

The Transcript

'Kampala's redemption is well within our grasp'

When Mr Antony K Mukangura was undergoing his postgraduate studies in Canada, a flame was lit in him as he embarked on writing his thesis. The thesis entirely focused on developing an intermodal transportation facility for Kampala.

BY PHILIP MATOGO

There is much to like about Kampala. Even in the book of someone who has practised architecture in hospitality and multi-family settings in the United States of America (USA) for two decades. Antony K Mukangura, who is passionate about reimagining Kampala and finding practical solutions to problems that continue to beset Uganda's capital, is not in doubt about the scale of work to be done.

Mr Mukangura, who holds a Bachelor of Business from Trent University, a Bachelor of Environmental Design Studies and a Master of Architecture from Dalhousie University in Canada, tells *The Transcript* that he sees Kampala's glass as both half full and half empty. Half full because it is "a city of immense cultural energy, economic potential, and natural beauty". Half empty because it "faces pressing urban challenges like flooding and traffic congestion."

He adds: "Solving these challenges requires a coordinated strategy, integrating architectural, urban planning, landscape architecture, environmental design, and civil engineering."

The problems besetting Kampala are, in Mr Mukangura's assessment, "solvable through disciplined planning, investment, and integrated urban systems", not least because global cities have faced similar challenges.

"Decades of rapid growth without sufficient integration between transportation, land use, environmental infrastructure, and civic development have led to these problems," he tells *The Transcript*, adding: "Research from institutions like MIT Senseable City Lab, Harvard Graduate School of Design, and UCL Bartlett School of Planning consistently shows that resilient cities succeed when transportation planning, water management, land use, and environmental systems are designed together."

Light bulb moment

When Mukangura was undergoing his postgraduate studies in Canada, a flame was lit in him as he embarked on writing his thesis. The thesis entirely focused on developing an intermodal transportation facility for Kampala.

"This research-based experience reinforced my belief that Kampala's future depends on integrated urban systems rather than fragmented interventions," he says.

"I have also had the opportunity to work on numerous projects in Uganda and collaborate with developers to reinforce the role of architectural design to improve Kampala's built environment," he adds.

Mukangura sees Kampala's urban planning failure majorly through the lens of the concentration of major traffic-generating civic functions in the central business district.

"Facilities like the Department of Motor Vehicles, National Identification registration, Kololo Ceremonial Grounds and City Hall attract enormous daily traffic,"

he observes.

Kampala, he reckons, urgently needs a decentralisation strategy.

"Cities like Singapore successfully reduced congestion by distributing government and commercial functions into multiple urban districts connected by mass transit. Singapore reduced transportation inefficiencies through coordinated transit-oriented development, strict parking controls, and satellite business districts."

The relocation of major civic and administrative facilities domiciled within Kampala outside its central business district (CBD) has been talked about for eternity. Mukangura says it can be actualised when urban nodes that connect to the CBD through a reliable mass transit infrastructure see the light of day.

"Land repurposed within Kampala's urban core should prioritise mixed-use/tourism development, public parks, pedestrian-oriented public space, commercial activation, residential density, and transit connectivity. The city also needs a major expansion of grade-separated infrastructure at critical intersections like

Nakawa, Portbell, Kitgum House, Mulago, Wandegeya, Acacia, and Kira Road etc," he notes.

"These locations require phased bridge and tunnel bypass roadways designed through long-term civil infrastructure planning. These projects should be viewed as components of a larger metropolitan mobility strategy," he adds.

To show how global cities have proven that transportation systems work best when integrated with land use planning, he cites one example in the Americas.

"Curitiba, Brazil," he says, "transformed urban mobility through bus rapid transit integrated with zoning and development policy. Studies show Curitiba concentrated higher-density development along transit corridors, reducing traffic congestion and urban sprawl."

He adds: "Kampala can adopt a similar framework by intensifying mixed-use development around major transit corridors and implementing an integrated 'park and ride' system and adopt multi-level mass parking facilities. Kayoola EV bus transit hubs at the city periphery would allow commuters to transition from private vehicles to electric public transit, reducing congestion and emissions within Kampala city."

He proceeds to note: "Rationalising social infrastructure is also crucial. Schools, mall facilities, and public institutions, which typically have high traffic volumes, should be planned strategically to minimise unnecessary long-distance commuting."

Drowning in problems

One cannot speak to the problems besetting Kampala without referring to flash floods that repeatedly submerge low-lying areas in the capital during torrential rains. These areas include streets, businesses, and even residential areas.

"The city understands the low-lying flood-prone districts, seasonal rainfall cycles, topographical conditions, and drainage bottlenecks. However, the problem is a lack of integrated implementation. Current drainage systems are disconnected channels designed only to move water quickly, accelerating runoff and overwhelming low-lying districts," Mr Mukangura says.

"A comprehensive citywide hydrological strategy is needed, including detailed topographical mapping, flood-risk modelling, watershed analysis, and integrated drainage master planning. Upstream water retention systems are crucial to slow runoff and protect vulnerable downstream areas. The Netherlands, a global leader in flood management, utilises integrated retention basins, controlled overflow systems, and underground drainage networks. Modern flood resilience relies on upstream water storage rather than immediate removal," he adds.

Key to the approach that Mr Mukangura proffers are upstream retention basins, constructed wetlands, stormwater detention systems, and engineered drainage corridors.

"These systems should reduce peak flood volumes before reaching vulnerable districts. Underground flood tunnels are also essential in critical areas. Tokyo's advanced flood-control system, featuring massive subterranean drainage tunnels and stormwater retention chambers, demonstrates how dense urban environments can manage severe flooding through underground engineering. While Kampala may not require such scale initially, phased underground stormwater tunnels could significantly reduce recurring floods," he notes.

"Additional interventions include mechanised pumping stations, elevated roadway sections, flood walls, bioswales, permeable paving systems, and expanded urban green infrastructure. Mechanised pumping systems are vital in low-lying areas where terrain hinders natural drainage. Strategic pumping infrastructure can efficiently move stormwater over embankments into downstream networks without excessive excavation," he adds.

A new chapter?

Mr Ronald Balimwezo, Kampala's new Lord Mayor, this week spoke about "practical solutions" as he unveiled his executive team. While it remains to be seen how Mr Balimwezo's "practical solutions" will enhance Kampala's flood resilience and sustainability, Mr Mukangura reckons a rethink of the capital's water management is long overdue.

"Water should not be hidden in concrete channels. Many successful cities have integrated water into their public identity and environmental quality. Seoul's Cheonggyecheon Restoration Project is a powerful example. It removed an elevated highway and restored a historic stream corridor, improving flood management, environmental quality, biodiversity, walkability, and economic revitalisation," he offers.

"Kampala can transform its drainage and wetland systems into public environmental assets that improve ecologi-

cal health and urban liveability. This requires protecting water quality from urban runoff contaminated by waste, fuel, and pollution, which damages downstream ecosystems and threatens public health. Flood mitigation should be linked to environmental stewardship and water quality management," he adds.

Mr Mukangura also strongly believes that Kampala needs clear urban design governance for its future growth.

He says, "Design review districts with specific architectural and urban standards should be established for different areas, such as the CBD, residential districts, mixed-use corridors, industrial zones, institutional districts, and waterfront areas. These review entities should set standards for building materiality, public realm integration, pedestrian experience, landscaping, setbacks, environmental performance, and architectural quality. Cities like Copenhagen, Singapore, and Vancouver have shown that consistent design governance improves urban identity, walkability, development quality, and long-term land value."

As Mr Mukangura continues his pitch about how urban growth should create coherent, beautiful, and human-centred environments, and not just maximise building density.

"Kampala has potential but needs a long-term implementation strategy. Cities worldwide have overcome severe challenges through visionary leadership and coordinated infrastructure planning. Kampala should establish a 10-year integrated urban transformation framework with measurable goals, such as reducing flood-prone roadway closures, commute times, and expanding public transit," Mr Mukangura says.

"This transformation must be led collaboratively by architects, urban planners, landscape architects, environmental designers, transportation engineers, and civil engineers. Treating Kampala as an interconnected urban ecosystem is crucial. Disciplined planning, coordinated investment, and visionary leadership can transform Kampala into one of Africa's most resilient, liveable, and beautiful cities," he concludes.

PROPOSAL

The relocation of major civic and administrative facilities domiciled within Kampala outside its CBD has been talked about for eternity. Mr Mukangura says it can be actualised when urban nodes that connect to the CBD through a reliable mass transit infrastructure see the light of day.



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