The Bus Rapid Transit System of Lagos, Nigeria

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By

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BACKGROUND

LAGOS……

- Most populous city in Africa - 18 million inhabitants
- Lagos State is bigger in population than 23 countries in Africa
- Smallest state in Nigeria
- Current estimated growth rate is 6% as against 3.5% for Nigeria, hence by 2020, population is expected to be 35 million.
- Hub of nation's economic, commercial and industrial activities.
- 45% of nation's skilled manpower reside in the city.

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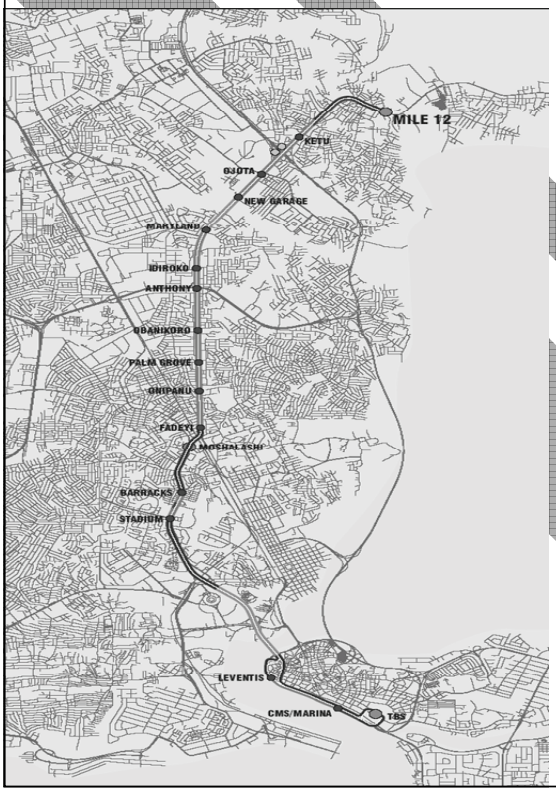
PUBLIC TRANSPORT OPERATIONS IN LAGOS

LAGOS BUS RAPID TRANSIT (BRT)



- Initial Study Tours in 2004, 2006 to Curitiba, Sao Paulo, Bogota & San Tiago
- 22km corridor
- Segregated lane (65%)
- 3 terminals, 26 stops, depot
- Government provides infrastructure, regulation, enforcement route planning, and operational specifications.
- Private sector provides rolling-stock, recruits and trains crew and manages operations

BRT Operations

- BRT Lite was successfully launched in March 2008
- 220 buses in operations
- Service coverage – Mile12 – CMS & Moshalashi – CMS – Mile 12
- Hours of operations- 6:00am – 10:00pm
- Headway– Max 10mins

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BRT Operations Contd.

- Over 900 bus pilots and bus officers
- 57 inspectors
- LASTMA's role – Traffic Management, Breakdowns and Enforcement
- Fares – 2 zone system
- Security outsourced
- Monitoring /Compliance team

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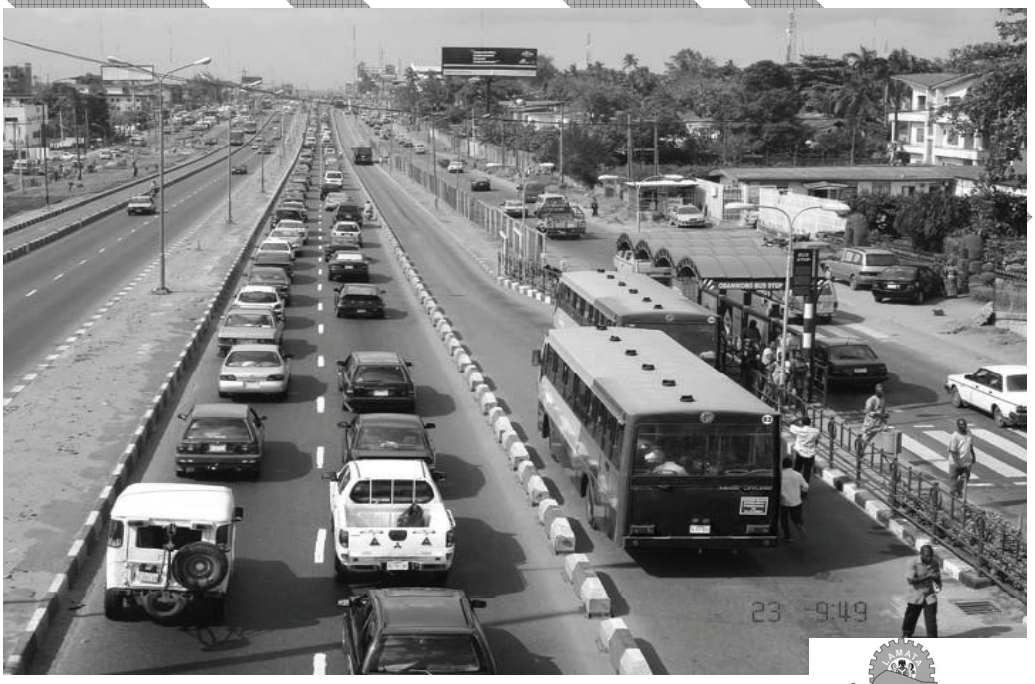
BRT 'LITE' in active service on Ikorodu road



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Comparison of the largest BRT systems worldwide

NAMES	CITY	COUNTRY	LENGTH (KM)	POP	PEAK HOUR ONE WAY	DAILY TWO-WAY
TransMilennio	Bogota	Colombia	84	7m	45,000	1,300,000
Assis Brazil Busway	Porto Alegre	Brazil	4.9	3.7m	28,000	290,000
Metrobus! EL Trole	Quito	Ecuador	16.1	1.8	7,000	240,000
BRT Lite	Lagos	Nigeria	22	17	10,000	220,000
9 de Julho Busway	Sao Paulo	Brazil	7	10	35,000	196,000
Sul Busway	Curitiba	Brazil	10.1	2.7	13,000	156,000
SE Busway	Brisbane	Australia	17	1.7m	18,000	150,000
Blok M Kota Line 1	Jarkata	Indonesia	12.9	9.8m	6,500	100,000
Megabus	Pereira	Columbia	16.7	0.7m		45,000
Adelaide O-bahn	Adelaide	Australia	3	1.1m	4,000	30,000

Commuters boarding BRT buses

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Commuters on board

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BRT Bus Pilot

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Crew Training

Bus Operatives: Pilots (Drivers) and Bus Officers

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IMPLEMENTATION STRATEGIES

BRT Implementation Strategies

- Planning

-Route selected based on the following Criteria:

  - Gateway corridor
  - High traffic demand
  - Less Resettlement Action Plan

-Studies

  - Feasibility study conducted by ITP
  - Design consultant appointed

- Stakeholder collaboration
  - Study tours with union executives
  - Series of high level meetings with Union members
  - Involvement of senior politicians
  - Inauguration of BRT implementation committee

BRT Implementation Strategies condt.

- Formation of the Cooperative comprising Union members on the BRT corridor
- Establishment of a steering committee comprising LAMATA and the funding bank which provide professional advise on the management of the cooperative and BRT operations
- Design of a cash flow system that protect the union members interest
- Bi-lateral operation
  - Danfoes(Mini and Midi buses) and Molues (big yellow buses) operate on the service lane
  - BRT buses operate on the BRT lane
  - Other private vehicles operate on the main corridor

BRT Implementation Strategies condt.

- The union acquired 100 buses for operation through bank guarantee from Eco-bank
- 120 more buses leased from Lagbus (Asset company)
- Cooperative recruited mainly union members for their operations
- Recruited members where trained by LAMATA on the running and management of BRT
- LAMATA also recruited professionals that where seconded to the cooperatives to assist on the job training
- LAMATA provided start up assistance by providing uniform, payment of salaries, training etc

OPERATIONS PERFORMANCE

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Performance Status

- Daily ridership well exceeds 220,000
- Average Load factor of 1000 passengers carried per bus per day
- Average trip per bus per day is 5
- Average waiting time of 15mins
- Average journey time of 55mins
- Over 113 million ridership since inception

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PERFORMANCE STATUS cont.

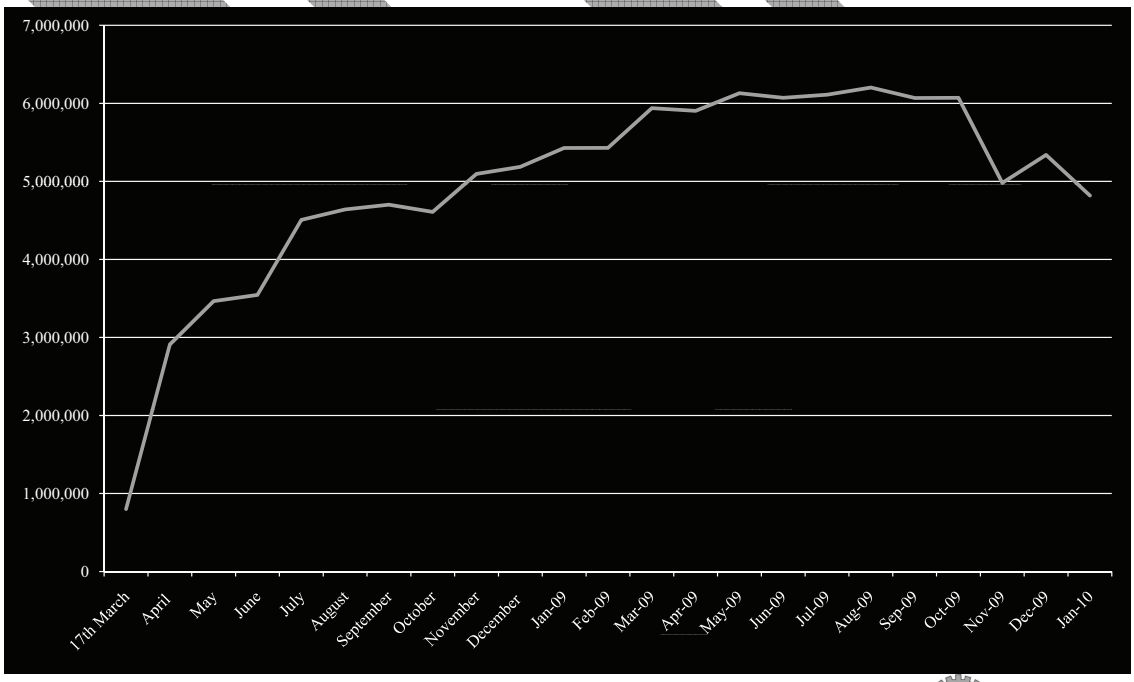
- Fleet capacity utilization is 95%
- Average passenger kilometre per day is 5
- Kilometers per bus per day is 220

RIDERSHIP FROM INCEPTION

MONTHS(2008)	PASSENGERS
MARCH 17TH –END	800,254
APRIL	2,908,134
MAY	3,465,276
JUNE	3,545,196
JULY	4,506,286
AUGUST	4,639,876
SEPTEMBER	4,701,847
OCTOBER	4,608,254
NOVEMBER	5,096,426
DECEMBER	5,186,413

MONTHS (2009)	PASSENGERS
JANUARY	5,427,776
FEBRUARY	5,429,663
MARCH	5,938,250
APRIL	5,904,332
MAY	6,130,344
JUNE	6,070,787
JULY	6,111,135
AUGUST	6,202,318
SEPTEMBER	6,067,900
OCTOBER	6,070,365
NOVEMBER	4,980,493
DECEMBER	5,338,970
JANUARY 2010	4,818,777
TOTAL	**113, 949, 072**

VOLUME OF RIDERSHIP SINCE INCEPTION



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Vehicle emission on the BRT corridor (tons/yr)

Pollutant	2006 "Before"	2008 "After"	Changes	Change (%)
CO_2	188,972	164,295	-24,677	-13%
CO	22,210	22,788	578	3%
VOC	2,166	2,137	-29	-1%
NOx	2,359	2,343	-16	-1%
PM	68	35	-33	-48%

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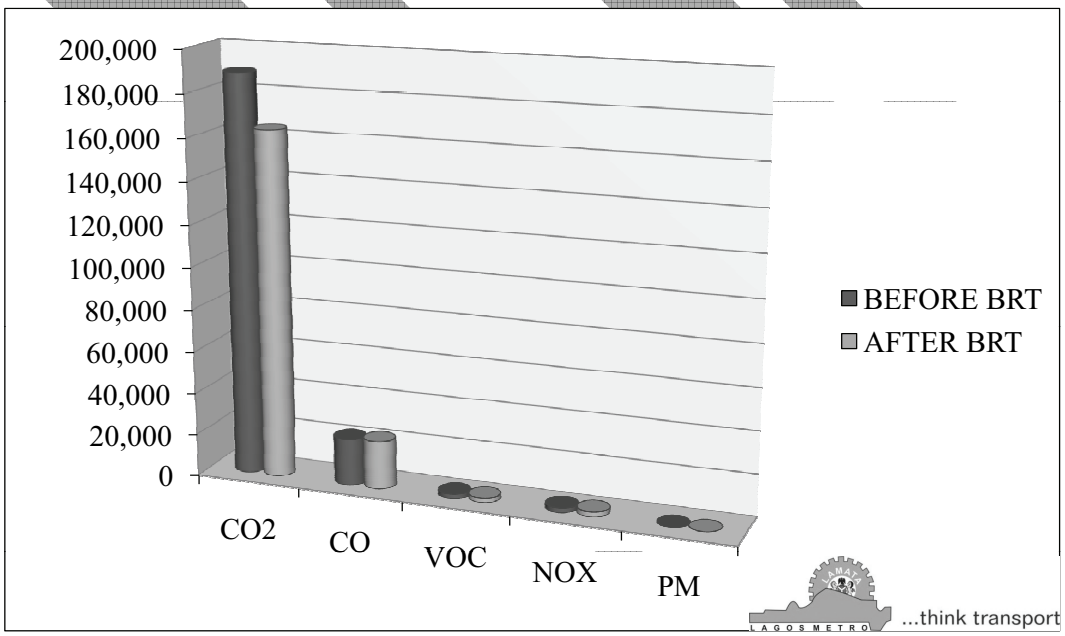
Vehicle emission on the BRT corridor



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Journey purpose of BRT Lite passengers by time of day

	Morning Peak	Inter Peak	Evening Peak
Work	52%	35%	52%
Business	26%	29%	27%
Shopping	9%	25%	13%
Education	13%	11%	9%

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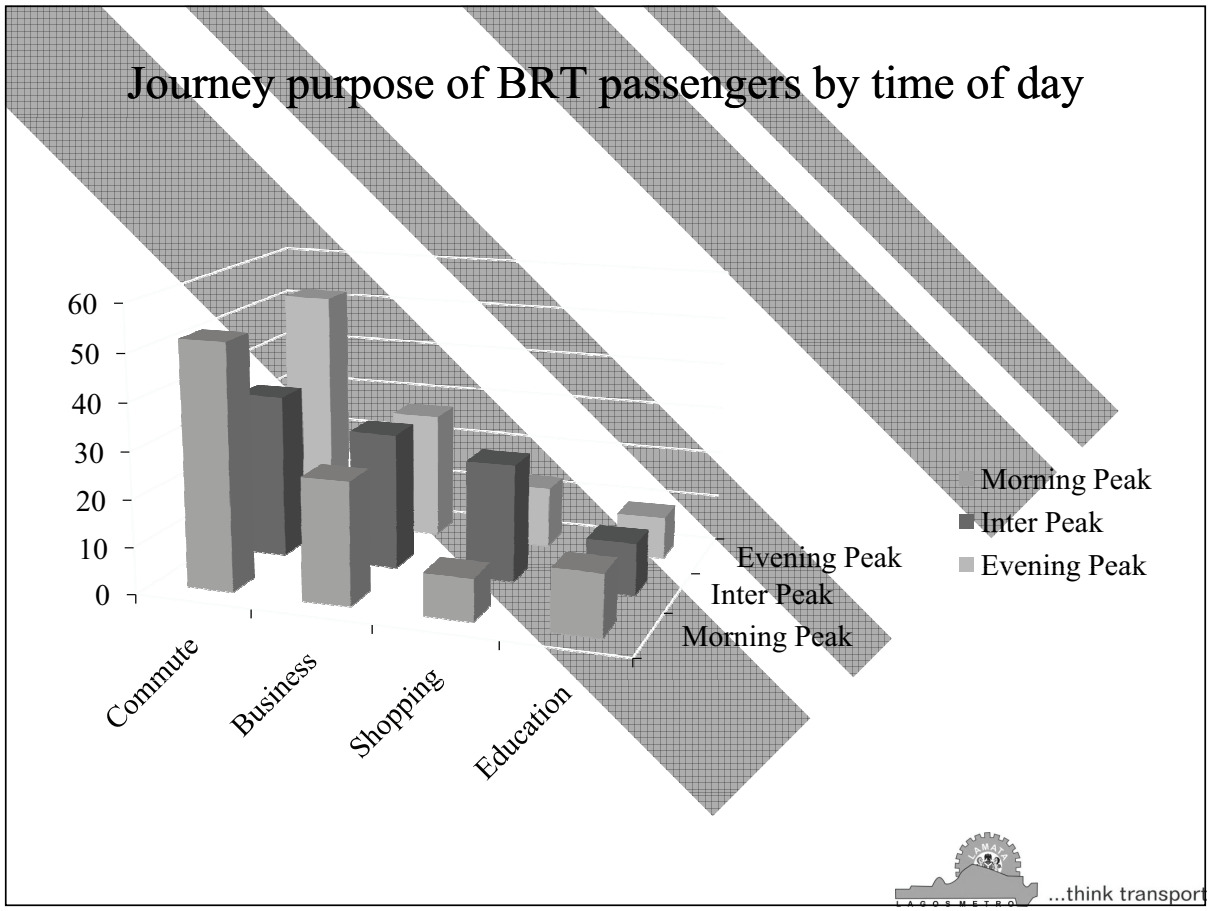
Journey purpose of BRT passengers by time of day
60
50
40
30
20
10
0
Commute
Business
Shopping
Education
Evening Peak
Inter Peak
Morning Peak
Morning Peak
Inter Peak
Evening Peak
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CHALLENGES
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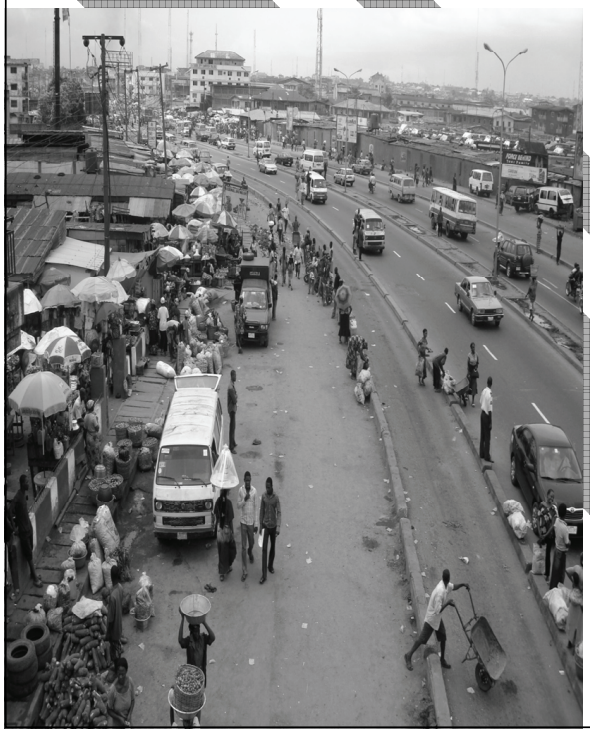
Traders occupying pedestrian and traffic lane



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ENFORCEMENT PROBLEMS

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Encroachment by Cart pushers

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BRT CHALLENGES AND MITIGATION ACTIONS

BRT CHALLENGES	MITIGANTS
Ticketing Issues	Introduction of electronic ticketing is being pursued
Deterioration of BRT lane	BRT lane rehabilitation works commenced and expected to be completed in March 2010
Crew misbehavior	Enhanced re-training programme for the crew is being planned
Frequent damage to BRT shelters	Rehabilitation of BRT shelters to begin mid - February
Deterioration of facilities at BRT depot	Rehabilitation of BRT depot to begin mid-February
Change Management	Consultant recently appointed for restructuring of management of the BRT scheme
Poor maintenance of bus body	Arrangement being made to re-fleet
Violations on the use of the BRT lane	Enforcement of the BRT is being reinforced
Safety and security issues	Intensified collaboration with enforcement agencies.

Critical success factor

- Scheme participants with different background , gaining their trust was essential
- Availability of funds required for infrastructure and rolling stock
- Public acceptance of the scheme through education, interaction and quality service experience
- Manpower development
- Union involvement and participation
- Strong political support
- Leadership professionalism within LAMATA

Achievements

- Daily ridership well exceeds 220,000
- Average waiting time of 10mins
- Over 113 million ridership since inception
- Reduction of travel time by 30%
- Building private sector capacity
- Generation of over 2,000 employment (Direct& Indirect)
- Fare affordability resulting to poverty alleviation
- Reduction in air pollution along the corridor by 13%

Learning Points

- Adequate preparation and planning are required for any successful transport initiative
- Investing in high capacity buses highly beneficial
- Financial institutions now showing interest in public transport investment
- Involvement of politicians imperative in the re-organisation of the informal sector
- Need to look beyond the union in future BRT expansion to ensure high standard sustainability

BRT IN OPERATION


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