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In 1950, the urban population of the African continent was 33 million people. By 2018, the continent had 548 million urban dwellers, representing more than a sixteen-fold increase. By 2050, this figure will have tripled, to reach 1.5 billion people living in African cities. Another relevant trend is worth looking at, namely the increase of the population living in slums. Overall, between 2010 and 2014, slum dwellers increased from 807 to 883 million worldwide, with 189 million in sub-Saharan Africa¹. These bewildering figures emphasize the magnitude of the challenges ahead in urban areas and question their capacity to accommodate these new inhabitants and offer them decent living conditions, whether through urban regeneration, densification or the construction of new cities.

IGLUS visited Nairobi, the capital city of Kenya, for the first time in February 2020. Once getting over the surprise effect of the discovery of a vibrant and energetic city, the visitor begins to catch a glimpse of the great local contrasts. Above all, Nairobi is characterized by segregation. Inherited from its colonial past, during which the racial question was embedded in urban planning and was a determinant factor in granting people's access to specific zones; the city's internal boundaries are now linked to economic power. Analysing current developments within the city highlights the competing interests and power relations between disparate stakeholder groups, low capacities in planning implementation despite strong institutional frameworks and limited transparency. Governance issues are creating political, social, cultural, and environmental concerns regarding Nairobi's urban development strategies. At the same time, we experienced local communities' strategies to overcome these shortcomings, obtain access to infrastructure and services and ensure that their rights are considered by local institutions.

Preparing this *IGLUS Quarterly* issue, we kept in mind this apparent mismatch of priorities between residents and local authorities. The following articles underline the raising expectations for development and governance alternatives and demand the inclusion of voices that seem to be forgotten along the way. The first interview aims at exploring urbanization trends in western and north African cities, through the perspective of Widson Monteiro, an architect and urban planner involved in numerous projects in the area. Ways to engage in the regeneration of inner cities in an inclusive manner are discussed, as well as relations between public authorities and the private sector.

The second article looks deeper at this issue, by studying the applicability of public-private partnerships for financing infrastructure in Nairobi. It advocates using PPPs as a solution to provide access to innovation, financing, technological, managerial expertise and appropriate risk transfer skills for infrastructure projects and establish recommendations to overcome challenges regarding governance and competing interests between stakeholders.

The *Quarterly* also aims at highlighting inspiring initiatives we encounter during our learning-expeditions. Community engagement in urban development was among the topic we explored in Nairobi and which had the greatest impact on the participants. We chose to present two of them via interview of community leaders. Raphael Obonyo will share his experience in building initiatives among the youth of Korogocho, one of the city's poorest areas. Robyn Emerson will then introduce the Kilimani Project Foundation, a community-based organization she co-funded in the neighbourhood of the same name. Besides the fact they are taking place in areas with opposite socio-economic conditions, both experiences stress community-based organizations' capacity to bridge the gap between citizens and public authorities. They can create the will and the means for communities and policy-makers to act collectively to create (more) liveable spaces.

The last contribution discusses ways of building children-friendly cities and providing them with enabling environments. Children experience urban spaces in a different way from adults and spatial changes should be considered to adapt them to the needs of their youngest dwellers.

We hope you will enjoy reading this African Cities issue and we invite you to join the discussion at iglus.org. There is a huge potential worldwide to reinvent approaches to city-making and we are looking forward to discovering the inspiring initiatives you would like to share with the IGLUS community. Would you be willing to contribute, we encourage you to contact us at chloe.gaspari@iglus.org.

Chloé Gaspari

¹ *World Urbanization Prospects: The 2018 Revision*, United Nations, Department of Economic and Social Affairs

Urban perspectives in Western African countries

Interviewee's Profile

Widson Monteiro is a partner architect of Architecture-Studio. He studied architecture at University of Minho in Portugal, and at University of Sao Paolo in Brazil where he gained his first professional experience. As a fellow of Leonard Da Vinci program in Dominique Perrault Architecture, he moved to Paris in 2010. He joined Architecture-Studio in 2012 and was named associate partner in 2015 and then partner in 2017 at the age of 32. Widson Monteiro also leads all the architectural and urban projects of Architecture-Studio in Africa, particularly in Côte d'Ivoire, Burkina Faso, Senegal, Togo, and Cameroon. He is currently working on the planning of an eco-district in Abidjan, the reconstruction of the Grand Market and the creation of an equipped park along the lagoon in Lomé, the rehabilitation and the transformation of a building into a Radisson Blu hotel in Douala; and the completion of the Mohamed VI "green city" university campus in Morocco.

IGLUS Quarterly: What are your views on the challenges faced by African cities?

Widson Monteiro: The first one that is generally mentioned is the demographic explosion. In my opinion, it is a positive trend since it shows a general improvement in living conditions as well as better access to food and healthcare. In the 1950's, the life expectancy of an African was around 40 years, while at the same time that of a European was 65 years on average. Today, life expectancy in African countries is around 65 years, while in Europe is it around 80 years¹. Another phenomenon called demographic transition is also ongoing: An African woman had between 6 and 8 children in 1950, while in Europe women had 2 to 4 at that time. People currently still continue to have a lot of children on the African continent, but depending on the region, the trend is now from 3 to 6. Let's also mention the median age. In Europe it's about 40 years, but in Africa it's between 15-20 years. This is a very important factor to take into account in urban transformations. Regarding the massive urbanization that we are observing, I would say that it is also important to understand the past 30-40 years. This period has been characterized by different forms of violence on the continent, such as civil wars, coups and famines. As a result, people also fled from the countryside to the cities. In the 60s, the African capitals had a few hundred thousand inhabitants while now, they host several millions. It happened over a very short

period of time.

The notion of *African urbanity* has thus been deeply transformed, without control, limitation nor Today, all African countries have a major urban center. In Dakar, Senegal, we find almost half of the country's population, in Abidjan, it's about 1/3. In Kinshasa, with the second civil war which ended in 2003, many people fled to the capital. It is not possible today to say how many people actually live in the city.

During this period of instability, planning or defining administrative structures and economic activities linked to urban centres were impossible. By comparison, China, which has faced massive urbanization, has implemented public policies to define regions, metropolitan areas and limit internal migrations. The country is of course criticized but it shows how strong political structures are essential. In Africa, political and administrative instability has made it impossible to measure the importance of both the demographic and urban explosions. There is now a rising awareness of issues and challenging in managing these dynamics.

IQ: What are the strategies developed to face those issues?

WM: One of them is the creation of new cities. This is an increasingly common trend on the continent, not only in West Africa. Some are very well known, like Di-

¹ https://data.worldbank.org/indicator/SP.DYN.LE00.IN?name_desc=false

² <https://www.businessinsider.fr/us/senegal-building-2-billion-futuristic-city-inspired-by-nature-2018-9>

amniadio² in Senegal. It is always a solution that presents itself as an addition to pre-existing cities and often, as capitals' extensions to relieve them. The creation of these cities is not envisioned yet as a process of urban decentralization with the development of strong secondary cities.

The African capitals are themselves new cities. They were created over a hundred years ago during the colonization. Their post-colonial history began around sixty years ago, even though it is hard to believe given their number of inhabitants. The African city has in fact to be built from now on, and it is not a natural process on the continent. Local construction methods are traditionally temporary, structures are constantly moving. The act of renovating the house, modifying it or even changing living places has characterized Africa's lifestyle for a long time. Trade or public spaces' uses are closely linked to this tradition. Today, these lifestyles are no longer suitable for cities, but they still exist. New urban dwellers continue to reproduce rural lifestyles within cities, especially in slums, which contributes to increasing insalubrity. To address these challenges, instead of building new cities, we should start to restructure, regenerate these cities, to analyse how we can (re)build them by taking these parameters into account.

IQ: How to restructure the city while being inclusive?

WM: One word that is used a lot by politicians in Sub-Saharan countries when they talk about restructuring the city is "clearing out"³. It's tremendously brutal. The idea is to expel populations in peripheries and instead build new and more luxurious neighbourhoods. This has been the case in Luanda, for example, where working-class neighbourhoods have become luxury condominiums. This way we don't address any of the real urban challenges and there is a fundamental problem with that. Instead, we could explore a regeneration project but of course, it is longer and more difficult.

I would like to mention a project we have in Abidjan, which can also explain the kind of issues we're dealing with. Architecture Studio has been asked study the pos-

sibilities of restructuring several districts of Marcory, one of the 13 municipalities of the Autonomous District of Abidjan. One of them is called Anoumabo, it is in fact a village where the Ebriés, who are the "people of the lagoon", live. It is a population that traditionally lived on the other side of the city, in the Plateau. They were expelled from this place when the French moved the capital to Abidjan in the 1930s to the Plateau so as to have, thanks to this position, a better territorial control. When the city expanded in the 1960s, the Ebriés were moved a second time, to Anoumabo on the other side of the Abidjan lagoon. There, they were given one piece of land per family. The city now includes this village and 100,000 people currently live in this municipality, in unhealthy conditions. There is a will to restructure and the local situation forces us to rethink the approach: the land parcels cannot be sold because they belong to the village, according to customary law that have been preserved. The inhabitants cannot therefore be expropriated.

We are carrying out our studies to restructure this space by integrating the inhabitants, so that they can continue to live there and at the same time develop economic activities. It is similar to planning, which is unusual because it takes time. Implementing such project is a challenge as it does not fit within the framework of political mandates and besides, even if the stakes are high, there is no political will. We need to experiment public participation and alternative financing solutions since this project cannot be carried out the traditional way, by selling the parcels. This project is also about social integration and social education, but local public policies are not prepared yet. But as architect and urban planners, we cannot think otherwise.

Next to Anoumabo, there is the Konan Raphael's neighbourhood, which is smaller, but where the interests of public and private actors collide with the collective interest. In this area, it was proposed to do the same social process. It is necessarily different since we're dealing with non-customary private land-ownership, but also with parcels belonging to both the Marcory municipality and the Ivorian property management company

³In French, the verb used is "déguerpir".

SICOGI. If we manage to bring interests together and resolve land issues, we could create a pilot project, which could be a symbol of the restructuring possibilities in West African cities.

IQ: Who has the expertise to implement these projects? How can we find ways to combine public and private interests?

WM: There is great incompetence on the side of public authorities and planning or development agencies, which rather act as land titles managers.

In Ivory Coast, there are sometimes individual initiatives to make things change, but this cannot work. A structural approach is needed. The private sector is the most active actor in urban development in Africa. It can be interesting, but these actors are not supervised. Their action does not take the city into account in an overall and integrated dimension. Building neighbourhoods in different places does not solve any problem if they are not connected to the remaining urban space.

In Ivory Coast, a Ministry of Cities has been created two years ago, which was a first step towards centralizing the country's urban affairs. However, practices are struggling to evolve, and urban infrastructure projects are still managed in silos and are not interconnected. This is also due to the fact that these are privately-owned projects and the role of the different stakeholders in the decision-making process is not always clear. This is quite related to the corruption that is present at all levels of society, which means that there are always opportunities to deviate from the norm. There are also very strong electoral dynamics and very little continuity from one administration to another. We start almost from scratch every time there is a change of local leadership and this does not allow for continuity in the development of cities in particular.

Developers also have issues: although they are looking for economic profitability, they nevertheless have difficulty finding the necessary competences to carry out their projects. Structuring is nevertheless possible. This was the case with the project for the new city of Yennenga in Burkina Faso, where the private developer took time to structure the project and collaborate with urban planners even before launching the parcels' sales.

It is an unusual approach, as often promoters consider their projects mainly through this perspective without thinking about integrating their new district in the overall local urban development.

IQ: What is your view on the development of “private” cities in Africa? There are certain projects like Tatu City in Kenya or Sheikh Zayed City in Egypt. How to compare them with Yennenga for example?

WM: If there are no public authorities, these territories will not become cities but will remain segregated spaces, dedicated to host a certain social class or activity. The question is, how do we manage to make the link between them and private projects? Yennenga is a project financed by a private company, it invests in infrastructure and generate income from land sales. It's an interesting model - and perhaps it's also linked to the fact that the investor is from Burkina Faso and wants to do something for his country - because there is a housing offer for every budget.

What I find interesting is that it is private, but the company integrates the public authority in all the steps of this new model of building cities. At each stage, the programme is validated by the national agency for regional planning. Agreements have been established to ensure that the city regains control of these new districts after project's completion. There is also physical space to welcome and businesses: the aim is not to build a dormitory district. There is a connection with the train. The project is part of the master plan for Greater Ouagadougou. It is currently 5 km away from the city but eventually it will be fully integrated. There is an innovative way of making the city with attempts to combine a public authority that is rather characterised by a long and tedious decision-making process and a private sector that has the funds and has every interest in seeing it go fast enough. But about the management of the city, of its infrastructure as well as State's competencies such as security, those cannot be privatized. Or instead of cities, ghettos will be built and won't be integrated into the urban landscape.

IQ: Architecture Studio also has projects in Morocco. Is it possible to compare sub-Saharan cities Africa with those from North Africa for example?

WM: The major difference between the two areas is

that North African countries of North Africa have traditions, even in urban planning, which are more ancient. The protectorate, in Morocco for example, didn't have the same effect as the colonization in Sub-Saharan Africa. Morocco is a stable kingdom, the king's power is very strong, and his instructions are followed. Morocco is willing to play a more prominent role on the African continent, somehow as a "liaison centre" with Europe and the United States. Managing the transformation of a Moroccan city will therefore always be easier because there is a decision-making process that is not linked to a mandate. It is possible to have a long-term vision; the King is in the process of setting up Morocco as a model for Africa for the next 100 years.

In Ben Guérir, there is a green city project⁴, launched by the government and financed by the OCP Group⁵, which aims to become the first green city on the continent. Central guidelines are followed locally and so far, what has been built complies with European environmental standards. There is also a local economy linked to the extraction of phosphates.

In Morocco, there are also many secondary cities, with their own functioning. In sub-Saharan Africa, this does not exist. However, Africans are starting to acknowledge Morocco as a system that inspires them. African delegations now come to see Moroccan examples rather than European models for example, which in a pan-African perspective is important and will be more accepted locally.

IQ: If we are talking about territorial integration, how can we rethink the peripheries?

WM: There is of course an explosion of urban peripheries, whether in North Africa or sub-Saharan Africa, with different standards of living though. They are characterized by a very high concentration of inhabitants. In Yopougon, which is a city on the outskirts of Abidjan, there are 1.5 million residents. These places are difficult to structure, but it is inherent to their very creation: social housing has been put on the fringes of urban centres, which creates many problems, particularly related to mobility. The approach of building social housing

within the city, where people were already living before being displaced, would have been more effective. These spaces can be reinvented and densified, since they are still low-densities spaces. Here again, a strong will to (re) structure is necessary to integrate these territories.

IQ: What additional ingredient should be added while rethinking the African city?

WM: There is in Africa an idea of oblivion: forgotten peoples, forgotten neighbourhoods, languages, traditions, even the forgotten nation. I don't have any message, rather an expectation to take advantage of these elements and reintegrate traditions, but also this huge cultural and linguistic in space making. Such perspective could help us in understanding cities and their evolution. We should be inventing the African city of tomorrow by integrating these forgotten elements into these rich territories.

Architecture-Studio is an architecture, urban planning, landscape and interior design practice founded in Paris in 1973. The studio is composed of 150 professionals in Paris and 50 in Shanghai, representing 25 or so nationalities, led by 13 partner architects. At Architecture-Studio, we believe in the virtues of exchange, crossing ideas, common effort, shared knowledge and enthusiasm. We believe these virtues are essential to provide continually renewed answers to environmental, urban and architectural topics in a changing, global and polymorphic world. In our opinion, architecture is primarily a social item. Architecture is the result of dialogue between economic, cultural and social interests which are interacting for each project. The European Parliament in Strasbourg, the Arab World Institute in Paris, the Onassis Cultural Centre in Athens, the urban design of Montpellier's Parc Marianne eco-neighbourhood, the 2010 World Expo masterplan in Shanghai, the Amman Rotana Hotel Tower, the Jinan Cultural Centre in China and the National Theatre of Bahrain stand among the practice's landmark completions.

<http://www.architecture-studio.fr>

⁴ <https://newcities.org/cityquest-mohammed-vi-green-city-morocco-designed-development-engine-incubator-research-hub/>

⁵ Morocco's phosphate-mining corporation

Applicability of Public Private Partnerships for infra-structural development within Nairobi Metropolitan region, Kenya

Daniel Mutegi Giti*, Prof. Owiti Abiero K'Akumu, Dr Edwin Oyaro Ondieki

Abstract: *This paper hypothesis that application of PPP will significantly contribute to increased financing of infrastructure within the Nairobi Metropolitan region (NMR), which has been plagued with inadequate, inaccessible and underdeveloped social and physical structures. The study utilized stratified sampling method and targeted six institutions within the Nairobi Metropolitan Region which included National Housing Corporation (NHC), Kenya National Highways Authority (KENHA), State Department of Housing, City County of Nairobi, Athi River township in Machakos County and the PPP unit based at the National Treasury. These institutions were selected because they were at various stages of using PPPs and the fact that the PPP unit is the central advisory unit in the application of PPPs in Kenya.*

The main objective was to investigate the extent to which PPPs can be utilized within the NMR and in Kenya in general to bridge the infrastructure financing gap. Utilization of the concept enhances cost effectiveness, technology, and affordable financing; projects are completed on time, which brings value for money. It was found out that PPPs, when structured in an effective manner, through aligning interests of stakeholders, provides can bridge this gap. Kenya has the necessary enabling environment for PPPs application in accelerating development in all the sectors of the economy. 81% of the respondents noted the importance of PPPs in accelerating infrastructural development in the country; they noted that this prospect faced many challenges: inadequate awareness and knowhow of structuring effective PPPs, capacity, inadequate institutional frameworks and inadequate project financing. It was recommended that the NMR and Kenya should embrace effective application of PPPs in all the sectors, to access: Innovation, financing, technological, managerial expertise and appropriate risk transfer skills.

Key Words: *PPPs; Infrastructure, urbanization; slums and informal settlements; Kenya.*

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Urbanization and its effects on infrastructure

UN Habitat (2016) noted that more than 54% of the global population lives in urban areas, because of the many benefits that accrue from the growth of urbanization, which includes: wealth creation, employment creation, and the tendency of such settlements to drive the required human progress through effective utilization

of forces associated with agglomeration and industrialization movements. The current trends show that this number can only continue to grow with this urban population growth significantly being more pervasive and rapid in nature in the developing world (Kenya included) than that of the developed world. According to the World Bank (2017), over 90% of the recent urbanization witnessed on the globe has occurred in developing

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countries, with urban areas gaining an estimated 70 million additional residents annually and this trend is prevalent in South East Asia and Sub Saharan Africa. This will see urban population doubling by the year 2030. Rapid urbanization brings many challenges to authorities including: pollution, where it has been estimated that 70% of all global carbon emissions are generated in cities. It brings about shortages in housing supply, since 70% of all urban land uses globally is dedicated to housing development, which in turn defines the urban form and densities. The development of housing has backward and forward linkages of up to 7 factors with the other sectors of the economy, including providing employment and contributing to national development and growth (UN Habitat, 2016).

This rapid urbanization has created a housing crisis and resulted in many people living in slums and informal settlements. This has been illustrated by the fact that in 1990, six hundred and eighty-nine million people lived in slums and informal settlements, a number which increased to eight hundred and eighty-one million in 2014, was an increase of 28% in only fourteen years. In 2010, 980 million persons globally lived in such settlements, and this number was expected to increase to 1,580,000,000 persons between 2010 and 2030. This has necessitated the development and construction of 1 billion housing units all over the world by 2025. This requires US\$ 650 billion per year or an accumulated US\$ 9-11 trillion (UN Habitat, 2016; World Urban Forum III, 2006).

As cities grow and urbanization process rises, there is corresponding rising pressure on governments' to provide housing and basic human needs and services such as health care, clean water & sanitation and other infrastructure. As it stands, majority of the cities in developing countries expected to absorb the greatest number of people arising from urbanization are facing enormous urban challenges. This is because these cities economic growth has not kept pace with the rate of urbanization being expected, and as a result, there is a severe shortage of adequate and affordable housing and basic infrastructure. This is because these facilities, which are needed to

sustain urban growth have deteriorated, lowly funded, poorly maintained or non-existent. A paradigm shift is required to jumpstart ways through which provision of urban infrastructure and housing will be provided (UN-HABITAT, 2011). Figure 1 shows Mathare settlement in Nairobi, which has dense settlements, and where housing is inadequate.



Figure 1. The housing typologies in Mathare, Nairobi City.
Source: (Author).

Kenya is experiencing rapid population growth, particularly in urban areas, and as such, the number of urban settlements have grown quickly in the last 30 – 40 years. This has generated tremendous development potential and opportunities, which has further brought about social, economic and spatial challenges. In the 2019 population and housing census, the national population was 47.8 million people. In 1999, Nairobi, the capital city had a population of 2,143,000 people, while in the 2019 census, it had a population of 4.2 million people, a situation which necessitates provision of adequate and affordable shelter, among other infrastructural needs (Republic of Kenya, 2019; ISOCARP, 2010). Table 1 shows the projection of the population of Kenya and the Nairobi Metropolitan region from 1999 to 2030. The Nairobi Metropolitan region (NMR) covers Nairobi city, Machakos, Kajiado, Murang'a and Kiambu counties.

Table 1 shows the population distribution and projection for Nairobi Metropolitan region, which shows an upward increase, and which will exert pressure on service provision.

Enhanced private sector participation in urban infrastructure and housing in Kenya

According to African Development Bank Strategy paper for Kenya (2012- 2018), the country's private sector is well developed, resource endowed and has the ability to supplement public sector financing of various projects. The sector contributes 97% of the GDP and 80% of the formal employment opportunities, but it faces challenges of infrastructural deficits, corruption, inadequate enabling environment and trained labour force. Infrastructure is insufficiently funded, such that in the last five years, only 27% of the national budgets was allocated to the areas of transport, energy, water, sanitation and other environment related infrastructure (African Development Bank, 2014).

The infrastructural investments required to sustain high quality life for urban residents' meet are complex, vary across sectors and success will involve close collaboration of the public and private sectors. This is what has led

stakeholders to explore the application of Public Private Partnerships (PPPs) in the financing and development of these infrastructural needs, including urban housing, an idea which has been supported by the High Level Panel on the post 2015 Development Agenda (HLP, 2013) and Bill Gates (2011). Urban areas including the NMR requires sustained mobilization of large scale PPPs to fund their infrastructure demands. Application of PPPs, will enable urban authorities to leverage little public resources, which will enable such resources to be stretched far in development discourse. The private parties through PPPs will avail research and development; technology; large scale production and manufacturing; generation of knowhow, utilization of best practices and diffusion of expertise (Guido and Sachs, 2015).

Justification for application of PPPs

PPPs have been proposed as a panacea for bridging the financing gap for construction and development of various infrastructural assets and supporting development objectives of NMR and Kenya in general. There is no globally accepted definition of PPPs, hence countries are at liberty to define what it constitutes and areas in which it can be applied (Ayodele and Anusike, 2015; Susilawati et al, 2009). Canadian Council for PPPs defines

Year	1999	2007	2012	2017	2022	2027	2030
Total National Population in Millions	28.7	36.3	41.5	47.2	52.9	58.7	62.1
Total Urban Population in Millions	5.4	9.0	12.3	16.9	23.1	31.7	38.2
Urban % of National Population	18.8	24.8	29.6	35.8	43.7	54.0	61.5
NMR Population in Millions	4.8	6.3	7.6	9.0	10.8	12.8	14.3
NMR % of National Population	16.7	17.4	18.3	19.1	20.2	21.7	22.8
NMR % of urban population in Millions	88.5	70.3	61.7	53.3	46.3	40.2	37.0

Table 1. The Distribution of national and urban population from 1999 to 2030

Source: Adopted from ISOCARP Review of National, Urban and Nairobi Metropolitan Population projection up to 2030.

the term as “a cooperative venture between the public and private sectors, built on the expertise of each partner and which best meets clearly defined public development needs through appropriate allocation of resources, risks and rewards” (Ayodele and Anusike, 2015; Spiering and Dewulf, 2006). These partnerships are carried out through contractual obligations which are entered into by the parties to the PPP contract. This makes completion of projects to be faster, efficient and effective (Ahmed, 2017; Ayodele and Anusike, 2015; Susilawati et al, 2009; Edwards and Shaoul, 2003).

PPPs may be defined as an arrangement implemented between public and private entities with the aim of providing public facilities and development requirements. Under such arrangements, the investments are managed by the private party within defined timelines with appropriate risk allocation amongst the parties (Kimani et al, 2015; Yescombe, 2007). The private party receives payments based on levels of performance aligned to specified contractual undertakings evaluated by the public sector partner (Kimani et al, 2015; Roger, 2002). Ong’olo *et al* (2006) defined PPPs as “...institutional relationships between the state and the private for-profit or the private not for profit sectors. Public and private actors jointly participate in defining the project objectives, methods and the implementation of the agreed cooperation. PPPs are a variation of privatization in which elements of a service previously run solely by the public sector are provided through a partnership between government and one or more private sector companies. Unlike a full privatization scheme where the new venture is expected to function like any other private business, in PPPs, the government is heavily involved throughout the project lifeline. World Bank (2012) defined PPPs as “a long term contract between a private party and a government agency aimed at providing a public asset or service where the private party bears significant risk and management responsibility”.

OECD (2008) defined PPPs as an agreement involving public agencies and one or more private players, who

may include operators and financiers, where the private party delivers agreed goods and services. This is done in a specified manner which meets contracted project objectives, where the arrangement is structured in a way that leads to compensation of the private sector with a profit margin. There must be sufficient transfer of risk to the party best able to handle it, in this case the private entity. In Kenya, the objectives of the PPP programme as captured in the PPP Act of Kenya, 2013 is to provide for the participation of the private sector players in the financing, construction, development, operation and maintenance of infrastructure through concessions or other contractual engagements. The private partner receives compensation from a public fund, user’s fees or charges or a combination of both Republic of Kenya, 2013).

Applicability of PPPs in infrastructure financing

The earlier held policy positions to the effect that public sector is solely responsible for funding infrastructural developments has been challenged by shifting public policy on available methods of infrastructure financing. This has been accelerated by waves of technological changes, increased appreciation of the existing linkages between the incentive structures and the resulting operational efficiencies and the general acceptance of the “user pays” principle across many jurisdictions (Grimsey and Lewis, 2002). This necessitated a move towards private sector participation in infrastructure financing through privatization of public infrastructure assets and services, like road construction. This resulted in the competitiveness of service provision associated with liberalization ideologies, and the fact that public sector performed poorly in this regard. Rapid globalization, which required provision of adequate infrastructure in all sectors of the economy became a challenge to governments despite their inadequate resources. The debts and monetary crises of the 1980s alongside the proved maxim that infrastructural development is central to sustainable development and international competitiveness, forced a rethink of infrastructure financing strategies. Countries were forced to institute reforms to allow for greater pri-

vate sector participation in infrastructure financing first through privatization, which was supported by restructuring and enactment of enabling environment, they embraced alternative infrastructure financing initiatives (UN Habitat, 2011).

PPPs have been embraced since the 1990's as a policy issue across the world (Ndandiko, 2006; Osborne, 2000). They have become a common procurement practice for goods and services across many sectors like construction of roads, telecommunications, water, prisons, housing, schools and universities and their management. The asset developed remains under the public sector control. (Ndandiko, 2006; Harris, 2003; Grimsey, 2002). The traditional procurement methods became unsustainable due to inefficiencies, poor pricing of products, corruption, over emphasis on high staffing without corresponding service delivery, inadequate management skills and slow project implementation (Ndandiko, 2006; Harris, 2003; Grimsey, 2002; Mustafa, 1999). The motives for application of PPPs for infrastructure financing are varied and may be sector specific, with common benefits including efficiency considerations, adequate utilization of resources, and application of market specific incentives which makes completion a hall mark for service delivery. PPPs application leads to integration of all project components and inputs, including private sector expertise in the realms of public sector management of infrastructure and service provision. PPPs bring about accountability where projects are designed in a way that brings about responsibility and due regard of law and other socio-economic guiding principles. This is supported by regulatory supervision, monitoring and evaluation, which is in built in the project design (Ndandiko, 2006; Farlam, 2005; Browne et al, 2003).

The major on the applicability of PPPs have been to whether it's on, or off public sector balance sheets; and to if it represents good value for money. A comparative analysis of the costs of the different infrastructure construction and financing mechanisms is what proves the value for money (Grimsey and Lewis, 2005). Morales and Amekudzi (2008) pointed out that value for money helps public agencies in determining whether to pursue

a project as a PPP rather than through traditional procurement procedures. Shaoul (2005) observed that value for money is associated with the three "Es": economy, efficiency and effectiveness, hence in PPPs, it is tied to the idea that they produce flow of services at least equivalent in quality to that which could be provided by the public sector. Fitzgerald (2004) further pointed out that value for money can be delivered through risk transfer, innovation, greater asset utilization and integrated whole-of-life management, all of which are central under PPP arrangements.

Grimsey & Lewis (2007) pointed out that on the public side, PPPs appear justifiable with high levels of responsibility and accountability because the sector is not exposed to the economic drivers that private companies are. The cost for the public sector to raise the necessary funds for the project has no relation with project risks. They further enumerated several studies where performance of PPPs in construction projects was evaluated and where the overall gains of PPPs are demonstrated. Spackman (2002) noted that private financing of public services has produced clearer objectives, new ideas, better planning and the incentives of wider competitive tendering, but also higher top management attention, consultancy, legal fees and risk premiums. Grout (2005, 2003 and 1997) noted that information costs and effective incentive structure always arise in PPPs payment mechanisms, which makes projects to be completed on time compared to traditional methods of contracting.

PPPs have emerged as an effective method to increase the stock of infrastructure in developed and developing countries, because of bundling of services and outputs therein. This provides a strong incentive for the private developers to achieve significant investment as well as operational efficiencies, with a clear focus on minimizing overall costs during the life cycle of the contract (World Bank, 2009). In a well-structured PPP, such efficiencies are usually significant enough to offset the higher cost of intermediating funds through the market as compared to direct borrowing for the private entities. By linking recovery of costs to the quality and level of service mostly through user charges, PPPs effectively shift the focus

away from mere construction of infrastructure, to efficient maintenance and operations (World Bank, 2009).

PPPs are highly effective in the construction of infrastructure due to practice of undertaking financing, designing and construction without involving large capital upfront from government (Ruck, n.d). This enables the public sector to accelerate investments in infrastructure which would not have been achieved or would have delayed, it introduces efficiency, as a result of improved work planning and organization; optimization of life cycle costs, risk management and innovation (World Bank, PPIAF tool Kit, 2008; Ndandiko, 2006; Browne et al., 2003).

PPPs have been successful in different countries across the world (Ong and Lenard 2002; Freut, 2005; UN – HABITAT, 2006b). Studies have shown issues which need to be undertaken for PPPs application (Ibem, 2010); other studies have dwelt on the contributions of PPPs in addressing infrastructure development, construction and financing challenges in different countries including Nigeria (Ibem, 2011a; 2011b; Adegun and Taiwo, 2011). Abdu and Kassim (2010) pointed out that PPPs have been utilized in the delivery and development of urban infrastructure in countries like Mexico, Pakistan, Egypt, India, South Africa, Bulgaria, Russia, Thailand and UK (Payne, 2000); Australia, USA, Canada, Malaysia and Indonesia (Ibem, 2010).

Legal framework for PPPs application in Kenya

Application of PPPs is successful where there is a properly developed legal and regulatory environment, appropriate technical skills to manage PPP transactions and appropriate project design (Bothale, n.d; National Council for Public –Private Partnerships, 2016; United Nations, 2008). Several pieces of enabling legislation on PPPs application have been developed in Kenya. These includes: **The Public Private Partnerships Regulations 2009**, which guided application of PPPs before the emergent of the PPP laws (Republic of Kenya, PPP Regulations, 2009). **Public Private Partnerships Policy 2011** provides political, economic and social rationale for the application of PPPs in supplementing government's efforts of meeting its ambitious development

goals under Kenya Vision 2030 (Republic of Kenya, Public Private Partnerships Policy, 2011). **Public Private Partnerships Act, 2013** legalized private participation in infrastructure financing, development, construction, operation and maintenance. It set up critical institutions and procedures for PPPs applications like the PPP Unit, PPP Committee, PPP nodes in the contracting government agencies and procedures to follow. It provides for establishment of a fund to facilitate PPP projects in the country with the effect of making such projects viable and bankable (Republic of Kenya, Public Private Partnerships Act, 2013).

National Public Private Partnerships Regulations, 2014 operationalized the application of PPP Act 2013 by defining clearly the procedures for PPPs application in infrastructure, implementing PPP proposals and the Project facilitation fund envisaged under section 68 of the PPP Act 2013 and critical for project actualization (Republic of Kenya, PPP Regulations, 2014). These regulations have further been strengthened through operationalization of Public Private Partnerships (Project Facilitation fund) regulations, 2017, which enables contracting authorities receive financial support in PPP transactions, feasibility studies, payment of consultancy and advisory services and project viability gap funding. The fund will be used to support firms which lack short term liquidity and as such meet contingent liabilities which arise from implementation of a project (Republic of Kenya, PPP project facilitation fund, 2017).

Section 33 of the **Urban Areas and Cities Act, 2011** provides that counties and their boards may enter into partnership for the provision of infrastructural services and for efficient service delivery (Republic of Kenya, Urban Areas and Cities Act, 2011). Section 6 (3) of the **County Governments Act (2012)** provides that counties may enter into partnership with public or private bodies as per the provisions of any laws relating to PPPs; and such partnerships may be necessitated by the need to fund and provide any infrastructural assets and services within defined jurisdictions (Republic of Kenya, County Governments Act, 2012). Realizing the potential private players have in financing roads in Kenya, the government encourages participation of private parties in road

construction through PPPs among other collaborations; through establishment of appropriate PPP framework for roads construction, financing and maintenance (Republic of Kenya, Sessional Paper No. 6 of 2006). One such initiative is the Roads annuity programme through Public Finance Management (Roads annuity) regulations of 2015, which has made deliberate efforts in attracting private players in roads construction.

Methodology

The study utilized stratified sampling method where the target population (in this case NMR), was categorized into sub populations and sample draws were made independently of each other. Six questionnaires were administered per the target institution, making a total of 30 questionnaires utilized, out of which 22 questionnaires were returned. Data analysis was done on the returned 22 questionnaires drawn from the institutions like: Department of Housing and Urban development (6), National Treasury (the PPP secretariat) 6, Kenya National Highways Authority (KeNHA) 2, City County of Nairobi (6) and Mavoko Township of Machakos County (2).

Results and discussion

Knowledge on the existence of PPPs and their applicability in financing infrastructure

It was found out that 81% of the respondents were

aware of the concepts of PPPs and their possible applicability in infrastructure financing in NMR, while 19% were not aware of PPPs and its application in financing urban infrastructure. This means that a majority of respondents in the sampled institutions had general know how on the concept, which shows that it has grown in the country from the time it was established.

It was found out that the dominant PPP forms and models cited in the study and which were thought to be applicable in meetings in infrastructure financing included: Concession and Management contracts at 26.37 and 22.6% respectively. Land swap model at 21.03% with others being Output Performance Based Contract; Build Own Operate Transfer (BOOT); Build Operate Transfer (BOT) and Combinations of various PPP models at 30%. Figure 2 shows the proposed models for application of PPPs in financing infrastructure in NMR.

It was found out that a combination of various PPP models like concession, management contract, BOT, BOOT and Design, Built Operate and Transfer, were most preferred models in delivering infrastructure and other development needs. This is because it would bring efficiency in financing infrastructural developments and that each model had unique characteristic and features useful in project delivery. Land swap was favoured because various government agencies have huge tracts of

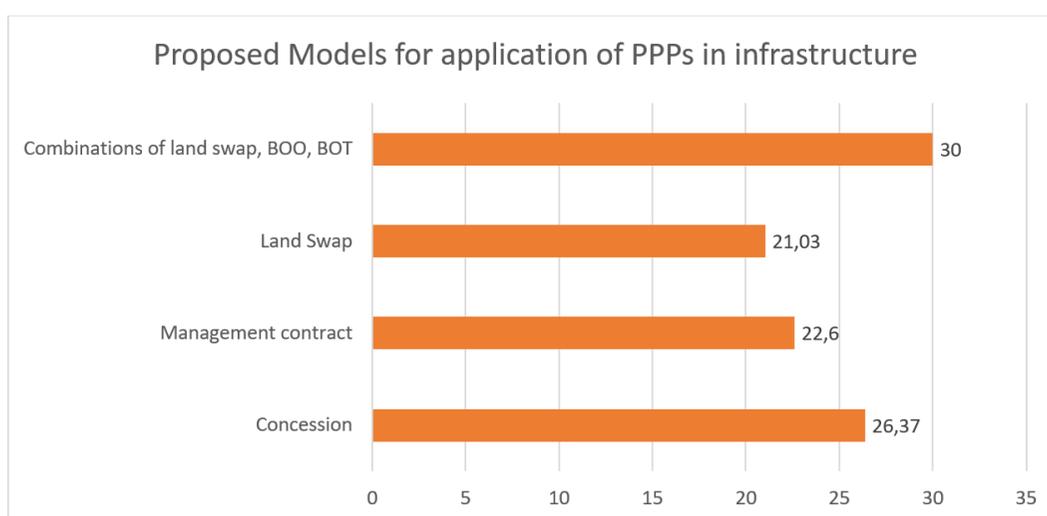


Figure 2. The proposed models for PPPs application in financing infrastructure in the NMR.
Source: Author (2020).

land which can be used as a sweeter for PPP deals, and where under PPPs arrangements, the public sector can use such land as equity contribution. Concessions and Management contract were also favoured as possible models for PPPs application.

Respondents stated that they had prior knowledge of PPPs applicability in the construction and management of infrastructure at 43.9% of the respondent had prior knowledge on the applicability of PPPs in roads and associated infrastructure, housing Infrastructure at 25.5%, telecommunications at 21.9%; and security and energy at 8.7%. It was found out that infrastructure development had benefitted from PPPs all over the coun-

S/No	Areas of PPPs application	Percentage
1.	Roads and associated infrastructure	43.9
2.	Housing Infrastructure – water, waste management, sewer lines, street	25.5
3.	Telecommunications	21.9
4.	Security and energy	8.7
Total		100

Table 2. Areas of PPPs application in NMR from respondents
Source: (Author).

try hence the concept was not entirely new. 100% indicated that NMR can benefit from application of PPPs in meetings the SDGs demands. This is presented in table 2 below.

Applications of PPPs in delivering infrastructure projects

71.4% of institutions were using one form or the other of PPPs; while 28.6% were yet to use PPPs, but were in the process of implementing PPPs projects. 23.8% observed that PPPs were applicable in roads construction so as to increase coverage in the NMR. 19% observed

that their organizations had partnered with counties (counties provided land corridors for roads and other physical infrastructure development); Private sector provided financing, consultancy services, technology and innovations in the partnership. Partnerships were also developed with various agencies to develop housing infrastructure (access roads, sewer lines, water lines, electricity; environmental waste management and garbage collection). Institutions also engaged private entities to undertake financing, mortgage administration and management contract between public and private parties.

90.5% noted that PPPs were critical in meeting organizational goals of infrastructure provision like roads financing and other development; 9.5% pointed out that their organizations did not utilize PPPs.

Challenges of using PPPs in financing infrastructure

20.3% cited limited awareness of the applicability of PPPs for infrastructural development and service delivery within the NMR; 19% cited inadequate PPP legislation on infrastructural development and service delivery, which hampered private sector participation; 19% cited inadequate institutional frameworks on PPPs application. 13.9% cited inadequate PPP regulations to attract private parties. 10.1% cited inadequate dispute resolution mechanisms in PPPs because development projects involve many parties and disputes might arise during construction, development and operational phases; 6.3% cited inadequate financing for PPPs applications in infrastructural developments like funding feasibility studies, design and project preparation costs. 6.3% cited limited trust, capacity, training and political goodwill in implementing PPPs projects. 5.1% cited limited accessibility to serviced land for PPPs applications curtailing private sector interest in such partnerships. These challenges are highlighted in figure 3.

20.8% of the respondents observed that the country requires proper institutional frame work for PPPs application in infrastructure development. 18.1% cited the need for advocacy for the adoption and application of

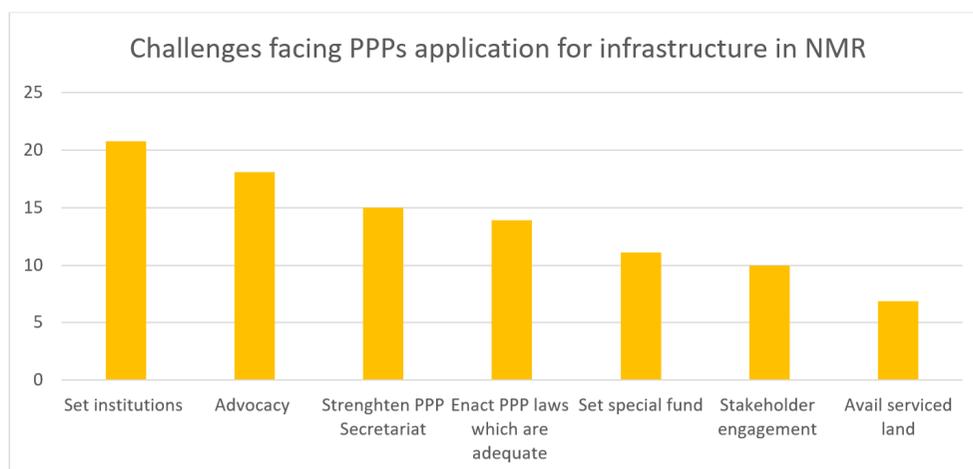


Figure 3. The challenges facing application of PPPs in financing infrastructure in NMR.
Source: Author (2020).

PPP; 15% stated that strengthening of the PPP secretariat based at the Treasury would solve the problems, because the secretariat will be able to lead the required advocacy sessions and create public trust in the unique position of PPPs in. 13.9% cited the need for the enactment of proper PPP laws, which will be suitable for all the sectors and not which concentrated on hard infrastructure like roads while leaving out social infrastructure.

11.1% noted that the country should form a special fund for the application of PPPs, as envisaged under section 68 (4) of the PPP Act, 2013. 10% noted that stakeholder engagement would make many critical actors be involved in developing bankable PPP projects. 6.9%

were of the opinion that availing serviced and readily available land which was free of encumbrances would make PPPs applicable. 4.2% observed that advocacy in the dailies and building trust would solve problems inherent in using PPP for infrastructure and service delivery. Figure 4 shows ways of resolving the challenges facing application of PPPs in NMR.

Discussion

The findings reveal that residents of NMR were aware of the benefits and rationale for PPPs application in roads construction, but pointed out that contracting agencies must structure such arrangements so as to balance and align the interests of stakeholders. Kenya has for a long time used various forms of PPPs to deliver

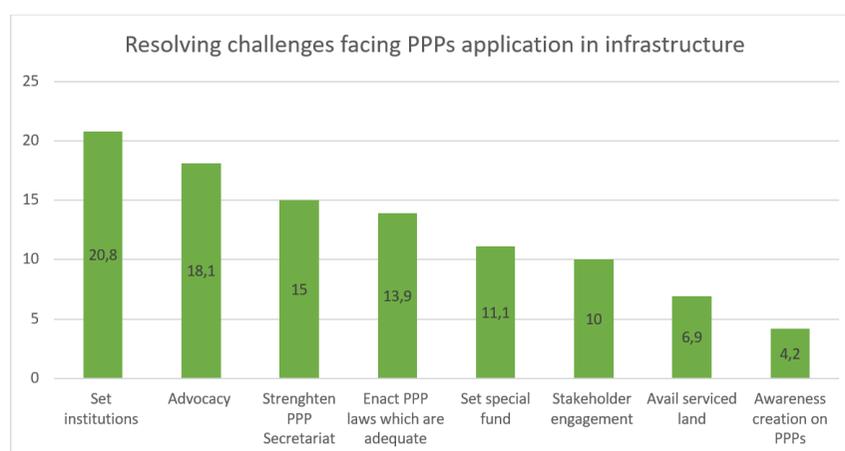


Figure 4. Ways of resolving challenges facing application of PPPs in NMR.
Source: Author (2020).

on various infrastructure projects: - in energy, roads, and ports including airports. An example of this is the Green field project at the Jomo Kenyatta International Airport; PPPs are worth applying for in the construction of roads in NMR. Measures for effectiveness in PPPs arrangements are achieved by forming a special purpose vehicle (SPV/SPE) that will safeguard the interest of all the stakeholders involved. It was found also that Kenya Informal Settlements Improvement Project (KISIP) a partnership between World Bank and Government of Kenya has been able for example to deliver so far 70 kms of roads within informal settlements in Kenya. The Housing Directorate also undertook construction of housing infrastructure projects like sewer and water lines at Mavoko Municipality from 2008 to 2012. PPPs are a solution to government budgetary inadequacies in infrastructure provision. Figure 5 shows some of housing in Mathare developed through some form of PPPs, where the community works with some Non-Governmental organizations and some microfinances for communities to do self-housing.

Conclusion and recommendation:

From the data analysis that showed that 81% of the respondents noted the importance of PPPs in accelerating infrastructural development in the region. Although this faces many challenges like: inadequate awareness

and knowhow of structuring effective PPPs, capacity, inadequate institutional frameworks and inadequate project financing, these can be addressed through adequate capacity building, effective structuring and implementation. It was recommended that the NMR and Kenya should embrace effective application of PPPs in all the sectors, including infrastructure financing. This will enable the region to access innovation, financing, technological, managerial expertise and appropriate risk transfer skills for such projects.



Figure 5. Self housing schemes in Mathare through local partnerships
Source: (Author).

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Community engagement, positive impact and urban transformation: lessons learned from Korogocho, Nairobi

Interviewee's Profile

Raphael Obonyo is one of the most prominent African youth voices who is renowned for spearheading youth agenda on the continent. Mr. Obonyo has served as Africa's representative in the World Bank's Global Coordination Board on Youth and Anti-Corruption, the external adviser, UNISDR's Africa Youth Affairs and UN Habitat's Youth Advisory Board. He has also served on the UNESCO Youth Advisory Group. He is the co-founder and convener of the Youth Congress, a premier youth-led organization in Kenya; of Koch FM, the first community radio in Kenya; of Miss Koch Initiatives - a Girls Education Initiative, and of Kenya Youth Media. He is a policy advisor to a number of local and global organizations.

IGLUS Quarterly: The IGLUS participants met you in Nairobi in February, but could you please introduce yourself and explain your journey to our readers?

Raphael Obonyo: My name is Raphael Obonyo¹, I was born and raised in Korogocho, which is one of Nairobi's slums. The area has typical slum issues, such as poverty and poverty-related problems. I grew up there. What is important to keep in mind, is that 70% of Nairobi's population lives in slums, Korogocho being one of them. As people migrated from rural to urban areas, looking for opportunities, jobs or better quality of life, some of them didn't find jobs or didn't have the required salary to afford the city's cost of living, they end up in places like slums.

Growing up in such conditions makes you want to find ways of improving, transforming the area but also of making sure you access opportunities that can help you live a better life. This is what we tried to achieve in Korogocho, and one of the ways was to form a youth organization. We started engaging in activities that would help us to survive in the area, but also improve our insecure environment. Crime was rampant in the area, public services were inadequate, and we had poor access to education and health. The youth group started to think of ideas to improve and started initiatives like Miss Korogocho, or Miss "Koch". It was an initiative to support girls' education and empowerment but also to

fight against rape and sexual violence. It also aimed at showing the beauty of such neighbourhood. The idea was to improve the image of the area and encourage residents to appreciate the potential we have, even as people growing up in these areas. We may lack services but should consider our talent, ideas and use them to create a better life in these areas. We started using youth groups to advocate and improve service delivery and governance of the area. We started initiatives like Koch FM, a community radio providing residents with information helping them to better engage in decision-making processes regarding Korogocho's governance or development.



View of Korogocho

Source: <https://classic105.com/tag/korogocho/>.

¹ <https://www.un.org/africarenewal/magazine/april-2018-july-2018/raphael-obonyo-poverty-pinnacles-power>

Later, we launched the Youth Congress to mobilize and engage youth in leadership. Overall, we realize that our togetherness was our social security.

IQ: When did you start these initiatives? How did the residents react when you initiated them?

RO: Miss Koch was the first one, in 2001. It first generated anxiety in the environment, it was not common for young people to gather together that way. In slums, there is a culture of gate keeping, with certain group of people, mostly the elderly, who make decisions for the community, even on who can come in, who can get out. This system excludes young people. When we launched the initiative, we were questioned on how young people dare bypass the existing system and address, by themselves, some of the neighbourhood's challenges. Youth in the slum are largely seen as trouble-making. So, if a group of young people starts gathering to provide solutions, everyone around is sceptical.

Besides this scepticism, it was also risky: we were campaigning against sexual violence, which was seen as a norm in the area and that is also perpetuated by people who grew up there and we know. It would thus be a challenge to mention such topic in the community because we could become a target.

On the other hand, there was also a sense of pleasant surprise, such a contest was new and unexpected and the community gave it chance. Residents eventually supported us after realizing it was a positive

initiative for the area and it could improve its image. At that time, there was only few public events because of insecurity. When we manage to set it up, residents saw it as a community reunion.

IQ: Could you share with us some other initiatives you have created so far?

RO: We now train young people on media and communication through the non-profit we have created, K-youth media². The whole project is about training the youth on story-telling, on how to share positive stories about the community. They create films and documen-

taries, and one of them was recently touring in Europe and nominated for an award. The principle is to tell stories about positive transformation of the community.

IQ: We are now 19 years after the first initiatives you launched. How do you measure their success? How did they have a positive impact on the community? What lessons have you learned?

RO: First of all, these initiatives really changed Korogocho's image. When we started, the neighbourhood would only be associated with crime, poverty or violence. A couple of years later, as a result of these initiatives, not only ours by the way, Korogocho has now a more positive image. Residents are now increasingly appreciating Koch as a place they can proudly call home. And what do you want for your home? You want to improve it, you want to engage in activities with positive impact. It really created a positive transformation cycle and journey.

Miss Koch really had a huge impact. With this contest, the focus was about girls' access to education³. A greater number of them have now access to secondary high school and even college education, while before it would have been impossible. They are also coming back to the community to help.

There are also been some infrastructural and structural improvements. We organized the korogocho community and started following up public funds, demanding provision services and asserting our permanence and rights, and we now have street lighting and other essential services and facilities. Additionally, and as a result of being aware, conscious and organized, we now have an ongoing a slum upgrading programme, with road and infrastructure improvements and soon better housing conditions. Indeed, thanks to being organised as a community, we have realized some positive tangible progress.

Overall, these initiatives emerged to give young people platforms to group their talents, to develop certain skills which have helped them to become professionals (media, training, sports...) in different sectors. There is even greater appreciation of youth power in cities and

² <http://www.k-youth.com/>

³ <https://misskoch.org/>

in slums. I have done a TED Talk entitled “Living a full life in Nairobi”⁴: in my pitch I was saying that if we want to build strong and sustainable cities, we need to focus on the youth, build up on their talent, creativity and enthusiasm. We cannot build cities without considering young people, their interests, their needs and concerns.

IQ: Do you feel that this message is being well received by local authorities?

RO: At first, I think they were a bit hostile. They thought we were disruptive, just out to cause chaos, but with time they came to appreciate the importance of our work. I like to say we are engaging with them according to the “3 C” checklist:

- We are challenging them, when we think there are not pulling up their weight
- We are criticizing them where we think they are underperforming, not delivering the services to the community. We did petitions, report, studies to follow-up on their (lack of) actions. We even went to court as a community, to make them understand that even if we might be living in deprived areas, we deserve better services and leadership.
- But we also complement them on positive actions they undertake

With time they started seeing us, and the youth in general, as partners and engaged with us in some programs, listened to some of our ideas. I can’t say that the relationship is perfect, but there have been some great improvement on how the local authorities interact with young people.

The key thing is about being organized. We also established the Korogocho Residents Association, which was the first of its kind in the slum. It is rare to find such association among the urban poor, but it helped the residents prioritize their needs and establish budget for them and engage with local authorities to advocate for their rights. The county government now see such association

as an asset and seek partnerships.

IQ: Government bodies in Kenya are often accused of corruption. Did you face any challenge on this matter?

RO: It is interesting because we are precisely fighting against corruption, which is huge in slums. It is the impediment to development. We made it clear we wouldn’t pay or bribe to get any service from or county government. We use the people’s power and organize them to defend what we knew was our rights.

IQ: There are other informal settlements areas in Nairobi. Do you have interactions or common programs with their organizations?

RO: Here again, Miss Koch had an impact and is now replicated in Kibera, Mathare, Mukuru and other informal settlements. So is the community radio initiative. We also have established different platforms for solidarity, exchange of ideas. We came together with some other residents’ associations to fight for the right to housing and the creation of guidelines on eviction. Before, we used to face situations where houses in slums would be demolished because the government was starting another project. We came up with guidelines on how to do that with dignity, compensation and rights for the people.

IQ: How do you finance your action?

RO: We mostly rely on the youth voluntarism! There is also a bit of community contribution, sometimes in kind or by putting resources. We developed our projects and packaged them into programme proposals and sought out for different partners to support us. Some NGOs are now supporting some aspects of our work. We are also interacting with academic partners who could help us with studies or evidence-based advocacy. Sometimes, international organization also provide support.

We seek resources from within and outside; it includes selling different items and products generated by young people from Korogocho, we also organize concerts.

⁴ TED Talk: [Living a full life in Nairobi](#)

We don't get any money for the government, but it is acting to create an enabling environment. For example, when we started Koch FM, it was actually illegal to set up a community radio, since there were no regulations. We fought and engaged with the government and as a result, we have a policy framework and legal provisions for establishment of community radios, and as a result a number of community radios have been established across the country. I must say it worth the fight, and we look back with pride and joy.

IQ: General elections are coming soon in Kenya. Would you have any recommendation for future political leaders?

RO: First of all, let me make a recommendation to the residents of slums: they must not detach leadership from the situation they experience every day. There is almost a direct correlation between the leaders we have and the situation in slums. We need to pay more attention to the kind of leaders we elect. We tend to forget that election is not just an event, but it impacts our day-to-day life during the whole term.

To politicians, there has to be a comprehensive plan on how to deal with slum situation. There is need to review urban planning. The issue of urbanization is a reality, so they must come up with strategies on how to manage this trend. It can't be stopped, but we must manage the challenges that emanate from the phenomenon: creating economic opportunities and jobs for young people, decent and affordable housing, and ensure access to health. There are lots programmes that need to be implemented, but it has to be done in partnerships with the communities. The last thing slum residents need is a decision taken by someone in an office, without taking into account local realities. Slum upgrading programmes are not only about housing, they must address the entire ecosystem. The housing aspect may be improved, but without better economic conditions, sustainable livelihood and other essentials, it won't change anything. We need a comprehensive strategy to tackle the issues, acting on part

of the problem will not provide any long-term solution.

IQ: You mentioned the slum-upgrading program in Korogocho. Could you tell us more about it?

RO: We have a slum upgrading program, as a result of a debt swap between Kenya and Italy⁵. Resources are now invested in Korogocho, and it is managed by a partnership between both governments. So far, they have done quick win projects such as road improvements, setting up a healthcare centre. They are now moving towards addressing housing, which is really tricky, especially regarding the question of land tenure. They also need to understand the context to address the housing issue: building up multi-storey buildings is not an answer, on the contrary it might result in pushing people starting another slum somewhere else. It takes time to deal with those issues. The residents' association is working with them to apply lessons learned from other slum-upgrading projects.

IQ: If you had to give advices to communities that would like to organize themselves, what would you recommend? What should they explore to build community?

RO: Residents must find value in coming together and organize themselves. There is a tendency of people thinking they can solve problems in the society by dealing with aspects that only touch on them directly.

Slums residents should also not see themselves only regarding what they lack, but also see what they have among them. In Korogocho we saw talent, potential and ideas in young people. They should utilize that.

There is a need to build partnerships with different stakeholders, like government, private sector, development partners, international organizations, at some point and in some ways; and these partnerships, if you strengthen them, can contribute to create progress.

Residents also need to organize themselves in groups that can be used to create projects and reach out to these

⁵ <https://www.standardmedia.co.ke/article/1144004020/kenya-italy-swap-benefits-korogocho-slums>

potential partners, to find financing options as well.

IQ: Creating a long-term community organization requires leadership. How did you build this leadership?

RO: We continued to train ourselves, to seek out for capacity development support from different actors. We reached out to other people who had capacity and could help us to engage with stakeholders at different levels. For example, when we started our study on the impact of public funds in Korogocho, we didn't do it ourselves, we reached out to renowned research organisation – the Institute of Policy Analysis and Research (IPAR)- established a partnership to get the data and establish recommendations and interventions. We now want to use them to engage with authorities to find solutions for the challenges that we are facing.

It is about knowing the limitations and inadequacies you face, but also the community's potential and purposefully reaching out to specific partners and actors to join the initiatives.

IQ: What does inspire you?

RO: First of all, I get inspiration from deep within myself, it has to start with you. I also get inspired by seeing the commitment from people I work with on different agenda and initiative, and from seeing the people's expectations and the progress we make by coming together and engaging in some initiatives. I draw inspiration from different places and actions, sometimes learning about results achieved by initiatives in other places. And by knowing that change and transformation are possible if we work together and stay committed on the long term.

In Korogocho, we faced threats from people benefiting from oppressive systems and status quo: sometimes you expose yourself to some risks when you're seeking change. But you must do what needs to be done if you want to transform your environment and have a positive impact. The consequences of doing nothing are dire, more than the risk we take and at times the price we have to pay.

I am optimistic about the future, since I have seen the progress and changes we have been able to realize. I have also seen the younger generation coming up to take responsibility and try in their own way to make a difference. They give me hope of a bright and better future.

I remind young people that change begins in small places close to home. Young people can start initiatives in their areas, and this small change will have some butterfly effect and impact people beyond the neighbourhood's borders.

Similarly, the Sustainable Development goals have to be localized and appropriated by local communities to ensure a more sustainable impact on our neighbourhoods and more generally, our cities. We will keep helping organize the youth leagues to empower them in dealing with challenges they face in their locality. Organization is a big thing since the Youth Congress has now delegations from the 47 counties from Kenya. We will also carry on engaging with authorities to create an enabling environment.

Shifting the power with a community foundation

Interviewee's Profile

Robyn T. Emerson is an urban planner and a serial, social entrepreneur who has established projects in Kenya and the U.S. She has a certification Social Entrepreneurship from Acumen and is a fellow of Babson College Women Entrepreneurs in Kenya. She has worked in diverse communities and a broad range of projects in Kenya. She is the co-founder of the Kilimani Project Foundation, an internationally recognised community foundation; Founding President of Women in Real Estate, Founding Board Member of Give Realty - a housing/real estate social enterprise and Trustee of Crafts with Meaning - a social enterprise that creates markets for rural artisans. She is a leader of Kenya Private Sector Foundation's (KEPSA-F) Nairobi Forum Initiative. She is the co-author of Building in Kenya: A Real Estate Developers Toolkit, the only comprehensive book on making sound real estate investments through a built structure.

IGLUS Quarterly: Let's start with the very beginning of the Kilimani Project Foundation¹. Could you tell us how and why it started?

Robyn T. Emerson: It started with a conversation, in 2012, between my husband, some neighbours and friends of ours, and I, in a garden. We were all agreeing that we didn't really have a say on what was happening in our neighbourhood, Kilimani, even though we could see significant changes and new developments. We were also feeling a growing disconnection between us, the neighbourhood and the other residents. For example, middle-class Kilimani children would be sent to private schools in other parts of the city instead of attending ones in the neighbourhood. Local public schools are mainly by children nearby informal settlements leaving the schools under-resourced, lacking community support. As residents, we started to wonder about what we could do to create 'community' in Kilimani and decided to meet regularly. We were only 5 or 6 people at first, it was very experimental, and we didn't know where it would go. Therefore, we called it the "Kilimani Project", because we saw it that way. The idea was to think about what makes Kilimani a community of choice to live, work and play. How could we gain knowledge about here it was going, understand the reasons why people love the neighbourhood, what was worth protecting or reviving in the ward. Based on this we started to engage with the residents.

IQ: What were your first actions?

RE: We invited people speak through pictures, an ac-



Source: Author

tivity we call Picha Sauti (picture voices), and we arranged community photo walks. Upon looking over the pictures taken we saw the could be classified as the good, the bad and the ugly of Kilimani. It was an eye opener to see what Kilimani had become and to make it more powerful, we created an exhibition in a mall to

¹ <http://www.kilimani.co.ke/>

reach out to as many residents as we could getting their comments and ideas as well. It led to the creation of the first Kilimani Community Festival. We now have turned it into a regularly held street festival which takes place in the neighbourhood three times a year. We also helped re-develop the local police station and started the Kilimani Organic Farmers Market. Those initiatives share a common goal: provide a safe space and an opportunity for Kilimanians to come together and get to know each other, in an informal way, over a cup of coffee or a meal. It is all about developing a sense of a strong(er) community.

IQ: Before the Kilimani Project Foundation, did any structure exist to represent the residents? How did the neighbourhood react when you started your actions?

RE: There were already some associations of inhabitants, created at streets' scale for example. They would reach out to local leaders in case of issues regarding infrastructure or service delivery. There was no way of tracking response effectiveness. The Foundation aims at bringing people together to claim their rights to live in a liveable neighbourhood and is now the umbrella organization. Of course, we reached out to these associations at the beginning of our initiative. There was not much pushback in terms of why we are pulling the community together. We did it because at all levels within the society, people need to organize and ask for accountability from local authorities. Kilimanians can afford to pay for private services such as water, waste or even security, but they also pay their taxes and it is thus their right as citizens to ask for transparency regarding public funds and provision of services. The Foundation aims at providing a platform to empower the residents and give them a voice in the local governance.

IQ: How is the Foundation structured?

RE: Our action is structured around five pillars, that are: planned development, social cohesion, environmental management & green spaces, public safety and enterprise development. Each topic has its own working group and are animated by volunteers. Their actions aim at creating opportunities for Kilimanians to strengthen the community, create opportunities but also inform



Figure 1. A Kili-Kaptain sensitising an estate guard on COVID-19 and the public services available
Source: Author

them and advocate for a better implementation of existing regulations regarding the urban landscape. Over the last six years, the Foundation has recruited a membership of 300 Kilimani businesses and residents. They have made great use of our social media platforms to discuss their experience and express their concerns. We had an important issue on noise pollution, due to nightclubs, construction projects or worship places². We launched the #ICantSleep twitter campaign to raise awareness on this problem, organized the community actions to file complaints and engage with local authorities to enforce regulations on noise levels. In response to Covid-19 they activated 'Kili-Kaptains' volunteers who act as street marshals to keep residents informed of ever-changing government directives.

IQ: How do you finance your activities?

RE: KPF operates on relatively lean financial means. It is a membership-based organisation with categories - individual, corporate and residential associations. We also rely heavily on good will. When we started our activities, we were calling on donations and gave our free time, even our own resources. It is how we organized

² <https://www.the-star.co.ke/news/2019-10-28-court-orders-kiza-b-club-and-space-lounge-closed/>

our first festival back in 2012, thanks to people's contribution! Equipment for stages, music was donated. There are a lot of artists who grew up in Kilimani, we also reached out to them and they really helped. This festival was a huge breakthrough, it was an amazing day to show how vibrant the community can be if we put our energy into it. We lost some money of course, but it was worth it. Now, we are formally organized as a foundation. Such a legal structure helps to design our actions as programmes, receive grants and in general reach out to diverse funding sources, at an international level. We don't receive any money from any level of the Kenyan governments to carry out our actions.

IQ: What are your relations with local authorities?

RE: Over the years, we managed to develop strong relations with the local government. It was not always easy since we are developing actions regarding urban planning/development and are advocating for the government to respect the current regulations, which for example limit constructions to 4-storey buildings. There is also a legal obligation to communicate about the project on each construction site and it is not always respected. Kilimani attracts a lot of investments in development projects due to its coveted, centralised location. What

we are trying to tell the local authorities is that, as a community, we are not against development, but it should be respecting the norm and reasonable in terms of what the neighborhood's infrastructure can absorb.

Our foundation is now recognized as a legitimate stakeholder and we have been involved by the county in the definition of the masterplan; we organized some workshops with the residents. Public participation is a key promise of our constitution. The county must engage the public in policy making, and we now manage to have a say on this process. This influence is also a way for us to measure the success of our actions, of the existence of our foundation.

Relations with the government have recently changed though, the county has been put under receivership by the national government and we are awaiting to engage with the newly appointed Director General. There is a growing frustration regarding the current capacities of local authorities to deal with the city's issues. It is also more contentious due to the legal proceedings on the Cytoon towers.

IQ: How do you measure your success?

RE: I mentioned the term of influence, but there is also inspiration. The foundation has inspired other communities to organize themselves and we helped with sharing our best practices in building communities. We don't necessarily have common projects since initiatives are very local, but we are always available to contribute to strengthening communities. We also have tangible legal victories, regarding the noise issues of the night clubs. We fought and obtained the closing of those places. We are now leading the protest against the Cytoon Towers project and brought the case to court. It was a 35-storey tower planned to be built the neighbourhood, with a mix of apartments, offices and commercial spaces. Such a project would cause huge damages to the neighbourhood, in terms of traffic congestion of course, but also regarding the water supply or the sewerage system. It was a legal battle of more than a year, which we managed, on our side, with the volunteer assistance of a lawyer. We invested a lot of our energy and it turned out very posi-



Figure 2. KPF members at local police station meeting to offer support to each other in pandemic crisis
Source: Author

tive! In February, the court has stopped the project³. It is a great victory, but we must remain vigilant.

IQ: After few years of existence, what are the lessons learned? What would you have done differently?

RE: I think this initiative has taught us the power we can have as a collective. Residents must understand that they can make a change if they share the issues they face, if they get to know their neighbours and talk to them. Kilimanians are very proud of their neighbourhood, they do not hesitate to claim that they are a community which owns its evolving existence. This is a very important message to share with people from other places: create a collective and don't be passive. Rather act and create solutions, at your scale, even small, and it will have an impact.

Another lesson learned, and perhaps it is linked to what we could have done differently, is about people empowerment. Empowering people from the very beginning of the initiative, by giving them the tools to develop their own solution, or co-create with them, is crucial. Until now, we had this tendency of doing things for them, finding solutions for their problems. We could have imagined a system of grants to fund Kilimanians' solutions, or even start crowdfunding to finance some of their innovative ideas. We are now in the process of reinventing what is the purpose of the Foundation and how it should interact with the residents. We have realized how creative people are if we give them an environment that enables them to use it and create the living space they want.

⁴ <https://www.the-star.co.ke/counties/2020-02-03-court-blocks-construction-of-35-storey-cytonn-towers/>

Developing Policy for Child Enabling Environments in Kenya

Kristin Swardh, Soraiya R. Shah

Authors' Profile

Soraiya is the Broadcast Manager for Aga Khan University's Graduate School of Media and Communications (GSMC). With a BJourn from Rhodes University & USIU and a PGDip (Hons) from the Sol Plaatje Institute of Rhodes University, Soraiya has worked as a radio presenter, political communications manager and has held a variety of senior marketing roles both in the hospitality and public sector. Prior to joining the GSMC Soraiya owned and operated a consultancy firm specialising in communication & media strategy for corporates and political parties, as well strategic interventions in brand alignment and management.

Kristin Swardh was the project lead for the Child Enabling Environments project at AKU while under fellowship at the East Africa Institute. Kristin has a Bachelor of Social Work degree and has over four years of experience working directly with marginalized populations locally and globally. Her focus in social work practice includes gender-based violence, human rights, and supporting achievements of domestic, political, and social equality.

Kenya is still very much a country ensnared by her colonial legacy. Looking at the layout of Kenya's major cities, it is easy to see that development and infrastructure have not moved beyond colonially demarcated zones, leading to cities, urban spaces and rural-urban infrastructure that is still fragmented, hindering social integration despite rapid growth both in infrastructure and population. These inequalities, and relics of a divisive past, are most apparent in social institutions that are parastatals or fully government owned such as hospitals, public education centres, recreational spaces, etc.

As rapid urbanisation and burgeoning populations begin to challenge the entrenched built-environment, immediate stress-points become apparent. Apart from access to health facilities, the next major issue facing Kenya is access to quality education, not only in terms of curriculum but also facilities, from primary to tertiary.

One of several programme areas the EAI focuses on is Urbanisation and the impact of rapid growth on environments such as infrastructure, socio-economic integration, access etc. While there are a number of factors to consider when looking at these issues, amongst the most pertinent is that of design and inclusivity.

Design of an urban centre not only influences move-

ment, access, and dictates how social interaction happens, but it also means that rights and needs of all persons within society are understood and attended to – which demands inclusivity as cities grow.

As EAI was looking at issues around Urbanisation it became clear to us that public participation, while checked-off a list when city-development decisions are made, were not holistically inclusive. One of the least attended to was the participation of youth and young children in design processes for cities, especially with regards to schools, access to them and their appearance/layouts.



Source: Author

Research shows that the needs of children have been forgotten in the wake of rapid urbanization; with urban design and planning seldom considering them. As a result, urban education spaces (not an isolated area), are not child friendly and leave children exposed to physical and psychosocial harm. In order to assess if our observations were correct the EAI developed a 'Child Enabling Environments' (CEE), component to our Urbanisation programme.

The focus of the CEE initiative was built around the knowledge that children provide valuable insight when information is presented in a meaningful, child-centered way. Allowing for participation prompts their capacity to be authentic participants in planning, development, and implementation processes; leading to better outcomes as they feel included in an environment tailored to them.

While there is a huge amount of literature about improved-spatial changes having positive outcomes on education, currently, there is no research available on this topic from a Kenyan perspective. In order for policy changes or implementations to be made, evidence, grounded within the Kenyan context needs to be captured and the methodologies used within this project are the foundation for this, hoping to be a primary source for data, literature, and methodology for Child Enabling Environments in the Kenyan context.

In order to establish an evidence-informed policy protocol, the project sought specifically to explore and investigate the following:

- To examine the emotive responses of children based on the physical features of their environment.
- To understand “best interests of the child” from the perspective of the children themselves.
- To identify policy recommendations that promote the inclusion of child rights principles (non-discrimination, best interests of the child, the right to life, survival and development, and respect for the views of the child) into existing

governance structures.

- To develop an initial template on best practices and strategies for the implementation of Child Enabling Environments in East African schools.

In designing the study, we decided to use a Case Study method of data collection, to allow us to deepen our understanding of the “how” and the “why” of the contextual situation, through exploring data in a real-life environment. Before we could develop the study in to a multi-faceted study we needed to test our data collection methodologies and evaluate the responses so as to see how to create a framework that could be implemented at a variety of educational institutions to provide sound-evidence for policy.

To gather this our primary data EAI partnered with Milimani Primary School in the Milimani/Kilimani suburb of Nairobi. We received permission from the headmaster to speak collectively to all the classes, to explain the work we were doing, why we were doing it and the outcomes we were hoping for. EAI used a member of the core team from the Institute and hired a local consultant to communicate these ideals in Kiswahili, despite English being the primary language used at the school.

Apart from sharing information with students, staff and faculty, the EAI also had to get permission from parents/guardians of the children so that we could use the data we collected – questionnaires, drawings, verbal interviews etc. ethically. We made the decision to relay any communication in English and Swahili, to ensure that parents/guardians understood the nature of our work, given that this primary collection of data would form the foundation of a much larger study, and therefore it was imperative that there was no fault-finding or discrepancy in data collection.

In order to decide where a spatial change would be most ideal, we mapped the school from its gates, to playgrounds, classrooms etc. Depending on the ages of the children we were speaking to a variety of data collection methods were used, to identify areas along the following six criteria:

1. Liked
2. Disliked
3. Felt safe
4. Felt unsafe
5. Accessible
6. Inaccessible

The reasoning for these 6 criteria was at a very basic level to understand what the students liked and disliked the most, regardless of age or gender, ergo simple and accessible language.

There are roughly 860 students at Milimani Primary School. In order to collect representational data, we randomly selected 6 children from every stream: 3 males and 3 females, to identify areas of the school based on the above 6 criteria. Children, based on their ages, were asked to identify areas of the school with regards to the above criteria as follows:

- **6 – 8 year olds:** walking the school with EAI data collectors and verbally saying/pointing out areas based on the criteria above, placing coloured stickers correlating to the criteria above to identify where they felt what on maps of the school
- **9 - 12 year olds:** walking the school with EAI data collectors and verbally saying/pointing out areas based on the criteria above, drawing and assigning specific colours to areas relative to the 6 criteria,
- **13 – 16 year olds:** walking the school with EAI data collectors and verbally pointing out areas based on the criteria above, based on the above emotive criteria, share written extracts on experiences at the school that evoke those feelings.

Once the data from the streams was collected; the various areas of the schools listed by students were tallied

against the 6 criteria. For example, 'toilets' scored high across the board in the categories of 'unsafe' and 'disliked'. The 'playfield' scored high amongst the boys as 'accessible' but scored high as 'inaccessible' from most of the girls. When asked why girls felt the playground was inaccessible, most of the responses were around boys pushing girls off the field as they played football, because 'football was not for girls'. As the data compilation happened it became apparent that in order for an effective spatial-transformation to take place, the area would have to be:

1. Used by all members of the school regardless of age and gender,
2. Be an area that was frequently used,
3. Be an area that would have impact if transformed i.e. measurable.

Through the data we collected, the places in order of response, for transformation were the toilets, the classrooms and the water fountains for drinking water. How-



Source: Author

ever, in our research it had come to light that brand new bathrooms and water tanks had been donated to the school just four years ago. The bathrooms we saw had sinks missing, no toilets, no toilet paper and had not



Source: Author

been flushed for days due to lack of water, electricity was also unavailable because the school had not paid their bills, which only added to the despair.

The water tanks which had been designed to capture rain-water had been damaged and the catchment pipes were missing. When evaluating whether to do a classroom, we would have had to choose a class or two and this would have not been equitable or accessible to all

and therefore would interfere with measurement of impact. It was therefore decided that the front of the school, a large, dust-in-the-heat/mud-pool-in-the-rain, area that served as an entryway and waiting area would be an ideal space, even though it ranked lower than other areas in order of priority by the 6 criteria.

We gathered quotations to transform the entryway to the school, putting in drainage, overlaying the mud with Cabro (cement bricks), solar lighting and refurbishing the waiting area – a metal shed open from four sides with less than 20 benches to accommodate over 800 students waiting for the school to open, or waiting for pick-up at the end of day.

Now that we have a space identified for change, and we have the permission of the School and the Ministry to transform the space, we just needed to raise the money. Fund-raising as part of a University was not possible and the EAI did not have a budget. So we turned to grants and external donors, who had to not only believe in the principle of spatial-transformation, but also believe that this was an equally important criterion as any other educational output.

It took us four months to find funding and when we did, the funders said that they would be able to raise the money for the spatial change as part of their Christmas CSR, that their staff contributed to. We were delighted; our budget for transformation would be met, we had time to properly write-up our findings, prepare documentation needed for application to conduct case-studies on five other schools and generally get all our ducks in a row for a strong, progressive CEE policy.

As the end of 2019 approached, we worked closely with the organisation that had pledged us the money to ensure that their staff knew what the project was, why we were doing it and how the money was to be used. It would be wonderful to share the story of a transformation and post-transformation evaluation of a space to see if improvements in a common-area of a school does result in any positive educational outcome. Alas.

Our donors, at the end of last year told us that they had

only been able to raise half the money they had initially assured us that we would get. Furthermore, the money was not accessible until the early months of 2020; by which time both our consultant and EAI's staff member would no longer be available. This not only stopped us from moving ahead with the planned transformation in December, during the school holidays, but also meant that moving forward with the project would be much more difficult due to loss of personnel.

Whenever EAI talks of this project, one of the most frequent questions asked is around timelines. It has taken us two years since inception, from conducting a literature review and compiling a needs assessment to the various meetings with Ministry and schools for permission to today. While this timeline often leaves people amazed, the journey has to be understood. Getting to this point, required a number of visits to the school and numerous meetings with both school and Ministry representatives for access to the school and to show that the data we were collecting would be used academically. Apart from these various visits, the initial research, policy evaluations and discussions with NGO's to establish research questions and develop a contextual needs assessment, the lack of personnel and funding means that every step needed to achieve data took time and planning. These issues alongside working to a school timetable and a changing educational board meant that letters, meetings for explanations etc. needed to be recycled.

Despite the lack of complete funding, EAI was able to save some money in the last financial year, which we have funnelled into the CEE project. We were hoping that despite missing the December holidays we would be able to use the Easter holidays to undertake the spatial change at Milimani and start outlining initial policy recommendations – but thanks to Corona, this too is now on hold.

While we know that better, cleaner, environments and inclusivity in design processes, even at a very basic level, result in better educational outcomes in order for Country-wide policy to be up-taken we have to prove that this is evidenced in Kenya too, and not just at one educa-

tional institution but at several. We hope that this year we can finish up the initial case-study so as to garner permission to evaluate the impact of spatial change, as other schools, using government funding are undergoing, it is a race against time, stymied somewhat by Covid-19 but, if we do want to ensure that policy is effective, contextual and relevant, it is only by completing our initial goal of spatial transformation at Milimani that will prove this.

The East Africa Institute ¹(EAI) is part of the Aga Khan University (AKU). EAI's mission is to act as a platform for policy formulation, decision-making, and action in order to address the challenge of, and harnesses the opportunities for adaptive and sustainable social and economic development; while ensuring a resilient environment resource base.

¹ www.aku.edu/eai

IGLUS Quarterly

IGLUS Quarterly is an analytical open access journal dedicated to the analysis of **Governance, Innovation and Performance** in Cities and is edited at École Polytechnic Fédérale de Lausanne (EPFL), Switzerland. IGLUS Quarterly aims to **facilitate knowledge** and **experience sharing** among scholars and practitioners who are interested in the improvement of urban system's performance in terms of the service efficiency, sustainability and resilience.

IGLUS Quarterly applies the highest academic standards to analyze real world initiatives that are dealing with today's urban challenges. It bridges the gap between practitioners and scholars. IGLUS Quarterly therefore adopts a multidisciplinary perspective, simultaneously considering political, economic, social and technological dimensions of urban systems, and with a special focus on how governance affects and is affected by the use of technologies in general, and especially the pervasive application of the ICTs.

iglus.org/quarterly/

IGLUS Executive Master

Our Executive Master in Innovative Governance of Large Urban Systems (IGLUS) responds to today's needs: growing cities evolve into metropolitan areas with their major infrastructures – transport, energy, buildings, water and greens – becoming increasingly interdependent, not the least because of the pervasive nature of the information and communication technologies. Managers and policy-makers concerned with such large urban infrastructure systems not only need to learn how to operate them, but must also become experts in maintaining, planning, and financing them in order to better respond to changing customer demand and evolving citizen needs. In short, the complexity of cities faced with ever more pressing challenges requires skills and expertise that our Executive Master's program offers.

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