Institute of
Economic Affairs

Nairobi City Scenarios

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Nairobi

City

Scenarios

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Preface

African urban areas and especially cities have been growing rapidly in the recent years. Urbanization in Africa is increasingly associated with the high economic growth that has been observed in the last decades. Some of the factors re¬sponsible for the urbanization include population dynamics, economic growth, increasing densities in rural centers, as well as the growth of mega cities. With the opportunities of urbanization, there are also challenges in the de¬velopment and management of these cities. Some of these include increase in associated crime, provision of social services, sustainable economic development, housing development, urban governance, environmental management, climate change adaptation, mitigation and disaster risk reduction. The challenge involves dealing with the devel¬opment and infrastructure deficit, in addition to required adaption to and mitigation of cli¬mate change.

Nairobi is among the cities of the continent of Africa that is growing rapidly partly due to opportunities that it provides for Kenyans migrating from the rural areas and inhabitants from other countries of Africa. Nairobi is home to major organizations such as the United Nations headquarters. Its central location in the continent Africa and proximity to the coastal town of Mombasa not to mention its conducive climate makes it a favourite for many. Nairobi contributes about 60% of Kenya's Gross Domestic Product.

This booklet by the Institute of Economic Affairs (IEA-Kenya) on the Nairobi 2040 Scenarios captures the process that resulted in the scenarios developed by the Institute of Economic Affairs through its Futures Programme in collaboration with the Rockefeller Foundation. The stories bring out alternatives futures for this fast growing city. Planners and policy makers can greatly benefit from these possible scenarios as they work towards policies that will contribute to a desirable, more habitable and sustainable city.

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Essay Competition
Socrates Luseka, Joshua Nyantika and George Abwajo

1.0 What are Scenarios?

Scenarios are plausible stories about the future. They are not predictions and they may or may not happen. In a rapidly changing world, individuals are contantly exposed to uncertainties with regards to their future, and thinking about the future helps create coping strategies or mechanisms.

Scenarios help us do this by analysing trends, drivers and discussing critical uncertainties about the future and imagining alternative solutions to future challenges. The emphasis is on using the information from the scenarios building process to put together a winning strategy, since the focus in on the quality of strategies and successes of decisions made, rather than on the future or stories created.

2.0 About IEA and Scenarios Work

The Institute of Economic Affairs (IEA-Kenya) through the Futures programme seeks to facilitate increased utilization of futures methodologies in research and policy analysis. The IEA has been has used the scenarios building methodology to conduct research and analysis on various issues. The scenarios projects are:
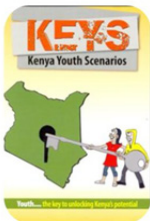
3.0 Nairobi City Scenarios

The Nairobi City Scenarios 2040 is a part of a worldwide discussion dubbed Informal City Dialogues, which forms part of the Rockefeller Foundation's centennial celebrations under the theme "Innovation for the next 100 years".

The Foundation commissioned scenarios dialogues towards innovation in the informal spaces of six cities i.e. Lima, Bangkok, Chennai, Accra, Manila and Nairobi. The dialogues sought to "understand the relationship between the formal and informal aspects in our cities and to envision a different, more inclusive and resilient future". The primary goal of the dialogues was to "Surface and encourage innovations that will help cities build on the strengths of the informal city to achieve a more inclusive and resilient future".

The project was designed to include representative voices from both the formal and informal sectors of the city of Nairobi, and was hosted by the Institute of Economic Affairs in partnership with Forum for the Future.

[1]As of 2008, for the first time in human history, more than half of the world's populations, 3.3 billion people, were living in urban areas. Projections indicate that by 2030, 80% of the world's population, nearly four billion people will be living in cities, and that one out of every three people will live in a slum. Nearly 1 billion people hail from the informal sector today, and approximately 85% of all future employment opportunities around the world will be created in the informal economy.

Among the 6 participating cities, excluding Accra which did not rank in the top 120, Nairobi ranks last (115 out of 120) with regards to its general global city competeveness. Bangkok heads the list at position 61 followed by Lima at 77, Manila at 85 and Chennai at position 105.
The World Bank's "Ease of Doing Business Report" ranks Nairobi at position 13 out of 13 urban areas in Kenya where it ranks 5th with regards to ease of starting business, 11th in the ease in dealing with construction

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[1]*Forum for the Future, 2013. Informal City Dialogues: The 2040 Challenge Briefing Paper*

permits, position 12 in the processes for registering property and 13th in its efforts in enforcing contracts.

[2]With its largest proportion of the population (68.5%) aged between 15-64 years, unemployment is a real concern. [3]The informal sector has been growing at an average of 17.2% per annum, compared to the formal sector's 2.23%, despite the challenging business conditions highlighted above.

[4]In Kenya, many young people move to urban areas in search of better opportunities, concentrating in Nairobi and Mombasa. By 2006, Nairobi employed 25% of Kenyans and 43% of the country's urban workers and it generated over 45% of GDP. However, over 60% of its population lived in slums. This continued influx of people into the city has increased the strain for jobs, impacted provision of public goods, education, utilities, housing and infrastructure among others. More often than not, where the public and formal systems have failed, the informal has come forth as better alternative, especially for the poor and vulnerable in the city.

This exposes them to shocks and risks increasing their vulnerability. With these trends in mind, it is prudent to engage in conversations around urban informality and what it portends especially to the poor and most vulnerable residents of Nairobi. Similarly, the unique position of Nairobi as the capital city of Kenya and a city county, and the challenges that come with this makes the discussions timely and vital for the country's development and national discourse on urbanization.

Nairobi City Scenarios describe the journey into probable futures of the residents and of the City. It involves a critical look at the present followed by an analysis of the past to identify trends and drivers that will influence their future. The end is a summary of their imagination peppered with facts and intuitive thoughts of the events, characters innovations and situations that create Nairobi in 2040.

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[2]*KNBS,2009. Kenya National Population Census of 2009 Basic Report. Nairobi. KNBS*

[3]*Institute of Economic Affairs and Friedrich Ebert Stiftung, 2010.Youth Fact Book*

[4] *United Nations Human Settlement Programme (UNHABITAT), 2006. Nairobi Urban Sector Profile*

The Organizing Question was:

i) How will Nairobi look like in 2040?

The output was the four scenarios stories depicting the future of Nairobi in 2040.

ii) What innovations and ideas need to be pursued in the informal space to create a city where everyone enjoys high quality of life? The output was one innovation that would be funded to a tune of USD 100,000.

4.0 The Journey

The Nairobi City scenarios were a product of the following activities:

- Pre-Workshop Activities
- Scenarios Building Workshop
- Innovations Workshop
- Implementation of the Innovation
- Scenarios Dissemination

4.1 Pre-Workshop Activities

These activities were meant to initiate conversations on the future of the City of Nairobi.

Pre – Workshop Activities

1. City Fact Sheets
2. Identifying Relevant Drivers
3. Think Piece / Systems Diagram
4. Essay Competition
5. Street Dialogues, Walkabouts, Informal Meetings
6. Round Table Meetings

i) Nairobi City Fact Sheets

A fact sheet was prepared covering the main social, political, demographic and economic data on Nairobi. The participants were also given a summary of the 'Doing Business Report' for Nairobi (by the World Bank), which had data on the ease of doing business in Nairobi. These helped them paint the current picture of the City of Nairobi.
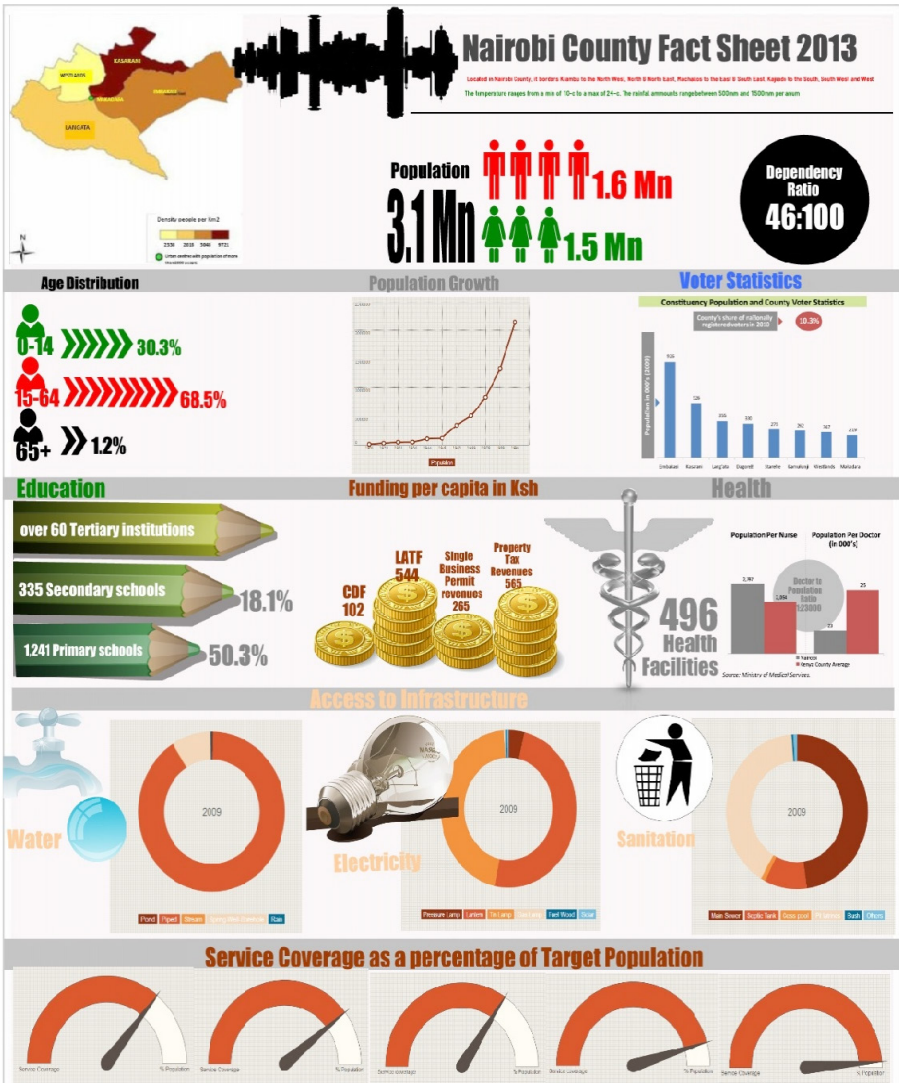
ii) General and Relevant Driving Forces

The Forum for the Future team prepared a briefing paper exploring:
1. What the term "informal city" meant and a framework for understanding the dynamic relationship between formal and informal systems;

2. Key dimensions of urban informality including the key actors, activities, and respective outcomes; and

3. The external drivers of change that will shape the future of cities and the role of urban informality in the Global South.

This provided a good background and catalyst for the discussions on the relevant driving forces during the scenarios building workshop.
(found in www.ieakenya.or.ke)

iii) Essay Competition
In preparation for constituting a diverse team of participants, the IEA-Kenya held an essay competition, open to people below the age of 25 years. The essays were to answer the question: 'What will Nairobi look like in 2040?' and were to provide the catalyst for conservations around the future of Nairobi.

These are the essays we receieved:
• In the quest for a Better Nairobi by Socrates Luseka
• Living my vision by Joshua Nyantika
• Nairobi City in 2040 by George Abwajo

iv) Nairobi Street Dialogues, Walk-abouts and Informal Meetings
In order to gain a better appreciation of the informal aspects of the city (ways of earning a living, the social interactions, and solutions to its problems) and to understand the interplay between the formal and informal sectors of the city, the project staff walked round the city and held conversations with a variety of people representing various facets of the city. This process also helped with the identification of participants for the workshops.

v) Pre – Workshop Round Table Meetings

Four roundtable meetings were organized under the ICT and Creative's, Entrepreneurship, Socio-Economic, Media and Governance Sectors, with the following aims:
- Introduce the project to various stakeholders
- Gain an understanding of the interactions between the formal and informal sectors selected

Below is a think piece on the consumptions relationships in Nairobi

	Informal	Straddle	Formal
Individual	• Labour - domestic work • Hawkers & traders • Housing • Education • Quacks • Utilities • Groceries • Furniture • Construction	• Transport • Savings services • Loans • Security • Entertainment	• Retail goods • Financial services • Micro-loans • Housing • Transport • Public services • Roads
Firms	• Courier • Labour • Repairs Services		• Cleaning & supplies • Professional services • Labour
Government	• Labour • SME	• Taxes • Fees & levies • Housing	• Business services • PPPs & Investments • Bonds & Bills

	Informal	Straddle	Formal
Individual	• Labour services • Agriculture products	• Business services • Entertainment • Labour • Security • Homecare	• Retail services • Entertainment
Firms	• Inputs • Consumer goods • Finacial Services	• Communication services • Financial services	• Cleaning & supplies • Professional services • Labour
Government	• SME Business premises	• Infrastructure • Utilities • Law & order • Health services • Education	• Utilities • Garbage & refuse collection • Registration services

Samples of the Highlights from the Roundtables

Creative Sector

Relationship Between the Formal and Informal

- Formal art practice in Nairobi happens in conventional spaces and auditoria including the Kenya Cultural Centre, The Phoenix Theatre, The Go Down Art Centre, Goethe Institute, Brookhouse Theatre.
- Informally, arts happen in places such as streets, open arenas, dumpsites, community centres arts/curio and framing shops and private homes.
- Formal and informal realms in the arts complement and even contradict each other
- Many practicing visual artists In Kenya today are self taught, honing their skills through workshops, apprenticeship and residencies (in-country and out-of-country)
- Some artists have trained at local arts colleges like Buru Buru Institute of Fine Arts or at the universities
- Artists feed into the formal pattern/realms through presentations of their work in formal and conventional spaces and structures.

Drivers

- Unemployment - art provides a means of engagement to many unemployed youth
- Untapped opportunities - increasingly, the artistic space is expanding also thanks to devolution providing artistes with opportunities to explore and expand into hitherto uncharted territories and places
- Increasing training opportunities - more institutions of higher learning now have arts faculties that offer programs in theatre and film productions, media studies, fine arts and visual arts e.g. University of Nairobi and Moi University
- Untapped market - Whereas the uptake of arts in the informal spaces is high due to low production costs, charges and high population, there's a large and untapped middle and upper class market.
- Enabling legislations and policies

Role of Innovation in Shaping the Future

- A symbiotic relationship exists between the arts and the environment. The arts can preserve and conserve the environment, beautify the city and put a smile on the city dwellers.

- Monuments created out of scrap metal i.e. Kimathi's and Mboya's monuments on Kimathi Street and Moi Avenue respectively have added glamour to the city

Looking Ahead The Sectors in 2040

- The artists stake their claim in the development of the city
- Art is mainstreamed in the educational curriculum
- City planning is refocused in a way that involve the arts in the planning and environmental conservation programmes
- Creative partnerships between the artistes, the private sector and city planners are established and explored
- Need to develop more spaces for artistic engagement
- Intellectual property rights systems are established
- Artistes are encouraged to increase their visibility
- A role of honours is created to celebrate art and artists

Entrepreneurship Sector

Relationship Between the Formal and Informal

- Informal businesses need formal structures to survive like licensing
- Informal businesses need the formal sector and vice versa e.g. both the formal and informal parts of the transport sector reinforce and complement each other
- But the informal also have their own rules that guide their operations even though informally. Informality is not a synonym for chaos.
- Also, the informal sector can influence systems in the formal realm e.g. in banking like Equity bank, Iko Toilet
- Both conflict at the level of remuneration, time spent, code of conduct
- The formal will always seek to force the informal to conform to formality yet, more often than not; the formal players are the main consumers of products from the informal space.
- Innovation in the informal systems could influence legal regimes and systems
- Although the formal cannot survive without the informal, the informal can easily do without the formal

Drivers

- Supply Factors
- Micro-finance institutions which provide credit facilities
- Revised and more inclusive policies
- Liberalization and opening up of the banking sector
- Entrance of new non state actors and players who have helped to incubate ideas and in training
- Existing opportunities in training to improve capacity of the informal players e.g. KEPSA, IEA,
- Increased availability of information
- Opportunities for invention and innovation
- Unemployment
- Demand Factors
- Export market opportunities
- Authenticity and genuineness of products - people are increasingly buying Kenyan
- Other Drivers
- Housing - it takes a lot of capital to secure affordable housing or business premises
- New frontiers of trade
- Good Policy frameworks

Role of Innovation in Shaping the Future

- Informal business will shape the future of a city by absorbing the critical mass of unemployed people directly and indirectly-it has a multiplicity effect

- It will contribute to shaping policy discussions

- Innovations will help promote social entrepreneurship and systems

Looking Ahead The Sectors in 2040

- Improved and affordable housing or business premises
- Improved standards of living
- Informal will formalize upwards to 90%
- Improved revenue collection...increased taxation
- Improved infrastructure
- Better food production and hence improved food security due to commercialization
- Unstructured but vibrant informal sector where formality will change to informality like it has turned out in Brazil
- Improved governance will improve Nairobi
- A changed mind-set towards more 'Kenyanness' - an enlightened city population with an appetite for locally made and unique products
- A reduced population due to the cost of living in the city

4.2 Scenarios Building

A team of 30 young people were selected from the various interactions during the pre-workshop meetings to participate in the scenarios building and innovations workshop. They comprised a diverse group of individuals aged between 18 to 50 years, drawn from various sectors and representing the formal and informal sectors of the city. The expected output would be one innovation that would be funded by the Rockefeller foundation to a tune of USD 100,000.

The process
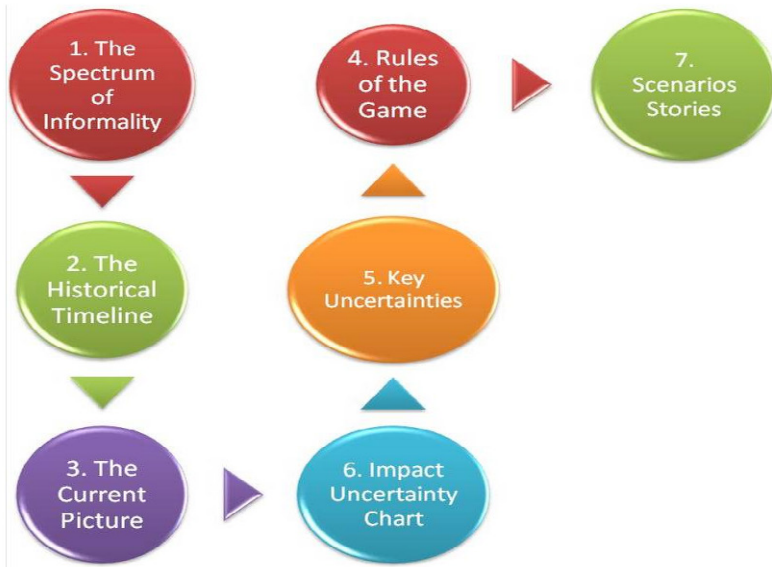
4.2.1 Interplay Between the Formal and Informal Aspects of the City

-The formal and the informal have to work together
-The informal underpins Nairobi's economy and can transform the formal.
-There is no clear separation between the formal and the informal
-It is challenging to define the informal and formal clearly
-The informal community can be or is like a guarded community. Individuals from the formal sector experience some difficulty penetrating the informal sector and in some instances have to use go –betweens or middlemen
-Informality does not imply impunity or indiscipline
- nformal is not always for the poor, rather, it is an accepted way of life
-There is an aspiration for a certain level of formality among people working in the informal sectors or an "affinity for formality"
- Nairobi is an informal city
- Nairobi is not the space but it is the people

4.2.2 Historical Timeline

A tree does not grow without the roots and scenarios stories cannot be built without taking a critical look at the past so as to map events and identify patterns of behavior (continuing or emerging trends) and structural or systemic changes. In this case, the rooting exercise involved building a timeline of Nairobi's history going back 60 years, twice as long the time

- Radio as a means of communication (sending greetings or making funeral announcements) has stood the test of time and is still in prominent use today.
- There was a boom in technology after the 1990's.
- Politics seemed to define the lifestyle in Nairobi.
- There is more democratic space now as compared to the past.
- The participants had little historical knowledge with regards to what happened in the city in the periods before 1980.
- Service provision in the public sector (like housing and transport) seemed to work in the 60's-80's but began deteriorating in the 90's. It was argued that there was a small population then. Others argued that before 1963 Nairobi was a colonial town which was rigidly controlled hence the illusion of better services and order.
- The effect of Structural Adjustments Programmes (SAP) was evident in the timeline
- Throughout Kenya's history, there has been a struggle and desire for change with epochs such as the attempted coup in the 1980's, multipartism in the 1990s, 'second liberation' in 2002 to date
- Major investments in various sectors of the economy had been made in the last 10 years
- There was a lot of privatization in the 1990s
- Nairobi had fallen behind in the curve of urbanization.
- The youth in the city were not homogenous with informal city dwellings fragmented along ethnic lines. There has also been an explosion of youth culture in the last 10 years and an increased disconnect between the youth and the older generation
- Innovations within the formal sector are appreciated and or celebrated in mainstream media, a determinist for the society, while those in the informal sector have been largely ignored
- The plans Kenya had on attaining independence were adopted by Singapore and they worked, but the same cannot be said for Kenya. Is it because the planning in 1940 and 1973 failed to capture the residents' aspirations for the future and if so, would the new plans face a similar fate?
- Rural-urban migration has been constant, associated with search for opportunity
- Insecurity has been constant with threats from organized gangs like

Mungiki, Al Shabaab, political violence like the 2007 post poll chaos etc.

- Multi-cultural interactions were present over the years resulting in the creation of an urban culture unlike any other in the countryside.
- Informal sector had changed over time e.g. informal or non-formal schools had been recognized by the government meaning they have access to fund that enable them purchase teaching and learning resources
- Artisans were still using 1970 equipment (outdated equipment) which affected their work
- Nairobi has always been and is still is the seat of the executive, judiciary and legislature (even with devolved governance) as well as headquarters to several firms.
- Nairobi is a regional hub, its population is growing, the economic activities and the informal sectors are growing.
- There had been an NGO boom in response to strategic adjustments programs, liberalizations of the registration processes and an expansion of democratic space among other reasons.
- There had also been an expansion of media industry. In the Pre 1990's, media was controlled by the state. Technology has also experienced exponential growth.
- The youth were not only keen about getting formal jobs but also improving their ability to make money
- Fashion cycles or basic concepts keep being repeated e.g. platform shoes and minis or sandak and bell bottom trousers came back as flats, miniskirts and hipsters. The marketing and market has evolved with time.
- Racial inequality in the 1960's and 70's as enforced by colonialism has currently, morphed into socio-economic inequality was growing and social mobility is decreasing.
- Nairobi's ability to be resilient amidst shocks like 1998 bomb blast, the Sinai fire tragedy among others, had improved with time.

4.2.3 The Current Picture

Scenarios stories about the future are like maps describing the journey to the future. A map can be misleading if we do not know where we are standing when we set off on a journey. The knowledge of where we are standing at the beginning of the journey is the 'Picture of Now'. This involved group discussion, analyses and brainstorming sessions on Nairobi's present face, context and challenges. Nairobi was described as:

-Inspirational - people are always innovative
-A bit messy and has a 'Poo fixation'
-It is good if you have money
-It is resilient
-Creativity hub
-Kibera is a microcosm
-The pace of life is very fast
-A contradiction - several worlds in one
-A young city
-Morals and values keep evolving – defined by age or class?
-Problem rich environment
-Seriously underdeveloped
-Survivalist tendencies – short term visions and innovations
-60% live in the informal world
-Outsider perspective – happy place, religious place, passionate place
-Unique – only city with a national park a
-Concrete jungle – the CBD
-Need to think about sustainable transportation
-People come to Nairobi to look for opportunities
-Diminished forest cover but there are increased efforts towards forest protection e.g. the existance of a policy to maintain 10% forest cover
-Nairobi river basin is an environmental problem – informal sector contributes to the pollution
-Level of lead is alarming thanks to old cars
-Unplanned development - housing units in low or middle income estates
-High demand for water/water security - New craze for digging borehole as the alternative/primary source of water contributing to the diminishing water table.

[5] *Institute of Economic Affairs. 2008. Thinking Long-Term, Acting Today! The art of scenarios building (Issue 8)*

4.2.4 Rules of the Game - Drivers

Driving forces are factors that shape the future. They are those underlying and impacting factors that set the pattern of events and determine the outcomes of how the future of Nairobi will evolve over the next 30 years. Some of them can be reasonably predicted (high level of certainty) while others can't. In nearly all cases, these factors are interconnected and have an effect on one other. They form the rules of the game. To formulate a useful mental framework of alternative plausible futures, it is essential to distinguish certainties from uncertainties.

Driving forces typically include the state of the economy, political decisions, social issues, emerging trends, demographic realities, technological drivers, the state of the natural environment, etc. These drivers change over time and sometimes the rules of the game can be 'rewritten' to gain competitive advantage. Also note that some rules are more important than others. A PESTLE analysis was conducted in this case and the drivers were listed as follows:

Political
- Political stability
- Regional and intergovernmental (county) relationships
- Population "control" – Kenya's population is growing too quickly and spilling into cities. There are ongoing conversations around family planning and government regulation of family sizes
- County government performance
- Political leadership
- Implementation of the constitution
- Other urban development
- Political Parties system – charismatic rather than ideology based
- Regional stability
- Self organizing mechanisms – people organize around issues and the middle class has been missing in action
- The role of the middle class.

Environmental

- Nairobi's natural resources are diminishing more boreholes are being sunk and they are deeper due to lower water tables
- Nairobi river basin is degraded and polluted
- The car fleets are growing older and larger and it contributes to air pollution
- Increased incidences of flooding
- Climate's volatility and unpredictability will have a great impact - currently Nairobi is experiencing heat waves and heavier rain National Park – human wildlife conflict, there is need for a cost benefit analysis of the park.
- Smart buildings
- Sharing natural resources (Park, water, Forest)
- Environmental futures should shape the law
- Green economy (carbon trading,   renewable energy, recycling/waste management ecosystem services)
- Awareness and attitudinal change with regards to environmental issues
- International agreements
- Proper environmental and waste management regulation, policy (legal frameworks) and enforcement. Discard the old inherited frameworks being used currently.
- Nairobi river basin – health hazard and effects of unhealthy population on GDP

Social

- Cultural identity – uniquely Kenyan vs. 'Westernization'
- Gender inequality
- Cooperative action
- Democratization of production (music & media, products)
- Language – English as a language   provided opportunity for formal employment.

- There is a strong youth culture and a market for the same – this is a shaping force. However the youth are not homogenous
- Radio in the vernacular language was attracting advertising
- There is social division. Nairobi is fragmented both in class and language
- Moral values and religion
- The education system
- Nairobi centric education is needed because Nairobi has specific challenges - needs out of the box thinking
- Credentials and a certificate are deemed very important –"credentialization". There is a need for the deconstruction and reconstruction of the education system and to embrace E- learning and MOOCs (Massive Open Online Courses)

Technology

- Can play a role in decongesting the city
- ICT is an enabler, it increases productivity and efficiency
- Basic transport technology such as traffic lights need to be in force Technology is getting cheaper (smart phones)

- Technology can help deliver services in areas like health and education or though innovations like Mpesa
- Cybercrime & Privacy issues
- Technology has enabled collaboration
- New ways of manufacturing and constructing (cheaper, more creative, smarter, environmentally friendly) green buildings and affordable housing
- Eliminating corruption
- Enhanced access to information and transparency - information should be properly analyzed for use during planning
- A two edged sword on creative industries e.g. aids in piracy
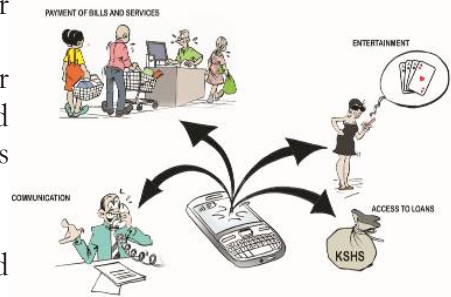
[7] Sheng is street slang that mixes Swahili and English.

- Agricultural technology
- Appropriate technologies – alternative technology – waste
- Urban management and planning – GIS, GPRS

Legislative
- Intellectual property (which has been part of an unfair international system) rights and patenting
- The frameworks are a hybrid of the formal and the informal
- Appropriate laws and policies to facilitate the frameworks
- Policy on donor or investor relations
- Global regulations and international laws
- Access and cost of justice – night courts, commissioners of assize
- East Africa Integration
- Urban zoning and planning

Economy
- Employment levels
- Level of innovation
- Openness of market
- Levels of public, private and informal investment
- Affordability of capital
- Quality of infrastructure (roads, water, electricity, intimate)
- Financial literacy
- Global and regional growth
- Global economic integration
- Chinese economy – size and nature
- Rural Urban Migration
- Effects of decentralization
- Economic activity in outskirts of Nairobi
- Ease of starting and doing business
- Expansion of taxation pool – county governance
- Creative and informal economy
- Knowledge economy
- Competitive city
- Regulations – conducive environment for SMEs to contribute to local economy

- Donor funding plays a core role
- Diversification of the economy
- Unequal economy
- Financial hub – great reliance on FDI
- Oil Dependence and cost of energy
- Industrialization policy/modernization – will Nairobi be a net importer or consumer – counties and abroad
- Public sector wages – Greece's Story
- ICC trials and sanctions threats – Iran's story
- Events and Nairobi's resilience

4.2.5 Key Uncertainities

Key uncertainties are the driving forces that that one cannot accurately predict how they will play out in the future but either way, will have a great impact. This makes them vital for developing a better understanding of how the future might unfol. They include risks, possible trend breakers and wild cards. The key uncertainties for the future of Nairobi were listed as follows:

Scarce natural resources e.g dinimishing parks, lower water tables (digging boreholes deeper) Cost of living – housing bubble
- Healthcare
- Education
- Climate change impacts

- Safety and security
- Inequality
- Epidemics
- High levels of unemployment
- Food system
- Extreme poverty
- Nature social structures like the family,church, values, drug use and

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abuse
- Organized crime – gangs and militia
- Creativity - Innovation - technology
- move from techno trance (technology as solution) to innovation (new ideas)
- Discrimination - Ethnicity versus meritocracy/cosmopolitanism
- Dignified human development/ quality of life
- GoodGovernance and Leadership
- Land tenure
- Citizenship – classes, interests
- Competitiveness
- Resilient infrastructure
- Land use
- Energy (includes oil)
- Caring Citizens
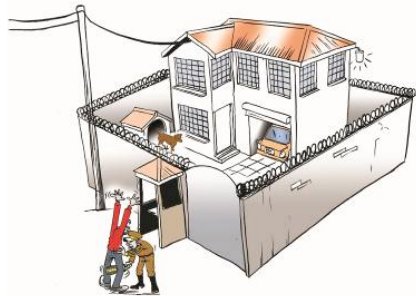
4.2.6 Impact Uncertainty Chart

All the key uncertainties are plotted on an 'Impact / Uncertainty chart' in order to prioritize those uncertainties that the participants have the least knowledge about (those that are least predictable) but will have the greatest impact on how the future of Nairobi may evolve over the next 30 years.

High uncertainty should not be construed to mean high improbability. It means having little knowledge or no clue of how something may pan out

Impact/Uncertainty chart also clearly shows how key issues are related to, and interconnected. It also acts as a radar screen (and a sort of system map) on which Nairobi actors can monitor key uncertainties and their movement over time, thereby getting a better idea of the unfolding future so that they can respond more strategically and more proactively.
After mapping the drivers in the uncertainty chart, two drivers i.e. the

ones with the highest levels of uncertainty and impact are selected and are used to create the game board or to distinguish one scenario from the other.

The graph above (on the right) illustrates how the key uncertainties were graded and how the 2 final drivers for the game board were arrived at. These are *nature of citizenry* and the *nature of governance in Nairobi*.
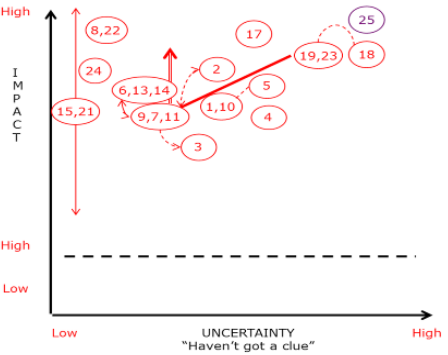
The opposite extremes for each of the 2 drivers were: Governance - highly competent county versus failed county; and Citizens – caring and inclusive vs. indifferent subjects.

4.2.7 Scenarios Stories

Nairobi in 2040 comes about as the result of interactions between two uncertainties – the nature of county governance and the nature of citizenry in the city.

Nature of Governance

Governance is the process of decision making and the process by which the decisions are implemented or not implemented. Governance is what determines the destiny of nations and peoples. Kenya's system of governance as envisioned in the Constitution of Kenya 2010 is founded upon the concept of devolution. In Kenya, there two levels of government: the national and the 47 county governments. Both levels have distinct functions but are also interdependent and operate on a basis of consensus and cooperation. Nairobi is one of the 47 counties but is unique, being the capital city of Kenya.

Governance in this case is conceptualized as a key role played by the county government, both the elected and appointed officials. The success of the county depends on the type of representation, interests of the

leaders (elected and appointed), nature of decision making process in the scenarios stories and the quality of decisions made. This is what results in the failed or successful county i.e. Nairobi City.

The nature of the Citizenry.

Citizens have roles and responsibilities. The manner in which they go about fulfilling these is one of the things that will determine the future of Nairobi city. This will be determined by their influence and level of participation in the affairs of the city. This will also be influenced by their individual perceptions or mindsets, beliefs, values, identities, skills and knowledge.

A possible future for Nairobi could be on with residents who care about their city and actively execute their roles and responsibility towards the betterment of the city or a more inclusive city by sometimes going an extra mile to help the poor and most vulnerable in society or to step in where systems have failed. To them, Nairobi city is a home. The flip side could be residents who are less interested in creating a sense of ownership of the city. They will give to Caesar what belongs to Caesar and continue with life so long as nothing interferes with their private space. They are less concerned about inequalities and the welfare of the poor and most vulnerable in the city. To them, Nairobi city is a space where they earn a living and reside.

The "county competence" and "nature of citizenship" axes could be somewhat related with the supposition that a more efficient, more equitable, better coping county could help increase levels of social trust and cohesion, ultimately leading to more caring citizens that are inclusive. It is in reflecting on these two extremes that the four scenarios of Nairobi in 2040 were generated. They are: Najivunia, Bonoko, Vulture and Big Brother Cities.

Najivunia City; a Nairobi city that has highly competent and caring citizens who include others (Najuvunia is Swahili for 'I take pride in')
Bonoko City; a Nairobi city that has failed, but with caring citizens who include others (Bonoko is a nickname given to an ordinary Kenyan who

spoke out when law officers planted a bonoko (slang for a fake gun) on the body of an innocent street vendor)

Vulture City; a Nairobi that has a failed county and indifferent subjects who exclude others, and

Big Brother City; a Nairobi that has highly competent county but indifferent subjects who exclude others.

Nairobi City Scenarios Game Board
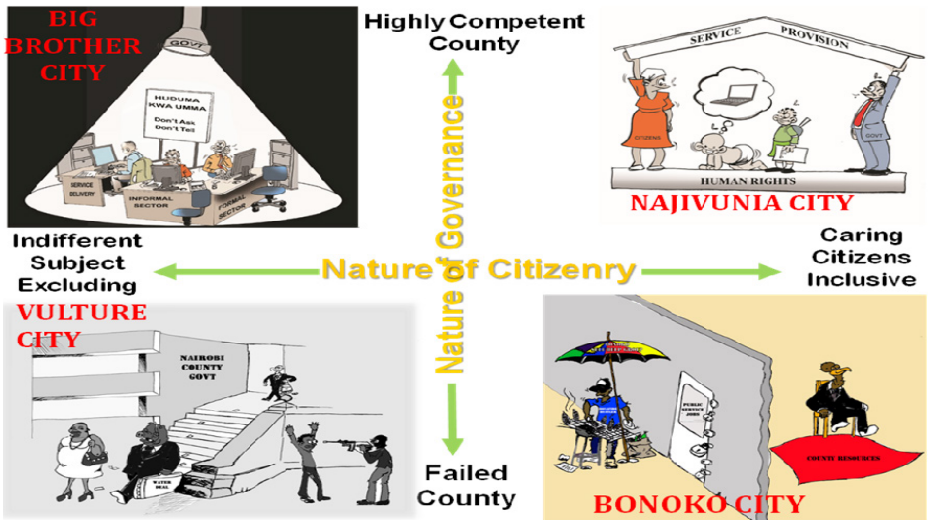
4.2.7.1 Najivunia City

"Najivunia" is a Swahili name meaning, "I am proud of or taking pride in". It reflects a city where many are proud to be part of and work inclusively to ensure all people enjoy their life in the city. This is a story of a city with a highly competent county government and caring and inclusive citizens. There is freedom of speech. It has quality and affordable healthcare where the government and the people share costs to keep it running. The middle class are active and keep fighting for their rights and other people's

rights. The people feel a sense of civic duty and the government actively engages citizens and consults all stakeholders in its policy making and implementation. When the public services cannot meet the demand, the people come together to fill that gap.

The infrastructure is expansive and sufficient for development. The cost of living is high. There is increased focus on the climate as evidenced by the numerous studies on climate change, adaptations, and responses funded by the business community.

The result is abundant knowledge and capacity on handling climate change including the development of smart buildings that generate their own energy. Service provision is efficient. Population settlement is denser but well organized. People freely exercise freely their right to own land. Land ownership has become less of an issue because of increased trust in government to properly plan for and use land for the common good.

There is good policy on land tenure that has seen [most of] slums upgraded into better low income housing, and land is owned by the people who live on it. Laws to regulate how much land one owns are enforced and government has bought back extra land. Though inequality still exists, there are controls that have ensured that the gap between the rich and the poor narrows and there are a lot of self employment opportunities. Small and Medium Enterprises support the economy and are protected by the government. This creates an atmosphere for creativity, innovation and competition. There are instances of protectionism but this is to the extent that local businesses are not disadvantaged by foreign ones. The EAC still exists but there is tension with regards to membership and level of engagement – purely economic or political. Kenya is also a very strong player in the regional community (driving force of the union) and it dominance also contributes to the tensions.

The city has renewable energy sources with investments in solar energy

and geothermal energy. Fossil fuel is used as an alternative source for volume demands with very efficient manufacturing systems. Water is obtained from strategic reservoirs and sinking of boreholes ceases. The city also recycles most of its water. The national park still exists and the animal migratory corridors and the forests are well protected. The Nairobi River is rehabilitated and protected, providing a conducive environment for fishing and water sports.

The city pays other counties to ensure they keep the river clean from source. Security is assured in the city with proper lighting and effective use of surveillance cameras. There is less crime due to decreasing inequality. Heightened citizen action means that communities help each other. The city's competitive edge is sharpened through application of a multiplicity of skills. This is supported by a twenty-four hour economy. There is cheap capital available for investors and this is corroborated by an investment friendly environment.

Increased development in technology makes the city a technological hub. Collaborations make some informal systems more powerful, such as those in SME and technology. The city has equal opportunities and as a result a female governor is in power. The creative industry is more formalized thus better organized with designated spaces/places for business and easy licensing procedures. The formal has opened up to the informal, for instance street vendors are allowed to sell their wares in the city but with clear regulations. Life is generally optimistic but not utopian. The Journey to the current picture of Najivunia city has been full of challenges but the outcome is something that the residents are proud to be part of.

4.2.7.2 Bonoko City

The city, Bonoko, is named after an incident where security agents planted a gun (Bonoko) on an innocent trader and executed him in cold blood. A man who saw the whole incident was able to corroborate that the trader was innocent, earning himself the name Bonoko. He symbolizes a caring citizenry that stands in the gap of ineffective leadership and systems. This city is for the organized. Cartels, investors and the corporate hold

the government hostage to advance their own interests. The government cannot cope with the high demand for service provision due to the high population. It also lacks the will and capacity to expand its resource base. As a result, the residents turn survivalists.

Informality is the way of life in this city. Residents resort to self organization to provide the services needed. The government does not prioritize on security so the citizenry either contract private firms, employ multi-level security systems in their gated communities, resort to community policing or the youth in informal settlements provide security at a fee. The residents feel safe.

The residents are diverse but certain traits cut across like the appetite for unique yet affordable products and services, efficiency and value for money. The youth are innovative and want instant gratification. They prefer flexible working hours and majority hold at least two jobs. The informal sector is no longer seen as temporary employment for new entrants awaiting formal jobs or a transitory stop for the retrenched or the retirees.
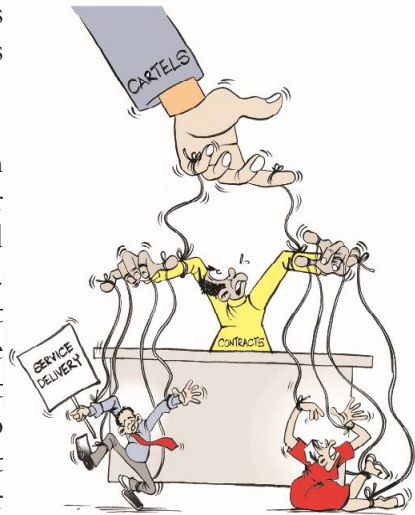
It is now a preferred choice as it offers flexibility and high returns. Goods and services provided offer value for money in most cases, diversity, quality and better profit margins especially for the self-employed. The number of people living below a dollar a day is at its lowest since independence. The number of millionaires is on the increase.

Excessive regulation of the market makes business formalization difficult and expensive. Thanks to technology, businesses operate efficiently and most of them remain small in terms of staffing. There is a symbiotic relationship between the formal and the informal sector, where the informal sees the formal as a market for creative products while the formal

sees the informal as a distribution channel.

Communication between the government and the citizenry is continuously frustrated by a cabal comprising of the elite corporations and individuals. Government plans are weak or non-existent in some sectors. The systems are so rigid and do not allow for adequate stakeholder involvement. As a result there is a disconnect between the citizenry and the leadership of the city. Ad hoc contracting leads to ghost or incomplete projects. Public services provision is privatized on the premise of increased efficiency but those tasked do not deliver.

Corruption is growing by the day. The informal sector has grown tremendously but there are huge losses in revenue, attributed to the high levels of informality, and the informal sector is seen as the enemy of development and is "fought" with regulations and restrictions but its growth continues.

More people fail to pay taxes because they do not receive commensurate services. The leadership engages in beautification projects that see the demolition of informal structures housing businesses in the Central Business District (CBD) and its environs, forcing entrepreneurs to relocate. The "hide and seek" game between the city council officer, police officers and the traders is a common sight in the CBD. The government ignores the markets put up by informal traders, leading to congestion and pollution. Despite these challenges, the residents flock these areas in search of goods and services.

Residents of Bonoko City know their rights and flock the courts to seek justice. The courts get overwhelmed. Life in the City becomes difficult by the day. Public protests are a norm in Bonoko City. There is a failed transport system and a plan to invest in mass transport is predicated on regulations that favour investors with a large capital base.

The poor turn to matatus (14 seater vans used for public transport), a few form cooperatives and invest in buses; others opt to carpool while some prefer to buy personal cars which are old though affordable. Land ownership is a nightmare. Community members join together to buy land and build affordable housing. Formal systems are disregarded as

they are expensive. Cooperatives and Chama's/ investment groups are the most preferred options for saving and accessing loans for business or investments.

The residents live with a certain level of dignity, thanks to their prowess in self organization. The fuel and energy costs are ever on the rise. Green energy is too expensive. The maintenance of the water and sewer systems is defective. The old pipes keep bursting and contaminating the water sources and it is warned that the country might face a cholera epidemic.

There is a semblance of order in public places like markets and bus terminals. Former vigilante members oversee this at a fee. The strongest voices in this scenario are: cartels, contractors, large corporations, foreign direct investors, cooperative movements and the informal sector.

4.2.7.3 Vulture City

Vulture city results from failed county and indifferent subjects, who exclude others. The citizens are disengaged in the affairs of the city and only care about their individual/nuclear lives.

In 2040, the Vulture City is characterized by gangs and vigilantes that seek to control different parts of the city especially informal ones. They control movement in and out of their strongholds, provide security services, water vending and illegal connections of electricity. There are many vulture investments that take advantage of the failure of a strong county government regulation and hence exploit the public. Rule of law has completely failed and corruption and impunity thrive. Economic growth registers a negative.

There is both capital and labour flight to other cities that provide better investment opportunities. Due to lack of a collective vision and leadership, people recline to their tribal and religious groupings in search of security. However, this is largely among the poor. The middle class and upper class establish high walled gated communities. In these communities, they seek to have as many services such as shopping malls, borehole water, solar

power and medical services provided within their walls. The high cost of living makes life difficult and it is a place of survival for the fittest.

Small arms circulation in the vulture city is an open activity as individuals seek to protect themselves. The levels of inequality are high and there is an abuse of the social contract resulting in diminished trust in the leadership and systems. Private firms no longer observe the minimum wage requirement and other established work place standards.

The informal sector, especially small and medium enterprises collapse due to the high cost of doing business. Large firms that remain dictate prices with blatant disregard to any regulations. Poor sanitation in informal settlements continues under deplorable conditions, leading to regular outbreaks of communicable diseases. Failure of the county government to respond sees the entry of the National government working closely with the Non-State actors in the provision of health services.

In a bid to be in control, the county government seeks the help of the police to stop the emerging gangs. Use of force leads to deaths but does not stop the gangs, who have public support. Capital and labour flight means that the county government cannot raise sufficient resources and this affects any attempts at improving service delivery. The county government turns to borrowing, raising the debt burden. Cost of credit is high and few can afford it hence entrepreneurship is curtailed.

People in the vulture city are innovative but only to the extent that they solve their daily problems (innovation for survival). Street protests and civil disorders by the poor are common as people can no longer bear the harsh life in Nairobi. Politicians take advantage of this to offer lip service and gain political mileage.

However, come the general election, the voter turnout is very low due to voter apathy. The losers in the election frustrate the elected officials. The opposition almost brings to a halt the approval of county policies and budgets. It is a city of pain. Those who have the money make it while the rest live "one day at a time".

The key actors in Vulture City are gang leaders, vigilante groups, apathetic citizens, inefficient and compromised county government officials, unscrupulous investors and humanitarian agencies that try to fill the gap of failed government systems.

4.2.7.4 Big Brother City

The big brother scenario is one of a city characterized by highly competent city governance but met with uncaring and indifferent subjects who exclude others in their day-to-day life.

Big Brother city possesses functional infrastructure including roads, rail, water, sewerage and effective waste management services. Government has the final voice and an upper hand in all decisions. Social services such as healthcare, education, and sports are efficient and with universal coverage for city dwellers.

Employment is available and the quality of political leadership is good. There is however open intolerance towards outsiders. People are individualistic in their lifestyle. Competitiveness is low as the government controls every aspect of the economy. High taxes are levied upon individuals and firms to ensure that government operates accordingly. The population is complacent there is little public participation and debate on policy alternatives. Low levels of innovation are due to the fact that the county government is the largest employer and hence there is no pressure for individuals to be creative. Low levels of corruption make the running of the city efficient as citizens can rely on government services. Population growth is controlled and majority of the people are old.

There is high cost of living compared to cities in the rest of the country.

The Big Brother city has low levels of inequality due to low wage disparities. The media is controlled and is careful to remain loyal to the ruling elite. The informal sector does not thrive and is considered ruinous to the image of the city. There is a static culture. People fear to destabilize the government due to its good delivery record. The city is highly mechanized and largely secure.

Multinational corporations find it investor-friendly and set up a myriad of their regional businesses. It's a Big Brother state where the political leadership is dominated by middle aged and older males. However, it is more inclusive at other levels of governance. Religion has a low profile with a 'Don't Ask Don't Tell' policy practiced in public life. The Big Brother City has constant conflict with the National Government as it demands its own space to operate. It also sees broad constitutional rights as an unnecessary interference to the city's independence and autonomy. The key actors in Big Brother City are the county government, Business associations and professional bodies such as legal, engineering and planning.

It was agreed that Nairobi is presently in BONOKO CITY now, and that a preferable future would be NAJIVUNIA, but that VULTURE CITY and BIG BROTHER CITY are also plausible futures, as well as that different aspects of Nairobi could exist in these different scenarios.

4.3 Innovation
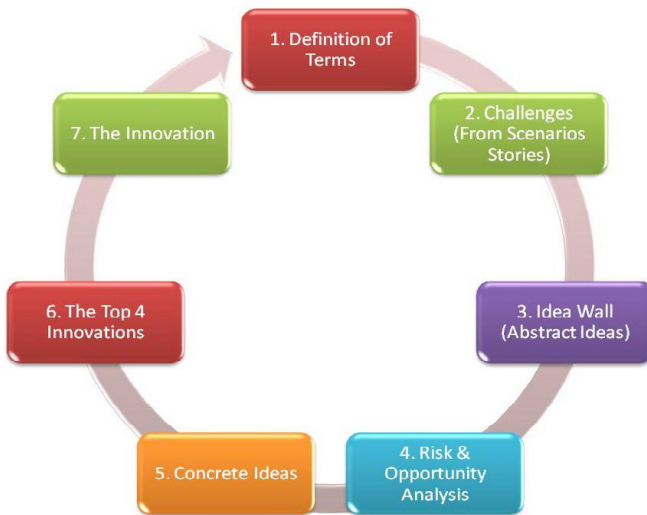
The objective of this 3rd Part of the process was to surface and encourage innovations that will help Nairobi City: 1) build on the strengths of the formal and informal aspects of the Nairobi to achieve a more inclusive city; 2) build the resilience of individuals, families and communities against rapid changes, future shocks or stresses facing their city. The expected output would be one innovation that would promote build resilience and promote inclusivity in the city of Nairobi. This innovation would be funded by the Rockefeller foundation to a tune of USD 100,000.

4.3.1 Definition of Terms

Innovation
• Ways of solving a problem with an impact of how to solve the same in the future
• A new way of thinking or doing or NOT doing things
• Using unique/indigenous resources in developing local content
• A redefinition of the problem. How the problem is defined may be part of the bigger innovation conversation
• Requires sustained commitment from a group of people or a person
• Innovation is something that can be replicated

- It's a state of mind
- Trying and failing and trying again until things work (Innovation=trial + error)
- In a world of accelerating change, innovation is the only insurance against irrelevance. While foresight anticipates, innovations activate. The ideal situation to handle the changes is by combining foresight with innovation. Innovations included a wide range of activities. They could be new products, services, processes or different ways of organizing people to increase their access to resources i.e. social innovations. It may be reinvesting into a program or an organization that is being ignored and does not have enough support but is critical to shaping a more inclusive city. The means by which to evaluate the strength of an innovation especially for the innovation grant application is whether it will build resilience and inclusivity in Nairobi.

Resilience
- Ability to overcome difficult situations e.g. floods
- Capacity to persevere under adversity
- The ability by which communities and systems cope
- Ability to absorb shocks and adjust accordingly
- Anti - fragility
- Bad things can also be resilient e.g. mafia groups in Italy, systemic poverty, dictatorships etc
- Slang for a hard nut to crack/being hard headed
- The ability to keep moving forward despite the challenges
- A resilient city is a city where individuals, communities and systems have the capacity to survive, adapt and even grow in the face of stress and change.

Inclusivity
- Accommodating and not limiting others or other ideas
- Belonging
- Ability to be part of
- Involvement in and for diversity
- Representativeness
- Retaining original identity but functioning as a unit
- A test for inclusiveness is access, not just language

- Open mindedness and tolerance. Does tolerance include tolerating those who are closed minded?
- Reaching out

An inclusive city is a city that values its people and their needs equally and strives to expand opportunities for everyone including the most marginalized and vulnerable citizens. The inclusive cities are cities where everyone has access to and can afford basic services such as water, sanitation and electricity. They are cities where everyone's voice is represented in the governance, budgeting and planning processes.

Managing the future calls for:-
- Resilience
- Adaptability
- Flexibility
- Complexity
- Diversity

4.3.2 Challenges Identified from the Scenarios Stories

The participants then identified challenges faced by the informal sector, the poor and vulnerable living in each of the scenarios i.e. Najivunia, Big Brother, Bonoko and Vulture Cities. They were in form of the questions below:
- How far can self help groups go with regards to scaling up their work?
- How much needs to be build vs. how much needs to be redistributed
- Funding? Where do you get the money from? Money should be used to establish the connections and efficiency
- How to connect funds to the things that have to be formal
- How to have a fair tax system
- How to "transfer" the co-responsibility burden to citizens?
- How to overcome the negative attitude of persons with regards to informality
- How to include the vulnerable in collaborations between informal and formal groups/ how to build partnerships that ensure inclusion
- How not to force ideas on people

- How to help highly educated people translate their ideas into action
- How to plan for an ver increasing population
- How to implement and make physical and technological infrastructure work for the city in the future
- How to use regulation positively to foster and not curtail development
- How will social life (family units) look like?
- How to deal with the huge number of people who migrate into Nairobi everyday and how to deal with pressure on service provision
- How do we have dignified living space/homes? How will people homes look like?
- How can government define its challenges right? What is government supposed to provide and what needs should the residents take care of in their private capacity?
- How do we deal with informality especially in Najivunia City?
- How do you achieve good social interaction and levelling amidst economic inequality?
- How to achieve secure housing / dignified housing
- How to value and dignify work
- How to ensure that residents enjoy high quality life. This is a factor of access and not necessarily what one does
- How to deal with the fascination of owning parcels of land. How to deal with the challenge of changing perceptions with regards to land ownership and use
- How do you temper economic growth and reduce inequality?
- How to disassociate certain jobs from negative perceptions
- How to overcome the "easy" route of a low wage economy
- How to deal with people that are affected / "laid off" as a result of technological advancement
- How to develop realistic expectations among the young people
- How to prioritize urban planning and city issues politically
- How to have a labour intensive economy
- How to provide good nutrition
- How to have (minimum) quality of standards for basic services
- How can agriculture not be an enslaving activity?
- How do we produce/provide food in Nairobi?
- How to cope with corruption

4.3.3 Idea wall

The innovation to be funded would be drawn from the Ideas and Options generated to address these challenges. The Idea Wall below comprises abstract ideas or interventions seeking to address the aforementioned challenges.

Abstract Ideas

Infrastructure Development	Encouraging Enterprise	Governance	Participation	Micro-Economic
• Includes road, rail, energy, pipeline, fibre and subways • Investment in pro poor infrastructure that recognizes informal systems • Innovative ways of harnessing energy to attract investors, increase employment opportunities and improve security • Formation of Matatu Saccos • Turn Nairobi Dam into a Hydro Station • Improve drainage systems - water and sanitation • Improve railway services • Slum upgrading • Feasibility study for a solar field in Narok • Matatu rapid transit • Decent transport systems • Train Station in Kibera • Solar field in Narok to serve Nairobi • Waste recycling and improving waste management systems	• Cottage industries like detergent making • Active participation in economic activities • Make it easier to do business • Equalization fund to be disbursed to all informal businesses and residences • Improve value addition in small scale businesses • Multi National Corporations • Government and private sector involvement in empowering informal sector • Enact policies that encourage private investment • Enhance access to banking and MFIs • Give loans to scale up innovations or inventions using patents to ideas or prototypes as collateral • Give funding based on various innovation cycles • Patenting – civic education, lower costs, faster transparent process	• Provide opportunities for social action • Community dialogues as a tool for building resilience • Devolve governance into county • Increased awareness to have a more inclusive society e.g. 1/3 gender rule • Punish corruption regardless of last name or political affiliation • Meritocracy – employ qualified individuals Involves the informal in problem solving • Separation of powers, transparent, accountable, inclusive and equitable • Review existing policies thematically and transform them into activities or tangible projects • Advocacy platforms • Develop and implement sound rules that promote cohesion • Strengthen Kenya Bureau of Standards	• Implementation, protect and defend devolution • Developing citizen participation structures • Vibrant civil society – provide checks and balances • Protect freedom of speech • Youth empowerment and life skills • Develop long term solutions to deal with recurrent issues • Improved government feedback mechanism • Reform youth groups • Support interest groups like Karengata, NCBDA, Eastleigh Association • Strengthen CBOs and informal cooperatives • CSO to pressure Government to deal with Dandora Dump • Increase women representation at community and county assembly • Public participation in vetting of officials	• Create opportunities for creative minds • Encourage value addition to products from vocational projects like prisons • Match labour with markets • EAC trade fairs • Increase resource pulling in Saccos • Social protection • Refine and enhance economic stimulus packages Provide equal opportunities in the job market • High cost of living • East Africa Community • Job shadowing and flexible working hours • Entrepreneurship • Diversify sectors of production • Buy Kenyan first policy – ban imports from the far East to promote local goods and production

Education	Family and Health	Tax	Food
• Even distribution of teachers • Free laptops – what is the value? • Introduce life skills training as part of the school curriculum • Reform education system i.e. vocational based curriculum • Reintroduce logic and critical thinking to secondary and tertiary education • Education that is relevant, entrepreneurial, practical • Include stop gap measures for school drop-outs e.g. talent academies • Make ICT studies compulsory and examinable	• Child custody cases aided by social support • Vouchers to improve nutrition for young children • Increase the budgetary allocation to health to 15% of the national budget • Incentive based vaccination program for urban poor children • Build or provide Crèches close to workplaces • Government mobile clinics • Outreach and risk reduction interventions like use of condoms • Free maternity services • Family planning	• Flat taxation - do not punish enterprise • Proper use of taxes – should equalize • Hypothecate taxes • Encourage a progressive tax regime across the board • Community taxation • Tax and Decentralization – land tax, capital gain tax, • Hut tax • Reducing tax burden but increasing tax base • Increase revenue collection	• Subsidize food to ensure same prices in all super-markets • Sack faming • Diversity in Agriculture • Community gardens or plots • Everyone should grow their own food – grow what you eat • Provide farmers with modern farming inputs • Formalize grid system and GIS to support deliveries • Urban gardening • Proper food preservation to reduce waste • Provide incentives for agribusiness or commercial food production • Roof top farming

Media	Partnerships and Collaborations	Housing/Land	Data	Planning
• Community media and ICT hubs i.e. Koch and Ghetto FM stations • Digital villages • Kenya open data • Shift focus from mainstream media to social media as a source of information • Open up the media industry	• Youth reform groups – connect them to proper municipal systems • Public versus private ownership of public goods and services e.g. health service, garbage collection • Resource mobilization • Community dialogues • Fabrication Lab • Open spaces	• Improve housing schemes • Deliberate on land reforms • Consistency in policy making among the various arms of government • Green housing • Tax idle lands • Involve the informal sector residents in relocation plans before evictions	• Improve data collection • Sms surveys in slums • Android surveys • Develop service delivery index • Crowd-sourced data for municipal asset management • Community sourced data for responsive pro poor transport planning	• Disconnect between planning and implementation • Urban planning and decentralization – move with labour, decongest the city • Informal city policy lab • Create ministry of urban development

4.3.4 Risk & Opportunity Analysis

The participants played out the game board by identifying and working with potential pathways, vectors, drivers and actors leading to the preferable future as well as mitigating against less preferable futures. From this exercise, they generated a few more ideas that were included in the Idea Wall.

High and stable economic growth rates are strong driving forces 'pushing' towards a more competent county and it has a feedback effect (a virtuous circle); meaning that the more and better economic growth there is, the more likely it is to stimulate and influence the country to be more competent, thereby causing more investment and growth. Equitable growth, however, is a strong driving force pushing directly to the preferred future of NAJIVUNIA.

Volatile climate and extreme weather is a force that would 'push' towards a failed county, however, if the county coped with some aspects of such disasters and learned from the experience, it would make them more competent and better able to cope with subsequent crises.
The role and nature of technology can and will play out in every future, and can act as a driver to any future. This makes it a very powerful tool to utilize in making a preferred future. Below is a summary of the discussion.

What things lead us to Najivunia?
- Mainstreaming positive values
- Implementing the values of the constitution and the constitution in totality
- Citizen involvement in decision making – this creates ownership
- Creation of an Environment or culture that allows for experimentation – encourages trial and error
- Social entrepreneurship. Business to give back to the society – advanced form of CSR
- Practice Good governance
- Patriotism
- Social cohesion
- Modernization of current technologies of production

- Upgrading the quality of goods and services
- Appropriate technology and training
- Using the media as a public space
- Easy to use software "accounting"
- Using software that does not have patents – open sources
- Easy to use hardware "multi-pass card"
- Access to better information (tech.)
- Re-education
- Early childhood intervention to create access
- Learn to understand not condemn.

How do we move away less preferable scenarios?
- Decisions based on data, understanding and wisdom
- Focus on or identifying and addressing the "right" problems
- More talk that is honest and less emotive and more action
- Learn to understand, not to condemn

Risks
- In Bonoko city, there was a risk of residents not being able to influence decisions
- In Big Brother there was the risk that only a few people will control the economy
- Corruption
- Weak governance
- Lack of mutual understanding

Opportunities
- Effective allocation of resources
- Government embracing ICT
- Improve ability to use mobile phone based solutions for a range of issues

4.3.5 The Four Major Innovations

To get the final innovation, the Abstract Ideas, Actions and Decisions listed under the Idea Wall were transformed into initiatives, interventions and projects (Concrete ideas) using the filters below.

Filter 1: Actions, Decisions, Initiatives, Projects (concrete ideas)
Concrete ideas/Innovations had to address to the following questions:
• Implementation – Strategy – How?
• Relevance - For What?
• Responsibility – Who?
• Time – By When? Stages
• Funding – How much? Will USD 100,00 be sufficient

Filter 2: Rockefeller was willing to fund ideas to the tune of USD 100,000. It could be seed money, complete, contribute to solve a problem. The innovation had:
• To result in inclusivity and resilience
• To involve and benefit the poor and vulnerable in the city
• To strengthen the informal sector
• The Top Four Innovations selected
• Mazingira Bora Project
• Informal City Policy Laboratory
• Korogocho Eco-Spaces
• Ubuni Studio

The Ideas selected were very good and the participants chose to pick the top four. Each idea was presented to the plenary guided by the following questions?
• How will it look like?
• How will it work?
• Who is going to do it? How?
• How does it build resilience and inclusivity?
• How does it benefit the poor and vulnerable?
• How does it strengthen the informal sector?
• What does the idea look like in the different futures – Vulture, BB,

Bonoko and Najivunia. In which scenario does it work best?
• How does it help us to get to the NAJIVUNIA City?

4.3.5.1 Informal City Policy Lab

The informal City Lab exists to make sure that the right problems are being addressed and with the right solution. The greatest misfortune when addressing challenges in general is that most people identify the wrong problems and spend a lot of time and resources in solving it. The remedies provided are usually spot on however the effect is usually undesirable since the problem facing the specific group of people remains unaddressed or is party solved. This has led to frustrations and a disenfranchised people especially those working in the informal sector. The Informal city lab seeks to remedy this by engaging the citizens concerned in various processes where they clearly identify their challenges guided by facts and real life experiences. As the name suggests, it will be based in the informal parts of the city and the main objective would be to provide interventions for challenges faced by various groups working in the informal spaces thereby strengthening the informal sector.
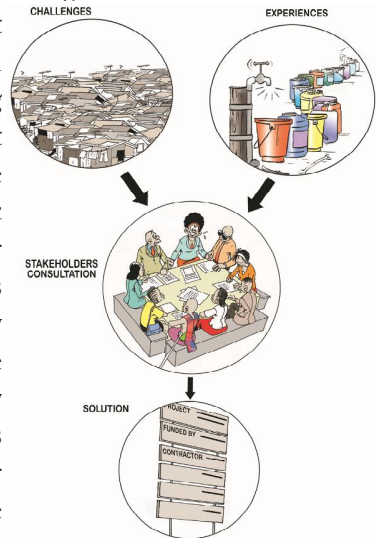
All processes will include the following aspects: consultations, generation of ideas, experiments and everything will be representative. All the processes will engage a wide variety of stakeholders drawn from the formal and informal sector. The essence is to engage in evidence based problem solving and the interventions. The Lab will encourage experimentation and generation of ideas thereby challenging the notion that there are right and wrong ideas period. The lab will act as a sounding board for ideas by providing a platform to test the ideas as well as measure the outcomes and impacts.

The Lab will bring together people via forums like barazas and round tables among others for the purposes of information collection, discussions, trying out ideas and receiving feedback as well as to develop tailor made solutions or interventions based on these. The project will involve people from all sectors and will provide a platform that will encourage the civil society, media and the academic community to publish their work. All these efforts will promote collaborations at various levels and secure buy in from all sectors especially the government. The entire process will be documented for future learning. Since this lab is a pilot, the organizers will make a case for up scaling it into real labs in the informal spaces rooting it on the outcomes from the project.

The secretariat will be at the Institute of Economic Affairs who will oversee the implementation of the pilot project with the intention of recruiting a group from the informal sector to run it. The lab involves a variety of stakeholder with a bias to people interacting in the informal space who are the main target of the project. It is premised on solving problems with the aim of increasing resilience among the poorest and most vulnerable groups of people. By involving a wide variety of stakeholder, the project, its processes and interventions will encourage inclusivity.

It is unlikely that the idea would work in vulture city in the long term but it could be useful to Bonoko and big brother cities. In Bonoko city, there is a challenge of weak or failed governance systems versus citizens who are caring and interested in inclusivity. The lab will help the failed county prove itself competent by helping them identify the right challenges affecting their people and provide viable interventions.

4.3.5.2 Fab Lab – Ubuni Studio

The Ubuni studio is model studio that has similarities to the Fab lab. It is a multi-partnership project based on strategic partnerships and networks.

The Lab is premised on the fact that people know their needs and it offers them an opportunity to create their solutions either as prototypes or as a final product. The labs not only challenges people to think proactively and futuristic but it gives people the opportunity to work with their hands thereby earning an income resulting in economically empowered individuals, communities and cities and improved living standards among the poor. It provides a cool way of visualizing ideas and imagining solutions. It also offers a new form of training that is specialized yet user friendly in that it can be used by anyone (independent of their expertise, level of education etc)

The Lab complements the Jua Kali Industry in creating practical solutions to problems. It goes further to guarantee accuracy and quality (products can be easily standardized and regulated) of products. It is easily replicable or scalable.
The lab will also respond to social, health and emotional challenges for instance by producing easily affordable prosthetics tailor made of each individual giving people a hope for a better life and raising the self esteem of those disfigured by natural or man-made causes or discriminated upon by the society e.g. persons living with disability (ies)

How will it work?
The lab has a variety of innovative items, hardware and software, like the welding machine, 3D printer, glass cutters, woodwork, plastic work and metal work machines. The students are trained on how to use the various machines and get a certificate at the end and they can go ahead and work in other organizations. The labs provides them with an opportunity to exercise their creativity by making products that are sold and part of the

profit from the proceeds is ploughed back into the lab contributing to its sustainability. The project is keen on recycling hence the all the products are made out of recycled materials. This will create networks and a robust value chain for the youth e.g. from waste pickers to vendors.

The project will ensure inclusivity by aggressively targeting women, the poor and other vulnerable groups in the city. By providing the poor with an opportunity to speak to their need by developing products they need, the project will be contributing to enhancing dignified livelihoods as well as building local economies.
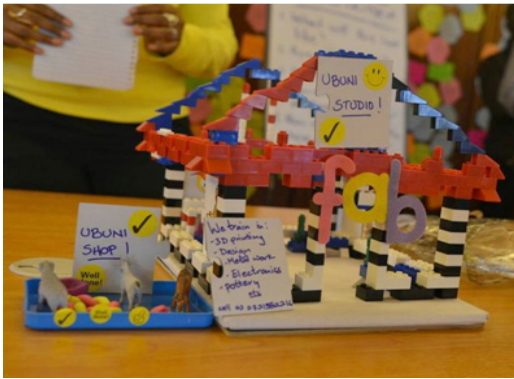
The final creative presentation (see Picture on the Left) comprises the Ubuni Lab which houses all the equipment and the training centre. The lab has a shop where the final products are sold.

The partnership will be with the Ministry of Education, Primary Schools, Institutions of Higher Learning, Vision 2030 Secretariat, Office of the president, Ministry of Industrialization and the Private Sector. The money will be used to buy the machines and the space will be provided by the primary schools. The University students will run the project.

The project generates income for the target audience and equips them with skills they can use beyond the lab resulting in empowered youth. It provides the poor and vulnerable with practical solutions to their problems. They get to define their problems and solve them. It raises literacy levels among the youth and creates a robust value chain involving a wide variety of stakeholders thereby creating employment. Income from the products made and sold will be ploughed back into the labs to contribute to the replication of the project in other areas. Universities may choose to buy their own equipment. The measure of success will be other institutions replicating it. It helps the informal sector produce products that are

standardized and of high quality hence they can access a variety of markets in the formal and informal spaces.

This innovation can work in bonoko and najivunia cities. It sparks, enhances and depends on creativity. It is not discriminatory in that anyone can be taught how to use the equipment. The Lab provides space for self reliance since the target group earns income from the products they make and sell.

4.3.5.3 Mazingira Bora project

This is a professionally managed waste collection system that involves waste being collected from households followed by sorting then recycling. This will create income and jobs to the persons involved (especially the youth who a major custodian of the environment) and benefit the communities in general. This involves setting up a centre to recycle wastes like plastic, metal, tyres, clothes and organic wastes. The project intends to empower the youth to earn livelihoods and communities to preserve the environment, promote recycling of wastes and innovate new products from wastes. All these will result in an efficient and professional waste management and recycling system.
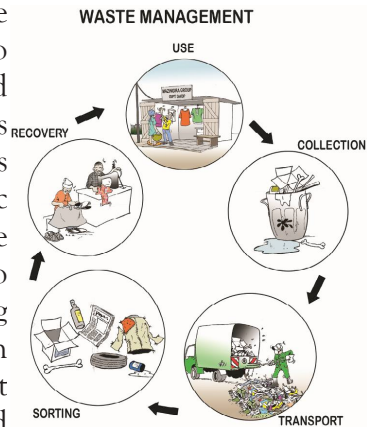
The project will rent a space in the community to house the secretariat and recycling plant. Part of the funding will be used to meet train project beneficiaries on waste recycling and management and to cater and business registrations costs. A variety of products will be made from the various types of waste/recycling materials which will be sold to the general public. A show room will be established to display and market/sell the products. The project will also target plastic industrial companies, exhibitions, local markets (especially Maasai Market) and Households. The project intends to partner with other organizations like Nema.

Waste normally comes from the households and is collected by youth groups who are not well organized and end up littering the road.

They deliver to the warehouse where it is ground (selling recycled waste in powder form is better because it has more returns) and sold. The buyers make different products that are later sold to various markets. The project intends to fill up the gaps in the waste management and recycling project. From the illustrations the gaps have been identified and will be filled up as follows:

Gap - Measures
From Households to Youth Groups /CBOs Vans – Educate the citizens on waste separation and disposal e.g. plastics in the plastics bin / bag, organic wastes in the organic wastes bin/bag etc

Littering by the garbage vans on their way to the recycling plant/warehouse - inject professionalism by providing equipment (vans and protective gear) to the youth. Also, help the youth register and formalize their community based organizations. This will make payments and garbage collection easier since the plant will work with groups and not individuals. Everyone will be accountable since groups will be allocated specific neighborhoods hence monitoring will be easier. The secretariat can account for use of funds since payment are made to a registered group

Warehouse to Market – all project beneficiaries will be trained on garbage collection and waste management, recycling and marketing to increase professionalism in the sector.

Also funds will be used to buy machinery (like grinding machines) to improve efficiency and quality of the end products.
The pilot project will target households in Babadogo Community. Start with 10 pilot groups who are capacity build on management and efficiency in waste management and recycling. Each group will have at most 20 members. All groups will have a similar management structure.
End products for sale include ground plastic, tyre sandals, bags among other things. It was shared that plastic in the grounded state fetched more money than any other form.

4.3.5.4 Korogocho Eco-spaces

This process begins with consultation among the community members, the government among other stakeholders. The river is cleaned and reclaimed, trees are planted at the river banks, gabions are built to deal with overflows and a bridge is constructed to ensure that people can comfortably cross from one side to the other. Animals are introduced in the river.

Initially people would poo and pee in the river. The projects builds a toilet with a good sewer system connected to the main sewer system. A water tank is installed and the water is used to clean the system and by the community members.
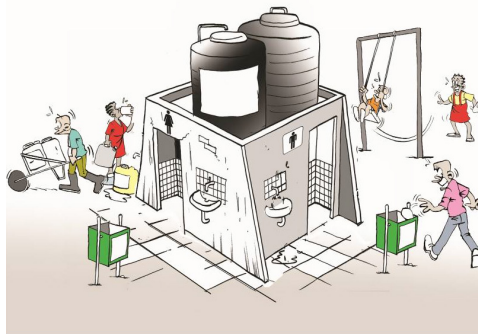
A child play section is developed and the place is well lit to allow children to play till late. The parents also have an area to rest and socialize as they watch the children play. Animal pens are built to house chicken for sale and for learning purposes. There is a business angle to the project. A food court is built and part of the proceeds will be used to maintain the toilet hence no charges will be levied to the park users. The park is not fenced giving access to all community members.

The project will be piloted in Korogocho after consultation with the community, the elders and the administration. This project has worked in other areas like Kibera. The 8.2 million will be used to put up the basic structure/facilities and proceeds from the various business ventures will be used to sustain the space.

This will be a project based on multi-level partnerships between the community members, private sector and Nairobi City Council. The commercial enterprises will provide money for the management of the space. The gabions will control flood water and the possibility of displacement as a result of flooding is proportionately reduced. There is no fence giving access to all community members. The project beneficiaries

have to agree to donate the land and participate in its reclamation creating ownership of the project.

The initial fees will be very affordable and this will be scrapped with time. The dynamics of the slums are that the poorest are the ones who live closest to the river since structures there are affordable despite their hazardous nature. Since the space is closest to the river and to the poorest, the residents can cross over and enjoy the space. The gabions help them do away with challenges previously brought about by floods.

There are no formal requirements to use facilities. Informal traders will trade well since they are provided with good and affordable facilities and a ready market and this might move them towards formality within the confines of the informal settlements.

It will work in the four scenarios . Everyone needs somewhere to relax and recreate. There might be a challenge in the big brother scenarios since residents in these scenario are the big brother is that they are not too keen with providing people with space for civic engagement.

The initiative involves the residents hence this provides them with an opportunity to care for others i.e. the poor and vulnerable as well as entrepreneurs in the informal settlements. The fact that there are connections to formal systems like the sewer system hence improving the relationship between the government and the community. The project will be formalized in future so that in other areas it could be built as part and parcel of slum upgrading schemes or other housing projects.

4.3.6 Final Innovation

Final selection was done through voting for each of the four innovations and the Fab Lab Makers called Ubuni Studio emerged tops with a slight margin. The innovation is to be built on and submitted for further consideration in Rockefeller Funding.

Innovation	Votes
Ubuni Studio	15
Korogocho Eco-spaces	14
Mazingira Bora project	13
Informal City Lab	10

Appendix 1 – Essays

In Quest Of a Better Nairobi By Socrates Luseka

The making of Nairobi into a prosperous city is here with us. The future brings with it hope given the various development projects and plans underway. With vision 2030 economic blueprint right at its implementation, Nairobi is no doubt becoming a major economic powerhouse and developed city as years roll by. Come 2040, the story will be different. However there remains a lot to be done before we stand to applaud this hyped and hoped for success. There are areas we need to explore and innovations we need to tap. Better still, there are negatives we need to eschew and positives we got to embrace in both our social, behavioral and physical aspects of our lives. After all, ideal success doesn't lie only in lush buildings and great infrastructure, but how rich our social lives are and how we are able to marry this with every aspect happening around us. The core issues to put into analysis are the common aspects that make the society's whole. They range from education, infrastructure, housing, transport, health, water, politics, security, economy etc. And those precisely are what we ought to look at as we create a path for the city's success.

First and foremost, development strategies need to be looked at again. Both major and rising firms should not only have their headquarters within CBD, Upper hill or Westlands but also in other areas. Schools and learning institutions too, should follow the same path. We need to have a balance across the city. Open air markets should be established in their actual trading zones and not near government offices (parliament) and also hawkers should be pushed to carry out their business in established market stalls and not from the CBD. The ministry of planning and the United Nations habitat should consider extending house development projects to other slums and not in Kibera alone. Slums like Mathare, Mukuru kwa Njenga, and others need to be considered as well. They should also ensure a fair and credible selection process for the completed house entrants that see local residents occupying the houses and not outsiders. After completion of Syokimau rail service station, more effort should be put on building other nine modern stations including those on Jogoo road, Imara Daima and Makadara Estate, to ease congestion in Nairobi. Futuristic

cities within like Konza Technology city and other economic zones should be open to driven investors, more so from serious development oriented countries eg China, Japan, Korea, European countries, U.S etc.

In and around, dirt is quite common. Compared to other African cities of its status level like Kigali, Capetown and others, Nairobi ranks low when it comes to cleanliness. More dirt cans should be spread out by the city council within and various campaigns,aimed at creating awareness on the importance of maintaining a clean environment be carried all across. Also, the Nairobi leadership should use this as a way of creating employment, say, by employing youths to carry out cleaning in their respective areas of residence. Infrastructure remains to be an issue. True, we may be having major road upgrades but such should spread out to other areas in our plans and ensure development of the whole. Open sewers and potholes are quite common on roads, even on streets within the CDD. Street floor tiles have varied fractures .Repair should be done and not just for short term, but ones that will longer periods of time. Such open grounds not only impede efficient road transport but also hold stagnant water during rains, encouraging breeding of dangerous insects like mosquitoes. Transport needs to be dealt with freshly and with renewed impetus. It turns out that the late honorable Michuki's laws are no longer in force as they used to be.

The rampant madness within city Matatu continues. The loud music is itself a pollutant; touts and vehicle owners encourage accidents by passenger overloading; simple rules like obeying the speed limits, driving on ideal lanes are broken; overtaking at wrong road joints is quite common and the heavy traffic witnessed at rush hours all around the city, is quite an issue on its own. In solving some of these problems, Camera surveillance systems should be installed on all major roads. It is a bit expensive, but with good planning it is close to possible. Traffic easing systems should join the fray as well. Traffic police should be serious with public service vehicle rules better known as Michuki rules' .Seat belts should be worn and the standard speed limit maintained. It is crystal clear that the seriousness with which these rules are being applied is actually not at it as compared to the times when they were first coming into play. We can do better. And positive initiatives like the recent enactment of new additional road rules by parliament into law, are what we need to build on, together with other

projects e.g. construction of highways, bypasses, bridges and Syokimau Rail service to decongest traffic in Nairobi.

Housing has had its fair share of issues. Major house construction projects have led to various house falls in later stages. We should not only think of increasing the number of houses for our good, but ensure they are of quality; long lasting and safe for would be occupants. What we need is well planned, qualified architectural and construction systems in all the major construction zones. Housing problem is an issue in slums .Not only is houses scarce but their general state is wanting. Most of them are established on weak structures, some adjacent to sewage lines, posing a grave threat to hygiene. Here still, we should not only encourage construction of enough houses, but of descent, better and environment cum health friendly for the area residents. Water scarcity need to be addressed. Slums are the most heavily affected. Most slum dwellers receive water through water kiosks and end up paying higher water prices than those fortunate to have access to piped water. Water companies and ministry of water should aim at spreading water all across the city. Pipes from water reservoirs should be fixed all across for the benefit of all. Lastly, proper leadership is what we need to propel us into this success. In getting proper leadership, the onus is on us citizens. Let us elect leaders with good office records and good policies and not base our measure on ethnic backgrounds and fame. All said and done, Nairobi is ours and its success will speak well of our own success. Let us go for it and build it together! 2040 will indeed be a different story.

Living My Vision by Joshua Nyantika

"Am not in Nairobi!!!", she vehemently denied. "Until I see that 'tall round thing', I am not in Nairobi." My little 6 year-old sister repeatedly reminded us. We had been travelling on a six-hour journey from Kakamega to the capital to visit our father and had arrived at night. That was eleven years ago.

Having been raised up in a little town with the tallest buildings being five storeys up and with not so much bursting of activity like the Nairobi, all we had in mind was this big city with so much good and awe-striking physical

features and numerous tall buildings. The 'tall round thing' was KICC, an icon of fine architecture she had seen in pictures. The next morning we finally saw the 'tall round thing' and other taller structures on our tour of the streets.

Ten years down the line, after my high school education, being admitted to university in the city brings back the good memories of the first journey to Enkare Nyrobi, a place of cool waters, its meaning in Maasai. Spending time in the city has made my perspective of life change, from 'Something should be done' to that of 'I should do something', concerning the quality of life that I and those around me live. The city has taught me to think fast and big. As a top urban agglomeration, the city hosts almost major administrations, both public and private. I have a vision of what our cool 'Green City in the Sun' will look like come 2040. My vision for Nairobi comes forward as am travelling in a future-time flying capsule.

As my capsule enters the city from west, am struck by the beautiful Nairobi skyline that is clear against the rising sun. The skyscrapers that we once only admired overseas are here with us. As I fly, the speeding motors below me heading town are swift, thanks to the six-lane superhighway, with three lanes leading to town and the rest from. The subway train network is the best in Africa as it connects the city to Cairo and Johannesburg, stretching also to West Africa. This has been made possible through Nairobi's central geographical location in Africa and the world. Flights are direct to and from Asia, Europe and Americas. The revamped Jomo Kenyatta International Airport is busy with planes landing and taking off, to handle the heavy flow of aircraft, Wilson Airport was expanded and they work together. This came as a result of the increased number of business executives transacting businesses with companies in Nairobi, tourists flocking in and out Nairobi and the improved export business. Beautiful buses criss-cross the city ferrying commuters to their various places of work and stay. My vision for Nairobi.

As I pass the National Museum of Kenya, I see that it has been hosting a two-week long Global Art Exhibition where the attendance is overwhelming. Almost all world nations are represented here and our honorable president will be here to officially close it. Nairobi is a major global art platform

where artists showcase their skills. The industry is big business, and sells all in major cities of the world. Entertainment has been catered for as the conditions of recreational parks and stadia have greatly improved also being well managed. Uhuru and City Parks are now home to droves of city dwellers and visitors who take time to relax there. I afford a smile as I see kids and their parents ride a rollercoaster and others rowing beautifully colored boats at Uhuru Park.

The once small iHub has grown and is housed inside the newest skyscraper in town, as I am gazing at their company logo atop the Umoja State Building. It offers employment to over five thousand young professionals. The number of technologists working with other telecommunication firms in Upper Hill is astounding; they have managed to attract the world's attention with their products that offer solutions to once hard to solve problems. I can see logos of big corporations like Opera, Google, Samsung, Microsoft and Dell on top the other buildings. They have also developed technological incubators that host and breed young startups in the nation at large. Nairobi has the fastest internet connection and is the most interconnected.

Security in the city is no longer a thorn in the flesh, street CCTV cameras with feeds to all police stations watch over the safety of Nairobians as they go about their daily lives. The Major Private Security firms that are hired to provide security to the multinationals around and even individuals ensure the gap the police don't fill is catered for.

The real estate sector has never been this big in Kenya. The once Kibera is now the lively Muungano estate. Villas and residential courts in the outskirts of the business district house people who make this great city. Hotel business has not been left out, as the need to hold major conferences made them built. Wow! There is a six-star hotel in town! Global business executives and world leaders who want class can now comfortably enjoy the goodness of the city too.

Education is a major pillar that makes Nairobi, students living and studying in the city improves the activity buzz. Institutions of higher learning have increased in the yester-years and house universities like Oxford and Princeton, which enhance distant learning. Research centers

have also been established through co-operation with foreign nations. I want a brighter tomorrow through education, Nairobi offers.

Bright night lighting makes one think it's day. A city that never sleeps, because it's not any near to close of business at night. Dumping waste is better as waste management programs were established. Nairobi now houses all great contrasts, of race, religion, tribe, and they make the facets of Nairobi character. The call to work and make this vision a reality is summed up not better than in the national anthem, "Natujenge taifa letu, Eh ndio wajibu wetu…" (Let's build our nation, it is our responsibility).

Nairobi City in 2040 by George Abwajo

Nairobi City is the capital city of the Republic of Kenya. It's the largest city in East and Central Africa and is among the six largest cities in Africa. It is a financial hub, gateway to Kenya's tourism industry, commercial hub and conferencing centre. It is home to some of the biggest hotels, architectural pieces and unique in its diversity. Some of the landmarks include, Kenyatta International Conference Centre, Nairobi National Park, Jomo Kenyatta International Airport and Moi International sports centre, Kasarani.

Currently there are plans which have already been initiated by Government of Kenya in conjunction with the private sector to enable Kenya attain the middle income status by 2030. As Kenya's capital city, Nairobi holds 60% of the country's Gross Domestic Product, hence it largely falls on the plan. Some of these projects include implementing the Grand Vision 2030, Konza Techno polis, TATU City and Garden city among others. Modernizing and efficiently equipping hospitals, increasing of social amenities, expansion of roads and energy sectors and real estate expansion. Nairobi as envisioned in 2040 needs a good leadership, change in poor culture and implementation of policies which intend to change it. This includes the innovations in solid waste management. Nairobi should be garbage free and overflowing sewerage should be nonexistent. A look at the developed nations implementing the solid waste plan shows that they are currently running out of waste to process and recycle. Currently, the city is one big dumping ground. The biggest dumping ground we have, The Dandora dumping site is overflowing and stinking. Few people earn

their living through it by earning some few coins. A recycling plant is to be introduced, complete with the accompanying facilities. This will create high income jobs for the track/garbage collecting drivers collecting the baggage from residential and commercial places, jobs to be created within the factory for those working in it and the end product of the recycled good to be sold and reused, hence creating other jobs for the sellers.

I am imagining a self reliant city generating energy for its own use. A policy of every commercial building and industrial set up of buying solar panels should be compulsory. Solar incentives are given by governments to every household to purchase hence saving power. Nairobi receives enormous amount of sunshine all year round enough to generate enough energy and bridge the national grid deficit which normally results to rationing and black outs. Ngong' wind power should be enormously expanded to fulfill its potential said to be over 20 MW. Nairobi shall be self reliant on its own energy.

Nairobi has a high rural-urban migration, hence by 2040 the population is expected to rise from the current 3.5 million to about 8-10 million. It needs proper planning to accommodate the ever increasing human population. Hence proper planning for the new estates that are coming up and reorganization of the existing estates should be a priority. There is need to come up with over 1 million housing units to accommodate this population, by utilizing the air space i.e. flats of up to 10 storey buildings in the slums and other estates like Shauri Moyo occupying so much land with few units. These low cost units shall accommodate the young population which is majorly unemployed. There should also alongside that have water harnessing facilities around the city, encourage tree planting, energy saving electrical compliances and street lights in all estates and roads all over the city using the solar powered street lights currently on Harambee Avenue.

Hospitality sector, social amenities, tourist arrivals and sporting facilities should have expanded three fold by 2040. Nairobi should at least be having 5 modern state of the art stadia. Kasarani Stadium, City and Nyayo stadiums t be expanded and modernized each having a sitting capacity of over 70,000 seats. We should by then be bidding for Common wealth games, World Cup, Olympics, Africa Cup of Nations, PGA Golf

tournaments, Formula 1 grand prix, International tennis and safari rally and IAAF events. Tourism arrivals should be topping 4 million. Jomo Kenyatta International airport to be expanded to receive traffic of over 10 million passengers and an extra 5 star hotels to cope with increased tourists' traffic. Expansion in education facilities with the same number of secondary schools as primary schools, so that the transition rate from primary to secondary schools be 100%.

Existing will be light rails and speed trains connecting various parts of the city. Syokimau, Konza, Ruai, CBD, Kikuyu, Westlands, langata and Kayole. Some shall exist by underground tunnels. It is expected that internet is cheap, fast and readily available by underground cables to each residential home and work place. Nairobi's universities should be leading in Africa, at least 3 in top 10 best universities in Africa, leading in research, innovation and infrastructure. More expanded super highways with extra lanes and no round about. There will be a twenty four hour economy where people are safe working in shifts even at night. With the good county government, Nairobi shall be having its own Metropolitan police meeting the threshold of 1 policeman to 400 residents.

Lastly, unemployment remains one of the biggest hindrances to development of the city. There is skilled labor but no jobs. To reduce unemployment to less than 10% in the city, special economic zones need to be expanded. By expanding EPZ's we shall be creating more export goods hence more employment in value chain. Konza and more ICT parks to are developed and employ more people. Railway network is modernized and Airport expansion making Nairobi a one stop shop for international travelers and goods distribution centre in East and central Africa. Planting trees along the major sources of Nairobi water, Ndakaini and Sasamua Dam to maintain and even increase water flow to city residents with good water management.

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The Institute of Economic Affairs (IEA - Kenya) is a Public Policy Think Tank and Kenya's premier dialogue forum that seeks to promote pluralism of ideas through open,active and informed public debates on key policy issues, and to propose feasible policy back-up to policy makers including members of parliament as well as through reserach and advocacy. Through its work, The IEA-Kenya provides alternative public policy choices and addresses the legal and institutional constraints to economic reforms and growth.

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