Sustainable Urban City Development: Public Transport Perspective

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Lisa Seftel, City of Johannesburg
Agenda

- Considerations
- CoJ experience iro:
  - land use planning
  - Infrastructure – large and small
  - Operations
  - Transformation and empowerment
  - Funding
  - Behavioural change
- In conclusion
Urban City Development in the South: Some considerations and starting points

- Context matters: continent, economy, geography and history
- Size of a City is as important as the size and nature of population and economic growth
  - Sub-Saharan cites may be growing at too slow a pace for Transit Orientated Development (TOD) to work
- Is “Mobility as a Service - MAAS – a plausible scenario for Southern African cities?
- How much does ‘green matter’ until it becomes price competitive
What is sustainable urban city development?

- Accessible, affordable mass transit – to become a matter of choice
- Limited vehicle use
- Encouragement and enablement of walking and cycling
- Focus on healthier lifestyles and greener cities
- Reducing trips, especially home to work and home to school trips by:
  - Corridors (Transit Orientated Development)
  - Building a stronger, more integrated urban core
  - Polycentric urban areas
  - Changing patterns and ways of work
Linking land use and transport planning

Motivation
- Rea Vaya 1A and 1B offers 130 000 passenger trips, yet we only do between 50 000 and 60 000.
- Trips not covered are in contra direction to the peak and non-peak times (morning)
- Without densification along corridors and polycentric nodes, public transport will not be sustainable financially.

CoJ
- Transit orientated development, Corridors of Freedom,
- IPTN and transport master planning
Creating a public transport network hierarchy

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<th>MODE CATEGORIES</th>
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| Rail Public Transport Network          | SIPTN-Type A | 9000-15000 | Gautrain, Metro Rail          | • To move people quickly from area of high residential to areas of employment/income opportunities  
• Limited stops. (closed stations)                                                                                                                                                                                                                                                                                                           |
| Rapid Road Public Transport Network    | SIPTN-Type B | 6000-9000 | Bus Rapid Transport, Light Rail | • Corridors of Freedom, mixed use development, three story residential  
• To move people quickly from area of high residential to areas of employment/income opportunities  
• Limited intersections and right turns so buses can be relatively speedy  
• Limited mostly closed high or low floor stations                                                                                                                                                                                                                                                                                          |
| Road Public Transport Network          | SIPTN-Type C | 3000-6000 | Bus Rapid Transport           | • Corridors of Freedom and areas where the City wants to densify along the corridor  
• Mixed use development, three story residential, social housing along corridor.  
• Fairly frequent closed and opens low floor stations and some stops                                                                                                                                                                                                                                                                        |
| Road Mixed Traffic Public Transport Network | IPTN-Type D | 1000-3000 | Bus (Double Decker, Standard) | • Frequent stops with shelters  
• Some public transport priority (e.g. queue jumping)  
• On street stopping by public transport vehicles  
• Low to medium density                                                                                                                                                                                                                                                                                                                   |
| Road Mixed Traffic Public Transport Network | IPTN-Type E | 500-1500  | Bus (Standard, Mini bus)      | • Frequent stops with lay byes and shelters  
• Low to medium density                                                                                                                                                                                                                                                                                                                      |
| Road Mixed Traffic Public Network      | IPTN-Type F  | <500     | Bus, Taxi, Demand responsive (e.g. e-hailing) | • Low to medium density  
• Mostly stops or e-hailing                                                                                                                                                                                                                                                                                                                   |
Motivation

- For residents to switch to walking, cycling or public transport, Cities need:
  - Dedicated/managed lanes for public transport, cycling
  - Wide, safe, well lit sidewalks
  - Attractive, light, safe, comfortable terminals/ranks/interchanges
  - Contributes to effective movement as well as public safety

CoJ

- Continue to roll out BRT where either demand in morning peak is over 7,000 in peak direction at present or a good chance in the future
- Complete streets which can include cycle lanes but as important is accessible sidewalks
- Increased focus on well managed and maintained public transport facilities
Infrastructure (small)

Motivation
- To facilitate behavioural change, legibility, accessibility and high levels of passenger information is necessary.
- Walking must be safe, but attractive active shop fronts and activated spaces makes people want to use open spaces and streets.
- Last mile accessibility and safety is critical especially due to urban sprawl and low densification of City areas.
- ITS is important but over rated.

CoJ
- VMS signs at stations, way finding signage to stations.
- CCTV cameras on routes and stations.
- More robust bus monitoring and contract management.
- Passenger shelters.
- Changing nature of on street parking –
- Passenger information and information for Apps.
- Park and Ride.
- Support for tuk tuks and similar.
Operations (public transport services and vehicles)

Motivation
- Performance based contracting can ensure that public transport meets the promise of:
  - Reliability
  - Safety
  - Service Excellence
- Use of greener fuels, contributes to sustainability

CoJ
- Rea Vaya BRT contracts are:
  - Fee per km contracts with penalties for operator
  - Also negotiated – this can be a downside even with a fpk
- Rea Vaya and Metrobus have used:
  - Euro IV, V
  - Dual fuel
  - Considering piloting electric vehicles
Transformation and empowerment

Motivation

- We come from a deeply divided past which continues to breed inequality, division and racism in the present.
- In public transport sector, this is manifested in the “we need to be subsidised” demand from mini bus taxi operators and small bus operators.
- Today, the lack of sustainability and prosperity is more about their current business model than apartheid legacy, but remains something that needs to be addressed.

CoJ

- Training and capacity building e.g. Wits School of Governance course for taxi industry leadership.
- Driver training including in customer care.
- Partners in public transport facilities management.
Funding

Motivation
- Public transport is a public good for sustainable cities and needs funding from the fiscus
- Alternative sources are nice in theory but often do not meet the test of:
  - Feasible (e.g. parking levy)
  - Contesting demands (e.g. fuel levy)
  - Popular acceptance (e.g. Etolls)
- Lack of public funding commitment is a source of conflict with private operators

CoJ
- Subsidisation of Metrobus
- Subsidisation of Rea Vaya together with national government
- Would like to become contracting authority for provincial subsidised contract but anxious about unfunded mandate – take over and be the sphere of government blamed for cutting services
- Significant financial compensation of affected operators or restructuring from PTNG grant
Behavioural change

Motivation
- This is about
  - making public transport, walking or cycling 'cool', 'the thing to do', 'a way of urban life' and
  - breaking car based lifestyles and reliance
- Needs more than introduction of new modes but campaigns to popularise, retain, advance

CoJ
- Gautrain, Uber, Taxify has managed to get car users out of their cars, especially young professionals but fragile shift due to:
  - Trip numbers relatively small and not necessarily on most congested routes
  - Sensitive to price (e.g. Gautrain airport service)
  - Sensitive to safety concerns.
- EcoMobility World Festival, 2015
In conclusion

- Public transport matters for sustainable urban development
- It takes a combination of infrastructure, tight operations, strong attention to public safety, legibility and making it cool to happen!