



Advancing the Afrikan lions' narrative: the quest for a sustainable future for all...

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

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Abstract:

Africa is the second largest continent with over a billion people living in some 55 countries¹. It is a continent renowned for its rich anthropocentric traditions (such as Ubuntu) and is home to at least half of the world's dozen fastest growing economies are also from this continent that is characterised by a predominantly youthful demographic. The demonstrable rapid pace of change, coupled with the continent's leapfrogging potential has led many to re-interrogate their perceptions of Africa. Subsequently, many commentators have advanced the notion of the "21st century as the African century". In so doing, these commentators adopt a number of lenses ranging from macro-economic, developmental, geopolitical, policy and governance ones amongst others. Notwithstanding the positive

scenarios of an arguably more prosperous Africa within the foreseeable future, very few of the commentators have adopted a human-centred approach that taps into the realities and aspirations of the vast numbers of denizens of our continent.

Consequently, the emerging narratives inadvertently reflect an epistemological bias that fails to take cognisance of the complexity of the African condition. The paper argues for a narrative that is rooted in the *Afrikan* reality and one that is empathic towards the creative expressions being co-constructed by its own people, in partnership with empathic actors and stakeholders from the global community. Part of the reason for inherent bias in the prevailing externally constructed narrative lies in the question of context, authorship and ownership.

To emphasise the importance of theoretical propositions such as those of *situated development* and the *genii loci*, the paper adopts the noun "Afrika" (that is, Africa as seen from the 'inside out' – from its own realities and aspirations); to distinguish it from the more popular notion of "Africa" (as viewed from the 'outside in')... The paper draws this ontological insight from the field of *Afrikology*² (which argues rather convincingly that all languages from our continent spell Africa with a 'k').

In addition to this philosophical

¹ https://www.au.int/web/en/AU_Member_States

² <http://www.jpanafrican.org/docs/vol6no6/6.6-Wanda.pdf>



discourse on the Afrikan perspective, the paper offers a case study on the impact of a socially conscious design ethos employed by one of the leading engineering consultancies to explore the dialogic and transformative potential of design thinking and allied ethnographic tools in facilitating a more nuanced, inclusive and targeted community-centric vision in shaping Afrikan design innovation. The paper introduces three pilot design projects across the Sub-Saharan region showing how design methodology tools have been introduced into the engineering world. Such context-responsive tools would hopefully foster a developmental agenda that references an authentic Afrikan narrative.

Finally, the paper adopts a futures-oriented view in exploring the potential benefits for practicing engineers in adopting human-centric tools to aid in positively contributing to the realisation of diverse national development plans and visions of a number of countries on the continent, as well as the United Nations-promulgated 17 Sustainable

Development Goals (SDGs) [and their related 169 targets] by the year 2030³. In this regard, design thinking is arguably a natural complement to the traditional systems thinking strategies familiar to engineers the world over...

The paper argues strongly that engineers, architects, planners, designers and allied professionals embrace transdisciplinary and participatory ethnographic tools in their quest for more creative and innovative solutions as they aspire to contribute towards the development projects on the continent and *similar majority world contexts* (where 90% of humanity resides).

In conclusion, the authors believe that by adopting a co-constructed narrative for the future of the continent, the collective aspirations of an entire region could move the developmental discourse beyond that of merely proffering a higher *standard of living* to its people, to a more sustainable one of a better *quality of life* for all⁴

3

<http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

⁴ <http://wdo.org/about/definition/>



Bringing Ideas to Life...

With 2500 staff in Africa, Aurecon is one of the largest engineering consultancies on the continent and the largest such consultancy in South Africa. The company has adopted a future-ready strategy that is built on three platforms of *innovation, digital engineering* and *eminence*. Innovation for Aurecon extends beyond their information systems and technology artefacts. According to their strategy document: "innovation will be focussed on clients and we need to demonstrate the value of our ideas to both our clients and to the business. At the heart of our innovation of the client experience will be the concept of design-led thinking. Our innovation program is in place to differentiate our offerings. We will encourage and nurture innovation and technical excellence from our people." (Aurecon, 2017)

This is a critical element to implementing *design thinking*⁵ into any business. There needs to be complete understanding and support for design thinking methodology from the very top of the business. It cannot be a pilot implemented by an "innovation team". In order to experience the success of design thinking it needs to be embedded into the DNA of the business. It needs to become business as usual.

Many research papers have acknowledged the positive link that innovation has on the GDP, economic growth and employment of countries. (European Commission, 1996) There is also a strong case for showing how innovation is a key factor in a business entity's long term prosperity and survival. (Tidd, 1997) The challenge for engineers, who are very analytical, is that innovation is not a linear process but is part of a system of relationships and feedback loops between science, technology, learning, systems, policy, organisations and market readiness which may be referred to "systems of innovation" (Sundbo, 1998). Systems thinking therefore provides them with a methodology to better understand the behavioural characteristics of a multi-node innovation system.

When looking at the culture of Aurecon we see it has a strong legacy of being a very successful infrastructure engineering consultant. It has world class technical experts across a number of engineering disciplines and are trusted by clients to implement large scale infrastructure projects. This track record requires a large number of very good analytical thinkers who are risk averse and experts in their respective disciplines.

However in order to foster creativity you have to create the right organisational climate to support this

⁵ "Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements

for business success." —Tim Brown
<<http://www.ideo.com/pages/design-thinking>>



creativity (Hussey, 1997). Aurecon is successfully using the design thinking methodology to blend its strong analytical expertise with the creative world to discover innovative new solutions for its clients and stakeholders.

Walking the Designerly Talk...

We will introduce three pilot projects that Aurecon has initiated across Sub-Sahara Africa using this design thinking methodology, namely:

- *Our African City* – a dialogue in response to rapid; urbanisation on the continent
- *By the River* – the history of rivers in Africa; and
- *Afrikanist in Motion* – the story of public transport commuters on the African continent.

Pilot Project #1: *Our African City (OAC)*...

Gwen Ramokgopa (Our African City Ambassador) describes this project as *“a dialogue that is initiated, developed and owned by Africa with the intention of fostering a shared understanding across government and society about how best to manage urbanisation. Through this dialogue we can make a significant contribution to achieving the goals of economic development, job creation and improved living conditions for all of our people and transforming our cities.”* (OAC, 2016)

Post-colonial Africa inherited cities characterised by segregation and based on Western models of

single-function land-uses with decentralised neighbourhoods linked through personal car-based transport. The result is cities characterised by urban sprawl, spatial exclusion and growing congestion. Our current spatial models are based on the concept of compact cities, applying conceptual frameworks of nodes and development corridors with the aim of creating densification and development infill. These are located on assumptions about how people and goods will move, how employment will be generated and locate, and what people need to improve livelihoods.

Lack of enforcement of spatial plans and inconsistent linkages to infrastructure planning combined with a deep understanding of economic potential and drivers, left most African cities with unchanged development patterns, more dictated by large developments and road infrastructure than future planning.

How does an engineering company like Aurecon contribute in a more inclusive and systemic manner to this wicked problem of urbanisation?

OAC is about bringing together leading expertise across the financial, political, technical and social spheres to collaborate in developing new thinking and solutions that address inclusive urban transformation. It is about opening the debate on and crafting a vision of what an Afrikan city should look like and how to innovatively



address the challenges we face to leapfrog the development process.

The dialogue is built on three principles of close collaboration between government and private sector, breaking down silos between and in the spheres identified and using a human centric innovative approach to guide the process.

The philosophy of *Our African City* is to view urban transformation through an African lens by positing the question: “how do we use environmentally sustainable economic growth as a means of achieving particular social goals?” This means that marginalised communities are included in urban development planning for social spaces, economic development and in environmental management and protection.

OAC is not being launched in a vacuum. It seeks to augment and support other initiatives across the continent. The OAC dialogue is therefore guided by broad policy documents including the *African Union (AU) Agenda 2063* – a bold vision that anticipates the state of the AU’s centenary. (African Union Commission, 2015) In the South African context the OAC dialogue takes direction from the *Integrated Urban Development Framework* (IUDF) recently released by the South African government.

The IUDF policy framework aims to “guide the development of inclusive, resilient and liveable urban settlements, while squarely

addressing the unique conditions and challenges facing South Africa’s cities and towns.” (Department of Cooperative Governance and Traditional Affairs, 2014)

The vision of the IUDF is: ‘Liveable, safe, resource-efficient cities and towns that are socially integrated, economically inclusive and globally competitive, where residents actively participate in urban life’. (Department of Cooperative Governance and Traditional Affairs, 2014)

To this end, the OAC dialogue in South Africa is structured around the 8 levers of the IUDF. *Our African City* brings together stakeholders and experts to build thought leadership and discussion on the 8 levers of expertise required to give life to the IUDF.

The high stream of innovation required to leapfrog the development process requires innovation tools grounded in a deep understanding of underlying needs. By using design thinking Aurecon is allowing its multiple range of technical experts to engage with a broad range of stakeholders to better shape innovative solutions for the problem of African urbanisation.

OAC is built on three principles:-

- Close collaboration between government and private sector;
- Breaking down of silos between and within stakeholder groups; and



- Introducing innovative human centric methodologies like design thinking.

The design thinking methodology allows stakeholders to participate in a non-threatening environment where all options are considered and all views are respected. This allows for an environment of exploration and rich interaction. This approach is not easy for professionals who believe they need to have an answer for the problem before entering the room. The process requires stakeholders to spend more time in the why of things. Before providing a solution we need to ask if we are addressing the right problem.

Engineers are trained to jump to solution mode based on what they know can work. The OAC dialogue allows you to spend more time in the why of things. Like most *wicked problems*, rapid urbanisation cannot be solved with a linear analytical approach. Through the OAC dialogue engineers are given the opportunity and platform to ask much deeper systemic questions from a broader range of stakeholders to which they are traditionally accustomed to. This allows them to have a much deeper understanding of the issues affecting people's lives. It allows them to have better empathy and understanding for the ultimate end user beyond the client's expectations. This allows for a richer interaction with other professionals

and also opens the mind to a more diverse worldview.

Pilot Project #2: *By the River*

Wagenia is a riverine tribe that has built its fame upon water. Their ability to manipulate the river flow in the cataracts, their fishing techniques in the waterfalls and their initiation practices have provided them a reputation for being the finest watermen of the river Congo.

In Wagenia culture, the baby's first river bath half a year after its birth was a sign that the infant had survived the first months of its life and had not fallen victim to the high infant mortality. After this bath the child was allowed outdoors and outside the village. A child born after the premature death of one or more children of the same mother was placed in a canoe, which was allowed to float freely on the water without human intervention for a few moments the first day of the child's life. After its boat-ride through no-man's-land, it was pulled ashore again with the exclamation "we have found a baby". Such a child was named Bvoloiyaba, i.e. "dead fish (floating on the water) of the river". The exclamation was accompanied with the wish "catch us fish, Bvoloiyaba". (Oestigaard, 2009)

Whereas rivers hold "only about 2 percent of fresh surface water"⁶ globally, it is commonly accepted that rivers have played a significant

⁶<https://water.usgs.gov/edu/watercyclefreshstorage.html>



part in the history of African tradition and culture. Although all rivers carry the same physical water made up of two particles hydrogen and one particle oxygen this precious liquid is viewed and treated differently depending what it is being used for. Holy water being used for a baptism or purification ritual is seen as very different to water being used for irrigation purposes or the water driving a hydroelectric plant on the Nile. When dealing with any river system it is therefore critical to have an appreciation for the cultural and religious traditions which shape that community or society.

Interestingly the way river communities deal and interact with their water may transcend modern national borders. Identities and traditions linked to the river may represent regions and broader cultural spheres across geographic nations. Rivers can therefore represent an Afrikan identity that can unite or divide people across modern day political and national boundaries. A case in point is the path followed by the Nile (the world's longest river) from its source to the Mediterranean Sea.

It is commonly accepted that broad stakeholder participation is an essential part of any successful water resource management initiative. Much research has been done on incorporating local culture into water studies including the research by UNIFOB Global in 2008 on Water, Culture and Identity. UNESCO also reported on the numerous international platforms

covering the theme of water and cultural diversity.

However: "Despite the claims of participation and inclusion that many new management approaches make, their decision-making models still reflect an impaired management paradigm based on controlling the natural system through technical solutions developed with expert information. Although this management may have been appealing in the past, it contains assumptions of power differentiation, control, and cultural dominance that have resulted in solutions that embraced the interests of few. This approach slighted ecological considerations and excluded disadvantaged populations, indigenous peoples, and insular minorities. Failing to address the biological and cultural diversity associated with water problems is no longer suitable. Instead, a cross-cultural approach that encompasses diversity is needed." (Johnston, 2012) .

So how does an engineering consulting company embrace storytelling to better understand the history of rivers in African culture? In collaboration with the World Design Organisation and the Nairobi University, Aurecon has initiated a design thinking project called "By the River". Launched at the Nairobi Innovation Week in March 2017 the project will look at using human centric methodologies to gain a better appreciation for the rivers in the city of Nairobi.



What is the potential desired future state of rivers in African cities?

'In the Sub-Saharan African context, the desired state of riverine systems could ideally be one where these systems function as a source of environmental, economic and socio-cultural prosperity. For this ideal to come to fruition, there is a need for riverine systems to be seen as the metaphorical veins of African cities. Ideal functioning riverine systems are those of good water quality which create rich ecological habitats by providing a level of flood attenuation, sediment trapping and carbon storage.

Simultaneously, riverine systems can contribute to the aesthetic prowess of urban cities as well as provide ample opportunities for sustainable subsistence and commercial practices. Only once riverine systems are functional can they contribute to environmental, social and economic upliftment, either directly or indirectly (Aurecon Analysis Report 2016).

However achieving 'functioning riverine systems' will only become a reality if the local community takes ownership of the initiative. The "By the River" project launched at the Nairobi Innovation Week in March 2017 did not look at what innovation or technology can be used to clean up the river. The human-centric approach was to ask the question: What is the role of the river in Nairobi culture and history?

The name "Nairobi" comes from the Maasai phrase *Enkare Nairobi*,

which translates to "the place of cool waters". The phrase is also the Maasai name of the Nairobi River, which in turn lent its name to the city. The Nairobi River and its tributaries flow through the broader Nairobi County.

The river therefore played not only a significant part in shaping the city but also the culture and history of its people. In the local culture the term "By the riverside" is very significant. When you had a special announcement to make you would go down to the river to make it. When you had a special meeting it would happen by the river. So can we rediscover this history? Can we start telling the story of the river in local culture? What if we can get people to proudly tell their history through their connection to the river? Can we get people to re-embrace the rivers? By re-embracing the rivers you will be re-embracing your history. You will be re-embracing your culture. We will start celebrating our proud African history. This is the journey we are embarking on; to tell the story of the rivers in Nairobi. Once people have embraced the rivers we can start the environmental discussion with respect to water management systems.

We can then look at what technological or innovation interventions will support people in claiming back the rivers. How can private sector support the people on this journey? This is the human centric approach which puts the people at the centre of everything. Once we have support from the end



user for the outcome we can explore
how we are going to get there.
Welcome to “By the river”.





Pilot Project #3: *Afrikanist in Motion*

On Monday morning, we caught a bus north from Junta municipal bus station in Maputo. We got to Junta just before 4am to find the bus was already filling up. 800MT (US\$26) each got us a seat on a bus going 800km north on the N1 to Vilanculo. The sun was barely beginning to show and the bus rank was in darkness apart from various bus stands laden around which women and children milled, selling sustenance for the journey. Puddles of teflon light illuminated foot-long fresh baguettes (a Mozambican curiosity), water, sodas and bananas underneath the bus shelters and between lines of buses belching smoke. It was a scrum in Portuguese on board and we seized seats a row apart from each other near the back. We'd been held up getting on the bus by the tout insisting that our backpacks cost extra. We indignantly beat him down from the asking price of half a bus ticket, anxiously watching the bus grow fuller and fuller.

Getting seats was actually good luck because the bus tout went on to sell scores more tickets. Rather than wait for the next bus to fill up these stragglers had chosen to do the 10 hour journey standing or sitting on whatever might be available. After some debate, various objects of luggage – mainly plastic buckets — were unpacked from the back and carried forward as makeshift aisle seats for their brave bottoms.
(PTDAFRICA, 2014)

The above extract from a travelogue of an intrepid South African couple traveling across Africa using only public transport. For this couple it was a journey of discovery, a choice. However for most Africans public transport is the only way for them to travel.

In order to get a better appreciation for public transport commuters on the African continent Aurecon is teaming up with a community photographer from Cape Town to capture such a journey. The photographer, Yasser Booley, is embarking on a public transport journey from Cape Town to Dar es Salaam.

Choosing the right photographer to capture this journey is critical to how the story will be captured. Yasser's describes himself as an Afrikanist which compliments the *Afrikan Design Innovation* theme of Aurecon's design journey. As an artist he has the ability to capture the deep emotion of his subject matter in beautiful photographs. He possesses the talent to capture the humanity regardless of the physical environment of the subject. He is deeply rooted in his faith in humanity: "*why everyone counts is because like me, we are the centres of our 'experiencing' the universe and in photographing the overwhelming variety of this 'experiencing' in the places and people I have encountered, I slowly tease out the notions, values, beliefs from a constant flux of impressions I contend with daily. I believe that this*



distillation has resonance across isms and schisms and beckon to a common humanity. I want my work to act as the signage that will eventually arrive at this point of departure.” (Booley, 2013)



Image of the photographer Yasser Booley – Abbas Jamie

Through joining Yasser on this photographic journey, Aurecon is hoping to capture a very rich visual story of the public transport commuter in Africa. The intention of this journey is not to only showcase public transport across Africa but to give all stakeholders a richer appreciation of the lived experiences of African public transport commuters. To gain better empathy and to have slightly deeper understanding of what commuters experience on a daily basis. Aurecon believes that by telling this story their transport planners and engineers will have a better appreciation for the ultimate end user and thereby be better equipped

to provide more human-centric transport solutions. The intention is to take this same rich visual story to transport clients across the continent. By using a human centric approach Aurecon wants to instil the concept that they are designing for the client’s clients. We need to place the end user at the centre of everything we do.

Perception of public transport in Africa varies from one country to the next. We also see that public transport in North Africa will differ substantially from the commuter experience in Central or Sub-Saharan Africa.

In his book *Dark Continent my Black Arse*, Sihle Khumalo captures a light-hearted moment he experienced on his public transport journey from Cape to Cairo: *“unexpectedly the barman said to me, ‘My friend, it is impossible to travel from Cape Town to Addis by public transport.’ After I had described my route to him, he replied, ‘OK, but if was really possible it would take more than six months to reach Addis,’ and shook his incredulously. To a certain extent I could understand why the barman regarded Cape Town as such a far, unreachable place – he was using Ethiopia’s slow transport system as a point of departure. When I told him the trip had taken me slightly more than a month he found it hilarious, very funny. I, in turn, found it hilarious that he was finding this so funny and so we both had a good laugh.* (Khumalo, 2007)



The Afrikanist in Motion project wishes to capture the emotions of this rich collection of commuter stories. The inaugural Cape to Dar leg will be the first episode in telling this story. Through this rich visual journey we hope to introduce a whole new generation of youth to the idea of using public transport to explore, discover and celebrate this continent of Africa.



Photo courtesy of Yasser Booley
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Bringing Life to Ideas...

In conclusion, this paper presents three unique pilot projects that demonstrate the efficacy of Design Thinking in advancing an Afrikan Design Innovation agenda whilst simultaneously referencing issues of

global importance such as the SDGs.

By using projects that are diverse in scope and complexity, it is hoped that the inherent versatility of the deployed methodologies is presented in an accessible and generalisable manner.

Arguably, the deployment of a future-ready ethnographic (qualitative) approach in an engineering consultancy such as Aurecon is in itself novel given the traditional modes of professional discourse inherent within the wider disciplinary milieu – this opens up possibilities for co-design and co-creation with practitioners in other ‘problem-solving’ fields such as architects, designers, and planners.

Additionally, the transdisciplinary epistemological lens of Afrikology further enhances the emerging narrative as one that “that goes beyond Eurocentricism, or other ethnocentrism. It recognises all sources of knowledge as valid within their historical, cultural or social contexts and seeks to engage them into a dialogue that can lead to better knowledge for all” (Wanda, 2013:2).

The emerging narrative helps to highlight the creative aspirations of the denizens of Afrika by giving their hopes and aspirations a strong, content responsive voice. In so doing, the co-directed storytelling provides the proverbial lion with myriad well informed and highly motivated ‘historians’, all telling their story from their own individual vantage points...

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