The Introduction of the Rea Vaya BRT System in Johannesburg: Developments, Achievements and Challenges

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Rea Vaya is a bus rapid transit project in Johannesburg. Johannesburg adopted BRT in principle as its long-term mass transit solution in November 2006. The first construction contract was signed in September 2007. The first Rea Vaya buses began operating in August 2009.
Full Future Rea Vaya Network approved in November 2006
Phase 1 Network

Phase 1 has three sub-phases:
Phase 1A: 25 kilometres, 143 buses, 70,000 passengers a day, 8.4m travelled km
Phase 1B: 63 kilometres, 640 buses, 334,000 passengers a day, 40m travelled km
Phase 1C: 122 kilometres, 805 buses, 434,000 passengers a day.
Rea Vaya Characteristics

Full BRT system:

• Rea Vaya has articulated buses that run in exclusive trunk buslanes in the middle of the road, and passengers board at stations.

• The station platform and the bus floor are at the same height so boarding is “level”.

• Rea Vaya also uses “complementary” buses which have doors on both sides. This allows them to run on ordinary roads and pick up passengers on the kerbside. But they can also enter the trunk busways and passengers can board at the stations.

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Rea Vaya Characteristics

Full BRT system:

- The buses have multiple doors which speeds up boarding and alighting
- All fares are paid before boarding the bus.
- System designed to ensure high capacity in the future, with passing lanes and multiple stopping bays at stations
Rea Vaya key elements

• City is providing the infrastructure, including depots
• City paying for all fare collection equipment and all the intelligent transport systems.
• City will contract operations to private sector
  - Fare collection system
  - Station Management
  - Bus Operations
• Negotiated contracts with affected operators
• In return for contracts, the affected operators are expected to withdraw their competing services.
Rea Vaya key elements cont.

- City will collect all fares and pay bus company on a fee per kilometre basis.
- 12 year contract
- Weekly payments
- Expect to be able to cover bus operator contract costs from fare revenue.
- Fare collection and station management contracts to be paid for by city revenues
Developments to date

- First trunk route of exclusive busway completed: 25.5km between Soweto and Johannesburg city centre
- 23 stations completed on this route
- In operation, as “Phase 1A”.
Developments to date

- Second trunk route from Soweto to the city under construction.
Constructing stations
2-module station under construction in Diepkloof, Soweto
Artwork
Passing lanes and multiple stopping bays at stations provide high capacity and allows for express services.
Bus ways
Fleet

- Scania, Marcopolo
- 102 complementary buses and 41 articulated buses.
- Euro 4 diesel buses with particulate filters
- Six months to deliver from order
- Loan financing through BNDES (Brazilian ECA).
- Contracted operator will take over loan.
Rea Vaya
articulated buses
Complementary bus
Intelligent systems

- Control centre controlling bus operations
  - Automatic vehicle location system on buses
  - Real-time passenger information system
  - CCTV system to monitor stations
  - Advanced traffic management system

- Automatic Fare Collection tender
Negotiations

- Negotiating the bus contract with affected owners from ten taxi associations
- Independent facilitators are managing the process.
- 575 taxis need to be withdrawn from affected routes.
- Their owners will become shareholders in the bus operating company.
- Equity from scrapping / sale of taxis
- Will appoint MD and management team to run the operation.
- Station management contract also being negotiated.
- Displaced taxi drivers being offered employment in Rea Vaya (stations and bus company).
Employment

• Rea Vaya will create about 700 permanent jobs in Phase 1A, as many as it displaces.

• Has also created about 3,300 temporary construction jobs to date.
Opposition from some taxi operators

- Has been opposition from some quarters in taxi industry, esp. national bodies.
- Taxi strikes on 24 March and 1 September 2009.
- Overwhelming passenger support for the service, however.
- More and more affected operators are joining the negotiations.
Starter Service launched on 30 August 2009 with:

- 40 buses
- Contracted a temporary bus company, which contracted the municipal bus operator to start the operation.
- A city agency is managing the stations – 24 in operation
- 15 hours a day
- Interim paper tickets
- Interim flat fares
Starter service

- By mid-October: 16,000 passengers a day, mainly on the 28-bus trunk service (ticket validation figures)
- 23 Stations employ 550 people: nine people per shift, per station (3 guards)
- 74 drivers recruited from affected taxi operators
- Temporary depots
- High security in initial weeks because of elements within the affected taxi constituency remaining opposed to Rea Vaya
- Control centre – station surveillance, and security hub
- 1 September, shots fired at two buses in Soweto
Phase 1A Service

- Full Service will begin once the bus operating contract has been signed with the new taxi-owned bus company. Aim: End January 2010
- Will expand from 40 to 140 buses
- Estimated patronage is 80,000 daily passengers (25 million annual)
- 18-hours a day, Saturdays and Sundays
- Every 3-5 minutes in the peak, every 20 minutes minimum in off peak
- Control centre to be fully functional
- Smartcard fare collection intended by mid-2010
Phase 1A
Achievements

- Rapid implementation
- Have taken the first steps to introducing a quality public transport system for Johannesburg.
- Further phases will be simpler to introduce as the models are in place.
- High quality infrastructure and fleet.
- Distinctive brand.
- Displaced taxi drivers being employed.
- Probably will achieve accommodation of taxi owners.
- Well-supported and liked by passengers.
Challenges

- Institutional
- Accommodating the taxi industry
- Funding
Institutional Challenges

- Decided to establish Rea Vaya ring-fenced business unit in City Dept of Transport as an interim step
- Still deciding on appropriate institutional structure
- Structure mostly unstaffed, except for about six directors/deputy directors and some control room staff
- Policing a challenge
Challenge of accommodating the taxi industry

- Opposition, conflict and security threats from elements **opposed**; also unemployed people
- Pressures from those **in support** for an extremely good deal (jobs, high fee, other contracts)
- Negotiations mean many temporary elements currently
  - Station contracts
  - Bus operating company contracts
  - Starter service overcrowded
Funding challenges

- Transitional and transformational costs very high
  - Negotiated contract not tendered
  - Expectation of equal or better profits
  - Technical support
  - Negotiation and consultation process with taxi industry

- Operational costs: new cost to City
  - Bus operating contract and fleet can be funded from fare revenues
  - But: AFC, station management, business unit, infrastructure maintenance and control centre staff require budgeting
Funding challenges

- City has to date not been required to invest much in the system
  - National government funding for infrastructure (World Cup legacy investment)
  - Grant funding for planning
  - Future expansion will require City commitments – recession, financially difficult period
- Rea Vaya has been very popular and passengers want more of it!
  - Sustainable revenue streams now critical to expand the system.
Thank You!
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