CIG UGANDA

STRATEGIC LAND USE OPTION PLANNING REPORT

Bus Rapid Transit-KCCA/GKMA | June 2020

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Any queries should be addressed to the Publisher, CIG Uganda, Plot 31 Kanjokya Street, 3rd Floor, Wildlife Tower, Uganda Kampala or Cardno International Development, Level 5 Clarendon Business Centre, 42 Upper Berkley Street, Marylebone, London, W1H5PW UK.

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The report was prepared by CIG Consultant; Dr. Charles Koojo and peer reviewed by CIG team comprising of Benjamin Olobo, Infrastructure Advisor; Dick Komakech, Deputy Team Leader and Helena McLeod, Team Leader.

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EXECUTIVE SUMMARY

The Cites and Infrastructure for Growth (CIG) Uganda is a five-year UK Government funded programme implemented by Cardno International Development with partners Genesis, ORI and Riccardo. The programme commenced in June 2018 and is expected to run over a 5-year period to June 2023. CIG delivers the support to MDAs through either TA or support to planning and implementation programmes.

In July 2019, DFID approved the project proposal for GKMA Bus Rapid Transit (BRT) preparatory and planning studies that is focusing on coordinating and supporting the technical and strategicaspects of BRT planning. This is expected to feed into the next stage of finance mobilization and implementation of the BRT project. As part of this BRT preparatory planning activity, there is a requirement to undertake an assessment for Land use planning and integration with BRT to identify areas for policy revisit or amendments prior to BRT project implementation and eventual operation and management. This also includes identification of the opportunities that can scale up land use and urban transport.

The objective of this report is to present the findings on potential opportunities for land use development within the three identified BRT corridors along Jinja Road, Gayaza Road and Entebbe Road, and provide recommendations to improve and maximize the future operation of the BRT. This report builds on the prior findings in the accompanying BRT Landuse assessment report which should be read and considered along with this current report.

Major Opportunities

- The backbone of the system should be a mass rapid transit system for GKMA, accompanied by a hierarchical and modern public transport (PT) network;
- Development of supportive policies and internal procedures that promote greater access to transit service by ensuring development opportunities around significant transit infrastructure, such as BRT stations, are protected and encouraged.
- The strategic land use option development will be on transport system that makes better use of the existing infrastructure or existing underused assets (e.g. reopening rail lines, widening of roads, etc.) which will help propel development in the GKMA areas.
- Presence of reliable, affordable and sustainable transport modes will offer opportunities to plan for better social infrastructure such as housing, schooling, health facilities
- Implementing strong city-wide and regional land use policies to support compact growth and sustainable transit services that can reach the most people, the most cost-effectively.
- Ensure that land use and transit policies are supporting mutually inclusive strategic objectives, at the regional scale, as well as at the scale of individual lines, along corridors, and at nodes (e.g., station areas).

Major Constraints

- GKMA and also KCCA has inadequate policies and regulations for strategically creating “articulated densities” (densities that are strategically distributed across parts of a metropolitan area)
- The land use assessment revealed that developers within GKMA tend to prefer development of peripheral green fields rather than urban redevelopment in the city core,
- Lack of capacity on the road network could hinder the delivery of future developments, such as additional housing, essential services, commercial and industrial spaces in the GKMA
- There are also inadequate policies, regulations, and supporting mechanisms for redeveloping built-up areas, particularly within the slum built up areas/brown fields i.e. Bwaise, Kalere, and Kasubi etc.
- During the land use assessment, it was found out that the various urban authorities have neglected urban design at the neighbourhood and street level.
- There is no functional GKMA authority as envisaged under the NPD 11 2015-2020, which calls for KCCA and urban local governments to closely coordinate land-use plans, infrastructure investments, and urban services.
- The huge upfront capital investment required to develop a transit system is one of the greatest obstacles to integrating transit and land use.

Overall the noted findings and recommendations are expected to lead to a more focused policy discussion between MOWT, KCCA, Planners and Policy makers with a view to firm up the future planning and development of the GKMA BRT system.

1.0 INTRODUCTION

1.1 Overview

The Greater Kampala Metropolitan Area is facing a number of transportation problems, resulting from rapid growth in vehicular traffic and lack of adequate transport infrastructure, traffic management and services. Population projections show that the GKMA population will continue to grow (between 3.5% and 5.5% per year) and will reach approximately 10 million inhabitants around 2040 (Source: 2012 KPDP). There is an urgent need to currently plan and provide infrastructure and services that will enable GKMA and KCCA to function well in the future.

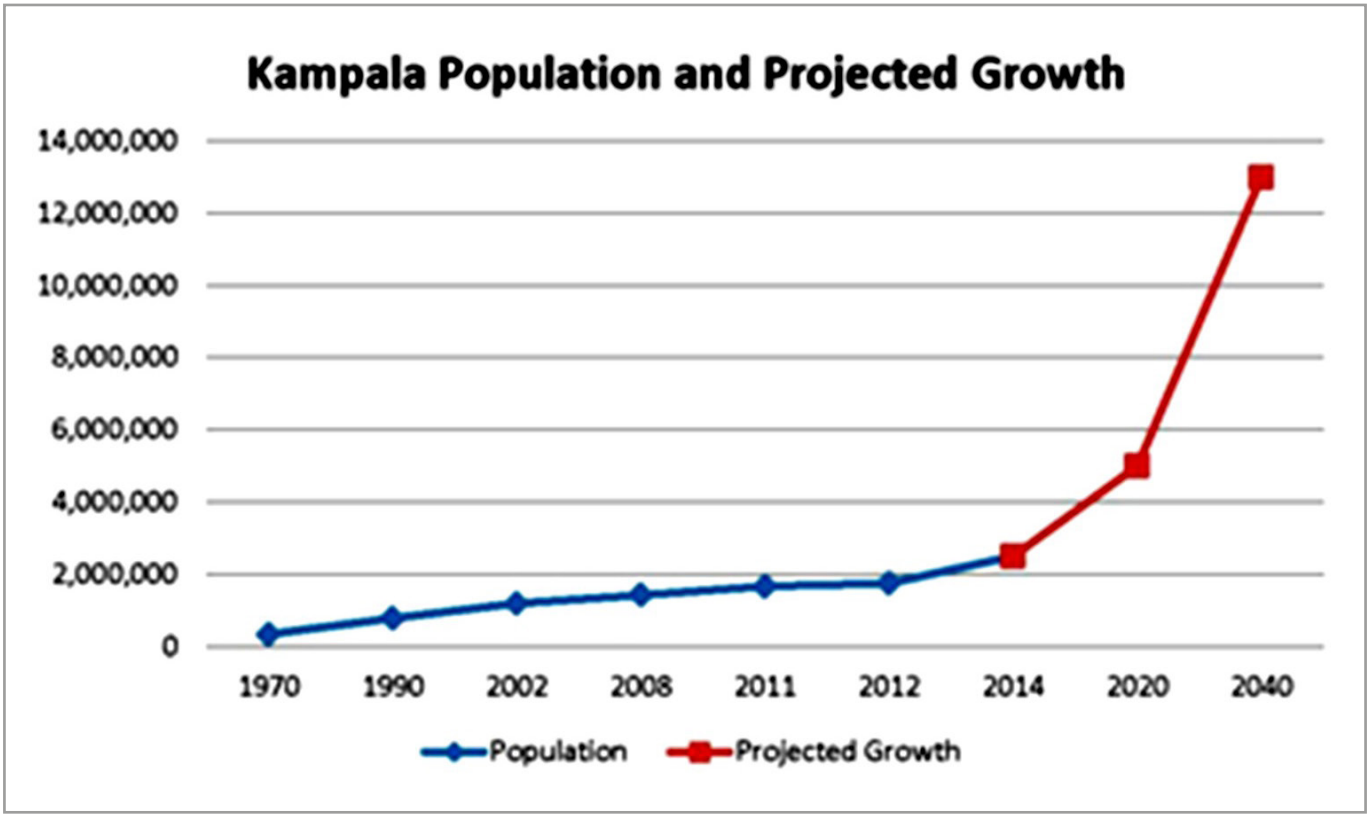

Figure 0-1: Kampala Population and Project Growth Source: KPDP (2012)

The GKMA BRT strategic land use development option takes into account locations, which maximize the potential to reduce the need to travel, or where travel is necessary, maximize opportunities to travel sustainably. With rising incomes within the GKMA, urban residents are expanding outward, following the trajectory of automobile-dependent sprawl as evident from the land use assessment of the BRT (2019)

Transit is one of several important tools, along with supportive zoning and creative financing, used to make urban visions a reality. The planned KCCA BRT systems has been designed and constructed primarily to meet existing traffic demand in built-up areas. Within the GKMA and at KCCA and Municipal Council level, departments and agencies have varying missions, objectives, budgets, management styles, governance structures, and staff profiles. These differences do hinder the types of cross-sector and interagency coordination needed for transit and land-use integration.

1.2 Opportunities and Constraints

In parallel with identifying opportunities to improve a sustainable transport system more widely or to have positive impacts on issues of wider concern, such as regeneration, were noted.
Constraints are factors, which limit the potential transport options available. Opportunities and Constraints identified during the BRT land use assessment were:

Opportunities

- The backbone of the system should be a mass rapid transit system for GKMA, accompanied by a hierarchical and modern public transport (PT) network
- The strategic land use option development will be one of the transport system that makes better use of the existing infrastructure or existing underused assets (e.g. reopening rail lines, widening of roads, etc.) which will help propel development in the GKMA areas.

- It will also help in opening up un-developed areas in the hinterlands of the GKMA as well as providing regeneration of housing in some of the areas, which are currently not linked by proper transport corridors.
- The implementation of the strategic land use option development will be fundamental in creating employment for the workers and the local businesses.
- Presence of transport modes will offer opportunities to plan for better social infrastructure such as housing, schooling, and health facilities.

Constraints

- GKMA and also KCCA has inadequate policies and regulations for strategically creating "articulated densities" (densities that are strategically distributed across parts of a metropolitan area)
- The land use assessment revealed that developers within GKMA tend to prefer development of peripheral green fields rather than urban redevelopment in the city core, because green field development is faster and costs less up front. This belief ignores the high life-cycle costs related to expanding the infrastructure network (for example, water pipelines and sewerage networks); operating and maintaining that network; and forgoing the high opportunity costs of expanded urban land use.
- Inconsistencies in the planning instruments and deficiencies in their implementation,
- Lack of capacity on the road network could hinder the delivery of future developments, such as additional housing, essential services, commercial and industrial spaces in the GKMA
- There are also inadequate policies, regulations, and supporting mechanisms for redeveloping built-up areas, particularly within the slum built up areas/brown fields i.e. Bwaise, Kalere, and Kasubi etc.
- During the land use assessment, it was found out that the various urban authorities have neglected urban design at the neighborhood and street level hence transit development orientation investment development not taken into account and not a priority. The lack of urban design elements creates a disconnect between the transit system and the surrounding neighborhoods. This lack of integration does not promote the reconfiguration of the city layout along the BRT lines in a way that fosters vibrant urban life and economic activities.
- There is no functional GKMA authority as envisaged under the NPD 11 2015-2020, which calls for KCCA and urban local governments (Wakiso Municipal Council, Nansana, Kiira, Kyegera, Mukono, Kajjasi, and Makidye Sabagabo etc.) need to closely coordinate land-use plans, infrastructure investments, and urban services.
- The huge upfront capital investment required to develop a transit system is one of the greatest obstacles to integrating transit and land use. This obstacle is particularly difficult to surmount because unprecedented urban growth has put severe pressure on the ability of local governments to finance infrastructure investments and urban services.

1.3 Horizon Years' land use Scenarios 2040

While it is typical to define "business as usual" and "desirable" scenarios, the approval of the GKMA PDF enabled the BRT, land uses assessment 2019 to define three future land use scenarios as BRT, Todenka bus and Light rail:

- Possible mass transport system to be operational in the next 5 years (2020-2025)
- **GKMA PDF Scenario** consisting of the planning of land use, population and employment and full implementation taking into consideration of the 2014 Census
  - » ***Population*** - assumes urban densification of KCCA outside the central division as well as adjacent urban areas, in accordance with the approved PDF, given modifications based on new data.
  - » ***Employment*** - assumes ongoing urban sprawl throughout the GKMA with some densification of existing urban centers.
- **Realistic Scenario,** in which the planning of 2011/2012 was adjusted according to new data and partial implementation of the 2012 PDF. This scenario is of greater relevance than a simplistic "business as usual".
  - » ***Population*** - characterized by decentralization of employment centers within the GKMA, extending outwards from Kampala to both existing urban centers expected to intensify as well as new urban centers planned as new towns.
  - » ***Employment*** - Kampala retains its current domination of formalized employment and in both 2025 and 2040 will account for almost two thirds of the supply of workplaces. While secondary urban centers will develop new employment opportunities this will be more limited than in the GKMA PDF scenario

Both scenarios converge on the same 2040 population and employment forecasts for the entire GKMA region, differing in the geographical distribution. This enables proper evaluation of the future transport alternatives. For detailed review of Land Use Scenario components refer to approved Key Specific Report 'Methodology for Development of Base Year (2016) and Future Scenarios' (2025, 2040) Land Use, Population and Employment Data' or approved "Travel Demand Model Report" under the multi modal transport master plan 2018.

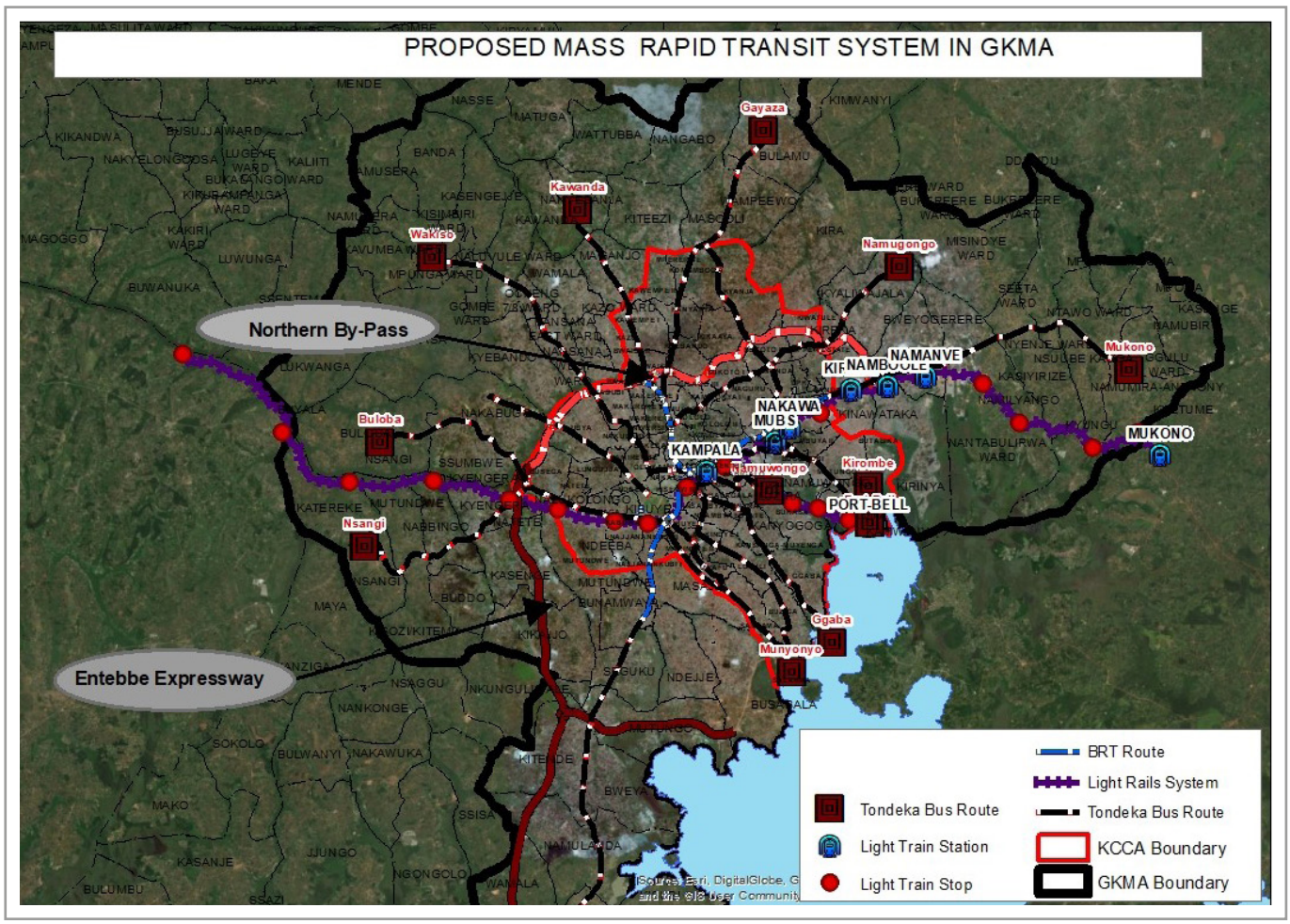

Figure 1 2: Proposed Mass Rapid Transit System

2.0 RECOMMENDATIONS

Despite highlighted challenges and issues there, remains adequate evidence that residential densification and employment intensification along key BRT corridors in the GKMA. Importantly, urban areas should not be viewed as static, but rather as areas that continue to grow and take shape as the requirements of specifically users' change with the introduction of new technologies and approaches to urban living.

Added motivation for densification is that few urban environments have an intrinsic quality that will see it retaining its value and condition over an extended period without focused interventions. Investment and redevelopment are required in order for property values to be retained or grown.

2.1 Strategic Vision, Strong Support for Enabling Institutional and Regulatory Framework and Develop strategic Plan

There is need for a GKMA strategic vision that is indispensable for success¬fully integrating transit and urban development. Transit is a means to help create desirable patterns of urban growth, not the other way around. It is, literally and figuratively, a vehicle for connecting people to places, thus contributing to creating the kinds of cities and neighborhoods in which people want to live, work, play, learn, and interact. GKMA need to translate its visions of the future into the land-use and infrastructure elements of a statutory GKMA plan, which must be market sensitive, socially inclusive, and rooted in fiscal realities

This land use strategic option advocates for the strong support for the project of the 'Development of a Multi-Modal Urban Transport Master Plan for Greater Kampala Metropolitan Area (GKMA)" 2018, which is part of the Kampala Institutional and Infrastructure Development Program (KIIDP), being executed by the Government of Uganda through Kampala Capital City Authority (KCCA). The World Bank sponsored the project as part of the KIIDP–Phase II.

2.2 Further detailed Land use assessment

It was noted that in almost all the integrated transport studies undertaken within KCCA and GKMA there has not been any in-depth land use assessment undertaken in the feasibility studies. It is therefore imperative that land use for BRT as part of the NPD 111 be undertaken as part of the design.

2.3 Maximization of the future BRT

The issues of density and land values have been taken into consideration to be able to determine maximization of the future BRT and be able to guide preferred alternative BRT for implementation specifically include the following:

- Many of the middle and upper income areas within the City and GKMA are not fully developed and can accommodate a much larger population
- There are key highly underutilised public sector landholdings in very central locations, which could be used for high-density residential development. It is in those areas that there is likely to be less resistance to traditional ideas of single plot housing, because of the convenience of living so close to the CBD and other centres of employment. Examples include Nsambya Police Barracks; part of the Uganda Railways Corporation (URC) lands, Naguru police barracks. However, progress in this regard seems to be very slow.
- Transit Oriented development (TOD) may enable increasing densities along BRT corridors
- Some informal areas are not that dense and there are opportunities to reorganise them with proper layouts and achieve higher densities and better living conditions.

2.4 Densification and Land Use Optimization

The KPDP proposed density was that in the city centre (residential neighborhoods target was put at more than 200 persons/ha and the inner city at 200 persons/ha.

The land use assessment shows that the target has not been achieved yet and KCCA should endeavor to ensure that this is attained. This will be in conformity with the desired BRT goals and be able to serve as many people as possible.

The land use assessment findings show that land use has not been well optimized to its full capacity to enable the urban functions to maximize the potential of the BRT when put in place. Optimization of land use in the GKMA refers to

- Maintaining an efficient intensity of land use and safe levels of development and population.
- promoting an acceptable standard of environment and amenity for the population; and
- Ensuring an appropriate balance between the population and the capacity of infrastructure required to service it.

2.5 Carefully Articulated Land-use Mixtures

Density is not the only important element of land use and built environ¬ments. Other elements include carefully articulated land-use mixtures; safe and smooth accessibility to transit stations (enabled by footpaths, cycle paths, and streetlights, for example); contribute to the development of a good built environment.

The justification for this option is based on the following facts

- Types of density that would have been determined through KCCA planning guidelines and the other urban authorities within the GKMA
- The existing trend of the various neighbourhood development taking place as observed
- Most of the proposed development i.e. shopping malls, light retail, offices, apartments, financial institution etc., are compatible with each other
- The current existing infrastructure can still support or will support densification and reduce the cost of servicing the neighbourhood
- Will be able to meet the planning guidelines of the planning authorities.

The use of a mixed land use policy can be efficient through the definition of an assortment of housing options as well as commercial, industrial and other land uses. The local authorities can enable household from low socio-economic classes remain in lands despite value increases. For example, enabling the building of luxury apartment building should be accompanied by a percentage of small apartments, which can be affordable to low income households. Furthermore, affordable housing schemes available ranging from rent control agreements, public housing provided by the state, and affordable loans for young families with potential for future financial empowerment.

2.6 Urban Hierarchy Service Areas

A number of core economic nodes within the City do not have sufficient capacity (residual floor area or vacant land) to absorb the demand for new residential development (or trip producing land uses), this will be done by adjusting the following variables:

- Land use mix and intensity of use of building floor space (persons per m²: household size / employment density) b. Space recovered through parking zone change (lower parking requirement) c. [a] and [b] further optimised through rezoning/ departures from standard development rules (height, coverage, floor factor)
- The City of Kampala should adopt policies (such as the Densification Policy, Tall Buildings Policy and the Urban Design Policy) which set sustainable design parameters to guide the form of future development.
- Whilst these policies currently support the principles and objectives of TOD, they often are misinterpreted or disregarded in the planning of infrastructure and assessment of land use applications at the nodal and precinct level. The use of standards that relate to road layouts, parking and/or access are often inappropriately applied in Kampala and GKMA context, especially in terms of human settlements planning.
- Densities and Intervention Approach - to constrain the scale of the built area priority needs to be given to the densification of the existing built areas and to ensuring future development occurs at the requisite density.
- Re-development can take place to achieve optimization of land use if planning is done now to make use of appropriate opportunities. Redevelopment of existing low residential density and medium areas can be such an opportunity. This re-development could take place progressively over the next five to 10 years, which would allow the KCCA and GKMA to upgrade the infrastructure to meet the demands of the new land use.

2.7 Bus station and Parking

The BRT designs should create a station area plans that involve significant levels of effort on the part of GKMA transport agencies, and local stakeholders. When done successfully, it can begin the creation of a new, transit supportive node in an BRT dominated environment. Station area plans processes also involve a substantial amount of community education and input, which can serve as an opportunity to promote the proposed BRT system and its benefits. Station area plans should address several key components to assure that they provide a successful blueprint for future development. BRT and Rail systems are more likely to rely on park and ride(P&R) facilities than local bus services but these are also the station areas that are typically identified as most appropriate for increased density, over the largest areas around the transit station

2.8 Linkages with Tondenka and Other Transport Modes

The BRT and Tondenka will be operating in the same corridor and hence need to integrate their activities and phasing in order to achieve the objective of an efficient and complimentary services to each other and the general public. This also applies to the ongoing expansion of the URC passenger train services as the land uses are the same and should have stop or interchanges which will link to more areas.

2.9 Densities and Intervention Approach

To constrain the scale of the built area priority needs to be given to the densification of the existing built areas and to ensuring future development occurs at the requisite density. The recommended Long Term Gross Density Targets are indicated the KPDP 2013.

For urban planning to effectively have the BRT functional need creation and distribution of employment in KCCA and the GKMA will require, inter alia;

- Extension of the CBD;
- Extension of mixed-uses in the City Frame including redevelopment of City Centre slums;
- Upgrading of the Central Industrial Zone to mixed Employment Zone;
- Knowledge precept within Makerere, Nakawa and Kyambogo
- Developing a set of Employment sub-Centres (~ 20 Ha. each) located at high access points along the movement system;
- Mixed Business-Commerce-Residential Urban Centre's and Corridors;
- Neighborhood scale commercial Centre's (markets, services).

In addition to using BRT to serve development that is already occurring, BRT is more and more commonly being used to help stimulate development in designated areas. A recent study conducted by ITDP analyzing transit corridors throughout North America found that if BRT is built in the right corridor and the government institutes policies that encourage development around that corridor, there is a strong chance that the land along the corridor will attract development. However, using BRT to drive development is not enough. BRT planning, when premised on development, must be directly linked to government development initiatives.

2.10 Land use Agglomeration

The development of the integrated transport for the GKMA should explore means for the land use agglomeration as a strategy in order to ensure that the investment is sustainable. Agglomeration is simply defined as a mass collection or assemblage of different elements. In the context of land use, agglomeration is when different uses, such as employment, institutional, or industrial lands, are developed in close proximity of each other

The proposed investments in the GKMA transit service, like the bus rapid transit or corridor infrastructure improvements, should make strong efforts to connect existing higher density employment and residential land uses or be planned to connect areas with high development or redevelopment potential. Strong infrastructure will influence where residents and employers choose to locate in future. Such strategic investment decisions can result in stronger asset utilization and ridership revenues over similar investments connecting already lower density or low development potential areas. Coverage services can still be employed to act as feeders to higher intensity agglomeration area destinations. However, high frequency and reliable transit service needs to be strategically deployed to build on existing or future high-potential demand patterns within and amongst labour pool areas and agglomerated economic areas in the GKMA/ city for maximum ridership and operational efficiencies.

2.11 KCCA and GKMA Local Authorities

Often, local planning and urban development authorities have a good sense of where they want to develop, what new development is likely, and where developers asking for zoning variances or other support from the municipality have approached them.

Sometimes planning authorities have regulatory structures that guide new development in specific areas through spatial development plans, and they may have a good sense of the likely period for these developments. Therefore, if one of the purposes of BRT corridor selection is to simulate development, information regarding the government's development plans should be collected and the locations should be mapped.

3.0 CONCLUSION

In summary, the relationship between land use and transit is complex and layered. There are temporal and contextual variables that are important to consider. GKMA at macro level and for every station area and corridor there needs to be attention given to unique combination of characteristics, constraints and objectives in order to determine the most appropriate context-sensitive solutions.

It is crucial to use integrated land use strategic development options to guide the development of GKMA's transport systems (more specifically BRT) to take into account their development trends, so that urban nodes /centers can fulfill their potential and discharge their essential role in ensuring rapid economic growth and socio-economic development.

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Cities and Infrastructure for Growth Uganda
Plot 31 Kanjokya Street
3rd Floor, Wildlife Towers
Kampala Uganda
Tel: +256 393208132.
www.ciguganda.com

Cities and Infrastructure for Growth Uganda
Cardno International Development
Level 5 Clarendon Business Centre,
42 Upper Berkeley Street, Marylebone
London, W1H5PW
Telephone: +44(0)1844216500
www.cardno.com