapter and has been a member of the AAK Governing Council from 2019.

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AAK | PROMOTING EXCELLENCE IN THE BUILT ENVIRONMENT

Maximize Your Membership Portal Experience

Welcome to the AAK membership portal! As you navigate through our portal, we want to ensure that you make the most out of your membership experience. Below is a detailed guide on how to leverage the various features and benefits available to you

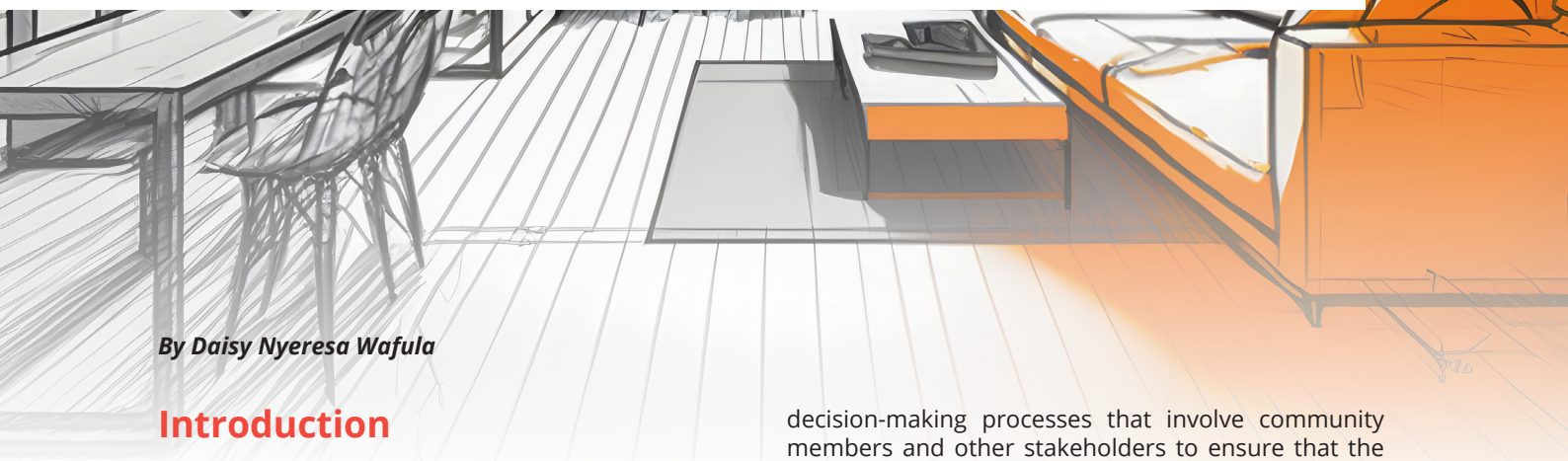
1. **Membership Certificate:** Download your membership certificate, letter of good standing or recommendation letter to showcase your affiliation with AAK.
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COLLABORATIVE PARTNERSHIPS AND COMMUNITY ENGAGEMENT IN THE BUILT ENVIRONMENT:

The Role of Interior Designers



By Daisy Nyeresa Wafula

Introduction

The built environment significantly influences the quality of life, health, and well-being of communities. The process of designing, constructing, and maintaining these spaces is increasingly recognized as a collaborative effort that benefits from the active participation of community members. Interior designers play a crucial role in this collaborative process, ensuring that the interiors of buildings meet the needs, preferences, and aspirations of the people who use them. This paper explores the importance of collaborative partnerships and community engagement in the built environment, highlighting the pivotal role of interior designers in fostering inclusive, functional, and aesthetically pleasing spaces.

Collaborative Partnerships in the Built Environment

Collaborative partnerships involve multiple stakeholders working together towards common goals in the development and management of the built environment. These partnerships can include architects, urban planners, interior designers, engineers, community organizations, local governments, and residents. The collaborative approach ensures that diverse perspectives are considered, leading to more holistic and sustainable outcomes. The benefits of collaborative partnerships are multifold; from enhanced creativity and innovation, to bringing together a variety of skills and viewpoints, fostering creativity and innovation. Different stakeholders contribute unique ideas and solutions, leading to more innovative and effective design outcomes.

Further, collaborative partnerships lead to improved decision-making processes that involve community members and other stakeholders to ensure that the needs and preferences of all parties are considered. It also leads to increased Buy-In and ownership of projects since when community members are actively involved in the design process, they are more likely to feel a sense of ownership and pride in the final outcome. This can enhance the longevity and maintenance of the built environment. Collaborative projects can also strengthen social ties within communities by fostering a sense of collective achievement and shared goals.

Community Engagement in the Built Environment

Community engagement refers to the process of involving community members in the planning, design, and management of their environment. Effective community engagement ensures that the voices of those who live, work, and play in a space are heard and valued. The methods of community engagement are several; interactive workshops and design charrettes bring together community members and professionals to collaborate on design solutions. These sessions can include brainstorming, sketching, and model-making activities.

Secondly, Surveys and questionnaires gather quantitative and qualitative data from community members about their needs, preferences, and experiences. Public meetings and forums provide platforms for community members to express their views and participate in discussions about proposed projects. Digital tools and social media platforms can facilitate engagement, allowing community members to provide feedback and participate in discussions remotely.

The Role of Interior Designers

Interior designers are integral to the process of creating functional, aesthetically pleasing, and user-centered spaces within the built environment. Their expertise extends beyond aesthetics to include considerations of functionality, accessibility, sustainability.

- **Interior Designers as Facilitators:** Interior designers often act as facilitators in collaborative partnerships and community engagement processes. They bridge the gap between technical professionals and community members, translating ideas and needs into practical design solutions.
- **Needs Assessment:** Interior designers conduct thorough needs assessments to understand the specific requirements and preferences of the users. This involves direct interaction with community members to gather insights and feedback.
- **Design Development:** Using the information gathered, interior designers develop design concepts that reflect the needs and aspirations of the community. They create detailed plans and visualizations to communicate these ideas effectively.
- **Implementation and Evaluation:** Interior designers oversee the implementation of design projects, ensuring that the final outcomes align with the initial goals and community expectations. Post-occupancy evaluations are conducted to assess the success of the design and identify areas for improvement.

CASE STUDIES

Case Study 1 - Community Center Revitalization: In a project to revitalize a community center, interior designers collaborated with residents, architects, and urban planners. Through a series of workshops and public meetings, they gathered input on the desired functions and aesthetics of the space. The final design included flexible, multi-purpose areas that catered to various community activities, reflecting the collective vision of the stakeholders.

Case Study 2 - Affordable Housing Development: In an affordable housing project, interior designers worked closely with future residents to understand their needs and preferences. Surveys and focus groups were used to gather data, which informed the design of interiors that were both functional and welcoming. The project demonstrated how residents' input can lead to more livable and satisfactory housing solutions.

Challenges

One of the main challenges in collaborative partnerships is balancing the diverse needs and preferences of different stakeholders. Compromises are often necessary to achieve a consensus. Another challenge is limited budgets and resources, which can constrain the extent of community engagement and the implementation of desired design solutions. In addition, communication barriers pose a challenge where effective communication between technical professionals and community members can be challenging, particularly when there are differences in language, knowledge, and expectations.

Opportunities

Advances in digital tools and virtual reality can enhance community engagement by providing more immersive and interactive ways to visualize and contribute to design projects. Further, increased recognition of the value of community engagement in policy frameworks can provide support and funding for collaborative projects. An easily overlooked opportunity is one on educating and training interior designers in community engagement techniques, which can enhance their ability to facilitate inclusive and participatory design processes.

Conclusion

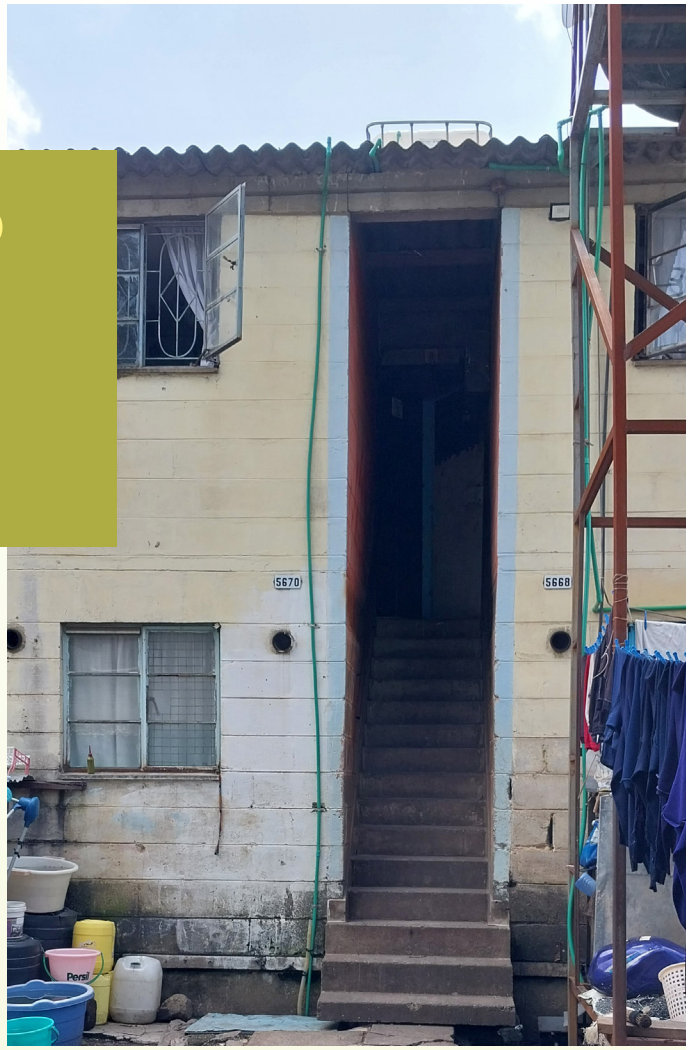
Collaborative partnerships and community engagement are essential for creating built environments that are inclusive, functional, and reflective of the needs and aspirations of the people who use them. Interior designers play a crucial role in this process, acting as facilitators who translate community input into practical and aesthetically pleasing design solutions. By embracing collaboration and engagement, interior designers can contribute to the creation of spaces that enhance the quality of life and well-being of communities. As the field continues to evolve, there are opportunities to leverage technological advancements, policy support, and education to further enhance the impact of interior designers in the built environment.



AUTHOR BIO

Daisy is an Architect and Interior Designer with a Master's degree in Project Management. With eight years of professional experience, she is passionate about creating green spaces and designs that prioritize functionality and minimalism. Her approach to design is rooted in human-centered principles, ensuring that the spaces she creates are not only aesthetically pleasing but also deeply attuned to the needs and well-being of the people who use them.

DENSIFICATION AND CONSERVATION OF JERICHO LUMUMBA ESTATE – NAIROBI









By Prof. Tom Anyamba

The Origins of Jericho Lumumba

Jericho Lumumba was built in 1961 as part of the estates that were to house 'better off' African workers. The estate was to house workers and their nuclear families after the colonial state had changed policy towards housing for Africans around 1957. Prior to 1959, the city only housed African bachelors in single room, single storey quarters. The last of the single room quarters in the fashion of the 1940s and 1950s was the Ofafa Kunguni estate.

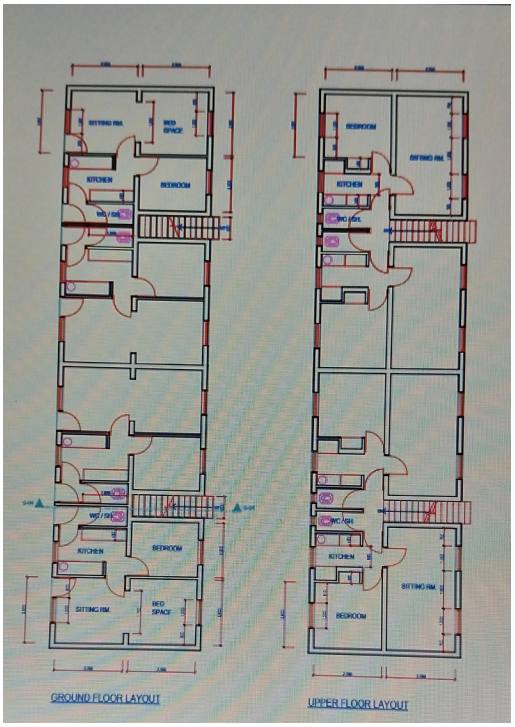
Jericho Lumumba was part of the Ofafa developments built from the late 1950s to 1961. They included Ofafa Kunguni, Ofafa Maringo, Ofafa Jerusalem and Ofafa Jericho. These estates were named after Councilor Ambrose Ofafa who was killed in November 1953. The colonial authorities decided to honour Ofafa by naming new residential estates in the Eastlands parts of Nairobi, where he lived and died.

The policy of the colonial government until the breakout of the Mau Mau uprising was to house only African bachelors in the city. After the defeat of the Mau Mau in 1956, the authorities accepted to house African families. This led to the development of family housing typologies beyond the single rooms previously built.

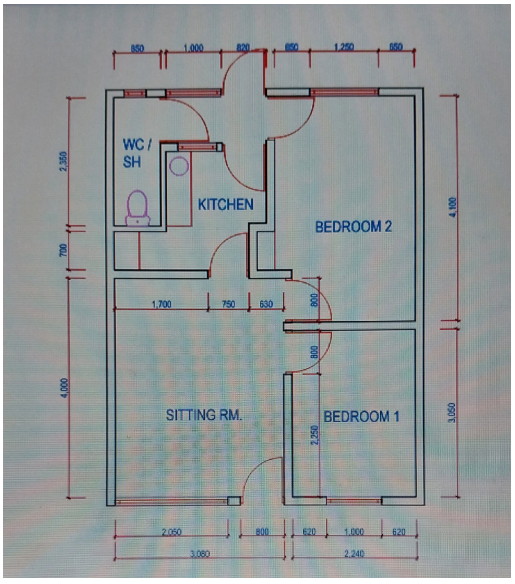
The single room housing typology was based on the bed-space concept and was to house African bachelors. This typology is to be found in Ofafa Kunguni, Ziwani, Mbotela and many of the Railway quarters all over the country. The family typologies were one bedroomed and two bedroomed types. Fig.1, Fig.2 and Fig.3 examples are to be found in Ofafa Maringo, Ofafa Jerusalem and Ofafa Jericho (which includes Jericho Lumumba).

Current Situation in Jericho Lumumba

The one bedroom and the two-bedroom houses were meant to house a nuclear family of 4-6 people. However, due to the increased household sizes there was need for additional living space. As a result, the previously open spaces between the blocks, have been informally converted to living spaces. These spaces are predominantly built using corrugated galvanized iron sheets. The original buildings were built using concrete blocks for the walls and corrugated asbestos sheets for the roofs. It has been proven that asbestos exposure may increase the risk for cancers of the digestive system, including colon cancer. Apart from additional family space, some extensions are leased out to sub-tenants as a source of additional household income. The originally formal estate has thus evolved into an informal settlement.



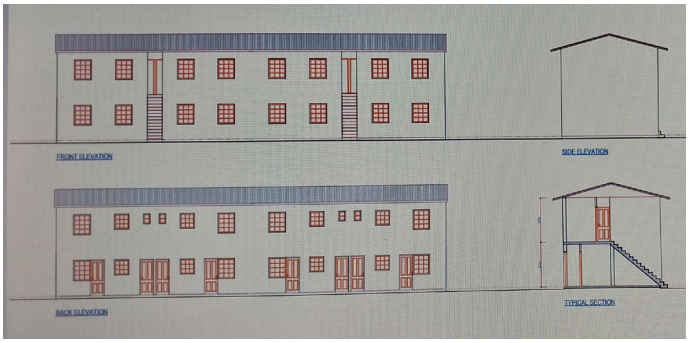
1 Bedroom Typology



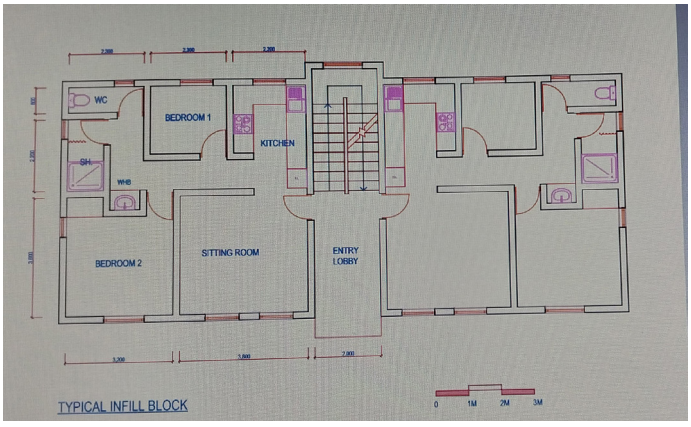
2 Bedroom Typology



Densified Land Use Plan



Elevations and Typical section



Typical Infill Block

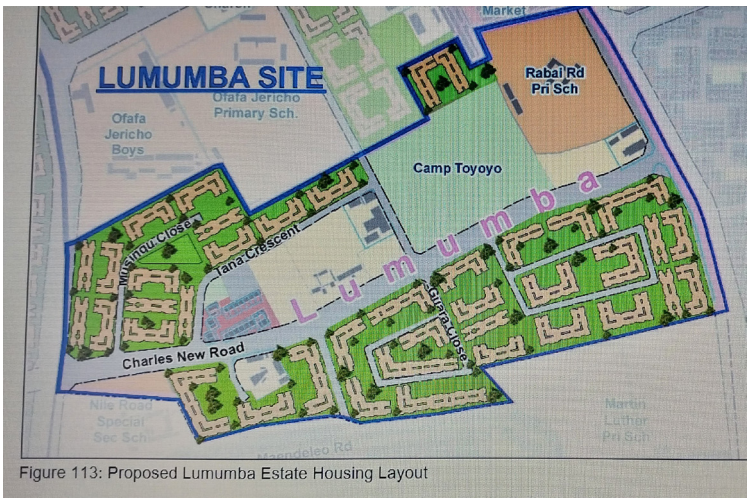


Figure 113: Proposed Lumumba Estate Housing Layout

NaMSIP Layout

The increased population has created a demand for job opportunities. In this regard, some of the extensions are used as business outlets. These businesses include groceries, barber shops/saloons, eateries etc. These informal businesses therefore sustain the livelihoods of the increased population.

The above not-withstanding, the new extensions and increased population have a negative impact on the original infrastructure. The water supply is not adequate to meet the new demand leading to water rationing. Similarly, the power supply is not sufficient, resulting in frequent power outages. In the same vein, the sewer system is over-stretched resulting in sewer breakages.

As earlier stated, Jericho Lumumba is currently an informal settlement as can be seen on the following images, Fig.4, 5, 6 and Fig.7

NaMSIP Urban Renewal Proposal

The City of Nairobi has on several occasions attempted to upgrade and renew the estates in the Eastlands area. The Nairobi Metropolitan Services hired Real Plan Consultants to generate an Urban Renewal strategy for the 18 Eastlands Estates. The Nairobi Metropolitan Service Improvement Project (NaMSIP) was thus accepted in September 2019. The NaMSIP proposal for these estates (including Jericho Lumumba) adopted a selective re-development strategy. This entailed the retention of all the public facilities, namely, schools, shopping centres, churches, health centres etc. In this proposal all the existing residential blocks were to be demolished and new 16 storey blocks built.

As a result of the above approach, the NaMSIP proposal was designed to create an entirely new neighbourhood. The rich urban history of Lumumba and the other estates would thus be erased as there is no provision for any heritage conservation measures in the NaMSIP proposal.

The re-development of the residential blocks would destroy the current social structures of the residents. Over the years, the houses have been handed over from grandparents to parents and now to grandchildren. Most of the current residents are grandchildren of the original residents of the 1960s. They have thus created strong supportive social structures which would be destroyed on re-development.

On re-development, the current single and double storey blocks would be replaced by 45 blocks of 16 levels. Fig.8 shows the NaMSIP layout for Jericho Lumumba.

Proposed Densification and Conservation of Lumumba Estate

The densification and conservation of Lumumba Estate will adopt an insitu approach. New walk-up 4 storey blocks will be in-filled in the spaces between the existing blocks. This will ensure that the current residents are not displaced during the construction period, and thus maintain social cohesion.

The infill approach will retain the existing blocks that will showcase the heritage of Lumumba from the colonial times to date. This conservation will also retain the strong social networks that have been created over the last 60 years. In addition, by conservation, the old and the new can be shown to co-exist in the same neighbourhood.

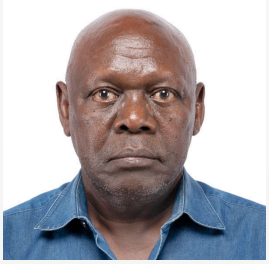
Fig.9 shows the new infill typology. The 4 storey walk-ups have a fifth roof level that can be used for laundry activities and for rainwater harvesting, including possibilities of solar heating and lighting options. Fig. 10 shows the proposed densified land use of Lumumba Estate.

Conclusion and Recommendations

The urban renewal of Eastlands can be achieved through insitu densification by use of infill blocks without redevelopment and displacement of residents. This approach will preserve the heritage of the area and at the same time maximize on land use. Rainwater harvesting and solar heating and lighting options will mitigate energy use. The asbestos roofing sheets on the existing blocks which are a health hazard have to be removed and disposed of appropriately with the assistance of the Kenya Defence Forces.

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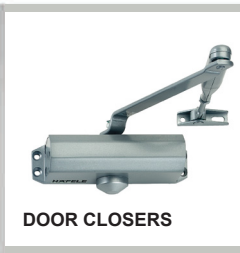


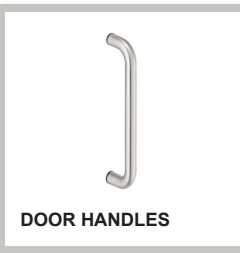
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Tom J. C. Anyamba who was born in 1955 is a professor of Architecture at the University of Nairobi and a principal of Mazingara Systems Architects in Nairobi. He graduated in 1980, with a Bachelor of Architecture (B. Arch.) degree at the University of Nairobi and also graduated in 1986, with a Master of Architecture (M. Arch.) degree at the Helsinki University of Technology in Finland. He further graduated in 2006, with a PhD degree at the Oslo School of Architecture and Design in Norway. He has over 40 years of professional experience and has designed and supervised many architectural projects including Jomo Kenyatta Sports Grounds in Kisumu. He has published widely on architecture, informality and urbanism. He may be reached on tanyamba@gmail.com

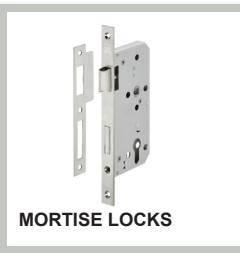
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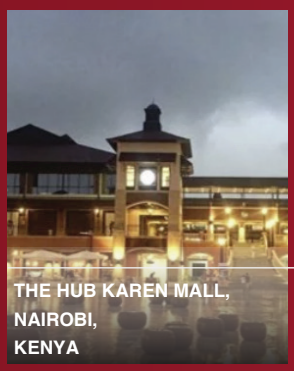
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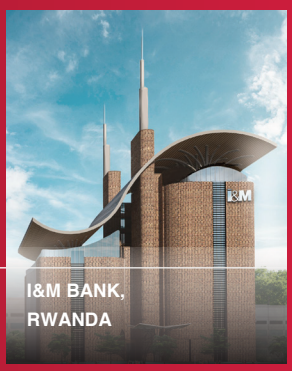
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SOCIAL HABITATS FOR MENTALLY HEALTHY SPACES

By Litunya Rosemary

According to the World Health Organization (WHO), it is estimated that 1 out of 4 people in Kenya suffer from mental health disorders every year. Depression is common. While the causes of mental health disorders are varied, an article by the American National League of Cities states that Housing quality, or the physical conditions of a person's home, can have particularly consequential impacts on our mental health and well-being. It goes on to state that the linkages between health and housing are not limited to physical health, but impact mental health and well-being as well. It is therefore imperative to consider mental health when designing houses and buildings, since the state of housing can help reduce the occurrence of mental illnesses and promote faster recovery for some existing mental health disorders.

Architects, interior designers and other building industry experts have an opportunity to ensure that they design houses that are not only aesthetically pleasing but also beneficial to the physical and mental health of the people that use them. When assessing the functionality of buildings, we look at a variety of issues such as ease of circulation, accessibility, universal access and hierarchy of spaces, among others. But are these buildings truly functional if they do not promote mental wellness and cognitive function? By carefully manipulating design elements and considering the mental and physical benefits of different design choices, it is possible to create mentally sound spaces that promote well-being and support cognitive function. We cannot divorce physical health from mental health.

For a building to promote mental wellness, a variety of factors need to be considered. These include, but are not limited to, noise control, natural lighting, artificial lighting, ventilation, minimisation of clutter, Feng Shui colour schemes, use of water elements, site planning, use of indoor vegetation and even furniture placements. By carefully manipulating design elements and considering the mental and physical benefits of different design choices, it is possible to create mentally sound spaces that promote well-being and support cognitive function.

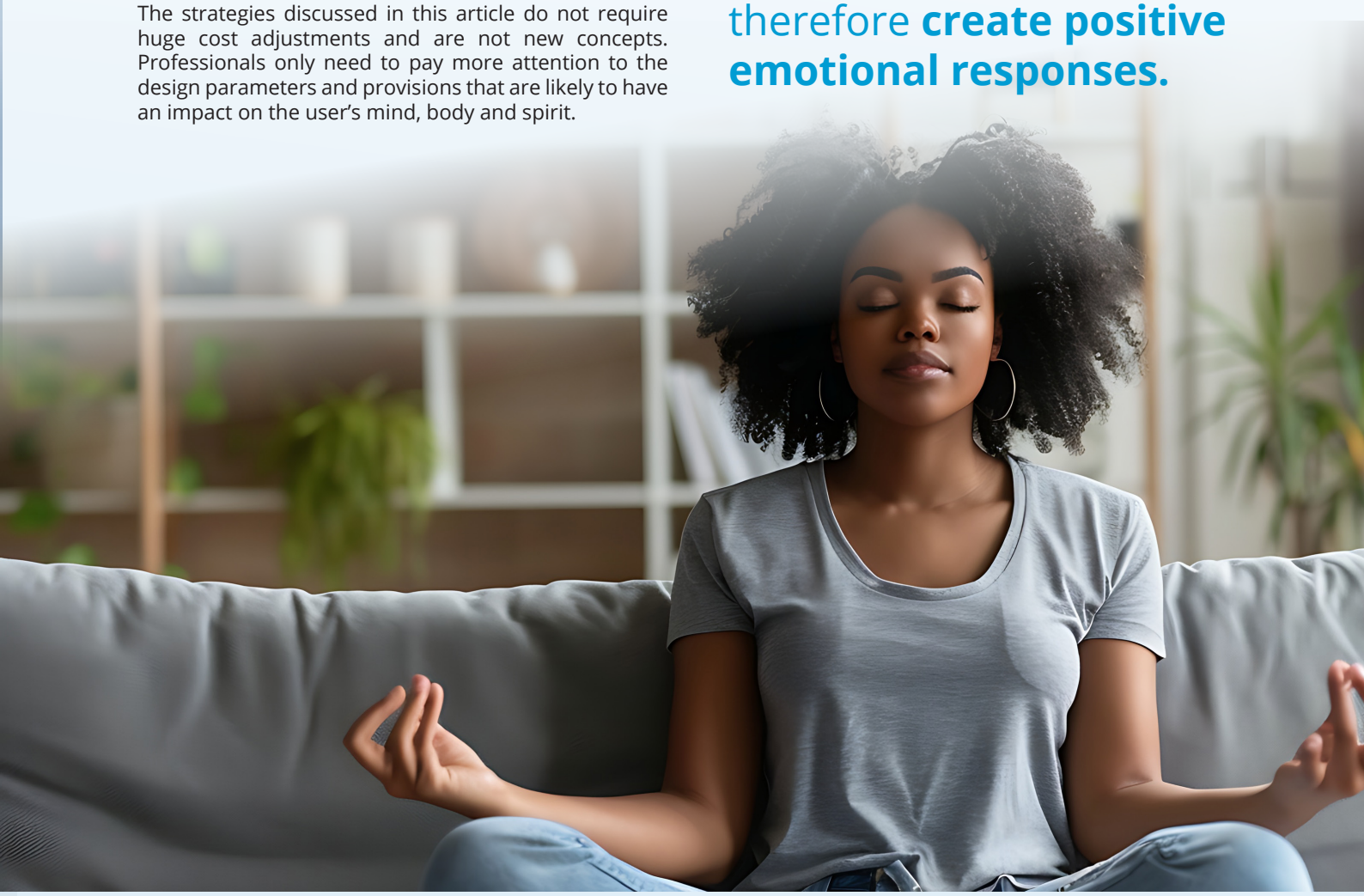
Natural light has several health benefits, including increasing levels of vitamin D, increased concentration, retention and productivity. It also promotes better sleep patterns, while over-reliance on artificial light during the day leads to increased fatigue and eye strain. Natural lighting can be maximized by use of large windows, light colored finishes, mirrors and skylights. Spaces should be arranged to maximize natural lighting. Large windows also promote free flow of air while enhancing ventilation and produce positive responses from building users. It is for this reason that one may be inclined to or advised to place their desk next to a window.

In addition, it is important to select artificial light sources that are activity appropriate. For example, use of blue light promotes better sleep cycles while use of yellow tones exudes a feeling of warmth and comfort. It is important for the design to adequately control glare. Incorporating natural elements such as plants, wooden finishes and wooden furniture also promotes well-being by bringing a sense of warmth into a space. Inclusion of plants in indoor spaces purifies air, improves concentration and reduces stress.

De-cluttered environments reduce stress. The reverse is true. Well-designed racks and shelves along walls make it easy to organize a space and therefore create positive emotional responses. We could also borrow from the Ancient Chinese Feng Shui design philosophy that promotes harmony and balance. This is achieved through proper placement of furniture, use of color and decor as well as use of natural elements such as water and plants. The use of Feng Shui guidelines creates aesthetically appealing and mentally healthy spaces.

The strategies discussed in this article do not require huge cost adjustments and are not new concepts. Professionals only need to pay more attention to the design parameters and provisions that are likely to have an impact on the user's mind, body and spirit.

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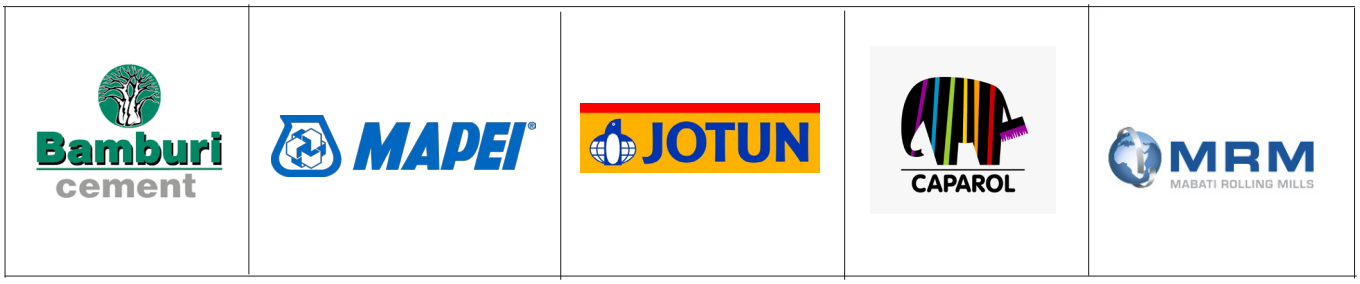


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Rosemary is an Architect + Environmental Design Consultant and Founder of Buxton Build. She is also a Tutorial Fellow at the Technical University of Kenya (TUK).

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