

REALESTATE Insight

Monday, October 26, 2009

INFRASTRUCTURE DEVELOPMENT: LINKING EFFICIENT TRANSPORTATION INFRASTRUCTURE TO THE DEVELOPMENT OF A VIABLE MEGA CITY

In October 2007, at the ThisDay Summit in New York, Mr. Fashola, the Executive Governor of Lagos State laid out the his plans for a modern Lagos – the New Lagos Mega City Project. He identified transportation and waste management (in addition to the fundamental requirements of power and water) as critical to the fulfilment of this plan. The deficiency of infrastructure is felt more significantly in cities such as Lagos where it was reported in 2001 that the infrastructure was sufficient to support less than 10% of the city's populationⁱ. Implementing transport infrastructure and organising mobility while sustaining a strategic vision for development of a city is perhaps one of the most critical pressure-points cities like Lagos face.

This edition focuses on how a good transportation infrastructure development plan can deliver a mega city and open a vista of opportunities to the real estate sector.

AN ASSESSMENT OF THE LAGOS TRANSPORTATION INFRASTRUCTURE

The Lagos Metropolitan Area Transport Authority (LAMATA) acknowledges the need for an integrated approach, and in consultation with experts including the World Bank, has confirmed that the new initiatives on mass mobility integrate rail and water transportation. However, implementation is slow.

A case in point is the water transportation initiative; while the government assures that it will continue to provide the enabling environment for public private partnerships, the ferry service along Victoria Island-Lekki-Badore waterways which reduces travel time from 2-3 hours by road to 45minutes has a total capacity of less than 2000 people daily, compared with a demand, estimated at more than 200,000.ⁱⁱAccesses have also not been carefully thought through, making light of the integrated intermodal claims.

The implementation of a rail network has not fared any better, with an ambitious plan of putting in 35km of rail tracks and trains with a capacity to move 500,000 people a day, the plans to implement 2 of the 5 lines over the next 3-4 yearsⁱⁱⁱ is yet to come to fruition since the ground breaking event in 2006. With the recent award of the concessionaires the rail project may have to wait several years.

By far the largest group of commuters travel to work in buses and cars as transport by train and ferry (both more efficient than buses in terms of mass transportation) remain insignificant. This means, road transport is the only tangible means of mass movement, putting pressure on the network of inadequate and deficient roads. The city's street cover only 6% of its surface, compared with 11% in Mumbai, 21% in Delhi and 22% in New York^{iv}.

It is reported that in the past decade, while 500km of roads have been rehabilitated in Lagos, there have been minimal new road projects. The most significant road expansion programme since the early 80s is the Lekki/Epe Expressway. This US\$35m^v project will, upon completion cater for a small percentage of the population, and in no way addresses the need for an integrated urban mass transportation system.

The launch of the Bus Rapid Transit (BRT) in February 2008, by LAMATA has to a small degree replaced a few hundred buses, moving an average of 200,000 passengers daily^{vi}. This is a successful campaign when measured against Mexico City, which established its BRT (metrobus) system mid 2005, and moves 263,000 people daily through 80 stations. The success of the metrobus includes the design and implementation of a dedicated bus lane and excellent passenger infrastructure and facilities, a challenge which Lagos still faces.



Figure1: Articulated diesel-run "metrobus" at a station in Mexico City

TRANSPORTATION INFRASTRUCTURE - The Economic Impact on a City

According to the Asian Development Bank (2001), an efficient transportation network is at the crux of the productivity of a mega city.

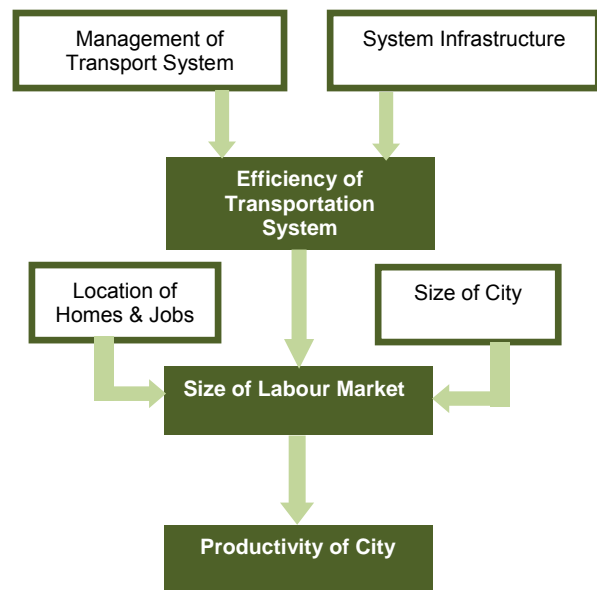


Figure 2: Factors relating to the productivity of a mega city (Asian Dev Bank, 2001) culled from Moving Millions. F. Moavenzadeh et al, 2007

The main purposes of implementing an integrated transportation infrastructure plan are to initiate economic growth, to contribute to the welfare of the public, provide accessibility to employment and amenities of life, ensure public safety & security as well as engender social cohesion. In achieving these objectives, the issues of energy consumption, degradation of the environment and threats to the quality of life must be well considered^{vii}.

Of the 23 Megacities identified early 2000s, one third (including Lagos), are in the developing world. All suffer from the symptoms of an unsustainable transportation system including air pollution, congestion and decreased economic activity

Congestion - rapidly increasing vehicle population travelling on a fixed (or slow increase in) supply of roads lead to deterioration. Congestion is a global phenomenon, but the much more rapid population growth in a city like Lagos makes it more critical. According to a report by the Organisation for Economic Co-operation and Development (OECD), the optimal travel speed in a city about 20-25k/hour, travel speed in

REALESTATE *Insight*

Monday, August 31, 2009

Lagos at peak periods (which is no longer limited to a few hours a day) falls to 4-8km/hr (or less).

Decreased Economic Activity - the impact of traffic flow on the economic health of the city can be profound. It is reported that Lagos loses US\$3bn yearly as a direct consequence of delays resulting from traffic congestion 2% of GDP)ⁱⁱⁱ

DEVELOPING AN INTEGRATED TRANSPORTATION INFRASTRUCTURE SYSTEM – The Challenges Lagos Faces

Based on the United Nations' projection, Lagos by 2025 may emerge the third largest city in the world with a population over 25 million people. This knowledge must put some vigour to visioning and planning, not manifest in the present level of efforts.

Delays with Implementation: Two years ago the Lagos Metropolitan Development and Governance Project (LMDGP) was established with a World Bank assistance grant of \$200m (N24.8b)^x. The purpose of the funds is to support the infrastructure and urban renewal efforts in Lagos State; however, triggering the drawdown of this funding has been painstakingly slow. Only recently, the sum of N10bn was released for the implementation of several road infrastructure projects including the Lekki-Ikoyi Link Bridge-connecting Lekki Peninsular Scheme I with Osborne Road via Turnbull Road in Ikoyi^x. This project is now 2 years delayed and may not be completed until 2011-12.

Disconnect With Urban Planning: In relation to town planning, new projects in the suburbs of Lagos are focused on the delivery of residential accommodation without serious consideration for commercial, industrial and retail facilities. This means the mass movement of people into the commercial areas of Lagos and Victoria Islands will continue. This is set to be further enhanced by the more recent zoning regulations which overall increases in density with less attention to road infrastructure required to service additional users. A lack of integrated planning has often led to the need to install services pipe work post completion of road projects.

The benefits of cohesiveness between urban planning and transport infrastructure development cannot be over stated. Property owners stand to benefit from enhanced infrastructure including good accessible roads. In spite of the economic lull, Oshodi, a suburb in Lagos, once notorious for all the negative attributes of bad planning and poor infrastructure has recently experienced a property price upsurge of more than 25%^{xi}. In other parts of the metropolis, road rehabilitation works have given rise to redevelopment activities along whole streets.

MAKING A SUCCESS OF THE INFRASTRUCTURE PLANNING, DEVELOPMENT AND MANAGEMENT EFFORTS.

The ongoing transportation Infrastructure rehabilitation and development projects will only deliver a viable mega city if they are strategically planned, adequately funded and promptly implemented.

Longer Term Planning: Master plans should be visionary, therefore long term. Lagos requires a 25-30year plan, implemented in 5year buckets. These plans should not be limited to how to move people into the city, but must include plans for decongesting the Lagos metropolis, using transportation internodes to create new suburbs. A quick win could be the extension of BRT services to other parts of the metropolis should be complimented by plans to establish CBDs in identified commercial hubs such that people would not need to travel long distances for their daily activities. In Mumbai, the average travel time to work is 15 minutes, and 45% of the population walk to work!^{xiii}

Interconnectivity is Essential: It should not be more strenuous for an individual who commutes by road to travel by rail or ferry. To encourage the use of alternative means may require incentivising. The provision of secure parking facilities at jetties may be an incentive for car owners to use ferry services. The ease of movement of freight from the ports need to be considered and addressed alongside the current plans, to relieve the city of the numbers of containers moving through its nooks and crannies.

Exploring International Funding Windows: PPPs AND DFIs

The inclusion of local and foreign concession companies in infrastructure PPPs is key to bridging the infrastructure deficit in Lagos. Government and donor resources fall far short of the required capital, therefore private capital must be mobilised. The global value of private participation in Infrastructure projects between 1996 and 2006 was estimated at \$713.6bn of which \$40.7bn was spent in Sub-Saharan Africa^{xiii}.

Transport Projects in Sub-Saharan in World Bank PPI Database by Sector , 1996-2007

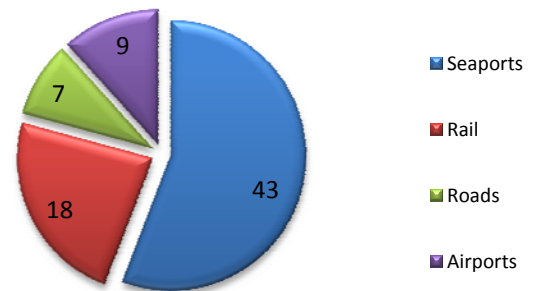


Figure 3: Transport Projects in Sub-Saharan Africa. Source: World Bank PPI Project Data Base

Infrastructure projects are usually large scaled, requiring funding from various sources. Taking advantage of the funding from DFIs with a bias for infrastructure development projects in emerging markets is another source of much required funding.

Strategic Project Implementation: An integration of the activities of related government agencies - Lands, Housing and Physical Planning and Works, could contribute towards sustainable project implementation. An integrated approach would create less friction between parts, minimize hitches at implementation and may result in quick synergy benefits.

High impact projects are those with direct impact on high traffic areas or centres, these should be top priority. An example is with marine transportation. The ferry services and the construction of jetties must be extended to specific suburbs, providing an alternative means of transportation to majority of users of the link bridges between Lagos Mainland and the Islands.

A strategy for harnessing the wealth of management techniques and expertise gained from previous urban development to coordinate and manage the new development efficiently would ensure durability and sustainability of current efforts.

ⁱ Kubava 2001

ⁱⁱ Lagos Metropolitan Area Transport Authority, LAMATA website

ⁱⁱⁱ Businessdayonline Lagos : Mega city in search of efficient transportation 22Sept 2008

^{iv} Mumbai: The Compact Megacity – Philipp Rode

^v Lagos infrastructure upgrade: LCC targets 2011 completion deadline, The Vanguard, June 23, 2009

^{vi} Newspaper Interview Managing Director/CEO of LAMATA, Dayo Mobeorola,

^{vii} MovingMillions. F.Moavenzadeh et al. 2007

^{viii} Alitheia Capital Research based on GDP per capita estimate for 2008 assuming 2hour extra traffic time per capita

^{ix} Lagos Metropolitan Development and Governance Project website

^x Julius Berger Begins Lekki Bridge, Badagry Road Upgrade With N10 Billion - Daily Independence 18/05/09

^{xi} Alitheia Capital Research 2009

^{xii} Mumbai: The Compact Megacity. Philipp Rode

^{xiii} World Bank PPI Project Data Base