



Africa on the move... Seeds of Green Growth



A World Bank series highlighting successful environmental ideas that show promise for scaling-up in Africa

LAGOS BUS RAPID TRANSIT (BRT) Fighting congestion and climate change

Context

Lagos is the sixth largest city in the world with 17 million people. It is one of the fastest growing cities – since the 1970s, its population has quadrupled. By 2015, it is expected to reach 25 million and claim its place as the third-largest megacity in the world. Till recently, its city public transport was limited to erratic, expensive, smoke-spewing 75,000 mini buses (*danfo*) and shared taxis (*kabu-kabu*), making 16 million trips daily. The poorer half of the population paid a fifth of their disposable income to ride them. Ownership was fragmented, with each person or group owning 2-3 vehicles which they would be driving themselves. The road networks were inadequate, and the city had one of the highest car ownerships with severe congestion in the “go-slows” as seen below. A typical journey from the main residential areas to Lagos Island would take two hours.

Approach

The Lagos Urban Transport Project identified enhanced bus services as a key component of an overall plan to overhaul the transport system. A form of Bus Rapid Transit (BRT) was selected - this roadway-based rapid transit system that looks and behaves like a subway, offers high capacity rapid transit services but on dedicated lanes in city streets. First constructed in Curitiba, Brazil, and then adapted in many cities around the world, it takes less time to construct

than a rail system as existing roads are restructured. In the case of Lagos, the government decided to construct a ‘BRT-Lite’ which cost



them \$1.7m per km compared to \$6m per km for the well known premium BRT systems. In March 2008, this 22 km project connecting Lagos mainland with the island became the first dedicated bus route in Sub-Saharan Africa. The BRT runs a 16-hour operation, using 220 buses to move more than 200,000 passengers daily. In its first two years of operation, it moved more than 120 million passengers.

Making this concept a reality involved these measures:

Institutional: In 2002, the Lagos Metropolitan Area Transport Authority (LAMATA) was set up as a semi autonomous agency to ensure effective coordination between the federal and state agencies. A law gave it jurisdiction over roads, route-planning and all transport-related issues. To ensure its sustainability, a transport user charge was issued and the agency was staffed with professionals who had international experience.

Investment: A public-private financing model was used; LAMATA provided the enabling infrastructure

Exploring synergy among traffic and climate change mitigation objectives

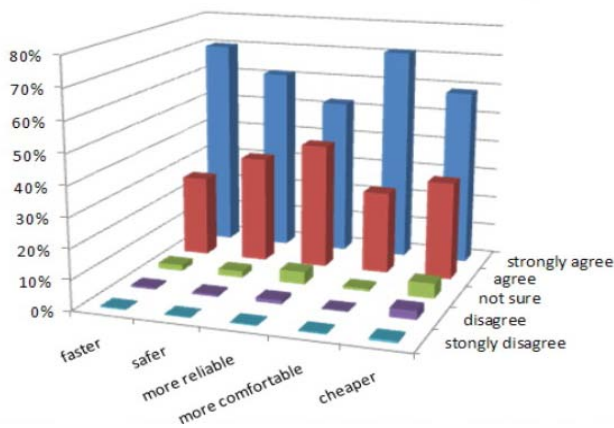


like passenger terminals and maintenance workshops for the new fleet while private operators procured and operated the buses. The World Bank provided technical advice and a \$100 m credit (with the Lagos state contributing \$35 m). Governor Babatunde Fashola provided 70 additional buses to boost the system. Ecobank, Nigeria provided the financial guarantee for buying new buses.

Information: A public awareness campaign was carried out in which 90-second spots demonstrated how to use the BRT even as it was being constructed. When the BRT system was 100-days old, a BRT Parliament was established to assess and debate the performance of the system. It became one of the most popular televised proceedings and this was followed by a weekly program with interviews and opinions which has 5 million viewers. A 24-hour helpline was set up. BRT and LAMATA shirts and caps were introduced to build the BRT brand. A sense of pride was instilled in the drivers (erstwhile drivers of mini-buses) and they were called 'pilots'.

Results

Economic: Journey time was reduced by an average of 25 minutes from one end to the other. Fares have gone down from 230 Naira to 100 Naira. BRT carries 25% of all trips along the corridor whilst accounting for just 4% of vehicles. Users were very satisfied (see graph).



Social: The BRT generated 2000 jobs for drivers, bus conductors, inspectors, ticket sellers, and mechanics. It is estimated another 10,000 indirect jobs were created relating to operators of formal and informal park-and-ride facilities and mini fast-food services.

Environment: The BRT has reduced air and noise pollution. According to LAMATA, BRT has reduced CO₂ emissions by 13% and greenhouse gas emissions by 20%. Wait time has reduced from 45 to 10 minutes, reducing the exposure of passengers to pollution and leading to health benefits through reduced respiratory diseases.

Lessons Learned

Stakeholder engagement is important. A lot of groundwork was done even before the project was drawn on paper. The needs of the traveler were determined by ethnographic observations of travelers' use of public transport, quantitative surveys on walk, wait and travel times, and focus groups to explore issues faced by different demographic groups. The engagement principle was that it was better to receive than to give information. LAMATA forged an early partnership with the National Union of Road Transport Workers, which formed a cooperative to run the BRT system and educated operators on the value of a mass transit system. This included tours of South American BRT systems in 2004 and 2006 to improve their buy-in. It got political support across parties and from the Governor's office.

Strong institutional and inter-agency coordination are key. An apex sector regulator (LAMATA) ensured that there was one body responsible for planning, regulating and coordinating the supply of adequate and effective public transport in all modes. It was legally empowered to act as the sponsor and promoter of mass transit systems.

Scaling-up

The BRT-Lite version takes relatively shorter time and budget to deliver and can display the value of a mass rapid transit system to skeptics. It also has environmental and climate co-benefits and can be integrated with multi-modal transit efforts. The Nigerian government already has plans for replicating this in other cities (Port Harcourt, Ibadan, Calabar and Kano). The Lagos approach can also be a model for other BRT systems planned in Ghana, Tanzania, Kenya, South Africa and Uganda and for other rapidly expanding urban areas.

Further Reading

- LAMATA <http://www.lamata-ng.com>
- Lagos State <http://www.lagosstate.gov.ng>
- The World Bank <http://go.worldbank.org/5GT0JCEDK0>
- Video about Lagos BRT <http://go.worldbank.org/AY4MM4AL41>