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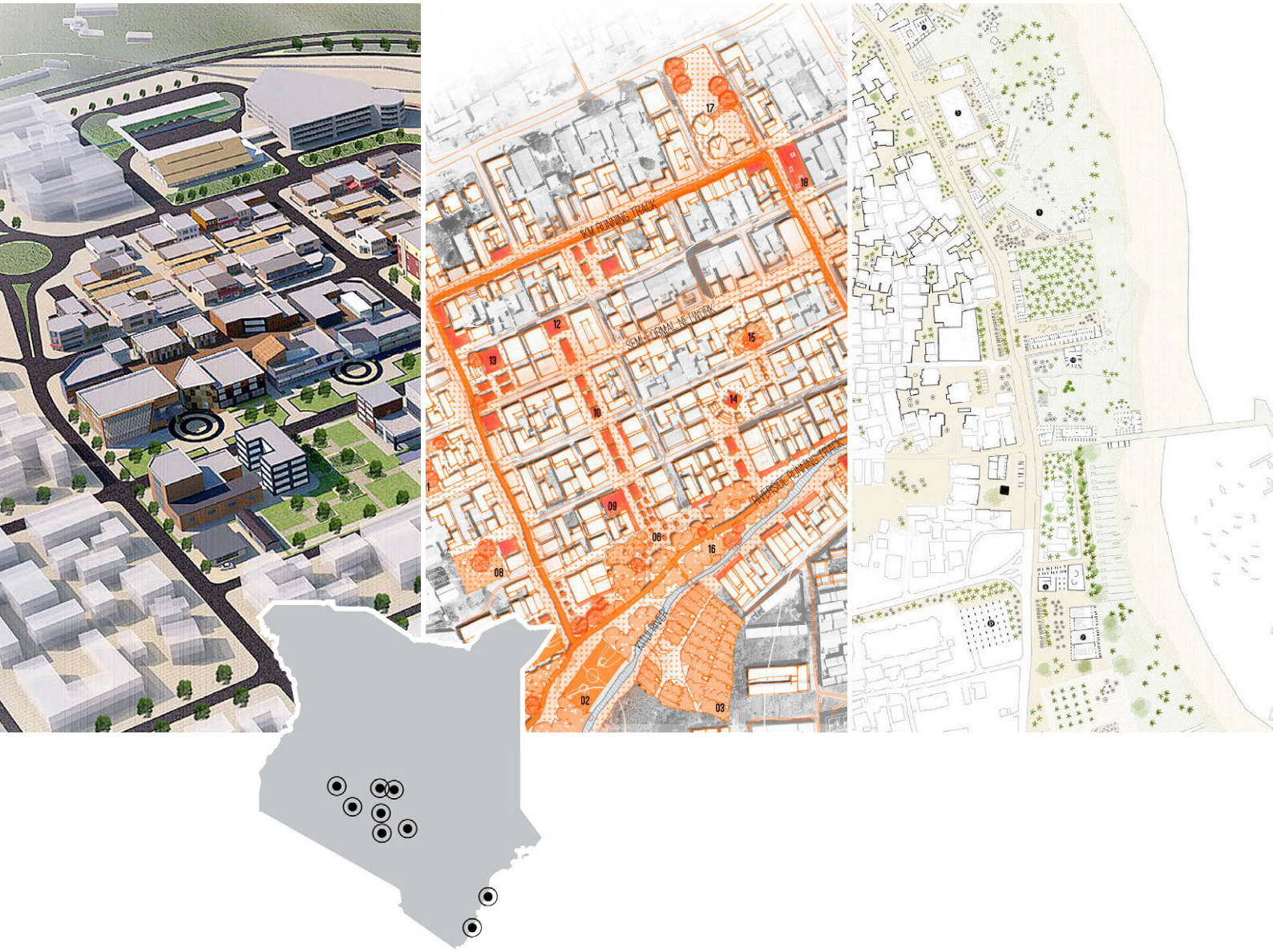

UN-Habitat Support to Sustainable Urban Development in Kenya

International Design Collaboration for Kenya

Volume 3: Report on Student Design Competition for Kenya's Towns

UN HABITAT
FOR A BETTER URBAN FUTURE

UN-Habitat Support to Sustainable Urban Development in Kenya
International Design Collaboration for Kenya
Volume 3: Report on Student Design Competition for Kenya's Towns

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United Nations Human Settlements Programme (UN-Habitat)
P. O. Box 30030, 00100 Nairobi GPO KENYA
Telephone: +254-020-7623120 (Central Office)
www.unhabitat.org

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Project Coordinator: Laura Petrella
Technical Advisor: Klas Groth
Project Manager: Yuka Terada
Principal Authors: Klas Groth, Baraka Mwau, Nathalie Garner, Yuka Terada

Competition Secretariat: Agnes Sandstedt, Asa Isacson, Baraka Mwau, Nathalie Garner, Yuka Terada
Government of Kenya Contributors: National Government: Department of Urban Development, Ministry of Transport, Infrastructure, Housing, and Urban Development. County Governments: Embu, Kiambu, Kilifi, Kitui, Machakos, Mombasa, Nakuru, and Nyeri

Design and Layout: Jacob Kalmakoff, Fredrick Maitaria
Editorial Support: Natassia Ciuriak

UN-Habitat Support to Sustainable Urban Development in Kenya

International Design Collaboration for Kenya

Volume 3: Report on Student Design Competition for Kenya's Towns

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This competition would not have been possible to undertake without the sincere commitment and engagement of a number of people.

First, UN-Habitat would like to thank the participating students for their hard work in creating inspirational and useful urban planning and design solutions. Undertaking the competition with its challenging setting and embedded complex urban issues proves the devotion of both academic institutions and individuals.

Second, the commitment of the jury members and the Kenya planning schools reference group was essential in both setting up and implementing the competition, as well as in framing the competition to the local context and contributing to the general and local discourse of urban development, planning, and design.

Third, the respective Kenyan counties' contributions made key information and data available. Additionally, the county planners and project managers provided invaluable input in the process.

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Summary

Kenya's urban population in 2050 is projected to reach over 42.6 million people, up from a current estimated urban population of just under 12 million. This transition is expected to have a significant impact and, thus, calls for increased preparedness on the part of policy makers and planners. Inadequate and underdeveloped infrastructure, severe shortages of affordable housing, dysfunctional land and housing markets, informal settlements, transportation and mobility challenges, socio-economic challenges, and environmental degradation, are some of the challenges that must be addressed.

To aid in this effort, UN-Habitat designed a programme, "Support to Sustainable Urban Development in Kenya", to support the Government of Kenya and stakeholders in planning sustainable urban development. Within the context of the Kenya Municipal Programme, UN-Habitat has conducted capacity development training sessions for county governments (technical officers, legislative officers, and informal settlement leaders) in the form of structured learning sessions and rapid planning studios and has provided planning advice, support for revenue enhancement, and contributed in strengthening planning education in Kenya. It is within this framework that the Student Design Competition was undertaken.

This report is structured as follows: Chapter 1 introduces the competition; Chapter 2 highlights Kenya's urbanization context; Chapter 3 features the process of implementing the international urban planning and design competition; Chapter 4 outlines the best proposals for each site and other select proposals; Chapter 5 discusses the findings of the competition; and Chapter 6 concludes.

The student design competition was framed as international design collaboration for Kenya and primarily featured students of urban planning, urban design, and architecture in multi-disciplinary teams that involved other disciplines, such as urban economy, geography, environmental management, and sociology. It sought to demonstrate the value of urban planning and design in guiding the transformation of urban centres through scaling down urban planning and design to the lowest level. It also aimed to develop the capacity of future urban planning and design professionals in Kenya.

Students were invited, globally, to team up and undertake design work in selected sites, selected from among the towns participating in the Integrated Strategic Urban Development Planning component of the Kenya Municipal Programme. Over 700 students expressed interest, from which 150 competition teams were formed and 97 (66%) of these teams submitted a proposal for evaluation. An independent jury of professionals, drawn from diverse institutions and expertise – urban planning and design, architecture, urban development, and urban policy – and having knowledge of Kenya's urbanization landscape, evaluated the submissions to identify the overall competition winner and best proposals per site. They also identified strategic issues for policy and planning education in Kenya.

The design competition process revealed a number of fundamental issues that Kenya's planning education staff, professionals, and other actors within the urban sector should consider. The jury noted that each selected site illustrated a set of urban complexity issues that – taken together – contribute to the epistemological determination of Kenya's urban challenges. Thus, the competition rekindled the importance for discussing the implications of Kenya's urban landscape to urban planning education and practice. Representatives of Kenya's planning schools

noted that, in addition to the competition offering students an opportunity to engage with an ongoing urban planning programme and broaden planning and design knowledge, the competition also tested students' preparedness for actual practice. For county planners, the competition demonstrated the value of detailed planning and urban design, particularly for improving implementation of citywide development plans and for raising awareness of urban design in unlocking complex urban development challenges.

Overall, the design competition called for actors in Kenya's urban sector to revisit issues and debate the following: integrated approaches to planning for sustainable urban development; visions and goals for urban planning and development; the implementation of urban plans; planning levels and urban scales on a citywide level; the implications of urbanization and time perspectives; the demarcation of planning areas and defining urban edges; historical contexts and cultural heritage; the importance of public space and urban ecological systems; the integration of urban informality; planning for new towns; the impacts of mega-infrastructure projects at the local urban level; and equipping planners for the next generation of Kenyan cities and towns.

For UN-Habitat, this was a pioneer design competition of this nature, particularly one focused on Kenya's cities and towns. It not only drew the attention of the global urban planning and design educational community to Kenya's urban context, but it also attracted the attention of governments, international development partners, and practitioners of different backgrounds.

Small Market Centre, Near Kisumu, Kenya © Baraka Mwau

1

Introduction

1.1 Overview

Open-mindedly exploring and investigating opportunities to further improve the conditions for our cities and towns in order to offer an attractive and good living environment will often lead to visions and ideas and eventually to solutions, which might not otherwise have been considered. Continuously searching for new urban solutions is instrumental, as cities and towns are in constant transformation, morphologically, structurally, socially, culturally, and economically. Exploring new solutions and approaches to urban development derived from a particular context also generates new knowledge, which can be transferred elsewhere.

This publication reports on the outcomes of such a process: framed by an international urban planning and design competition – **International Design Collaboration for Kenya** – in which young urban planners and architects discussed and reflected on urbanization. This competition encouraged collaboration between students in Kenya and abroad and addressed the importance of embedding urban design principles in larger urban planning processes. It also promoted inter-university collaboration as a platform for knowledge exchange and co-production in the creation of livable urban spaces and diverse human settlements. In essence, the competition tried to highlight and address a broad spectrum of urbanization issues – challenges, as well as opportunities – faced by both Kenya and the world.

The competing teams were composed of people from different disciplines, cultures, and backgrounds and, through this inter-disciplinary approach, various perspectives on the development of the next generation of Kenyan cities and towns were developed. Furthermore, due to the teams' Kenyan and non-Kenyan composition, opportunities emerged to combine local knowledge with international discourses. Of course, this was both inspiring and challenging, given the complexity of urbanization, as well as the set-up and structure of the competition, with students collaborating from different corners of the globe.

The competition was organized as part of a larger development programme – the Kenya Municipal Programme (KMP) – under which a diverse set of urban development issues are addressed. It was implemented during the first two quarters of 2016, reflecting the current urban development processes in Kenya, and with an outlook to the Habitat III global conference in Quito, Ecuador in October 2016.

1.2 The Kenya Municipal Programme

The Kenya Municipal Programme addresses support in service delivery and the improvement of governance in Kenya's urban centres under the responsibility of county governments. Its rationale builds on the fact that a significant fraction of Kenya's Gross Domestic Product (GDP) is generated in urban centres, particularly through manufacturing, wholesale and retail trade, transport and communication, utilities, banking and financial services, and real estate and construction. Thus, Kenya's urban centres must function properly to attain full economic potential and be developed and planned in a sustainable way. Currently, the challenges of unplanned urban growth, inadequate infrastructure, affordable low-cost housing, impoverished informal settlements, and increasing urban poverty, among others, have profoundly undermined the path to sustainable urban development. In addition, the urban authorities are highly dysfunctional, characterized by ineffective management and governance and low budgetary allocation for urban development. In light of all of this, the Kenya Municipal Programme was designed to address institutional strengthening; participatory strategic development planning; infrastructure and service delivery investments; and improved project management, monitoring, and evaluation.

Nakuru, Kenya © Flickr/ViktorDobai

1.3 Integrated Strategic Urban Development Planning

One of the Kenya Municipal Programme's objectives is to enhance and strengthen approaches to participatory strategic development planning in order to support county administrations in the formulation of Integrated Strategic Urban Development Plans (ISUDPs). These are the key instruments in guiding urban development and planning in the long term. They are also used to ensure that all perspectives are accounted for in a holistic and integrated manner.

1.4 Implementing partners of the Kenya Municipal Programme

The Kenya Municipal Programme, lasting from 2010 to 2017, is executed and implemented by the Kenyan Government through the Urban Development Department of the Ministry of Transport, Infrastructure, Housing, and Urban Development, formerly under the Ministry of Land, Housing, and Urban Development. It is mainly financed by the World Bank (which provided US$129 million in funding), with co-funding from the Swedish International Development Cooperation Agency (Sida).

UN-Habitat's support of the Kenya Municipal Programme is framed under the broad framework of "Support to Sustainable Urban Development Sector in Kenya" and financed by the Swedish Embassy in Kenya. Within this framework, UN-Habitat conducts capacity development, which entails training on various issues related to urban planning and development in the counties, and offers technical support for planning processes and curricula development for Kenya's planning schools.

STRUCTURE OF KENYA MUNICIPAL PROGRAMME

Source: UN-Habitat. Adapted from Kenya Municipal Programme, Project Document.

1.5 UN-Habitat at a Glance

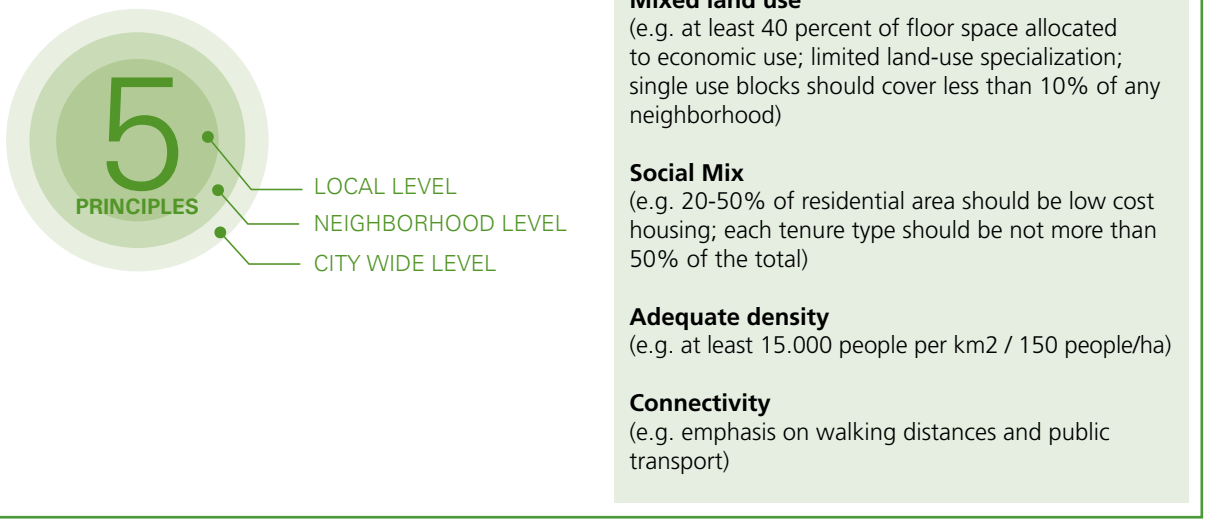
UN-Habitat is the United Nations programme working towards a better urban future. Its mission is to promote sustainable human settlements development and the achievement of adequate shelter for all. Cities are facing unprecedented demographic, environmental, economic, social, and spatial challenges. There has been a phenomenal shift towards urbanization, with 6 out of every 10 people in the world expected to reside in urban areas by 2030. Over 90% of this growth will take place in Africa, Asia, Latin America, and the Caribbean.

In the absence of effective urban planning, the consequences of this rapid urbanization will be dramatic. In many places around the world, the effects can already be felt: lack of proper housing and growth of slums, inadequate and out-dated infrastructure – be it roads, public transport, water, sanitation, or electricity – escalating poverty and unemployment, safety and crime problems, pollution and health issues, as well as poorly managed natural or man-made disasters and other catastrophes due to the effects of climate change. Mindsets, policies, and approaches towards urbanization need to change in order for the growth of cities and urban areas to be turned into opportunities that will leave nobody behind.

UN-Habitat, the United Nations programme for human settlements, is at the helm of that change, assuming a natural leadership and catalytic role in urban matters. Mandated by the UN General Assembly in 1978 to address the issues of urban growth, it is a knowledgeable institution on urban development processes, and understands the aspirations of cities and their residents. For close to forty years, UN-Habitat has been working in human settlements throughout the world, focusing on building a brighter future for villages, towns, and cities of all sizes. Because of these four decades of extensive experience, from the highest levels of policy to a range of specific technical issues, UN-Habitat has gained a unique and a universally acknowledged expertise in all things urban. This has placed UN-Habitat in the best position to provide answers and achievable solutions to the current challenges faced by our cities. UN-Habitat is capitalizing on its experience and position to work with partners in order to formulate the urban vision of tomorrow.

Towards this end UN-Habitat has created a new vision which makes a shift in focus and incorporates three essential urban elements into a new, integrated working methodology: Urban Legislation, Urban Design and Urban Finance, as a three-legged strategy in advancing sustainable urbanization. To underscore the importance of quality urban life, UN-Habitat has further proposed an urban planning and design approach anchored on 5 principles: adequate space for streets and public space in an efficient street network; mixed land use; social mix; adequate density; and connectivity. This supports the 3 key features of sustainable neighbourhoods and cities: compact, integrated and connected.

Source: UN-Habitat. Adapted from KMP Report.



UN-Habitat Five Principles of Neighbourhoh Planning @ UN-Habitat

2

Kenya Urbanization Context

2.1 Urbanization Trends

Similar to other Sub-Saharan African countries, Kenya is experiencing rapid urbanization. The history of Kenya's urbanization is traced to the coastal region where urban centres emerged centuries before colonial occupancy; as a result of intercontinental trade. More urban centres, especially in the interior, emerged during the colonial period (1895-1963), but significant urbanization took off immediately after Kenya's independence from British colonial rule in 1963.[1] The rapid influx of people from rural to urban areas followed the collapse of colonial administration, which had restricted rural-urban migration.

Although Kenya's urbanization is below Africa's average, the country is experiencing one of the highest annual average rates of change: 4.15% for 2016-2020. Indeed, while only 8.6% of the country's population (818,000 people) was urban in 1965, as of 2015, this number was 25.6% (11,978,000 people) and close to half of the country's population is projected to be urban in 2050 (42,636,000 people)[2] , which is slightly below the 2015 projected total country population of 46,749,000 people. This growing urban population will reside in urban centres of varying sizes, which the 2009 Kenya Population and Housing Census defines as "a built-up and compact human settlement with a population of at least 2,000 people defined without regard to the local authority boundaries".

This population shift compels policy makers and urban planners to revisit preparedness, in terms of strategies and adaptive institutional capacities required to sustainably manage the transition and attaining sustainable urban development. In doing so, balancing the needs of the current and future urban populations will be inevitable. Current urbanization presents an equal share of opportunities, as well as challenges; yet, the current planning system in Kenya remains inadequate in addressing these urbanization dynamics.

Urban Population size and proportion in Kenya

Year	2015	2020	2025	2030	2035	2040	2045	2050
Urban Population Size	11 978	14 738	17 973	21 767	26 148	31 091	36 595	42 636
Urban Population Size - Percentage of Total	25.6	27.9	30.3	32.8	35.5	38.2	41.0	43.9

Source: *United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision, CD-ROM Edition*

1. Republic of Kenya, (2012). 2009 Kenya Population and Housing Census: Analytical Report on Urbanization. Volume VIII, March 2012. Nairobi, Kenya National Bureau of Statistics

2. United Nations, Department of Economic and Social Affairs, Population Division (2014). World Urbanization Prospects: The 2014 Revision, CD-ROM Edition

2.2 Urbanization Distribution

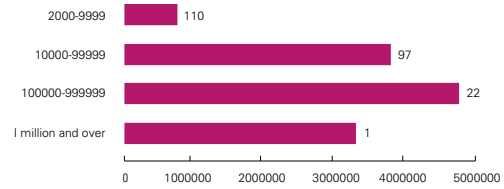
In 2010, Kenya enacted a new constitution that introduced a devolved government system comprising a national government and 47 county governments. Of these counties, only two – Nairobi and Mombasa – have an entirely urban population. Kiambu, Machakos, and Kisumu are over half urbanized, while the least urbanized counties are Meru, West Pokot, and Narok, with less than 10% of their population being urban in 2009. Other counties with comparatively higher urbanization in 2009 were Nakuru (45%), Isiolo (44%), Kajiado (41%), Uasin Gishu (39%), Kericho (38%), Migori (34%), Vihiga (31%), and Kilifi (25%).[3]

Agro-ecological and economic patterns influence the current distribution of urban centres. For instance, counties with economies driven by pastoral livestock farming (where the population is sparsely distributed) are the least urbanized, while those dominated by arable farming (where the population is more densely distributed) are more urbanized.

Kenya's main transportation infrastructure network has also influenced the distribution of urban centres, particularly the Northern Corridor infrastructure, which was commissioned in the colonial era (see Map 1). Indeed, 76% of Kenya's urban population lives within 15 kilometres of this corridor, resulting in the emergence of three key hubs: the coastal hub around Mombasa; the central hub around Nairobi; and the western hub around Kisumu, Eldoret, Kericho, and Nakuru.[4] This distribution is unbalanced, with areas that were considered unfavourable for infrastructure development becoming the least urbanized, that is, areas in northern Kenya. Recently, the Government of Kenya embarked on the development of the LAPSSET[5] corridor, which cuts across the northern Kenya frontier and is expected to catalyse urban development in the region.

The major urban centres (with over 150,000 people) comprised half of the total urban population in 2009. They include: Nairobi, Mombasa, Kisumu, Nakuru, Eldoret, Kikuyu, Ruiru, Kangundo-Tala, Naivasha, Thika and Machakos).[6] With the exemption of Mombasa, Nakuru, Eldoret, and Kisumu, these urban centres are all within the Nairobi Metro region. A significant share of Kenya's urban population is distributed across small towns, reflecting the early stages of urban development.

Proportion of Urban population by Size Category in 2009, Kenya



	I million and over	100000-999999	10000-99999	2000-9999
No.	1	22	97	110
Share of Urban Population	3109861	4617114	3665486	631109

Source: National Council for Population and Development, Kenya 2013

Major Urban Centres in Kenya, 2009

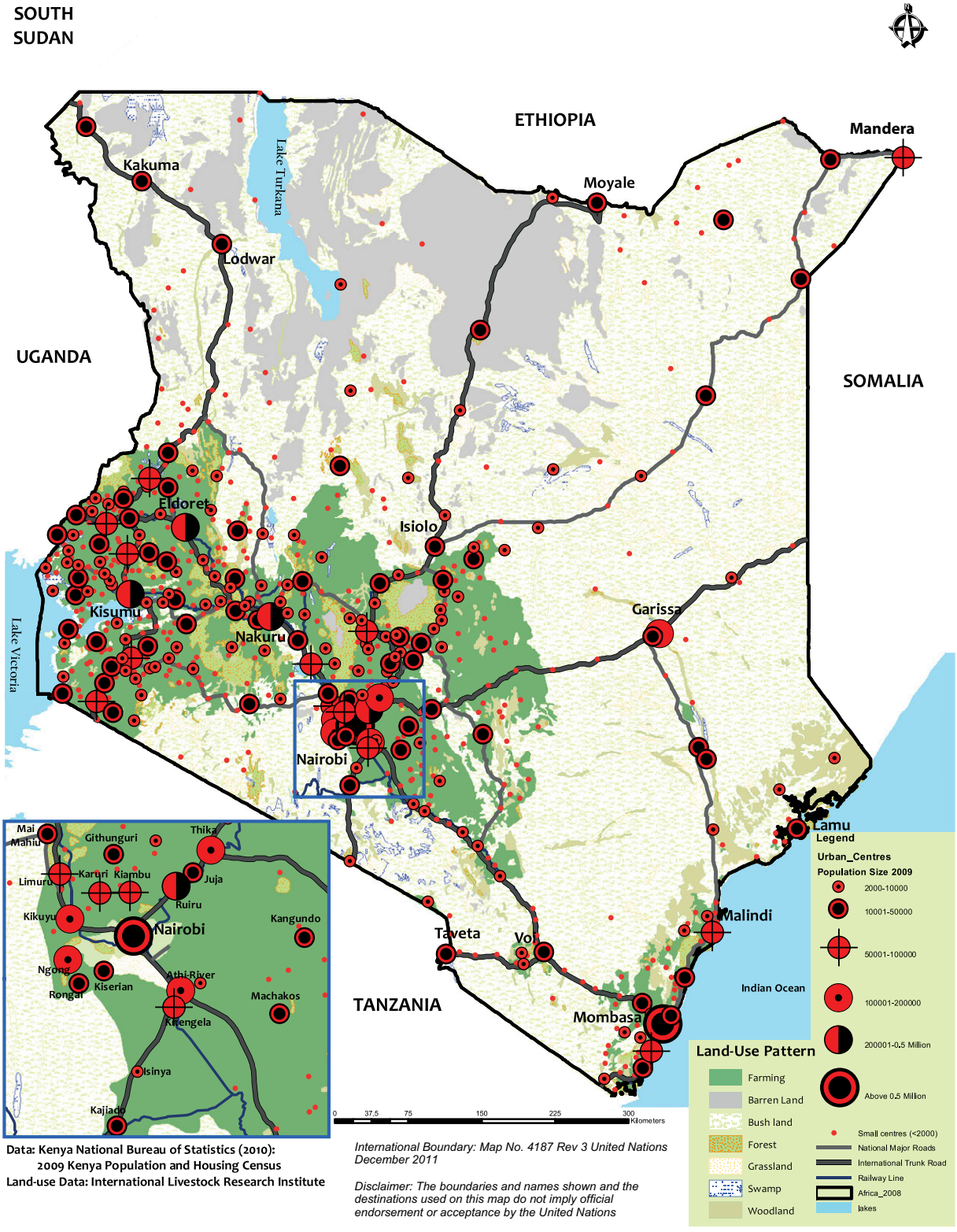
Urban Centre	Total Population	Core Urban Population	Peri-Urban Population	% of total population
KENYA	12,023,570	9,090,412	2,933,158	
Nairobi	3,109,861	3,109,861	0	25,9
Mombasa	925,137	905,627	19,510	7,7
Kisumu	383,444	254,016	129,428	3,2
Nakuru	367,183	343,395	23,788	3,1
Eldoret	312,351	247,500	64,851	2,6
Kikuyu	264,714	200,285	64,429	2,2
Ruiru	240,226	238,329	1,897	2,0
Kangundo-Tala	218,722	13,119	205,603	1,8
Naivasha	170,551	91,898	78,653	1,4
Thika	151,225	136,386	14,839	1,3
Machakos	150,467	40,819	109,648	1,3

Source: 2009 Kenya Population and Housing Census: Analytical Report on Urbanization.

2.3 Urbanization and Planning Issues in Kenya

The current state of Kenya's urban centres exemplifies the mismatch between rapid urbanization and adequate urban planning. Inadequate and underdeveloped infrastructure, severe shortages of affordable housing, dysfunctional land and housing markets, informal settlements, transportation and mobility challenges, socio-economic challenges, and environmental degradation all embody the poor performance of urban planning and design in Kenya. Despite this, Kenya's urbanization continues to record a positive correlation with economic growth.[7] For example, despite the Nairobi metro region having among the largest informal settlements in the region

3. Republic of Kenya (2012). 2009 Kenya Population and Housing Census: Analytical Report on Urbanization. Volume VIII, March 2012. Nairobi, Kenya National Bureau of Statistics
4. The World Bank (2016). Kenya Urbanization Review
5. LAPSSET (Lamu Port South Sudan Ethiopian Transport)
6. National Council for Population and Development, Kenya (2013). Kenya Population Situation Analysis report



Data: Kenya National Bureau of Statistics (2010):
2009 Kenya Population and Housing Census
Land-use Data: International Livestock Research Institute

International Boundary: Map No. 4187 Rev 3 United Nations December 2011

Disclaimer: The boundaries and names shown and the destinations used on this map do not imply official endorsement or acceptance by the United Nations

Map of major population centres in Kenya © UN-Habitat/Baraka Mwau (2014)

(e.g., Kibera, Mukuru area, Mathare Valley-Huruma area, and Kiandutu), it contributes a significant share of Kenya's GDP. This implies that Nairobi's growth is polarized, with evident socio-economic inequalities (as with many urban centres in Kenya).

Several planning interventions have been unable to adequately address these challenges. In particular, ineffective urban planning has resulted in a combined product of informal developments and "fragmented planned" developments. Likewise, secondary cities and medium sized and small towns suffer from a lack of or inadequate planning to cope with growth.

Urban Informality

Informal settlements and informal economic activities (street-related, markets, location of light-industries, etc.) are defining elements of Kenya's urban centres. Informal settlements have emerged as the defunct residential areas for affordable housing among urban, low-income earners, as well as areas offering income generation activities (mainly on the informal economy). The African Development Bank Group estimates that, in 2012, Sub-Saharan Africa had the continent's lowest urban population (32.8%), but the highest proportion of informal settlement dwellers (65%).[8] In 2014, an estimated 56% of Kenya's urban population lived in informal settlements.[9]

Tenement Housing in Embakasi, Nairobi-© Baraka Mwau

7. The World Bank (2016). Kenya Urbanization Review
8. African Development Bank (2012). "Urbanization in Africa." Inclusive Growth. 22 August 2016 <http://www.afdb.org/en/blogs/afdb-championing-inclusive-growth-across-africa/post/urbanization-in-africa-10143/>.
9. UN-Habitat, (2016). Slum Almanac 2015/2016: Tackling Improvement in the Lives of Slum Dwellers. Nairobi, UN-Habitat.

Housing in Kenya's informal settlements is mainly occupied on rental basis. However, the housing provided within informal settlements is highly inadequate, often characterized by poor design and structural quality, insecurity of tenure, inadequate infrastructure services and amenities, and inadequate public spaces. Furthermore, in various cases, they sit on environmentally sensitive or degraded areas. The following are key factors undermining the availability of adequate affordable housing for all: high cost of land and formal construction, difficulties in accessing finance (high interest rates), prohibitive tax regimes and regulations[10], and inadequate forward planning that can inform the strategic delivery of serviced land on the required scale. Additionally, some informal housing developments do not necessarily combine to form informal settlements, such as "middle-income" neighbourhoods produced through self-build housing, at times on informal land subdivisions (informal land markets), using unapproved building designs, or a combination of various formal-informal processes. Overall, poor planning and informal developments contribute to inadequate public spaces and streets.

As the informal land and housing markets fuel growth of informal developments, the failure of the formal sector ("modern sector") to create adequate job opportunities has pushed the increasing working-age population to partake in the informal economy. Annually, the working-age population increases by 800,000, while the economy only creates 50,000 modern sector wage jobs[11]. Urban planning has, however, been unable to effectively integrate the spatial implications of this economic reality. For example, in many cities and towns, informal traders are often in constant conflict with authorities over trading space rights, market places are inadequate, light industrial activities lack proper spaces – many often occupy road reserves and riparian reserves, resulting in environmental pollution, posing hazards and health risks.

Urban Sprawl

As many cities and towns in Kenya grow without proper planning and design, urban growth is converting prime agricultural land into urban real estate and engulfing rural settlements, which results in complex peri-urban edges and the degradation of vital ecological assets like forests and wetlands. While planned city/town extensions would most optimally address this transition and create more sustainable urban growth, most of the urbanization is spontaneous (informal), caused by

10. The World Bank (2016). Kenya Urbanization Review
11. The World Bank (2016). Kenya Urbanization Review

irregular land sub-divisions and spatial designs that perpetuate sprawl, often driven by market pressure to create exclusive suburban residential areas. This has had fundamental implications on food production, land markets, social equity, infrastructure development, and urban form, among other issues.

Furthermore, where new areas of development are planned on the urban edges, the application of single-use zoning has had little impact on addressing urban sprawl. In various cases, this growth has resulted in relatively low densities that, cumulatively, increase costs of infrastructure development, as cities and towns struggle to serve new areas. Meanwhile, the average beneficiary of such infrastructure investments decreases, reinforcing urban socio-economic inequalities. However, not all new developments on the urban edge are low density. Some new areas are growing informally or through isolated planning interventions, with building typologies of relatively high density and mixed-use, which implies that proper planning and design for urban extensions create opportunities to engage key actors in steering investments towards sustainable urban forms.

Transport and Mobility

Movement within and between cities and towns is a key factor underpinning sustainable urbanization. Yet, inefficient transportation characterized by traffic congestion is common in Kenya's major urban centres, while small towns often lack any defined mobility system. This will likely worsen if the planning and management status quo is maintained and if the urban population increases as projected in the coming decades.

Walking and informal public transportation (*matatus* and *boda bodas*) are used by a majority of Kenya's urban residents. The challenge of mobility is compounded by poor urban planning, particularly poor street networks, a lack of integrated land use and transportation planning, and under-investment in urban mobility. Informal systems have filled the gap, but they cannot effectively match demand. For example, in Nairobi, only 20% of formal commercial or industrial employment opportunities are accessible by walking or matatu.[12]

Pedestrians and streets in Kitui town © Baraka Mwau

Poor accessibility is mainly attributed to the public sector's inadequate institutional and financial capacity to invest and sustain public transport systems, though the private sector has typically lacked the incentive to roll-out efficient city-wide public transport systems.[13] Additionally, the disconnect between land-use planning and transportation systems causes increased demand, often particularly for motorized mobility.

Roads are currently Kenya's major transportation infrastructure. Thus, road efficiency – in terms of design and layout, network and connectivity, and level of service – is a high priority. Importantly, the link between urban form (shape, structure, and function) and transportation systems needs to be addressed holistically. The mono-centric form of many of Kenya's urban centres, as well as the high concentration of employment at the core and spatial expansion on the edges, has contributed to radial transport patterns that begin and/or terminate at the core, resulting in congestion.[14] Thus, integrated land use and transportation planning, as well as the availability of the right infrastructure and services, are critical for a sustainable city.

Basic Urban Services and Amenities

In addition to mobility services, cities and towns should provide adequate water and sanitation (including sewage and solid waste management), electricity, healthcare, education, recreational facilities, and public spaces. Most Kenyan urban authorities are unable to keep pace with current urbanization, resulting in a large service deficit.

Although access to basic services is better in urban areas than rural ones, on average, access is low and quality varies between formal and informal areas. In particular, the low level of services in informal areas is affected by insecurity of tenure, lack of inclusive planning, and municipal financing, as well as the haphazard form of many informal settlements, which has limited access to reticulating networked infrastructure, like water, sewage, and electricity. This shortage of basic services in informal areas compels poorer households to spend relatively higher proportions of their income on basic services.

12. The World Bank (2016). Kenya Urbanization Review
13. UN-Habitat (2012). *The Urban Mobility Challenge.* Nairobi, UN-Habitat
14. The World Bank (2016). Kenya Urbanization Review

Source: Digital Globe/ Google Earth

15. World Bank. 2013. World Development Indicators. Washington, D.C., World Bank.

16. The World Bank (2016).

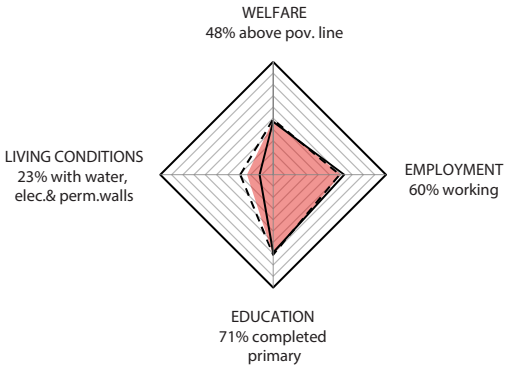
2.4 Urbanization and Structural Transformation

Kenya's urbanization, as in most sub-Saharan countries, is characterized by a number of socio-economic challenges, including comparatively low income levels (mainly generated within the informal sector), low levels of capital investment, low industrialization, high poverty, and inequality. This is a result of rapid urbanization without a matching change in the economic structures. For instance, the average share of manufacturing has declined over the past 15 years and services have remained at 52% of GDP in Africa.[15] Although data indicate there is a relation between urbanization and economic productivity in Kenya (see diagram opposite) the urbanization rate is less than 30%, with high poverty levels and agriculture accounts for a quarter of GDP, as manufacturing has declined from 13% of GDP in 2006 to 10% in 2015. Services increasingly drive growth and these are largely informal.[16]

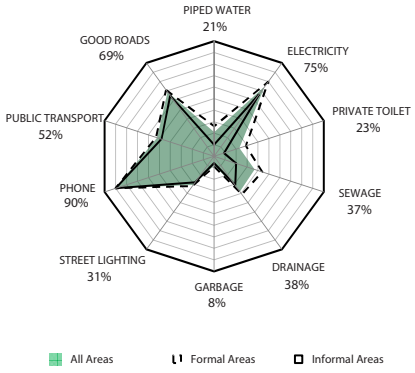
The informal economy generates most of the jobs in urban centres, as the formal sector has not grown as desired. Unemployment remains a major challenge, particularly for urban youth. The 2009 Kenya Population and Housing census reported that 53.1% of the urban population is engaged in the informal economy.

The impact of low income levels amid rapid urbanization includes increasing reliance on the informal sector for housing and employment, inequality, and poverty. Spatial-economic disparities are evident in Kenya's modern cities and towns (see diagram on opposite page.

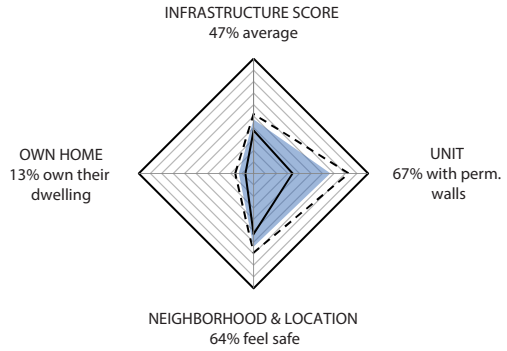
DEVELOPMENT DIAMOND



INFRASTRUCTURE POLYGON



LIVING CONDITIONS DIAMOND



Source: World Bank (2016)

2.5 Urban Governance and Capacity for Urban Planning

Good urban policies and the institutional capacity for good urban governance and management are inadequate in most of Kenya's urban centres. Prior to the enactment of the 2010 constitution, local authorities were mandated by the Local Governments Act to manage urban centres. Post 2010, county governments were mandated to appoint urban management boards, the performance of which is critical for sustainable urban development in Kenya. Yet, as of 2015 (3 years after formation of county governments), most counties had not established such boards.

The need for effective municipal institutions for Kenya's urban centres is critical for sustainable urban development. They institutions are important in formulating and implementing strategies to address urban challenges, including guiding infrastructure and housing investments, steering urban renewal, formulating policies, enhancing revenue, rationalizing land and housing markets, and undertaking urban planning and management. However, in order to execute their mandate effectively, they need human and fiscal resources and must be supported by enabling policies and legislation. In 2015, Kenya had 198 accredited planners-according to a draft gazette notice by the Physical Planners Registration Board-serving a population of over 45 million people, creating a clear gap in capacity.

Kenya's urban centres, including the largest city, Nairobi, continue to grow without comprehensive spatial development plans and growth management strategies. Until recent planning processes were initiated for its major cities and towns, urban planning generally underperformed in sustainable urban development. The urban planning and design capacity must address urban informality, inclusive growth, strategic urban investments and financing, municipal revenue enhancement, urban legislation, and environmental and climate change concerns.

Proper urban governance must be accountable, responsive, equitable, effective, and efficient and must follow the rule of law, a strategic vision, and a participatory (democratic) framework. County governments must, thus, first address weaknesses in planning capacity, administration, and urban management institutions.

Housing, Kisumu, kenya © Baraka Mwau

NYERI

Population: 119,353
Planning Area: 267 km²
Location: Nyeri County, 0° 25' 0" South 36° 57' 0" East
Function: County headquarters and regional growth center
Urban Economy: Agriculture-related sectors, Commerce and service, informal economy

EMBU

Population: 60,673
Planning Area: 102 km²
Location: Embu County, 0° 32' 0" South 37° 27' 0" East
Function: County headquarters and regional growth center
Urban Economy: Agriculture-related sectors, Commerce and service, informal economy

KITUI

Population: 109,568
Planning Area: 580 km²
Location: Kitui County, 1° 22' 0" South 38° 1' 0" East
Function: County headquarters and regional growth center
Urban Economy: Trade and Commerce & service, informal economy

NAKURU

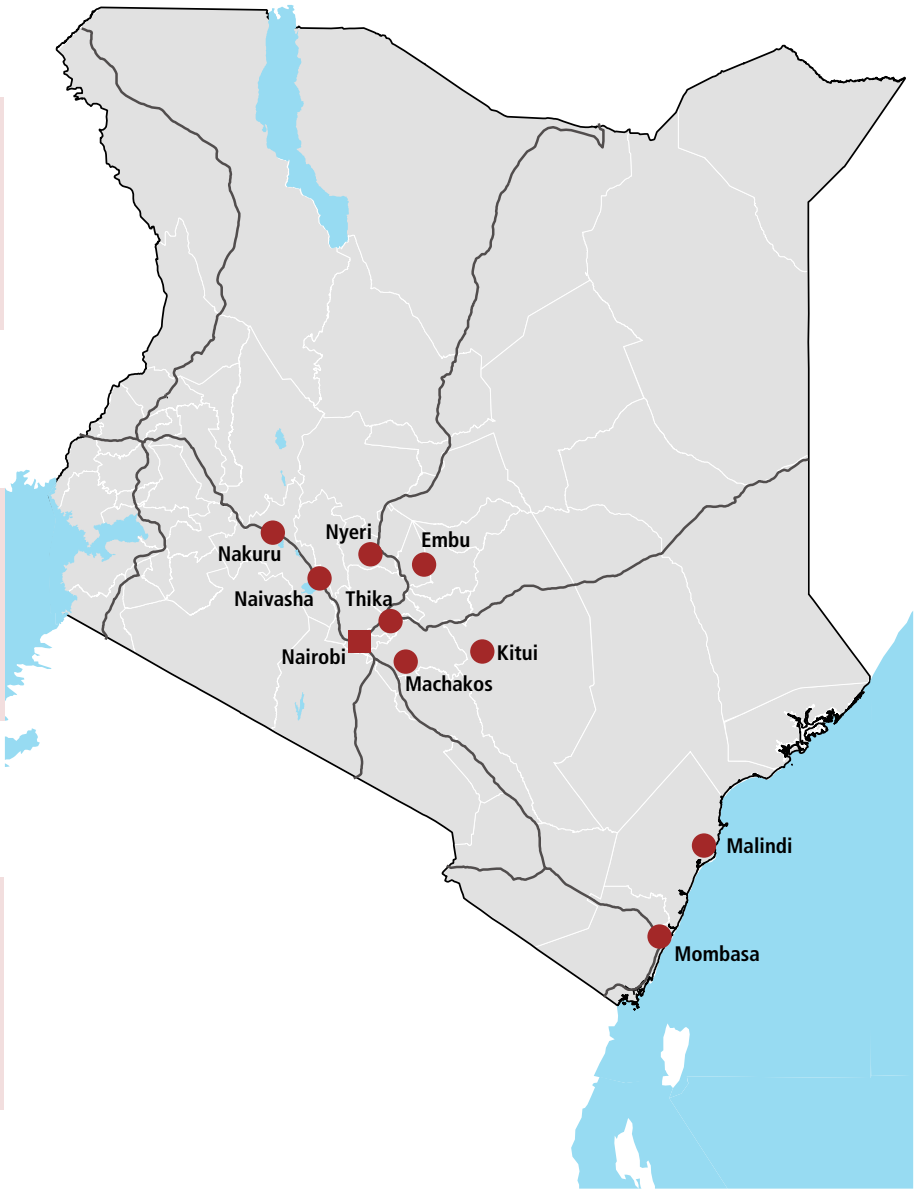
Population: 286,411
Planning Area: 613 km²
Location: Nakuru County, 0° 17' 0" South 36° 4' 0" East
Function: County headquarters and regional growth center
Urban Economy: Agriculture-related sectors, industrialization, Tourism, Commerce and service, informal economy informal economy

THIKA

Population: 109,568
Planning Area: 113 km²
Location: Kiambu County,1° 3' 0" South 37° 5' 0" East
Function: Sub-County Headquarters, Industrial growth center and part of Nairobi metropolitan region
Urban Economy: Industrialization, Real Estate, Commerce and Service, informal economy

NAIVASHA

Population: 169,142
Planning Area: 951 km²
Location: Nakuru County, 0° 43' 0" South 36° 26' 0" East
Function: County headquarters and key growth center
Urban Economy: Agriculture-related sectors, industrialization, Tourism, Commerce and service, Informal economy



MACHAKOS

Population: 150,041
Planning Area: 524 km²
Location: Machakos County, 1° 31' 0" South 37° 16' 0" East
Function: County Headquarter, Part of Nairobi Metropolitan region, Economic and Administrative center
Urban Economy: Tourism, Trade and Commerce, Informal economy

MOMBASA

Population: 938,131
Planning Area: 288 km²
Location: Mombasa County, 4° 3' 0" South 39° 40' 0" East
Function: 'Port City' and regional economic hub, County Headquarters, global tourist destination
Urban Economy: Port and Transport, Tourism, Real Estate, Trade and Commerce, Manufacturing, Informal economy

MALINDI

Population: 118,265
Planning Area: 677 km²
Location: Kilifi County, 3° 13' 0" South 40° 7' 0" East
Function: Sub-County Headquarters, county/regional growth center and tourist destination
Urban Economy: Tourism, Trade and Commerce, Informal economy

Source: UN-Habitat. Adapted from KMP Report.

Likoni, Mombasa © Digital Globe & Google Earth. Image Date 2016

3

International Urban Planning and Design Competition

3.1 Urban Design Competition: Context and Process

Kenya's urban centres are undergoing dramatic population growth, with some 50% of the population expected to be urbanized by 2050. A significant share of this growth will be recorded in secondary and intermediate cities. This transition presents an equal share of challenges and opportunities to urban planning and development in Kenya.

Some of the more significant challenges undermining sustainable urban development in Kenya include a poorly functioning land and housing sector, underemployment, urban poverty and inequality, informal settlements, urban sprawl, ineffective or lacking urban planning and design, and inadequate infrastructure and urban services. The new Constitution of Kenya devolved the responsibility to govern and manage urban areas to the 47 Counties of Kenya. Furthermore, capacity and knowledge limitations also present challenges. To address these various hurdles, the international urban planning and design competition sought to demonstrate the value of urban planning and design in guiding the transformation of urban centres by scaling it down to the lowest level. This focus will be key in implementing policies and strategic plans currently being formulated. At the same time, the competition was designed to help develop the capacity of Kenya's future urban planning and design professionals to deal with the prevailing urbanization landscape.

The specific objectives of the design competition were to:

- To enhance the urban design component of Integrated Strategic Urban Development Plans;
- To present planning students with an opportunity to participate in the planning process, where they can apply acquired theoretical planning and design knowledge;
- To advance students' applied learning skills; and
- To act as an opportunity to illustrate the opportunities and limitations of the Integrated Strategic Urban Development Plans in developing the next generation of Kenyan cities and towns, particularly from a spatial perspective.

3.2 Competition Sites

The competition invited students to undertake their work in selected urban sites as part of the Kenya Municipal Programme and the formulation of Integrated Strategic Urban Development Plans. These sites varied in character, contextual location, and size, making the competition address issues in different geographical, topographical, typological, and socio-economic conditions. Thus, urban planning and design was undertaken on different urban scales, ranging from city-districts to neighbourhoods to specific streets. The competition was based on the draft Integrated Strategic Urban Development Plans developed for the following cities and towns: Mombasa, Nakuru, Naivasha, Nyeri, Machakos, Thika, Embu, Kitui, and Malindi.

CENTRAL BUSINESS DISTRICT | ENVIRONMENT | INFORMAL ECONOMY | INFORMAL SETTLEMENT | MIXED USE DEVELOPMENT | PUBLIC SPACE | TOURISM | TRANS-PORTATION | WATERFRONT

NAIVASHA

The site is a section of the lakefront. Inadequate housing, infrastructure, limited public space and mobility challenges, continue to undermine Naivasha's sustainable development. Expectations of the design:

- Connection between Naivasha town and Lake Naivasha
- Harness opportunities for local economic development
- Revitalization of the lakefront area

E PS TO W

NAKURU

The eastern section of Machakos Town, and comprises three major areas: the urban settlement, the riparian corridor and the rural settlement across the river. The urban settlement and the riparian corridor are challenging as there is inadequate infrastructure and ageing housing. Environmental challenges such as flooding are also prominent. Expectations of the design:

- Revitalization of the settlement and the riparian corridor
- Examining the spatial relations of the urban-rural interface
- Possibility of urban agriculture

IE MUD PS TR

NYERI

The site consists of the railway station area, the central park, the matatu and bus park area, and the hawkers market. Challenges of traffic and street vendor congestion, conflicts over space, poor integration of land-uses, and inadequate infrastructure to support the functions are among the major challenges undermining the optimal functioning of the area. Expectations of the design:

- Integration of uses in the area and development of the site as Transit Oriented Development
- Enhance the public space system, connectivity and place making

E IS

MACHAKOS

Witemere is an informal settlement within Nyeri. Like other informal settlements, Witemere is characterized by inadequate infrastructure, amenities and housing, tenure contestations, unemployment and low incomes, and vulnerability to disasters. Expectations of the design:

- Spatial, economical and functional integration of the informal settlement to the wider urban development
- Addressing the environmental challenges

IS E MUD TR

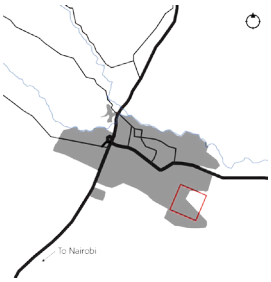
EMBU

The site is a section of the relatively compact CBD, which is significant in terms of commerce and financial functions, however is marred by conflicts between vehicular traffic, pedestrian, and hawkers, combined with inadequate parking arrangements and poor integration of various uses of the streets. Expectations of the design:

- Create a pedestrian-friendly environment in the CBD area
- Integration of the stadium in the CBD area
- Solving the parking problems in the CBD area

CBD PS TR

THIKA

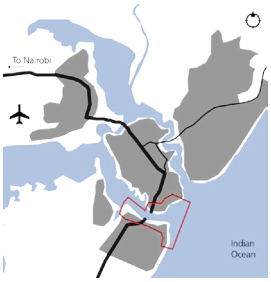


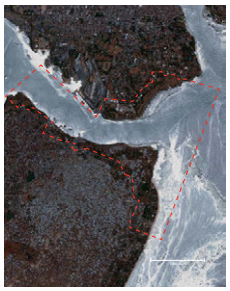
The site is a secondary CBD development at Kiang'ombe, one of the rapidly growing mixed-use sections of the town. Inadequate infrastructure, ineffective governance and management, poor urban planning resulting in informal areas, loss of public space, congestion, environmental degradation, as well as physical challenges such as a steep topography in some sections of the town. Expectations of the design:

- Develop the site into a viable second CBD and examine the relationship between both CBDs
- Create a pedestrian-friendly environment in the CBD area while solving traffic congestion problems
- Integration of the stadium in the CBD area

CBD MUD PS

MOMBASA



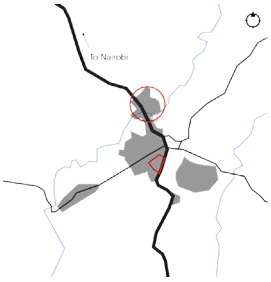


Covering the Likoni ferry crossing areas, Mama Ngina Drive and the waterfront section on the opposite side including Shelly beach, the site consists of public spaces. Despite the city's expansive coastline, inadequate planning and ineffective land administration and management has caused significant issues. In the process, a large section of the shoreline has been privatized, limiting the number of waterfront public spaces publicly accessible. Expectations of the design:

- Revitalization of Mama Ngina Drive and Likoni waterfronts
- Integration of recreational functions with formal and informal activities

PS TO TR W

KITUI

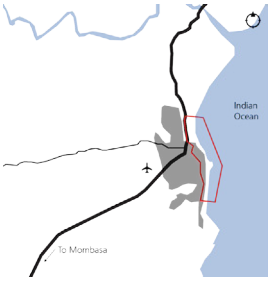


The Kunda-Kunda bus park/market area is a major transit area for the town linking it to centres in the region and in Kenya. It is also a significant hub for informal economic activities. Despite the vital economic and transportation function played by the park, its optimal performance is hampered by poor connectivity; lack of a site plan that can integrate the functions effectively; highly inadequate infrastructure facilities and space; congestion and capacity issues; environmental challenges; and poor management. Expectations of the design:

- Redevelopment of the bus-park into a retail market
- Integration of formal and informal economic activities
- Revitalization of the steam flowing through the site

IE PS TR

MALINDI



The site comprises of the waterfront area of the town. This site has a public beach, Malindi beach, informal settlements, and numerous tourist resorts and facilities. Informal settlements, poorly articulated densities, poor connectivity and accessibility to the waterfront by the public, inadequate infrastructure and environmental degradation are some of the challenges facing the site. Additionally, there are environmental concerns of conserving Malindi's the marine ecosystem, following the poor planning and development along the waterfront. Expectations of the design:

- Revitalization and redevelopment of the waterfront
- Particular attention to social inclusivity, economic productivity, public-space enhancement, cultural heritage and environmental sustainability

E IS TO W

Source of all images: Digital Globe/ Google Earth

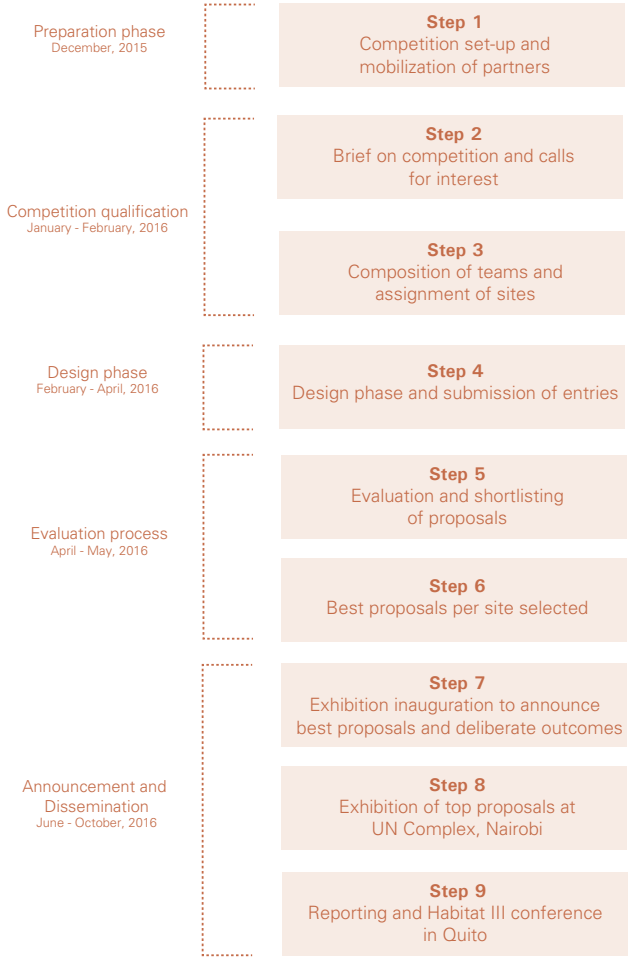
3.3 Setting up and implementing the competition

The competition aimed to create momentum for greater urban design uptake by demonstrating the value of urban design in the implementation of Integrated Strategic Urban Development Plans in Kenya. The teams were expected to analyse their assigned site, including the contextual conditions and how it fit the proposed Integrated Strategic Urban Development Plan in order to understand the inherent challenges and opportunities. Each team submitted a proposal on how the site could be developed through an urban planning and design framework, either in the format of urban design guidelines or a specific project proposal, while placing emphasis on the conceptual idea rather than on a detailed solution.

The competition ran from January to June 2016 and over 700 students from around the world participated. These students were grouped into 150 teams and 65% of the teams (97 entries) successfully submitted their proposals in time for the deadline on 20 April 2016. The competition process involved seven stages and is illustrated in the diagram below.

Competition teams were required to submit an Abstract (MS Word and PDF format) and a maximum of 2 AO posters for their proposals (JPEG and PDF format). Only one submission was permitted per team.

The competition used an online portal of UNI, the UN-Habitat partnership with universities worldwide. UNI developed an online system that enabled participants to submit applications and the Competition Secretariat to manage the entries. This system also enabled an online interaction between the Secretariat and participants during the period allocated for 'Question and Answer'. Further, UNI promoted the competition and provided graphic design support and published the results online.



Over 700 applications were received by the Competition Secretariat

150 international competition teams entered into the competition

65% of the competition teams submitted their proposals

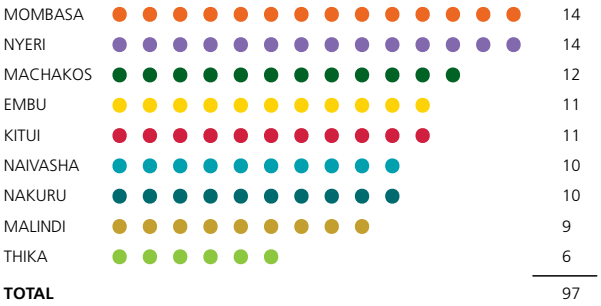
3.4 Evaluation of Proposals

The proposals were judged by an independent jury, comprising of professionals drawn from diverse institutions and areas of expertise, ranging from: urban planning and design, architecture, urban development, and urban policy, and those with knowledge of Kenya's urbanization landscape.

The work of the Jury entailed assessment of the submissions in a two phase process. The first phase involved assessing all entries and short-listing proposals based on the submission requirements and the basic evaluation criteria provided by the Competition Brief. The second phase entailed grading and discussion for each respective short-listed entry, selecting the best proposal per site and the overall competition winner.

From the first phase, 38 proposals qualified for the second and last phase of evaluation. These entries were assessed based on the following, more elaborated criteria;

- **Response to the competition brief:** How well the overall concept and idea responds to the aim of the competition.
- **Response to the actual site:** How it relates to the context and particular conditions of the site and town in question.
- **Technical viability of the solution:** Is the solution technically viable?
- **Methodology and analysis:** Use of appropriate design methods, such as contextual research, secondary research, reflection, critique, analysis, and empirical evaluation.
- **Conceptual and theoretical basis:** Application of philosophical, conceptual, and theoretical thinking to solve complex urban challenges.
- **Thematic innovations:** Innovative urban design solutions for particular themes
- **Creativity and originality:** Creativity and originality of the overall proposed scheme, including "spatialization" of complex socio-economic, political, and environmental issues.
- **Professionalism and intellectual rigor:** The depth of the design solution, including claims and their supporting evidence.
- **Communication:** Clear communication of key aspects of the solution, design approaches, and arguments for the proposed solution
- **Presentation:** Clarity of the presentation materials, including posters and extended abstract and strict adherence to competition guidelines.
- **Working with complexity:** Engagement with complex socio-economic, political, and environmental issues and developing appropriate, yet innovative, spatial solutions for these at different levels.
- **Mastery of urban design:** Demonstrating mastery of urban design theory and practice and applying it to solve complex urban challenges in the specific socio-cultural, economic, and political context.
- **Contribution:** Potential to contribute to theory,



Distribution of submitted entries among counties

Members of the Jury

Gustaf Asplund
Urban Advisor, Sweden/Ethiopia

Toma Berlanda
Director, School of Architecture, Planning and Geomatics, University of Cape Town, South Africa

Hannah Maranga
Urban Planner, County Government of Kiambu, Kenya

Isaac Karanja Mwangi
Kenya Institute of Planners / University of Nairobi, Kenya

Mugure Njendu
Architectural Association of Kenya, Nairobi, Kenya

Alfred Omenya
Principal researcher and consultant, Eco-Build Africa (Jury Moderator), Nairobi, Kenya

Klas Groth
Technical Advisor, Urban Planning and Design Branch, UN-Habitat, Nairobi, Kenya

practice, and discourse in urban design.

Evaluation was done within similar submissions, i.e., per town or site. After examining scores and discussing the substantive content of each submission, the best proposal per town/site was selected. Ten submissions were selected, one per town/site, with the exception of Malindi, where the jury selected two proposals. These are indicated in the text box on the following page. Importantly, the 38 proposals were not evenly distributed across the nine sites. Some sites had more entries qualifying for the second phase than others. Overall, Naivasha, Embu, and Thika had the fewest submissions qualifying for the second phase of evaluation.

This was followed by discussions to identify the overall competition winner. After a process of elimination, 3 proposals were considered to be outstanding, from which the jury chose one proposal as the competition winner and the other two as the runners-up. The other 7 proposals were recommended for special mention. The results of the competition were revealed at an inauguration ceremony in June 2016 and all selected proposals were exhibited at the UN complex in Nairobi.

Jury examining the competition entries © UN-Habitat Baraka Mwau

Geographic distribution of participants, UN-Habitat, 2016

Best Proposal per Town/Site

Winner	Machakos, Team 3005 "Machakos. Urban-rural interface"
Runner-up	Nakuru, Team 2014 "Urban Nodes – ToD Strategy for Nakuru"
Runner-up	Thika, Team 6006 "Dynamic Trade Centre: Kiang'ombe CBD"
Special Mention	Nyeri, Team 4014 "Legal Security, Work, Education, Health"
Special Mention	Naivasha, Team 1001 "Rise. Raise. Rose"
Special Mention	Mombasa, Team 5008 "Mombasa: New Urban Waterfront For A Historic New City"
Special Mention	Embu, Team 7017 "Embu - Pedestrian-friendly environment in the CBD area"
Special Mention	Kitui, Team 8008 "Co-dependent Systems in Developing Economies"
Special Mention	Malindi, Team 9003 "Malindi Alive" Team 9009 "Malindi Waterfront as Socio-ecological Infrastructure"

Mambrui ©DigitalGlobe&Google Image. Image Date 2014

4

Proposals by City

4.1 Machakos

Overall Competition Winner

“Urban – Rural Interface” – Machakos (Team 3005)
This proposal aims to connect the three main areas of the site: the riparian corridor, the low-income degenerated urban neighbourhood, and the rural areas, which offer a variety of uses for agriculture and urbanization.

The proposal places emphasis on diversifying the site’s land uses, blending the residential character with the agricultural character of the rural area and allowing for increased trade and production. It seeks to build synergy within the rural-urban interface and utilizes sustainable production models, which allow for the preservation of the rural area, while also promoting its development. A fourth element of the design reconsiders the city’s borders, with a proposal for a new connection with the other side of the riverbank; environmental design elements are also incorporated. Lastly, the proposal takes into account the importance of cooperation and negotiation between the relevant agents and actors involved in such processes, in order to achieve sustainable urban development.

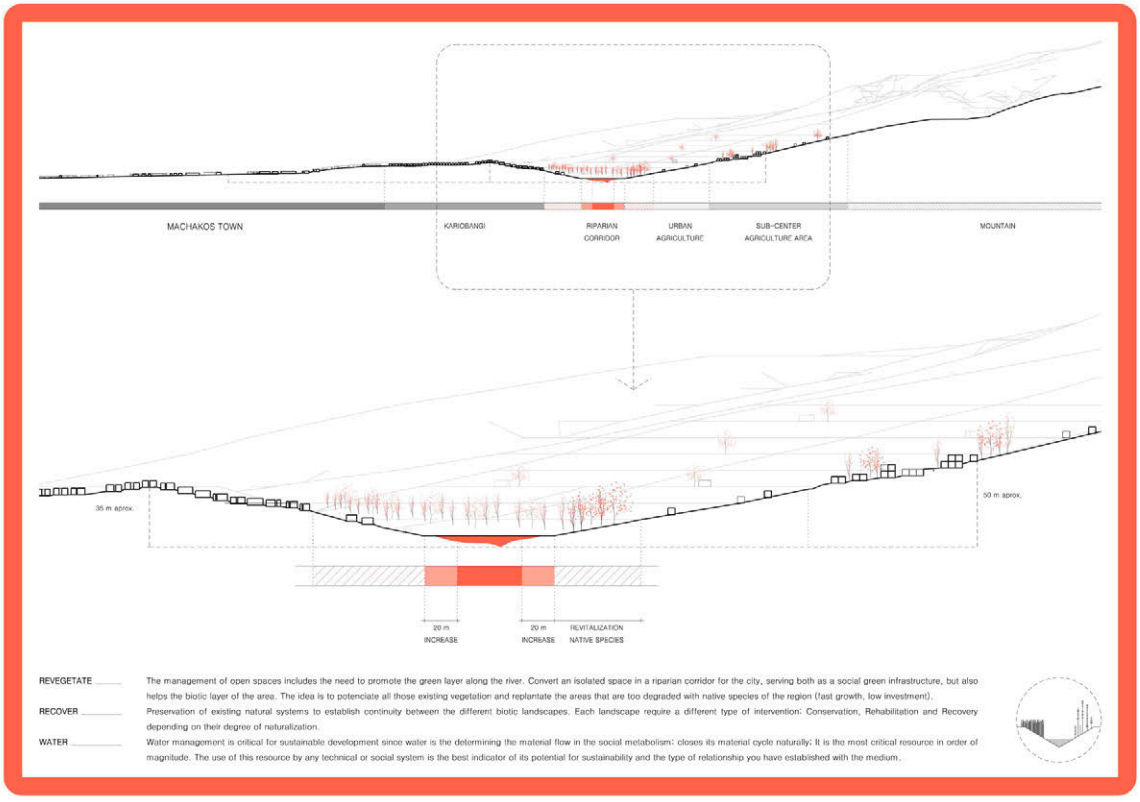
Team members:

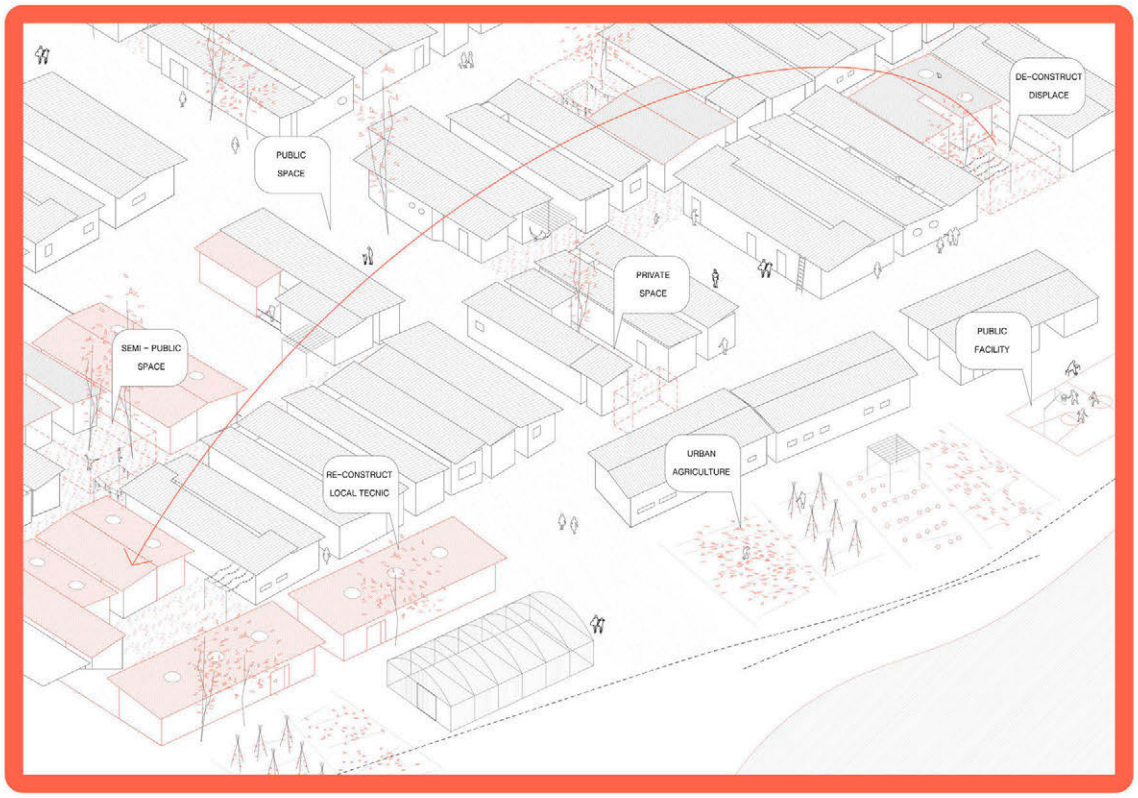
ETSAM - Technical University of Madrid
Román Alonso Gómez

ETSAV - Technical University of Catalonia
Sara Ferrán Ballus, María Ferré

University of Nairobi
Paul Omanwa

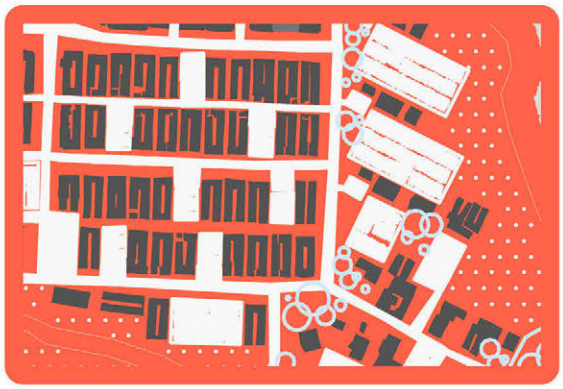
NOTE:
For the overall winning proposal, the second poster submitted by the team has been split and sections enlarged in order to enhance readability of the text.


MACHAKOS TOWN
KARIOBANGI
RIPARIAN CORRIDOR
URBAN AGRICULTURE
SUB-CENTER AGRICULTURE AREA
MOUNTAIN
35 m aprox.
50 m aprox.
20 m INCREASE
20 m INCREASE
REVITALIZATION NATIVE SPECIES
REVEGETATE
The management of open spaces includes the need to promote the green layer along the river. Convert an isolated space in a riparian corridor for the city, serving both as a social green infrastructure, but also helps the biotic layer of the area. The idea is to potenciate all those existing vegetation and replantate the areas that are too degraded with native species of the region (fast growth, low investment).
RECOVER
Preservation of existing natural systems to establish continuity between the different biotic landscapes. Each landscape require a different type of intervention: Conservation, Rehabilitation and Recovery depending on their degree of naturalization.
WATER
Water management is critical for sustainable development since water is the determining the material flow in the social metabolism: closes its material cycle naturally; It is the most critical resource in order of magnitude. The use of this resource by any technical or social system is the best indicator of its potential for sustainability and the type of relationship you have established with the medium.

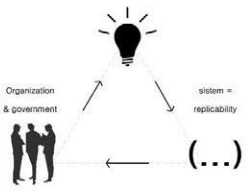


MACHAKOS

URBAN-RURAL INTERFACE

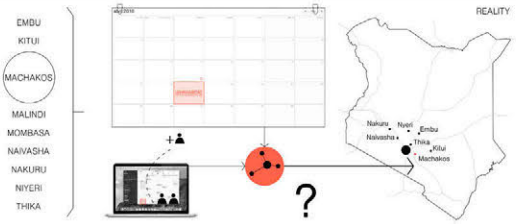


POSTER 2



THE COMPETITION AS A PRETEXT

Un-Habitat organize a competition inviting students to generate IDEAS about urban planning and design, that complement the completion of the planning processes of nine towns in Kenya. But what if we go further? Can be, that proposal, more than a simple idea?



LOOKING FOR MORE THAN A SIMPLE IDEA - REALITY

We found it interesting as we understand the competition as a pretext to exercise and rethink some of the lines of the current property urbanism and housing projects, in a REAL context. And thats the point, this competition is characterized by the fact that is a real demand. That's why we are ambitious in our approach: we are trying to START A PROCESS to amend the urban (and social) barriers existing now in the Machakos Town, providing a first scheme that sintetize the role of each of the agents involved.We are focused on designing a workable collaborative process for Machakos but, working with an objective and distant approach, we try to create a replicable system for other cities with similar characteristics.

CONTEXT

KENYA

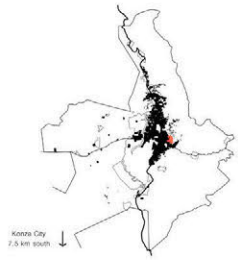
A country in Africa and member of the East African Community (EAC). Its capital and largest city is Nairobi. Kenya covers 581,309 km2 , and had a population of approximately 45 million people (in July 2014).

MACHAKOS / NAIROBI

Machakos town is situated 60km southest Nairobi, the largest city of Kenya. The proximity to the capital and its situation to the south, makes Machakos an important satellite city.

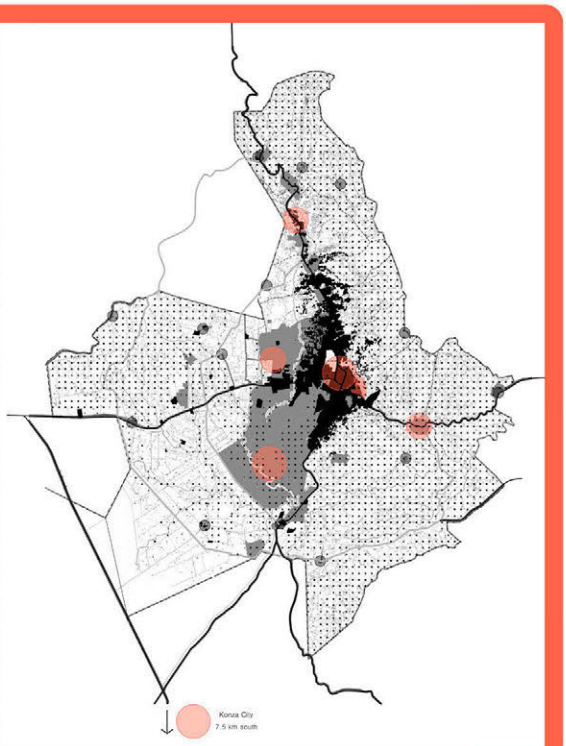
MACHAKOS COUNTY

A county of Kenya. Its capital is Machakos. The county has a population of 1,098,584. The county borders Nairobi and Kiambu counties (W), Embu (N), Kitui (E), Makueni (S), Kajiado (SW), and Muranga and Kirinyaga (NW).

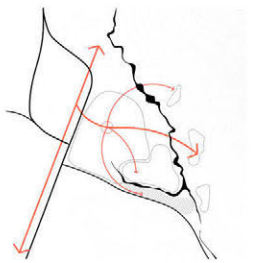


MACHAKOS TOWN

A major urban centre, one of the largest town in Machakos County. In 2009 had a population of 150,141 people, projected to grow to 350,000 in 30 years. Is surrounded by hilly terrain, with a high number of family farms.

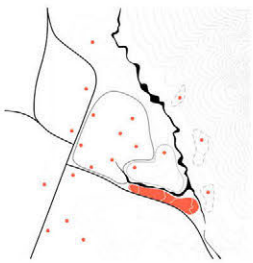


ANALYSIS



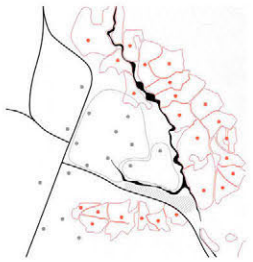
RELATIONAL ANALYSIS

Transport and communication network between the city and the area proposed.



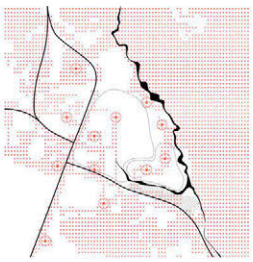
ANALYSIS OF URBAN CENTRALITIES

Major urban centers with the possibility of being interconnected.



PRODUCTIVE SPACES + DEVELOPMENT OPPORTUNITIES

Development possibilities areas as productive spaces mainly engaged in agriculture.

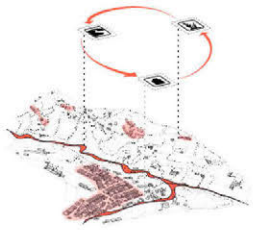


MAJOR URBAN FOCAL POINTS

Analysis of areas with potential to be developed in the proposed urban planning.

A_ URBAN PLANNING

1_ CONNECTIVITY

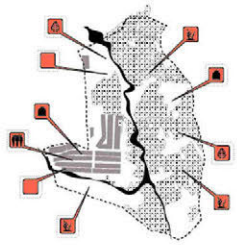


A1_ THREE MAIN AREAS CONNECTION

(slum area, riparian corridor, and agricultural area)

The propose has as it's aim to generate the dialogue between the 3 areas realised on the site. Do to the riparian corridor and the river's environment it is possible to engender a close realtion between the slum's urban area and the rural area featured by it's agricultural use and it's possibilities to be urbanized.

2_ REVITALIZATION

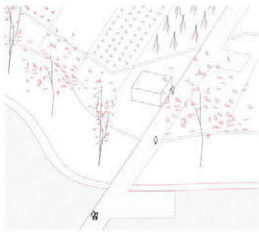


A2_ DIVERSITY OF USES

(diversifying city. Producing city)

The revitalization of the urban fabric is given by a diversification in land use. The residential character of the urban area and the agricultural character of the rural area are modified intensifying existing uses of trade and production and implementing new applications.

3_ SOSTENIBILITY



A3_ RURAL-URBAN INTERFACE

(A new way of development)

The proposal includes the possibility of developing new urban models that allow the dialogue between the rual environment and urban land. The new rural-urban interface is based on sustainable production models which enable the preservation of the local but also pomoting its development.

4_ IDENTITY

A4_ FORWARD / BACKWARD

(Re-thinking the city's border)

The current area corresponds to a degraded condition limit their area. The possibility of a new connection with the other reverside reinvents the position edge of the urban area.

5_ PROCESS

A5_ COOPERATION AND NEGOTIATION

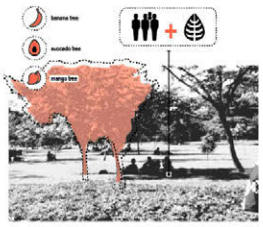
(Participative process and bottom-up iniciatives)

Urban planning areas like this should not be done only from the institutions. The proposal should be realized based on cooperation and negotiation between agents and actors involved in the process in order to guarantee their viability and proper development.

B_ ENVIRONMENT

B1_ RIPARIAN CORREDOR AS A GREEN INFRASTRUCTURE
[A great alternative for sustainable development]

The river as an element that allows the connection becomes urban green infrastructure. Improving the environment, preserve the environment and enhance natural areas in the city. The rural-urban interface generated may extend along the river, producing similar situations in other parts of the urban fabric.

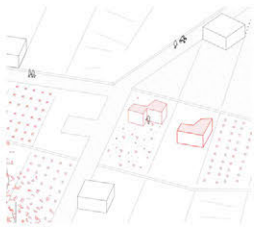


B2_ TREES'S IMPORTANCE
[Green areas and its city benefits]

Promote the use and planting of fruit trees detected already on the site [mango, avocado, banana] in order to improve the environment quality, strengthen compacting soil, preserve native species, and promote as a meeting point and social activity in the community.

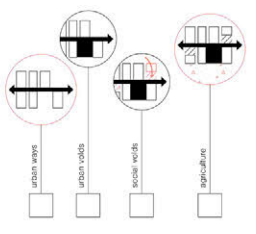
B3_ EDUCATION
[Education + training as a way of preservation]

• Education on the importance of preserving and protecting the environment, on local issues, and recycling,
• Training of qualified personnel with the aim of generating a responsible production of goods with the territory and develop specific knowledge for preservation.



B4_ MODEL SITE FOR URBAN AGRICULTURE
[New paradigms for sustainable urbanism]

A new paradigm that allows the preservation of the agricultural character of the rural area and its development unfold. The spirit is also reflected on the city that establishes a dialogue with the other riverside. You can replicate and succeed elsewhere as sustainable possibility for urban development.



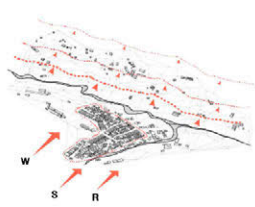
B5_ TIME'S PROCESS: PRESERVATION AND EVOLUTION
[Environmentally friendly and sustainable city development]

That process should happen over time allowing the development of natural areas and the inclusion in the social sphere of green spaces. It is planned over time that allows the consolidation of new models of urban life actions, environmentally friendly and committed to a sustainable city.

C_ INFRAESTRUCTURE

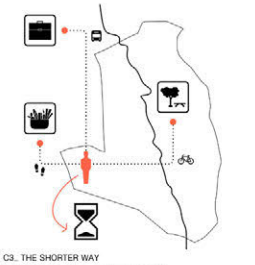
C1_ CONNECTING WITH THE CITY
[infrastructures to conect up]

Inclusion of urban areas to the city through the connection to the main roads. At the meeting public spaces are created by modifying the border with the aim of establishing a dialogue between this two areas.



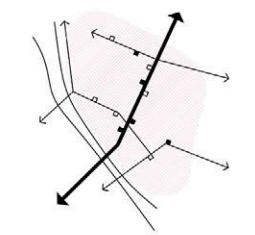
C2_ INFRASTRUCTURES
[water, sanitation, roads]

Improving urban infrastructure in the slum area is critical to its revitalization and inclusion as part of the city fabric. Intensification and improvement of existing networks to enable proper operation is proposed.



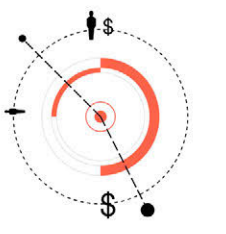
C3_ THE SHORTER WAY
[re-thinking distances and ways of life]

Efficiency in planning is crucial to its viability and sustainability. The proposal aims to bridge the gap by a city that allows its inhabitants to live comfortably. Distances to economic centres, operating points and transport networks are reconsidered.



C4_ OVERLAPED INFRASTRUCTURES
[valuing the preexistence]

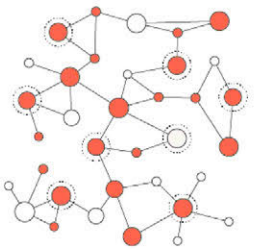
The proposal on urban infrastructure plan overlaps the existing infrastructure, trying to strengthen the networks that are configured with the passage of time. The proposed system is based on the improvement and enhancement of existing roads and urban networks supporting improvement.



C5_ PROJECT AFFECTED PERSON (PAP)
[trying to reduce the impacts]

The process of establishing the urban plan should produce minimal impact on the inhabitants. Project affected person (PAP) include business tenants, residents, landowners. It is intended in the urban plan generate the minimum displacements and maximum compensations.

D_ SOCIAL



D1_ SOCIAL NETWORK
[social connection between actors involved]

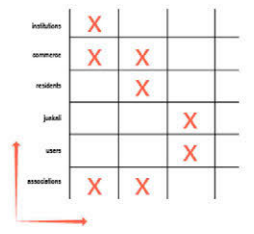
Networks. Contact between the social sectors that allow the activation of the city and the implementation of initiatives that promote the maintenance of the new urban model. The special relationship between the two riversides should produce a social connexion between the actors involved.

D2_ SOCIAL INCLUSION
[connecting with the city interface]

It is based on the social inclusion of its inhabitants. Action plans and investments that can generate a social connexion with the groups present in the proposed area are essential. Education and training programs, job creation, socialization projects, search for identity within the city···

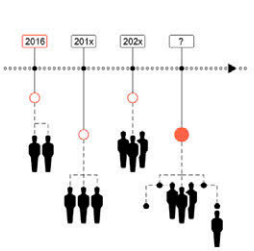
D3_ PARTICIPATIVE PROCESS
[committed to people's ideas]

Allow the participation of the inhabitants in urban development plans is essential to ensure continuity of development. Participatory processes take place from the initial phases of analysis and data collection and extend to the actual achievement of urban plans.



D4_ ACTORS
[City, identity, Collectives]

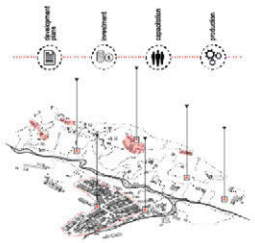
Locate and empower stakeholders within the urban fabric can produce new possibilities for urban interaction (within the area and to the city). Institutions, businesses, residents, users, jubakali tenants, and community associations are actors involved.



D5_ SOCIAL ACTIVATION
[consolidate the urban interface]

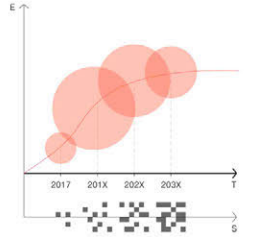
The social activation over time allows create new networks. The empowerment of certain actors would produce new partnerships and possibilities to produce and consolidate the urban interface.

E_ ECONOMY



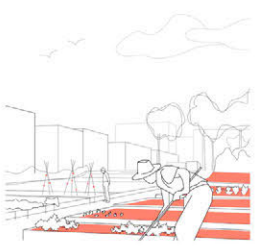
E1_ INVESTMENTS FROM THE CITY
[looking for a competitiveness level]

Investment in this area of the city is essential for improvement allowing to place it on a competitiveness level with other neighborhoods. The inversions come from development plans, economic investment, community training and production of goods.



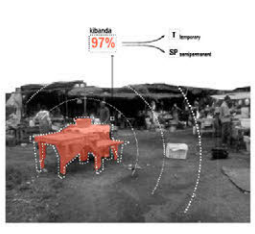
E2_ ECONOMY AND CITY
[economic growth and urban quality]

Boost the economy is one of the bases to allow proper urban development. The empowerment of the people of Kariobangi promotes social and economic growth and involves the inhabitants in improving urban quality of the city.



E3_ DEVELOPING URBAN AGRICULTURE
[linking urban and rural areas]

The proximity to the rural environment makes it possible to consolidate urban agriculture as potential for development and identity for the Jubakali community. The implementation of urban orchards that allow sustainable production establishes a direct link with agricultural areas across the river.



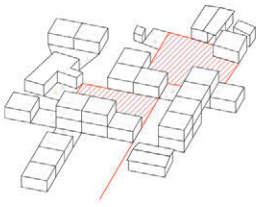
E4_ ENGAGED IN LOCAL COMMERCE
[betting on local business]

Optimize traditional and local micro-enterprises in this urban area, creating public spaces for this trade and improving the conditions and job opportunities of these businesses.

E5_ SUSTAINABLE ECONOMIC CICLE
[making a viable plan]

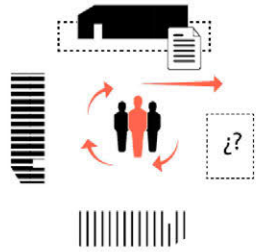
The spatial relationship established between the three main areas also allows the development of an economic cycle to ensure the viability of the whole area. Agricultural production could be absorbed by the urban centre which in turn will invest in the other side, maximizing the role of the riparian corridor.

F_ HOUSING



F1_ PUBLIC SPACE USE
[city and interaction in the neighbourhood]

Production of public space can generate greater social interaction in the Kariobangi community. The free spaces are exploited to generate públic and semi-private spaces that favor social contact and the consolidation of the urban interface.

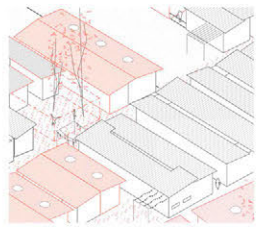


F2_ PROPERTY
[towards the creation of a formal fabric]

The revitalization of housing goes mainly to seek a formula that allows the habitants of owning land. The first step to true consolidation of a formal urban fabric is to empower residents to become its home owners.

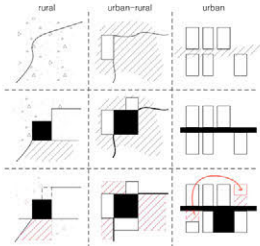
F3_ COMMITTED TO THE LOCAL
[between local and global]

Local support in housing construction is proposed. Techniques and local materials and local knowledge are essential for sustainable development to a dialogue between the local and the global.



F4_ COMMUNITY IDENTITY
[looking for new meanings]

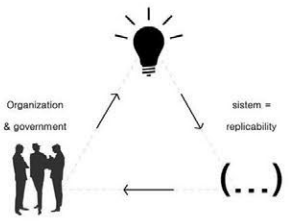
The consolidation of the area proposal requires the creation of a defined community identity. The possibilities of the agricultural area and its link with the urban fabric are key to the development of the identity of Kariobangi and its surroundings as a whole.



F5_ URBAN GROWTH + DENSITY
[how about the future?]

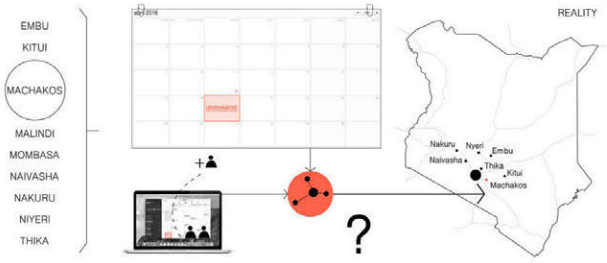
Urban planning proposes guidelines to guide future growth of Kariobangi settlement linked to agricultural area across the river. The public spaces are proposed as a cornerstone for the growth of the city while allowing reorganize urban density.

POSTER 2: Split I



THE COMPETITION AS A PRETEXT

Un-Habitat organize a competition inviting students to generate IDEAS about urban planning and design, that complement the completion of the planning processes of nine towns in Kenya. But what if we go further? Can be, that proposal, more than a simple idea?



LOOKING FOR MORE THAN A SIMPLE IDEA – REALITY

We found it interesting as we understand the competition as a pretext to exercise and rethink some of the lines of the current property urbanism and housing projects, in a REAL context. And thats the point, this competition is characterized by the fact that is a real demand. That's why we are ambitious in our approach: we are trying to START A PROCESS to amend the urban (and social) barriers existing now in the Machakos Town, providing a first scheme that sintetize the role of each of the agents involved.We are focused on designing a workable collaborative process for Machakos but, working with an objective and distant approach, we try to create a replicable system for other cities with similar characteristics.

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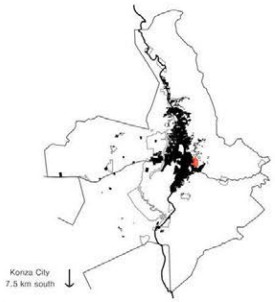

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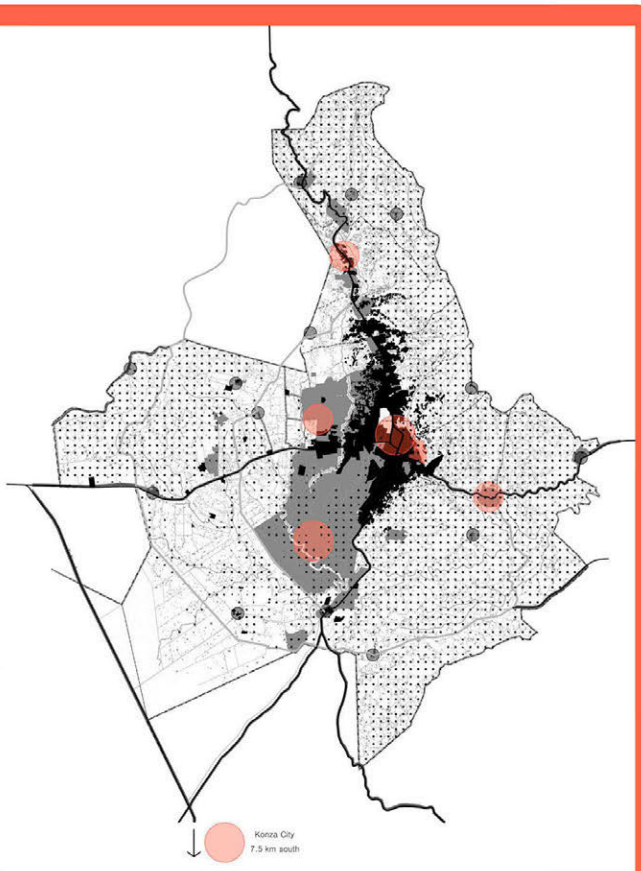
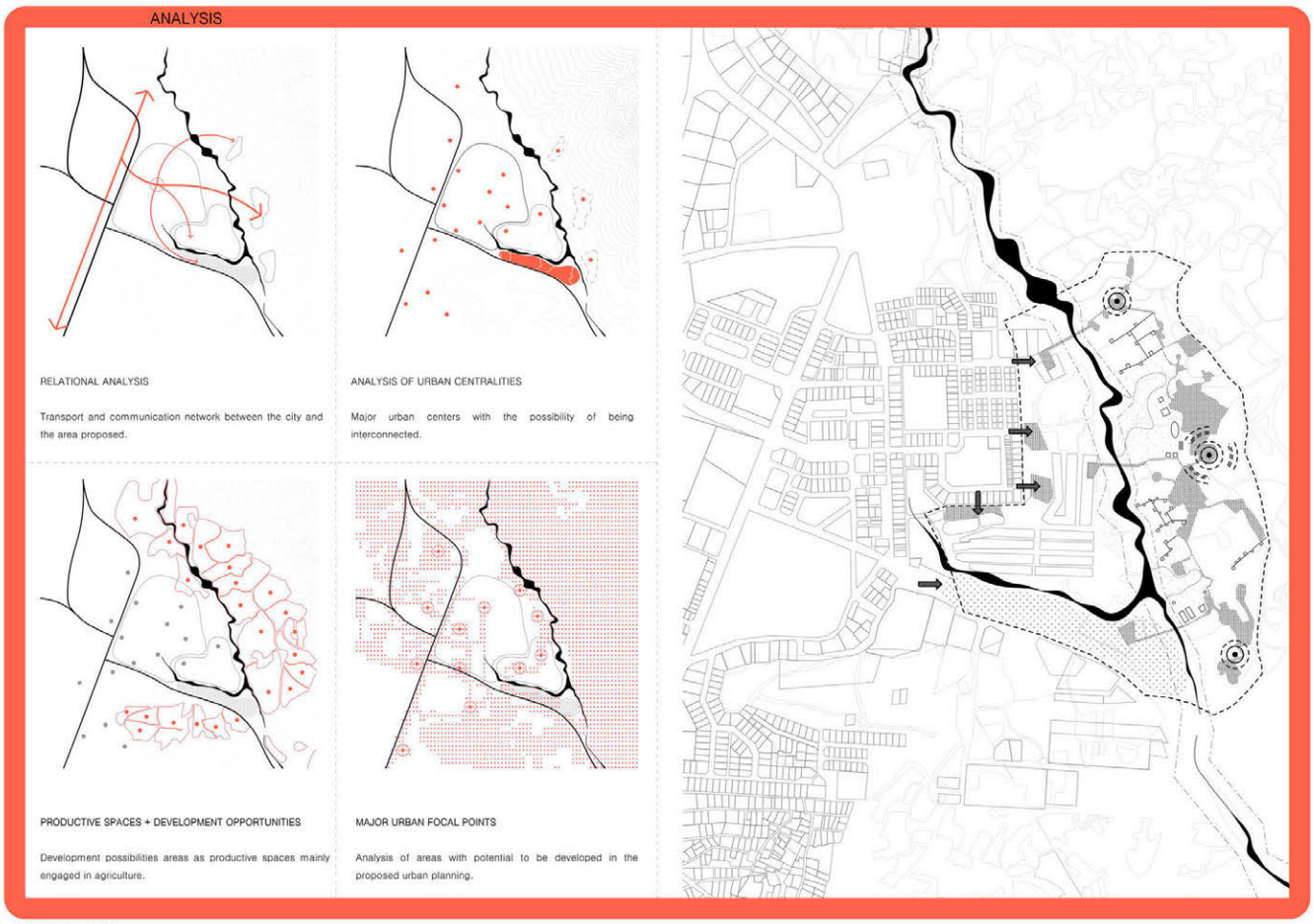


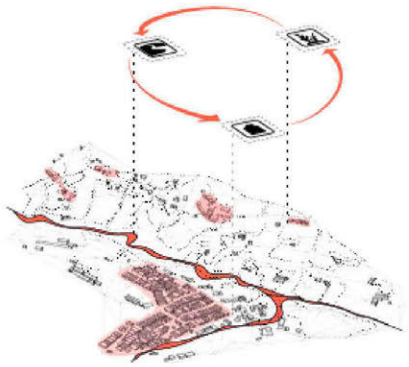
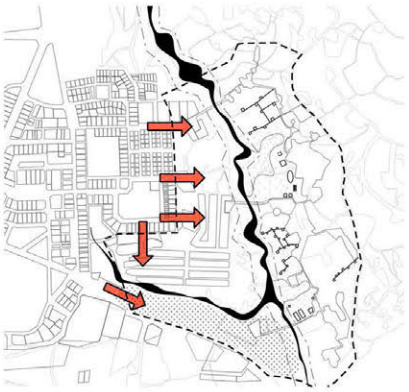
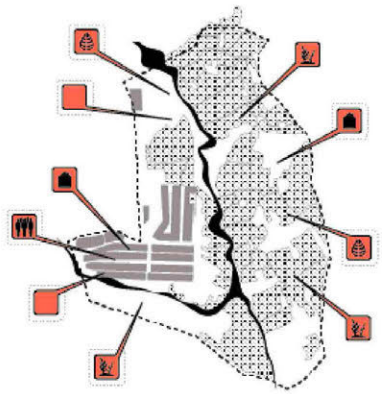
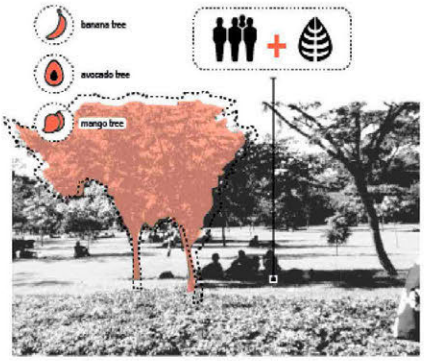
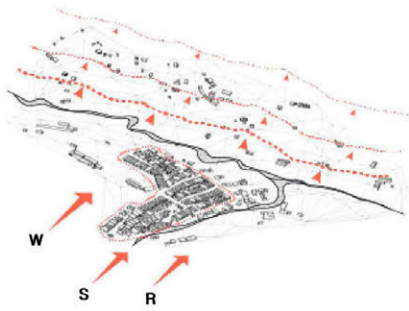
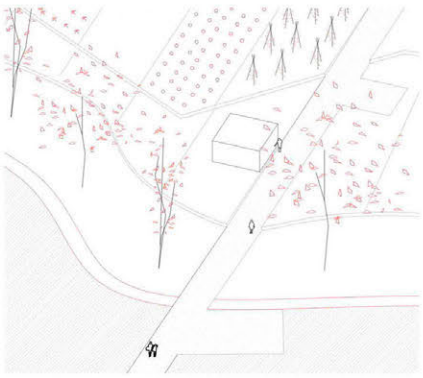
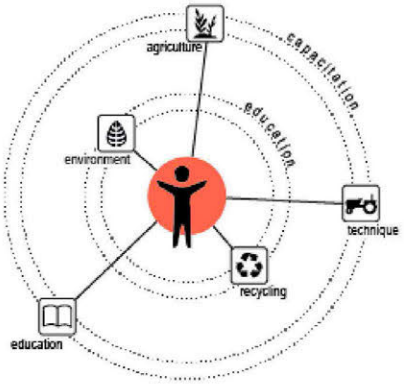
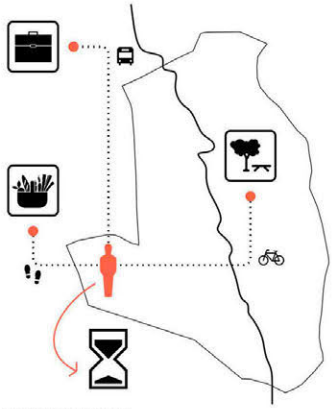
[Academic use only]

POSTER 2: Split II

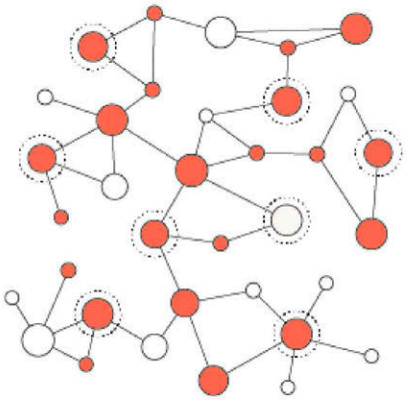


[Academic use only]

POSTER 2: Split III

	A_ URBAN PLANNING	B_ ENVIRONMENT	C_ INFRAESTRUCTURE
1_ CONNECTIVITY			
	A1_ THREE MAIN AREAS CONNECTION [slum area, riparian corridor, and agricultural area] The propose has as it's aim to generate the dialogue between the 3 areas realised on the site. Do to the riparian corridor and the river's enviroment it is possible to engender a close realtion between the slum's urban area and the rural area featured by it's agricultural use and it's possibilities to be urbanized.	B1_ RIPARIAN CORREDOR AS A GREEN INFRASTRUCTURE [A great alternative for sustainable development] The river as an element that allows the connection becomes urban green infrastructure. Improving the environment, preserve the environment and enhance natural areas in the city. The rural-urban interface generated may extend along the river, producing similar situations in other parts of the urban fabric.	C1_ CONNECTING WITH THE CITY [infrastructures to conect up] Inclusion of urban areas to the city through the connection to the main roads. At the meeting public spaces are created by modifying the border with the aim of establishing a dialogue between this two areas.
2_ REVITALIZATION			
	A2_ DIVERSITY OF USES [diversifying city. Producing city] The revitalization of the urban fabric is given by a diversification in land use. The residential character of the urban area and the agricultural character of the rural area are modified intensifying existing uses of trade and production and implementing new applications.	B2_ TREES'S IMPORTANCE [Green areas and its city benefits] Promote the use and planting of fruit trees detected already on the site [mango, avocado, banana] in order to improve the environment quality, strengthen compacting soil, preserve native species, and promote as a meeting point and social activity in the community.	C2_ INFRASTRUCTURES [water, sanitation, roads] Improving urban infrastructure in the slum area is critical to its revitalization and inclusion as part of the city fabric. Intensification and improvement of existing networks to enable proper operation is proposed.
3_ SOSTENIBILITY			
	A3_ RURAL-URBAN INTERFACE [A new way of development] The proposal includes the possibility of developing new urban models that allow the dialogue between the rual environment and urban land. The new rural-urban interface is based on sustainable production models which enable the preservation of the local but also pomoting its development.	B3_ EDUCATION [Education + training as a way of preservation] * Education on the importance of preserving and protecting the environment, on local issues, and recycling, * Training of qualified personnel with the aim of generating a responsible production of goods with the territory and develop specific knowledge for preservation.	C3_ THE SHORTER WAY [re-thinking disntances and ways of life] Efficiency in planning is crucial to its viability and sustainability. The proposal aims to bridge the gap by a city that allows its inhabitants to live comfortably. Distances to economic centres, operating points and transport networks are reconsidered.

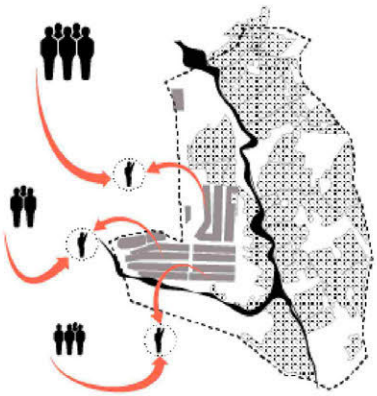
D_ SOCIAL



D1_ SOCIAL NETWORK

[social connection between actors involved]

Networks. Contact between the social sectors that allow the activation of the city and the implementation of initiatives that promote the maintenance of the new urban model. The special relationship between the two riversides should produce a social connexion between the actors involved.



D2_ SOCIAL INCLUSION

[connecting with the city interface]

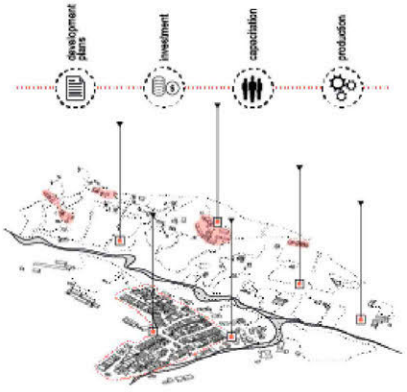
It is based on the social inclusion of its inhabitants. Action plans and investments that can generate a social connexion with the groups present in the proposed area are essential. Education and training programs, job creation, socialization projects, search for identity within the city···

D3_ PARTICIPATIVE PROCESS

[committed to people's ideas]

Allow the participation of the inhabitants in urban development plans is essential to ensure continuity of development. Participatory processes take place from the initial phases of analysis and data collection and extend to the actual achievement of urban plans.

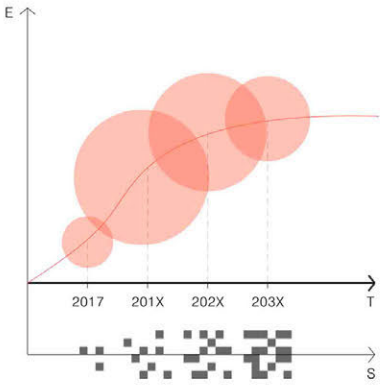
E_ ECONOMY



E1_ INVESTMENTS FROM THE CITY

[looking for a competitiveness level]

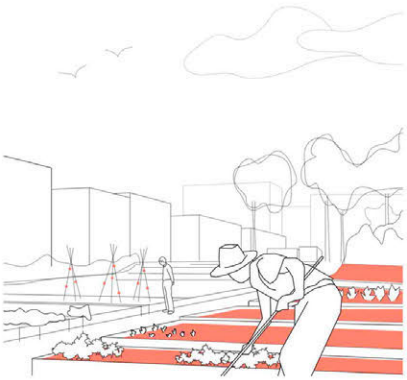
Investment in this area of the city is essential for improvement allowing to place it on a competitiveness level with other neighborhoods. The inversions come from development plans, economic investment, community training and production of goods.



E2_ ECONOMY AND CITY

[economic growth and urban quality]

Boost the economy is one of the bases to allow proper urban development. The empowerment of the people of Kariobangi promotes social and economic growth and involves the inhabitants in improving urban quality of the city.

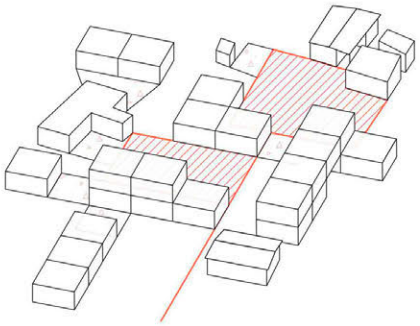


E3_ DEVELOPING URBAN AGRICULTURE

[linking urban and rural areas]

The proximity to the rural environment makes it possible to consolidate urban agriculture as potential for development and identity for the Jubakali community. The implementation of urban orchards that allow sustainable production establishes a direct link with agricultural areas across the river.

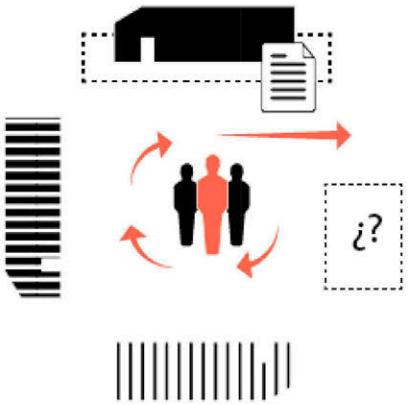
F_ HOUSING



F1_ PUBLIC SPACE USE

[city and interaction in the neighbourhood]

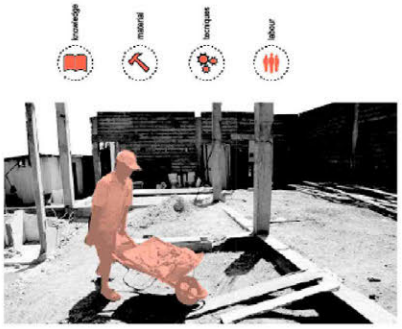
Production of public space can generate greater social interaction in the Kariobangi community. The free spaces are exploited to generate public and semi-private spaces that favor social contact and the consolidation of the urban interface.



F2_ PROPERTY

[towards the creation of a formal fabric]

The revitalization of housing goes mainly to seek a formula that allows the habitants of owning land. The first step to true consolidation of a formal urban fabric is to empower residents to become its home owners.

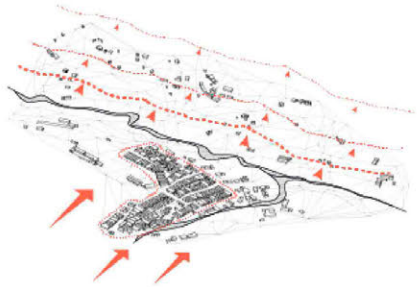
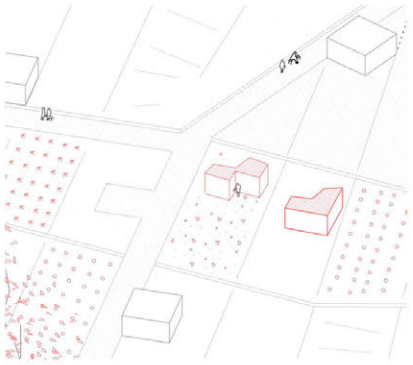
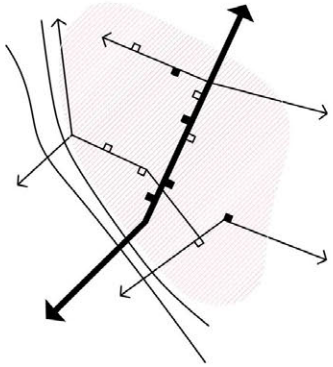
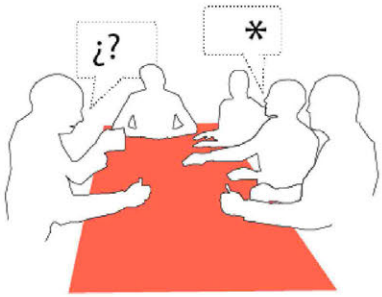
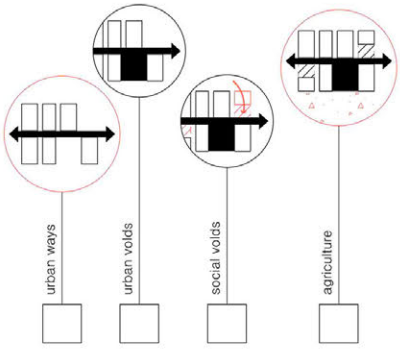
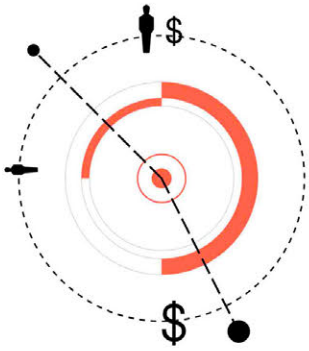


F3_ COMMITTED TO THE LOCAL

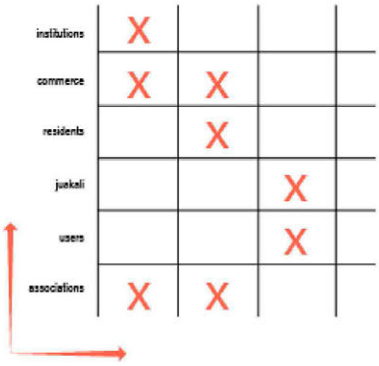
[between local and global]

Local support in housing construction is proposed. Techniques and local materials and local knowledge are essential for sustainable development to a dialogue between the local and the global.

POSTER 2: Split IV

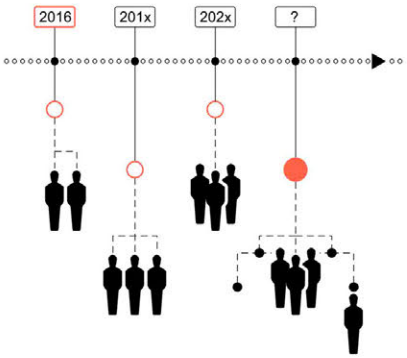
	A_ URBAN PLANNING	B_ ENVIRONMENT	C_ INFRAESTRUCTURE
4_ IDENTITY			
	A4_ FORWARD / BACKWARD [Re-thinking the city's border] The current area corresponds to a degraded condition limit their area. The possibility of a new connection with the other reverside reinvents the position edge of the urban area.	**B4_ MODEL SITE FOR URBAN AGRICULTURE** [New paradigms for sustainable urbanism] A new paradigm that allows the preservation of the agricultural character of the rural area and its development unfold. The spirit is also reflected on the city that establishes a dialogue with the other riverside. You can replicate and succeed elsewhere as sustainable possibility for urban development.	**C4_ OVERLAPED INFRASTRUCTURES** [valuing the preexistence] The proposal on urban infrastructure plan overlaps the existing infrastructure, trying to strengthen the networks that are configured with the passage of time. The proposed system is based on the improvement and enhancement of existing roads and urban networks supporting improvement.
5_ PROCESS			
	A5_ COOPERATION AND NEGOTIATION [Participative process and bottom-up iniciatives] Urban planning areas like this should not be done only from the institutions. The proposal should be realized based on cooperation and negotiation between agents and actors involved in the process in order to guarantee their viability and proper development.	**B5_ TIME'S PROCESS: PRESERVATION AND EVOLUTION** [Environmentally friendly and sustainable city development] That process should happen over time allowing the development of natural areas and the inclusion in the social sphere of green spaces. It is planned over time that allows the consolidation of new models of urban life actions, environmentally friendly and committed to a sustainable city.	**C5_ PROJECT AFFECTED PERSON (PAP)** [trying to reduce the impacts] The process of establishing the urban plan should produce minimal impact on the inhabitants. Project affected person (PAP) include business tenants, residents, landowners. It is intended in the urban plan generate the minimum displacements and maximum compensations.

D_ SOCIAL



D4_ ACTORS
[City. identity. Collectives]

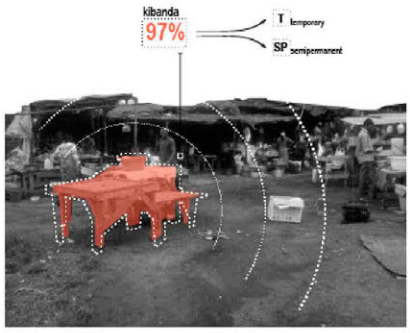
Locate and empower stakeholders within the urban fabric can produce new possibilities for urban interaction (within the area and to the city). Institutions, businesses, residents, users, jubakali tenants, and community associations are actors involved.



D5_ SOCIAL ACTIVATION
[consolidate the urban interface]

The social activation over time allows create new networks. The empowerment of certain actors would produce new partnerships and possibilities to produce and consolidate the urban interface.

E_ ECONOMY



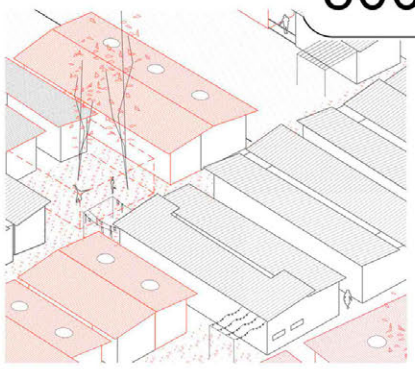
E4_ ENGAGED IN LOCAL COMMERCE
[betting on local business]

Optimize traditional and local micro-enterprises in this urban area, creating public spaces for this trade and improving the conditions and job opportunities of these businesses.

E5_ SUSTAINABLE ECONOMIC CICLE
[making a viable plan]

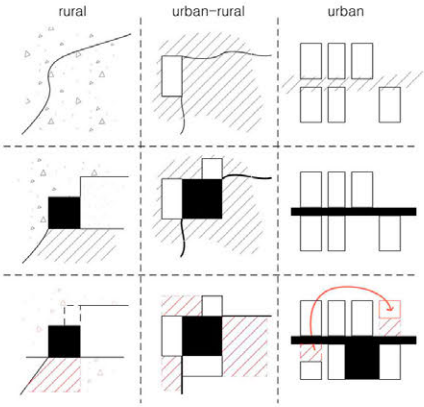
The spatial relationship established between the three main areas also allows the development of an economic cycle to ensure the viability of the whole area. Agricultural production could be absorbed by the urban centre which in turn will invest in the other side, maximizing the role of the riparian corridor.

F_ HOUSING



F4_ COMMUNITY IDENTITY
[looking for new meanings]

The consolidation of the area proposal requires the creation of a defined community identity. The possibilities of the agricultural area and its link with the urban fabric are key to the development of the identity of Kariobangi and its surroundings as a whole.



F5_ URBAN GROWTH + DENSITY
[how about the future?]

Urban planning proposes guidelines to guide future growth of Kariobangi settlement linked to agricultural area across the river. The public spaces are proposed as a cornerstone for the growth of the city while allowing reorganize urban density.

3005

Jury Comments

The Jury selected proposal 3005 as the overall winner of the UN-Habitat International Collaborative Student Design Competition for Kenya's Towns. The winning competition proposal is based on a site in Machakos town, which featured an area on the urban edge. The design competition brief required the teams to address revitalization of the settlement and the riparian corridor, while examining the spatial relations of the urban-rural interface as a priority. Across the river, development of the hilly rural settlement needed to be conceptualized in the context of possible rural-urban transformations. The anticipated transformation of the rural edge is likely to result in a peri-urban area, conversion of rural agriculture land into urban real estate, or even being developed as model sites for urban agriculture. Such were some of the possibilities that needed to be addressed, while at the same time recommending various environmental design interventions. This winning proposal is grounded in a creative, yet pragmatic, conceptual approach, combined with spatial, schematic diagrams to address the complex urban-rural interface for this eastern section of Machakos core urban area. Among other elements, the proposal aims to create integration and connectivity by analysing the context of the site within the wider town, then recommending extensions of infrastructures, re-orienting circulation, developing a linear park along the river, and creating functional synergies across the urban-rural interface. It addresses urban revitalization by promoting mixed uses through diversification of uses. It focuses on greenery and green infrastructure by promoting the river as the connection between urban and rural areas of the site through an environment sensitive design that enhances green areas and facilitates the development of green infrastructure.

Its people-centred process of development is focused on cooperation, partnerships, and citizen participation. Of all the proposals, the jury found this to be the best response to the design assignment and conveyed a strong sense of realism, while demonstrating a strong grasp of the urban growth challenges in the area. The jury identified the proposal's convincing conceptual approach as being both pragmatic and creative and as offering a solid framework and process for addressing the urban-rural edge presented by the site. The proposal developed a design framework that took note of the likely transformations of both urban and rural areas and sought to enhance the linkage between the two by proposing synergetic functional and spatial relationships, while leveraging the settlement qualities presented by the three main elements defining the site: the low-income urban neighbourhood area, the riparian corridor, and the rural settlement area.

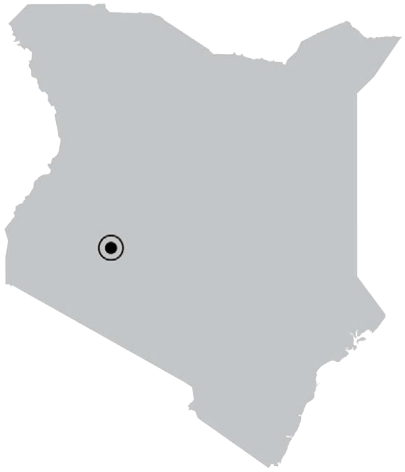
It offered a systematic approach that went further to engage with the key aspects of sustainable development – environment, social, economic, and political processes – which were presented in a matrix and tool box. The design virtually addressed all key elements needed to enhance liveability in the diverse area, prescribing various interventions tailor-made for the site, while resonating with other Kenyan urban-rural interfaces. It recognized the vital role of green infrastructures in cities and how such infrastructures can also double as public spaces and the connecting elements in complex peri-urban contexts.

The proposal also recommends integrating urban agriculture and green areas within upgraded informal settlement areas/the urban section. It recommended regenerating the informal settlement area by not only enhancing integration within the existing urban fabric and through enhanced functional and spatial relations with the rural edge, but also through strategies to enhance the public space system. It valued a people-centred process that advocated for a participatory approach and community building where the local stakeholders become the drivers of this transformation.

The proposal offers a strong and convincing conceptual design framework, which supports the process at this stage. Indeed, its focus was not on presenting a plan, but rather on the actual process of achieving the desired design outcomes.

While unanimously agreeing that it was the most outstanding proposal, the jury noted that proposing to extend improved infrastructure across the rural area could result in rapid conversion of the agricultural land to urban real estate, implying that the conceptual framework ought to have offered various regulatory recommendation, as part of the anticipation to the transition and transformation.

Overall, the jury commended the proposal for provoking important debates in both theory (academia) and practice, in order to encourage academics and practitioners to revisit the understanding and application of urban planning and design in urban-rural interface contexts and places of transition like Machakos.



4.2 Nakuru

Runner-Up

"Urban Nodes – ToD Strategy for Nakuru" – Nakuru (Team 2014)
This design proposal aims to tackle inadequate infrastructure development, poor land-use organization, poor connectivity, and unplanned densification and transportation activities through Transit Orientated Development (TOD). It aims to address the integration and connectivity within the area and with adjacent land uses, including suggesting a footbridge across the highway to connect the two sides of town with the railway station. Using land-use analysis, the team divided the site into smaller zones: commercial, light industrial, low-density residential, high-density residential, and commuter areas. The proposal offers a design alternative on how to deal with actual/existing urban fabric, aims to revitalize and integrate the site into the existing urban fabric, and offers an example of how secondary cities can leverage national (regional) mega-infrastructure developments, in this case, the Northern Corridor Standard Gauge Railway construction.

Team members:

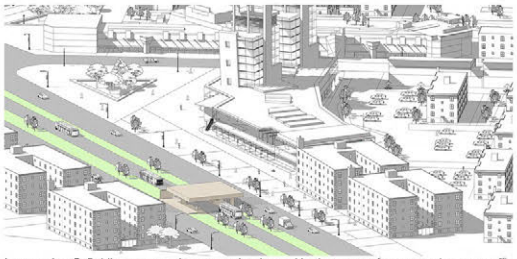
Iowa State University
Fang Zhou, Rongchuan Zhang, Dianyu Yang

Technical University of Kenya
Dennis Mutua Mwavu, Hamilton Kipkoech Bett

URBAN NODES
TOD STRATEGY FOR NAKURU

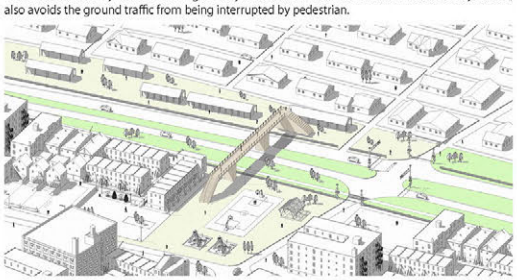
Bird-eye Render

Intersection A: A buffer zone is created between preserved area and residential area in order to leave more space for human activities.

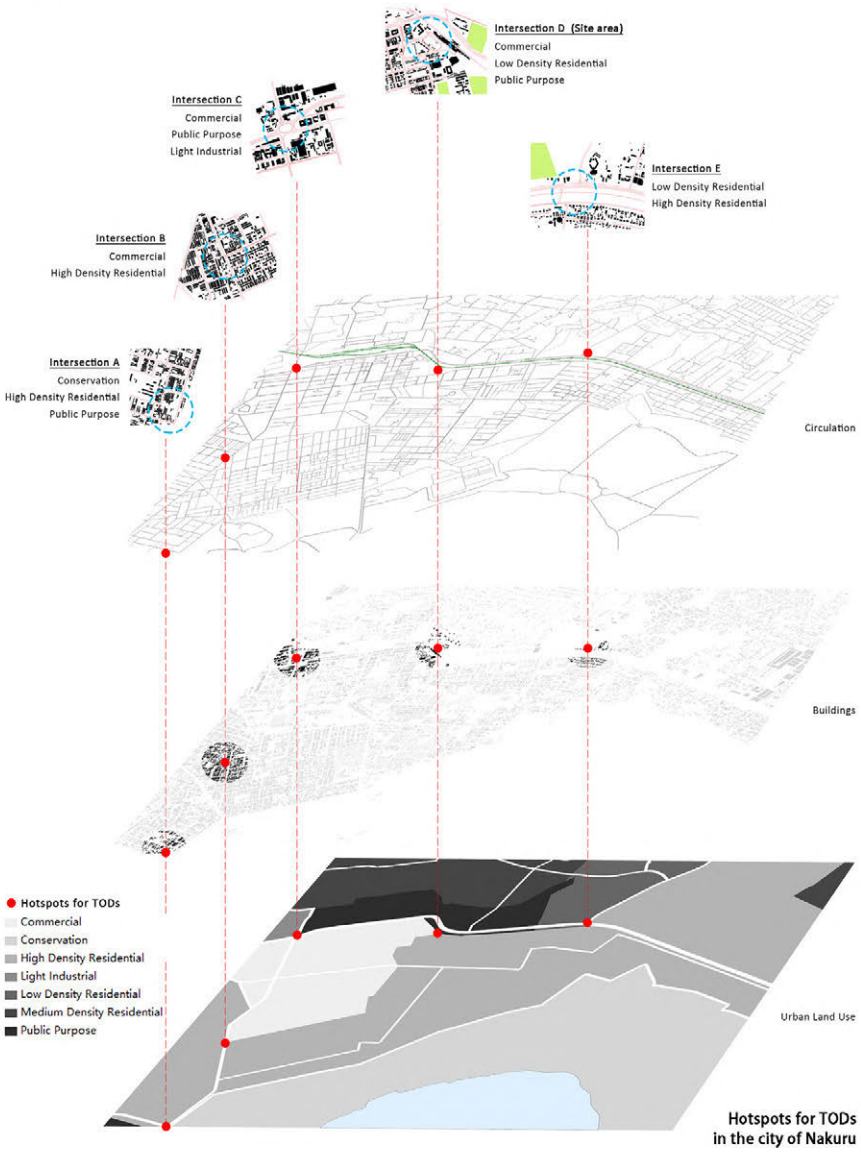


Intersection B: Public transportation system is relocated in the center of streets to decrease traffic pressure and leave more space for the sidewalks.

Intersection C: A skywalk connecting the adjacent blocks makes it easier to cross the busy streets, also avoids the ground traffic from being interrupted by pedestrian.

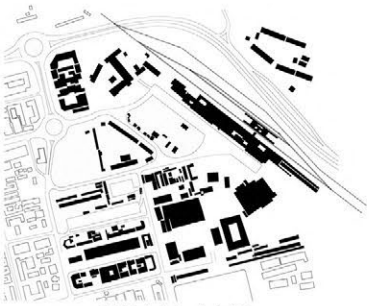


Intersection E: More connections such as skywalks and crossings make it easier for people to cross the railroad and highway safely.



Hotspots for TODs in the city of Nakuru

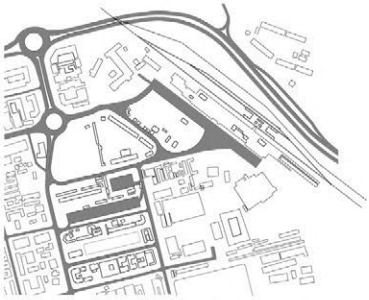
2014



Existing building footprints

Existing building footprints

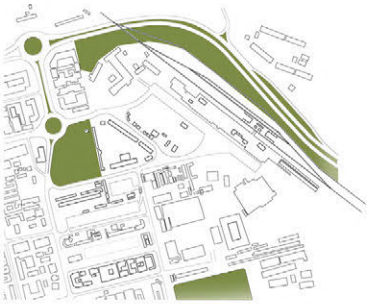
Proposed building programs



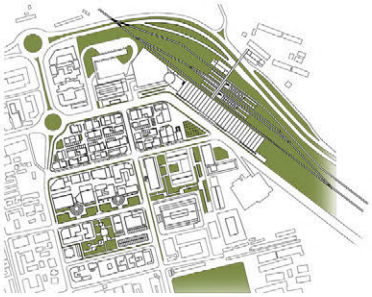
Existing traffic condition

Proposed traffic condition

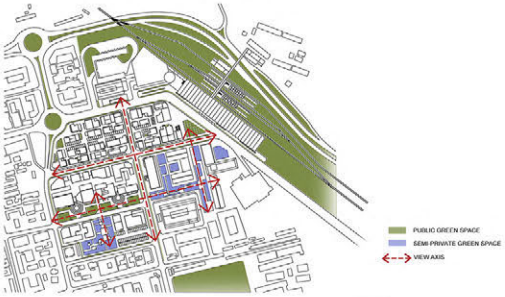
Proposed traffic typology



Existing public space



Proposed public space



Proposed public space typology

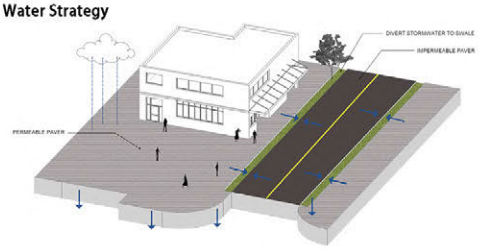
Project Concept

Through this competition site development, our team aim to generate several typologies of TOD for all different situations exist in the development of the city like Nakuru in Kenya. From the land-use analysis, we divide the city to several different kinds of big district: commercial, light industrial, low density residential, high density residential, agricultural rural area, CBD, etc. By providing different but similar solutions towards each situation, the overall typologies can be used in every potential TOD in city Nakuru.

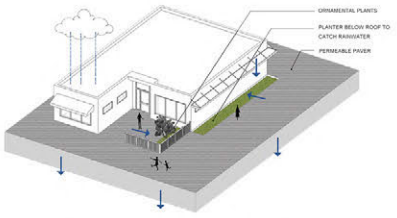
Intersection D (Site area) Design Strategy

The first step will be merging the city bus terminal to the train station on the same location. The express bus terminal will be relocated to the outside of the CBD area alone the highway, linking with the train station by a skywalk, which increases the connectivity. Sufficient facilities such as parking lots and hotels will be provided nearby. Later, the central area is designed as an commercial integration, which contributes to a celeb ration of pedestrian friendly community environment, not only creating convenient and organized urban fabric, but also making more connections between local and outside of the city. The linkage between green spaces and public plazas does improve the connectivity.

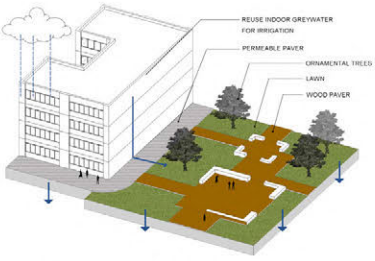
Water Strategy



Use permeable paver and swale to catch runoff.

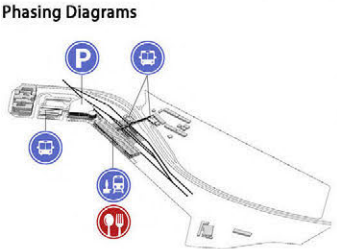


Use permeable paver and planters to catch runoff and collect rainwater.

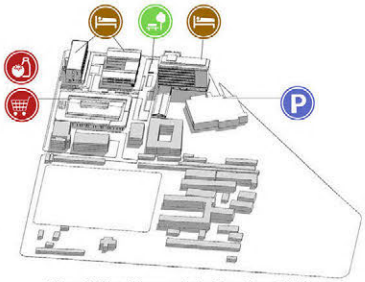


Collect greywater from nearby buildings, divert and reuse for irrigation.

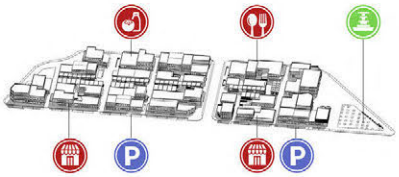
Phasing Diagrams



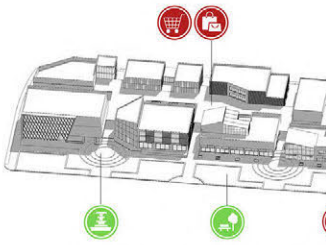
Phase 1: Public transportation integration



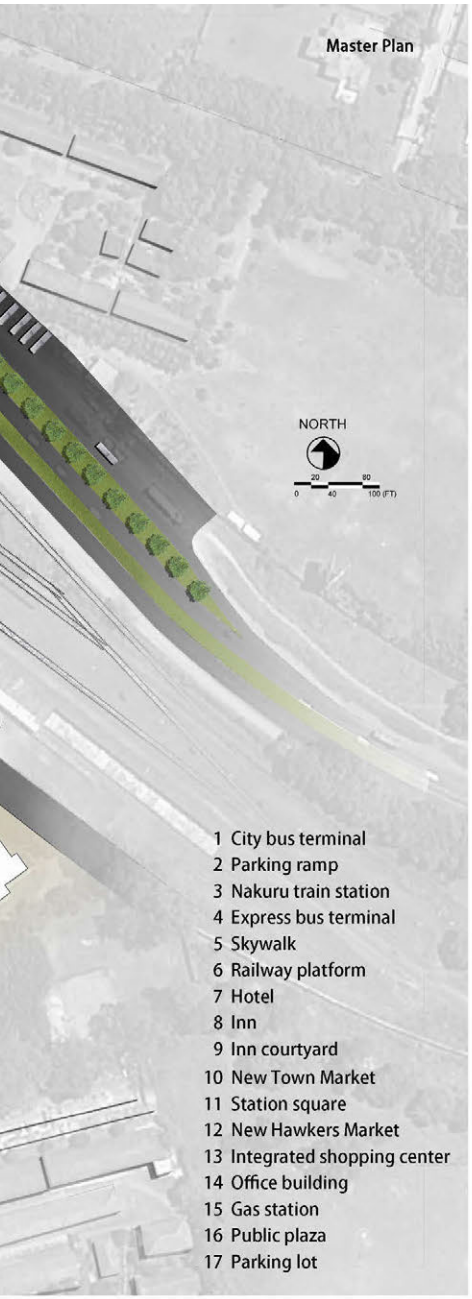
Phase 2: Hotel, inns and the New Town Market

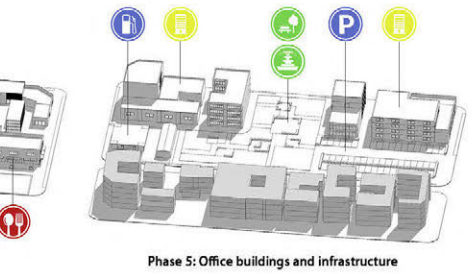


Phase 3: The New Hawkers Market



Phase 4: The integrated shopping center





Phase 5: Office buildings and infrastructure

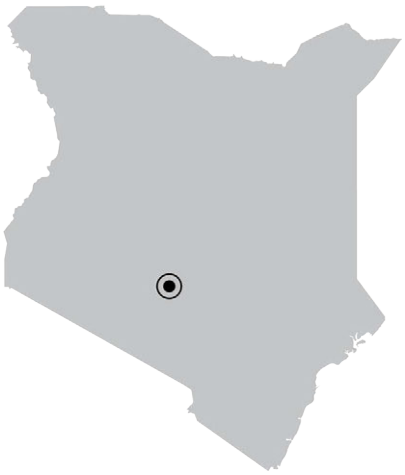
Jury Comments

This proposal emerged as the best among the submissions for Nakuru. The assignment was based on a section of the CBD (Central Business District) where the main public transport terminus is located and the existing old train station will hopefully be redeveloped into a modern facility during the construction of the Standard Gauge Railway through Nakuru. In that regard, the competition assignment required teams to formulate design proposals that leverage the potential for local economic development in the area. A successful proposal had to, among other things, address integration of uses in the area; promote productivity, including that of informal economic activities; and enhance the public space system, connectivity, and place-making.

This proposal addressed the integration and connectivity within the area and with adjacent land uses, including suggesting a footbridge across the highway to connect the two sides of the town with the railway station.

The Jury further noted the following:

- The proposal offered a design alternative on how to deal with the actual/existing urban fabric, aimed to revitalize and integrate the site into the existing urban fabric, and offered an example of how secondary cities can leverage national and regional mega-infrastructure developments, in this case, the Northern Corridor Standard Gauge Railway construction.
- The scheme also provided simple and pragmatic recommendations on how highly-contested urban spaces in Kenya can be better organized, shared, their capacity increased to accommodate more users, connected, and made more functional to promote local economic development.
- However, the scheme fell short of providing adequate capacity for local transportation, with a lot of focus on accommodating regional transportation needs. The site allocated for a city-bus terminal was proportionately small, considering the local transport demand.



4.3 Thika

Runner-Up

“Dynamic Trade Center: Kiang’ombe CBD” Runner-up – Thika (Team 6006)
This proposal envisions the Thika site as a green, well-connected financial and commercial hub that complements the main CBD and strengthens local economic development, provides diverse opportunities for businesses, supplies housing for all social classes, and creates appealing public spaces for social cohesion. Essentially, the proposal focuses on three aspects of daily life – working, living, and playing – and takes these into consideration by developing different components for compact urban structures, resulting in an attractive and compact CBD, with state-of-the-art technology and infrastructure for mixed use spaces that aim to attract investments. It employs an acupunctural intervention approach, where it discusses diversity, has a sense of scale, and promotes connectivity to existing urban fabric. Amongst others, the new CBD is positioned in close proximity to existing residential areas, which are incorporated into the development, bringing business and work opportunities to the people. The emphasis on the residential component complements the existing CBD and ensures a city that is economically active 24 hours, creating a more liveable and safe environment.

The proximity to the existing markets enables the incorporation of small-scale commerce, an alternative to the existing CBD. Positioned along greater new public transport mobility interventions, it ensures accessibility to and from the existing and proposed CBD, creating an active public spine through Thika by integrating working, living, and playing. The co-creation of public space ensures the ownership of the CBD and public space, contributing to the management and maintenance through shared responsibility. Part of the policy recommendation is the notion of staged public events and cultural activities initiated and promoted by local government for collective memory promotion, attachment, pride of space, and social cohesion in a diverse community.

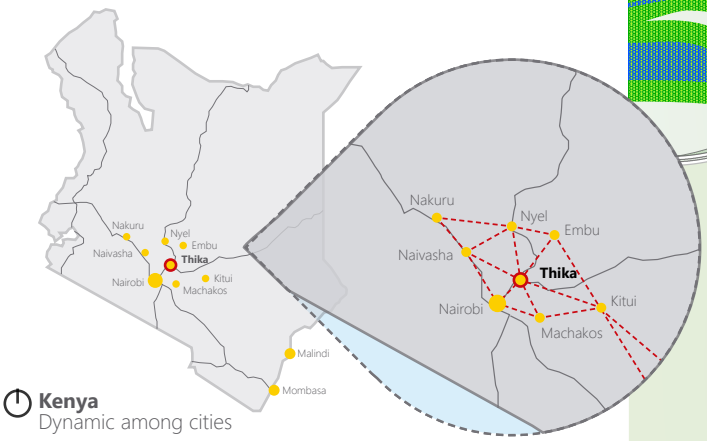
Team members:

Institute Of Housing And Urban Development Studies (IHS) - Erasmus University Rotterdam (Eur)
Josephine Atieno Omwanda, Kelly Mia Arendse, Diego Giron Estrada, Oleksandra Tkachenko, Juliana Giraldo Sanabria,
Maria Isabel Da Rocha Lima, Millicent Wawira Kareithi, Lynda Bitrus Elesa, Unbreen Qayyum, Ambrose Akpobe, Indriany Lionggo,
Poonam Mehta

Jomo Kenyatta University Of Agriculture And Technology (JKUAT)
Ronald Michael Kamau, James Shikuku Kamande, Michael Lumadede Agoya`

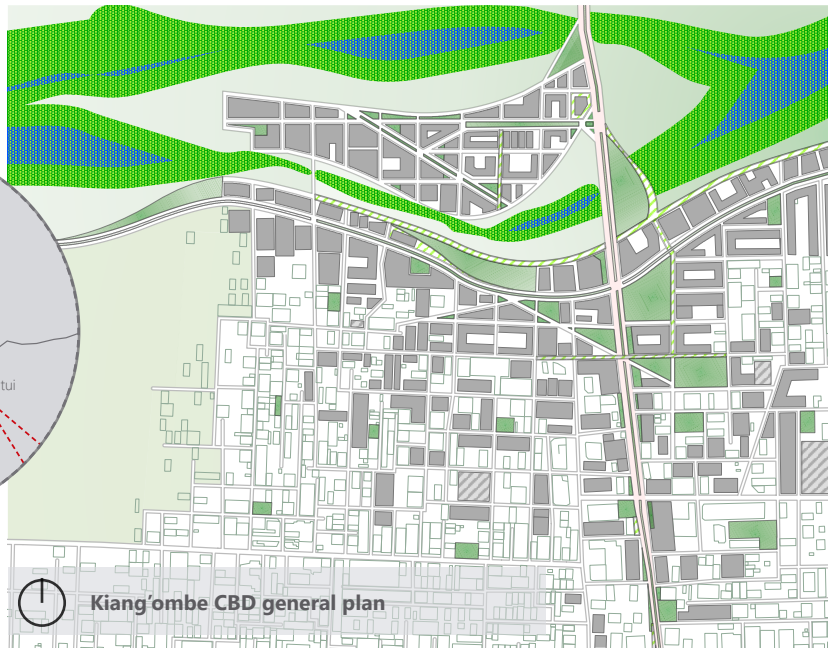
Dynamic trade center

Kiang'ombe CBD



Kenya
Dynamic among cities

Thika has a strategic location for being in between trades and dynamics among cities



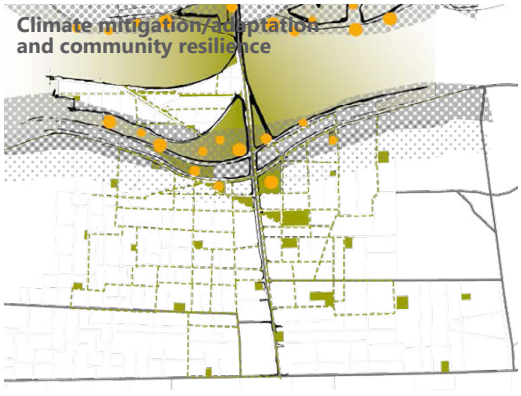
Kiang'ombe CBD general plan

To be a green, well-connected, financial and commercial hub that complem provides diverse opportunities for local and international businesses, housing and comfortable public space for social cohesion; and integrates well with

Objectives

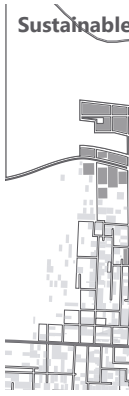
The objectives for the King'ombe sub-CBD are to:

1. Establish **Green growth oriented** planning and development
2. Establish effective Environmental management to **preserve natural features**
3. Provide **diverse housing opportunities** for people with different income and different interests (students, young professionals, families, elderly)
4. Create **space for local economic** development
5. Provide **effective transport and storm-water Infrastructure**
6. Provide **integrated and green public space**



Wetland restoration is part of green infrastructure strategy, which bring a wide range of **benefits** to Thika, such as **flood protection**, carbon sink areas, increase water quality, and mantain a wide range of **biodiversity**

Flood protection
Recreation areas
Biodiversity preservation/integration



Stages of dev which **integ** and promote

Propos
Exisitin

Restoring wetland

Aim

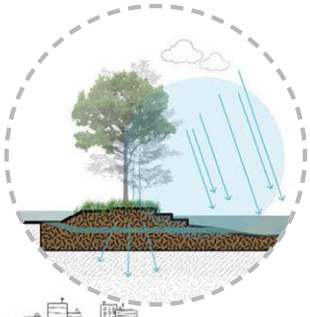
- Drainage systems and water networks for **environmental management**

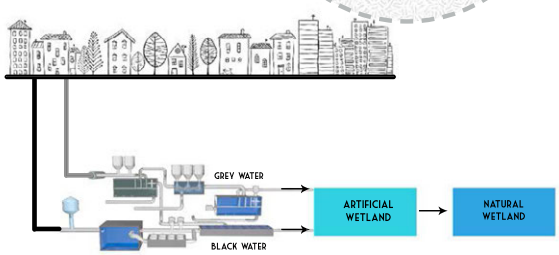
Sustainable Urban Drainage Systems" (SUDS) are designed around three objective:

1. Control the quantity of runoff from a development
2. Improve the water quality of runoff,
3. Enhance the nature conservation
4. Landscape and amenity value of the site and its surroundings all storm water.

Components

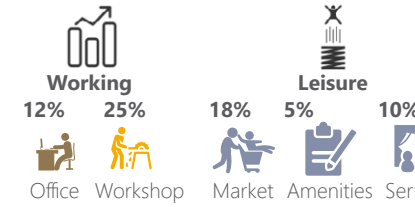
- Wastewater treatment facilities
- Water ponds or basins around clusters to temporarily retain, filtrate, infiltrate and control urban storm waters to prevent flooding-



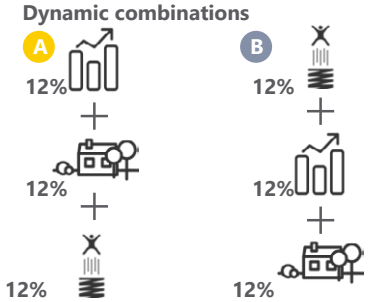


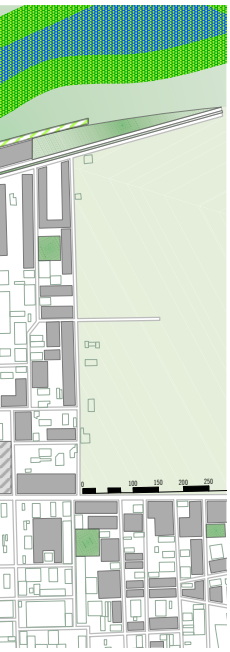
Urban infill

Actions integration



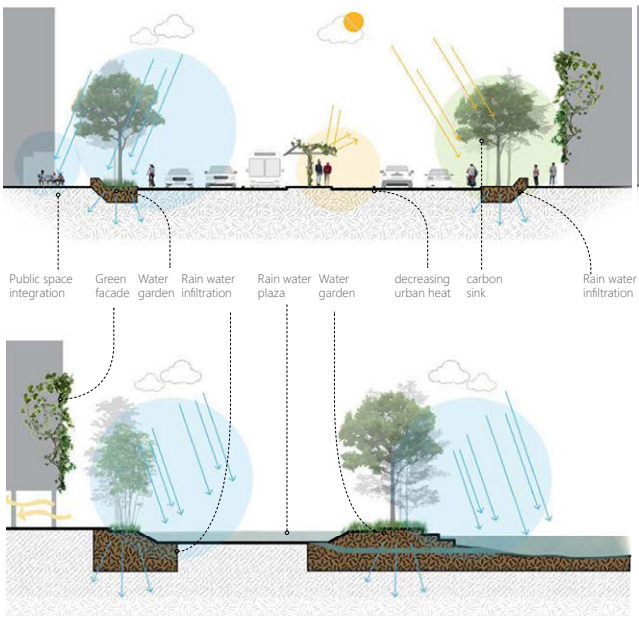
Dynamic combinations



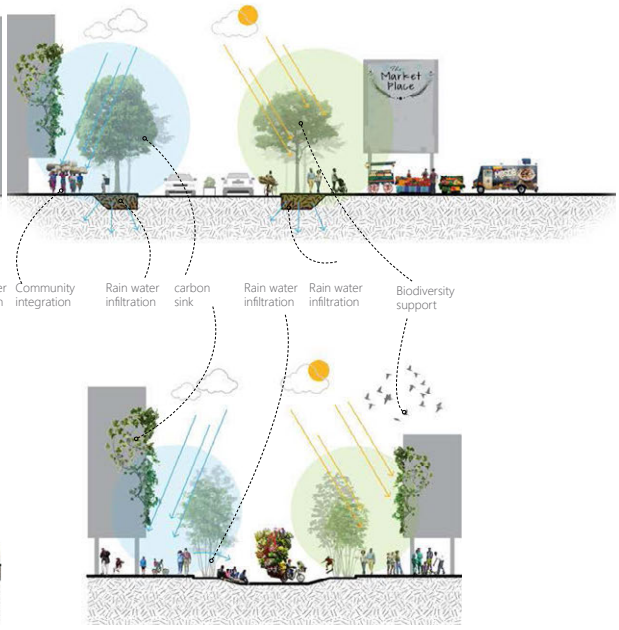


ments the main CBD;
g for all social classes,
the wetland.

Section A - Mayor avenues



Section B - Medium low traffic



Section C - Water plaza + Wetland integration

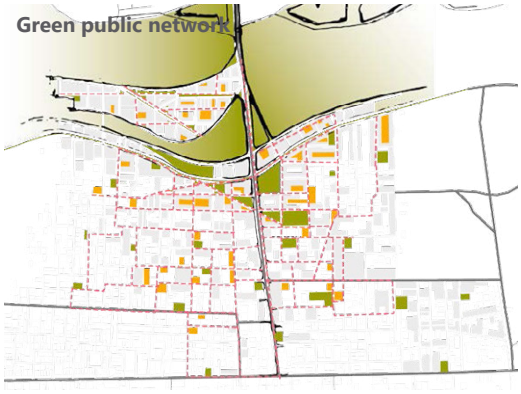
Section D - Pedestrian street

Sections
Esc 1 : 000

e development

velopment are define by a **gradual infilling**
rates the existing situation of the area
es **community engagement**

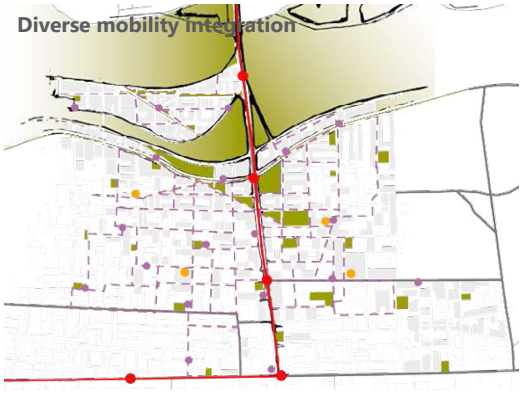
sed development development
g pattern



Green public network

A network of public space, composed of **green areas**, **permeable squares**, and connected by streets, **supporting the biodiversity** of the area

- **Green areas**
- **Permeable squares**
- **Green streets**



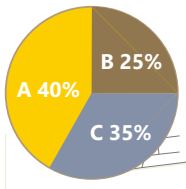
Diverse mobility integration

Enhancement of infrastructure which support the **diverse mobility choices connecting** the sub CBD with the historic center, other CBDs and **Nairobi**

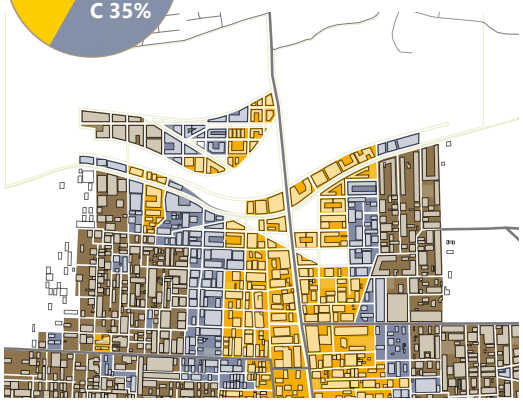
- **BRT**
- **Bike lines and rent bike station**
- **Car polling parking facilities**

Co-creation of public space

Location of actions combination



The proposal aims to integrate the dynamics by mixing uses, therfore three main actions to interact are framed (working, living, playing).

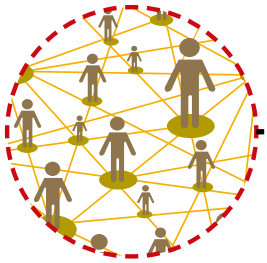


Aim

- Incremental cocreation of public spaces
- Diverse interaction in public spaces

Components

- Community centers are located next to parks, plazas and green spaces in order to integrate activities from the community
- Parks
- Community gardens in plots around
- Plaza



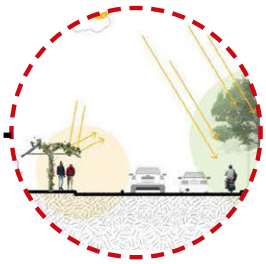
Economic growth

Thika is a city which supports trade interactions among Kenya cities

Sense of place

reflecting or characterized by both local and global consid-erations.

Public space



Connectivity

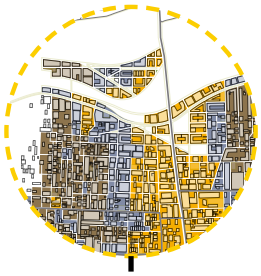
Integrate every sense of transportation walk, bike, brt, car

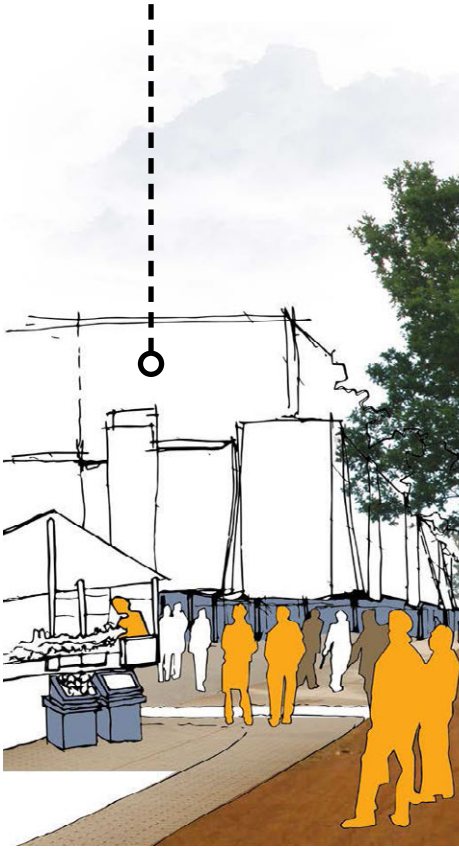
Incremental development

Is planned following the existing pattern development and by integrating the existing developments into the new dynamics from the CBD.

Dive

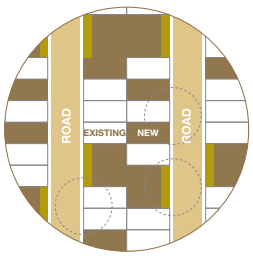
Of uses, surroundin capital, e and comm

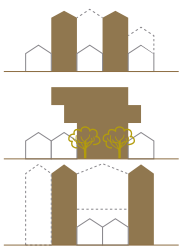


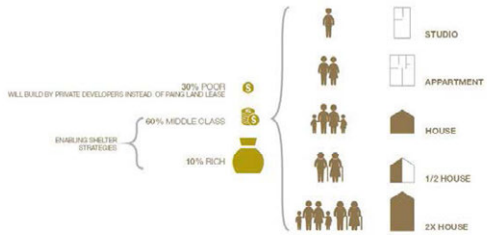


Gradual development

Infilling strategy







The proposal aims to integrate the dynamics by mixing uses, therfore three m framed (working, living, playing).

Project consists of three main actors i.e. government that has land, developers technology and community of Thika. The project should be self-financing proje affordable land and well connected and vibrant area.

Introduce a form of land sharing where business developers are conditioned to instead of paying the government for land. This concept has been practiced in Fa on calculations of the net present value (NPV) of lease payment and cost of cons the table below, the present value of annuity due is less than the cost of construc the government to give whole land to the developer in order to meet partially th

ersity

spaces and activities
gtheCBDfacilitatesocial
conomic development
unity revitalization.

Access

tonewmarkets,businessopportunities, and education and health improvement

Community intervention

Bottom up and top down approach

Liveability

By integrating activities and people needs, the spaces

Diversity

Of uses, spaces and activities surrounding the CBD areas. Shops, cafes, green areas, and many other place bring joy and dynamics to the CBD

ain actions to enjoy the space are

s with adequate finance, as well as
ect where the government provide

also construct low income housing
aria Lima in Sao Paulo, Brazil. Based
structing social housing as shown in
ting social housing so it is better for
he housing demand of poor class.

Mobility alternatives

Aim

- Disincentivise the use of private cars by introducing different options of transport

Components

- Walk, bike, public transport, car sharing
- Increase the quality of side walks
- Increase the amount of bike lines and improve the connections with relevant points in the city
- Rental bike system as a complement for the other transportation systems
- Bus with direct connection to Nairobi and Thika´s main CBD
- Identify the strategic locations for BRT stations
- Parking facilities for private cars are located next to mix use zones and integrated with rental bike system
- Rotary carousel parking strategy is implemented for the parking facilities

Benefits

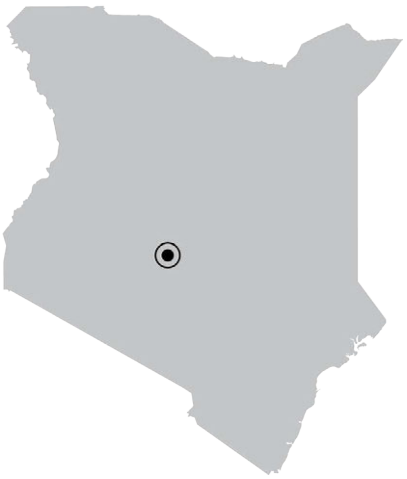
- Rewards from companies to employees for using carbon free transportation systems
- More productive hours, by avoiding traffic congestion and saving commute hours
- Active population with less stress
- Less polluted environment

Jury Comments

The Integrated Strategic Urban Development Plans for Thika identified a number of sub-centres to act as secondary CBDs. One of these centres was Kiang'ombe. The competition assignment required teams to provide ideas on how to develop the site into a viable secondary CBD, taking into consideration the challenges of addressing the complex urban issues currently manifested, while exploring both the relation between the proposed secondary CBD and the main CBD and the immediate context of the site.

Proposal 6006 emerged as the best among those submitted for Thika. Overall, the scheme contributes to the general discussion on the extension of the core function of this city by offering a typical, although incomplete, framework of regeneration or development of new nodes and sub-centres.

It is basically an acupunctural intervention approach, where it discusses diversity, has sense of scale, and promotes connectivity to existing urban fabric.
It provides a variety of mobility patterns, realistic densities, a system of public spaces, and strategies for informal settlements, with an environmentally sensitive design approach. However, the proposal was relatively weak in analysing and addressing the relations with the existing main CBD.



4.4 Nyeri

Special Mention

“Legal Security, Work, Education, Health” Special Mention – Nyeri (Team 4014)
This design attempts to address the lack of public space and other socio-economic problems of an informal settlement through four essential steps.

The first is forging a partnership with municipalities and community members.

The second is the construction of a large public square with community centres and sports facilities.

The third focuses on the creation of smaller squares with additional community centres and continuous incremental improvements of various public spaces, while also focusing on the creation and support of small businesses, particularly those engaged in urban agriculture (flowers and beekeeping).

The fourth emphasizes the continuous incremental of housing re-development with minimal relocation of inhabitants and with sub-sequential integration of the informal settlement into the wider urban fabric.

Team members:

Slovak University of Technology
Oto Novacek, Marek Trebula, Tomas Pozdech

Jomo Kenyatta University Of Agriculture And Technology (JKUAT)
Angela Machoka

Concept of settlement upgrading

Supporting communities
- community centre
- incremental development
- community based organization
- cooperation with municipality

Small businesses
- active parter in new houses
- creation of local markets
- support of local craftsmen

Gender equality
- empowering of women
- women in charge of inc. dev.
- work with vulnerable groups

Improvement of streets
- pavening of streets
- instalation of light and water
- storm water drainage

Urban agriculture
- roof gardening
- production of flowers
- creation of sustainable market

Public hygiene
- baths and toilets
- located in community centres
- enclosed waste system

Wi-Fi Hotspots
- 'right to be connected
- better access to labour market

Beekeeping
- support of urban gardening
- production of honey
- saving of planet

Education
- school
- skill improvment
- better access to labour market

Playgrounds
- children in spaces
- 'glue' form community

Local materials
- self-help & participation
- wooden houses
- houses from mud and strowe

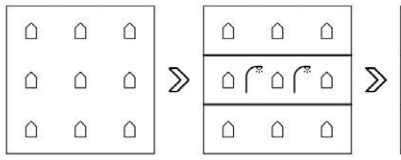
Community canteen
- support of communities
- public hygiene bio gases for heating
- work with vulnerable groups

Waterfront
- support the river
- preserve access

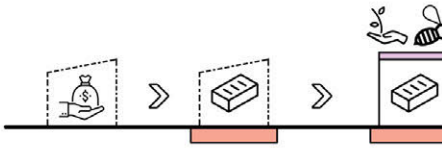
Recyclation
- waste problem solution
- creation of recyclation hubs
- network of waste pickers
- economical improvement

Micro loans
- support of communities
- public hygiene bio gases for heating
- work with vulnerable groups

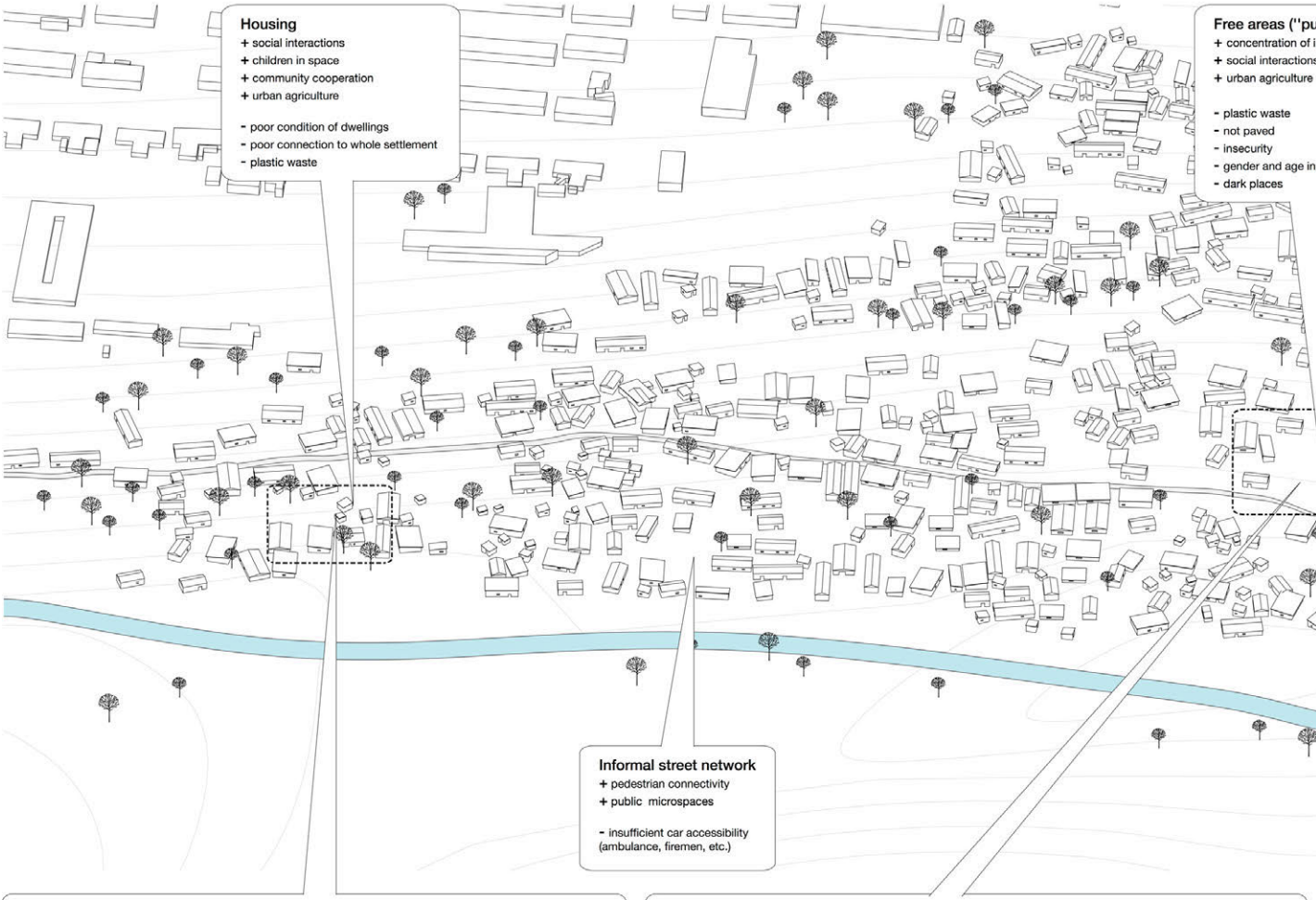
Urbanisim & Architectonical concept of settler



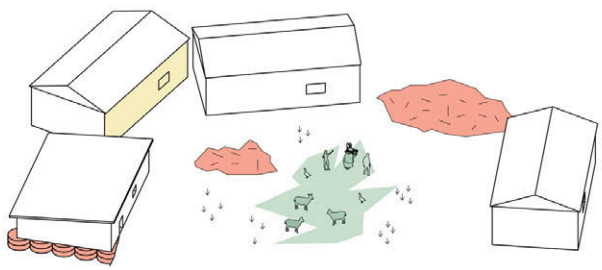
Urbanisim phases of project



Architectonical phases of project - incremental upgrading

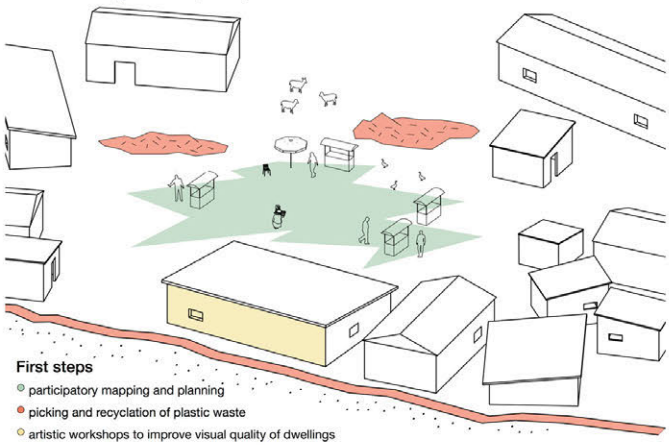


Housing - current status



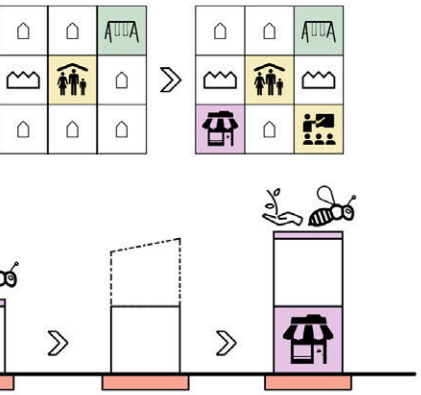
First steps
- participatory mapping and planning
- picking and recyclation of plastic waste
- artistic workshops to improve visual quality of dwellings

Free area (public space) - current status

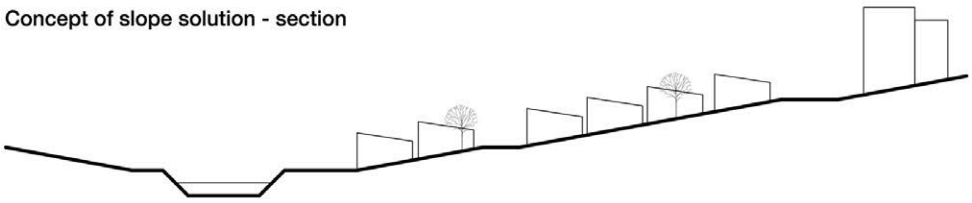


First steps
- participatory mapping and planning
- picking and recyclation of plastic waste
- artistic workshops to improve visual quality of dwellings

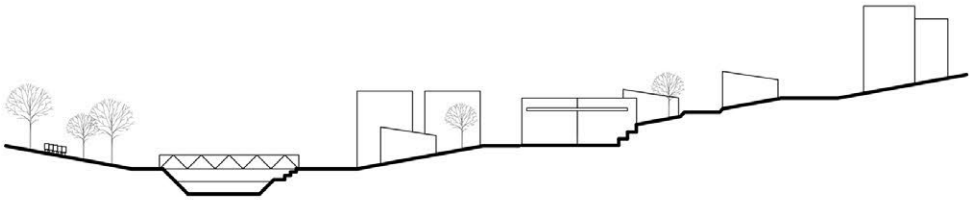
ment upgrading



Concept of slope solution - section



Section of current status



Section of design

ublic spaces")
nformal economy
equality

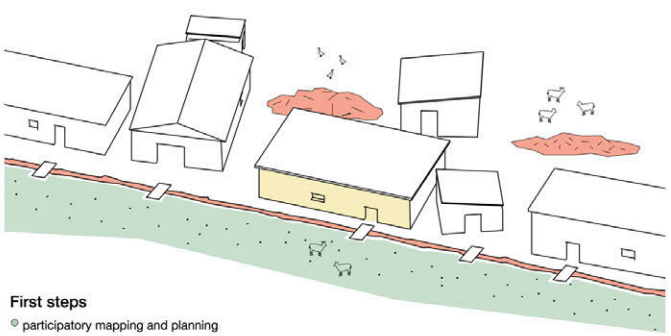
Main street
+ spine of settlement
+ social interactions
+ informal economy

- non-paved
- plastic waste
- dark places

Waterfront
+ water
+ social interactions
+ washing clothes
+ children in space
+ urban agriculture
+ bridge

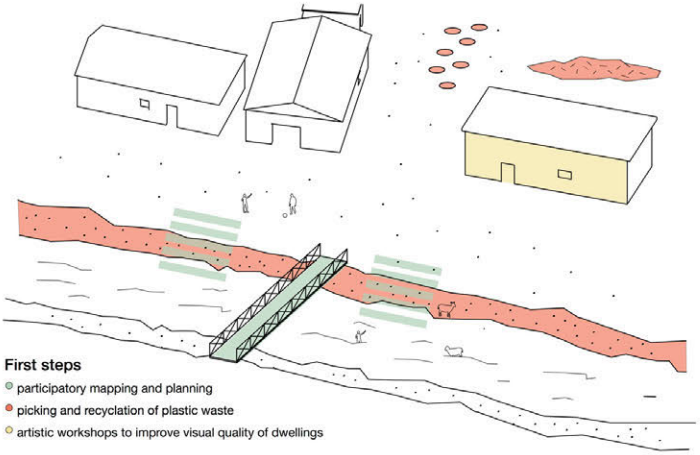
- not sufficient connection
- not-reinforced waterside

Main street - current status



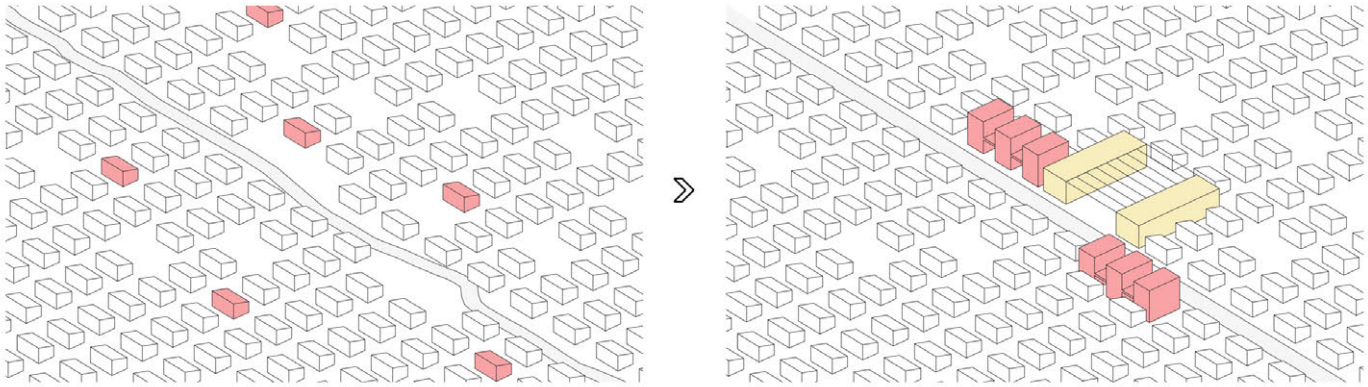
First steps
- participatory mapping and planning
- picking and recyclation of plastic waste
- artistic workshops to improve visual quality of dwellings

Waterfront - current status



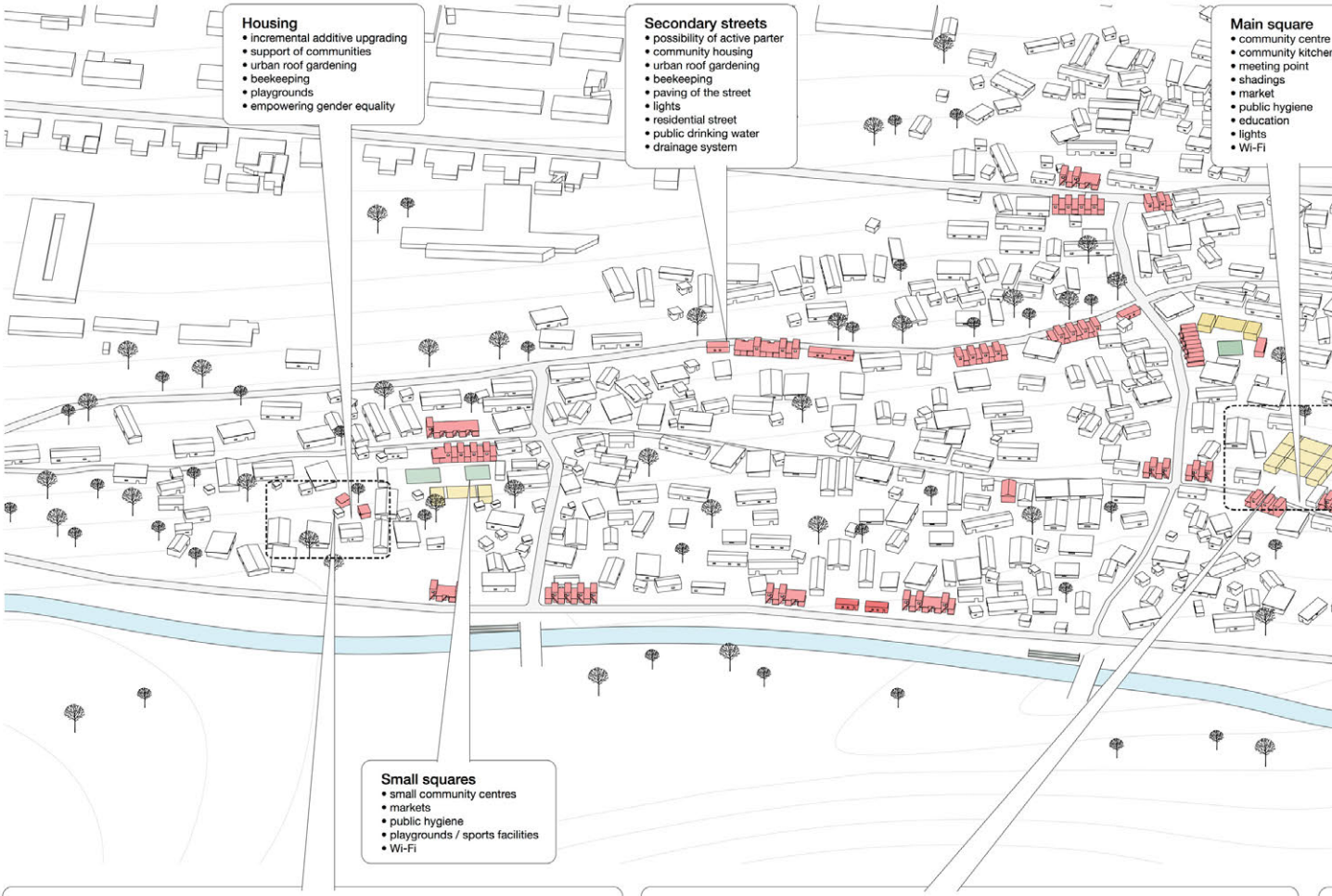
First steps
- participatory mapping and planning
- picking and recyclation of plastic waste
- artistic workshops to improve visual quality of dwellings

Phases of stettlement upgrading

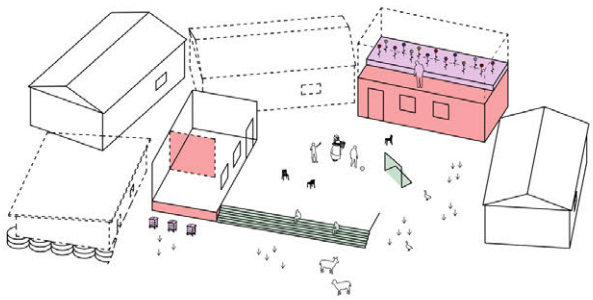


1. Phase - Participatory mapping and planning

2. Phase - 'Spine improvement' of main street & incremental upgrading



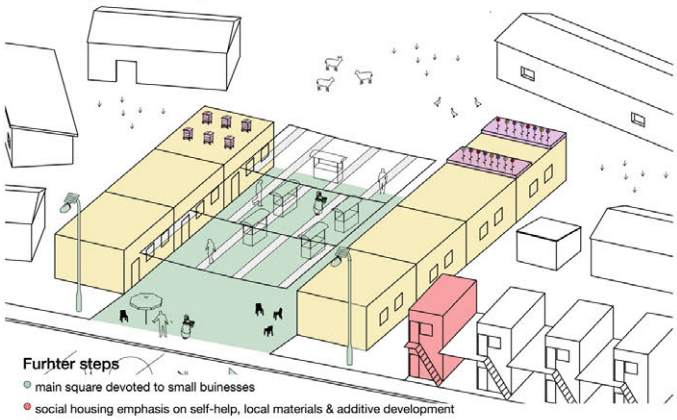
Housing - design



Furhter steps

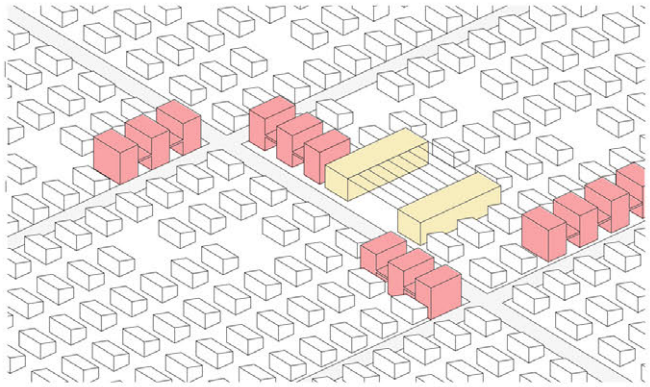
- community public spaces e.g. stairs for sitting (also reinforcement of hill)
- incremental development of houses, emphasis on self-help, local materials & flexibility
- urban roof gardening (production of flowers) & beekeeping

Main square - design

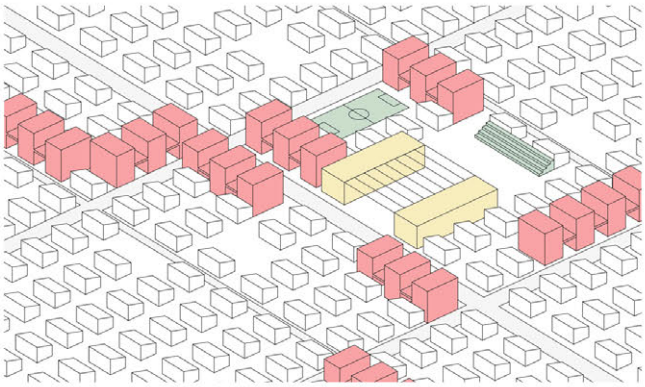


Furhter steps

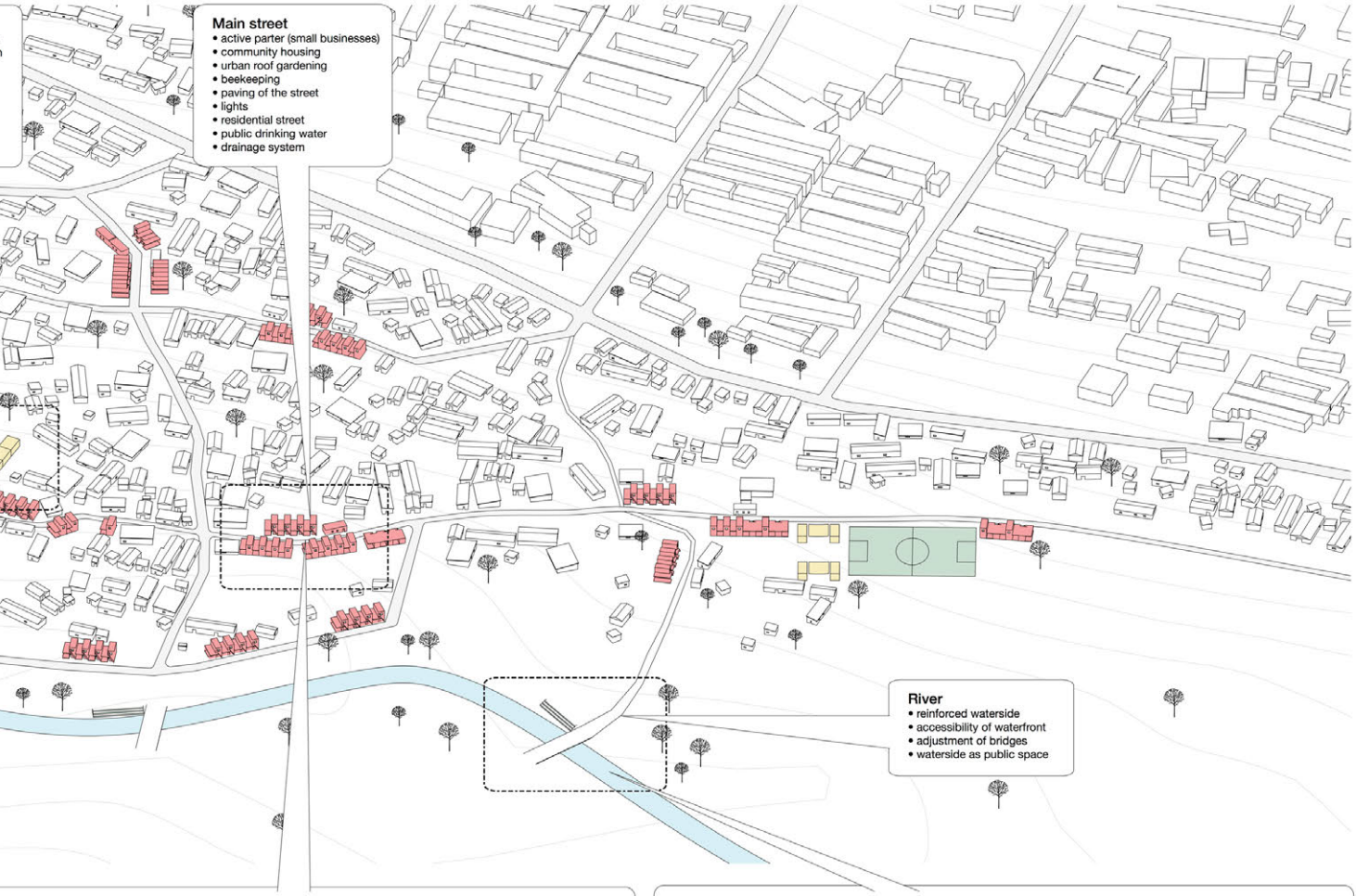
- main square devoted to small buinesses
- social housing emphasis on self-help, local materials & additive development
- community centre with public hygiene, school, Wi-Fi hotspots, etc.



3. Phase - New street network and public housing



4. Phase - Leisure and economic facilities & spatial integration into city Nyeri

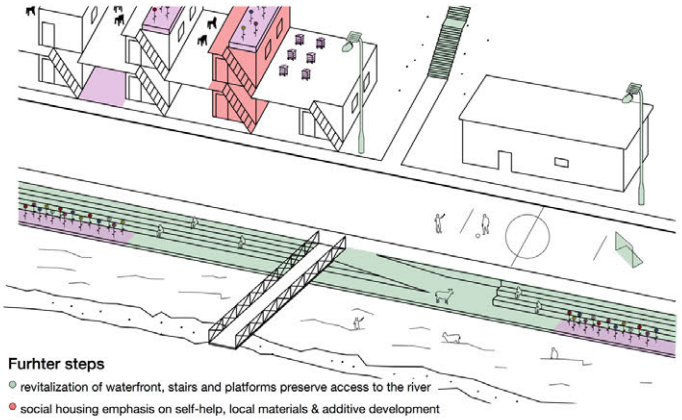


Main street - design

Furhter steps

- community public spaces & system of residential street
- social housing emphasis on self-help, local materials & additive development
- active parter (small businesses), urban roof gardening (production of flowers) & beekeeping

Waterfront - design

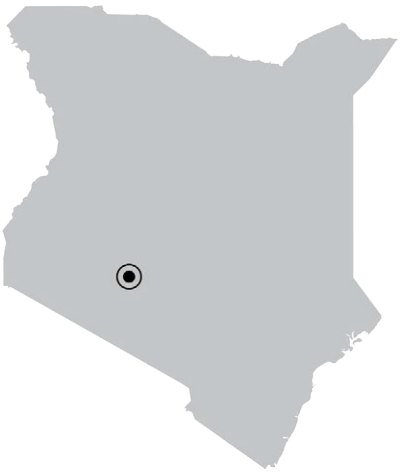


Furhter steps

- revitalization of waterfront, stairs and platforms preserve access to the river
- social housing emphasis on self-help, local materials & additive development
- active parter (small businesses), urban roof gardening (production of flowers), beekeeping & hydroponic gardening

Jury Comments

Being the best among Nyeri submissions, 4014 offers a "tool box"-like approach, with pragmatic suggestions on how to improve conditions in informal settlements, although the urban design is not as strong. Overall, the proposal is conceptually interesting and pragmatic in the manner it envisions the process of transformation.



4.5 Naivasha

Special Mention

“Raise. Rise. Rose” Special Mention – Naivasha (Team 1001)
This proposed design serves to illustrate an approach that facilitates economic development with the conscious consideration of the social and environmental context of the area. It taps into the inherent potential of the site by providing a platform for the local economy, particularly floriculture, to flourish on the basis of an agro-industrial economy.

The design strategy also incorporates the cordoning of environmentally sensitive zones and restricts further development in the area, conserving the existing wildlife corridor and the ecological flows of the region. The design exemplifies the integration of the industrial economy, environmental sustainability, and social inclusion.

Team members:

Delft University of Technology
Wenchi Yang, Wahyu Pratomo Hariyono, Lilla Krisztina Szilágyi, Nikita Baliga, Alkmini Papaioannou

KENYA IN THE GLOBAL FLOWER MARKET

Kenya is the third largest exporter of cut flowers in the world, accounting for the about 35% of all the flower sales to Europe. Due to its famous long lasting quality, the popularity of the Kenyan flowers is also increasing in the U.S. and Russia. The primary reason attributing to the high-quality blossoms all year-round is Kenya's tropical climate. With the strong transport links from Nairobi airport to Europe, from where it is transported to the rest of the world, the export of cut flowers is made smooth and feasible. To further facilitate the transportation of the perishable flowers as swift as possible, there is a terminal dedicated especially for flower cargos.

Kenya's high stake in the global flower market is encouraging foreign direct investments, resulting in the booming flower sector alone contributing 1.3% to the national economy. In the process of transferring these flowers from the grower to the consumer, the economic value of the flower increases by 375% when compared to its original worth in Kenya. However, the main beneficiaries of this operation are foreigners and the local economy of Kenya is still stagnant. There is a higher focus on meeting the global demands rather than catering to the local needs and there is a rising need to relook at this form of economic development driven by global giants and steer it to promote the local economy.

LAKE NAIVASHA : THE FLORAL BASIN

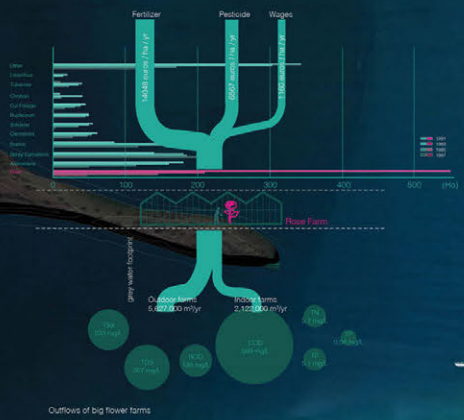
Lake Naivasha is an important hub for flower farms, by virtue of its abundant freshwater reserve and fertile soil for agriculture. Its close proximity to Nairobi airport and skilled labor force in the region are advantages for this flourishing industry. The highest percentage of flowers grown in this region is roses. There are about 5,627,000 cubic meters of outdoor rose farms and 2,122,000 cubic meters of indoor rose farms around Lake Naivasha.

Though on the one hand the flower industry is increasing the economic opportunities for people in the region, it is damaging the environmental quality of the lake basin. The extensive use of fertilizers and pesticides in order to enhance the flower yield is deteriorating the quality of the soil and water gradually. The groundwater extraction for irrigation is resulting in frequent fluctuations in the level of the lake affecting the biodiversity of the region adversely.

Moreover, the insensitive use of natural resources is having social implications on the settlements along the lake. The polluted water is no longer able to sustain the aquatic life in the lake, which was one of the main sources of employment and income for the local inhabitants. The fresh water of the lake is also a source of water for drinking and domestic purpose, but now has now become detrimental to the health of people. The monopoly of the large flower industries has lead to the high dependency of the local inhabitants on the industry for employment. The low standard of working environment is a consequence of this powerlessness of the workers and the pressure of the global forces. The poor working conditions of workers and the lack of alternate sources of employment is compelling the local people to indulge in destructive and illegal activities like deforestation, overfishing, etc. This is causing further damage to the environment.

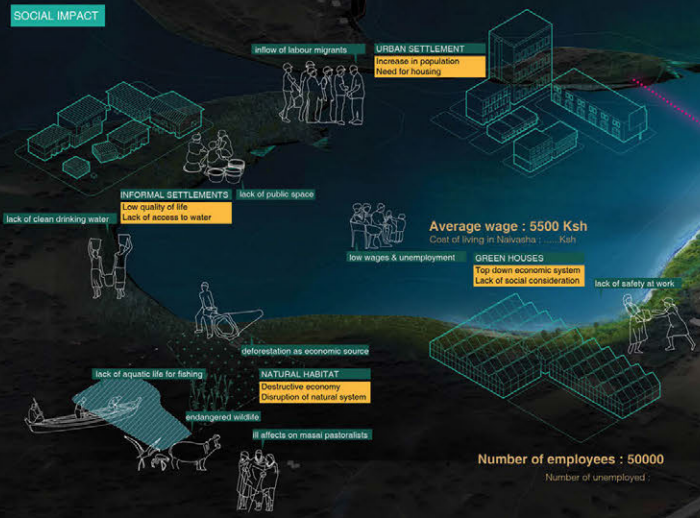
ENVIRONMENTAL IMPACT

Water balance of lake Naivasha



Outflows of big flower farms

SOCIAL IMPACT



BIO-BRICK PRODUCTION

The rose industry produces other outpu
besides the flower. Leafs and shoots that be
clipped off of the flower before packaging p
up into tons of biomatter. This matter that
currently regarded as waste and therefore h
no value for the producer can easily be turn
into a construction material called bio-brick.
part of the design, a solution to decrease t
amount of pesticides sprayed on the plants
origin, therefore the bricks are free of chemic
and are biodegradable. The rose produces
alternative material and when it needs to
replaced, it can be composted to become
for the flower industry.

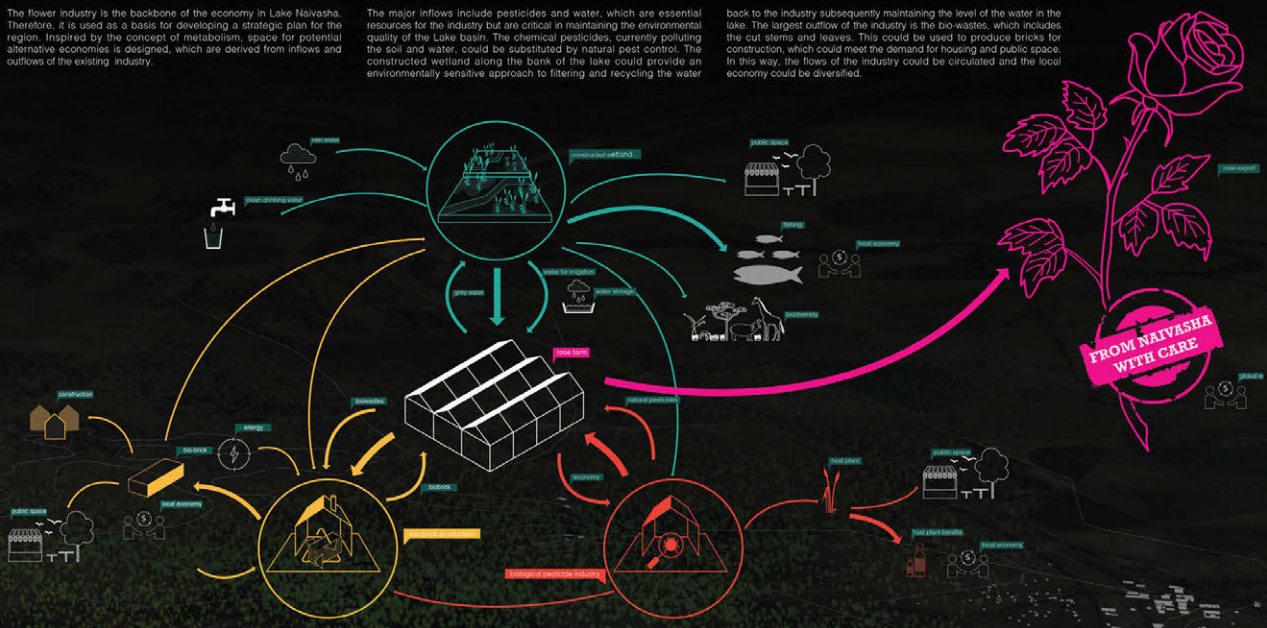
RAISE • RISE • ROSE

DIVERSIFYING NAIVASHA'S LOCAL ECONOMY THROUGH CIRCULARITY

The flower industry is the backbone of the economy in Lake Naivasha. Therefore, it is used as a basis for developing a strategic plan for the region. Inspired by the concept of metabolism, space for potential alternative economies is designed, which are derived from inflows and outflows of the existing industry.

The major inflows include pesticides and water, which are essential resources for the industry but are critical in maintaining the environmental quality of the Lake basin. The chemical pesticides, currently polluting the soil and water, could be substituted by natural pest control. The constructed wetland along the bank of the lake could provide an environmentally sensitive approach to filtering and recycling the water

back to the industry subsequently maintaining the level of the water in the lake. The largest outflow of the industry is the bio-wastes, which includes the cut stems and leaves. This could be used to produce bricks for construction, which could meet the demand for housing and public space. In this way, the flows of the industry could be circulated and the local economy could be diversified.



PUBLIC HABOR

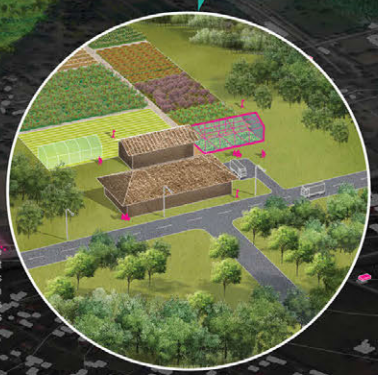
Route conncetions to lakefront

Constructed wetland

A harbor is designed as a public access for local residents and fishermen for an easier approach to the waterfront. The harbor deck offers space for fish markets where there could be a direct interaction between the fishermen and the local inhabitants. From the harbor, a canal is designed for the accessibility of boats from the lake to the inland. Besides this, the harbor also serves the boats for tourism which generates an additional revenue to the local economy.

Conservation for wildlife corridor

HOUSE OF LADYBUGS



Public beach

Houses of ladybugs are extensions of the existing farms, which cultivate the host plant for breeding the ladybugs. The ladybug is grown to replace chemical pesticides , which are detrimental to the environment. This space functions as an atelier which integrates production, education and public engagement.

Countries in development share many issues. Large international companies (may it be in the service industry, manufacturing industry or in our case, floriculture) tend to exploit cheap labor force and restriction-free raw-material mining of the Global South. Competitions in the global private sector create a vicious circle, an ever increasing gap between what the locals give and what the locals get back in return.

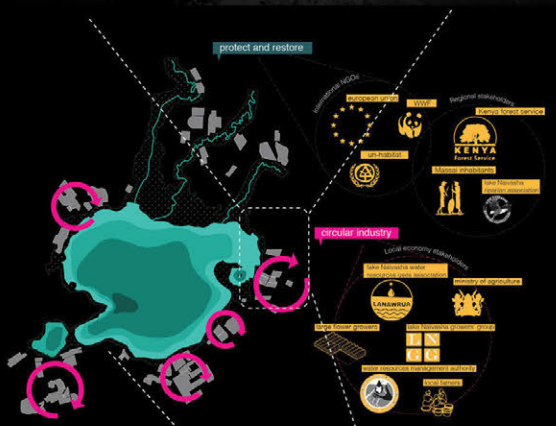
Our design focuses on providing Naivasha (its region, the lake as well as the city itself) a sustainable future with site-specific design elements.

Our methodology, however, is applicable, and could be replicated in any other location on the planet where fragile and precious local resources (soil, minerals, climate or workforce) are turned into profit for the welfare societies of the Global North.

REJUVENATING THE LAKE

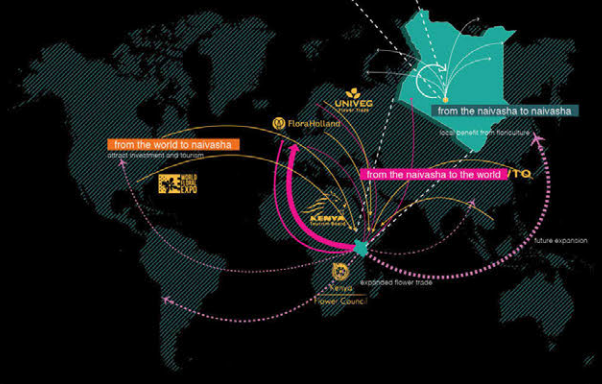
The main goals of the project are the protection of the ecosystem and enhancing the urban vitality along the lakefront. The first spatial strategy incorporates the zoning of the environmentally sensitive zones and restricting future development in these areas. These zones mainly comprise of the riparian area along the lake and the two estuaries of Gilgil and Malewa as well as the area around the Kenyan wildlife services. This would conserve the existing wildlife corridor and the ecological flows of the region.

The second spatial strategy is a consequence of the spaces created by the circular flows of the flower industries. Additionally improving the accessibility to the lake and enhancing the spatial quality of the public space accomplish urban vitality. The circular industrial flows generate revenue at the local scale by engaging stakeholders at different scales. By redirecting the investments of international and regional stakeholders, environmentally and socially sensitive production of flowers can be made feasible.



REPOSITIONING OF KENYA

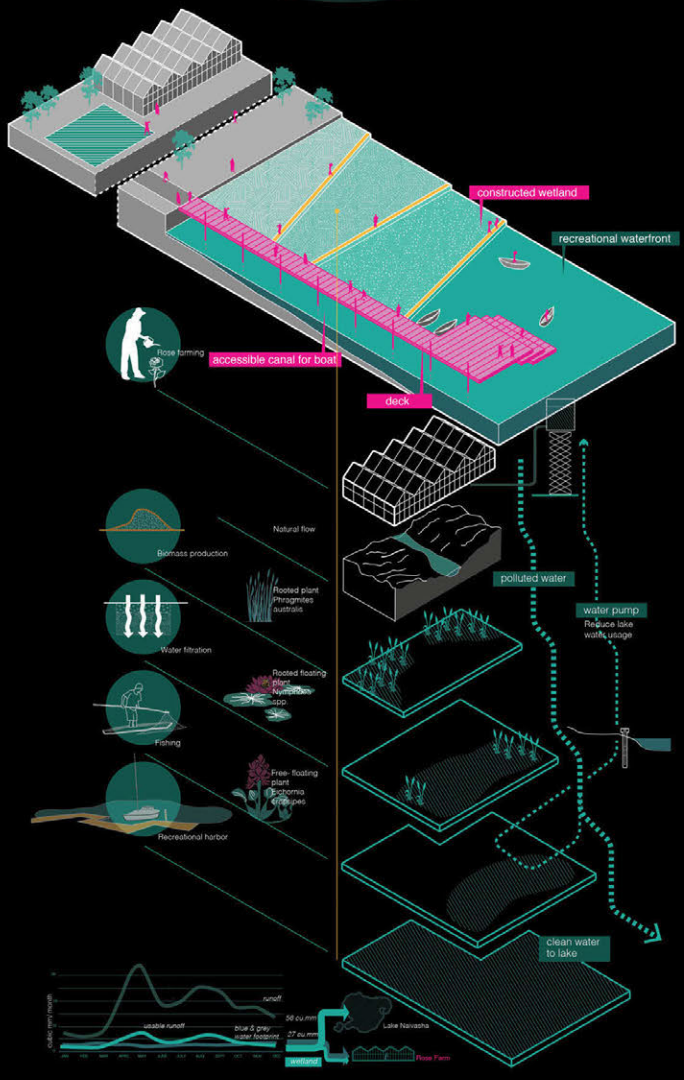
At the global scale, these local interventions would improve the credibility and quality of flowers exported from Kenya. This would further augment the Kenyan flower trade across the world, which would lead to the economy of the country to flourish. The increasing contribution of the flower business in the national GDP could further trigger national and international investment in the business. This would lead to the overall development of the Naivasha lake Basin and facilitate the improvement in the quality of life of the local inhabitants.



CONCLUSION

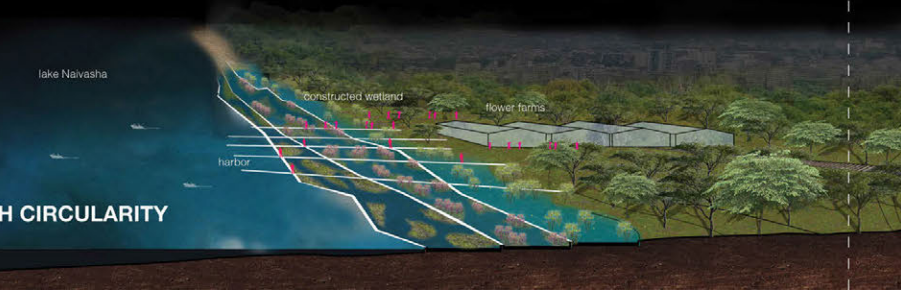
The objective of the proposed design is to illustrate the approach that could be adopted to facilitate economic development with the conscious consideration of the social and environmental context. It taps the inherent potential of the site by presenting a platform for the local economy to flourish on the foundations of the industrial economy in spite of the rising pressure of the global market. It exemplifies the integration of industrial economy, environmental sustainability and social inclusion.

Constructed Wetland



This intervention is proposed to maintain the quality of water and to harvest the rainwater in the region. The constructed wetland is strategically located in the region where the quality of water is undesirable and needs to be filtered. In this case, the waterfront along the urban center of Naivasha and near the large flower farms of Karagita is the identified polluted area.

The constructed wetland are planted terraces, which have different functions. The first two terraces have plants, which naturally filter the water and also provide biomass for the production of bio-bricks. The lower terrace is used for cultivation of fish, which further filters the water. The constructed embankments of the terraces are constructed with the bio-bricks and provide public access to the lake. Besides the filtration and protection of the waterfront, the designed edge provides recreational spaces for the local inhabitants as well as tourists.

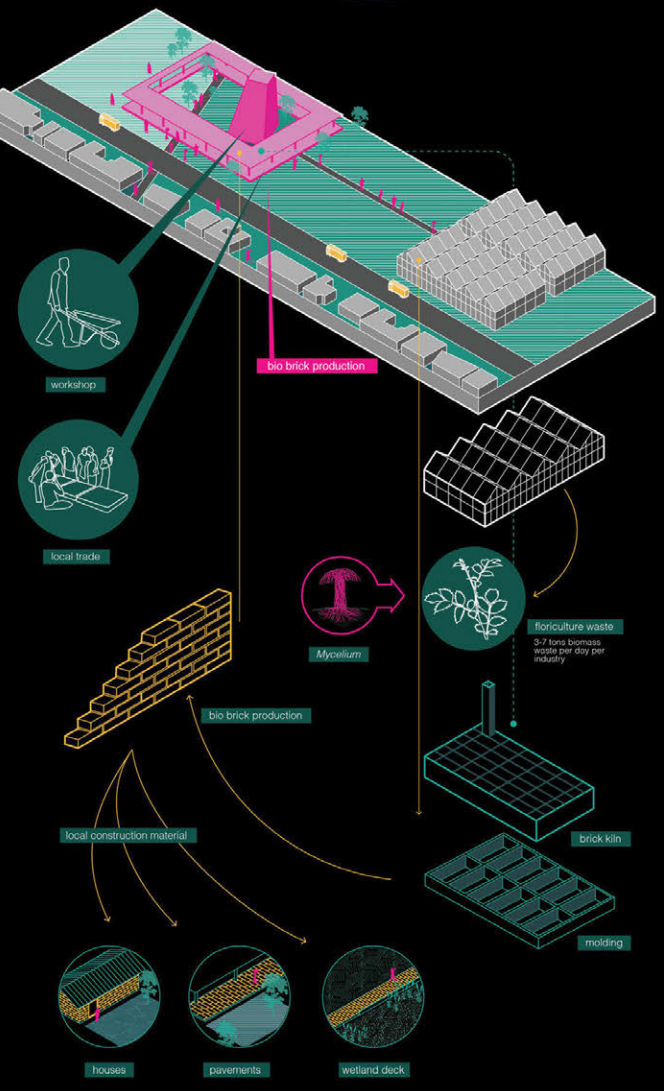


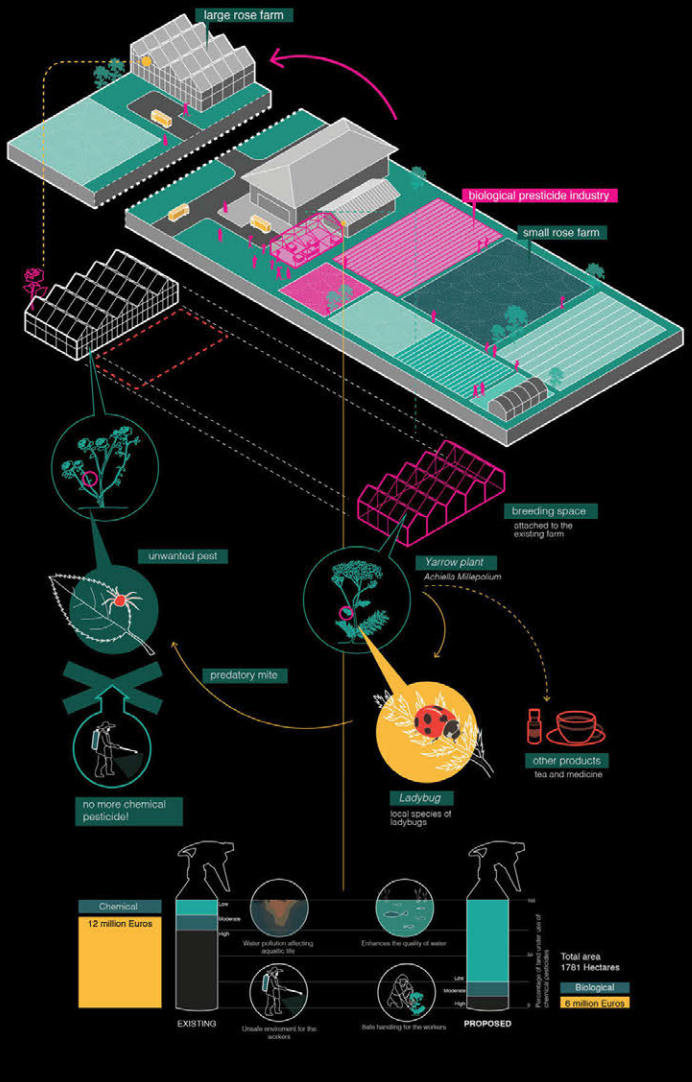
02

DIVERSIFYING NAIVASHA'S LOCAL ECONOMY THROUGH CIRCULARITY

-brick duction

House of Ladybugs

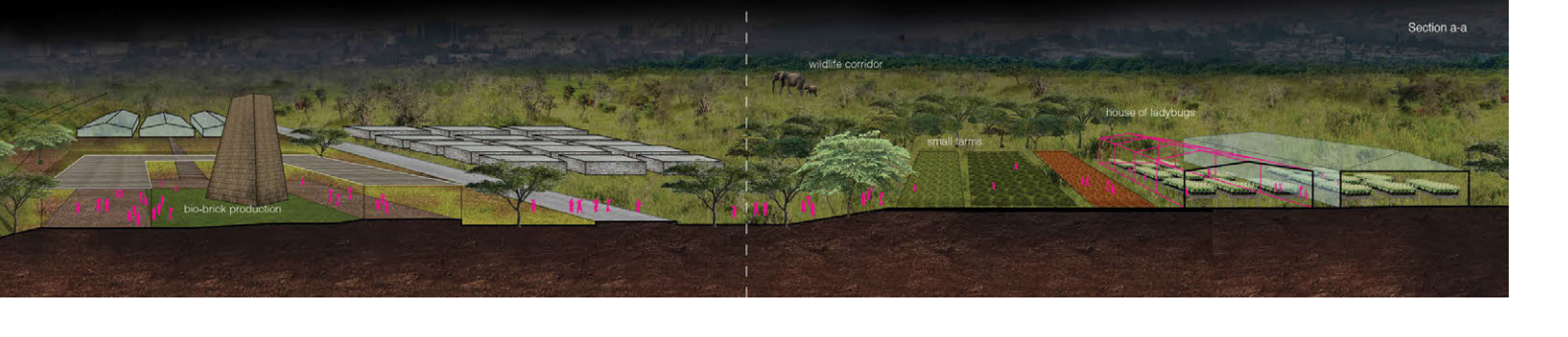




The abundant source of biomass provides a potential for a new type of construction material, bio-brick. The main ingredients of this bio-brick are the decomposed biomass from the industry and wetlands and the mycelium of the mushrooms, readily available in wet areas. These materials are added to brick molds and burnt to produce a sustainable construction material.

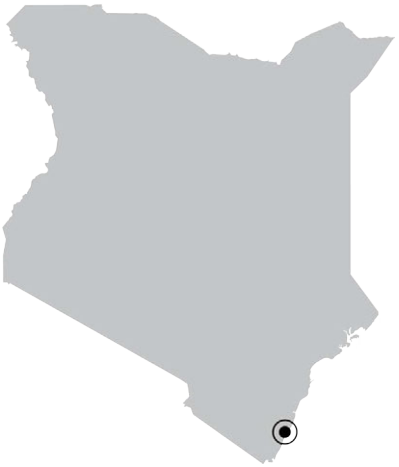
The bio-brick production industry also doubles up as a space for local markets and recreational spaces for the locals and tourists. It is located in the interspace between the flower industry, the urbanized area and the constructed wetland.

The intention of this intervention is to reduce the dependence of the flower industry on chemical pesticides. To control the pests on the rose plants, a practice called "seeding" is applied, which basically means relocating a branch containing the predatory mite from the host plan to the rose plant. The most common pest on the rose plant, the red spider mite or Tetranychus urticae is the prey for the predatory mite, here the ladybug or Coccinellidae, keeping it safe. The host plant chosen in this case is the yarrow plant or Achillea millefolium which attracts the ladybug by providing the pollen on the yarrow flower. The yarrow plant, native to Africa, has medicinal values and can be cultivated for economic benefits. This plant can be grown in farms as an outdoor extension to the existing small flower farms, which could enhance the spatial quality of the working environment.



Jury Comments

This emerged as the best proposal for Naivasha. It attempted to strengthen the prevailing economic driver in Naivasha – floriculture – and recommendations for reclaiming the lake for public space enhancement, with a broad conceptual approach. However, it lacked a strong connection between the theoretical approach and the urban design scheme.



4.6 Mombasa

Special Mention

“New Urban Waterfront for a Historic New City”
Special Mention – Mombasa (Team 5008)
This proposal envisages the revitalization of the Mombasa waterfront and enhanced connectivity between Likoni mainland area and Mvita Island area through the creation of a vibrant and sustainable waterfront and infrastructure conducive to a flourishing urban society. The plan suggests that this can be achieved, while reducing social disparities, through the effective allocation of formal and informal businesses, the boosting of the tourism industry through a variety of tourist attractions that appeal to all social groups, and by providing sustainable and open public spaces. Overall, the scheme aims to enhance public access to the waterfront, integrate the coastline into the design process from an environmental perspective, and promote local economic development.

Team members:

International Islamic University Malaysia
Zulaika Shaari, Ayesha Binti Ahmad Zawawi,
Nur Attiya Binti Masrom, Nursaffrina Binti Ropiee, Azamuddin Bin Amran,
Muhamad Rozaini Bin Mohd Rom, Muhammad Hasif Bin Ahmad

Jomo Kenyatta University of Agriculture and Technology
Reiner Khamala, Felix Archar

MOMBASA

NEW URBAN WATERFRONT FOR A HISTORIC "NEW CITY"

Mombasa is the second largest city in Kenya. Located on Kenya's Eastern coastline bordering the Indian Ocean, it's original Arabic name is Manbasa. In Kiswahili, it is called "Kisiwa Cha Mvita", which means "Island of War" due to the many changes in its ownership.
The history of the city is a mixture of African, Persian, Arab, Portuguese and British influences which contributed to the rich cultures found in the city today

Mombasa, a great trading centre.Was originally inhabited by the African Bantu people. The city was then visited by Jordanians in 6th century, Persians in the 9th and 10th century and thereafter Arabs. In this period the Arabs and Persians developed trading routes, commercial centers and contributed to a flowering of civilization reflected in the glorious architecture of their grand houses, monuments and mosques.

PROBLEM STATEMENT

Mombasa is a coastal city with a population
of 939,370 persons, and currently estimated to be
about 1.2 million persons. This leads to congestion and overwhelming of public spaces such as Mama Ngina Drive area, which is the only promenade that is accessible to majority of the city's residents. The draft ISUDP proposes for the revitalization of public spaces in the city, enhancing access to public beaches, densification,
mega-infrastructural development, various and waterfront redevelopments for land-value capture and to increase productivity.

CHALLENGES

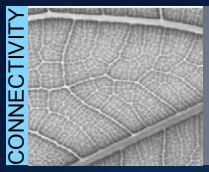
1. Being a free access ar
management and upkeep
park is a huge challenge to th
jurisdiction, especially with th
traffic of users over the wee
that raise concerns about c
capacity and proliferation of
from vending activities.
2. Being a prime location, th
has consistently faced the th
irregular allocation for
development.
3. During off-peak and at
some sections of the drive
registered different forms of
mainly petty crime.
4. The prime locations alon
park are not sheltered
exposed to excessive wind fr
ocean.
5. The edge of the park
waterfront is a cliff in nature,
it difficult to access the wate
especially during high tide.

CONCEPT

INTERLACE

To Achieve an inetrwoven urban platform and tying the links between the City, Old Town, Port, Statehouse and Tourist Destination, thus creating an effective waterfront design

CONNECTIVITY



To Create a connectivity between the land and ocean through an effective and accessible functional activities, transport.
Also to create a visual connectivity between Mainland and Island and the ocean through elaborate nodes and activities.

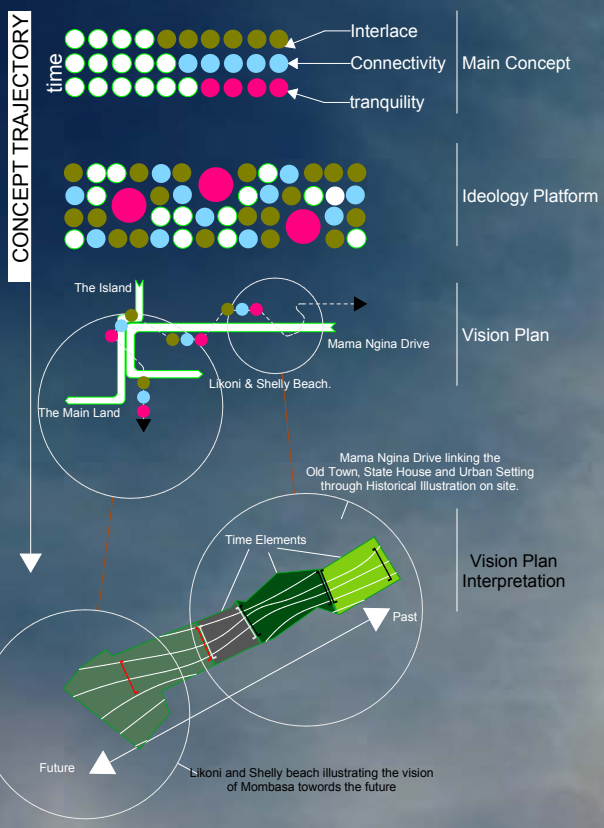
TRANQUILITY

To Achieve a Harmonious and Peaceful interaction between the people (Socially, Economically and Culturally), People and the architectural spaces and The City and Ocean.

TIME

To create the people's / city's vision through Time. This is to link the strong history of Mombasa and its vision towards the future. Designing for the present with regard to the future and past.

CONCEPT TRAJECTORY



URBAN DESIGN STRATEGIES

WATERFRONT AXIS

The
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PARK AND BEACH AXIS

The
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WATERFRONT ACTIVITY NODES

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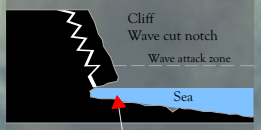
SOLUTIONS

1. By softening the edges with a promenade which not only allows access to the ocean but also to provide play area.
2.By providing an effective accessibility of the waterfront from the city through cable transport, Likoni bridge, Light Rail transport, and sustainable road network.
3. By creating Community 'Takeover' of the spaces hence creating a 24hr economy thus reducing on crime, also providing Crime Prevention Booths and Sustainable & Innovative lighting system.
4. Alongside the private recreation facility(Golf Club) we also provide Community/Public sport and recreation facility.
5.By providing an efficient spaces for the informal business hence inproving economy and tourism and bridging the gap in social structure.

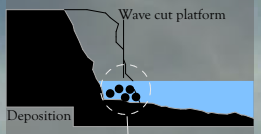
e Waterfront Axis- establishes the waterfront menade
e Waterfront Axis is the spine of the Sea+City ject area. It extends east to west on both sides The mainland and the Island.
waterfront. The Waterfront Axis will be an an promenade which prioritises pedestrian vements and and recreational activity spots n formal and informal.

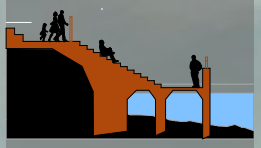
e Park Axis establishes the linking element for city and the ocean by creating a north-south nection between them.
ma Ngina Park at the centre provides recreation ities
s axis follows the point of Mombasa Old town Likoni with exclusive Mombasa illustration ugh the nature trail, plazas and public sports lly beach provides both formal and informal reational activities.

e waterfront is divided into three functional bles : Transport, Tourism, Public Spaces.
e transport node is to link the main land and the nd while also providing the tourism corridor ng Diani and Malindi, Lamu e.t.c
e Tourism node is to provide both formal and rmal activties for the tourist and enhancing the tion between the social levels.
e public Space nodes is to provide confluence ween the Users and spaces provided.



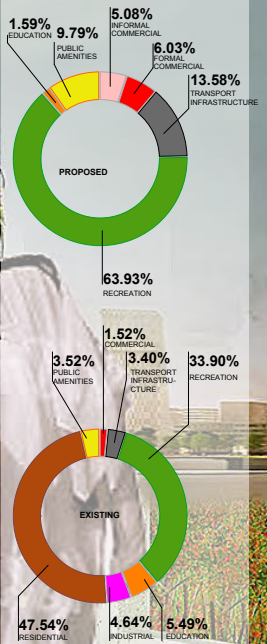
Illustrations showing the eroding effects of waves on Mama Ngina drive waterfront park, Wave cut platform phenomenon caused by coral reef erosion by strong waves from the sea



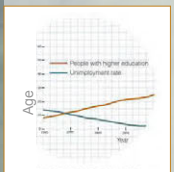


Softened Edge. A promenade with both a viewing deck in low tide and a playground during high tide. this is to provide an evening activity to a dormant walkway

LAND USE AREA



Social Cultural

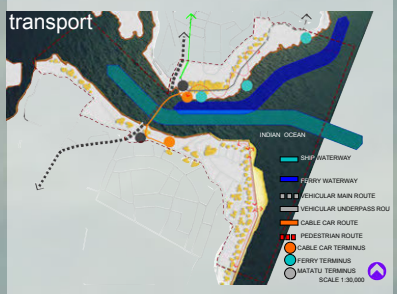


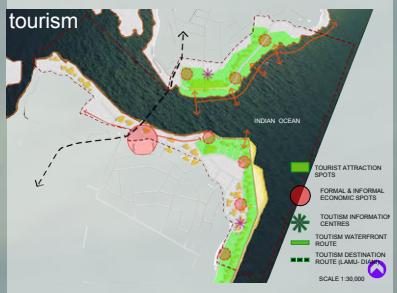
GROWING MIDDLE CLASS
Growing middle class in Mombasa and Kenya at large hence provision for recreational facilities

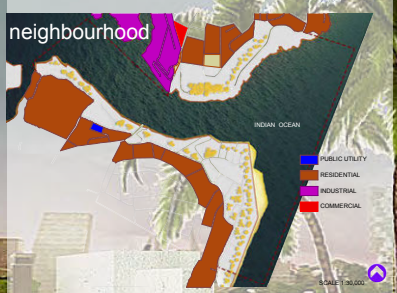
SOCIAL RESILIANCE
This is a great deal in society to cope with change. Hence, provision of activity spots to provide with networking capabilities between the different social groups.

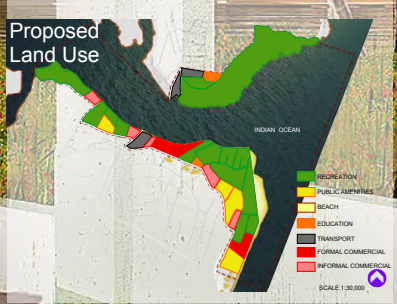
CLOSED STREETSCAPES
The current structure of the urban settting lacks green areas i.e private and public courtyards .Hence provision of Parks and reduction in social barriers.

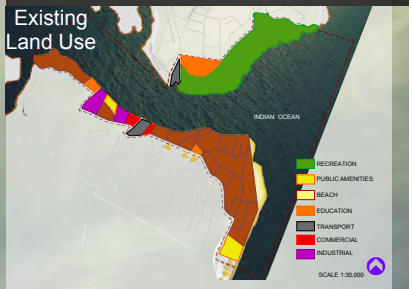
ISOLATED COMMUNITIES
The park and beach provides social ground to reduce on the social barrier and creating a confluence between people and people, and people and spaces, and land and ocean.

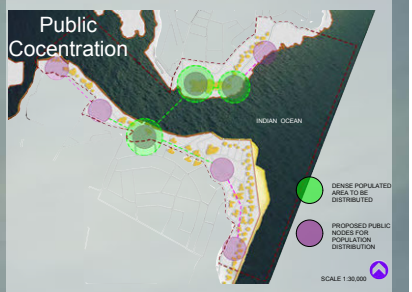


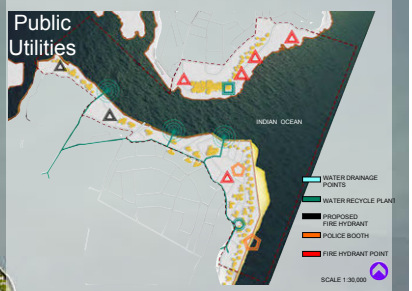












MASTER PLAN

COMMUNITY OPEN SPACES

Landscape for Recreation, Social Life and Sporting

Playgrounds,
Neighbourhood Parks
Sport Fields,
Nature Trails
Beaches,
Local Community Informal markets,
Urban Gardens

ECOLOGICAL LANDSCAPES

Meadows and Park For Environmental benefits.

Nature Parks,
Industrial Nature Park (For Mombasa History)
City to Ocean Link.

BLUE+GREEN INFRASTRUCTURES

Landscape that captures stormwater and clean air.

Infiltration park.
Swales and Infiltration medians.
Green wind buffer both as weathering and for carbon footprint reduction.

WORKING+ PRODUCTIVE LANDSCAPES

Landscape that generates new knowledge through Mombasa History, Generate energy and create new Urban experiences

Reseach facility and Education Facility (Marine Park and Tourist Information centre)
Camp Grounds.

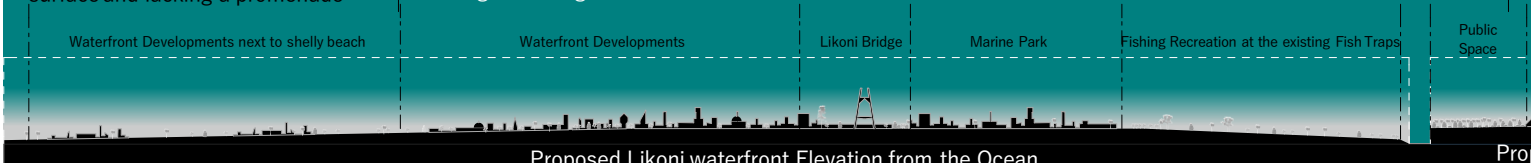
TRANSITIONAL LANDSCAPES

Temporary Landscapes that clean soil and enable new forms of social life and creative displays

Event landscapes,
Remediation Fields or Park
Art Scapes
Urban Meadows

Existing mama Ngina Park Section
Illustrating the extent on the Hard surface and lacking a promenade

Proposed mama Ngina Park Section



Proposed Likoni waterfront Elevation from the Ocean

Nature Trail Park

Nature trail park with informal business spots and private and public sitting niche.

Also the park demonstrates the the history of Mombasa through design, use of material and function.

Public Bath

A community initiative swimming facility for recreational for the public. This is to improve the community tranquility.

Public and Private sporting grounds

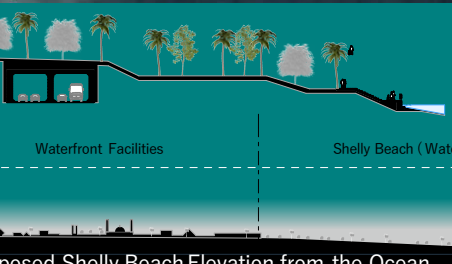
Alongside the existing Golf Course, the provision of public sporting facility and recreation along the waterfront.
This is designed on the reclaimed land and above the underpass, this is to increase visual continuity and reduction in carbon footprint.

Promenade

The softened edge through sustainabe control on the depleting cliff edge to create an active promenade with viewing decks, boardwalks and play area that can be accessed on both the Low tides and High tides.

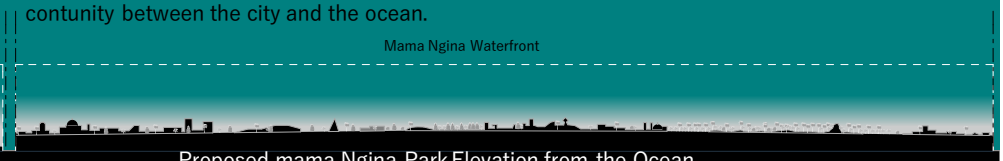
Mama Ngina Park

The Mama Ngina Park with the aim to create a link between the land and the ocean.
This is through the provision of public and private gardens, Ferry terminus for tourism tour, Monuments, jogging and cycling paths and Nature trails.
Adjucent to it is a tourist Information centre for Mama Ngina.



posed Shelly Beach Elevation from the Ocean

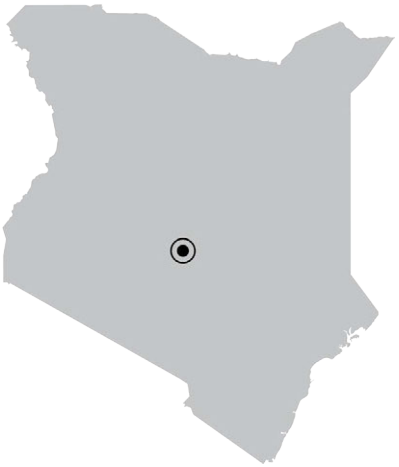
Proposed Mama Ngina Park section illustrating the allocation of the boardwalk promenade , underpass to reduce on the carbon footprint and creating visul contunity between the city and the ocean.



Proposed mama Ngina Park Elevation from the Ocean

Jury Comments

This was the best proposal among the submissions for Mombasa. The scheme aims to enhance public access to the water front, with implementable design suggestions, integrates the coast line in the design process from an environmental perspective and promotes local economic development. It also offers a solution for the Island-Likoni mainland crossing channel by suggesting a bridge, while taking note on its impact on the Mama Ngina Drive recreational park. However, the scheme is weak on social integration and, while promoting public access to the waterfront and local economic development, it also recommends privatization of some of the sections of the waterfront.



4.7 Embu

Special Mention

“Pedestrian-friendly environment in the CBD area”
Special Mention – Embu (Team 7017)
The CBD of Embu is plagued by lack of public space, poor pedestrian environment, and poorly managed parking spaces. This design proposal attempts to address these issues and comprises three main components.

The first is centred on developing a street hierarchy with emphasis on developing pedestrian friendly streets.

The second lays out the design for street lighting, trees, street furniture, pedestrian crossings, and improved water and waste management systems and includes an on-street parking management system to ensure parking only occurs in designated areas.

The third is concerned with integrating the stadium into the CBD through changes in the pedestrian environment and proposes to improve the area around the stadium to enhance and create space for leisure.

Team members:

The Technical University of Kenya
Mark Ojal

TU Berlin
Alokananda Nath, Adele Vosper, Evandro Davi Holz

Pontificia Universidad Catolica de Chile
Sofia Samur Zuniga

LFU Innsbruck
Alexander Obermeier

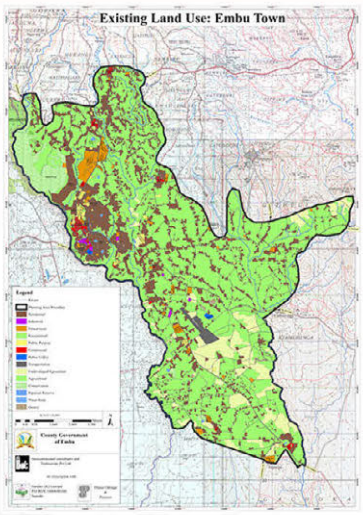
EMBU

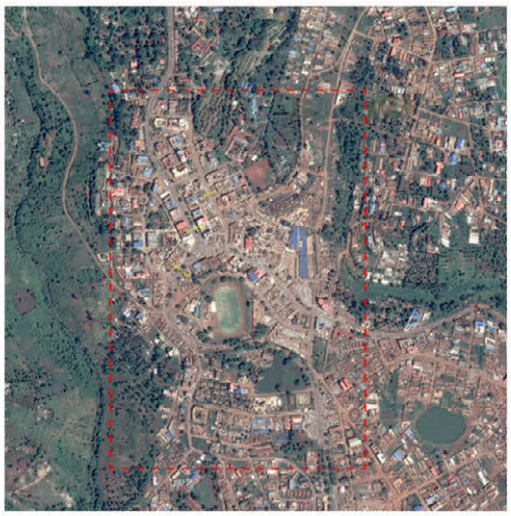
Embu is located approximately 120 kilometers northeast of Nairobi, on the foothills of Mount Kenya and along the major Nairobi-Meru highway. Currently the town serves as the county headquarters of Embu County. It had a population of 60,673 people in 2009, expected to increase to 144,000 people in 30 years. The town is located at the heart of a rich agricultural region; the town's economic activities are linked directly or indirectly to agriculture.

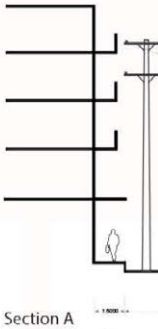
PROPOSAL - DESIGN PHILOSOPHY

The vision for Embu in 2035 as laid out in the ISUD P
Furthermore, the proposal was developed to help E
development, environmental management, and acc

The total area of CBD is around 28.79 Ha. The main activities within the CBD include wholesale businesses, retail shops, restaurant, hotels, offices, matatu stages, stadium, etc. The CBD has numbers of informal commercial activities such as hawking of light commodities, sale of second hand clothes, food and vegetable kiosks, etc.

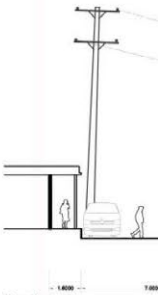






Section A
Current situation -

Section B
Current situation -



Section C
Current situation -

EMBU - CENTRAL BUSINESS DISTRICT (CBD)

The site selected in this town is a section of the CBD covering a part of the Meru-Nairobi Highway, Mama Ngina Street and the stadium area. The CBD of Embu is a commercial centre for the people of the town and surrounding hinterland. One of the major urban challenges in Embu has been inadequate infrastructure, and increasing congestion in the CBD area.

The CBD area is relatively small, but quite significant in terms of commerce and financial functions. As the town grows, the populations accessing the CBD has increased, and particularly during the daytime. The CBD is a compact area currently marred by conflicts between vehicular traffic, pedestrians, and hawkers, combined with inadequate parking arrangements and poor integration of the various uses of the streets.

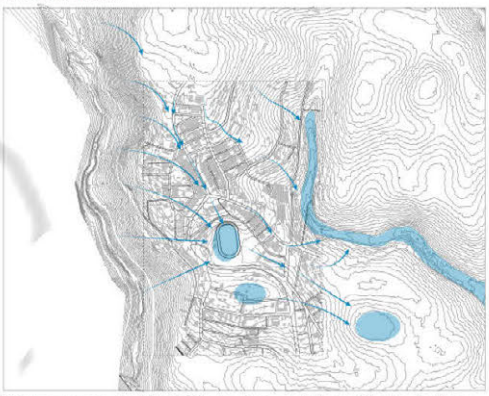
SITE ANALYSIS

Challenges

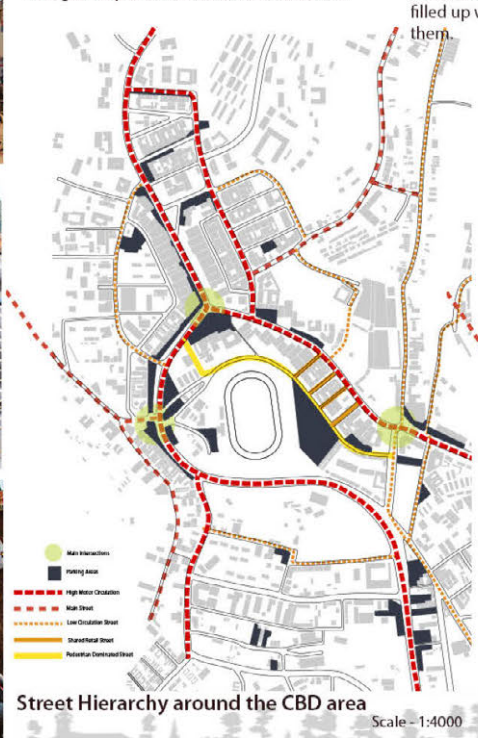
- Disconnected and lack of non-motorised transport (NMT) infrastructure negatively impacts pedestrian movement (w.r.t safety, comfort, accessibility)
- Open drains present health and injury hazard for pedestrians
- Poorly managed parking takes up a lot of public space
- Limited public spaces for recreation and leisure
- Informal economy poorly integrated

Opportunities

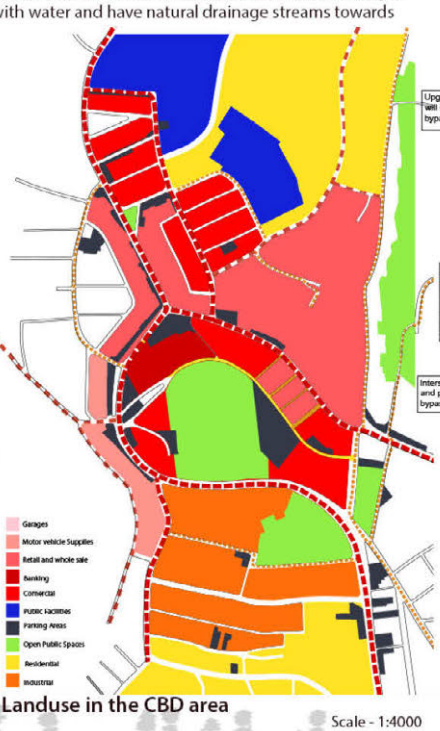
- Clear establishment of street hierarchies and NMT infrastructure improvements can better organise transport flows and connectedness of pedestrian routes
- Improved parking management can make more public space available for people
- Underutilised public spaces (e.g. area around the stadium and along the river belt) can be turned into green spaces for recreation and leisure



The topograpgy of the CBD area is undulating with the stadium being at a lower level then rest of the area. There are two more such sunken areas, one at the south of the stadium and the other on the east near the stream. Whn it rains, these sunken areas get filled up with water and have natural drainage streams towards them.

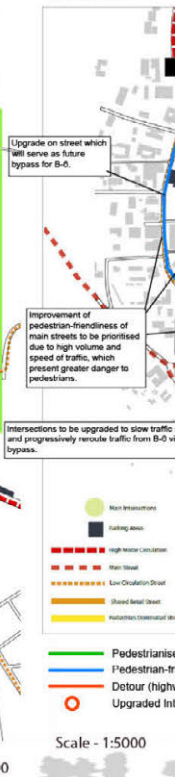


Street Hierarchy around the CBD area
Scale - 1:4000



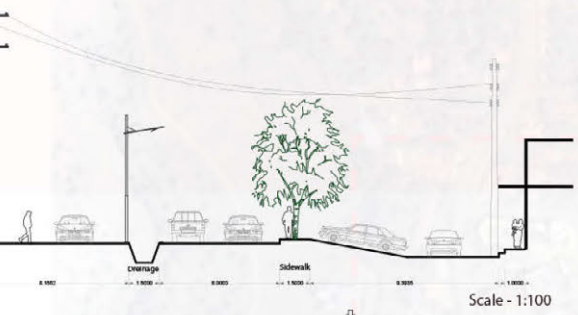
Landuse in the CBD area
Scale - 1:4000

TRAFFIC MANAG
Phase I

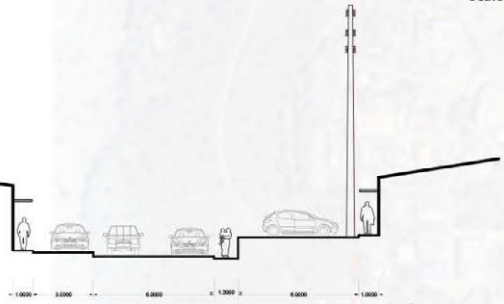


Scale - 1:5000

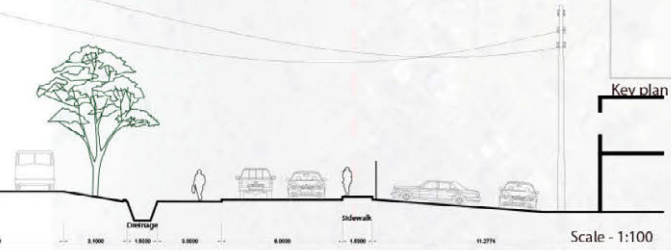
Plan guided the development of our proposal. The CBD was therefore specifically designed to be safe, accessible, well-planned, green and sustainable.
mbu reach a number of targets comprising Sustainable Development Goal (SDG) 11, especially those relating to transportation, inclusive and participatory
ess to green and public spaces.



Scale - 1:100



Scale - 1:100



Scale - 1:100

Key plan of CBD area. Scale - 1:2500

The current streetscape is dominated by cars and vehicles coming towards the CBD area with little or no space for pedestrians. There are no dedicated sidewalks in the entire zone which makes it difficult for pedestrians to walk or cross the streets. Parking of vehicles in haphazard manner along most of the main streets create congestion.

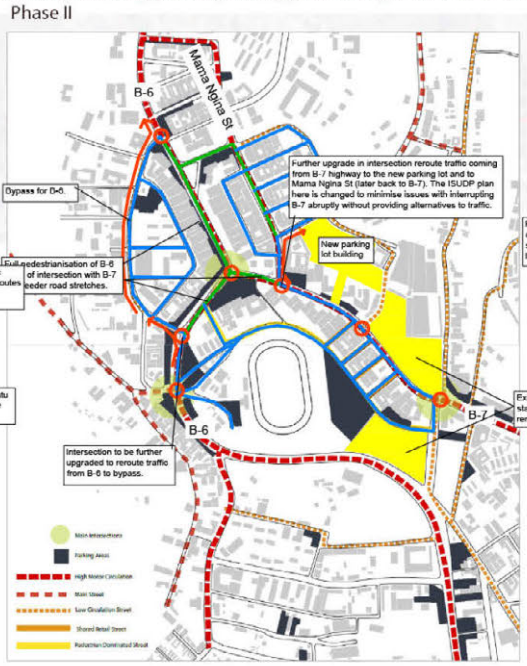
Hence managing traffic in order to avoid conflict was one of the primary goals of the design propasal. Below are the phase wise traffic management plan for the CBD area.

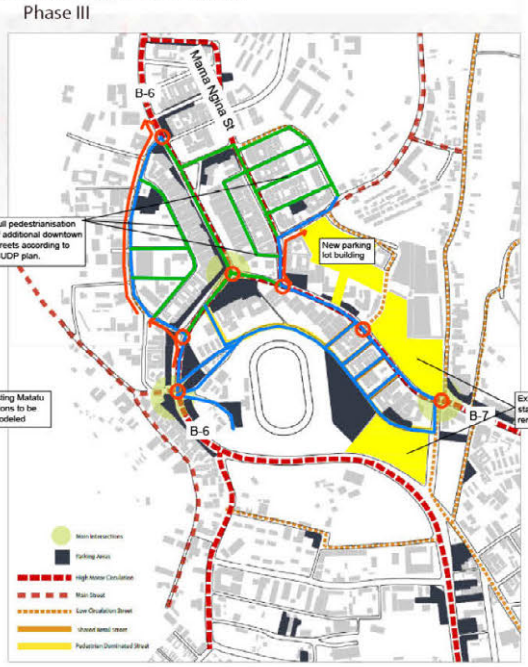
- Initially focus on on-site parking management than building off-street parking structures to have a better idea of the actual demand.
- Pricing of parking in busiest streets, initially in a simple manner (e.g. a once-off daily ticket), that can be later made more complex (e.g. per time). Include already-existing people collecting fees informally
- Definition of parking spaces in main streets and designed open spaces, whilst enforcing preservation of green spaces.
- Definition of Matatus stops for embarking/disembarking (per ISUDP).
- Installation of medians in main roads to minimise on-street parking in middle of highways (per ISUDP).
- Enforcement of law regarding parking in unallocated spaces, using graduating fines (e.g. just a warning for firt-time offenders, and increasing price for recidivists).

EMENT PLAN

Phase II

Phase III





Phase I
- Full pedestrianisation of Mama Ngina St and a secondary street as a pilot test for future works. These streets were choosen as they are secondary roads, hence will not present drastic changes in the main highways, and as they already present high pedestrian traffic.
- Prioritise improvement of pedestrian-friendliness of main roads due to higher traffic volume and speed presenting greater danger to pedestrians.
- Upgrades in intersections in B-7 to reduce traffic volume and speed, and progressively redirect it to the new parking lot and to return to B-7. The ISUDP plan here is changed to minimise issues with interrupting B-7 abruptly without providing alternatives to traffic.
- Upgrades in intersections in B-6 to reduce traffic volume and speed, and progressively redirect it to the planned bypass road, which should be also upgraded accordingly.
- Streets around the stadium and B-6 north of intersection with B-7 to not allow car access during weekends, to serve as pilot test for rerouting of B-6 via the proposed bypass.

Pedestrianised
Pedestrian-friendly
Detour (highways)
Upgraded Intersection

Scale - 1:5000

Phase II
- Full pedestrianisation of B-6 north of intersection with B-7 and feeder street stretches.
- Reroute of traffic from B-6 to use proposed bypass.
- Further upgrades in intersection in B-7 to redirect traffic to the new parking lot and to return to B-7. The ISUDP plan here is changed to minimise issues with interrupting B-7 abruptly without providing alternatives to traffic.

Pedestrianised
Pedestrian-friendly
Detour (highways)
Upgraded Intersection

Scale - 1:5000

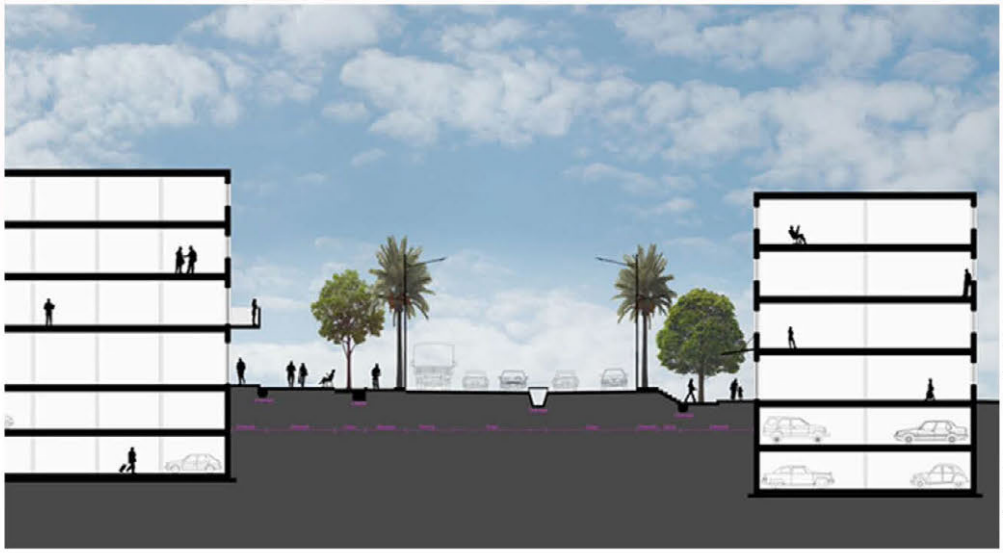
Phase III
- Full pedestrianisation of additional downtown streets according to ISUDP plan, incorporating lessons learned from previous pedestrianised stretches of road.

EMBU

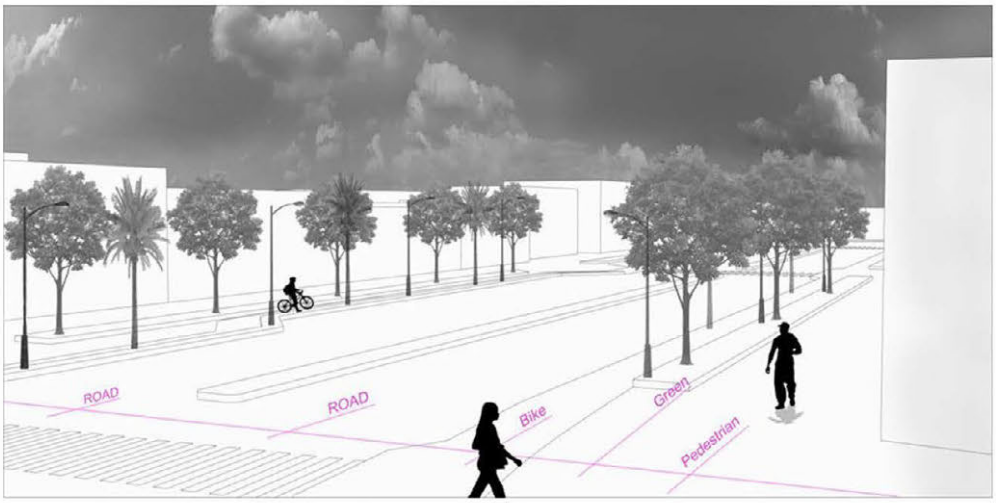
- Pedestrain friendly CBD area
- Optimising traffic and parking
- Managing vehicular movement
- Integrating the stadium within the CBD

PROPOSAL - DESIGN PHILOSOPHY

The vision for Embu in 2035 as laid out in the IS
Furthermore, the proposal was developed to he
development, environmental management, and



Final Street Sections and view

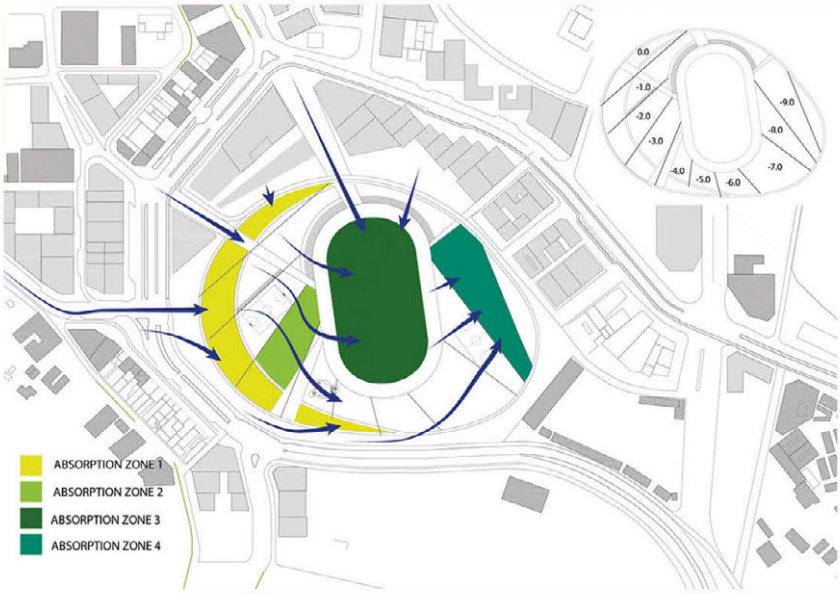


Final Plan of the CBD area with pedestrianis

UD Plan guided the development of our proposal. The CBD was therefore specifically designed to be safe, accessible, well-planned, green and sustainable.
lp Embu reach a number of targets comprising Sustainable Development Goal (SDG) 11, especially those relating to transportation, inclusive and participatory
d access to green and public spaces.

ed streets with integrated stadium

Scale - 1:500

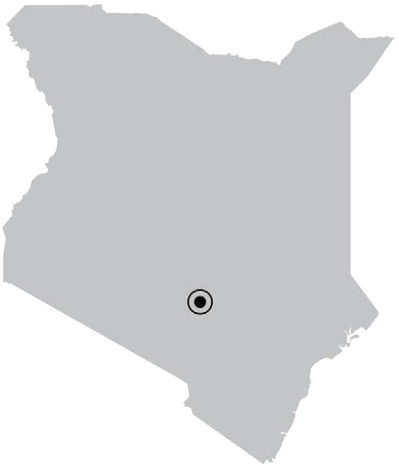


Water Flow Management System around the Stadium area

Reference image for the wholesale market area that would be an integral part of the redeveloped CBD of Embu

Jury Comments

Being the best proposal among the Embu submissions, it offers a fairly strong analysis of the site conditions, seeks to enhance local economic development, and recommends a traffic management plan. However, the urban design was not strong and could have been bolder in addressing the issue of the stadium in the CBD. Indeed, the jury noted that, overall, the Embu proposals ought to have come out more strongly to address the stadium location within the CBD, including analysing the impacts of the stadium's continued existence in the CBD of a growing secondary city.



4.8 Kitui

Special Mention

"Co-Dependent Systems in Developing Economies" Special Mention – Kitui (Team 8008)
This design proposal is a subtle intervention. Its primary aim is to catalyse incremental and organic growth within Kitui city and county. It envisages the Kunda Kindu Bus Park's functioning as a multi-purpose node of transport and economic activity, strengthening the relationships between various transport and commercial economies (both formal and informal). The team believes that this can be done through mutually beneficial interaction amongst people on the ground. The scheme proposes rerouting traffic to create a ring road as a more efficient means of circulation through the town. This ring road will activate and integrate informal and formal industry along the newly articulated route. A portion of the ring road will become a corridor linking the CDB to the Kunda Kindu bus park. Public squares and vehicular "pull-over zones" are located at strategic intersections leading off the route to alleviate congestion and encourage a pedestrian thoroughfare parallel to the corridor.

The design proposes a housing scheme directly abutting an existing natural stream. This scheme allows for mixed-trade on the ground floor and the incremental growth of housing above. The multi-functional nature of the program addressed the subtle range between informal trade and formal retail. The program intends to mediate between public and private spaces in the residential zones of Kitui, while maintaining a sense of permeability. Included in the proposal is reclamation of natural land to create a greenbelt. The reclamation of natural land will serve as a sensitive way to provide larger public spaces and further opportunities for community creation.

Team members:

University of Cape Town
Rudi le Hane, Claire Barry, Jonathan Melamdowitz

Jomo Kenyatta University of Agriculture and Technology
Arthur Magero, James Kagiri, Matthew Wambua

CODEPENDANT SYSTEMS IN DEVELOPING ECONOMIES

PROPOSED VEH

1: 4000

MASTER PLAN OF THE KITUI URBAN AREA SHOWING ZONING SCHEME

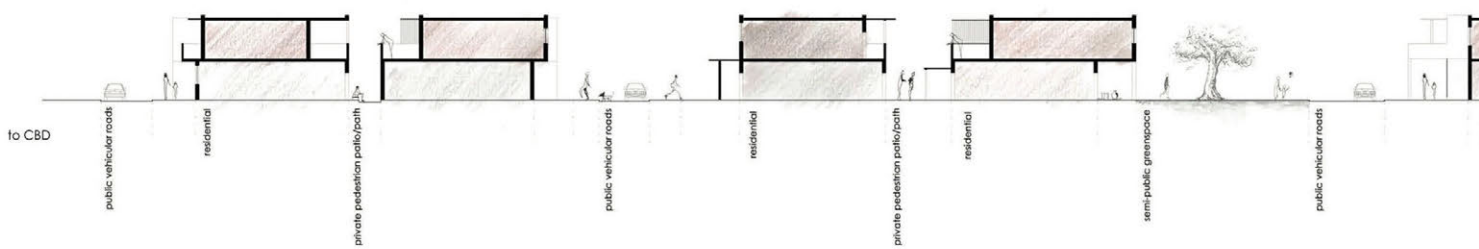
1: 2500

DIFFERENTIATIO

1:500

to CBD

COMMERCIAL
INDUSTRIAL
EDUCATIONAL
PUBLIC PURPOSE
RESIDENTIAL
RECREATIONAL
PUBLIC UTILITY

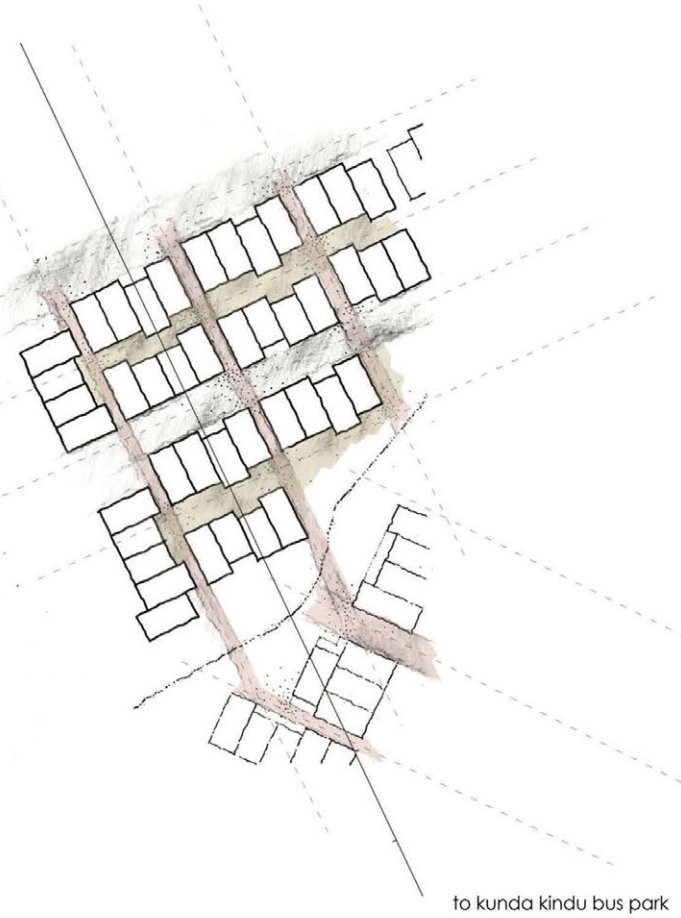


ICULAR MOVEMENT THROUGH KITUI

PROPOSED PEDESTRIAN PERMEABILITY THROUGH URBAN FABRIC

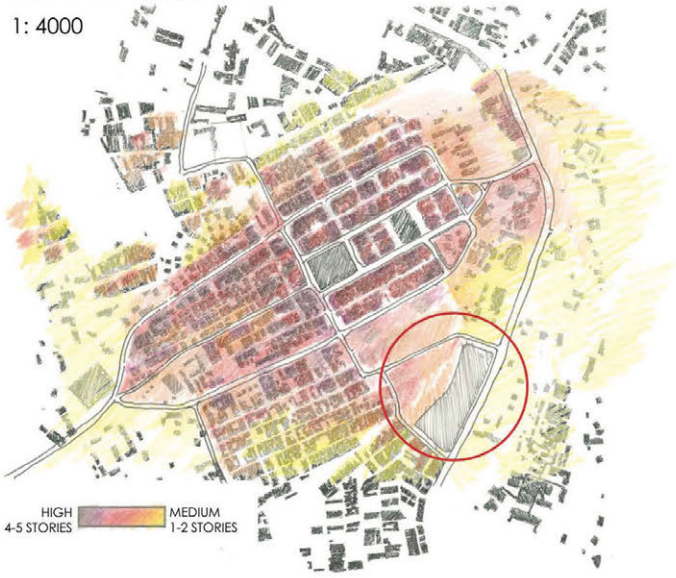
1: 4000

N BETWEEN THE RESIDENTIAL PUBLIC AND PRIVATE REALM

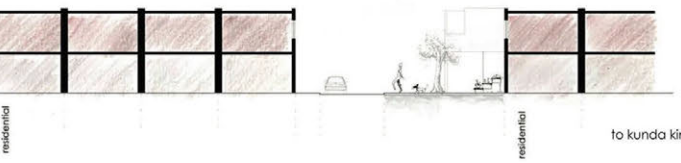


PREDICTED URBAN DENSITY

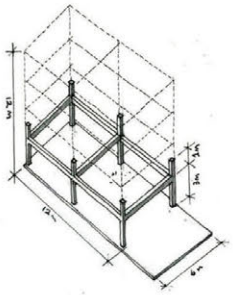
1: 4000

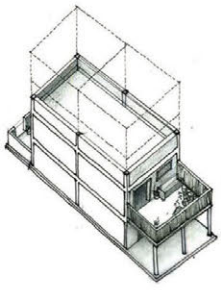


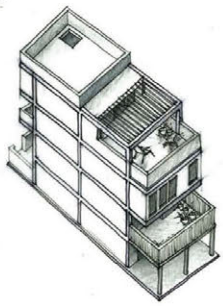
to kunda kindu bus park



to kunda kindu bus park







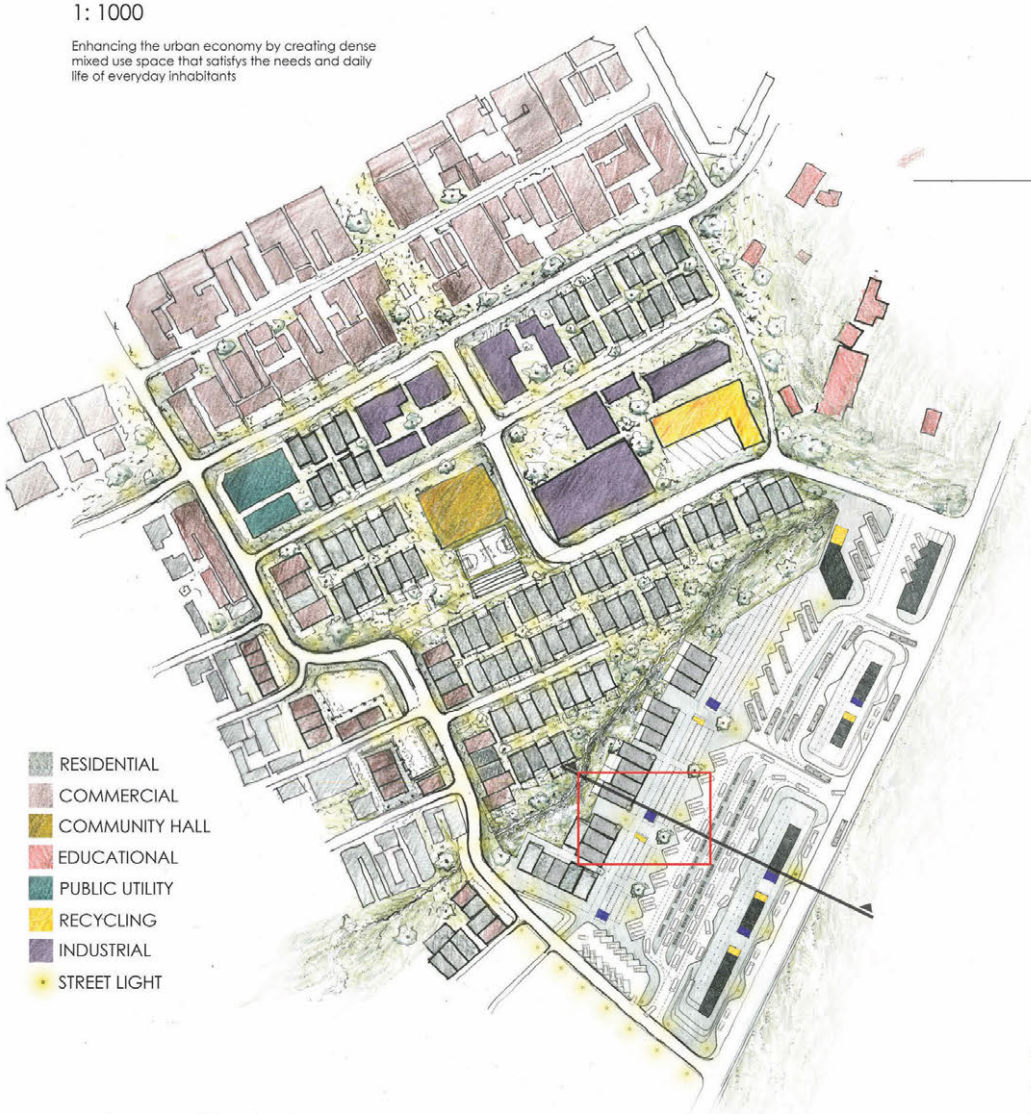
implementation of incremental housing through concrete frame structures that can be built upon in height over time.

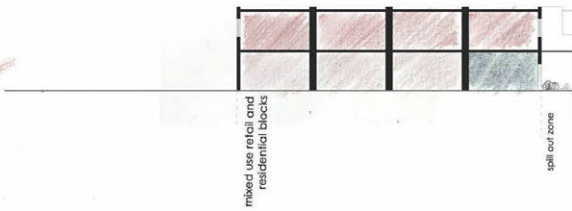
HOUSING SYSTEM SECTION

1:200

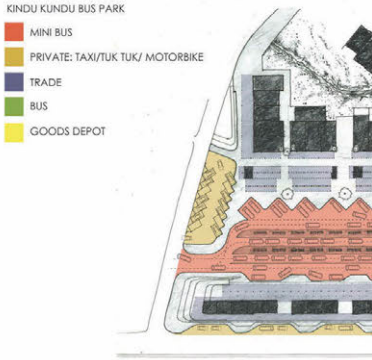
KUNDA KINDU BUS PARK SITE PLAN
1: 1000

Enhancing the urban economy by creating dense mixed use space that satisfys the needs and daily life of everyday inhabitants



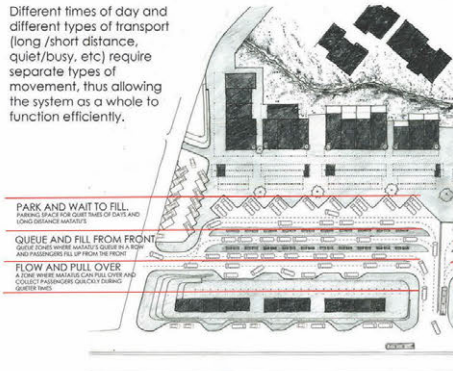


BUS PARK ZONING DIAGRAM
1: 1000

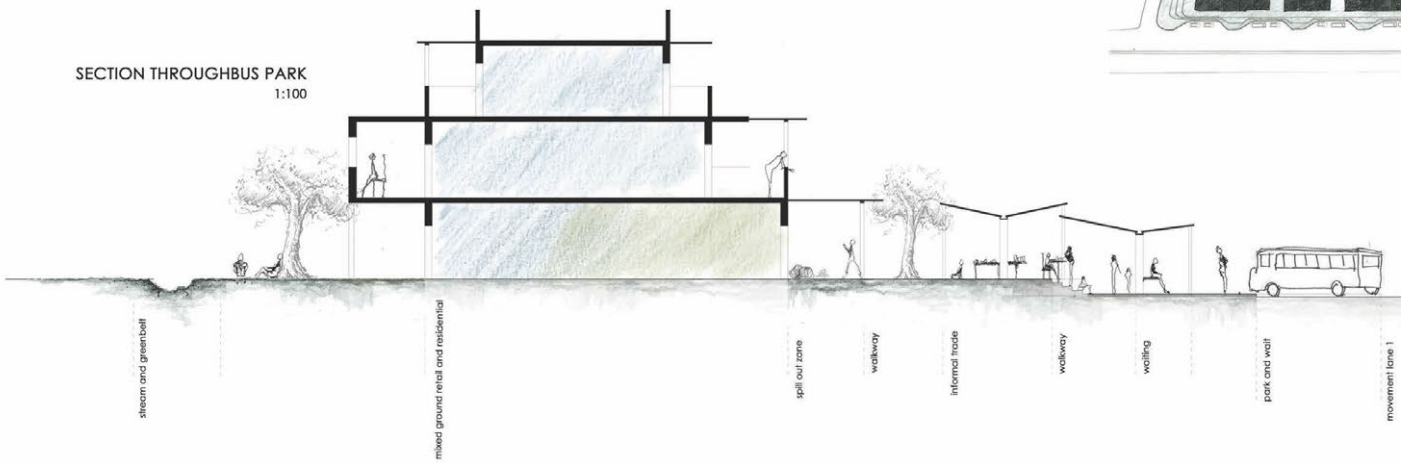


SYSTEM OF DIFFERENT TRANSPORT MOVEME
1:1000

Different times of day and different types of transport (long /short distance, quiet/busy, etc) require separate types of movement, thus allowing the system as a whole to function efficiently.



SECTION THROUGHBUS PARK
1:100

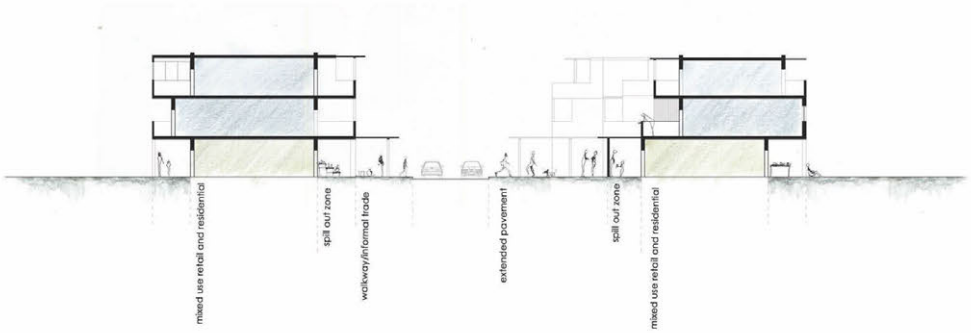


Creating a corridor of economy and public space that links the Kunda Kindu transport hub to the CBD and the central bus station there. Promoting economic growth and activity along this connecting route will begin to stimulate a wide range of organic growth across the city.

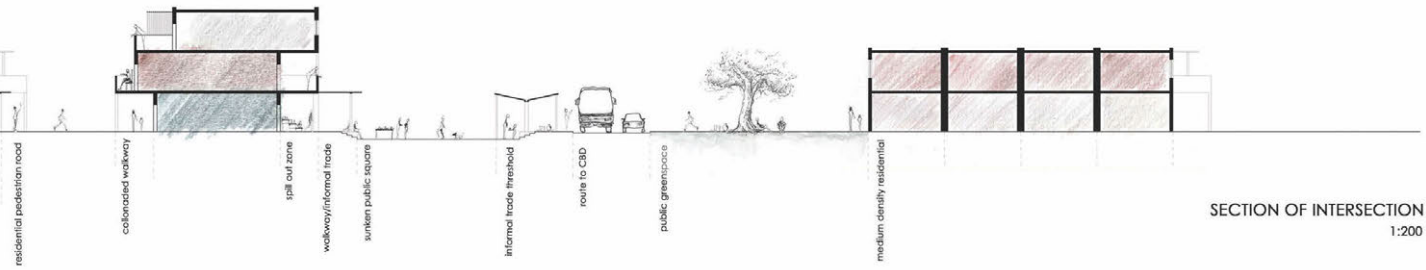
Giving a portion of the bus park over to an industrial function and connecting it to the CBD via the industrial areas we begin to further develop the diversity of transport economies and the opportunity they create.

TRANSPORT CORRIDOR

INDUSTRIAL CORRIDOR

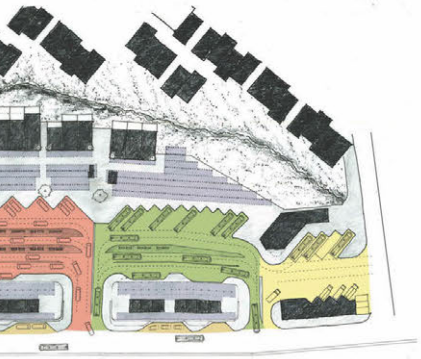


SECTION OF HOUSING AND PROPOSED ROUTE INTERACTION
1:200

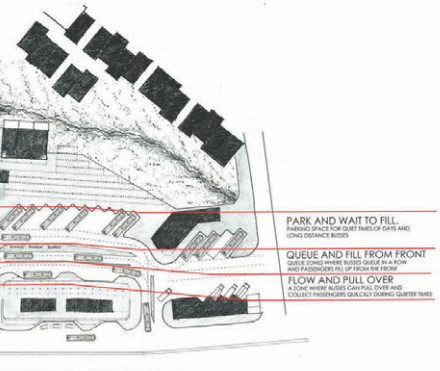


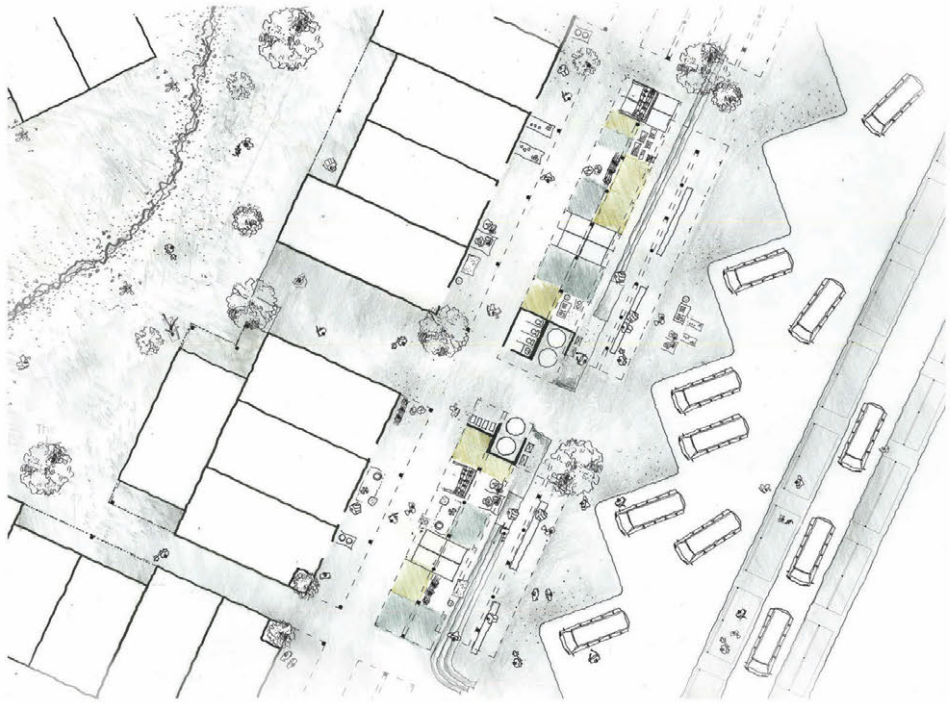
SECTION OF INTERSECTION
1:200

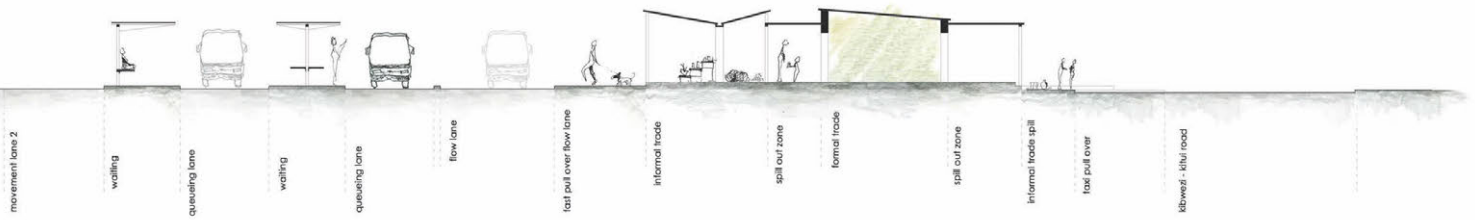
PLAN OF ECONOMIC EDGE OF BUS PARK
1: 200



NTS







Jury Comments

The design competition offered Kitui teams the option of working on two sites (Kunda-Kindu and Kalundu bus parks) simultaneously or separately. Eventually, proposal 8008 emerged as the most outstanding among the submissions made for Kitui. The scheme seeks to enhance the integration of economic (informal and formal), residential, and transportation activities and transform into a public space at Kunda-Kindu. It offers a fair contextual analysis and suggested interventions aim to increase the capacity of the site and address the inherent environmental issues. However, the proposal fails to clearly indicate the pedestrian links.

4.9 Malindi

Special Mention 1

“Malindi Alive” Special Mention – Malindi (Team 9003)
This design proposal aims to promote the enhancement of public spaces and improve Malindi’s tourism industry. It takes into account employment generation for hospitality services, entertainment, and other urban services; improves the urban image; and provides service training programmes for local residents. It provides for a Bus Rapid Transport system to solve the transport challenges along the waterfront corridor, as well as to revitalize the area. It went further to zone the corridor, where each zone has specific interventions. In addition, it suggests the installation of parking lots in the peripheries of Malindi to solve congestion issues.

Lastly, it aims to improve recreational spaces, for both residents and tourists, through the construction of cycling and jogging lanes and designated areas for cafes and craft sales.

Team members:

Universidad de Guadalajara
Aguayo Ascencio Aarón, Arellano Acevedo María Guadalupe, Cárdenas Castañeda Héctor Gabriel, Cedano Casillas Myriam, Dubois Casillas Carlos Rafael, Gómez Contreras Lucina, Hernandez Vazquez Jose Manuel, López García José de Jesús, Moreno Garcia Alberto, Quintero Perez Gustavo, Razo Zaragoza Alfonso, Viña Hernandez Susana Cristina

Technical University of Kenya
Lloyd Kimungi, Mwaura Kimani

Districts

Strategies by Districts

D-1 Old Town
- Pedestrian walkway to ling public spaces and attractions
- Rehabilitation of roads
- Corridors with mixed uses (residential and commercial)
- Comercial activities along pedestriam wlakways in order to activate local economy

D-2 New Town
- Built heritage protection
- New commercial and public spaces

D-3 Urban Services
- Concentrating urban services in this district (Hospitals, schools, cultural house, etc.)
- Promote the use of these urban services, giving easy access to the area

D-4 Residential Low Density
- Conservation and restoration around the Vasco de Gama pillar
- Construction of a mirador in the base of Vasco de Gamma pillar
- Pedestrian walkways construction to connect the north coast to the south cosast and highlight the beauty of the pillar

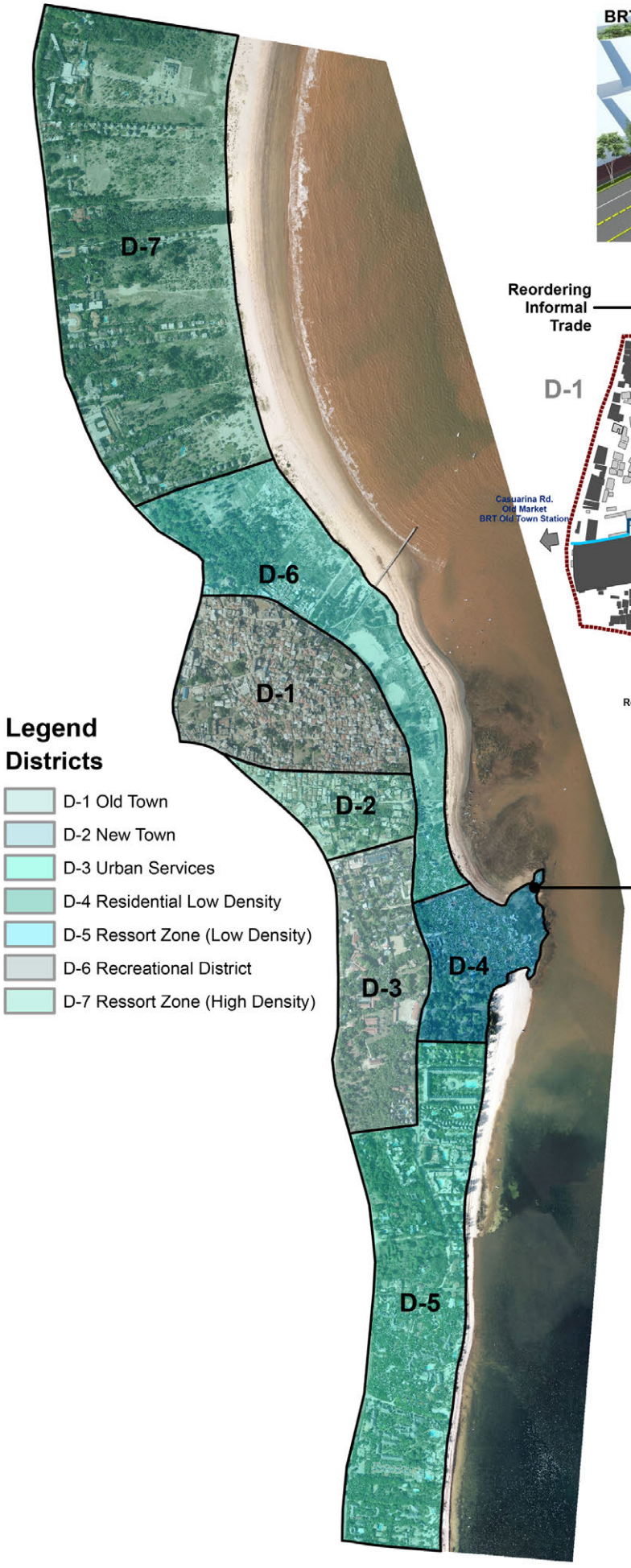
D-5 Ressort Zone
Low Density
- Promotion of Housing developments on vacant land
- Neighborhood park implementation

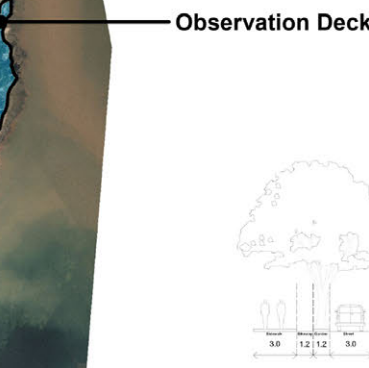
D-6 Recreational District
- Recreational facilities (sports areas, cultural walks, outdoor activities)
- Reordering of informal trade
- Bandshell (Malini Bowl)
- Cultural tour for handcrafts and local art exposure

D-7 Ressort Zone
High Density
- Hotel boutiques
- Leisure and nightlife (casino area)

BRT Stations
Bus Rapid Transit

- Kwa Ndomo Station
- Macaburini Station
- Malindi Cntral Park Station
- Malindi Town Station
- Old Town Malindi Station
- Vasco da Gama Station
- Health Station
- Silversand Station
- Muyeye Station





URBAN PROPOSAL 9003

Road and Transportation System

Priority Road Cyclist
Preferably circulation roads for cyclists

Priority Road Cyclist

Silversand Rd.
Football Stadium
Fishing Port
Boardwalk

Priority Road Cyclist
Preferably circulation roads for cyclists

Street Proposal
Model for Roads

Reordering Informal Trade

Discharge Line

Infrastructure Area

Fishing Port

Bike Stations

Multimodal Station

Fish Market

Multimodal Station

9 Stations
Linear Extension:
4,96 Km
Bus Rapid Transit

Percentage Between Stations
500 meters

Boardwalk
18.0 meters

Snorkeling
Jetty

Bikeway
2.0 meters

Observation Deck

Vial Proposal
Casuarina Road North-South
Road Section

Recreative Area

Pedestrian Walkway in the Beach
5.0 meters

30 meters

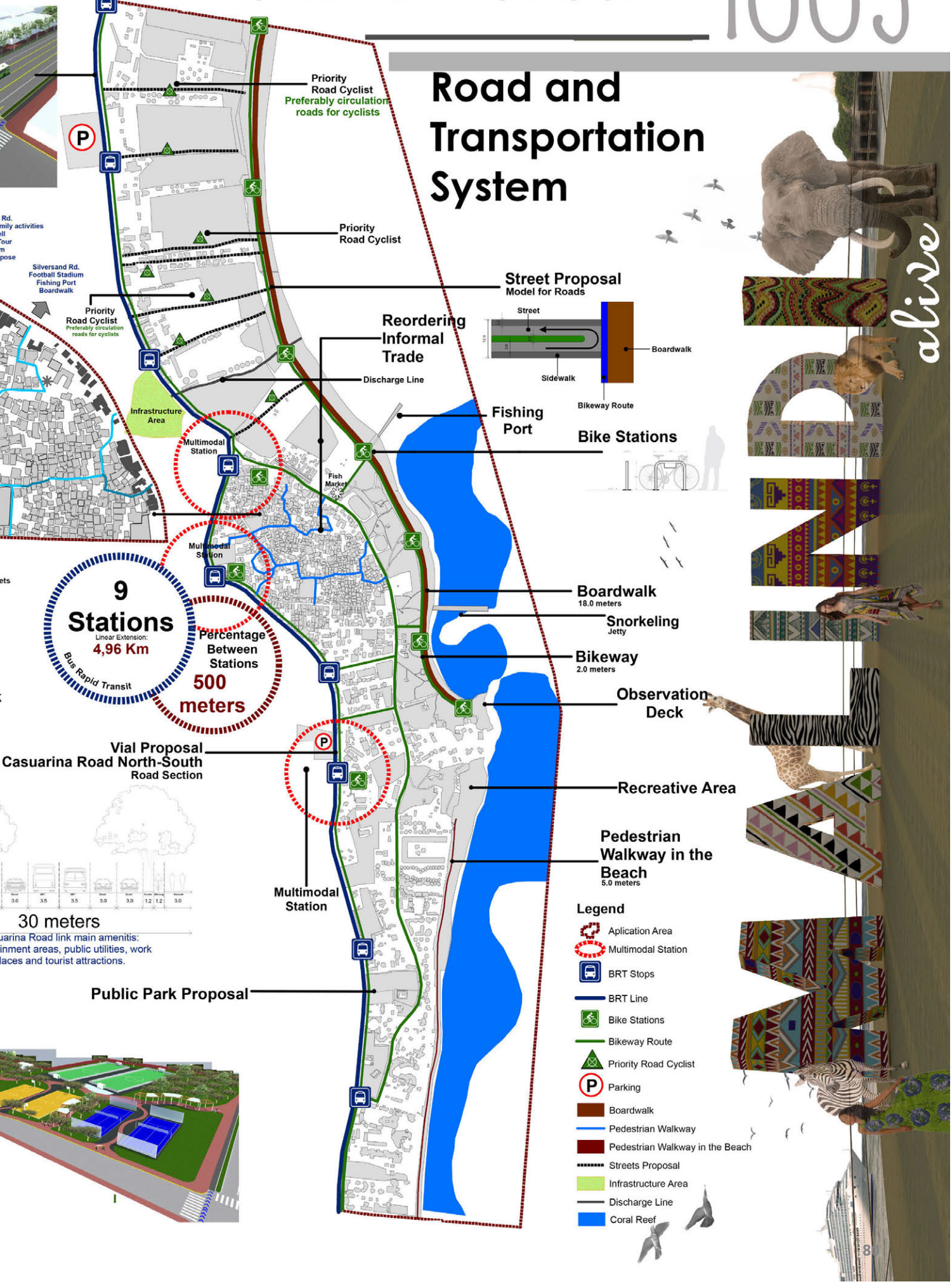
uarina Road link main amenitis:
inment areas, public utilities, work
laces and tourist attractions.

Multimodal Station

Public Park Proposal

Legend

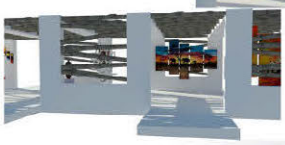
- Aplication Area
- Multimodal Station
- BRT Stops
- BRT Line
- Bike Stations
- Bikeway Route
- Priority Road Cyclist
- Parking
- Boardwalk
- Pedestrian Walkway
- Pedestrian Walkway in the Beach
- Streets Proposal
- Infrastructure Area
- Discharge Line
- Coral Reef



LEISURE AND NIGHTLIFE :
This space aims to generate an area in which the inhabitants of the coast and tourists can carry out nighttime activities, spaces needed to implement these activities are proposed to have a source of jobs and increase tourism in Malindi, areas such as bars, gardens, paths, social areas and multipurpose area ensure easy and enjoyable performance of such activities.

HOTEL BOUTIQUE:
This hosting area aims to increase tourism in Maldini, the spaces that make up this set as Deluxe rooms, large and modern pools as well as services that give the private club, are great attractions internationally with large capitals, which generate higher income for the inhabitants and the town of Malindi.

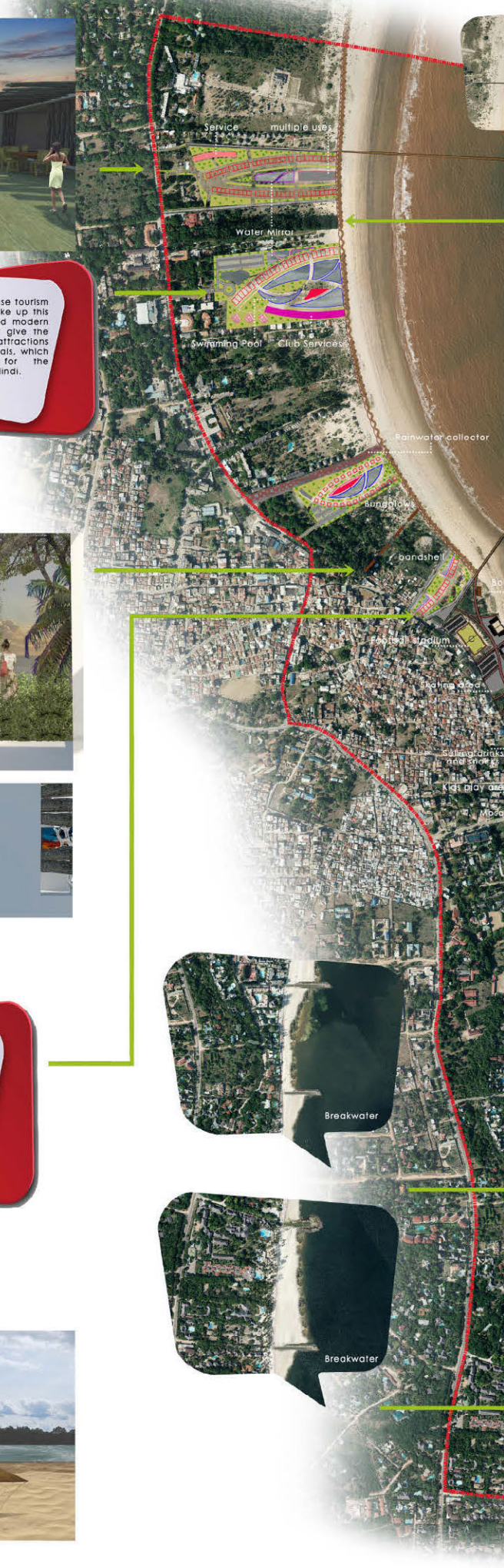
This cultural tour will allow the villagers to express their skills for art. Their artworks will be exposing temporarily in an area of extensive green infrastructure and open to the public, where tourists will appreciate and in some cases buy them. This trip will start from the Ngina Street road up to reaching the boardwalk that leads directly to enjoy Malindi beach.



RESTAURANTS AND FAMILY ACTIVITIES :
This area aims to create a space in which the family tourist can interact with each other throughout the day, and the same time enjoy Malindi gastronomy, also spaces are proposed for these activities are carried out with great comfor, such as; restaurants, sidewalks, terraces, gardens and playground, all with excellent views of the coast, the sea wall and great proximity to the fish market .

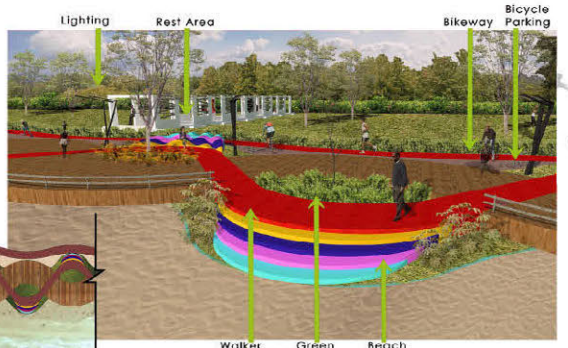
PUBLIC BEACH

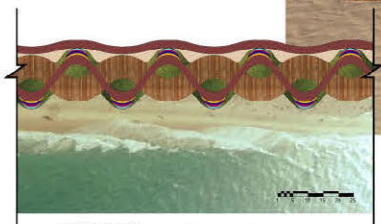
Fishing, walking, swimming, beach gaming and rest area with parasols proposed. These light structures can be removed and inserted at any time.



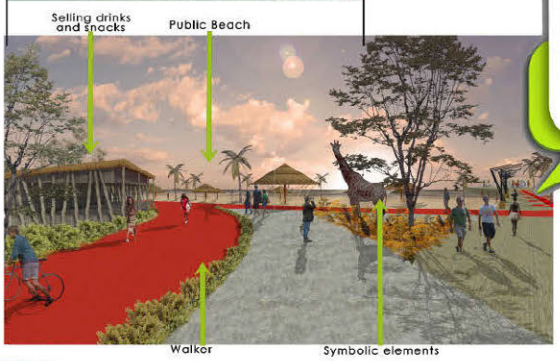
DESIGN PROPOSAL 9003

BOARDWALK
The seawall is seen as a conneccion between the various activities to be undertaken in the costal area of Malindi as a recreational area, cultural area, shopping and nightlife area. You can cross the boardwalk as you like, walking or cycling.
Another reason for this intervention is to generate greater tourist attraction to boost the economy of malindi.

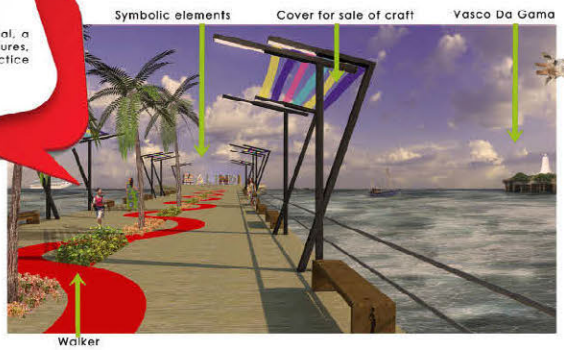




RECREATIONAL AREA:
This area includes recreational spaces that at the same time become generators of employment for the local population taking into account respect for existing green areas and creating harmonious spaces with the environment and that in the same time will achieve a major attraction for all tourists who visit it.



JETTY:
It's an area with great visual potential, a platform where people can take pictures, buy handicrafts, rest, walk and practice snorkel.



Local economic development through tourism activities

Tourism can be the source of development in Malindi. It may be a tourist destination in the region. It must have a valuable offer, something that on it's around is not available. It has to be an unrepeatable tourist destination.

- Strategies
  - Buyld the necessary infrastructure for tourism development
  - urban image improvement
    - Renewal areas. Creating public spaces
  - Create public places
- Employment

Jury Comments

The jury identified two proposals, as the most outstanding among the Malindi submissions. No single proposal among the Malindi submissions provided strong arguments that unanimously convinced the jury. Perhaps this is related to the complexity and scale (area coverage) of the site, as well as the difficulties of the teams to clearly articulate their proposals in a convincing way.

This proposal attempted to provide a Bus Rapid Transport system to solve the transport challenges along the waterfront corridor, while revitalizing the area. It went further in zoning the corridor, each zone with specific interventions. However, the urban design communication of the scheme was fairly weak.

4.9 Malindi

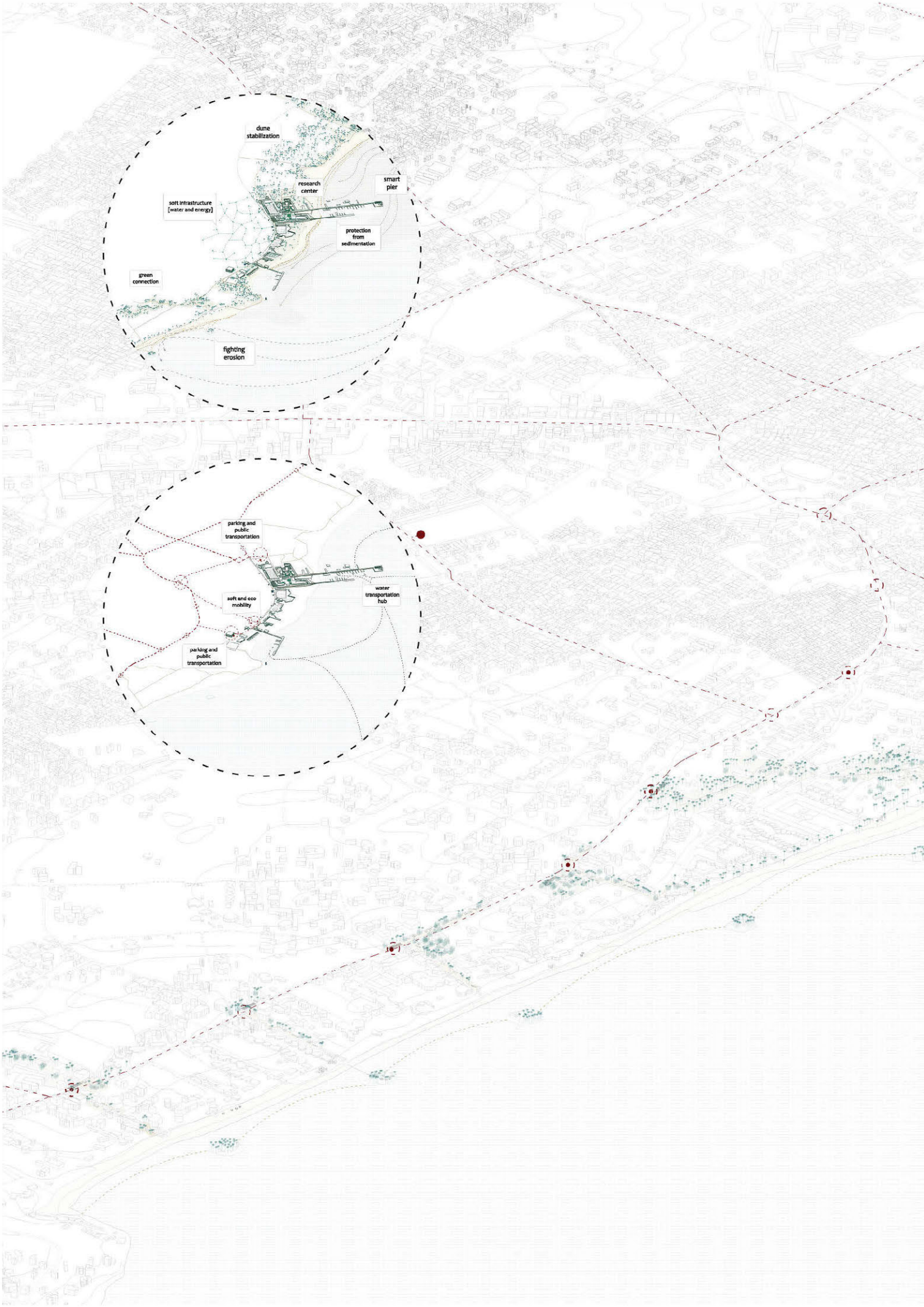
Special Mention 2

“Malindi Waterfront as Socio-ecological Infrastructure” Special Mention – Malindi (Team 9009)
This proposal recognizes the coastline as not only a critical environmental feature, but also an area for strategic local economic development interventions. It aims to reclaim the waterfront in order to turn it into a public good by redesigning it as a socio-ecological infrastructure, with the capability to confront environmental challenges related to climate change and natural hazards, while providing an interactive platform that promotes social inclusion, economic enhancement, and cultural empowerment. The design’s environmental and infrastructural strategy investigates the area from the river estuary to the southward tip of Casaurina beach, with the area facing Shella and the town center as the main metropolitan interface.

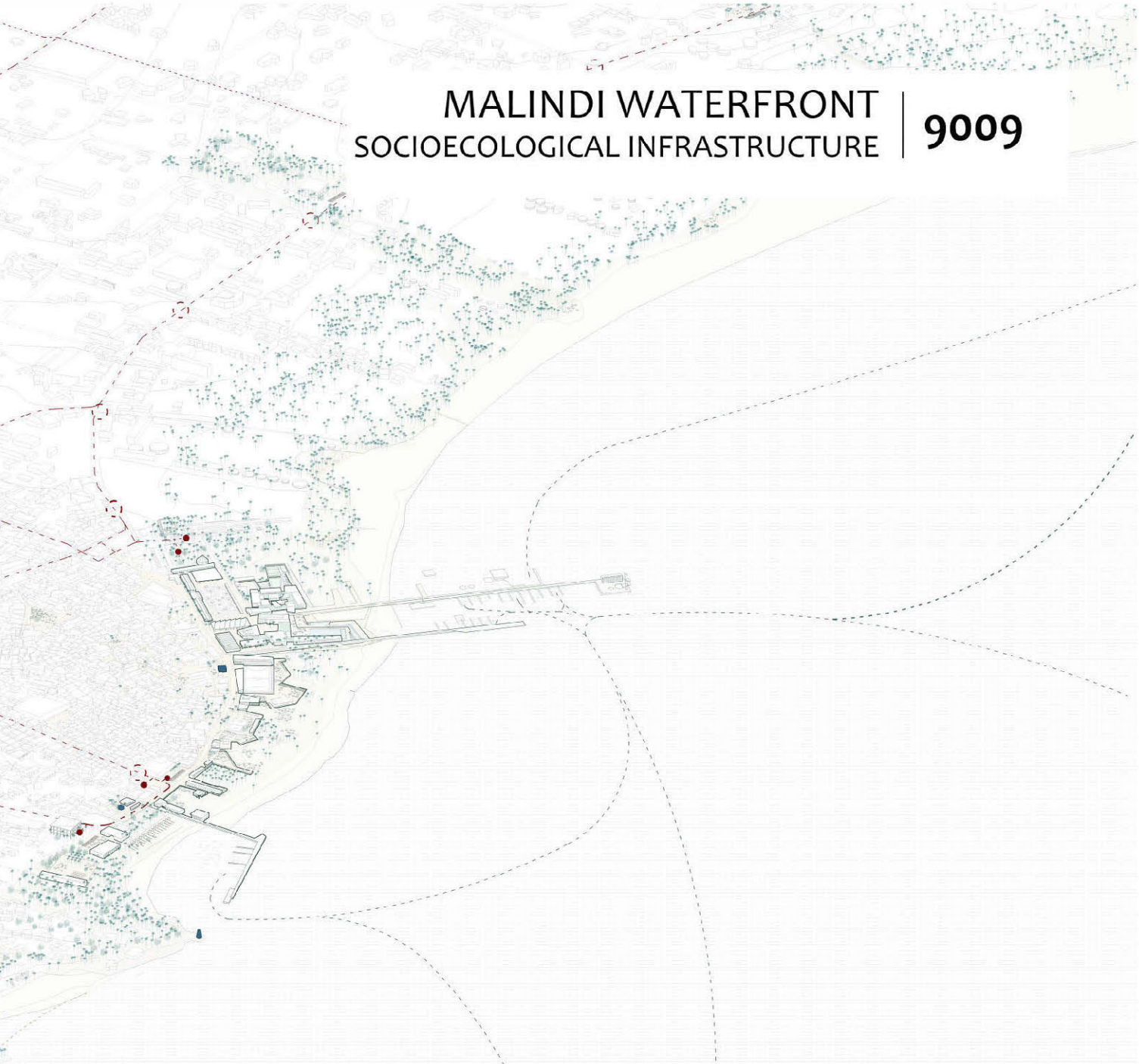
Team members:

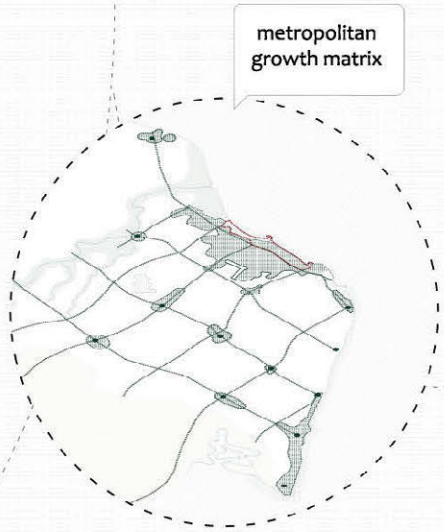
Politecnico di Milano
Alessandro Frigerio, Alessandra Sammartino, Pietro Bergamini, Pietro Manara, Mariachiara Anelli

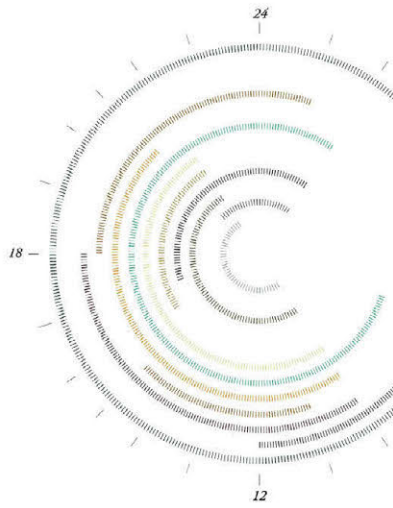
Jomo Kenyatta University of Agriculture and Technology
Kenalois Murakaru Kinyua


dune stabilization
research center
smart pier
soft intrastructure [water and energy]
protection from sedimentation
green connection
fighting erosion
parking and public transportation
water transportation hub
soft and eco mobility
parking and public transportation

MALINDI WATERFRONT
SOCIOECOLOGICAL INFRASTRUCTURE | 9009



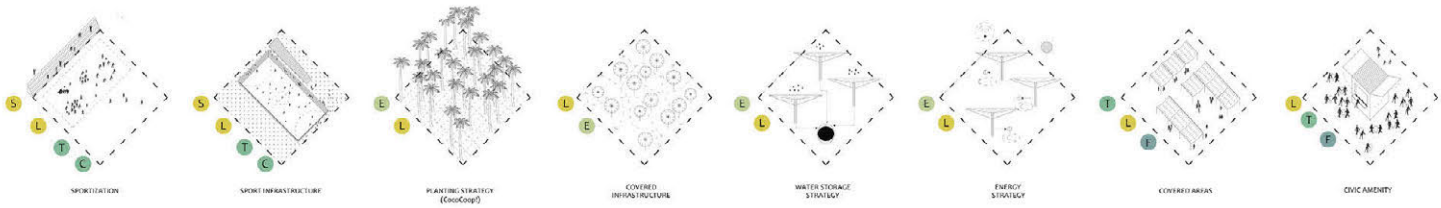




a multiple pocket infrastructure,
for a 24/24h public space!

opening new

IN/FORMALITY HYBRID PATTERNS



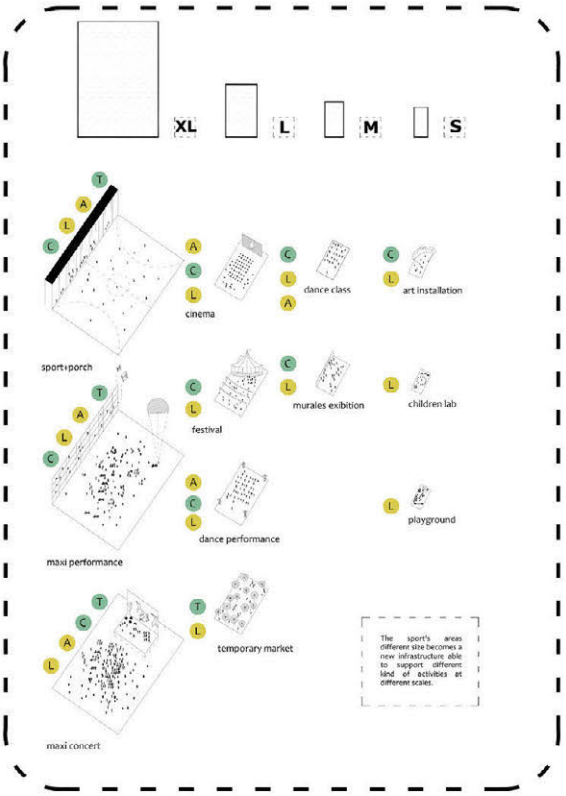
MALINDI WATERFRONT
SOCIOECOLOGICAL INFRASTRUCTURE

1 public space
2 market
3 research center
4 restaurant
5 sport
6 leisure
7 conference hall
8 media-art
9 cinema
10 exhibition area
11 local festival
12 cencert area

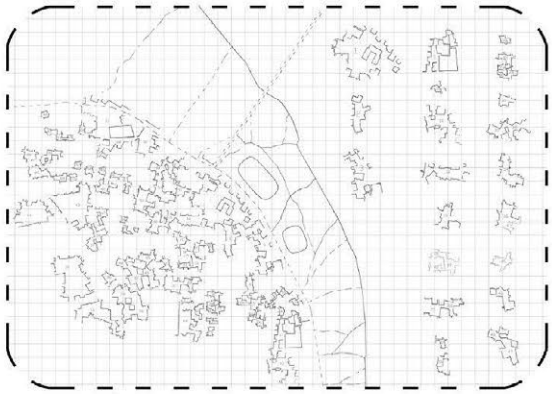
an amazing space for the Malindi cultural festival !

perspectives

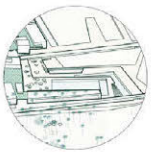
fostering local economies



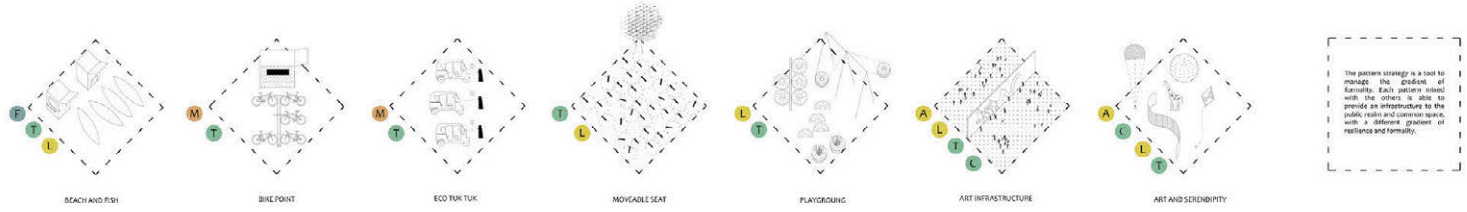
open air rooms: different sizes and activities



morphological studies on the Shella tissue



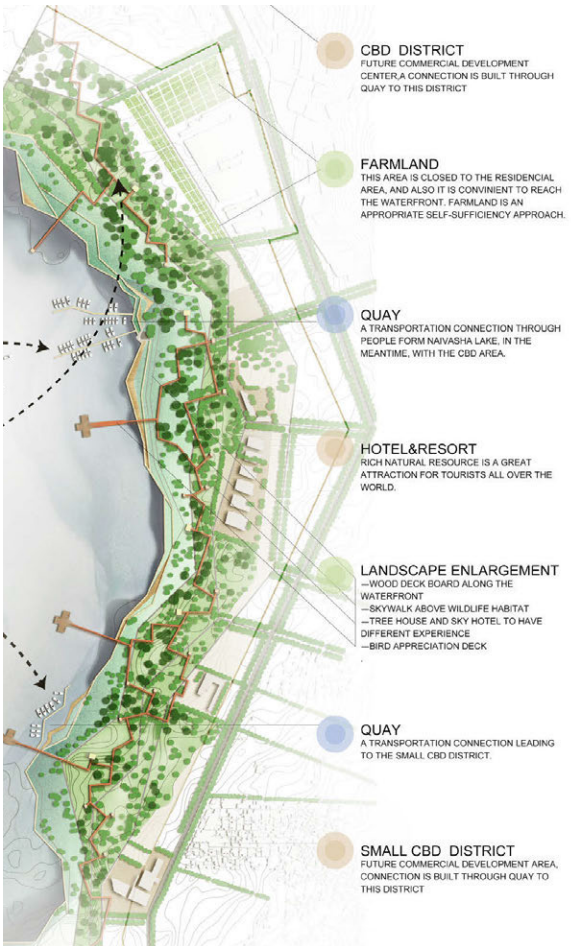
multiply your relation with the ocean!



Jury Comments

This is the second proposal identified as outstanding among the Malindi submissions. It has a good presentation of urban design, recognizing the coastline as a critical environmental feature and an area for strategic local economic development interventions. It also attempts to offer traffic management solutions. Although its urban design presentation was strong, the posters had weak visual clarity.

4.10 Other exhibited proposals

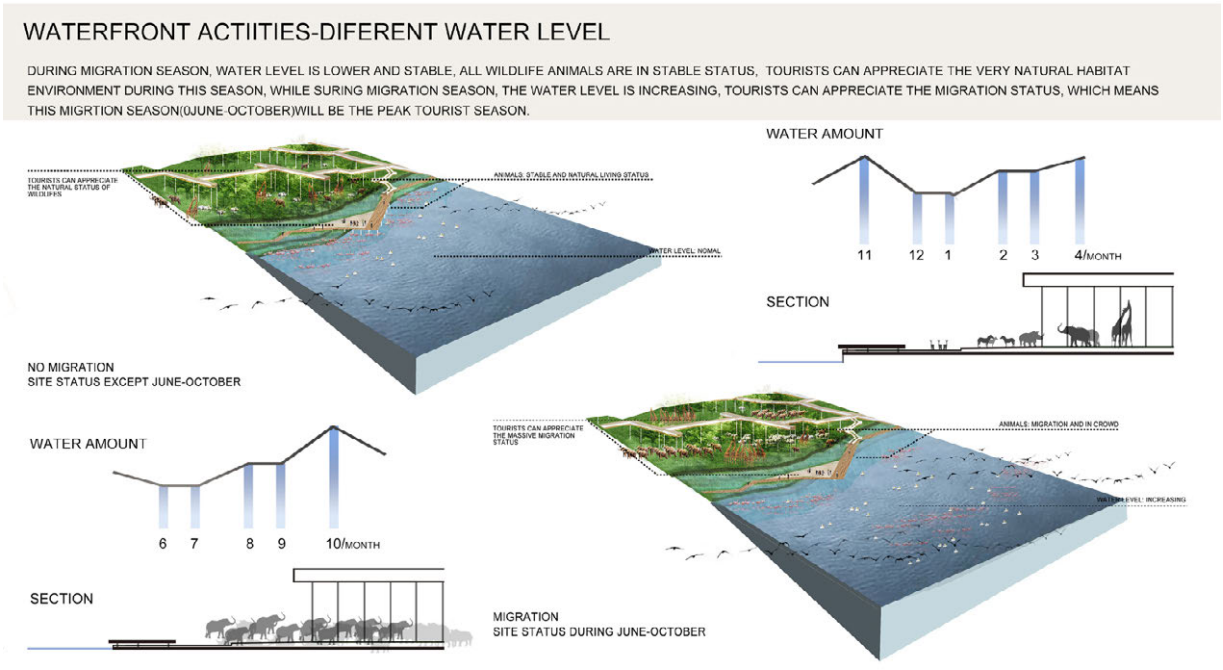


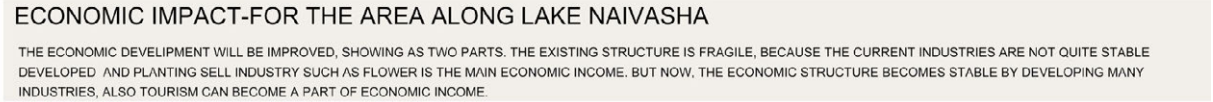
Abstract 1016: Life Line

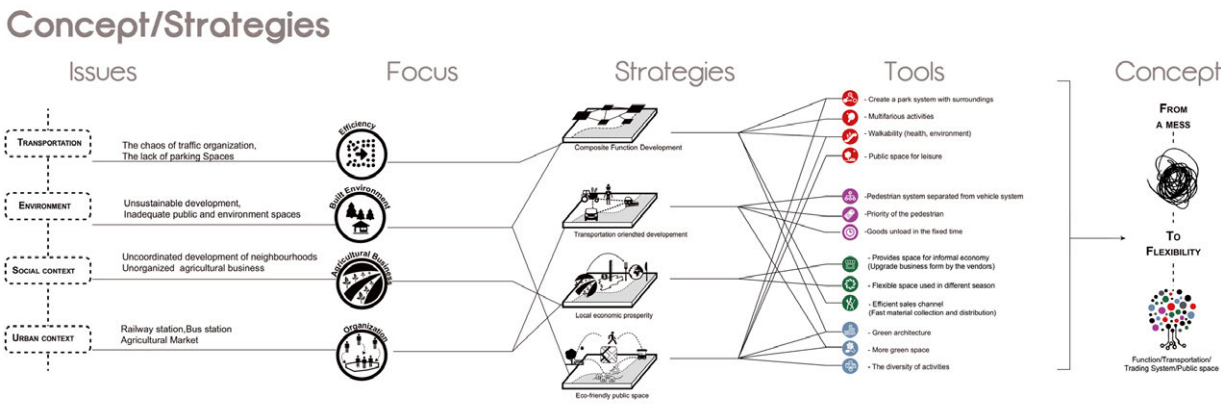
The proposal's main focus is to improve the economic development of the site, as the existing structure is fragile due to the instability of the current industries. With the flower and planting industry being the main source of income in the area, the plan aims to stabilize the economic structure by developing other industries, with a particular focus on tourism. One of the designs incorporates a wildlife-viewing platform, which will help lessen conflicts between humans and animals.

Jury Comments:

The proposal provided a case for the transformation of the lakefront by enhancing public space, had a good appreciation of environmental design, and greatly attempted to unpack the complexity of the site. However, the proposal appeared impractical in the context.





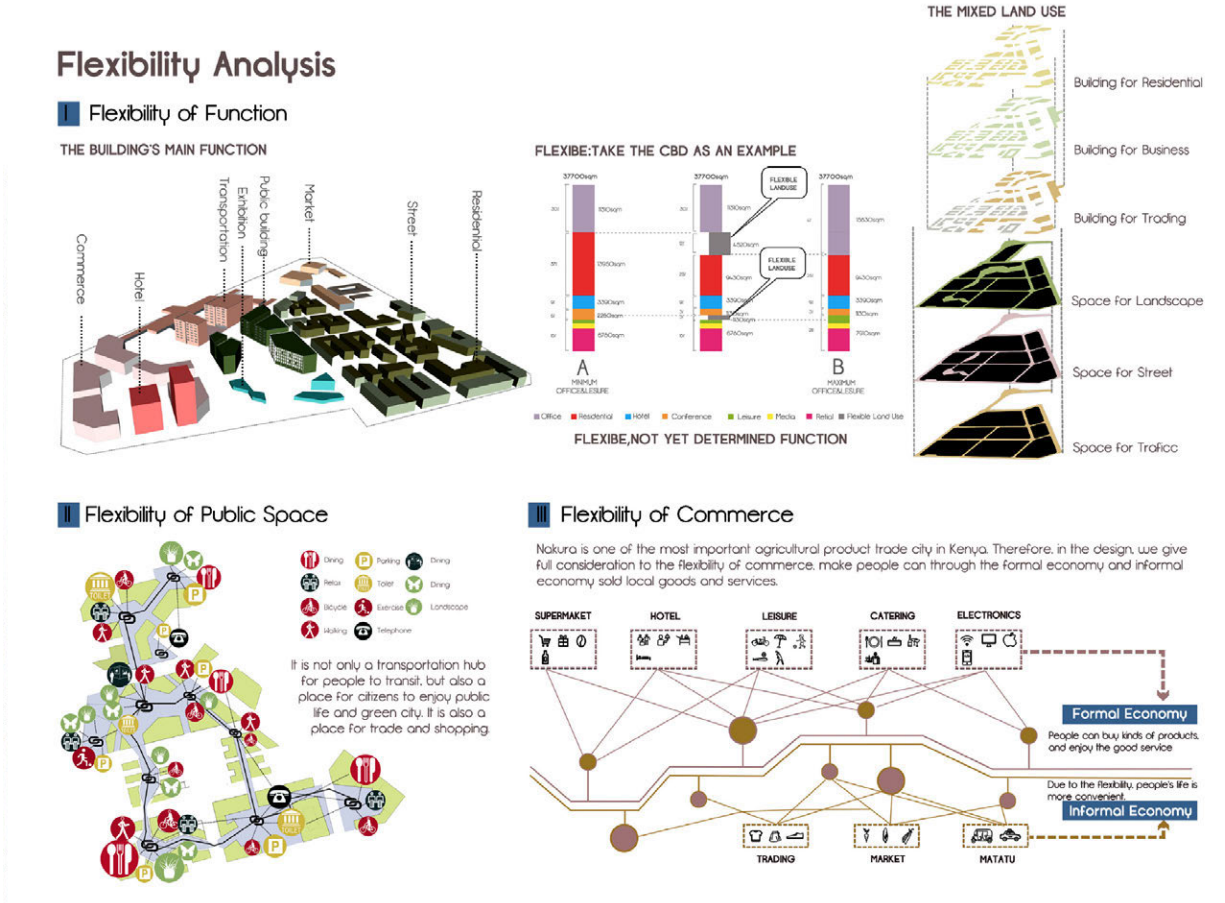


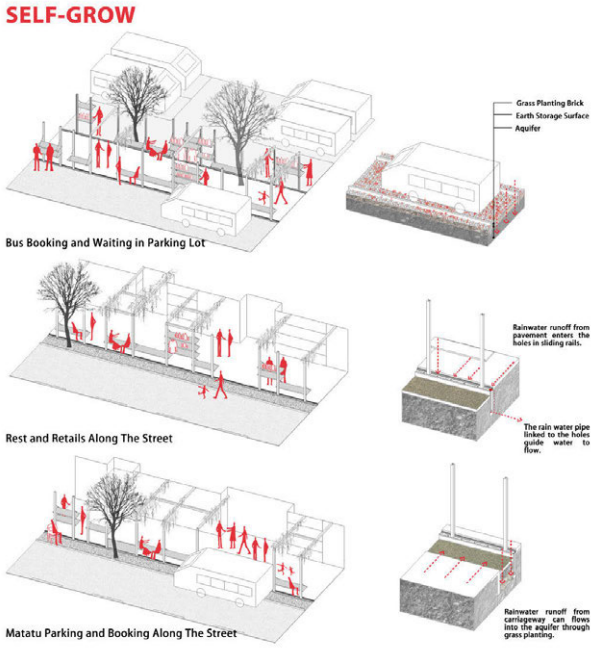
Abstract 2011: From a Mess to Flexibility

The proposal blends the sectorization and the flexible land-use methods to organize the site's multiple functions. First, as agricultural trade is key to the area's development, the plan incorporates informal and formal markets and streets for trading purposes. Second, traffic organization is addressed with the use of flexible traffic designs and multiple modes of transport to motivate the development of trade and business within the city. Third, the proposal provides space and land for access to services, such as accommodation, restaurants, travel services, and business services to meet the needs of residents and visitors, creating a dynamic place within the city. Fourth, the plan proposes a place for locals to enjoy green and public spaces.

Jury Comments

This proposal tends to reinforce entry into the CBD area and offers a good analysis and understanding of the site. However, the actual design solutions proposed were relatively weak.



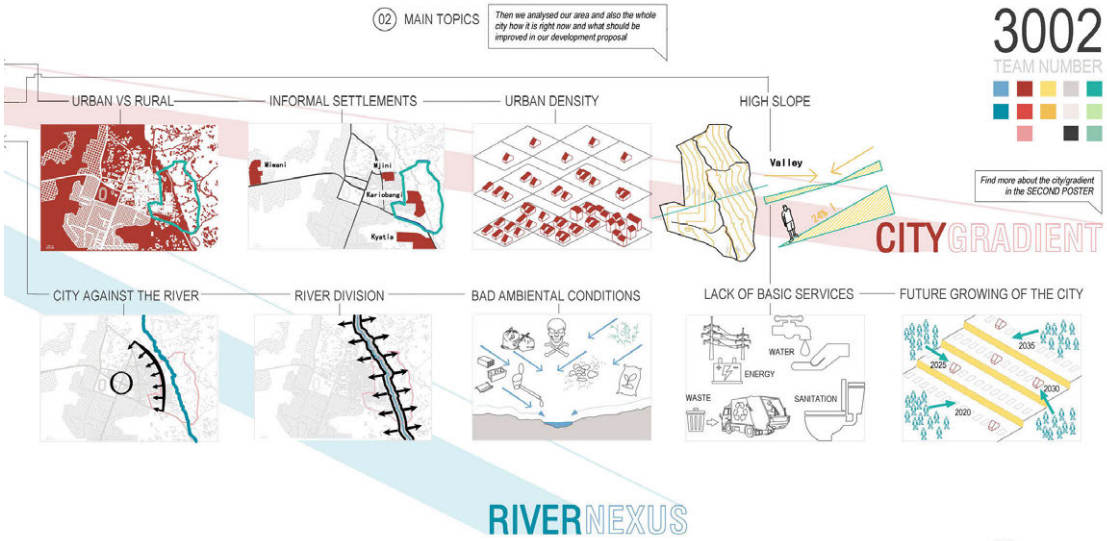


Abstract 2005: Reorganize with the Sliding Infrastructure

The plan seeks to reorganize the site utilizing a bottom-up, sustainable, and low-tech method, which aims to develop the area into a key regional transportation node with commercial, residential, and trade facilities. This will create a safe, livable, convenient, and active habitat. To do so, the plan reorganizes the site's land uses and streets, separating the large parking block into several small ones to allow for vendor activities and public spaces. The roads are also rearranged to create a more efficient *matatu* system and a more pedestrian-friendly environment. Finally, the design proposes a multi-purpose "sliding rail system" alongside the site's roads and pavements, which can act as shelves for vendors, benches, public spaces, and waiting areas for passengers.

Jury Comments

The proposal presented a simple vision and was well articulated, but the team missed the opportunity to develop the design further and especially failed to make a strong enough case for sliding infrastructure.

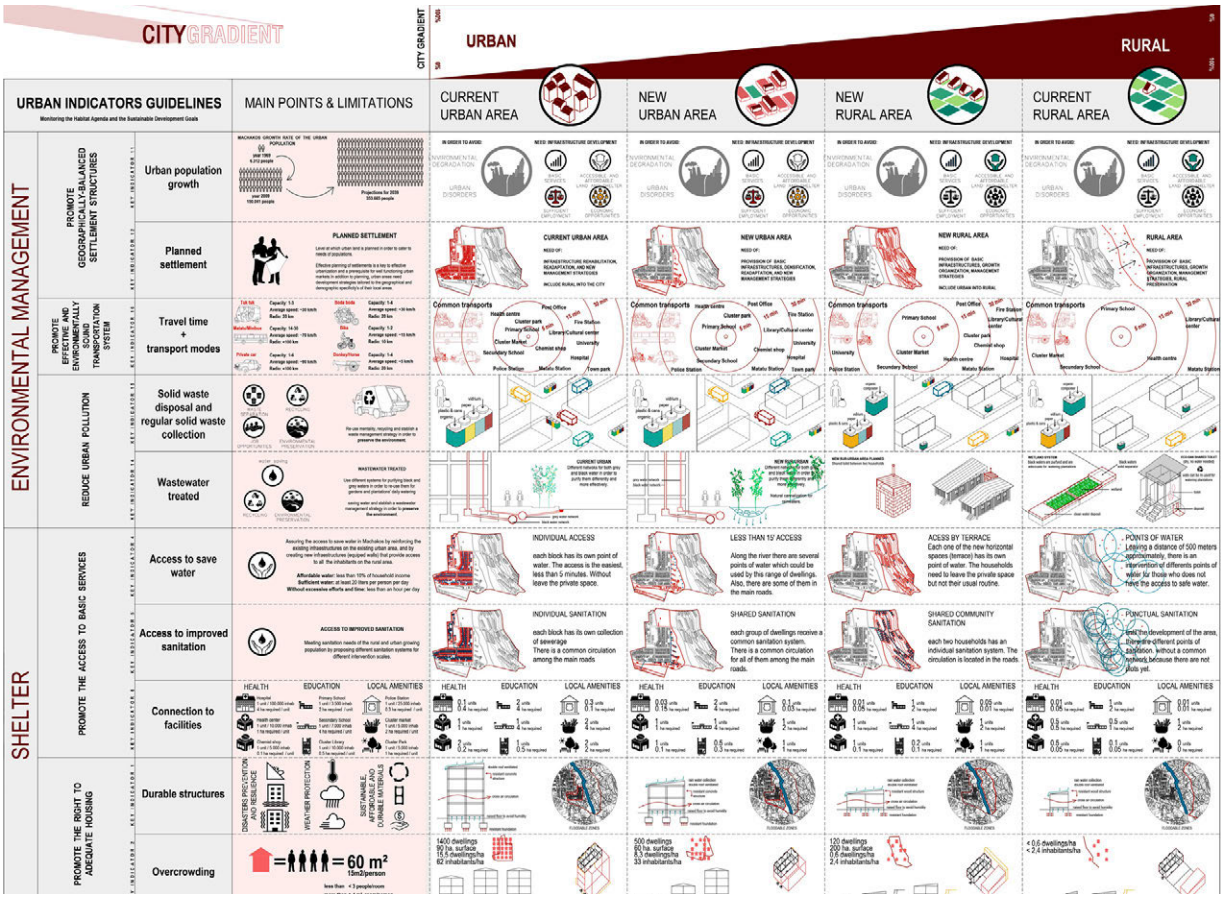


Abstract 3002: Matched Machakos

The proposal aims to unify the three elements that comprise the site: the urban settlement, the riparian corridor, and the rural settlement across the river. It sets out an adaptive urbanization process that foresees changes in the environment that accompany the growth of a city, viewing it as a dynamic organism whose urban structure must adapt to such changes. This results in an urban model that is more sustainable, in both social and economic terms. The proposal also emphasizes the importance of introducing agricultural activity into the dynamics of the city.

Jury Comments

The proposal gave the impression that the team dedicated significant efforts to developing an understanding of the urban-rural interface, which resulted in a design framework characterized by pragmatic and strong ideas. However, the presentation of the proposal was fairly weak.

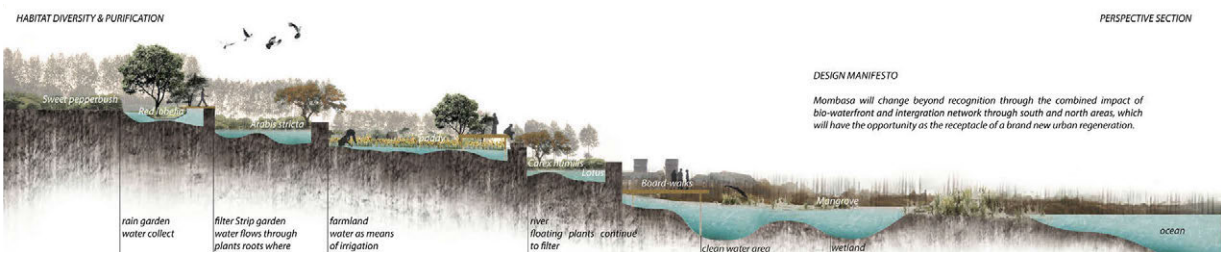


Abstract 5002: Dual(C)ity

Shelly beach, on the south bank of Mombasa, holds one of the largest populations of urban slum dwellers, with nearly 200,000 low-income residents. In contrast, Mama Ngina Drive is made up of gated communities with a large section of land dedicated to a golf course. There is a lack of integration among residents in the two parts of the city. We propose to create a direct access corridor to the ocean, which breaks the current segregation dynamic and provides new commercial opportunities for the newly created promenade. We also propose to limit the expansion of slums and improve access to public space. In general, we hope to contribute to the development of Mombasa as a location with less segregation, a fantastic waterfront, and abundant marine resources.

Jury Comments

The proposal illustrates that significant efforts were made to design in a holistic manner. It proposes pragmatic solutions and has strong design elements that include designs for enhancing the economic productivity and environmental efficiency of the oceanfront, taking note of climate change and rising sea levels. However, the design is fairly weak on social integration.



Phase I - 5Years

Focus lies on stabilizing the transportation network while restoring tourist destinations on Mvita mainland. On Likoni emphasis is placed on mixed-use affordable housing, improving stormwater management through rain gardens and commercial development along Shelley beach.

Phase II - 10Years

Aims to convert Likoni into a tourist corridor offering a wide variety of options ranging from ecotourism to showcasing the local culture, art and history of Mombasa along Shelley Beach Waterfront.

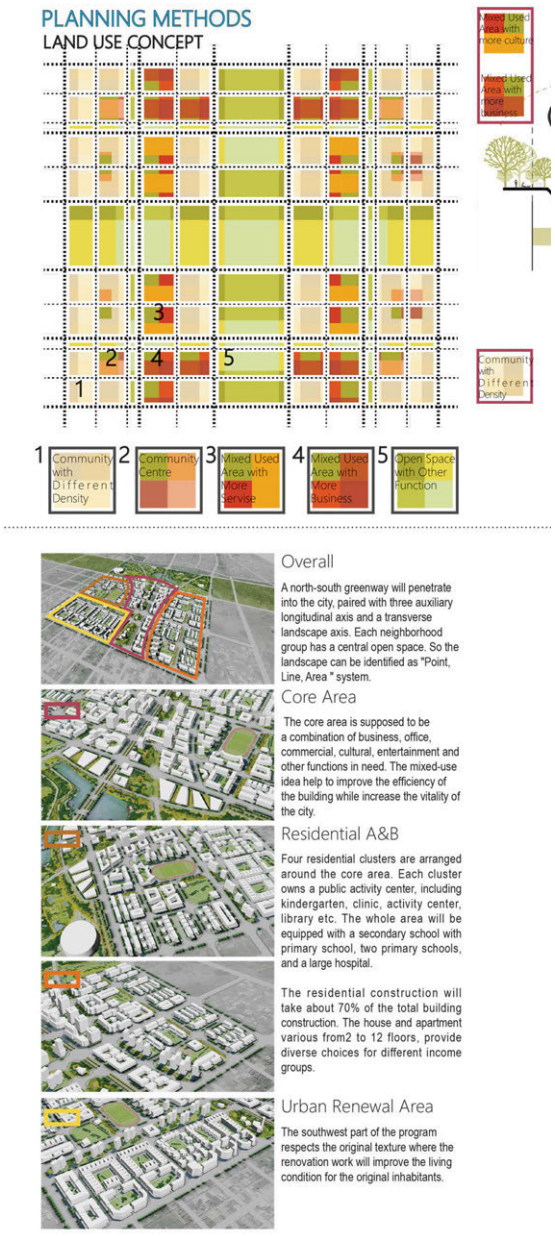
Abstract 5003: Bridging the Gap

High congestion in Mvita, unpaved roads in Likoni, and poorly connected transportation routes currently threaten the role transportation can play in securing Mombasa's economic viability. The design converts Mombasa into a transit-oriented city by developing a sustainable and reliable public transportation system and proposes to pave and widen the smaller collector roads, while incorporating bike lanes and pedestrian friendly designs in Likoni. The Likoni Bridge will also connect two major freeways that run through Mombasa, promoting tourism from Mvita to Likoni and increasing connectivity for pedestrians and motor vehicles. In line with the ISUDP's future ambitions for Mombasa, the plan also focuses on waterfront development in both Mvita and Likoni. A promenade will run from the Mvita Transit Center, along the coast through Mama Ngina Park, ending at a landscaped open-air theater. The Likoni's coastline will also be transformed into a vibrant and prosperous waterfront.

Jury Comments

The proposal identified the underlying problem of inequality, with solutions that focus on transportation and promoting tourism. It also stresses retaining cultural heritage in regeneration. But the design opts for single-use zoning and socio-economically segregated housing, as opposed to a more sustainable option of mixed-use developments with social mix.

Final plan integrating Phase 1 and 2 components

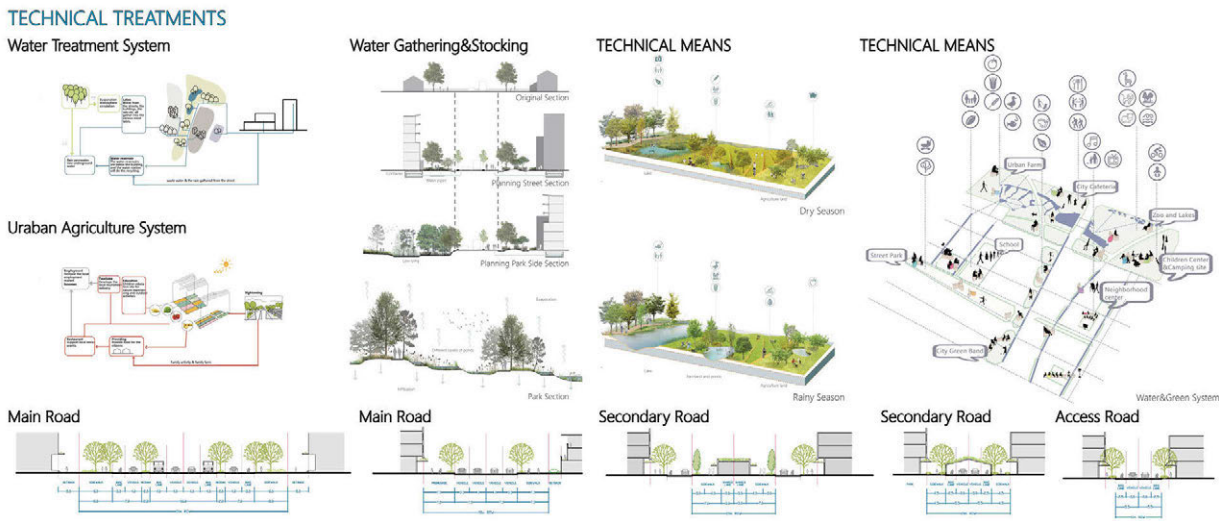


Abstract 6005: Osmotic. Mixed. Coexisting

Green areas are continuously being occupied by the development process in Thika. The city also faces other problems, such as an inadequate drainage and water recycling system. This design makes two proposals to address these issues. First, the reconstruction of a green area emphasizes the construction of a north-south greenway penetrating into the city, dividing the western part of the city into urban agricultural land, flora area, and waterfront area, while the eastern part of the city is divided into a camping site and children's space. Different age groups will hopefully profit from these areas. Second, a water management system gathers water from streets and buildings to be diverted to a water treatment center, serving as a step towards water reuse and recycling.

Jury Comments

The proposal aims to balance nature and built environment and places emphasis on open spaces. The design proposals have spatially integrated the new development with surrounding development by a well-connected street network. However, the proposal is weak on aspects of local economic development.

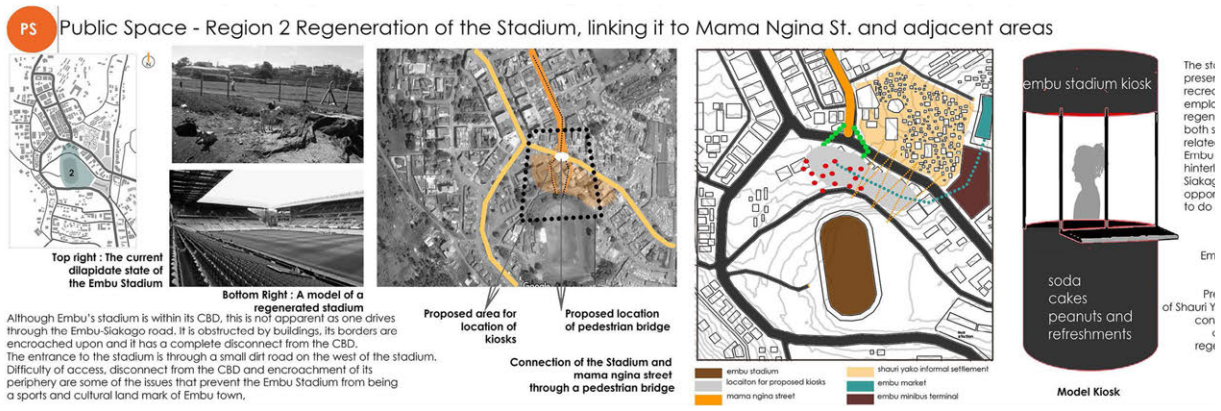


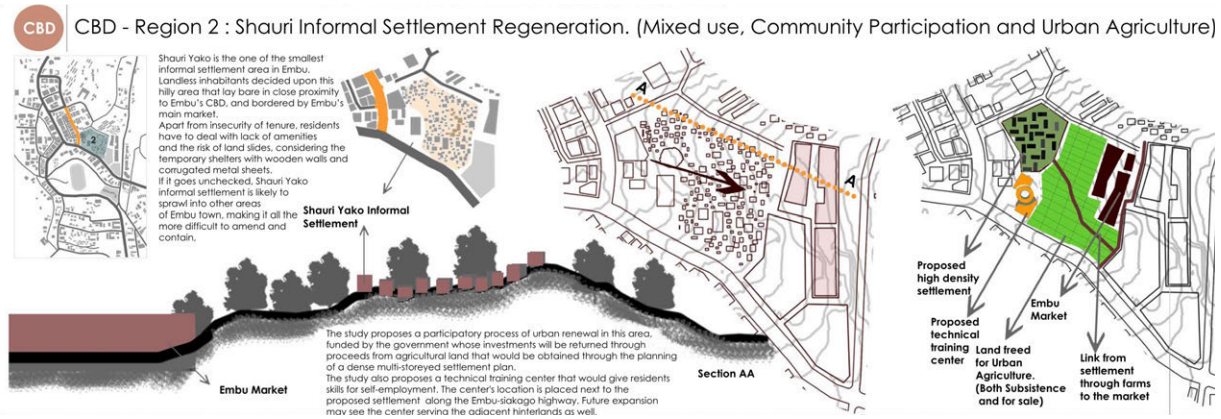
Abstract 7010: Inclusive Regeneration of Embu

Transportation is important for Embu, as its economy depends on its supply of perishable agricultural produce to bigger cities like Nairobi. Thus, it is important to cater to these needs without burdening the CBD. This design proposes the pedestrianization of a section of Embu's main street, Mama Ngina Street, while the northern section of the street is left motorized, with improved pedestrian walkways. Large vehicles transporting produce come in and out at night of Embu on the less congested routes, supplying produce to other cities without delay. Multi-story parking facilities are also proposed for motor vehicle users from the CBD. Additionally, our design creates and improves pocket parks in and around the stadium in order to improve recreational facilities and create employment.

Jury Comments

The proposal provides a fair analysis of the issues, particularly addressing issues of inclusion. The focus on pedestrian streets, informal settlement regeneration, and integration of informal economic activities in public spaces strengthens the proposal's aspects of inclusive regeneration. However, it lacks strong design solutions to support the analysis and ideas. Notably, all submissions for the Embu site provided no convincing design solution to the challenges presented by the current location of the stadium.





Abstract 8009: Semi-Formal Upgrading

The Kunda Kindu Bus Park is located in the biggest informal settlement of Kitui town. This area has a clear social separation among those living in formal and informal settlements. The main goal of the design is to integrate these groups and particularly focuses on semi-formal upgrading to transform informal spaces. The plan thus proposes a gradual spatial intervention and to provide sufficient and high-quality public amenities for all residents. It proposes different sized functional cubes to be used as exhibition spaces, bookstores, convenience stores, playgrounds, and booths for hawkers. It also proposes building a complex structure to be used as a market space, warehouse, and educational facility. The design thus hopes to encourage diversity and interaction, while improving the lives of residents living in both formal and informal settlements.

Jury Comments

The proposal recognizes the importance formal-informal urban functions to planning and design and goes further, analysing the sites in their broader context. Although the proposal aims to regenerate both market sites – Kalundu and Kunda-Kindu – the recommendation to shift bus-park function away from Kunda-Kindu will likely negatively impact the site's development, particularly the informal market activities.

Participants

Life Line – Naivasha (Team 1016)
Gilder Musimbi, Diana Modani
University Of Eldoret

From a Mess to Flexibility-Nakuru (Team 2011)
Yaying Liu, Yuehaocao Cao, Jiaqi Ma, Guangwei Wang
Chongqing University

Latmar Amkohe
Maseno University

Reorganize with the Sliding Infrastructure-Nakuru (Team 2005)
Xie Xiangya, Li Minhua
Tsinghua University

Nahashon Nyangena
University Of Nairobi

Matched Machakos-Machakos (Team 3002)
Andrew Mboloi, Jackline Karagai
Jomo Kenyatta University of Agriculture and Technology

Pablo Quintanal Junquera, Javier Morell López, Concepción Del Rocío Aranda Iglesias, Gonzalo Ortega Sánchez De Lerín, Elena Re Tarrero
Universidad Politénica De Madrid

Thomas Mfomo Zembou
Universidad De Las Palmas De Gran Canaria

Dual(C)ity-Mombasa (Team 5002)
Biao Lu, Tang Jingqiu, Shen Yifan, Chen Jinliu
The University Of Hong Kong

Peter Macharia
University Of Nairobi

Bridging the Gap-Mombasa (Team 5003)
Leah Gerber, Richa Yadav, Gustavo Serratos, Shao-Chen Lu, Manasvi Bachhav, Mengyu Jiang
University Of Michigan

Osmotic. Mixed. Coexsting-Thika (Team 6005)
Lei Jing, Yixiao Zhou
Tianjin University

Victor Aloo Nyikal, Steven Peter Ndubi
Jomo Kenyatta University of Agriculture and Technology

Inclusive Regeneration of Embu (Team 7010)
Meremiya Hussein, Arap Koech Daniel Kipketer
Jomo Kenyatta University of Agriculture and Technology

Semi-formal Upgrading-Kitui (Team 8009)
Sun Quan
University of California, Berkeley

Chen Kai, Wang Yi
Tsinghua Univerisity

Muli Kimeu, Emmanuel Litunya
Jomo Kenyatta University of Agriculture and Technology

5

Reflections and the Way Forward

5.1 Summary

The design competition raised a number of fundamental issues that Kenya's planning education, professionals, and other actors within the urban sector could consider and take note of. These issues emerged from the process of implementing the competition, ranging from the application and selection process, the design proposal preparation phase, jury evaluation process, and feedback from participants and Kenya's county government planners.

5.2 Jury Observations

The issues raised by the jury are not only relevant to Kenya's planning context, but could also speak to institutions and professionals in sub-Saharan Africa and even globally. A summary of these issues is discussed below.

The jury noted that each of the 9 sites selected for the competition illustrates a set of urban complexity issues that – taken together – contribute to the epistemological determination of the urban challenges in Kenya. For instance, the Nyeri site was an informal settlement, which represents a common challenge found in all major cities and towns in Kenya. The complex urban-rural (and peri-urban) edge exemplified by the Machakos site is a common feature of all major cities and towns. The congested and under-harnessed opportunities presented by public transport terminal areas and mega-infrastructure developments, like the Nakuru site, are typical and contemporary of many major cities and towns in Kenya. The spatial, environmental, economic, and socio-political challenges and opportunities manifested in waterfront areas are common planning and design realities for cities and towns adjacent to large bodies of water, as observed with the sites selected in Mombasa, Malindi, and Naivasha. Without a doubt, each site tests the preparedness of urban planning and design in Kenya. Planned city extension and renewal schemes were represented by the Thika, Nyeri, and Embu.

Proposals that emerged as the best among the submissions took into consideration pragmatic interventions, while also envisioning the likely transformations that will occur with increasing urbanization. This ought to be a fundamental concern for planners and designers engaged in shaping Kenya's urban form and built environment. In doing so, it is critical to consider urban design that adapts to change and uncertainty, mediates priorities for current and future generations, and takes note that technological innovations and advancements are changing the way infrastructure is configured and how buildings, neighbourhoods, and urban form is being shaped, as new forms of developments and new ways of thinking about urban sustainability emerge.

In that respect, the jury noted that the design competition rekindled the importance for discussing the implications of Kenya's urban landscape to urban planning education and practice. Indeed, the experience was very useful to the conversation on sustainable development in Kenya, in the sense that it raised issues in both the planning education and practice spheres. Key among those issues is urban informality, which was one of the most outstanding and crosscutting elements in each of the 9 sites. Thus, integrating urban informality in planning education, its recognition in policy and planning legislation and practice is critical in equipping Kenya's planning system with capabilities to guide sustainable urban development.

While discussing the issues of training built environment professionals (e.g., planners and architects), the capacity in counties (i.e., the number of people employed), it is equally important to address the substance of the

disciplines in order to ascertain to what level these disciplines are equipped to engage the entrenched and unfolding complex urban issues in Kenya.

From a public and private sector perspective, inadequacy of practical skills has compelled a number of urban planning and design graduates to shun practice. To address this, planning and design education must develop partnership with practice in both the private and public sector, expose students to the local urban reality through studios that enable them to develop practical skills, and nurture their critical thinking and solid problem analysis techniques. Solutions are not entirely rooted in reviewing planning curricula alone, but transformation is implausible if academia alone is involved. Instead, the various disciplines must work together and nurture reciprocity between academia and practice.

The idea is perhaps not to narrow down the challenges to professional expertise, e.g. urban design, but rather to steer an interdisciplinary conversation to trigger change in Kenya. Professional silos often impede integrated responses to complex urban challenges, not only in Kenya, but also in a number of cities and countries worldwide. The design competition was an attempt to integrate the silos by encouraging multidisciplinary teams to formulating design solutions together. This calls for co-production and collaborative approaches in developing innovative and sustainable urban solutions.

It was also noted that it is important for the organizers of design competitions (or design firms) to establish the effectiveness of collaborative design work that involves teams located in different parts of the world from both an academic and practice perspective. This is important to the ongoing debate on "transplanting" planning and design solutions from one context to another, often with little recognition of local context and application of local knowledge. It has generated debate on the relevance, applicability, and sustainability of such approaches and what such approaches mean to developing local capacity for steering sustainable urban development.

5.3 Perspectives from Kenya Planning Schools[17]

This competition was the largest international collaboration for Kenya's planning schools yet, with each of the participating universities having students team up with students from foreign universities. The nature of interaction gave rise to a unique global network for planning schools, which will forge the way for future collaborations.

Against that backdrop, the competition redirected the eyes of global planning schools to the urban context and challenges in Kenya. This presents numerous opportunities for Kenyan planning schools, as well as for urban centres where the urban design challenge sites were identified. Particularly for new planning schools, like that at Kenyatta University, it was an opportunity to engage with work undertaken by other planning schools in Kenya and internationally. Hence, the competition, in some way, served as a good benchmarking opportunity that will go a long way in informing the development of training curricula for new schools.

Part of Kenya's universities' objectives is to partake in real life projects, as well as to collaborate with society in nurturing innovations to solve current problems – in this case, human settlement development challenges. The competition fast-tracked this process by incorporating planning schools into an ongoing urban planning processes: Kenya Municipal Programme and triggering university-county government initiatives for urban planning and design. The universities are now better able to reach out and impart knowledge, as well as innovation, in Kenya's urban sector. This competition also gave students a chance to interact with policy makers who are implementing these projects and who have first-hand experience in urban planning and development in the counties, thus serving as an opportunity for them to self-evaluate their capacity (classroom learnt knowledge and skills) vis-a-vis the needs of the practice.

On the collaborative design approach, the experience was enriching with innovative communication channels employed between team members. There were a number of challenges ranging from language barriers, time-differences, contrary opinions and perceptions, and mediation of individual biases on optimal design solutions. Nevertheless, a significant number of the students identified ways to overcome these challenges and, in the process, enhanced their communication and collaboration skills and, more importantly, appreciated the diversity and uniqueness of various urban contexts. Fundamentally, it was noted that diversity in opinion on design issues emerged across from the diversity of students' backgrounds and schools. Subsequently, students were able to appreciate different approaches in teaching techniques and theoretical approaches, as well as different design approaches in various urban contexts.

17. Contribution by Mugwima Njuguna and Wycliff Nyachwaya of Jomo Kenyatta University of Agriculture and Technology, and Jackson Kago of Kenyatta University, Kenya.

The interdisciplinary composition of the design teams was a good opportunity for the students to appreciate the related disciplines and their role in urban development. It enabled them to work at different scales from the building to beyond the city.

In summary, the planning schools enriched their knowledge of ongoing planning processes in the country and explored possibilities of extending international collaborations. In the process, the competition added value to continuing processes to review planning curricula in two ways. First, the sites selected for the competition are a manifestation of numerous contemporary urban design challenges in Kenya; and second, the proposals, in one way or another, provided an opportunity to evaluate students' preparedness to engage these challenges upon entering practice. For instance, urban informality was a crosscutting element of the challenges and opportunities presented by each design site; yet, as a concept, it is under-explored both theoretically and practically in Kenya. This and other issues emerging from the competition emphasized the need for universities to strengthen links with practice by engaging practitioners, the public sector, and civil society organizations in strengthening planning skills for students. Thus, planning curricula can better adapt to prevailing urbanization realities, solving the challenges and leveraging the opportunities therein. It is also important for Kenyan planning schools to take up opportunities associated with international collaborations and partnerships.

5.4 Perspectives from County Planners[18]

A devolved government system was introduced by the Kenya Constitution of 2010, which stipulates the powers and functions of planning across two levels of government: national and county. Specifically, the Fourth Schedule of the Constitution mandates county governments to undertake county planning and development. This function is further elaborated by the subsequent County Governments Act and the Urban Areas and Cities Act. A review of the Physical Planning Act is underway to align the Act, a key legislation for urban planning in Kenya, with the provisions of the constitution and subsequent related legislations. Apart from defining functions related to planning, the Urban Areas and Cities Act require county governments to establish urban management boards under county government framework. These are just some of the legislative changes that reflect ongoing reforms in Kenya's urban sector. Combined with other strategies, these reforms are aimed at informing a sustainable urban development approach in Kenya, given the numerous challenges undermining productivity and functioning of its urban centres.

Urban centres in Kenya hold significant challenges and opportunities. Among the key challenges are a lack of or inadequate urban planning and design, inadequate infrastructure and housing, weak economies characterized by underemployment and unemployment, urban informality, inadequate public spaces, environmental degradation, ineffective institutions and poor governance, multiplicity and, in some instances, overlapping legislation governing planning, and a public that is less informed about urban planning. At the same time, cities and towns present enormous opportunities for driving economic development in the counties – both directly and indirectly.

Many counties have medium-sized and small towns. This means that policy and planning for many counties ought to design in a manner that resonates with the urbanization realities of this hierarchy of urban centres, including addressing the inherent and important urban-rural linkages. Above all, they should be well planned and managed in order to leverage the benefits of urbanization, including contributing towards substituting the heavily-relied-upon agricultural sector by promoting industrializing to increase the sector's productivity. Indeed, at the county level, the realization of Kenya's Vision 2030 and Sustainable Development Goals – especially for Goal 11, "Make cities inclusive, safe, resilient and sustainable" – will largely depend on how counties approach urban planning and development; in this case, with emphasis on secondary cities, medium-sized, and small towns.

There is a great opportunity for urban planning and design in the counties, in relation to the provisions of legislation on devolution. Among the key plans a county is supposed to formulate are the County Integrated Development Plan (CIDeP), County Spatial Plan (CSP), Sectoral Plans, and Municipal Plans, including Integrated Urban Development Plans (IUDPs) and Local Physical Development Plans (LPDPs). At the urban level, IUDPs and LPDPs are critical in guiding urban development. They offer an opportunity to formulate urban-level (city-wide/

18. Contribution by Hannah Maranga and Maina Onguso, Kiambu County Government.

municipal-wide) plans and LPDPs can specifically develop the platform for detailed planning and urban design. Indeed, as observed in the KMP planning process, urban design is equally as important an element of IUDPs, especially where detailed plans are included as part of the plan's deliverables.

The UN-Habitat design competition demonstrated the value of detailed planning and urban design, particularly towards improved implementation of urban development plans in the counties. From the competition outcomes, it was evident that urban design is a crucial tool for effective implementation of city-wide plan recommendations for urban renewal, densification and compact urban development, integration of urban informality (informal settlements and informal economy – jua kali activities), enhancing access to public spaces, enhancing efficiency of the urban form-connectivity, accessibility, greenery and aesthetics, mixed-use developments, and even improved public safety. The uptake of urban design is inevitable and important in facilitating better communication with developers, as design simulations of; for example, development control provisions are more effective than if reliant on policy statements alone.

The competition enlightened county planners on the benefits of increased uptake of urban design in solving complex urban development challenges and in generating catalytic effects for private sector investments that will eventually contribute to a public interest element of sustainable built environments. However, in order to accrue these benefits, it was noted that county governments will have to invest in capacity development for urban planning and design. This includes increased staffing of competent professionals, as well as working with planning schools and other actors for capacity development.

Policy reform is critical for greater uptake of urban design in Kenya. There is also need for Kenya's national and county governments and stakeholders, including private sector and UN-Habitat, to revisit the formulation of the National Planning and Building Regulations, which were intended to replace the Building Code of 1968. This will provide a framework for coordinated regulations and guidelines on detailed planning and design across the counties. The review of the Physical Planning Act, in line with the Constitution, is another urgently needed reform process. Such policies and legislative frameworks will also provide Kenyan planning schools with a vital reference and, in the process, open up research in advancing design standards and approaches.

Sustained support from UN-Habitat and other partners is needed by county governments to strengthen institutional capacity for urban planning and design, as well as for urban management. This includes consideration for more design competitions with a wider scope for public and private participation. Within such a framework, such competitions can better contribute to increased public awareness on urban planning and design. Such awareness will have a positive impact on county planning processes.

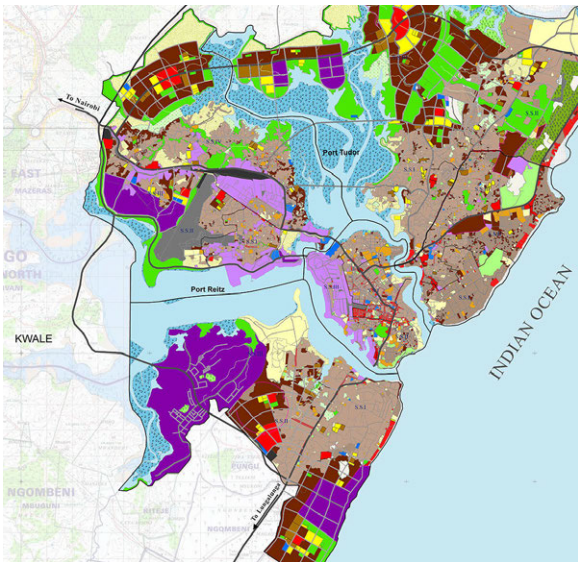
5.5 Key Findings and Emerging Issues

From the competition, a number of key findings and discussions emerged. These issues should be viewed in a twofold perspective: on the one hand, from the KMP process of formulating Integrated Strategic Urban Development Plans, and, secondly, from the design competition process.

5.5.1. Strengthening Integrated Approaches to Planning for Sustainable Urban Development

Kenya's urbanization is a paradox, presenting equal shares of opportunities and challenges. In order to engage with this, comprehensive approaches to urban planning and development are needed. Kenya's recent legislation on planning and development envisions an integrated approach. The County Governments Act of Kenya stipulates that planning in the counties shall be responsible for "coordinating integrated development planning within the county; and ensuring integrated planning within the county". The Urban Areas and Cities Act require county governments to formulate integrated urban development plans.

An integrated approach requires planning processes to mobilize interdisciplinary teams. In the spirit of demonstrating the value of such teams, the design competition encouraged students to form teams with diverse disciplines represented, including urban planning, urban design, architecture, environmental design, and economic studies. Thus, the competition process demonstrated the need to approach urban development through an integrated and interdisciplinary approach where economic, environmental, social, and spatial dimensions of urban development are closely interlinked. The formulation of the Integrated Strategic Urban Development Plans (under the Kenya Municipal Programme framework) also demonstrated the value of interdisciplinary



Extract from the Draft ISDUP for Mombasa. Source: Republic of Kenya, 2016

approaches to planning, although that could have been limited in the manner the planning process seemed to partly build upon sectoral and thematic analysis and recommendations.

Furthermore, integrated urban development planning enables counties (or municipalities) to be resource efficient and make more informed budget decisions, guide investments, and optimize land use, among other benefits. Through an integrated approach, therefore, planning, governance, and management are embedded and incorporated and clear mandates and responsibilities are outlined together with the general budgeting process of the county administrations. For the Integrated Strategic Urban Development Plans to be fully strategic, the integrated approach needs to be further strengthened.

5.5.2. Clear Vision and Goals for Urban Planning and Development

Mobilizing shared aspirations for the urban future is important for sustaining a constructive debate (at national and county/local levels) on the relevance of planning and design in guiding sustainable urban development in Kenya.

Through Integrated Strategic Urban Development Plans, and the design competitions, the importance of establishing a clear vision and goals early in the development and planning process was reconfirmed. As urban development processes are often cumbersome, complex, and spans long periods, having such visions and goals established continuously guides and supports the process. Thus, the Integrated Strategic Urban Development Plans as a strategic instrument can enhance and build momentum to overcome the shortcomings of electoral cycles and a change of staff within national, county, and local administrations, for example.

Moreover, this competition demonstrated the value of design to translate vision statements and planning goals into actual urban form representations, where actors are provided an opportunity to visualize the built environment. This facilitates greater engagement with the local realities of urban development. It suggests that, in order to realize the visions and goals articulated in the Integrated Strategic Urban Development Plans, it is essential for county governments to embark on detailed planning, while simultaneously nurturing sufficient capacity for urban planning and design.

5.5.3. Reconsidering Implementation of Urban Plans: "From Paper to Execution"

UN-Habitat's support towards the Kenya Municipal Programme, particularly the Integrated Strategic Urban Development Plan process and the design competition, underscored the need for policy makers, the Kenya planning system, and development partners to revisit plan implementation in Kenya. Poor plan implementation has often limited the efficiency of urban planning in the past for many cities and towns in Kenya. This opened room for ad-hoc coordination of development control or lack of development control and vacuum in forward planning, as well as poorly guided infrastructure investments, which contributed to increased informal developments. The scenario has also caused cities and towns to lack official frameworks for guiding investments and engagement with developers and development partners.

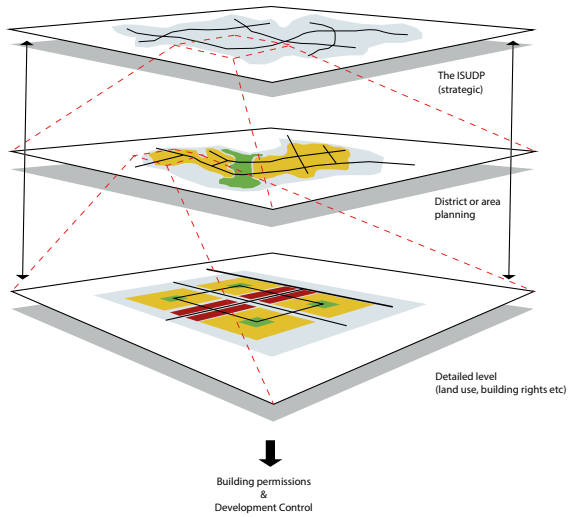
Based on the experience of the Integrated Strategic Urban Development Plans, a number of factors have contributed to ineffective plan implementation in Kenya, including extended durations between completion of plan-making and the commencement of implementation, as well as the failure to legally adopt plans; ineffective approaches to urban planning and design in relation to specific urban contexts; fiscal challenges and failure to formulate realistic capital investment plans; inadequate institutional capacity for effective planning and plan implementation; poor urban governance and ineffective policy and legislation; counter-productive political dimensions; and inadequate monitoring and evaluation frameworks for urban development plans. Furthermore and as particularly demonstrated by the design competition, there is added value in undertaking detailed planning as a way of strengthening implementation of citywide plans like Integrated Strategic Urban Development Plans. Previous

plans often failed to engage with detailed planning, resulting in plans that only addressed broader land-use issues and infrastructure needs and somehow vague development control provisions.

Although the Integrated Strategic Urban Development Plan is a strategic instrument for county governments to identify the urban development interventions of cities and towns in both the short and long terms, the need to attach an implementation framework or strategy to the plan is imperative. Such a framework will not only provide guidance on roles and responsibilities, but will also ensure that financial resources and legal frameworks are in place over time. Identifying priorities for and phasing in such an implementation strategy will also influence the budgeting processes. Furthermore, the framework will be of guidance for other urban sector actors, such as public and private developers, national ministries, and agencies.

5.5.4. Planning Levels and Urban Scales on a Citywide Level

The competition has clearly shown that interventions are needed at different levels of urban development. Although the Integrated Strategic Urban Development Plan provides overall strategic guidance to urban development in both the short, medium, and long terms, there is also a need for the plan – as a legally-binding planning instrument – to be clear on how it can be transferred and implemented locally. Thus, in addition to guiding the overall urban structure and strategic investments, Integrated Strategic Urban Development Plans ought to identify specific lower scales of detailed planning, as part of their implementation. For example, this can be done by exemplifying how a particular strategy or priority is to be implemented, either by illustrating a "real" example or by making reference to other similar cities and towns with successful practices.

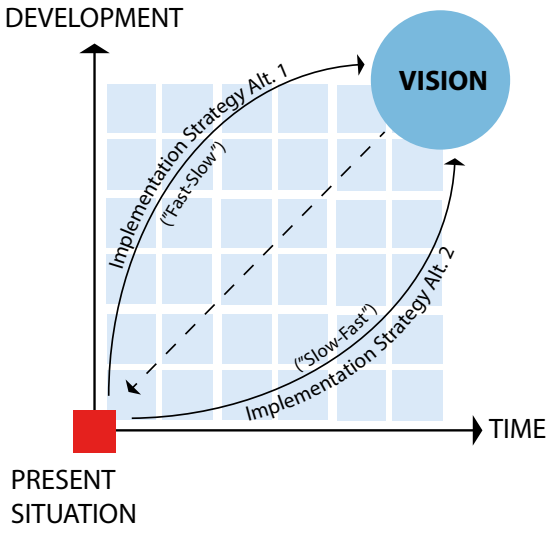


Planning at different levels © UN-Habitat

5.5.5. Urbanization and Time Perspectives

Kenya's urbanization presents planners and policy makers with the daunting task of addressing the challenges confronting cities and towns, while planning for a sustainable urban transition towards the attainment of a 50% urban population proportion. The Integrated Strategic Urban Development Plans encounter the realities of achieving this critical balance. Indeed, in view of the current status of urban centres, the recently devolved power of urban planning, governance, and management, as well as the scope and nature of urbanization predicted to take place in Kenyan cities and towns, collectively shows that urban development, planning, and design will span a fairly long time.

It will, therefore, be instrumental that the long term development is well balanced with immediate needs, especially in terms of providing basic services and housing to ensure adequate human settlements. This has profound implications on how scarce resources are allocated over time and makes space-making strategic phasing of urban development critical. Additionally, Integrated Strategic Urban Development Plans should balance providing a robust and resilient spatial urban development framework with the flexibility to accommodate a change of priorities and needs over time.



A simplified version of the back-casting model, where an identified vision is projected on the present situation to derive different development scenarios. Source: UN-Habitat

The competition results partly indicate such perspectives and the Integrated Strategic Urban Development Plans can be a key instrument in setting the priorities and phasing of development. Regular review and updating of the adopted Integrated Strategic Urban Development Plans will, therefore, be strategically important to ensure that the Integrated Strategic Urban Development Plans are a "living" instrument that is both useful within local planning administrations.

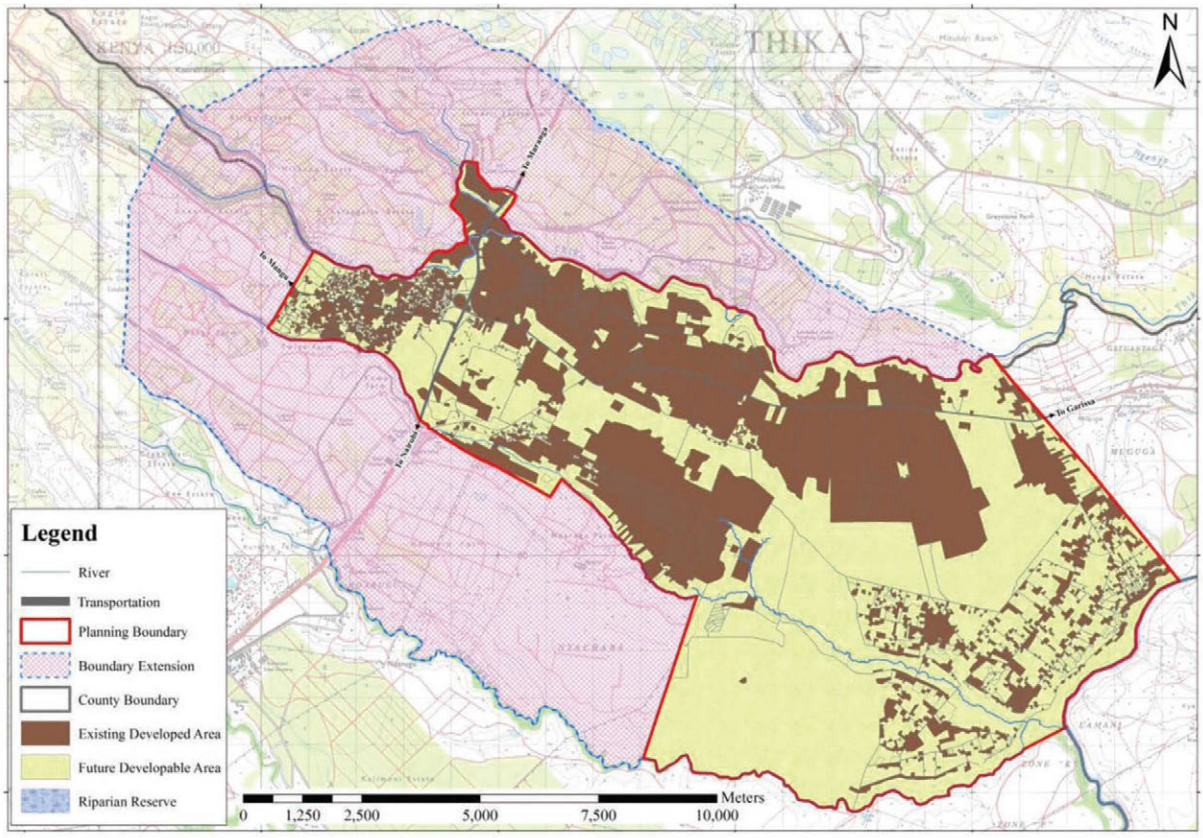
Particularly, the Integrated Strategic Urban Development Plan and design competition processes reveal various challenges and opportunities in the urban built environment in light of fostering quality urban spaces, optimizing land and resources use (e.g., by promoting mixed-use and compact development), opening up suitable new areas for urban development, environmental conservation and preservation, local economic development, and improved urban mobility. Improving the living conditions of the current urban population will thus require county governments to prioritize urban renewal programs, which entails using urban design as an instrument to visualize and guide production of liveable cities.

In the same way, citywide planning addressing planned urban extensions, redevelopments, in-fill developments, and growth management strategies will go a long way to enabling cities and towns to sustainably accommodate growing populations, considering the scarcity of resources.

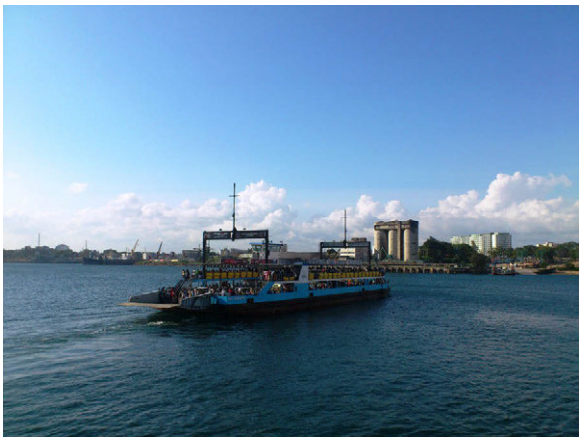
5.5.6. Demarcating Planning Areas and Defining Urban Edges

Uncontrolled or unplanned urbanization and urban expansion often leads to urban sprawl, especially when development mechanisms are not in place, due to inadequate capacity among relevant institutions, or when strong development forces and economic incentives occasionally overrule. The effect is often that existing or planned urban plans and regulations are not implemented as intended.

It is important to ensure that the demarcation of planning areas is informed by a set of defined criteria and spatial analysis. This will ensure that spatial planning covers the appropriate area and is not necessarily dictated by administrative boundaries. A number of Integrated Strategic Urban Development Plan planning areas lacked the scope to inform a plan that adequately guides comprehensive urban



Extract from the Draft ISUDP for Thika Town. Source: Republic of Kenya, 2016



Likoni Ferry Crossing in Mombasa© Baraka Mwau

development, owing to their confinement to administrative boundaries, while leaving out areas where growth is already contiguous in relation to the urban core, e.g., for Embu and Thika. In other areas, analysis revealed that the direction of growth of the urban centre was towards areas not necessarily covered by the Integrated Strategic Urban Development Plan, e.g., Thika, Embu, and Machakos. Essentially, the Integrated Strategic Urban Development Plan process underscored the importance and challenge of demarcating appropriate planning areas in Kenya's urban planning context.

Further, the competition results, exemplified by the overall winner, clearly show that, by working strategically with urban design, urban challenges can be reconfigured into opportunities. Also, by clearly defining the urban edges, opportunities to plan and address the urban-rural interface from an economic, social, and environmental perspective may arise. The definition of urban edges can also be used to maintain and even enforce the character and identity of a particular settlement, thus addressing cultural patterns and elements, as well as social factors.

5.5.7. Building upon Historical Contexts and Ensuring Cultural Heritage

While engaging with the urban transformations in Kenya, the design competition raised the importance of promoting cultural heritage in urban planning and design. For example, a number of proposals for Mombasa's site recognized the need to preserve and promote the Swahili design and architecture of urban spaces. Several of Kenya's modern cities and towns emerged, or originally developed, in the early 1900s as centres for trade or from the establishment of national infrastructure, such as the railway and ports connecting the country to its neighbours. However, some towns such as along the coast date back to at least the 1100s, including Mombasa. Thus, there is always a historical context and cultural legacy to be identified and taken into consideration in urban planning and design, whether it is individual objects, structures, or broader urban environments of cultural heritage.

5.5.8. Public Space as Generator for Urban Life

The competition clearly confirmed the need for the adequate provision of public space as instrumental in supporting the creation of an interesting, safe, and accessible urban landscape. Several proposals addressed the relationship between the public and private domains and, of course, the spectrum of semi-public to semi-private spaces. Public spaces help define the cultural, social, economic, and political functions of cities and towns and are, in many aspects, the generators of urban life and a vital ingredient to urban success. They help to build a sense of community, civic identity, and culture. Having access to sufficient and wider diversity of public space not only contributes to the quality of urban life, but it is also often a first step towards civic empowerment and greater access to institutional and political spaces. Seen as a public good, these spaces lead to urban environments that are well maintained, healthy, and safe, making cities and towns attractive for living and working. The Embu site clearly described and illustrated the importance of public space in renewal schemes, while the Nakuru and Mombasa sites had public functions or facilities play a critical role for urban life.

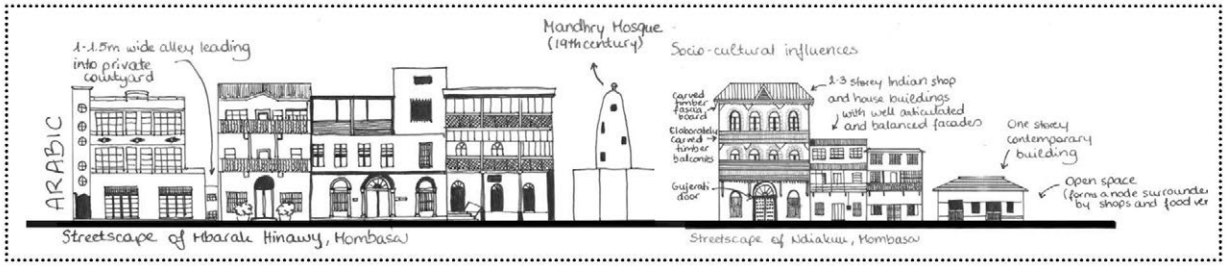


Image: recognizing existing cultural, historical and structural layers in urban development is important, as examplified in Mombasa by the proposal "Connecting People&Places", by Team 5015.

In addition to public facilities, a number of proposals also stressed the need to increase the availability of green spaces and the flexible use of public spaces, as well as to model streets and markets as vibrant public spaces that enhance mobility, social interaction, and economic productivity.

5.5.9. Urban Ecological Systems

Urban planning and design needs to clearly integrate open green spaces in the city, both on a strategic and comprehensive urban level, as well as on a local and micro level. Such spaces contribute significantly to strengthening the ecosystems and ecological biodiversity in the urban landscape, not only for the benefit of various biotopes and habitats, but also to improve people's health and recreation. They also have an impact on noise reduction, improved air quality, and the mitigation of negative effects from sudden increases in heat or rainfall. Integrating ecosystem services in urban planning and design helps sustainably manage waste and storm water and adapts cities and towns, making them more resilient and responsive to climate change. Safeguarding and improving systems of ecological, green, and blue infrastructures in urban areas coincides well with providing public space, with such integrated systems also enhancing connectivity and increasing accessibility within cities and between city districts. Within such systems, providing a citywide network of overall green structures, local nodes (e.g., larger parks), or pocket-parks also helps build identity and sense of being within a particular urban setting.

Also, taking into consideration infrastructure designs that are responsive to environmental sustainability imperatives is critical; for example, the use of sustainable urban drainage systems can recharge urban wetlands and ground water and enhance coverage of urban greenery. Mapping, assessing, and protecting environmentally sensitive areas, while regenerating declining ecological systems should thus be an integral part of urban planning and design interventions. The competition raised these issues through a number of proposals, e.g., those for Naivasha and Mombasa.

5.5.10. Integrating Urban Informality

In the context of rapid urbanization in Kenya, cities and towns have growth fuelled by urban informality: informal settlements account for up to two thirds of the population, the informal economy covers up to 60% of the total economic activity generated, and informal social and cultural structures provide necessary activities and social outlets. Hence, strategies and

Example on how new additions to an urban structure also can be motivated by provision of functional public space as generator for urban life. Snap-shot from Team 8015, "Grafting Urbanism".

plans should address settlements and access to land; social and economic structures; transport, mobility, and accessibility; and renewal schemes of both settlements and urban centres.

Virtually all the competition sites included elements of urban informality, which were addressed in various ways, and illustrated the relationship between the long term planning scenario and the immediate needs and provision of adequate infrastructure and services. Integrating urban formality in planning and design processes is an issue of democracy and securing the right and access to the city for all.

A number of the Integrated Strategic Urban Development Plans attempted to address urban informality and especially the economic dimension. For example, the Mombasa and Thika Integrated Strategic Urban Development Plans identify various locations for the development of informal markets and prioritize the upgrading of others. The design went further with this concept: several proposals attempted to demonstrate how informality can be integrated in various contexts, through transportation, housing developments, commercial spaces, etc., such in the Nyeri site.

However, it was evident from both the Integrated Strategic Urban Development Plans and the design competition processes that planning and design in the context of urban informality is not a straightforward

Example of upgrading in Kitui - "Semi-formal upgrading" by Team 8009.

undertaking. The complexity of various forms of urban informality and the lack of or inadequate policy, planning guidelines, and conceptual approaches dealing with it have often compelled planning processes to rely on individual interpretations and biases of appropriate interventions. This ends up being more experimentation than strategically informed transformation.

5.5.11. Planning for New Towns in Kenya's Urbanizing Context

Evidently, urban development must be managed and balanced as pressure for new development increasingly strains available resources and capacity – for example, in terms of land availability, infrastructure development, and urban planning and design capacity, or incentives to reuse and redevelop existing built environment and structures. When incentives for the latter are not enough, the so-called new towns solutions emerges; either proposed within or in close vicinity to existing urban settlement patterns or as isolated developments remotely located.

Although new town developments, which can be found globally, address an acute housing situation and accommodate new growth, there are several challenges related to this approach. One of them is identifying a concept relevant and adapted to the local urban context. The local urban context in Kenya is characterized by urban centres increasingly contributing to economic growth and increased populations with access to basic services, benefitting from agglomeration. Meanwhile, a vibrant informal economy provides critical employment, commodities (e.g., low-cost housing), and services (e.g., public transport) where the formal sector falls short. On the other hand, the urban context is struggling with socio-economic inequalities, inadequate basic services, underdeveloped infrastructure, informal settlements, inadequate institutional capacity, and financing challenges.

Against that backdrop, the competition demonstrated that borrowing concepts for urban planning and design can be a challenge, as illustrated in the Thika site. Other challenges can relate to connectivity, creating local jobs and service markets and, of course, a built environment that is endorsed by the users, whether it be inhabitants or visitors. Labelling and giving attributes to new towns, such as using the terms "Sports-City", "Smart-City", "Infra-City", "Techno-City", or "Eco-City", may attract (foreign) investment. But, from a global perspective,

6005

6007

Examples from the competition on a form of new town as part of developing a new sub-CBD, represented by Team 6005 (above) and Team 6007 (below).

it might be good to consider whether new towns contribute to urban sustainability at the local level. In essence, the urban planning and design aspirations of these new town proposals relatively determine their impact on sustainability and development.

The competition also renewed the debate on developing a sustainable new town in Kenya's urban context. The best proposal selected for the Thika site advocates for a secondary CBD, which resonates with the existing urban reality in Thika, striving to integrate the centre within the existing urban fabric, promoting social mix and affordability, and mixed-use developments and connectivity, all while enhancing local economic development and suggesting pragmatic and achievable designs for the prevailing real estate market in the town.

Other proposals opted for a total re-imagining of the site, with advanced engineering works and designs that evidently are in contrast with the surrounding area, which are likely to promote a fragmented urban fabric and whose operationalization would mean mobilizing significant financial and human resources that a secondary city like Thika may not find feasible in the foreseeable future. Also, these proposals could amount to ill-conceived investment decisions, given scarce resources amid the existence of more pressing needs in the town and county, like providing basic services, upgrading informal markets, providing affordable housing, and investing in urban-rural infrastructure links and agricultural development in the rural hinterland.

5.5.12. Applying Urban Design to Leverage Benefits from Mega-Infrastructure Projects at the Local Level

The competition has clearly demonstrated the potential of coupling urban planning and design interventions with mega-infrastructure projects. One example is linking development of the Standard Gauge Railway of the Northern corridor with a transportation hub in Nakuru. In this case, the new station and related urban functions can become generators for the local economy, enhancing mobility and accessibility and promoting urban life in the existing CBD in general. However, to harness this potential, national and local planning intervention alignment is critical. Transport Oriented Design (TOD can be an effective approach to integrate different aspects and interests on various planning levels.

This coordination between various levels of planning is not restricted to transport-oriented issues. The same applies to coordinating and integrating planning interventions on a local level, where synergies can be identified and harnessed regarding land use, resource efficiency, implementation, for example.

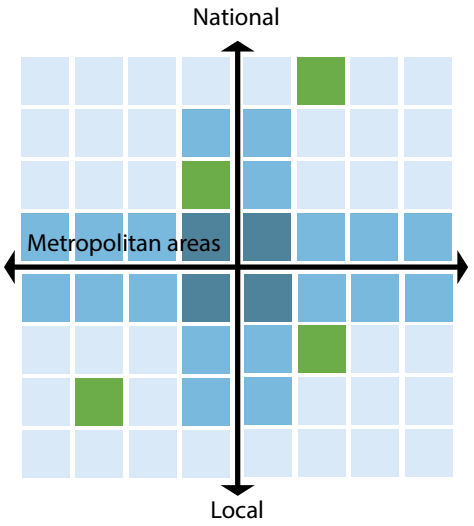


Diagram of vertical-horizontal coordination © UN-Habitat

5.5.13. Equipping to Plan for the Next Generation of Kenyan Cities and Towns

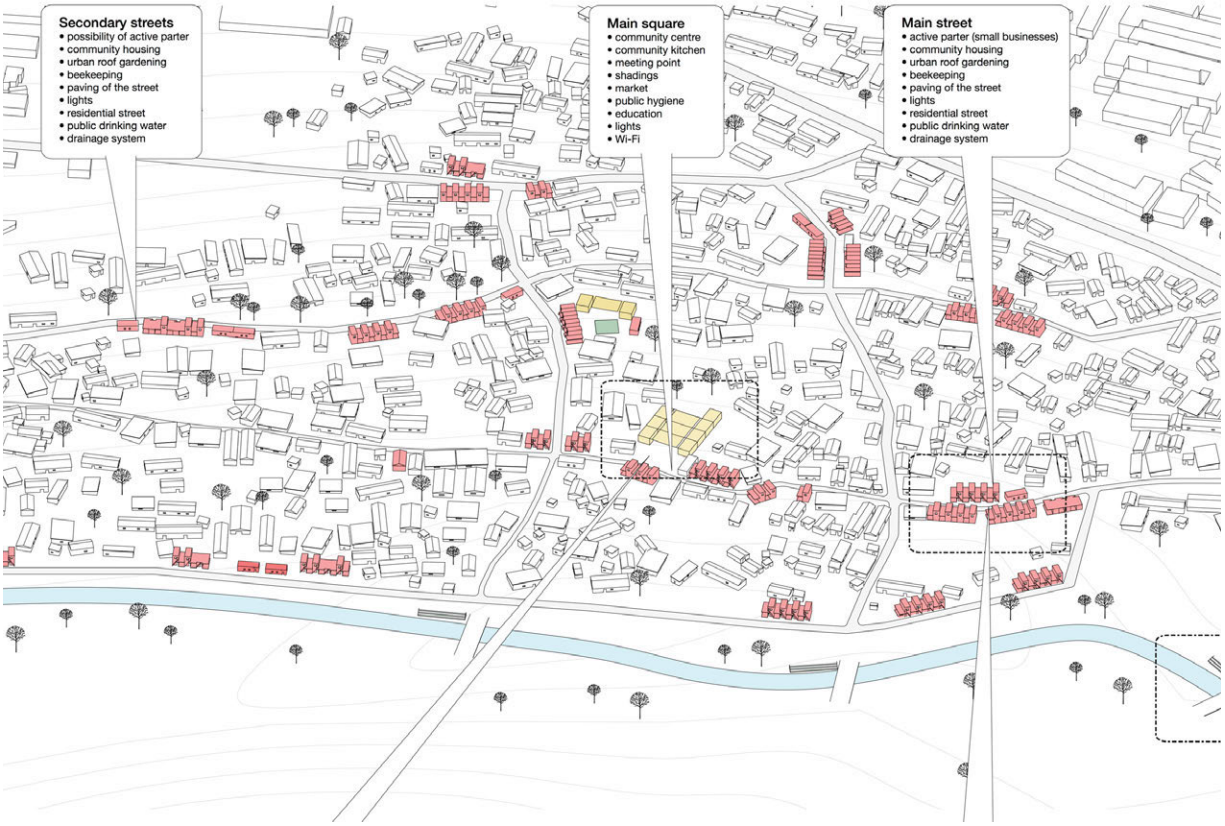
Following the devolution of responsibilities and the projected rapid urbanization, building the required adaptive capacities is needed in Kenya. Considering the country is relatively less urbanized (less than 30% urban population), there is still room to manoeuver; hence, county governments (most of which are predominantly rural) ought to take the early opportunity to develop sufficient capacity for urban planning and management.

Similarly, the Kenyan planning schools must train a generation of planners and architects with the right skills to engage with current and anticipated urbanization. This requires rethinking approaches and developing theoretical and practical skills that resonate best with Kenya's urbanization reality.

The competition underscored the importance of enhancing practical learning through studios that involve real sites, as a way of testing the applicability of theoretical skills. It is important for planners and architects to understand the socio-political context in which a planning process operates. The competition emphasized promoting participatory approaches and design co-production to capture local aspirations in shaping the built environment.

Both the Integrated Strategic Urban Development Plan and design competition processes also called for reflections on the preparedness of the human settlement disciplines in Kenya towards shaping the next generation of cities and towns, particularly on the effectiveness of planning in the context of "unplanned" and informal developments and poor land administration and management systems.

Moving forward, planning schools should revisit their curricula, the mode and substance of their training, and their institutional capacity to offer quality training in the various disciplines of human settlements. Among other strategies, they should build stronger partnerships with the practice of planning in both public and private institutions and should invest in relevant research that strengthens the theoretical and methodological spheres of urban planning and design discourse in Kenya.



Example of upgrading of informal settlements in Nyeri - "Legal Security, Work, Education, Health" - by Team 4014.

6

Conclusion

For UN-Habitat, this was the pioneer design competition of this nature, especially one focused on Kenya's cities and towns. It not only drew attention from the global urban planning and design community to Kenya's urban context, but it also attracted the attention of governments, international development partners, and practitioners of different backgrounds.

Urban planning and architectural competitions can efficiently attract a wide spectrum of approaches to address a particular challenge or question proposals by inviting professionals and/or students to participate and debate. An effective competition is often anonymous and has a pre-determined qualified jury evaluate the submitted proposals. Of course, the set up and design of a competition can also rely on an open and transparent process where the client may provide input into the process. Either way, a design competition can be a viable platform for the client (or organizer) to identify an optimal design solution, including addressing concerns of form, function, and economy.

Thus, an urban planning and design competition can be embedded in the formal planning process, where the results of the competition (for a particular area or site) can be the subject of a consultation process with stakeholders. Depending on the complexity of the project, a design competition can also be set up as a two-step process, where a conceptual approach is identified in the first phase and the detailed proposal in the second phase.

Further, the competition can identify the architect or urban planner most suitable for the particular issue at hand. It can also create and contribute to a general discussion on urban development, where creative and innovative solutions are identified and discussed and where all involved strive for the best qualities. The competing teams are also challenged to perform, thus raising capacity within the profession.

Urban planning and architectural competitions can communicate and market a particular objective or particular solutions to urban development. In a globalizing world where urban planning and design knowledge is "travelling" across different regions and contexts, such competitions can also be a way of testing the relevance, applicability, strengths, and limitations of various approaches, given a certain urban context.

This particular competition provided students with an opportunity to gain insight in the complex urban development context in Kenya, where there is a pressing need to address certain immediate issues and to pro-actively outline strategies for the long-term development of cities and towns. This opportunity thus enabled students and planning schools to self-evaluate their capacity to engage with the planning and development issues facing Kenya's urban centres.

The competition has proven to be of value in terms of addressing a wide range of key urban planning and design issues. Various approaches on how to interpret and transfer the strategies of the draft Integrated Strategic Urban Development Plans have been illustrated. It has proven the necessity of not only approaching urban development from a strategic perspective, but also the need to integrate an urban planning and design dimension when formulating Integrated Strategic Urban Development Plans. By doing so, the process is brought to a higher level and will ensure that the plan is implementable at broader, intermediate, and local levels.

By integrating an element of urban planning and design on a strategic level, there are far greater opportunities to engage relevant stakeholders and professionals in both private and public sector in a sincere discussion on what kind of cities and towns Kenya will develop. How this is done in practice needs to be discussed and elaborated in light of the specific conditions in each city and town.

Mtwapa Town, Kilifi County © Digital Globe & Google Earth. Image Date 2012

Annexes

I. List of Participating Institutions

INSTITUTION	COUNTRY
National University of Lanús	Argentina
National University of La Plata	Argentina
University of Buenos Aires	Argentina
Universidad de Flores	Argentina
Royal Melbourne Institute of Technology University	Australia
University of Melbourne	Australia
LFU Innsbruck	Austria
American International University Bangladesh	Bangladesh
Rajshahi University of Engineering and Technology	Bangladesh
Stamford University Bangladesh	Bangladesh
Katholieke Universiteit Leuven	Belgium
Mackenzie Presbiterian University	Brazil
Federal University of Rio de Janeiro	Brazil
University of São Paulo	Brazil
Laval University	Canada
McGill University	Canada
University of British Columbia	Canada
University of Guelph	Canada
University of Montreal	Canada
York University	Canada
Catholic University of Chile	Chile
Jimei University	China
Chongqing University	China
East China University of Science and Technology	China
The University of Hong Kong	China
Huazhong University of Science and Technology	China
Hunan University	China
Jimei University	China
Nanjing University	China

INSTITUTION	COUNTRY
Southwest University	China
University of Hong Kong	China
Tianjin University	China
Tsinghua University	China
University of Tsinghua	China
Wuhan University	China
University of Los Andes	Colombia
University of Zagreb	Croatia
Royal Danish Academy of Fine Arts	Denmark
University of Copenhagen	Denmark
Alexandria University	Egypt
Cairo University	Egypt
German University in Cairo	Egypt
Helwan University	Egypt
Modern Sciences and Arts University	Egypt
Leeds Beckett University	England
Oxford Brookes University	England
University College London	England
University of Oxford	England
Addis Ababa University	Ethiopia
Ethiopian Institute of Architecture, Building Construction and City Development	Ethiopia
Metropolia University of Applied Sciences	Finland
Aalto University School of Arts, Design and Architecture	Finland
Haaga-Helia University of Applied Sciences	Finland
University of Helsinki	Finland
INSA de Strasbourg	France
University of Nantes	France
Bauhaus University, Weimar	Germany
Free University of Berlin	Germany
Anhalt University of Applied Sciences	Germany
RWTH Aachen University	Germany
Techical University of Berlin	Germany
Technische Universität Darmstadt	Germany
Dresden University of Technology	Germany
Darmstadt University of Applied Sciences	Germany
University of Stuttgart	Germany
Aristotle University of Thessaloniki	Greece
Democritus University of Thrace	Greece
National Technical University of Athens	Greece
Technical University of Crete	Greece

INSTITUTION	COUNTRY
University of Pécs	Hungary
Centre for Environmental Planning and Technology University	India
School of Planning and Architecture, New Delhi	India
Gadjah Mada University	Indonesia
Institute Technology of Sepuluh Nopember Surabaya	Indonesia
Islamic University of Indoensia	Indonesia
University of Brawijaya	Indonesia
Gadjah Mada University	Indonesia
Shahid Beheshti University	Iran
University of Tehran	Iran
Polytechnic University of Milan	Italy
Polytechnic University of Turin	Italy
Sapienza University of Rome	Italy
Università degli Studi di Sassari	Italy
University of Applied Arts Vienna	Italy
University of Ferrara	Italy
Chiba University	Japan
Jomo Kenya University of Agriculture and Technology	Kenya
University of Nairobi	Kenya
University of Eldoret	Kenya
Technical University of Kenya	Kenya
Maseno University	Kenya
AAB University	Kosovo
University for Business and Technology	Kosovo
University of Pristina	Kosovo
American University of Beirut	Lebanon
Holy Spirit University of Kaslik	Lebanon
International Islamic University Malaysia	Malaysia
MARA University of Technology	Malaysia
Universiti Putra Malaysia	Malaysia
Autonomous University of Queretaro	Mexico
University of Guadalajara	Mexico
Institut National d'Aménagement et d'Urbanisme	Morocco
National School of Architecture, (Rabat)	Morocco
Delft University of Technology	Netherlands
Erasmus University Rotterdam	Netherlands
Institute for Housing and Urban Development Studies (IHS) of Erasmus University Rotterdam	Netherlands
NHTV Breda University of Applied Sciences	Netherlands
University of Amsterdam	Netherlands
Utrecht University	Netherlands

INSTITUTION	COUNTRY
University of Auckland	New Zealand
Ahmadu Bello University, Zaria.	Nigeria
Ladoke Akintola University of Technology	Nigeria
Norwegian University of Science and Technology	Norway
University of Tromsø	Norway
NED University of Engineering and Technology	Pakistan
Wrocław University of Science and Technology	Poland
Faculdade de Arquitectura da Universidade de Lisboa	Portugal
University of Dundee	Scotland
University of Glasgow	Scotland
University of Belgrade, Faculty of Architecture	Serbia
National University of Singapore	Singapore
University of Ljubljana	Slovenia
University of Cape Town	South Africa
Superior Technical School of Architecture of Madrid	Spain
Technical University of Madrid	Spain
Autonomous University of Barcelona	Spain
Polytechnic University of Catalonia	Spain
University of Moratuwa	Sri Lanka
Lund University	Sweden
Royal Institute of Technology	Sweden
Swedish University of Agricultural Sciences	Sweden
Damascus University	Syria
Uludag University	Turkey
California Polytechnic State University	U.S.A.
Columbia University	U.S.A.
Cornell University	U.S.A.
Fordham University	U.S.A.
Harvard University	U.S.A.
Iowa State University	U.S.A.
Morgan State Univeristy	U.S.A.
New Mexico State University	U.S.A.
Ohio University	U.S.A.
Pratt Institute	U.S.A.
Soka University of America	U.S.A.
SUNY University at Buffalo	U.S.A.
Texas A&M University	U.S.A.
University at Buffalo	U.S.A.
University of California, Berkeley	U.S.A.
University of California, Irvine	U.S.A.

INSTITUTION	COUNTRY
University of Cincinnati	U.S.A.
University of Massachusetts Amherst	U.S.A.
University of Michigan	U.S.A.
University of Oklahoma	U.S.A.
University of Washington	U.S.A.
Washington University in St. Louis	U.S.A.
Makerere University of Kampala	Uganda
American University of Sharjah	United Arab Emirates
National University of Science and Technology	Zimbabwe

II. Kenya Planning Schools Committee

COMMITTEE MEMBER	INSTITUTION
Mugwima Njuguna	Jomo Kenyatta University of Agriculture and Technology
Wycliff Nyachwaya	Jomo Kenyatta University of Agriculture and Technology
Romanus Opiyo	University of Nairobi
Charles Karisa	University of Nairobi
Lawrence Esho	Technical University of Kenya
Grace Kamweru	Technical University of Kenya
George Wagah	Maseno University

III. Youth Senate, Kenya

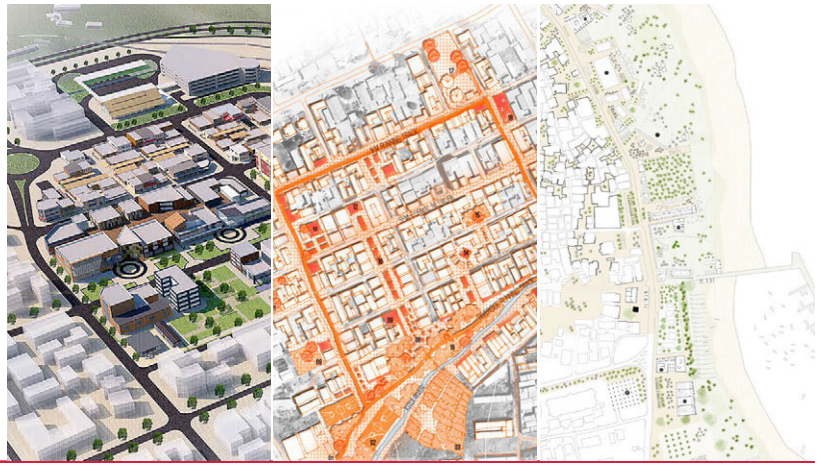
SENATE MEMBER	COUNTY
Albert Gakuru	Nyeri
Daina Mukami	Embu
Peris Mwangi	Nakuru, Naivasha
Geraldine Muiruri	Kiambu
Denis Kioko	Kitui
Bernard Mwendwa	Machakos
Said Musa Jobba	Mombasa
Mary Mulunga	Kilifi

IV. Competition Secretariat [UN-Habitat]

Agnes Sandstedt
Asa Isacson
Baraka Mwau
Nathalie Garner
Yuka Terada

UN-Habitat Support to Sustainable Urban Development in Kenya

International Design Collaboration for Kenya



Volume 3: Report on Student Design Competition for Kenya's Towns

Kenya's urbanization is set to increase significantly. According to the UN Population Division, *World Urbanization Prospects: The 2014 revision,* by 2050 Kenya's urban population will account for 44% of the total population. Although the projections indicate that the country's urban population will not have surpassed the rural population, the actual numbers of people living in urban centers will be significant, translating to an urban population of nearly 43 million people. This means that Kenya's urban sector will witness significant transformations - demographically, socio-economically and spatially - which will demand urban planners and policy makers to formulate and implement plans, policies and strategies that will guide a sustainable urban transition and development in the country. Meanwhile, the Constitution of Kenya, 2010 introduced a devolved system of government; a significant milestone that resulted in the enactment of county governments, 47 in number, and a national government. In the context of urbanization, this constitution, and subsequent legislations, mandated county governments to undertake urban planning functions and delivery of services, among other vital development functions. County governments are therefore set to play a critical role in shaping the future cities and towns of Kenya.

The Kenya Municipal Programme was set-up by the World Bank and Government of Kenya to address the increasing urban challenges in the country's major urban centers (then 15 Municipalities). Among the key components of this programme is the "Participatory Strategic Urban Development Planning" for select urban centers. Supported by the Swedish International Development Cooperation Agency (Sida), UN-Habitat partnered with the Kenya Municipal programme to enhance the capacity of the county governments in urban planning and particularly in the context of the Integrated Strategic Urban Development Planning. This resulted in a series of one-day learning sessions and two-day rapid urban planning studios, and other technical support activities.

This report focuses on the international Design Collaboration. Developed as a collaborative effort between UN-Habitat and nine Kenyan towns. Planning and Design students from all over the world were invited to select a site and propose interventions that would result in the sustainable development of the area. Through integrating aspects of the social, economic and environmental fabric of the town, students were required to submit two panels depicting their planned interventions along with an abstract. A jury consisting of international planning and design specialists assessed the proposals based on strict criteria and came up with an overall winner and several special mentions. Finally, in June 2016, selected proposals were exhibited at the United Nations in Nairobi. This report describes the process of assembling the collaboration and suggests further aspects that should be explored to capitalize on Kenya's urbanization.

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United Nations Human Settlements Programme
P.O. Box 30030, Nairobi 00100, KENYA
Telephone: +254-020-7623120 (Central Office)
Email: kenya.urbanplanning@unhabitat.org

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