

Building climate resilience through the rehabilitation of urban rivers in Africa.

Design to innovate workshop: Nairobi



UNIVERSITY
OF
NAIROBI



Co-discovery and co-exploration for climate

You may ask, why “Afrika”, spelt with a ‘k’?

This is purposely drawn from the insight from the field of Afrikology which argues, convincingly, that all languages from our continent spell Africa with a ‘k’ and so Afrika (with a ‘k’) is about seeing the continent with reference to its own realities and aspirations, as opposed to from an outside, or Western/Eastern perspective.

Afrikan Design

Aurecon launched the first chapter of ‘Afrikan Design Innovation’ at the Nairobi Innovation Week. Aurecon hosted the design-thinking component of the Nairobi Innovation Week. This included presentations by **Abbas Jamie** (Aurecon Director of Innovation and Transformation, Africa), **Prof. Mugendi K. M’Rithaa** (President of World Design Organisation) and the facilitation of 3 Design Thinking workshops



“Until lions have their own historians, tales of the hunt will always glorify the hunter”
– Chinua Achebe



“It is about coming up with solutions from an African perspective”

The Aurecon movement towards **Afrikan Design Innovation** forms a broad-reaching umbrella for ideas, stories and disruptions which mobilise **the development of the Afrikan Narrative**

Afrikan Design Innovation provides a vehicle for the redefinition and development of a sustainable future of the continent, by those of the continent. If innovation is the engine of this vehicle, human-centred design is the fuel.



Dr Amollo Ambole & Prof. Mugendi K. M’Rithaa



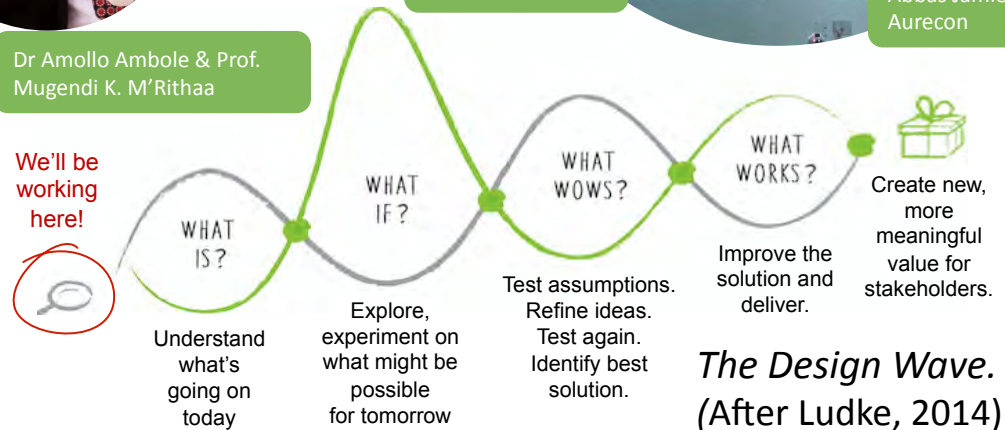
Aurecon Nairobi Office



Abbas Jamie, Aurecon

Design

The **Design to Innovate** journey has led us to undertake a strategic initiative which prepares us to work more effectively with one another and with our clients. **Design thinking is a human-centred approach which ensures that we design our solutions** after a thorough investigation as to **why the problem exists** and how we can develop an effective solution in a way that **best serves the end-user and therefore, the client.**





The Design Thinking workshops were centred on the resilience of urban rivers



Nairobi Innovation

The By the Rivers workshop served to **introduce students**, government representatives, members of the public and private sector as well as members of the Nairobi public to **Design Thinking as a tool for innovation and solving complex or 'wicked' problems**. The workshops introduced the **120 attendees** to the tools of Design Thinking and how to develop a **Focal Question around the challenge** of reclaiming the **natural and cultural capital of the Nairobi River**.



The workshops were centred on the resilience of urban rivers both to urbanization and climate change and highlighted for participants how **ownership** of the river and **its wealth** as a central element **to the city** and how the river can be **sustainably managed** and cleaned for future generations, rather than relying on government officials and directives to ensure that this asset is passed on.

"The River is ours. We need to own the river. WE need to make solutions for this problem"- Florence, DT workshop attendee

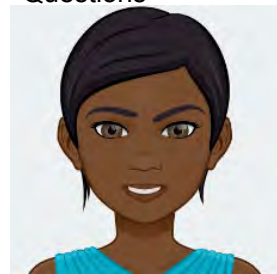
Workshop

Focal Questions

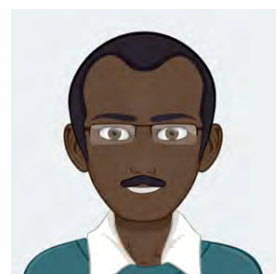
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Personas of the River

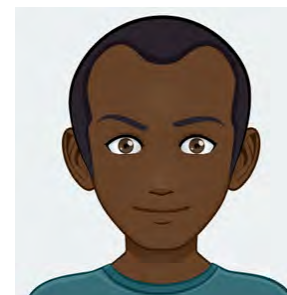
"How can the environmental club at University of Nairobi partner with Mwangi to collect & recycle waste to make brick, poles & manureso that Mwangi can sell to generate income create employment for her community members?"



"How can slum architects create an easy to use waste management system so that Victor can enjoy his home for many years to come?"



"How can Mama Willie + church members + Chama members organise a clean up event whereby they can collect garbage and recycle any part so that community members can earn income at the same time creating employment for the youth?"



"How can Catherine sustain a pollution free environment through education of managing plastic waste so that Juma can enjoy healthier surroundings"

Workshop 1

Personas of the River



Spice

S – Chama, neighbours, church, customer, active
P – big hands and arms, strong, robust
I – down to earth, religious, prayerful woman, outspoken, caring,
C – Listens to Kameme radio, ka bambe (phone), Mama Maboga sacco (gossip)
E – Charitable, loving, empathetic, happy her kids are going to school, stressed and concerned about her family's health. Lives day by day.

Focal Question

“How can Mama Willie + church members + Chama members organise a clean up event whereby they can collect garbage and recycle any part so that community members can earn income at the same time creating employment for the youth ?”



S – No education, engages in vices (stealing, drugs, etc) active night life, avoided by common people
P – Near the river, homeless, dumpsites, unhygienic
I – reject, introvert, outcast, junkie
C – speech, gang signs, stolen phones, street language
E – bitter, sad, aggressive, depressed, only happy under the influence

“How can the head designer in the ministry of urban planning design and build better/ smarter pollution filters so that Ocopizzo can have a super cleaner life?”



S – Chama, church, Sacco, Market Vendors
P – Slums, children go to public school
I – Loving mother, faithful wife, hardworking
C – Gossip (soko), Koduda (text message) Family
E – Usually stressed, struggling, abusive husband but hopeful.

“How can the Director of NEMA ensure sustainable use of the river and its resources so that Nseri can have a happy healthy life”



S – Family, students, friends, community (Luo tibe)
P – House in a rich area, lives in the city, motorcade transport
I – Loves sports, people books
C – Twitter, phones, conversations, google
E – Happy, retired, excited

“How can Manu Chandaria (CEO of Safaricom) create a recreational activity facility, run by locals, to promote Obama's tourist welfare so that he visits again and boosts Kenya's tourism sector?”

Workshop 2

Personas of the River



Spice

S – best friend: Daniel, Barber: Mike
P – lives in middle class Bururburu, works in upperhill
I – hardworking, entrepreneur, Muslim, go-getter, stock trader, motivational speaker
C – snapchat, Instagram, youtube channel, facebook, whatsapp
E – Fed up with the services he gets from the county government, but he finds comfort from family and friends.

Focal Question

“How can the urban development director ensure a good healthy environment by joining corporation and through his network so that he can ensure good healthy future community”



S – Siblings provide support, family and friends are of high importance
P – Overpopulated, Donholm neighbourhood
I – Reports to work early
C – whatsapp
E – Very happy

“How can Catherine sustain a pollution free environment through education of managing plastic waste so that Juma can enjoy healthier surroundings”



S – church community, family, friends and business partner
P – currently in Kawangware, workplace is Kibera, previously lived in Kibera
I – Hustler, hardworker and entrepreneur
C – Facebook, phonecalls, emails
E – Ambitious but not satisfied

“How can the environmental club at UoN partner with Mwangi to collect & recycle waste to make bricket, poles & manureso that Mwangi can sell to generate income create employment for her community members”



S – church community, neighbours
P – Kibera, informal settlement, poor waste management, poor infrastructure, inadequate housing, high unemployment
I – community meetings with church chama, MCA, local government, women’s representative.
C – Newspaper, word of mouth, radio
E – Angry at government, strong, hustler, hard-working, healing from the loss of child.

“How can Engineer Joseph Of Urban planning at NCC provide better infrastructure in Kibera so that Wanjiru can benefit from better housing and improved sanitation”

Workshop 3

Personas of the River



Spice

S – Friend, family members
P – Buru, Play Station 4, TV, Brickgame, Riverschool
I – Boy, Middleclass, pupil, last born
C – asking questions, education, TV, Sunday school
E – happy, optimistic, curious, enthusiastic, selfish

Focal Question

“How can the UoN students come up with programs that impact policies to give ‘new life’ to Nairobi river for Ian to enjoy less pollution, better drainage and cleaner environment ?”



S – Friend, family members, siblings, pets, neighbours, classmates
P – toys, school, playground
I – Friends, schoolmates, mental and physically disabled friends
C – TVs, storybooks, mobile phones, playing, dancing
E – curious, moody, jovial

How can the youth (UoN students) engage in social activities to assist in designing better drainage systems so that Urmis Child enjoys clean water in the



S – Classmates, Parents, Mama Mveni, Siblings
P – Mathawe, informal, poverty, poor hygiene and sanitation
I – Girl, Sambow, Christian
C – Listens to gospel music from Size 8, verbal, TV, radio
E – Happy, angry, confused

“How can Sonko influence Mary’s Parents to be more sensitive to dumping litter on/close to the riverside so that Mary can

- I. Enjoy playing along the river
- II. May’s parent’s can grow groceries in their ishamba along the river
- III. Mama Mboga can grow more vegetables along the river.
- IV. May’s caregivers are more aware of the threats of dumping garbage around the river
- V. Policy to prevent pollution of Nairobi River so that May and her family have access to clean water ?”



S – Parents, siblings provide emotional support, hangs out with friend Kamau
P – Poor sanitation, not secure, corruption, poor infrastructure,
I – 25 year old man
C – Social media, facebook, betting
E – low esteem, aggravated by everything

“How can slum architects create an easy to use waste management system so that Victor can enjoy his home for many years to come ?”



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*Bringing ideas
to life*

WORLD
DESIGN
ORGANIZATION



The Way Forward



FRACTAL Working paper/ Think Piece

Dr James Cullis, together with FRACTAL will take the information gained from this workshop and use it as a case study as a possible example of how design thinking can be applied to creating awareness and engendering stakeholder ownership of climate change adaptation and resilience in African cities