Sustainable Urban City Development: Public Transport Perspective

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Agenda

- Considerations
- CoJ experience iro:
  - land use planning
  - Infrastructure – large and small
  - Operations
  - Transformation and empowerment
  - Funding
  - Behavioiural change
- In conclusion

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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

PT

TOD

TDM

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
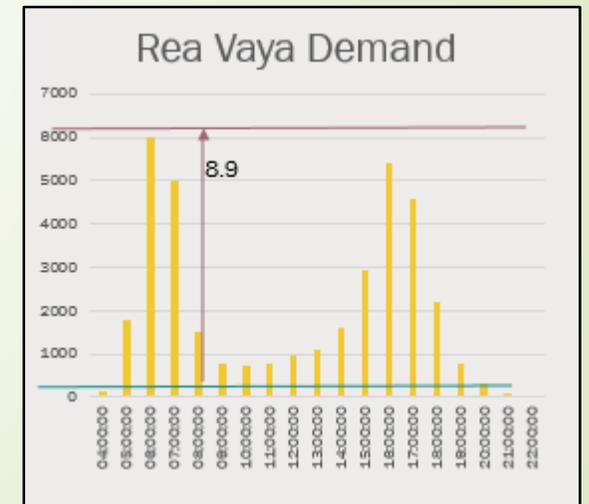
Creating a public transport network hierarchy

MODE CATEGORIES	TYPOLOGY	DEMAND	MODE	FUNCTION AND FEATURES
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 (High Capacity)	**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 (Medium Capacity)	**SIPTN-Type C**	3000-6000	Bus Rapid Transport	○ Corridors of Freedom and areas where the City want s o 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 (Medium to Low Capacity)	**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 (Low Capacity)	**IPTN-Type E**	500-1500	Bus (Standard, Mini bus)	○ Frequent stops with lay bye es and shelters ○ Low to medium density
Road Mixed Traffic Public Network (Demand Driven)	**IPTN-Type F**	<500	Bus, Taxi, Demand responsive (e.g. ehailing)	○ Low to medium density ○ Mostly stops or e-hailing

Infrastructure (large)

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
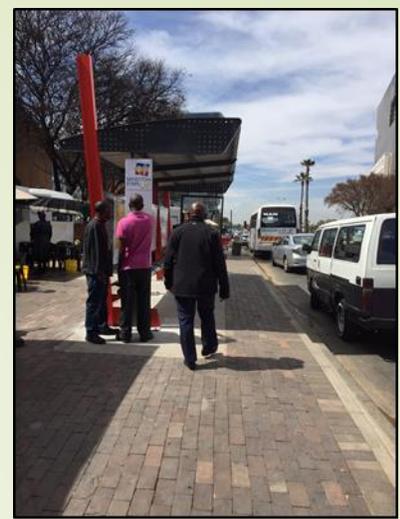
Operations (public transport services and vehicles)

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 operato
  - 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!