



An international review of paratransit regulation and integration experiences: Lessons for public transport system rationalisation and improvement in African cities

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Paper outline

1. Introduction
2. Bus Rapid Transit (BRT) and paratransit integration proposals in Cape Town and Dar es Salaam
3. Emerging challenges in Cape Town and Dar es Salaam
4. International case studies of BRT and paratransit integration
5. Lessons from case studies for Cape Town and Dar es Salaam
6. Conclusion

Paratransit in ACET case cities

South Africa –
minibus-taxi, *amaphela*



Kenya – *matatu*



Tanzania – *daladala*



Paratransit in ACET case cities

- integral part of transport systems
- demand-responsive
- intensely competitive
- fragmented ownership in sector

Trend

- developing world trend to improve level of service to passengers by incorporating paratransit in expanded formal public transport networks
- plans in Cape Town and Dar es Salaam to revitalise public transport systems currently under development and implementation

Challenge

- conflict between regulatory agencies and paratransit operators
- transition to planned formal systems a complex and challenging process
- process through which paratransit to be engaged/formalised uncertain

BRT and paratransit integration proposals

Cape Town: Integrated Rapid Transit (IRT) system

Dar es Salaam: Dar Rapid Transit (DART) system

BRT and paratransit integration proposals – Cape Town

Population 3 million

Public transport modal share:

- overground rail – half of passenger trips
- paratransit – one-third of passenger trips
- formal bus services – 17% of passenger trips

Challenges to paratransit regulation:

- planning and infrastructure provision responsibilities fragmented across national, provincial and local governments
- modal integration difficult to achieve

BRT and paratransit integration proposals – Cape Town

Taxi Recapitalisation Programme (2000) originally aimed to:

- legalise paratransit operations
- formalise business structures and labour practices
- establish a hierarchical representative structure from within the industry
- renew the vehicle fleet through a fixed scrapping allowance on surrender of old vehicles

- difficulties in engaging paratransit around restructuring of the sector resulted in primary focus of the programme being shifted to fleet renewal
- industry's lack of enthusiasm for fleet renewal – $\frac{3}{4}$ of old minibus-taxi fleet remain

BRT and paratransit integration proposals – Cape Town

Stalled previous proposals to incorporate paratransit in formal system:

- 2003 – “Klipfontein Corridor”, cooperative venture by provincial and local government
 - proposed BRT line to replace paratransit and conventional bus services along major arterial road
 - linked feeder services, non-motorised transport improvements and land-use intensification
 - reached detailed level of design at significant expense, but failed to be implemented
- 2005 – “Transformation of Scheduled Subsidised Services in the City of Cape Town”, initiative of provincial government
 - proposed incorporation of road-based services into formal bus system
 - trunk and feeder system comprised of 15 contract ‘balloons’
 - lack of cooperation between provincial and local governments; unresolved transport planning responsibilities between the spheres of government

BRT and paratransit integration proposals – Cape Town

Preamble to current BRT proposal in city:

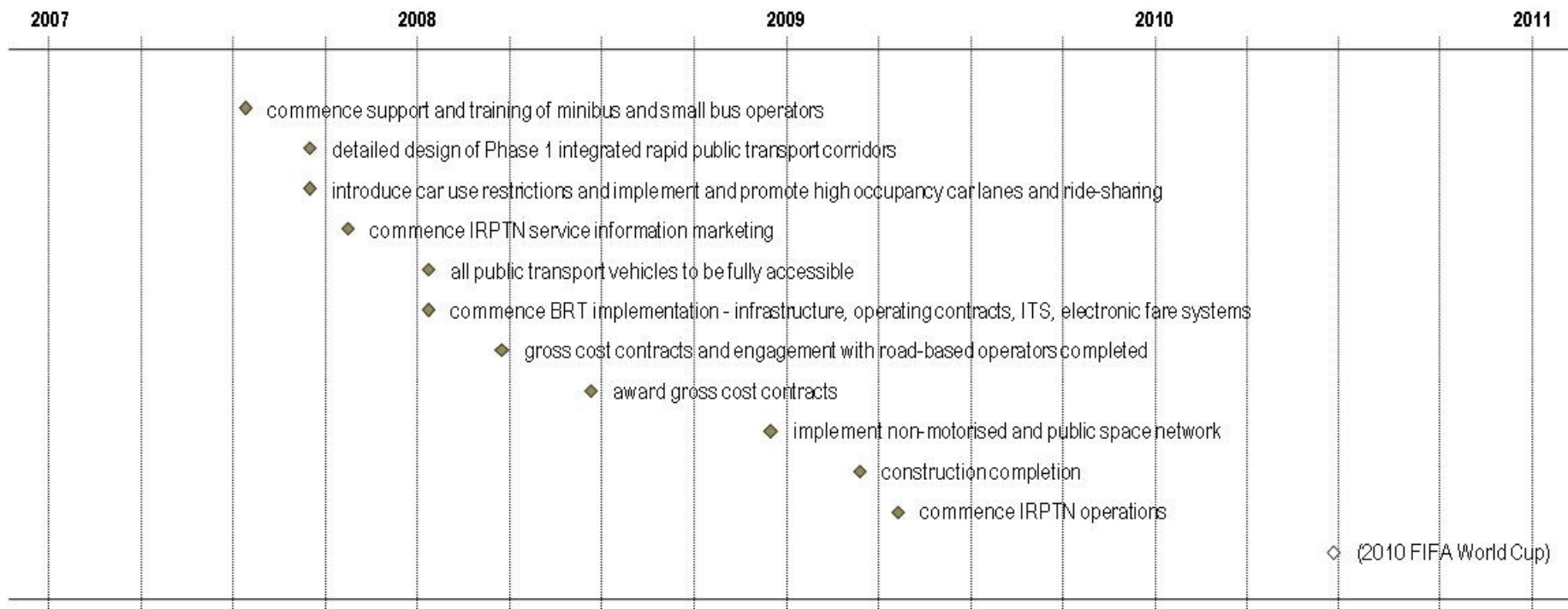
- by 2006 little progress on corporatising paratransit or addressing poor quality public transport
- renewed thrust to revitalise public transport emerged in 2006 with awarding of 2010 FIFA World Cup to South Africa
- World Cup recognised as a critical stagegate in passenger transport development
- opportunity to leverage funding to fast track investment in public and non-motorised transport infrastructure

BRT and paratransit integration proposals – Cape Town

Integrated Rapid Public Transport Network (IRPTN) programme (2006):

- new large-scale multi-modal urban public transport networks
- reliant on phased implementation of BRT trunk and motorised and non-motorised feeder systems
- supplement existing core rail corridors
- incorporate existing formal and informal road-based operations
- draw on Bogotá's Transmilénio
- first phase progress in Johannesburg, Nelson Mandela Bay Metropole (incorporating Port Elizabeth), Cape Town, Tshwane (Pretoria)

Selected IRPTN Phase 1 milestones (national)



BRT and paratransit integration proposals – Cape Town

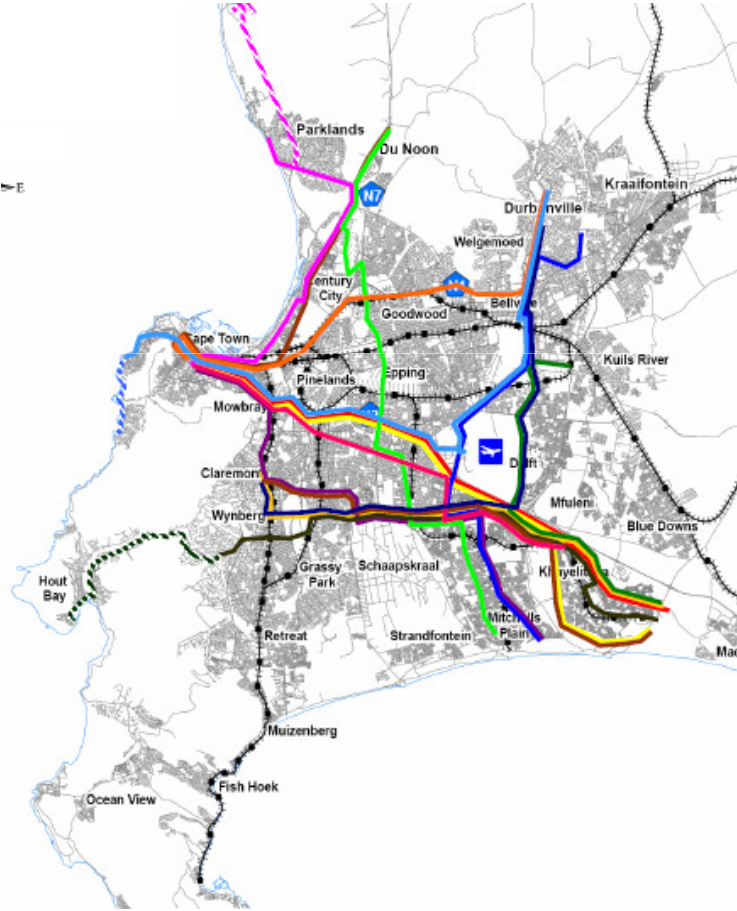
Proposed Cape Town Integrated Rapid Transit (IRT) system:

- local interpretation of IRPTN programme
- system of trunk corridors and routes for BRT and other road-based services
- inconclusive rationale for selecting BRT as the trunk mode of choice
- project office established, construction on some of the trunk lines initiated 2008
- bus and paratransit industries engaged in talks on incorporation in new system

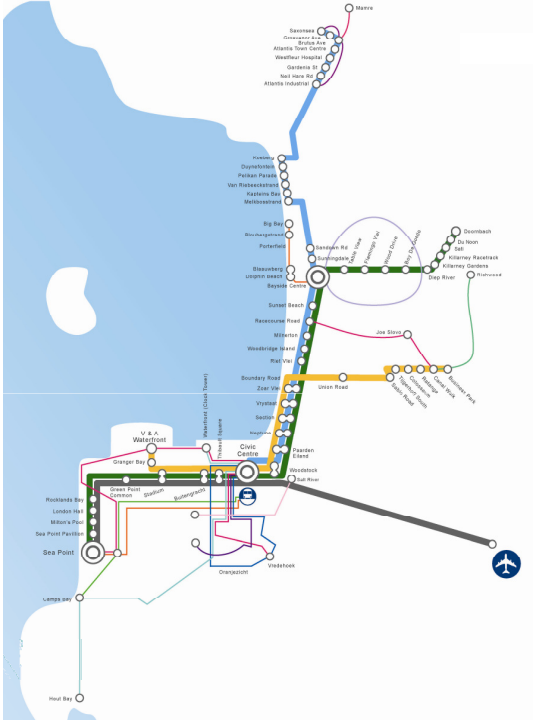


Cape Town IRT system

full system



phase 1

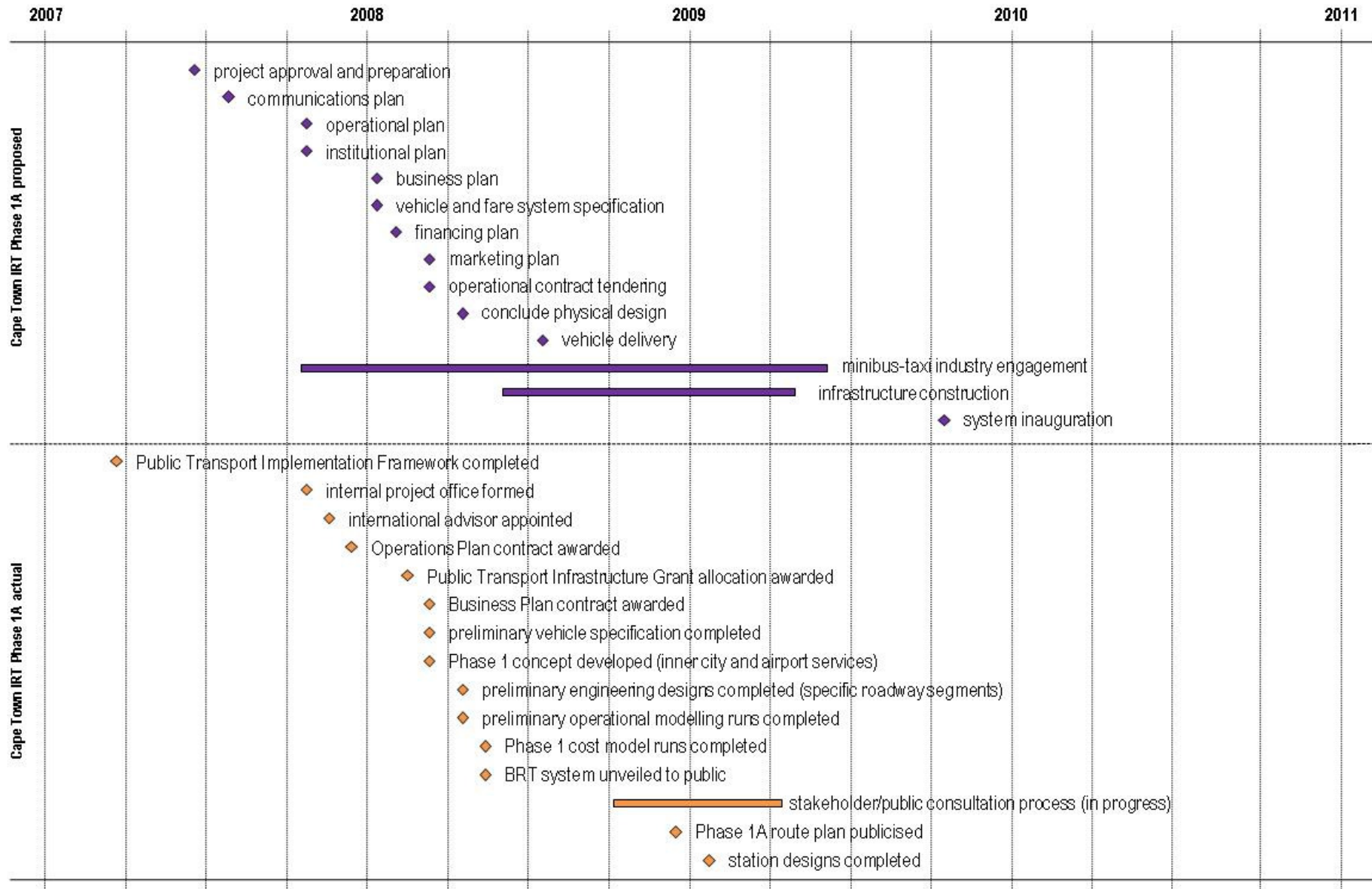


BRT and paratransit integration proposals – Cape Town

Cape Town Integrated Rapid Transit transition plan:

- business plan detailing contractual arrangements not available
- bus and paratransit operators to form amalgamated companies to tender for trunk or feeder contracts
- operator companies responsible for vehicle procurement and maintenance, and would be reimbursed on the basis of vehicle kilometres travelled
- planned smart card fare collection system, fare handling by central collection agency
- revenue to operators channeled trust fund entity
- oversight public management organisation incorporated in the municipality

Cape Town IRT Phase 1 proposed and actual milestones



BRT and paratransit integration proposals – Dar es Salaam

Population 4 million

Public transport services:

- 9,000 *daladalas*
- 30 buses owned by a public company Shirika la Usafiri Dar-es-Salaam (UDA).

Daladalas grouped into three main fleets:

- *Kipanya* van of 17 seated passengers
- ‘Coaster’ minibus of 30 seated passengers
- ‘DCM’ slightly bigger minibus with a capacity of 40 seated passengers

BRT and paratransit integration proposals – Dar es Salaam

Current paratransit operations:

- service generally of poor quality and unsafe
- lack professionalism, efficiency, quality and customer care
- fragmented ownership, most are owned by individuals
- most vehicles contracted out for fixed daily fee
- encourages speeding, overcrowding and increased hours of operation
- ‘operating culture’ influenced by competitive forces and the need to survive
- lack of effective regulation

BRT and paratransit integration proposals – Dar es Salaam

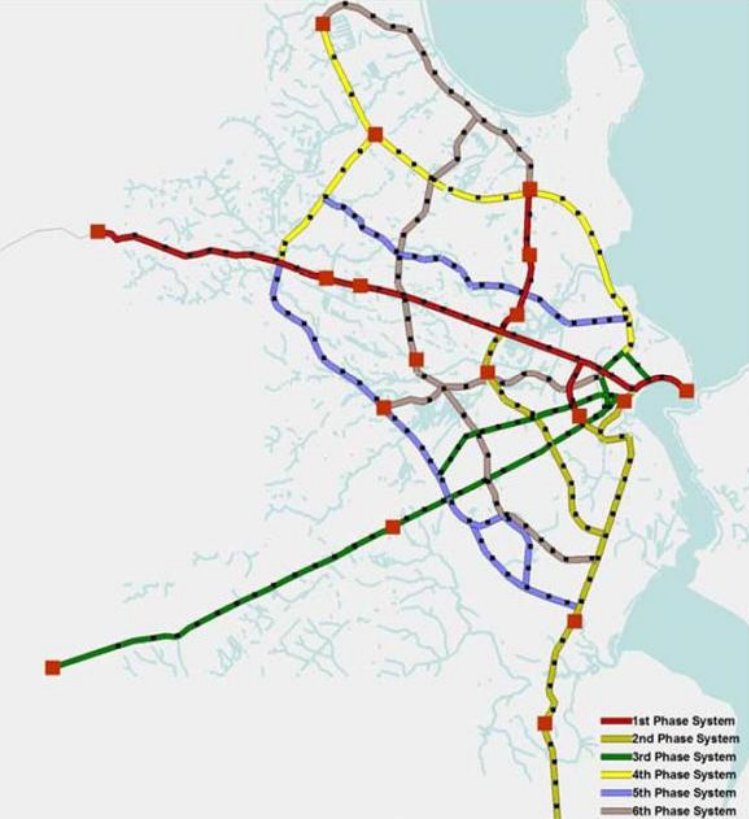
Proposed Dar Rapid Transit (DART) system:

- planned BRT programme to incorporate *daladalas*
- address poor level of service and increasing problem of traffic congestion
- first phase is 20.9 kilometres
- trunk–feeder system includes 31 stations, six integration stations, five terminals and two bus depots
- feeder services to use smaller buses

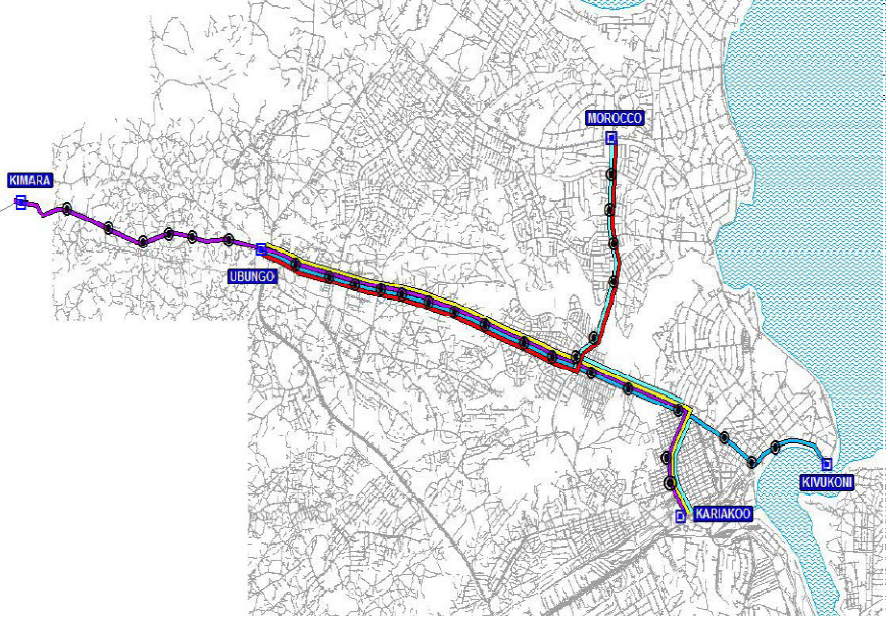


Dar es Salaam DART system

full system



phase 1

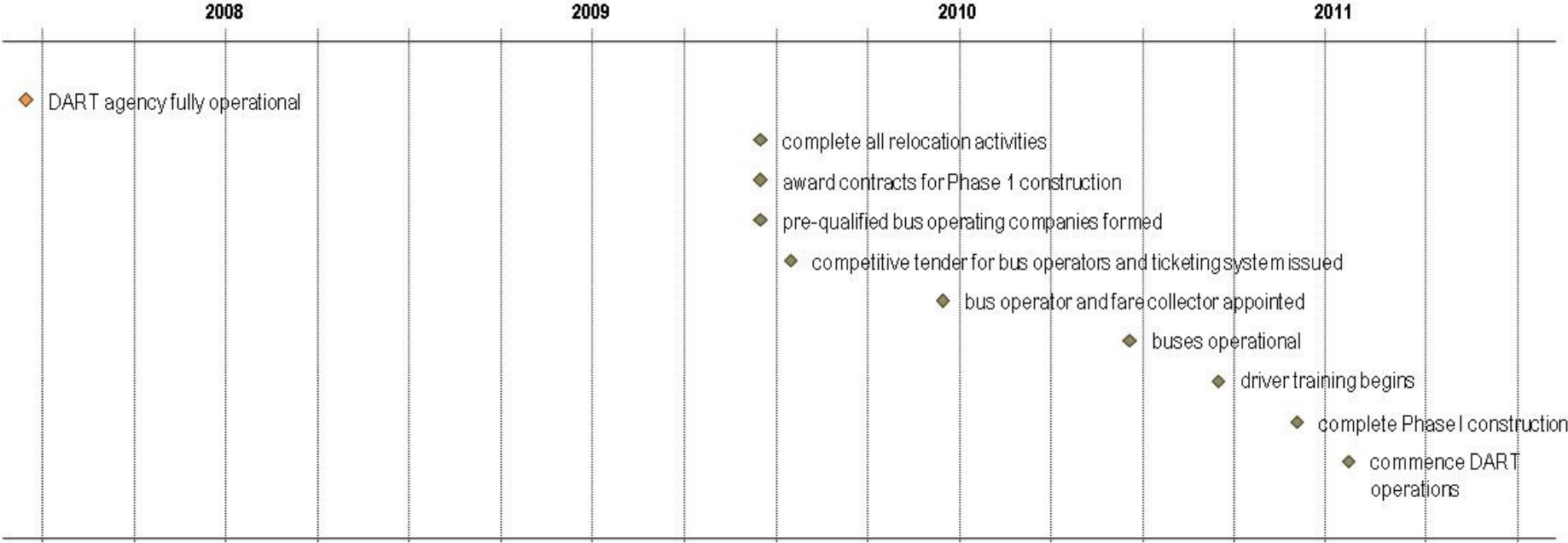


BRT and paratransit integration proposals – Dar es Salaam

Proposed incorporation plan:

- 2 companies operating both trunk lines and feeder lines in first phase
- bidding advantage to consortia which include former *daladala* owners and operators
- *daladala* owners must form into consortia or form a company and associate with an international bidder. International bidders are required to incorporate existing operators in their bids
- government stopped issuing licenses to *kipanyas* into CBD effective from 2007; re-allocated to periurban routes
- encourage registration of new buses complying with technical specification of the feeder buses as capital to enter consortia
- scrapping and compensation to provide entry capital to local operators under consideration

Proposed DART implementation timeline



Emerging challenges in Cape Town and Dar es Salaam

Key challenges:

- willingness of paratransit to be engaged on 'formalised' and tightly regulated systems
- operational and administrative capacity and skills in existing paratransit operations
- vigorous/violent resistance by some operators' associations in Cape Town
- apparent lack of resistance by daladala operators in Dar es Salaam
- different histories – operating practices, organisational structures and dynamics



Emerging challenges in Cape Town and Dar es Salaam

Cape Town:

- attempts to regulate paratransit abandoned through the late 1980s-1990s - explosive growth in sector
- operations compete for passengers with both rail and scheduled bus services
- fierce 'on road' competition between minibus-taxi
- continuing attitude of mistrust between the regulatory authorities and minibus-taxi operators
- control of access to routes seen as operators' prerogative, not that of authorities
- underlies tensions around BRT proposals and impact on employment opportunities
- 'top-down' design of the proposed networks and associated tendering procedures exacerbate problem
- remains unclear how authorities and their planning and implementing agencies propose to address this impasse

Emerging challenges in Cape Town and Dar es Salaam

Dar es Salaam:

- historical evolution of the *daladala* industry less systematically researched
- some level of accommodation between industry and authorities
- unclear whether diverse paratransit interests have effective shared representation
- possible lack of capacity to manage tensions as implementation unfolds

Emerging challenges in Cape Town and Dar es Salaam

Common challenges in Cape Town and Dar es Salaam:

- deficit of organisational capacity within relevant planning and implementing agencies to address this key issue in effective ways
- absence/limited presence of adequately contextualised understanding of complexity of transformation process
- importation/uncritical adoption of models of 'best practice' applied in other countries
- governance issues more challenging than technical capabilities

International case studies of BRT and paratransit integration

Background to case study selection:

- BRT proposals that incorporate existing paratransit operations
- significant investment in the phased implementation of urban BRT in Latin America
- cases may serve as precedent for Cape Town and Dar es Salaam
- prove informative to the manner in which BRT is approached
- may moderate high expectations of integrating paratransit into BRT systems

International case studies of BRT and paratransit integration

Bogotá (Columbia)

Mexico City (Mexico)

Santiago (Chile)

International case studies of BRT and paratransit integration – Bogotá

- Transmilénio demonstrates short time frame within which BRT can be implemented
- BRT viewed as alternative to heavy rail
- aims similar to Cape Town and Dar es Salaam
- reliable, integrated public transport system run by incumbent operators
- formalise and rationalise businesses of public transport operators
- increase and stabilise profit for operators
- improve working conditions for employees

International case studies of BRT and paratransit integration – Bogotá

- paratransit operators prior to BRT more consolidated than in Cape Town or Dar es Salaam
- continued presence of paratransit operations overshadowing formal services
- lack of integration between formal and informal systems
- existing paratransit companies' *de facto* regulators for public transport services, continue to operate formal and informal services
- extensive efforts to engage with paratransit operators prior to BRT implementation
- paratransit swayed by increased profits under BRT system
- BRT routes primarily in higher income areas – limited impact on poor
- new system unable to compete with the lower fares offered by paratransit

International case studies of BRT and paratransit integration – Mexico City

- Metrobús BRT system inspired by Transmilénio in Bogotá
- multiple modes in operation, similar to the Cape Town scenario
- replace large number of old paratransit vehicles with a new smaller fleet of articulated buses
- reduced travel time
- comfort improvements for passengers, and the
- opportunity for paratransit operators to formalise their businesses
- focus only on infrastructural and operational interventions in corridor not previously served by a trunk mode

International case studies of BRT and paratransit integration – Mexico City

- some initial opposition from paratransit to Metrobús project
- high level of public satisfaction for BRT service
- apparent success is relative to simplicity – encompasses only trunk services
- relies on physical integration (as opposed to operational integration) with other modes of public transport for feeder and distributor functions
- single corridor intervention, recently extended with another corridor
- engagement with two relatively discrete groups of operators, one formal and the other informal

International case studies of BRT and paratransit integration – Santiago

- history of attempts to rationalise paratransit industry
- Transantiago BRT and feeder system introduced to address high paratransit operating costs, oversupply of services and long, direct routes
- link into rail system through physical integration
- modal shift from private to public modes encouraged
- specific travel limitations on private vehicles where necessary
- fleet replacement took place on single day
- routes bundled into trunk and feeder ‘packages’, with foreign operators being favoured for trunk routes
- extensive impact on capacity of local operators, planners, implementers of the system, and continent’s bus manufacturing capacity

International case studies of BRT and paratransit integration – Santiago

- lack of user information and smart card recharge points
- widespread confusion about the new route structure
- funds not available to construct dedicated lanes for the buses due to expansion of rail system and freeway road network
- system deemed as unreliable, not matching expectations of travel time improvements
- primarily negative sentiment from the travelling public, rather than from the operators, that has shaped the poor image of Transantiago
- led to overloading and travel time increases on the rail system

Lessons for Cape Town and Dar es Salaam

Observations 1:

- city-wide scale of intervention in Santiago impacted on all stakeholders in the system
- single-day changeover (big bang approach) compounded challenge
- intervention affected all paratransit operators at the same time
- challenge to provide a new fleet of vehicles and implement the necessary infrastructural changes by a single 'due date' stretched institutional planning, skills and financial capacity
- initial aims with Transantiago to improve the passenger experience and shortcomings in operational and infrastructural planning had opposite effect
- users were inconvenienced, had to transfer more often, and experienced some increased travel times
- intervention in Mexico City only affected a single corridor at a time
- process of change could be piloted, and the transition ultimately more manageable

Lessons for Cape Town and Dar es Salaam

Lesson 1:

- **successful implementation depends on the scale of the intervention appropriate to the needs and capabilities of the involved institutions, operators, and public at large**
- **implementation timeframe must be long enough to accommodate adequate provision for detailed and protracted negotiation of terms of incorporation of paratransit operations**
- **successful implementation likely to depend on flexible timeframe enabling adjustment to transition plan to take account of emerging path dependencies**

Lessons for Cape Town and Dar es Salaam

Observations 2:

- organisational configuration of existing operators key to the level of complexity involved in the transition
- Mexico City paratransit operators affected by the first and second Metrobús corridors already consolidated into federations on respective corridors
- majority of bus companies in Bogotá in control of awarding operational licences to paratransit operators aligned into 4 groupings prior to Transmilénio
- operator engagement could proceed more rapidly to contractual and operational considerations
- paratransit sectors in Cape Town and Dar es Salaam much more fragmented
- individual operators and associations represented at numerous levels, with different alliances complicating the process of negotiation and reaching a final agreement

Lessons for Cape Town and Dar es Salaam

Lesson 2:

- **it is difficult to reach agreement on the regulatory and integration regime until greater paratransit operational consolidation is achieved, or until disaggregated negotiation can take place with the paratransit sector**

Lessons for Cape Town and Dar es Salaam

Observations 3:

- significant contextual differences preclude transferring paratransit regulatory and integration intervention to the African context without adaptation to local conditions
- in Bogotá, paratransit only public transport mode prior to Transmilénio – engagement with this sector imperative
- Mexico City's Metrobús introduced new mode into the public transport system to fill gaps in the network, limiting impact on city-wide paratransit operations
- intervention in Santiago had a system-wide impact; ensuing confusion led to a pronounced shift in passengers from road to more familiar and convenient rail

Lessons for Cape Town and Dar es Salaam

Lesson 3:

- **a context-specific approach is required in Cape Town and Dar es Salaam as local experiences and reactions to regulatory and integration interventions may differ radically from those in case cities**

Conclusion

- case study investigations were based on initial review of literature documenting the transitions in the case cities – not exhaustive
- little evidence uncovered about actual processes of engagement between regulatory authorities and incumbent paratransit operators
- further research is planned into processes of paratransit engagement in Cape Town, other cities in South Africa, Dar es Salaam and abroad

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