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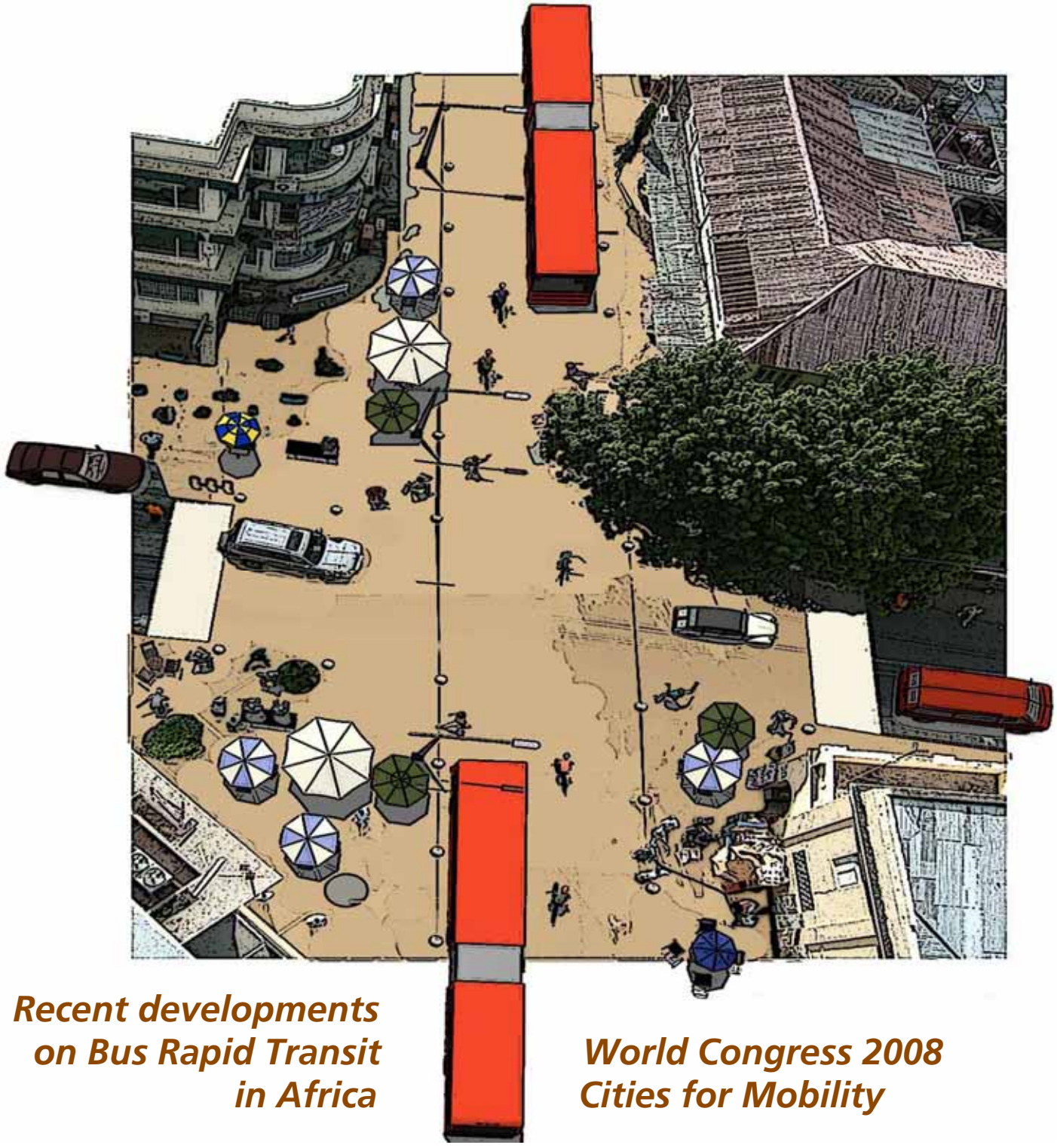

Recent developments on Bus Rapid Transit in Africa

World Congress 2008 Cities for Mobility

STUTTGART

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Recent Developments on Bus Rapid Transit in Africa

An overview

Introduction

African cities face rapid population growth, rapid (though still comparable low) motorization rates, rapidly worsening traffic congestion and thus decreasing mobility, and increasing health problems associated with traffic pollution. The majority of the urban residents rely on poor public transport (paratransit, minibuses), while the use of non-motorized means of transport becomes more and more dangerous. Walking and cycling is still the most used mobility mode for most of the citizens.

Policy responses have been meagre. It is difficult to maintain the transport infrastructure as well as to cope with the growing rate of motorization. Furthermore the understanding of the advantages regarding alternative approaches are still relatively poor.

As a result traffic problems will steadily worsen and emissions (including Greenhouse Gases) will steadily rise unless there are strong interventions and innovative solutions. One of these solutions can be the implementation of a Bus Rapid Transit system (BRT).

The Characteristics of a typical Bus Rapid Transit

Bus Rapid Transit (BRT) is a high-quality road-based transit system that delivers fast, comfortable, and cost-effective urban mobility through the provision of segregated right-of-way infrastructure, rapid and frequent operations, and excellence in marketing and customer service. The quality is near a rail-based system, but at a fraction of the cost. A BRT system costs typically 4 to 20 times less than a tram or light rail transit and 10 to100 times less than a metro system (Bus Rapid Transit Planning Guide 2007).

Whereas the first developments for BRT Systems were in Latin America, they became more and more popular in Asia and North America. ITDP first introduced the concept of BRT to Africa in 2002. From that, ITDP conducted a high profile road show with former Bogota Mayor Enrique Penalosa in January 2003, and site visits and BRT promotional activities by ITDP BRT program director Lloyd Wright. This was followed up with multiple study tours to Bogota, Quito, and Curitiba by mayors, transport ministers and other key decision makers from Dakar, Accra, Cape Town, Johannesburg, Pretoria, Dar es Salaam, Addis Ababa, Nairobi, and Lagos.

These advocacy efforts help initiated BRT projects in Johannesburg and Cape Town, but also in Accra (Ghana), Dakar (Senegal), and Dar es Salaam (Tanzania). Interest is also being shown in Kampala (Uganda) and Nairobi (Kenya).

The following text gives an overview of recent developments in the different African projects.

Lagos - Nigeria

The Nigerian City of Lagos is rapidly growing and with approx. 10 Million inhabitants one of the biggest cities in Africa. In the spring 2008 the first phase for a BRT system was implemented here. The public-private partnership organization Lagbus Asset Management Limited manages the system.

The first of several phases consist of a light version of a BRT system with the usage of bus lanes. The first corridor (Mile 12 - CMS) is 22-km in length and plans to upgrade the system towards a full BRT system exist. Right now, it is a curb-side busway, with 60 percent of it being segregated bus lanes.

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Dar es Salaam – Tanzania

Dar es Salaam has completed the detailed operational planning, infrastructure planning and business plan for the Dar Rapid Transit (DART) System. Key features of the system include the following:

- A 21-kilometer 'closed' BRT system, with dedicated 18-meter articulated buses, passing lanes at stations, median-aligned stations, and likely peak passenger demand on Morogoro Road of around 13,000 passengers per hour in one direction.
- A daily passenger ridership of around 200,000 passengers in the system, representing 20% of daily bus trips taken in the city.
- A 'transit mall' exclusively for pedestrian, bicycle and BRT traffic that will extend through the Central Business District (CBD).
- Express services that reduce travel times and improve operating efficiency.
- Enclosed stations, pre-board fare collection and at-level boarding and alighting.
- BRT access to the CBD, the Ubungo market area and intercity bus terminal, the main artery of the City (Morogoro Road), the intense Kariakoo market area, wealthy areas to the north of Kawawa Road, and high density housing and mixed development along Kawawa Road.
- High quality pedestrian and bicycle facilities along the BRT corridors, including regular at-grade pedestrian crossings and a segregated bicycle lane on both sides of the corridor.

The World Bank contracted Logit Consultoria, one of the most respected BRT planning and design firms, to develop the operational plan and detailed engineering for Phase 1 of the system. Logit has been involved with planning some of the most famous BRT systems, including TransMilenio. Institutionally, TANROADS is in charge of the construction of the system, while an executive agency will be set up to manage and control the system. The existing Daladala bus operators, in a consolidated and professionalized form, will play an important role as operators in the new system.

Based on a competitive bid, ITDP contracted Deloitte & Touche, a management consulting firm, to work on details of the fare collection and the business plan for the system. Training is ongoing, with local trainees, the DART Agency, and consultants benefiting from the experience of being directly involved with project planning.

Dar Es Salaam Rapid Transit
Morogoro-Bibi Titi station
Render from Luc Nadal for ITDP

With assistance from ITDP sub-contractor Nelson Nygaard Consulting Associates, a parking study was conducted to ensure CBD businesses are not adversely affected, along with a detailed downtown road network analysis where the road network is being reconfigured. This analysis classified the streets into four categories: BRT corridors, 'green' roads for cyclists and pedestrians; shared roads, and through-roads.

TDP, with funding from the United States Agency for International Development (US AID) and the United Nations Environment Programme's Global Environment Facility (UNEP GEF), assisted with the institutional and regulatory frame-work for a BRT System, as well as downtown traffic and non-motorized transport planning (see www.itdp.org). Christof Hertel from ITDP Europe also presented this project at the Cities for Mobility World Congress 2008 in Stuttgart.

According to the newspaper The East African for the first phase implementation Tanzania will invest $158.2 million, of which about 91.9 million is for the DART project. The government will be investing about 10 million into the project, and the private sector will also need to invest about 40 million, mainly for the procurement of the buses.

Kampala - Uganda

Kampala is by far the largest single production centre in Uganda and the main centre for industry, commerce and services. According to the Transport Master Plan (TMP) Study Report (2005) population projections, the Kampala population will rise to about 3.7 million by 2018. Kampala is the richest region in the country in monetary terms, but it is also an area with large numbers of poor residents seeking to better their income levels and living conditions through participation in its economic activities. That they deserve access to reliable, affordable and safe transport services to help them achieve their goal is one of the aims of the Transport Master Plan vision. Despite the strategic importance of Kampala in economic, civic and social sense, urban transport is not well developed. Urban Transport Services are provided by private operators mainly with 14 seater mini-buses commonly known as matatu or kamunyes and Motor Cyles commonly known as boda bodas. Traffic Congestion is very common and is worse during peak-periods. Road Safety in the Kampala is also a serious challenge

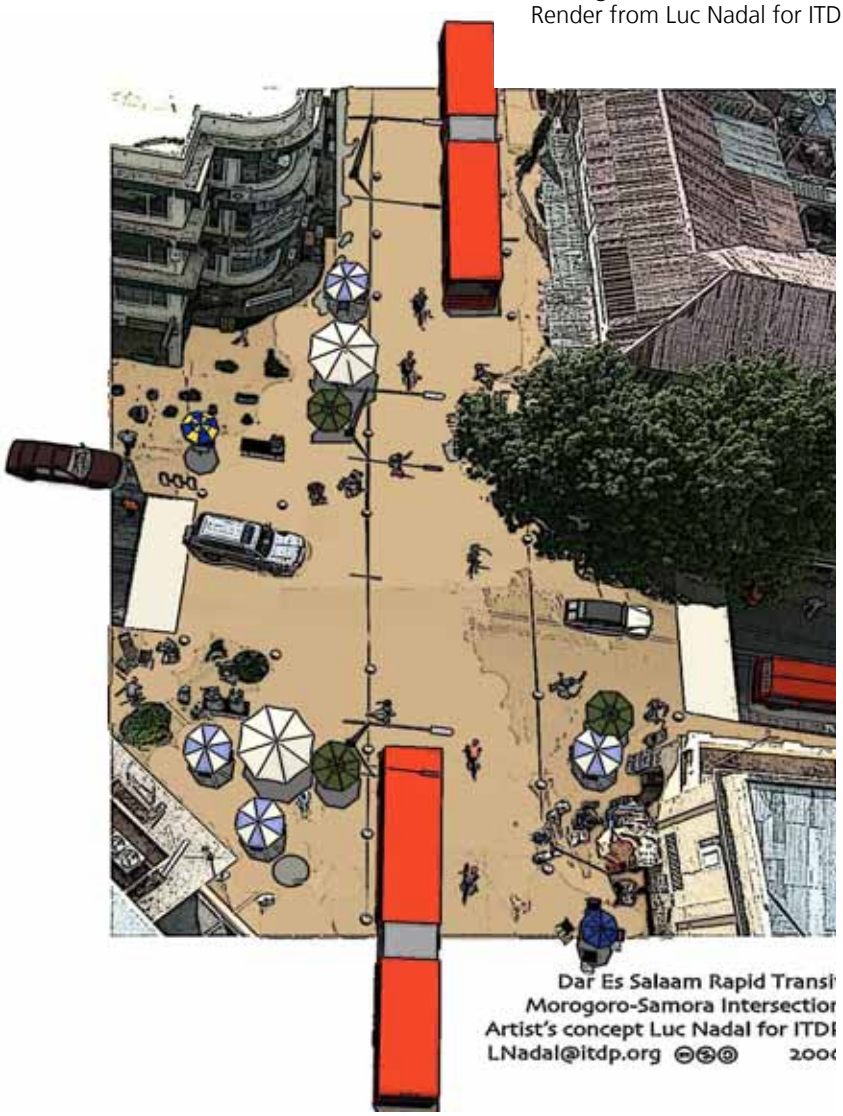
The Transportation Master Plan for Greater Kampala Metropolitan Area (GKMA) has been developed and reviewed recently and builds the basis for the indicated interventioons

The Plan will incorporate the development and establishment of both mass transportation (focus on Bus Rapid transit/BRT) and non-motorised transport interventions (focus on Cycling) as well as incorporating road safety infrastructure for users of non-motorised transport / Develop appropriate Land Use Planning (LUP) methods for the city to cope with urbanisation and urban degradation.

Further developments in Africa

Rea Vaya, Johannesburg's BRT system will probably be the first full BRT system to open in Africa. Phase 1a is scheduled to open in 2009 and full Phase 1 will have over 100 kilometres of median aligned segregated busways with pre-paid fare collection and at-level boarding and alighting. Road works have already been initiated in the City Center, and with detailed designs and operational plans in quite an advanced stage. Cape Town is in the detailed design phase for their BRT system that will open in 2010 in time for the World Cup games. Logit Consultoria is

Dar Es Salaam Rapid Transit
Morogoro-Samora intersection
Render from Luc Nadal for ITDP



working with both systems on operational planning and ITDP is acting as an advisor to both as well. Accra has the money from the World Bank to build Phase 1. The contract for detailed design and planning was awarded to Mott MacDonald in November 2007. Dakar has a pending UNEP GEF to finance part of the detailed design and operational planning, but it has not yet been approved by the GEF Secretariat.

Conclusions

Due to different planning systems, historical and future urban developments as well as different economical and sustainable needs in Africa the BRT idea has to be adopted to the specific needs in each project to find the best solution for the rising urban transport demand.

BRT in Africa solves several problems that previous donor institution interventions into the bus sector had failed to address, namely reforming the existing transport system to provide a more competitive service instead of competing for passengers. BRT is the only proven mechanism for keeping bus operating costs low (by getting them out of congestion and increasing boarding and alighting speeds), as well as keeping the bus fares low. It creates a high quality public service and a profitable business environment for private sector bus operators. Private operations under controlled competition have proven in Latin America to lead to a dramatic improvement in the quality of bus services and long term bus maintenance. Because BRT operates at much higher speeds and load factors, these systems do not require government operating subsidies if properly designed. As a result, many of the previous problems with public sector operators can theoretically be avoided.

Dar es Sallam Rapid Transit
Morogoro-Bibi Titi station
Render from Luc Nadal for ITDP

The sources for this article and for further information on BRT are mainly the following:

- Bus Rapid Transit Planning Guide 2007: www.itdp.org/documents/BRTPG2007r1.pdf
- Institute for Transportation & Development Policy: www.itdp.org
- Bus Rapid Transit Policy Center: www.gobrt.org

Institute for Transportation & Development Policy - ITDP Europe

The European Section of the ITDP is a non-profit policy research and advocacy organization based in Berlin, Germany, promoting sustainable transportation and land use policies worldwide, with a particular focus on developing and transition countries. The major objectives of the organization are:

- Design of equitable, people-centered cities with high quality of life
- Promotion of safe and attractive routes for bicycling and walking
- Extension and reform of public transport systems
- Improved mobility for vulnerable populations
- Promoting downtown revitalization and limiting urban sprawl
- Limiting the negative impact of transportation on the environment, health and economy

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