

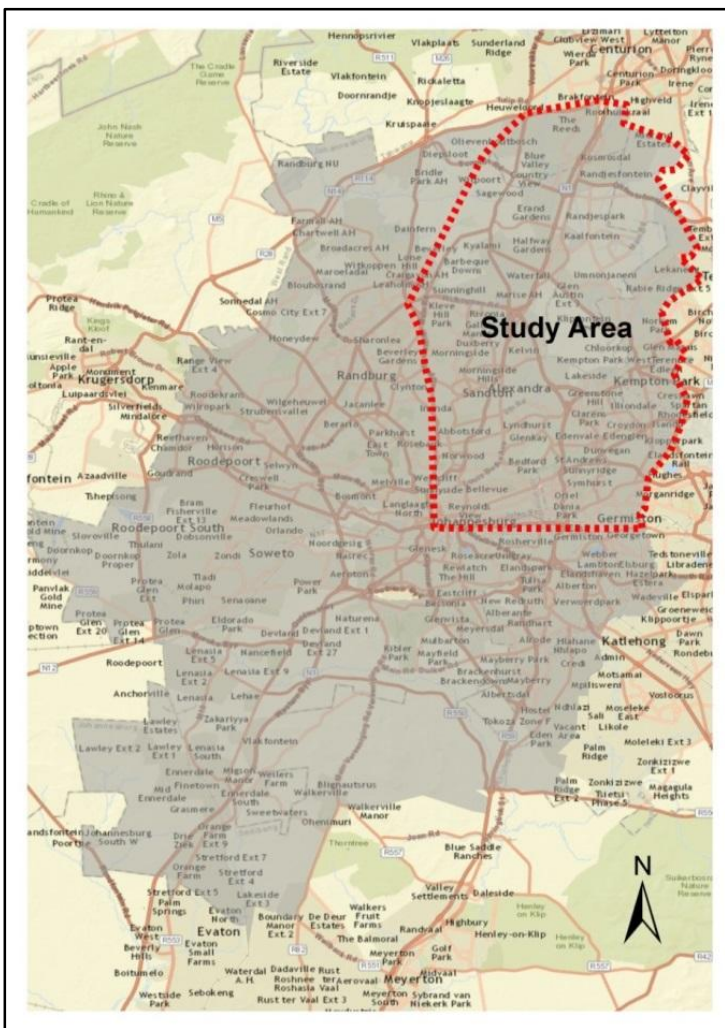
**1. Introduction and background**

**1.1. Purpose**

The purpose of this plan is to document the planning and phased implementation proposals for the North East Quadrant Integrated Public Transport Network (NEQ IPTN) including the third phase of Rea Vaya (Phase 1C). The plan will detail the design and operation of the IPTN, infrastructural and intelligent transport system (ITS) measures, the transformation and structuring of new business models and the financial implications and requirements for funding and operating for the first phase of the NEQ IPTN, which is regarded in this report as Phase 1C (a). Thus this plan is an operational plan for the NEQ IPTN but only a business plan for the first phase of Rea Vaya services, namely Phase 1C(a).

This plan aims to meet the requirements of an Operational and Business Plan as specified in the Division of Revenue Act, 2017/18 for the City to meet the grant conditions for the Public Transport Network Grant (PTNG).

The North East Quadrant (NEQ) is located as per the map on Figure 1 below within the Johannesburg Metropolitan Municipality.



*Figure 1: Northeast Quadrant Study Area*

## 1.2. Background

Since 2006, the City of Johannesburg has been rolling out the Rea Vaya Bus Rapid Transit (BRT). The first phase became operational in 2009 and the second phase in 2013. This plan is in respect of the third phase which covers the area set out in Figure 1.

The planning process differs from the first two phases where the focus was on the introduction of bus rapid transit. In this plan, an integrated public transport plan is designed with a role for BRT, conventional bus and mini bus taxi. There is also a focus on integration with non-motorised transport as well as recognizing the specific circumstances facing public transport provision in this area.

Preceding this plan, the Transport Department undertook a Sustainability Study in 2013 and also did an initial Phase 1C Business Plan which was approved by the Mayoral Committee in June 2014. The Sustainability Study evaluated whether it was sustainable to continue with BRT in relation to other options including 'doing nothing', curb side dedicated lanes and light rail. The study concluded that it could be sustainable but would require routes that extended beyond the original study area of Sandton, Alex and the CBD and would also need city investment in densification and development along the BRT corridor.

This conclusion contributed to the City's decision to dedicate the Louis Botha corridor as a "corridor of freedom" wherein City resolved to focus investment in changing land use, promoting densification and providing social housing and other social amenities. This is now part of the City's Spatial Development Framework.

The 2014 business plan, called the Phase 1C Business Plan sought Mayoral Committee approval for:

- 17 km of trunk routes between the Joburg CBD, Alexandra and the Sandton CBD;
- Complementary routes extending the Rea Vaya reach to Midrand, Ivory Park, Sunninghill and Greenstone;
- 242 BRT buses;
- 10 key BRT stations and interchanges at Greenstone, Alexandra and Ivory Park
- Emphasis but no plan on integration with other bus services, minibus taxis and Avanzas in respect of the operational plan, as well as commitment to integrate with Ekurhuleni;
- Continuation of the high floor bus and trunk route design legacy;
- A special approach to Alexandra with high levels of NMT, integration, three bridges to integrate with surrounding land use, an iconic interchange, but no BRT into Alexandra, due to the nature of the streets; and
- Bus financing through PTIS funding.

Subsequent to the adoption of the above, a number of circumstances have changed in the financing and planning environment which suggested the need to review and amend the above Business Plan. These included:

- The need for improved versatility to integrate the CoJ public transport network with a wider range of service types and modes (including other operators, lower order modes and non-motorised transport (NMT) and integrating the system across the metropolitan area and beyond. This included reviewing the feasibility of a "low floor" operating environment for any new routes and services, including for the 1C Trunk Route;
- The availability of more comprehensive, accurate planning information based on the 2013 Household Travel Survey, User Needs and User Preference studies;
- The need to accommodate planned, new major land use developments such as Waterfall and Modderfontein;
- The need for greater flexibility in catering for a wider range of demand, including provision for kerbside trunk routes, with the ability to expand from lower capacity to higher capacity trunk routes over time;
- Lessons learned in Phase 1A and 1B BRT operations, in relation to the period required for "ramping up" of demand and higher than anticipated operating costs;

- The Post Eco-Mobility World Festival experience making public transport more attractive to all income groups; and
- Grant funding constraints necessitating a more sequenced and sustainable approach for development of the network and services.

Consequently, in May 2015, the Mayoral Committee adopted a network design approach based on an Integrated Public Transport Network (IPTN) system as opposed to an Integrated Rapid Public Transport Network (IRPTN) approach. This approach focuses not only on BRT Trunk routes for high capacity road-based services, but simultaneously on other forms of public transport priority routes, as well as measures to make existing public transport routes and services more accessible and attractive, as part of an integrated public transport network.

The development of a City wide network also enabled the adoption of a mixed high and low floor system - keeping the routes from the South West of the City to the CBD and the North, high floor while enabling the Phase 1C BRT routes to be based on a “low floor” operating environment.

The high-floor bus operation on Trunk Routes 1A and 1B will be retained with easy transfer arrangements between the high-floor and low-floor operating environments achieved through appropriate design, at points of convenient interchange. In the North East Quadrant (NEQ), the trunk and complementary route network will be supported by a system of new minibus-taxi feeder routes.

Finally the operations planning component of the business plan takes into consideration public transport operations interfacing with the NEQ IPTN from Soweto and the North West such as Diepsloot.

### 1.3. Guiding principles

The following are the guiding principles for this plan:

- The operations of the IPTN in the NEQ will be fully integrated in terms of systems, services and infrastructure within the NEQ and City wide;
- The services provided will be safe, reliable, accessible and affordable to the full spectrum of user groups and have a positive impact on poverty reduction. Within this system, BRT services must be fast and able to move passengers quickly and effectively from residential areas to areas of economic opportunity;
- Service delivery will be efficient, cost-effective and financially sustainable;
- The service provided will improve user mobility and result in an overall reduction in levels of congestion and over-loading of services;
- The system will be sufficiently robust and flexible to be responsive to changing patterns and levels of demand, as well as being responsive to the changing land use and activity the public transport system is designed to influence and serve;
- The system will be environmentally sensitive and supportive of the environmental agenda for reduction in carbon emissions as well as visual and noise intrusion;
- The restructuring of the public transport system will be inclusive of operators previously providing services, enabling transformation of the mini-bus taxi industry and supporting broad-based black economic transformation; and
- The plan will support economic development opportunities and job creation and restructuring of land use which can address historic imbalance and inefficiencies associated with the apartheid legacy.

These principles are derived inter alia from the “Integrated Transport Network for City of Johannesburg” report, July 2015 and based on the combined results of the 2013 Household Travel Survey, 2014 Stakeholder Workshops and the 2014 Stated Preference Survey which inter alia identified the following imperatives for public transport:

- Increased reliability, frequency and improved punctuality;
- Greater mode choice with good infrastructure and facilities;
- Accessibility to “all people”;
- Improved customer care services;
- Greater emphasis on safety and security;
- Affordability and value for money; and

- Attention to improvement in “last mile” accessibility including provision of adequate sidewalks and safety features.

## 2. Network Development and Phasing

### 2.1. Integrated Public Transport Network Plan (IPTN)

Current land use is the primary determinant of the location and configuration of the transport network needed to serve the various activities of work, school, business, shopping and recreation associated with the different land uses throughout the city. Similarly, changing land use and increasing activity over time, informs the future shape of the network which will best serve future development. The level of trips generated and/or attracted to an area varies greatly according to the type and density of land use activity.

The affordability of private transport plays a major role in determining the need and support for public transport, with most users of the current public transport system being ‘captive’ to this mode for economic reasons. It is hoped that as public transport systems become more efficient, safe, reliable and attractive, there will be a growing demand from all income groups, to use this system.

By taking the current demand for travel by public transport and assigning it to the existing road and rail network across city, it is possible to identify major and minor corridors of demand along with routes of lower demand which feed into these corridors. Relating this configuration to the current and anticipated future land use allows for a rationalization of this overall network to be carried out to ensure effective coverage and accessibility to existing land use activities, and a flexibility to accommodate the future pattern of expected land use.

This exercise was done in the Integrated Public Transport Network Plan (IPTN) developed and approved in 2016 by the Mayoral Committee and also incorporated into the Transport Sector Plan as part of the Integrated Development Programme (IDP). The IPTN plan involves the following components:

- A public transport network hierarchy;
- Passenger access typologies;
- Service design parameters;
- Tools of integration across transport modes; and
- A strategic integrated public transport network for 2025 and 2037.

These typologies, hierarchies and tools were used as building blocks to develop the operational plan for the NEQ. **Appendix A** sets this out, extracted from the Transport Sector Plan, 2016. Adopting this approach ensured that the NEQ functions as an integral part of an overall system. It also ensures that the NEQ IPTN can be developed logically over time as a part of the overall integrated system of routes and services for the city-wide network, without introducing service inefficiencies or wasted expenditure.

Having the metropolitan-wide Strategic Public Transport Network (SIPTN), defined with a long term horizon, also serves as a road map for the future development of the region, as well as providing a context for the phased implementation the IPTN in any quadrant of the metropolitan area. The progressive implementation of the NEQ IPTN will thus take place over a number of years between 2018 and 2023.

### 2.2. Network and Service Design Considerations

Derived from the above and national norms and standards, the NEQ IPTN and system configuration were informed by the following set of network and service design parameters:

- *Mode selection*: The most appropriate public transport mode to meet the demand at a service headway that is attractive to the user and affordable to the service provider was considered;
- *Right-of-way/(ROW) Network typologies*: The most appropriate ROW that can adequately accommodate the combination of routes, with related modes and service frequencies operating along each segment of the network was considered;
- *Stops, interchanges and points of access to the public transport system*: This was determined related to the type of route, the area of operation and the interchange activities required between routes within the NEQ and those from beyond the NEQ, that connect with routes within;

- *Fare system/structure*: Off board automatic fare collection system is prioritised requiring on-board fare equipment and related door configuration, as well as ticketing and fare tagging equipment which affects station design;
- *Accessibility*: Passenger accessibility to services, transferring between services, and possible need for facilities such as bicycle storage facilities at busy stations was considered as well as the needs of 'universal accessibility' (UA) requirements to meet the needs of 'people with disabilities' (defined in NLTA 2009) that restrict their mobility. UA also addresses the potential access and mobility constraints experienced by other categories of passengers, including women with small children, pregnant women, the elderly and those travelling with luggage or large parcels;
- *Hours of service*: 18hours - based on national guidelines and standards;
- *Service headways*: – up to 3 minutes headways during peak based on national guidelines and standards achievable, on an affordable basis, using modes available to meet the service demand;
- *Passenger load factor on vehicles*; 5% – which ensures an acceptable level of comfort for the passenger and level of loading which is financially sustainable for the service provider.
- *Fleet pallet*: Articulated and rigid buses as well as mini bus taxis most appropriate for operating an effective, sustainable service.
- *Operating design speed by route type*: 36 and 12 kilometers per hour for the trunk and feeder routes respectively related to the type of vehicle and ROW categories along each route in the system.
- *In-vehicle standing time*: 18 to 20 minutes related to international best practice and local conditions.

### 2.3. Full NEQ Network

Based on the above and what is contained in **Appendix A** and **Appendix B** which sets out anticipated public transport demand city wide until 2025, a full NEQ network was developed based on the full level of demand for a 2025 horizon year. It will comprise a combination of BRT trunk routes, a number of complementary routes as well as network of main and feeder routes collecting and dropping passengers at stops, stations and interchanges.

Figure 2 is a map of the full network while Table 1 sets out the trunk, complementary routes only for the full network. The mode shown is based on the fleet required when the full fleet complement is available to meet the service design is available and with an assumption that there will be an integrated network serviced by rail, road based modes including buses and mini bus taxis.

This full NEQ network as shown in Figure 2 is anticipated to be made up as follows:

- Metrorail;
- Gautrain;
- BRT trunk routes and portions of some complementary routes;
- Priority public transport lanes; and
- Mixed traffic lanes.

*Table 1: Trunk and Complementary routes for full NEQ network*

Route No	Type <sup>(1)</sup>	Description	Mode <sup>(2)</sup>
T4A	Trunk	Sandton CBD to Johannesburg CBD via the Metro Centre	Artic
T4B	Trunk	Sandton CBD to Johannesburg CBD via Edith Cavell Street	Artic
T5A	Trunk	Swazi Inn, Ivory Park to Johannesburg CBD via the Metro Centre	Artic
T5B	Trunk	Swazi Inn, Ivory Park to Johannesburg CBD via Edith Cavell Street	Artic
T6A	Trunk	Kopanong, Ivory Park to Johannesburg CBD via the Metro Centre	Artic
T6B	Trunk	Kopanong, Ivory Park to Johannesburg CBD via Edith Cavell Street	Artic
CJC102	Comp	Johannesburg CBD to Sunninghill	Rigid Bus
C7A	Comp	Swazi Inn, Ivory Park to Sandton via Woodmead Drive	Rigid Bus
C7B	Comp	Swazi Inn, Ivory Park to Sandton via Rivonia Road	Rigid Bus

Route No	Type <sup>(1)</sup>	Description	Mode <sup>(2)</sup>
C8A	Comp	Kopanong, Ivory Park to Sandton via Woodmead Drive	Rigid Bus
C8B	Comp	Kopanong, Ivory Park to Sandton via Rivonia Road	Rigid Bus
C9	Comp	Greenstone to Randburg via London Road and Sandton Drive	Rigid Bus

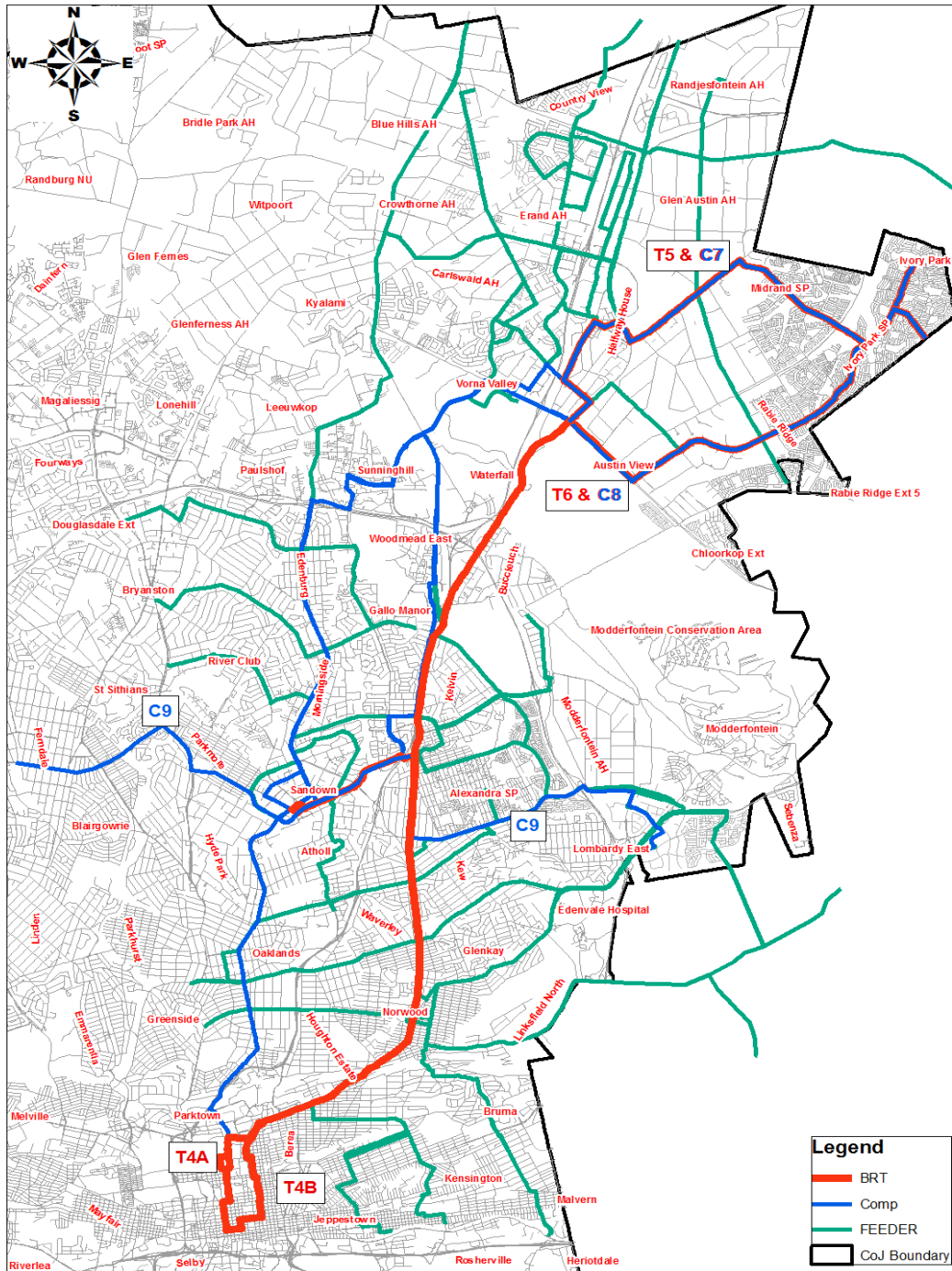


Figure 2: 2025 NEQ IPTN

Also proposed is a T7 trunk route from Soweto to Sandton which forms part of a citywide SIPTN but not part of the NEQ network. When the NEQ network is fully implemented, Figure 4 and Figure 5 demonstrates the network coverage within a 500m and 1000m radius

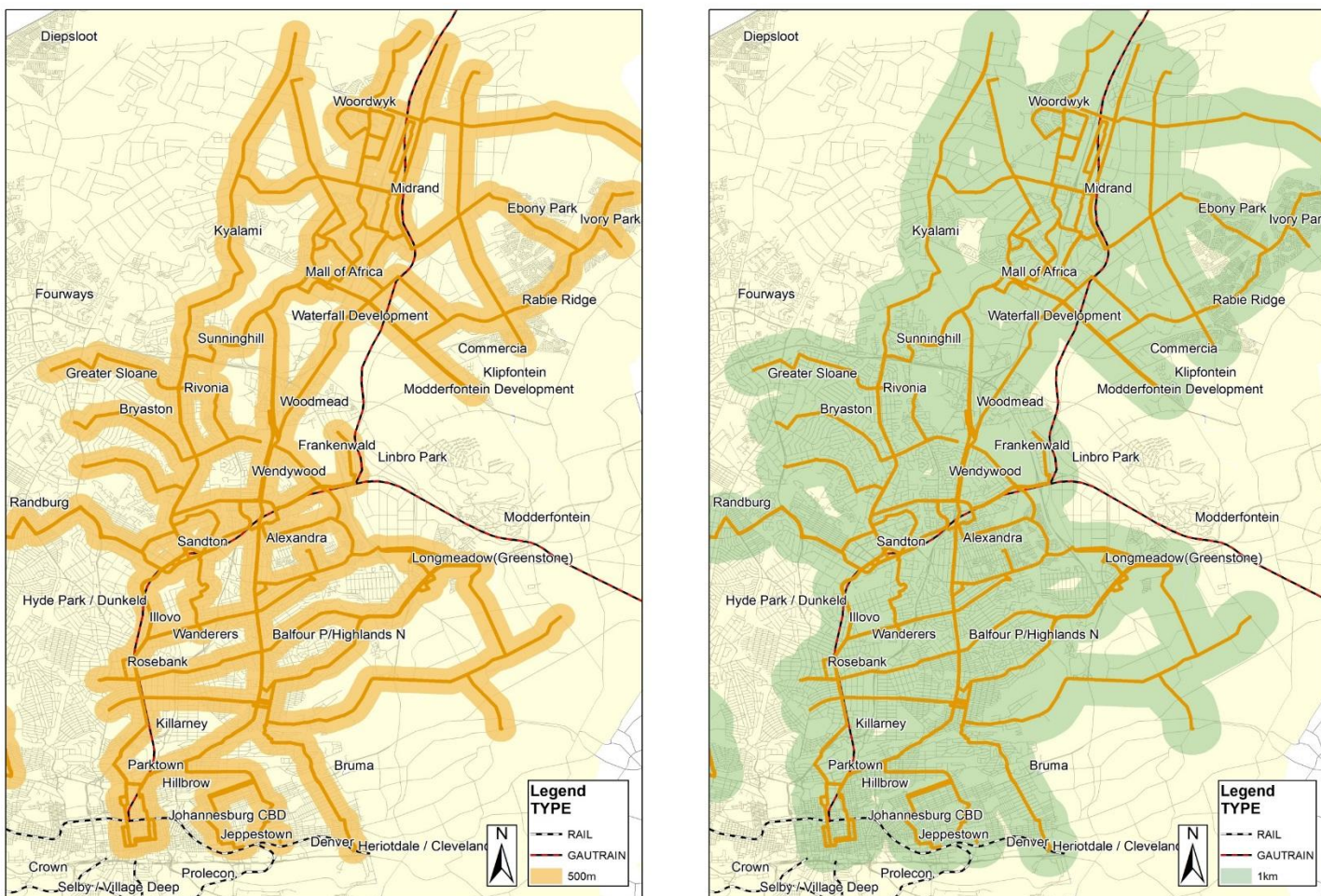


Figure 4: Northeast Quadrant IPTN Service Coverage – 500 and 1000 metre bandwidth

The Full NEQ network envisages a feeder network mostly serviced by mini bus taxis. However a closer look at some of the routes describe as ‘feeders’ have in fact discrete origins and destinations and would better be called ‘main routes’. The IPTN provides for such routes to be operated by either Metrobus, PUTCO or mini bus taxis.

**Appendix C** sets out potential feeder and main routes for a 2025 horizon year. However the City will be conducting detailed route surveys in 2017 to more accurately determine the route alignments and determine the number of mini bus taxis that would be required to service these routes. Once this is done, the extent to which existing taxi service would need to be restructured can be determined as well as the phased implementation of these restructured taxis services. This is further discussed in the section on Transformation.

#### 2.4. Service design

The peak hour demand on each route, together with the different categories of right of way (ROW) typologies along the route, are key inputs to the most appropriate public transport mode required to provide an effective and efficient service. The service frequency and turnaround time for the fleet operating along each route determines the fleet required for each route.

This plan includes route service design sheets, a sample is shown in Figure 5 which for each route sets out a route location plan, supported by a detailed point to point description of the route, along with the peak hour passenger demand profile, which includes boardings and alightings at all stops along the route.

The service design is described in terms of mode type, fleet size and service frequency in the peak direction, as well as a timetable for the route. The route performance characteristics include passenger-kilometres, total first boardings and transfers, as well as service kilometers (revenue-km and dead-km).

Details of the characteristics and performance of each route are contained in Appendix C.

This analysis provides important information on operational performance data and fleet requirements needed for costing and cash flow analysis, for the Business Plan in a later section.

Table 2 summarises the key statistics for the Trunk and Complementary services that will be contracted over the implementation phases of the NEQ. These statistics relate to the fully implemented service design, required to meet the full peak demand.

*Table 2: NEQ Service design statistics and performance indicators: Summary for the full network*

Route	Route length-km	Peak hour			Mode	Fleet
		Passengers <sup>1</sup>	Passenger - km	Vehicle-km		
T4A	19.4	9 848	90 859	1 043	Artic	31
T4B	19.4	7 275	68 908	923	Artic	27
T5A	39.2	10125	94696	2191	Artic	56
T5B	39.2	4491	40951	937	Artic	25
T6A	38.7	11242	149301	2564	Artic	67
T6B	38.7	4689	66688	1129	Artic	30
C7A	29.1	1172	8072	408	Rigid bus	13
C7B	30.2	2476	19220	544	Rigid bus	16
C8A	30.3	1061	11810	364	Rigid bus	12
C8B	31.9	2927	34493	702	Rigid bus	21
C9	19.8	8232	57062	1961	Rigid bus	74

*Note:*

Passengers = first boardings + transfers

Average passenger trip length = 19.8km

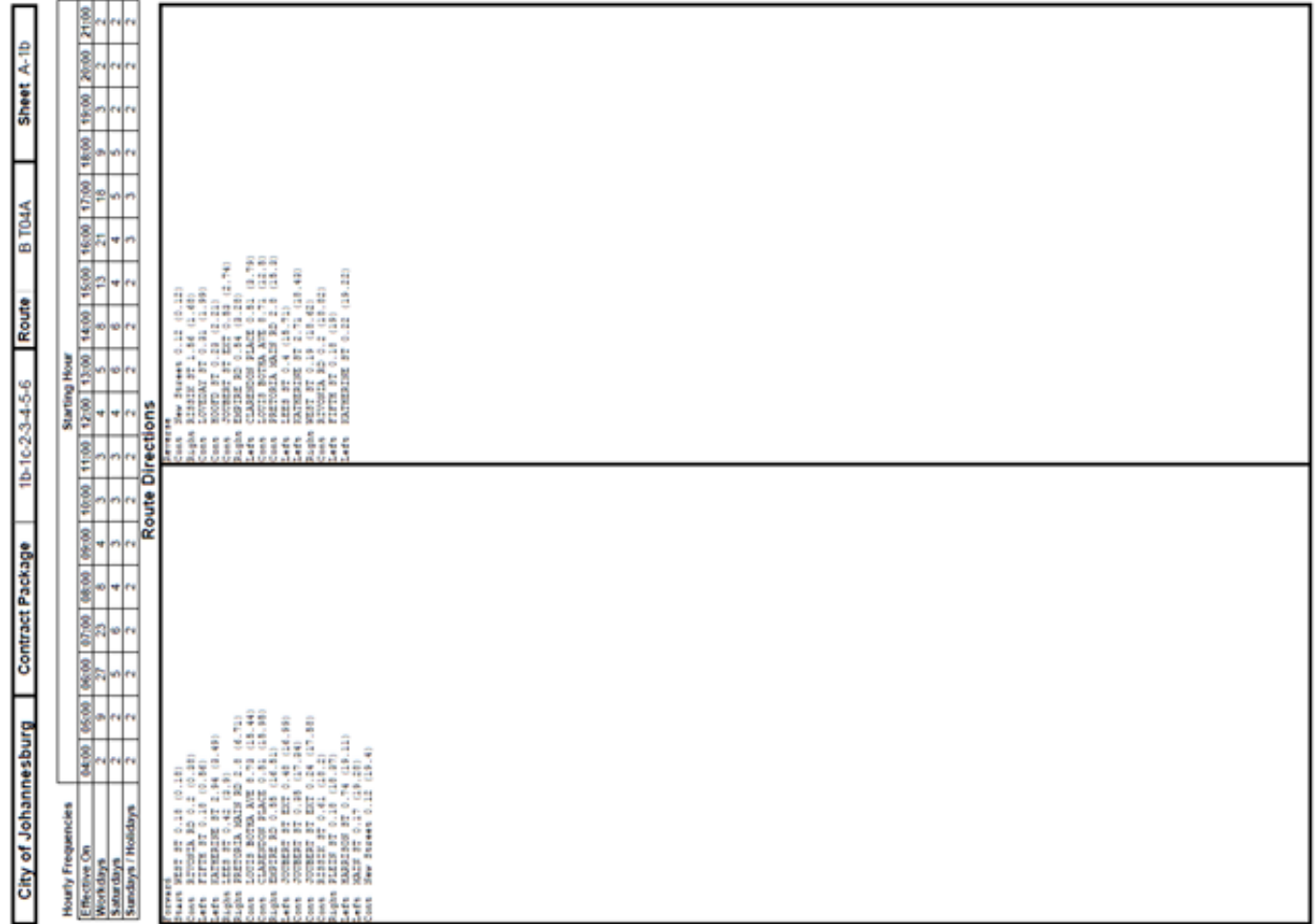
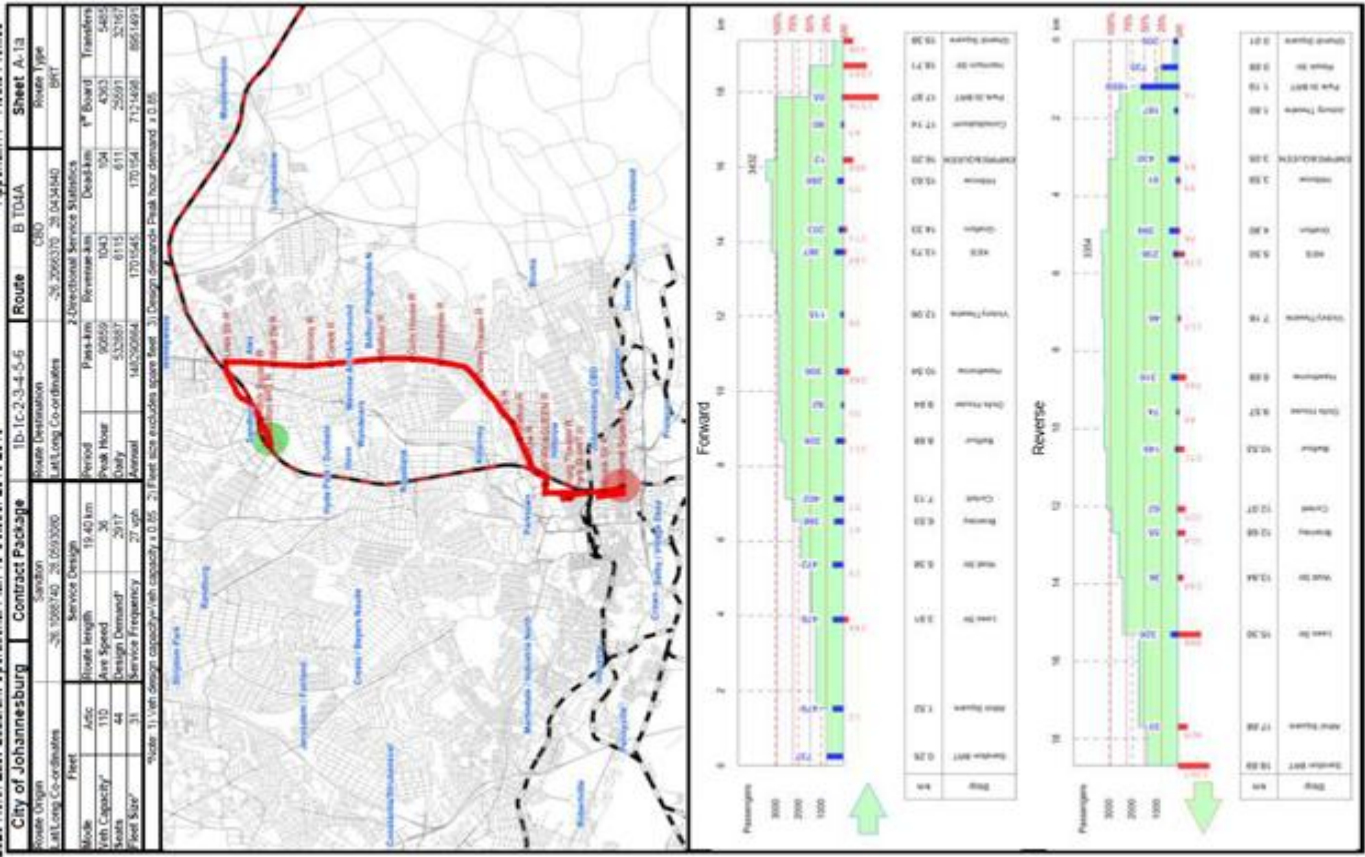


Figure 5: Example of Service Design Sheet

## 2.5. Full NEQ and Phase 1C(a)

Over the last year, the Transport Department has done detailed work on the North East Quadrant and Greater Soweto Operational Plans as well as reviewed the Metrobus operational plan and realised that it would not be possible with a high level of credibility to finalise an integrated operational plan and business model for the full NEQ. This would require:

- Verification of the demand and future demand on certain routes;
- Developing a detailed understanding of the infrastructure, operational and transformation costs of rolling out each route; and
- Determining a city wide financial model to be able to determine whether the City can sustainably continue to roll out dedicated BRT lanes as was initially envisaged and if so, what is the best sequenced roll out.

This requires a significant amount of work and it is anticipated that can only be completed at the end of 2018. When this is done, then the following can be agreed upon by the Mayoral Committee and Council:

- Which origins and destinations are best serviced by rail and what we should require of and partner with PRASA and Gautrain;
- Which routes should continue to be built as trunk routes for BRT operations and when;
- Which routes should have a new operational model which would involve existing operators (both mini bus and bus) on curb side dedicated lanes; and
- The finalization of a business plan for the full NEQ involving buses and mini bus taxi services.

This document thus further sets out the infrastructural, bus fleet requirements and transformation process for the full NEQ but only focuses on the business plan for what is called Phase 1 C(a). The details are set out in a later section but this involves only the T4 and C9 services described above.

## 3. **System Infrastructure for the full NEQ network**

This section sets out the following system infrastructure for the NEQ IPTN:

- Interchanges;
- Transfers between the high floor system of Phase 1A and 1B and the low floor system of Phase 1C;
- Dedicated lanes;
- Stations and stops
- Depots and holding areas; and
- Intelligent Transport Systems (ITS)

### 3.1. Interchanges

The NEQ IPTN will incorporate a number of interchanges where commuters can change from one mode to another or from one service to another service. All interchanges for the full NEQ rollout are indicated in Figure 6 below of which some interchanges are required for the commencement of Phase 1C (a). Both Full Phase 1C and Interchanges required for Phase 1C (a) are discussed below.

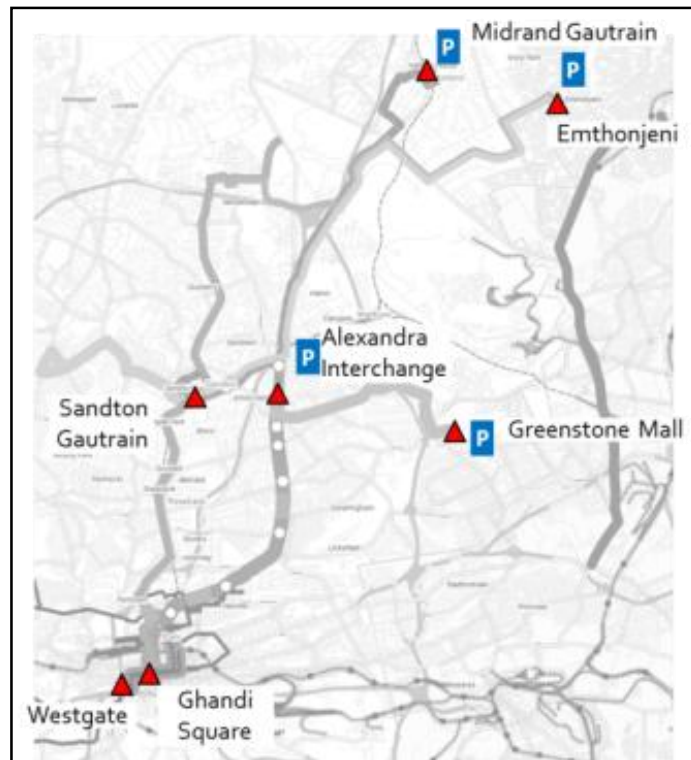


Figure 6: Phase 1C Interchanges

### 3.1.1. Alexandra Interchange - Phase 1C (a)

The services which will pass the Alexandra Interchange, for Phase 1C (a) are:

- T4 A (Sandton to Gandhi Square via Metro Centre); and
- T4 B (Sandton to Gandhi Square via Hillbrow).

Future Services (beyond Phase 1C (a), for full Phase 1C, will also include:

- T5 ( Ivory Park to Gandhi Square via Kaalfontein and Midrand);
- T6 ( Ivory Park to Gandhi Square via Rabie Ridge); and
- C9 (Greenstone via Alexandra and Sandton to Randburg).

Conventional low floor, median stations will be constructed along Louis Botha Ave at the intersection with Watt Street in Alexandra. These stations will be placed adjacent to the proposed Watt Street Development which will be a City initiated multi-storey commercial and residential development including new CoJ Regional offices.

Substantial road and bridge works are required at this node to integrate between buses, mini bus taxis, 4 +1 vehicles, pedestrians and cyclists. This will include the reconstruction of the existing Louis Botha Avenue adjacent to Alexandra as well as partial demolition of the existing road bridges to enable new road and pedestrian bridges to be constructed to connect the new stations with the pedestrian and cycle walk way between Alex and the Sandton CBD as well as to provide universally accessible access to the Watt Street development.

### 3.1.2. Sandton Gautrain - Phase 1C (a)

This facility will have low floor platforms, to allow low floor bus services from 1C (a) and future phases of Rea Vaya (serving the northern and eastern suburbs of Johannesburg) universally accessible level boarding and alighting. This is a key transfer node for passengers between Gautrain, Rea Vaya, and mini bus taxis and requires careful design consideration to provide the required level of integration.

At the time of drafting this document, a number of design options are being explored, and a coordinated solution will be sought. Options will include conventional stations in Rivonia Road or the integration and/or sharing of facilities with Gautrain, within the existing Gautrain station building.

### 3.1.3. Park Station - Phase 1C (a)

This facility will require both low floor and high floor platforms, to allow low floor bus services from 1C (a) and future Phases of Rea Vaya (serving the northern and eastern suburbs of Johannesburg) universally accessible level boarding and alighting, as well as to provide integration with the existing Rea Vaya Phase 1A and 1B.

This is a key node for transfer of passengers between rail, Rea Vaya, Mini bus taxis and long distance buses, and requires careful design consideration to provide the required level of integration. At the time of drafting of this document, a number of design options are being explored, and a coordinated solution will be sought between PRASA, Gautrain and the City. Options will include the addition of a conventional station in Rissik Street or the integration and/or sharing of facilities with Gautrain buses, within the existing Park station, and/or the redevelopment of parts of park Station to accommodate Rea Vaya buses.

Agreements will need to be entered into with PRASA in order to find the optimal solution for all parties. Long, medium, and short term solutions and strategies may need to be agreed and implemented.

### 3.1.4. Gandhi Square - Phase 1C (a)

Phase 1C (a) Rea Vaya Trunk services will commence and terminate at Gandhi Square, to inter alia improve the integration between Metrobus and Rea Vaya. This will require a low floor station module at Gandhi Square and the strengthening of the adjacent streets.

### 3.1.5. Greenstone Mall

Route C9 via Alexandra and Sandton to Randburg will commence and end at the Greenstone Mall, near the Ekurhuleni boundary with Johannesburg. The design of this facility will include low floor platforms to ensure seamless transfer if there is a future intersection with Ekurhuleni services, and include a "turn around" facility for buses returning to Alex, Sandton and Randburg.

The design should also be integrated with a proposed park and ride facility at the existing shopping mall, and space will be identified for the possible holding of buses during the day, when out of service.

### 3.1.6. Midrand Gautrain

Service T5 will originate in Ivory Park and proceed, via Midrand, to the Johannesburg CBD. A small transfer facility will be constructed at the existing Gautrain Midrand Station site for passengers to transfer between Gautrain, mini bus taxis and Phase 1C buses. Technically feasible options are being explored and assessed in conjunction with Gautrain in order to provide a fully integrated transfer facility. Design of the facility is to be based on a mutually agreed solution.

### 3.1.7. Emthonjeni

Emthonjeni in Ivory Park is an existing mini bus taxi rank owned by the City of Johannesburg. This facility is being redesigned to incorporate Phase 1C buses and mini bus taxis and will require the acquisition of a currently (largely) vacant site adjacent to the existing facility. Informal traders currently utilising portions of this site will be formally relocated to the new facility once completed.

The design of this facility is to include taxi holding, Rea Vaya low floor bus boarding facilities, as well as day time holding facilities for Rea Vaya buses which are out of service. A small park and ride facility and formal space for traders will be allocated within the extended site.

## 3.2 Transfers between NEQ and existing Phase 1A and 1B trunk routes

The NEQ network has a 'low floor' operating environment with low entry buses while the existing Phase 1A and 1B services are operating with a 'high floor' fleet and station configuration. To be able to interchange effectively with the NEQ services in the Johannesburg CBD, Hillbrow and the Sandton CBD, a number of stations will be redesigned and adapted. These transfer facilities, except for the station adjacent to the Sandton City Mall entrance, will become operational during the Phase 1C (a) implementation phase of the NEQ.

Figure 7 sets out the seven locations in and around Johannesburg's CBD where transfers between the high and low floor trunk route bus operations can take place.

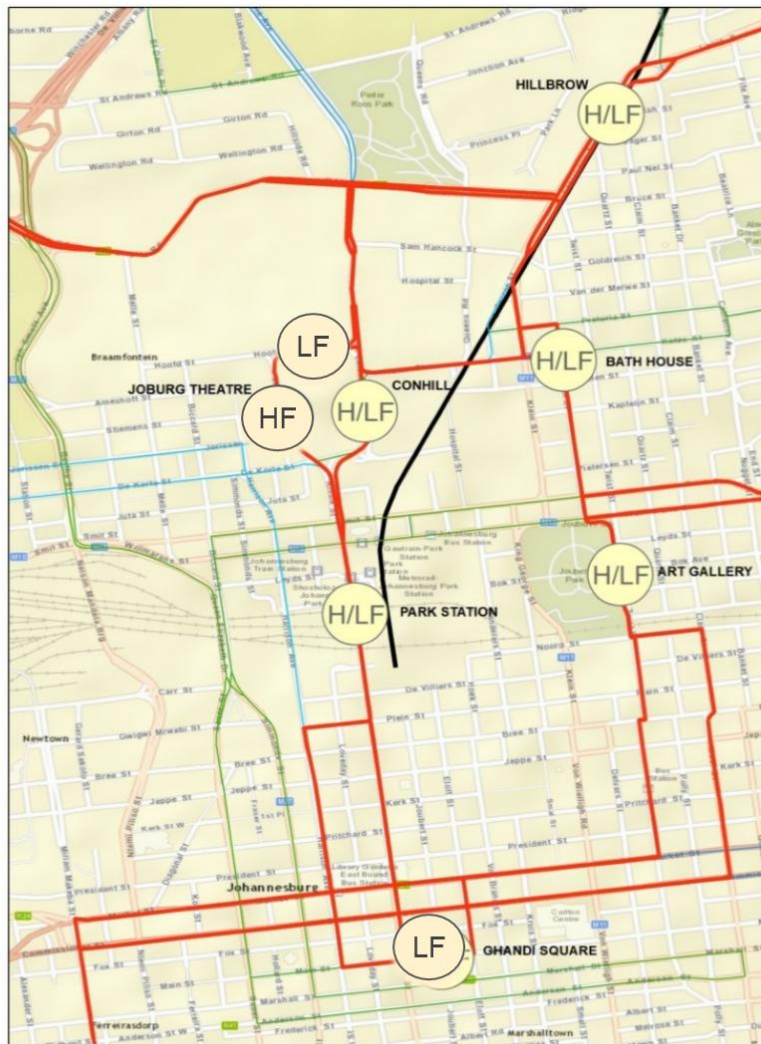


Figure 7: Low/high floor interchanges in the CBD

In the Sandton CBD, there will be two stations located opposite the existing Gautrain Station and Sandton City Mall, approximately 200 metres apart. The one alongside the Sandton City Mall will be a combined high/low floor interchange enabling transfers between high and low floor trunk routes.

### 3.3. Dedicated BRT Lanes and Public Transport Priority Routes

The proposed infrastructure to provide Phase 1C (a) services from October 2018 is as follows:

- 17.2 km of new median bus lanes (bi-directional) from Parktown to Sandton, along Louis Botha Avenue, across the M1 Motorway at Lees Street in Alexandra, and along Katherine Avenue to the Sandton CBD, Terminating at the Sandton Gautrain Station;
- A Public Transport “loop” within the Sandton CBD, commencing at the Gautrain Station and following Rivonia Road, Fredman Drive and 5<sup>th</sup> Street.;
- A new bridge over the M1 at Lees Street to accommodate Rea Vaya buses and pedestrians;
- Widening of the bridge over the Zandspruit on Katherine Avenue to accommodate additional lanes;
- Widening of Katherine Avenue from Grayston Drive to Marlboro interchange on the M1 to provide additional lanes and capacity for traffic to and from Sandton CBD;
- Road improvements and stops along the C9 route between Greenstone and Watt Street;
- Upgrading of sidewalks and lighting along all sections of roadway and
- A New “Hillbrow Link” as further elaborated below.

Due to the high volume of uses that would converge around the Metro Centre Loop (from Empire Road, future Oxford Road services and Louis Botha Avenue) the Alexandra to CBD route be split onto a second, parallel route. This will reduce the number of buses that need to stop at the stations at the Metro Centre

(Constitution Hill and Joburg Theatre) and will also improve coverage in the eastern part of the CBD as a trunk service can then be provided to Ghandi Square via Edith Cavell and Mooi/Troye Streets.

This amendment required approximately 500m of additional two-directional trunk bus way construction through Hillbrow to connect to the existing Phase 1A infrastructure.

Future requirements for Phase 1C and T5 Services (Ivory Park to CBD via Kaalfontein and Midrand) will require approximately 22, 5 km of new median bus lanes (bi-directional), from route origin, to the Johannesburg CBD. This is new infrastructure which excludes the section of the T5 route which runs along the existing T4 route, on Louis Botha Avenue, between the Lees Street Station to the Johannesburg CBD.

Numerous streams and natural waterways cross this route which be appropriately accommodated into the road designs. Existing bridges along the route will be assessed for both structural integrity and be widened, or reconstructed accordingly. It is anticipated that no major land acquisition should be required and that the existing road reserves will be able to accommodate the widened cross section of the existing roadways to include median bus lanes.

The route includes a section of the existing Old Pretoria/Johannesburg Provincial Road between Midrand and Alexandra, which will require upgrading to include the bi-directional median bus lanes. Negotiations will be conducted with Gauteng Department of Roads and Transport in this regard.

Phase 1C, T6 Services (Ivory Park to CBD via Rabie Ridge) will require approximately 19, 5 km of new median bus lanes (bi-directional), from route origin, to the Johannesburg CBD, a significant part of which will be along the same route as T5.

Phase 1C, C9 Services (Greenstone via Alexandra and Sandton to Randburg) will require approximately 16 km of a mix of new kerb side bus lanes (bi-directional), dedicated (bi directional) median bus lanes, and a section of "virtual bus Lane", from route origin, to the Randburg CBD.

The route will enter Louis Botha Avenue, interface with the Watt Street Station, and then proceed along the existing T4 Trunk to the Sandton Gautrain Station. This section of the route will have already been constructed so no further intervention will be required.

Construction will be required between Sandton Gautrain Station and Randburg. This section will require a mix of bi directional median lanes, and a section of "virtual lane" in Randburg. Some land acquisition may be required along the route.

#### 3.4. Stations and Stops

Table 3 below indicates the stations to be implemented for Phase 1C (a) October 2018. All station designs are aligned to the required passenger demands in Annexure B.

Phase 1C Stations: Based on Revised Typology after N/E Quad Planning Review	Suburb	Station Description	Modules	Revised NEW Typology	Low (L) or High(H) floor
<b>Gandhi Square(metro bus terminus)</b>	<b>Jhb CBD</b>	<b>Interchange</b>	<b>2</b>	<b>Closed/Full Shelter</b>	<b>L</b>
Bath House Station	Hillbrow	Existing Single Module Station - High Floor ( ADD a second module - LOW floor)	1	Closed	L
Art Gallery	Joubert Park	Existing double module ( convert one existing module to LOW floor)	1	Closed	L
Conhill Station(East Side Metro Centre)	Braamfontein	Straight Line Standard(kerb side)	1	Closed	L
Metro Centre( North of Metro Centre)	Braamfontein	Straight Line Standard(kerb side)	1	Closed	L
Park Station	Jhb CBD	Interchange	1	Closed	L
Clarendon opp Jager Street(ped signal)	Hillbrow	Midblock signal	2	Closed	H/L
LB bt west of Grafton Road	Bellevue	Straight line standard	1	Closed	L
LB bt St Peter & Fir St	Bellevue	Straight line standard	1	Closed	L
Victory Theatre	Bellevue	Straight line standard	1	Closed(18 m Shelter)	L
LB south of Louis Ave	Cheltondale	Straight line standard	1	Closed	L
LB south of 3rd Ave(opp Doll's House)	Highlands North	Straight line standard	1	Closed(18 m Shelter)	L
LB North of Athol St	Waverly	Straight line midblock signal	1	Closed	L
LB South of Corlett Drive	Gresswold	Straight line standard	1	Closed(full shelter)	L
Pretoria main North of Andries	Bramley/Wynberg	Straight line midblock signal	1	Closed	L
Pretoria Main & Watt Interchange	Wynberg/Alexandra Adjacent to Alexandra Watt St Terminal	Straight Line/Staggered (to be determined)	2	Closed	L
<b>Sandton to Alexandra Route</b>					
<b>18/04/2016</b>					
Phase 1C Stations: Based on Revised Typology after N/E Quad Planning Review	Suburb	Station Description	Modules	Revised NEW Typology	LOW High floor
<b>Rivonia bt 5th and West</b>	<b>Sandton</b>	Terminal(Straight line)	<b>2</b>	<b>Closed</b>	<b>L</b>
Rivonia bt 5th and Sandton Drive	Sandton	Straight line	2	Closed	H/L
Katherine West of Wierda East(AtholSq)	Sandton	Straight line, standard	1	Closed(18 m shelter)	L
Pretoria Main south of Lees	Wynberg	Straight line, standard	2	Closed	L

Table 3: Stations for Phase 1C (a)

Additional future stops and stations will be required for the full Phase 1C roll out. T5 Services (Ivory Park to CBD via Kaalfontein and Midrand) will require an estimated 23 stops. These stops will require differing passenger access typologies, determined from the boarding and alighting requirements at each stop. All stops will be located either on the left, or right side of the dedicated median lane, dependent on the required passenger access typology at the particular location.

T6 Services (Ivory Park to CBD via Rabie Ridge) will require an estimated 20 stops some of which will be shared with T5.

C9 services (Greenstone via Alexandra and Sandton to Randburg) will require an estimated 14 stops. All stops will be located either on kerb side, or on the left or right side of the dedicated median lane, dependent on the required passenger access typology at the particular location. Some of these stops between Greenstone and Alexandra will be implemented as part of Phase 1C (a).

### 3.5. Depots and Bus Holding Facilities

#### 3.5.1. Depots and Day/Night Time Bus Holding Facilities (Full Phase 1C)

New bus depots are required to be located in Alexandra, Selby and Midrand. The following basic facilities are to be provided at Alexandra and Midrand Depots: bus parking areas, secure fencing, fuel and wash bays, office space and space for minor/emergency repairs. Refuelling will cater for both diesel and CNG usage.

The Selby Depot which will be shared for maintenance with the Phase 1B Bus Operating Company will have full maintenance facilities as well as bus parking areas, secure fencing, fuel and wash bays, and office space. Refuelling will cater for both diesel and CNG usage. Facilities at Alexandra and Midrand Depots will only allow for minor/emergency repairs to vehicles.

Table 4 shows the number of buses that can be accommodated at each depot. These numbers reflect the overnight/daytime parking available.

*Table 4: Available Phase 1C bus parking per depot*

Vehicle Type	Depot/ Parking Area	Total
Articulated Standard	Alexandra	27 84
Articulated Standard	Selby	53 75
Articulated and Standard(combined)	Midrand	78
	<b>TOTAL</b>	<b>317</b>

Phase 1C (a) will require that only Selby and Alexandra Depots are completed timeously in order to commence operations. Midrand Depot will need to be completed before the commencement of operations of the balance of Phase 1C.

### 3.6. Intelligent Transport Systems (ITS)

The following ITS systems will be installed, commissioned and made operational:

- Information communication technology (ICT);
- Bus management and monitoring; and
- Automatic fare collection.

This is detailed below.

#### 3.6.1. Information Communication Technology (ICT)

Table 5 sets out the ICT components that will be provided in partnership with the City's Information Technology Department and MTC, the City's broad band municipal owned entity. This partnership will enable greater synergies and reduce risks especially in respect of business continuity.

*Table 5 ICT provision*

What	Detail	Who will provide this service
Optic fibre network	Optic fibre with a redundancy capability will provide a link between the main data centres (server room) and all Phase 1C stations and busses, layover points and depots. The	The optic fibre network will be provided by JDA and redundancy will provided and managed by MTC, the City's broad band municipal owned entity. The

What	Detail	Who will provide this service
	network will include switches at stations and a main core switch.	Transport Department will sign an SLA with them.
Wi-Fi	<p>Wi-Fi will be provided to all layover points and depots to facilitate distribution of data from the buses equipment for fare collection and bus monitoring to the main data centre.</p> <p>The City will provide free Wi-Fi to passengers at Rea Vaya stations in a separate project. No Wi-Fi for passengers will be provided on the buses at this stage.</p>	This will be provided and managed by MTC for the Transport Department as per above.
Data centres/servers	The City's IT department will host the servers for the Rea Vaya at its two data centres at Metro Centre and Roodepoort. The data centre in Roodepoort will provide redundancy in case the main data centre in Metro Centre is down. The Dimension Data Cloud will complete the redundancy structure as required by Group IT.	The Transport Department will procure the servers to be hosted at the City's data centres by Group IT.
Backup power	All ICT equipment will be provided with a UPS for power emergencies situations. The maintenance of the power network will be the responsibility of the ITS service provider.	Service provider on three year contract.

### 3.6.2. Bus management and contract monitoring system (BMCM)

When Phase 1A and Phase 1B was initiated, an Advanced Public Transport Management System was procured as is prevalent internationally in BRT systems. However this system is costly and it has been difficult to maintain after the initial installation contract terminated. For Phase 1C, it is proposed that a tender be issued for bus management and contract monitoring with reduced specifications. This may also enable local suppliers to tender, reduce the City's reliance on international suppliers and be more cost effective.

Table 6 sets out what will be specified for public procurement:

*Table 6: Bus management and contract monitoring system requirements*

What	Detail
CCTV cameras	High quality CCTV cameras (HD) focused at critical areas at the stations will be installed for passenger safety and security
Bus monitoring and control system	<p>A bus monitoring and control system will be installed on buses and linked with the stations and control room to provide the following functionality:</p> <ul style="list-style-type: none"> <li>• Bus scheduling system;</li> <li>• Passenger information; and</li> <li>• Communication between the bus drivers and the OCC.</li> </ul>
VOIP and Biometric system	VOIP will be implemented to facilitate communication between OCC and stations whereas a biometric system will be implemented and used to control entry in the data centres, stations equipment rooms and OCC.
Business Intelligence Tool (BI tool)	A BI tool will be introduced to enable exception reporting as well as mine data for specific reports to enhance decision making and information gathering. Reports generated will be for both passenger demand management and revenue management.

### 3.6.3. Automated Fare Collection system (AFC)

The AFC system proposed for Phase 1 C have been enhanced from Phase 1A and 1B to provide improved accessibility into the BRT system, reduce fare evasion and improve passenger numbers. The same system will be introduced to Metrobus and over a proposed ten year contract will also replace the Phase 1A and 1B system.

Table 7 sets out what will be specified to be provided for ideally for a period of ten years through a public procurement process.

*Table 7: AFC requirements*

<b>What</b>	<b>Detail</b>
Point of sale equipment	The AFC system will have three possible points of sale: Ticket Booth (TOM), Automated Vending Machines (AVM) and private vendors appointed by the banking partner of the system. The TOM and AVM will be located at the stations and private vendors along the routes.
Fare medium	There will be five possible fare media that can be used to enter the system, namely, EMV based cards, Mifare cards, cell phone payment technology and website for uploads and machine readable once off paper tickets
Validators	There will be validators that facilitate tap-in and tap-out as the passengers are utilizing the system for accurate fare determination. The validators will be deployed at stations and on rigid busses.
Banking partner	The AFC system is designed to operate with a banking partner as it operates on an EMV based platform. The system is likely to utilise the City's appointed partner for this purpose.

### 3.6.4. Quantities required for Phase 1C(a)

Table 8 is a summary of the quantities required for Phase 1C (a)

*Table 8: Quantities required for Phase 1C (a)*

<b>Equipment</b>	<b>Busses (141)</b>	<b>Stations (17)</b>	<b>Depot (2)</b>	<b>Lay over points (2)</b>	<b>OCC (2)</b>
Validator	X	X			
AVM		X			
TOM		X			
Gate		X			
Turnstile	X				
BMCM	X				
UPS	X	X	X	X	X
WI-FI			X	X	
Switch		X			X
CCTV camera		X	X	X	
VoIP		X			X
Biometrics		X	X		X

## 4. **Fleet requirements, procurement and funding**

### 4.1. Fleet requirements

The fleet pallet used to serve the NEQ IPTN involves the following:

- Single-articulated bus: Capacity - 110 (44 seats minimum);
- Rigid Bus: Capacity - 69 (40 seats minimum); and
- Minibus-taxi: Capacity - 15 seats (no standees).

Table 9 shows the bus fleet size by mode required to serve the full NEQ network.

Table 9: Bus fleet complement for full NEQ Network

Route	Fleet Complement	
	Artic	Rigid
T4A and B	58	
T5A and B	81	
T6A and B	97	
C7A and B		29
C8A and B		33
C9		74
<b>TOTAL</b>	<b>236</b>	<b>136</b>

Related to the above fleet requirement of articulated and rigid buses to operate on the trunk and complementary routes respectively, is the fleet of minibus-taxis needed to operate the network of main and feeder routes, designed as an integral part of the IPTN. As indicated earlier this will be determined after detailed route surveys have been done.

#### 4.3. Bus fleet specifications

The key features of the artic and rigid buses are as follows:

- Low entry buses;
- Euro V1 and in compliance with the minimum emission standards as set out by the SABS;
- The floor height will be 300mm so that buses will exactly align with the low floor BRT stations.
- The bus chassis will be imported in a completely knocked down state (CKD), and will be assembled locally;
- The body will be built locally, and manufacturers must comply with a minimum of 80% local content;
- The busses will comply with all the relevant Universal Access Design Guidelines;
- Buses will be fitted with boarding bridges for easy passenger transfers between bus and stations; and
- Buses will have the same look and feel as the current Rea Vaya BRT buses.

#### 4.4. Bus procurement and funding

The Transport Department has explored a number of options since 2014 on procuring and funding buses including the operator's procuring the buses and seeking international 'green' concessionary funding for buses.

After looking at the advantages and disadvantages, the following is the proposed way forward:

- The City will demarcate a tranche of Capital funding for bus purchase in the MTEF and beyond. This amount of money will be approximately R250 million per annum and can be used for the procurement of buses for Rea Vaya and Metrobus. The funds for this will be raised as part of the City's Financial Development Plan.
- These buses will be transferred to the BOC after year six in terms of the Municipal Finance Asset Regulations at a nominal cost depending on good governance and performance by the BOC. Permission to do this will be sought from the National Treasury as per these regulations.
- The Transport Department and City Treasury will seek the services of a transaction advisor who will advise both the City and the Affected Operators on whether and how the City and/or the SPV or BOC can procure additional buses. The Transaction Advisors will inter alia be required to develop and test scenarios to ensure sustainability over a 12 year period for the BOC.

## 5. Fares structure, fare levels and fare products

The City of Johannesburg's Integrated Fare Strategy comprises the Strategy Framework, Fare Policy, Fare Structure and Fare Levels, each integrated with the other and underpinned by Fare Rules.

The fare structure currently in use is a distance-based structure with a cut-off maximum fare at 48 kilometres. The following are the fares, as published for 2015/2016, for a single, one way journey of different lengths, using a Mifare or EMV smartcard. The current maximum fare is R 13.30. In the event a single trip card is used the cost is R 13.80, regardless of journey length.

Journey Length	Standard Fares – 2015/16
0 - 5km	R5.80
5.1 - 10km	R7.60
10.1 - 15km	R9.50
15.1 - 25km	R11.30
25.1 - 35km	R12.20
More than 35km	R13.30
Penalty fee	R13.30
Single journey cards	R13.80
Double journey cards	R26.50

The current fare products are the following:

- In the Peak Periods:
  - Standard Fare Capped for Maximum Distance of 48 kilometres
  - Bus Company staff on duty - free travel
  - Members of South African Police Services and the Johannesburg Metropolitan Police Department in uniform – free travel
- In the Off-Peak Period and on Weekends: All Customers receive a 10 % reduction in Standard Peak Period Fares in the weekday off-peak period (08h31-14h59) and at any time on Saturdays, Sundays and Public Holidays.

The fare system primarily works on the basis of points purchased/loaded onto the smartcard media and used for each journey according to the fare charges.

## 6. Transformation, public transport restructuring and bus company formation

This business plan envisages the restructuring of all public transport operations in the NEQ to achieve a single integrated transport system. Existing public transport operators will either become shareholders in one or more bus operating company that would operate buses or continue to operate services on a contracted or commercial basis along revised routes that will seek to provide the most seamless trips for passengers and the best income for operators.

In 2011 the Mayoral Committee approved a BOC Company Formation policy which sets out the approach and process that the City should follow when setting up new bus companies made up of public transport operators who previously operated on routes now operated by Rea Vaya BRT.

In 2014, the Mayoral Committee approved the approach and process for an engagement phase for the North East Quadrant (NEQ) catchment area.

Since then a Public Transport Transformation Forum has been set up, there has been extensive information sharing and study trips and technical support has been secured. Some consensus has been reached on various aspects of the transformation process but no agreements have been signed.

This section of the document seeks to draw on the above mentioned Mayoral Committee approvals as well as the experience during the engagement phase to set out a clear set of principles, approaches, policies and procedures that should be adopted as part of this plan.

## 6.1. Potentially affected operators

Table 10 below identifies the mini bus taxi associations and bus company public transport operators who are regarded as being potentially affected operators in the NEQ. Part of the negotiation process is to identify which potentially affected operators are affected operators and thus eligible to receive economic rights and participate as shareholders in the Bus Operating Company (ies) to be formed.

*Table 10: Potentially affected operators*

<b>Association</b>	<b>Abbreviation</b>	<b>Areas of operation</b>
Alexandra Taxi Association	ATA	Alex, CBD, Sandton, Midrand; Jhb Midrand; Randburg; Jhb Randburg; Rosebank; Greenstone; Tembisa. Kempton Park Edenvale, Jhb Modderfontein
Alexandra Randburg Midrand Sandton Taxi Association	ARMSTA	Alex, CBD, Sandton, Midrand, Randburg, Rosebank, Greenstone, Sunninghill, Tembisa, Midrand
Faraday Taxi Association	FTA	CBD, Randburg, Rosebank, Sunninghill; Greenstone; Cresta.
Ivory Park Taxi Association	IPTA	Ivory Park, Sandton, CBD, Alex, Rivonia, Midrand, Randburg, Fourways, Waterfall, Noordwyk, Vorna Valley, Edenvale, Rosebank, Crydon
Midrand Tembisa Taxi Association	MIDTA	Midrand, Kayalami
Randburg United and Long Distance Taxi Association	RULLDTA	Sandton, Randburg, Alex, Pretoria, Sunninghill, Kaya Sands, Fourways, Northgate, Cresta,
Rabie Ridge Taxi Association	RRTA	Rabie Ridge, Midrand, CBD, Sandton, Randburg; Alex; Jhb; Kempton Park; Kayalami
Metrobus	N/A	Midrand, CBD, Sunninghill, Sandton, Rosebank, Sandringham; Orange Grove; Highlands Park; Lombardy East/West and Bramley.
JR Choeu	N/A	Tembisa, Alex, Wynburg, Sandton, Randburg, Strydom Park, Kaya Sand., Wadeville, Alrode; Greenstone, Orange Grove, Bedford; Eastgate; Jhb CBD (Westgate).
Public Utility Transport Company	PUTCO	Soweto, Sandton, CBD, Parktown, Hillbrow, Orange Groove, Wynburg, Sunninghill, Midrand, Rosebank, Bramley, Woodmead and other suburbs en route.
Gautrain rail		Midrand, Marlboro, Sandton, Rosebank, CBD
Gautrain bus		Marlboro, Midrand, Sunninghill, Rivonia, Sandton, Fourways, Rosebank, Illovo, Parktown, Melrose Arch, Randburg, Hyde Park, Killarney, CBD, Gallo Manor, Mall of Africa, Noordwyk and Randjespark.
Gautrain mini bus		Marlboro, Woodlands; Woodmead, Limbro Park.

The current predominant business model of mini-bus taxis is:

- Individuals own taxis and employ/contract drivers;
- Drivers collect fares and give a certain amount of fares back to owners; and
- Individual operators belong to an association which allocates them routes.

A number of operators also own Avanzas or 4 +1's which operate local feeders and distribution trips.

In respect of the bus operators, most own the buses and have a contract with the Gauteng provincial government or the Gautrain Management Agency to operate the vehicles and receive a subsidy from the government as well as collecting the fare revenue.

The mini bus taxi associations are also organised in three different regional structures, namely Santaco Greater Johannesburg Region, Top Six Taxi Management and Johannesburg Gauteng National Taxi Alliance. The bus companies are affiliated to SABOA but while the former seek to participate actively in the negotiations, SABOA does not actively seek to co-ordinate the participation of large bus companies in transformation initiatives. They have sought in previous phases to represent small bus operators.

## 6.2. Principles and approach

The following are the proposed guiding principles for the transformation of operators which has already been canvassed with the potentially affected operators:

- The needs of passengers of safety, reliability and to be able to reach their destinations along the quickest route and the least waiting time;
- The lives of operators and their families are valued: Solutions should reduce conflict and build trust and not lead to violence;
- No affected operator should be worse off than before there was an integrated transport plan. The aim is not only for operators to get more money for tomorrow but wealth for their future and their families; and
- Taxis and buses both have roles of the same importance in the integrated transport plan

The approach in respect of the NEQ quadrant is to:

- Restructure all bus and mini bus taxi routes in the North East Quadrant catchment area over time;
- Introduce new bus services and restructured mini bus taxi services in at least two phases;
- Have at least two Bus Operating Companies which will operate the bus services;
- Give all potentially affected operators an opportunity to prove that they are affected operators;
- Give all affected operators an opportunity to be part of restructured bus and mini bus taxi routes either as shareholders or mini bus taxi or bus operators; and
- Provide for scheduled contracted and unscheduled commercial services in a way that both kinds of services will ensure that all mini bus taxi operators have sustainable businesses.

## 6.3. Phases of transformation and bus operating company formation

The BOC Company Formation Policy identifies the following phases:

- Engagement phase;
- Pre-negotiation phase;
- Negotiation phase; and
- Hand over phase.

Below progress already achieved is recorded, a road map going forward is proposed. The road map envisages that in each phase a number of agreements need to be signed and then implemented. The key proposed content of these agreements are set out in the following section.

### 6.3.1. Progress to date

Over the last two years, the following engagement and pre-negotiation phase activities have taken place:

- Significant information sharing in the form of workshops, roadshows and two study tours to Brazil and Cape Town;
- Establishment of a capacity building course through Wits School of Governance;
- Procurement of technical support first for the engagement phase and then for pre negotiation and the forthcoming negotiation phase;
- Establishment of a Public Transport Transformation Forum with a plenary structure, working groups and a process committee;
- Appointment of mini bus taxi association leadership to the above mentioned Forum on the understanding that they would represent all potentially affected operators;
- Appointment of representatives of PUTCO and JR Choeu to the above mentioned Forum but not potentially affected operators from Metrobus or Gautrain;
- Unsuccessful attempts to secure independent facilitation, secretariat and translation services who the affected operators feel comfortable with;
- Consultation on routes and services;
- Attempts to determine criteria for participation (referred to as a 'seat allocation plan' above) and regularisation of operating licenses;
- Resolving a number of preliminary issues such as the removal of a fence along Louis Botha;
- Drafting and in principle agreement of a Memorandum of Understanding on the concept of operations, business model and value chain principles;
- Drafting of a negotiation plan, called a Negotiation Framework Agreement.

The key outstanding issues for these two phase which should be conducted during the next period are:

- Putting in place independent facilitation, secretariat and translation services;
- Agreeing the seat allocation or participation criteria; and
- Signing of the Negotiation Framework Agreement which sets out the processes and procedures for the negotiation phase.

### 6.3.2. Road map going forward

Table 11 identifies the key issues that the transformation phases must cover, what agreements need to be reached and what actions are required to implement the milestones – actions which also form part of the negotiation process.

*Table 11: Transformation road map*

<b>Phase</b>	<b>Issues</b>	<b>Agreements to be reached</b>	<b>Implementation of agreements</b>
Engagement	Technical Support Capacitation	SLA with Technical Support	Monitoring of Technical Support
	Capacitation	Capacitation agreement	Implementation of capacitation
Pre-negotiation	Seat allocation plan/ Operating license strategy Participation (determining which PAO's are AO)'s	Operating License and /or Participation Agreements signed with mini bus and bus operators (separately)	Verification Body to begin process of determining who is an affected operator and assisting in operating license regularization.  Bus companies and City to implement terms of agreements with bus companies.
	Independent facilitator	Agreement on the process of appointing the independent facilitator	Independent facilitator appointed
	Negotiation plan	Negotiation Framework Agreement	Pre negotiation and negotiation processes
	Data collection iro: Affected operators Displaced employees Profitability	Data Collection Agreement	Data collection of AO by Verification Body Data collection of displaced employees by City Data collection of profitability by Technical Support, verified by the City
Negotiation	Business model including the form and structure of the BOC, the basis by which eligible operators may acquire shares and the process to set up the BOC including setting up a Special Purpose Vehicle (SPV)	Business Model and/or Bus Company Formation Agreement  Interim BOCA may also be required.	Establishment of SPV Operations of SPV Possible reporting on interim operations by SPV

Phase	Issues	Agreements to be reached	Implementation of agreements
	Bus Operating Company Agreement including fee per km	Bus Operating Company Agreement with agreed fee per km as an annexure.	BOC/SPV to start preparing for operations.
	Commercial and/or contracted services as feeders	Feeder Services Framework Agreement	Signing of contracted services agreements.  Provision of OLS with conditions as per Feeder Services Framework Agreement.
	Arrangements for employees displaced due to the removal of affected routes	Employment Framework Agreement	Determine eligibility for training or capacitation Training as per Agreement Recruitment of drivers by BOC and station management employer
	Compensation and empowerment premium, restraint of trade agreements	Compensation and Empowerment Framework Agreement	<ul style="list-style-type: none"> <li>• Data gathering by operators</li> <li>• Data verification by the City</li> <li>• Application of compensation framework agreement</li> <li>• Signing of relevant agreements including restraint of trade</li> </ul>
	Value chain	Value Chain Framework Agreement	<ul style="list-style-type: none"> <li>• Procurement processes for value chain items e.g. security and cleaning at stations</li> </ul>
Hand over	Closing of the negotiations	Negotiation closure agreement	Implementation of services

#### 6.4. Key agreements to be reached

##### 1.4.1. Data gathering

It is proposed that there is a data gathering agreement setting out how and who should gather data in respect of the following:

- Data on affected operators including details of their vehicles;
- Data on displaced employees who are eligible for training and employment in the BOC and stations; and;
- Data on mini bus and bus operations to be able to determine and verify current costs and profits.

This agreement should be signed by representatives of PAO before data gathering commences.

##### 6.4.2. Seat allocation or participation criteria

Since in respect of the NEQ it is the intention to have an integrated public transport plan and to restructure all bus and mini bus taxi operations, it has been proposed and discussed in the PTF that all operators who ply their trade on routes in the NEQ catchment on affected routes and who can prove that they were operating before May 2013, can be affected.

This can include operators who did not have operating licenses but can prove that they were operating due to the fact that a large number of mini bus taxi operators did not have legal licenses for a number of reasons including that the PRE and City did not process applications for a lengthy period of time. However not all may become shareholders in a Bus Operating Company. Some may have their licenses regularised and continue to operate on feeder services.

The proposed key principles and process to determine affected operators is set out below and will be included in a draft Operating License Regularisation and Participation Agreement for negotiation with affected operators. It is likely that there will be separate agreements for mini bus taxi and bus AOs.

- a) To initiate the process an advert should be placed in relevant local newspapers inviting all PAO to come forward to be considered as AO. In addition the City will procure the services of an independent body to verify POA that want to qualify as AOs.
- b) In respect of mini bus taxi operators who are PAO, to move from being a PAO to an AO and for an AO's vehicles to be regarded as affected vehicles, all operators in the NEQ will have the opportunity to demonstrate to a Verification Body that their vehicle(s):
  - Have an operating license or meet the criteria to get an operating license;
  - Have been operating before 1<sup>st</sup> May 2013 (or there was a transfer to a vehicle that was operating before 1<sup>st</sup> May 2013); and
  - Is not a scrap but a vehicle capable of being driven; and
  - There is proof that they were operating on an affected route before May 1<sup>st</sup> 2013.
- c) If a mini bus taxi PAO does not have an operating license for his or her vehicle, he/she will have the opportunity to further demonstrate to the Verification Body that he/he has before 1<sup>st</sup> May 2013:
  - Been operating on an affected route;
  - Applied for an OLS (new or converted – including definite or indefinite) but not received one due to the backlogs at the PRE;
  - Applied for a transfer but not yet received one;
  - Has an expired OLS but not yet renewed;
  - Has an expired OLS and has applied for a late renewal (outside of the expiry period); or
  - Has a license for a 15 seater but has applied for it to be increased to a 22 seater.
- d) Mini bus taxi PAO's will need to submit their relevant papers to the Verification Body and their cars will also need to be inspected. The Verification Body will be assisted in its task by employing people nominated by association, such people will nevertheless need to be capable to do the job.
- e) The Verification Body will verify if the papers and vehicles of mini bus taxi PAOs is in order and make a recommendation to the PRE to legalise their vehicle and grant them an Operating License.
- f) In respect of bus companies, relevant evidence to prove that they have been operating before 1<sup>st</sup> May 2013 on an affected route will be agreed upon as well as process to verify the evidence. This evidence will need to include contracts and operating licenses.
- g) In respect of mini bus operators, the City will negotiate with them to determine which operators as well as how and when these operators will either:
  - Hand in their existing operating license(s), scrapping their vehicle(s), receiving an empowerment premium and becoming a shareholder in the BRT BOC/VOC, using the scrapping allowance money and/or empowerment premium; or
  - Include their vehicle(s) for operation of a scheduled service and contract to the BOC/VOC; or
  - Regularise/amend their operating license(s) and vehicle(s) (if necessary) and continue to operate non-scheduled services on existing or new routes; or
  - Hand in their operating license(s), scrapping their vehicle(s) and exiting the industry with an empowerment premium.
- h) Affected bus operators at the end of the negotiation phase will become shareholders to the extent that they are affected. The route alignment of non-affected services may need to be adjusted if they previously were operating along a BRT route which has become a trunk route.
- i) The negotiations between affected mini bus and bus operators on the extent of their affectedness should be determined within the context of the legislative framework provided by the NLTA and subject to the DORA conditions.

### 6.4.3. Business Model and Bus Company Formation

In the engagement process with PAOs a number of different kinds of business models have been canvassed including:

- A single public transport operating company which operates the new buses as well as rationalised mini bus taxi and feeder routes;
- Separate vehicle operating companies for the new buses and for mini bus taxis;
- A bus operating company for the new buses and the taxi associations operate mini bus taxis as per the current model.

The role of four +1 usually operated by Avanzas or Ventures was also considered, including if they should part of the above mentioned companies, operating radius based local services.

In addition different contracting models for the restructured mini bus taxi routes was discussed including whether the City should contracting mini bus taxis to operate certain routes and pay them a fee per km or they should operate commercial services. Whether or not there should be certain performance standards that these taxis should meet – either running commercial or contracted services was also raised.

It should also be noted that Gautrain currently contracts with Alexandra Taxi Services for them to provide mini bus taxis services to areas such as Limbro Park and Marlboro. Gautrain pays the operators a subsidy and requires that the vehicles and drivers meet certain standards.

The following is the proposed policy positions and process that the City should adopt in terms of the business model:

- (a) It should be the decision of the AO's whether they should have a single Public Transport Operating Company, separate Vehicle Operating Companies or a separate Bus Operating Company for the new buses and that mini bus taxi operate on the current model, subject to further issues raised below.
- (b) In respect of the new services to be operated by BRT buses along the identified T (trunk) and C (complimentary) routes, discrete Bus Operating Company Agreements (BOCA) must be signed
- (c) Affected operators who are identified to become shareholders as a result of their vehicles and licenses being withdrawn from affected routes must receive dividends arising from the fee per km agreed in the Bus Operating Company Agreement (BOCA).
- (d) The City's preferred business model for both the restructured mini bus services and local distribution services by 4+1s should be that they operate commercial services.
- (e) Contracted services can be considered where there are passengers that need to be transported but not sufficient profit can be made on a commercial basis. The affected operators will need to prove through the data collection process (see attached) that not sufficient profit can be made.
- (f) Where there is a contracted service, certain performance standards will need to be met but these should be not be particularly different from the requirements to get an operating license including that the vehicle should be subject to vehicle fitness tests annually and that the driver should possess a professional drivers permit (PDP).
- (g) The AO's can decide whether or not commercial service of mini bus taxis and four +1's should be operated by a single company, separate companies or by associations subject to the following:
  - Each vehicle should have a valid operating license;
  - The conditions to receive an operating license should include that the vehicle is subject to a vehicle fitness test on an annual basis and that the driver possesses a PDP; and
  - The number of operating licenses should be determined by the City after consultation with affected operators. Affected operators should provide evidence of the need for more or less vehicles if they do not agree with the number of operating licenses set out by the City including with the information gathered through the data collection process (see attached).
- (h) The above process should incorporate the current Gautrain mini bus taxi contracts and negotiated with the Gautrain Management Agency.
- (i) The start date of restructured feeders could be different from the start date of BOC/VOC services. All issues relating to contracted and commercial services should be agreed upon in a "Feeder Services Framework Agreement" or similar and signed by all the Parties in the PTTF.

#### 6.4.4 Establishment of a Bus or Vehicle Operating Company

Experience in previous phases has indicated that the sooner a bus operating company is established, the smoother the transition process to operations is. It is also likely that there could be a need for services to be performed before the negotiations are concluded, a role that has been carried out by an interim company in both previous phases.

It is thus proposed that early in the negotiation phase, a special purpose vehicle (SPV) is established. Once the negotiations are complete the AO will then be incorporated as shareholders. Shareholders could join at different times.

The role of the SPV could include to:

- a) provide interim services before the BOC is established;
- b) set up of governance systems until such time that the AO's are ready to take over the operations of the SPV as shareholders in the BOC; and
- c) initiate training and capacity building for future BOC stakeholders including management staff and directors of the board; and
- d) possible procurement of buses.

In the past, the affected mini-bus operators of each association have subscribed for shares in the BOC indirectly, through Taxi Operating Investment Companies (TOICs). Each association formed its own TOIC, where each individual affected mini-bus operator subscribed for shares in the respective TOICS and the TOICS in turn subscribed for shares in the BOC. Meaning that the TOICS were the direct shareholders in the BOC. It is proposed that this process continue incorporating lessons from the previous phases.

#### 6.5.5. Bus Operating Company Agreement (BOCA)

The BOCA will be a 12 year contract and will be similar to the Phase 1A and 1B contract. It will include the following provisions:

- (a) Bus operator services including service planning, management and control;
- (b) How fees and payments will be made and the fee per km to be paid;
- (c) Bus schedules, timetables and frequencies;
- (d) Conditions for loan for use of onboard equipment;
- (e) Conditions for depot lease;
- (f) Insurance for busses and onboard equipment;
- (g) Obligations of both parties, breach and dispute renewal;
- (h) What happens when the BOC deviates from this contract (penalties) and
- (i) Bus ownership.

It is proposed that in respect of bus ownership, the City owns the buses for the first 6 years of the contract and then transfers the buses to the operator on condition that certain good performance and good governance has been achieved. The City will comply with the relevant clauses of the MFMA in respect of long term contracts and asset transfer.

#### 6.5.6. Compensation and Empowerment Framework Agreement

The BOC company formation policy indicates that: "The City recognises that certain operators were previously disadvantaged prior to 1994 because of the denial of franchise to black people and the public transport dispensation which did not fairly/equally treat all modes of transport, and that positive measures must be taken to support and facilitate the transformation of the minibus taxi industry with a view to providing safe, affordable and reliable public transport to commuters."

The measures proposed for AOs who are to become shareholders in the Phase 1C BOCs are as follows:

- (a) A once off amount, or a so called empowerment premium, determined as set out below and per the conditions further set out below;
- (b) The amount paid as equity should continue to be more or less equivalent to the amount that a shareholder would have received from scrapping his/her mini bus taxi;
- (c) Shareholders will need to relinquish their taxis and their operating licenses to be eligible for the empowerment premium and to become a shareholder;

- (d) The City will facilitate the process of taxi scrapping and relinquishing of operating licenses at minimal cost and administrative burden to the operator;
- (e) The City will pay an amount equivalent to the scrapping allowance to operators who own vehicles manufactured by Chinese manufacturers which are not eligible for the scrapping allowance. The exact amount would need to be negotiated and approved by the Mayoral Committee and a cap on the numbers of vehicles for which the City will pay the scrapping allowance may also need to be negotiated and approved by the Mayoral Committee;
- (f) The City will not pay for the outstanding hire purchase (HP) payments of identified vehicles as in previous phases but will facilitate the payment of these amounts to banks from the empowerment premium;
- (g) Mini bus taxi drivers and related employees should be given an opportunity to become staff of the BOC or the stations including through the provision of training (see further section) and that value chain opportunities should be provided (see further section); and
- (h) Certain categories of mini bus taxi operators subject to certain conditions, can also be eligible to receive an empowerment premium to exit the taxi industry as further set out below.

Below the proposed process and conditions in respect of the empowerment premium are set out:

- (a) The amount of the empowerment premium must relate to the amount that a mini bus taxi operator would have made over a seven year period if he/she had not become a shareholder of the BOC. Seven years has been chosen because operating licenses are granted for a period of seven years in terms of the NTLA.
- (b) The amount that a mini bus taxi operator would have made may vary depending on the routes travelled, age of the vehicle and other circumstances, which will be determined through data collection which is independently verified (see earlier section).
- (c) It is thus possible that the amount would vary. This or these amounts must be negotiated with the affected operators and submitted to the NDOT for approval (together with the independently verified data justifying the amount) and then approved by the Mayoral Committee.
- (d) The amount can't be paid out until the AO has submitted his/her vehicle for scrapping, the license has been relinquished and cancelled and the AO has committed to be a shareholder including committing to a restraint of trade not to operate another vehicle on any of the affected routes.
- (e) To ensure that AO's spend or invest the money that they receive as an empowerment premium wisely, they should be required to attend a course on personal finance where they are independently assessed.

Depending on the progress of negotiations there may be a difference in the time when the operations will begin and when shareholders subscribe for their shares after which they will be able to receive a dividend. If this situation occurs in respect of Phase 1C, compensation for loss of income should be negotiated with the AOs. This amount may vary between mini bus operators and bus operators and the amount would need to be justified in terms of the data collection referred to in the pre-negotiation section.

The conclusion of the negotiations on the above must be included in a Compensation and Empowerment Framework Agreement which will require Mandating Committee and Mayoral Committee approval before signing in the PTF. It may be possible that different agreements are negotiated with the bus and mini bus AO's.

#### 6.5.7. Employment Framework Agreement

The BOC Company Formation policy allows the City to make an offer in respect of displaced employees. The majority of displaced employees are drivers of the mini bus taxis and buses that will be taken out of service. Other employees can include rank marshals and 'cooking mamas at ranks. Some are formal employees and others are independent contractors from a labour law perspective.

An Employment Framework Agreement will set out that these workers will be given preference for employment as drivers in the BOC, other staff such as mechanics and cleaners in the BOC and cashiers, marshals and ambassadors in the stations. It will also include the processes by which the City will establish and fund a programme to evaluate the competency of identified workers and then provide training for them.

#### 6.5.8. Value Chain Framework Agreement.

In previous phases, AO also negotiated value chain framework agreements whereby previously disadvantaged mini bus taxi operators are enabled to benefit from the 'value chain' activities of the Rea Vaya BRT. The City has a BRT value chain policy in this regard.

It is proposed that an agreement in this regard be signed with the AO in the NEQ but only after the above mentioned policy is reviewed. The review is necessitated to align the commit of the City to provide value chain opportunities to the mini bus taxi industry with the MFMA and Supply Chain Regulations and City policy.

### **7. Phase 1C(a) Business Plan**

As indicated in the first part of the document, the NEQ IPTN including Rea Vaya Phase 1C will be implemented in phases between 2018 and 2023. This section provides the relevant details as well as the factors influencing the selection of Phase 1C (a) as the first sub-phase of the NEQ to be implemented in October 2018. It concludes with the financial model for Phase 1C (a).

#### 7.1. Factors influencing the selection of Phase 1C (a) as the first sub-phase of the NEQ

The Transport Department has deliberated significantly on the phasing in of the NEQ. As the various City wide and NEQ studies it became evident that very significant demand is generated within the NEQ as well as between the NEQ and other parts of the City and province. It was thus not possible within the current funding, financial and institutional constraints to implement either the entire NEQ or just the Phase 1C trunk and complementary new buses in one go.

Many combinations were considered and finally the option which is most feasible and would be most sustainable was identified as being the proposed Phase 1C (a) routes and services. The reasons for this are inter alia:

- Significant progress has been made on the T4 infrastructure – the only section outstanding for an October 2018 start would be alongside the Watt Street Development;
- Introducing Complementary services with buses from Ivory Park and Midrand before the introduction of trunk or dedicated lanes was not likely to be successful due to the anticipated slow speeds in mixed traffic. Due to budget constraints, trunk routes T5 and T6 can only be fully implemented by 2023;
- The Alexandra based mini bus taxi associations have requested that all taxis on Louis Botha need to be removed on day one of the introduction of Rea Vaya, thus there needs to be a sufficient supply of buses on 'day one'.
- Sufficient budget does not exist to purchase more than the 372 buses needed for the full NEQ network between now and 2020;
- There is uncertainty regarding the extent to which the Soweto to Sandton demand and CBD to Sandton demand may shift on the T4. Starting with T4 and monitoring the passenger shifts may give us more certainty in respect of the final roll out of Phase 1C.

The sections below summarises the passenger demand and services and other inputs in the financial modelling and business plan.

#### 7.2. Routes and services

Phase 1C (a) covers Trunk route (T4) route from Joburg CBD to Sandton as well as a section of the planned Complementary route (C9) from Greenstone to Sandton via Alexandra. In the full Phase 1C, C9 will extend to Randburg. For Phase 1C (a), there will be a C9 A and C9B to improve coverage and connectivity between Alexandra and T4 on the one hand and Alexandra and Longmeadow and Greenstone on the other.

The trunk is approximately 22km and it integrates with Rea Vaya Phase 1A and Phase 1B in the CBD. The complementary routes are approximately 15 km each and will also be integrated with future phases e.g. T7 from Soweto to Sandton.

Table 12 below sets out the key route descriptions of T4A, T4B, C9A and C9B and Figure 6 shows the map:

Table 12 Route descriptions for T4A, T4B, C9A and C9B

Route No	Description	Route Length
T4A	Sandton CBD (Rivonia Rd-Katherine Str) via Alex (Louis Botha) to Gandhi Square via Metro Centre (Rissik Str pass Park Station)	22km of trunk route
T4B	Sandton CBD (Rivonia Rd-Katherine Str) via Alex (Louis Botha) to Gandhi Square via Hillbrow (Edith Cavell Street)	
C9A	Greenstone (Modderfontein Road) via Alex (London Road) to Sandton CBD (Lees Str to Katherine )	15km complementary route
C9B	Greenstone (Modderfontein Road) via Alex (Florence Maphosho Road) to Sandton CBD (Lees Str to Katherine	

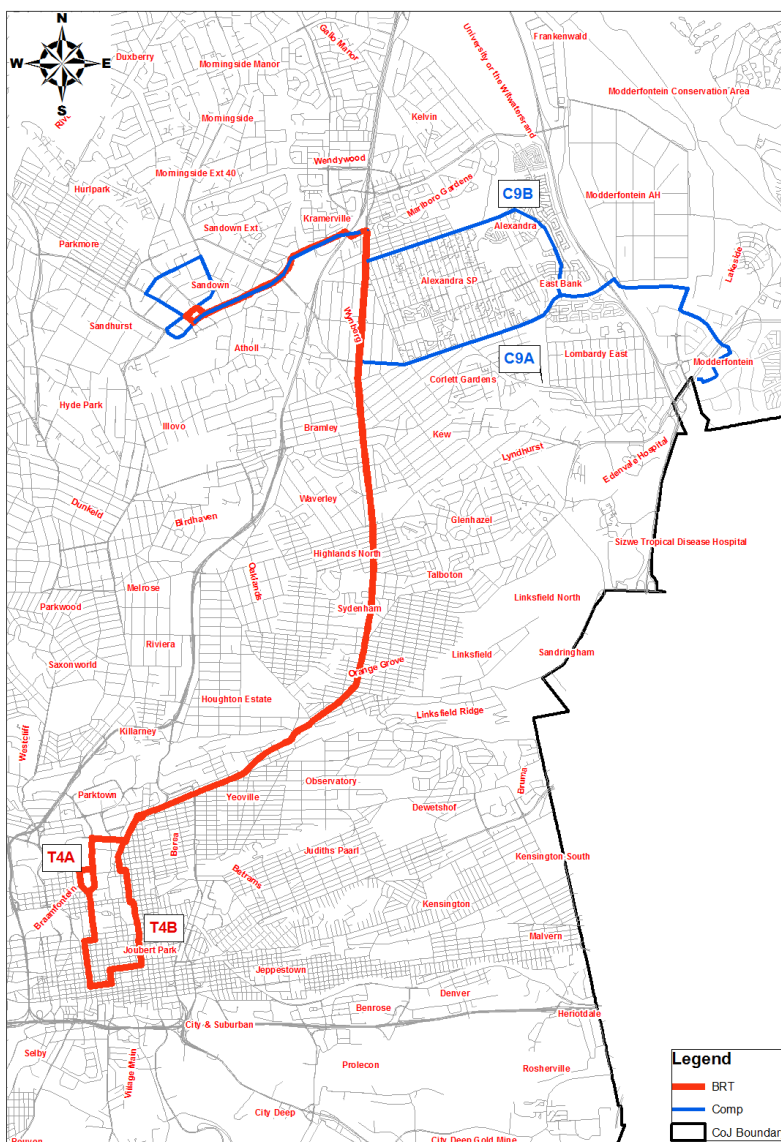


Figure 6: Phase 1C (a) trunk and complementary routes

The high level modelling on the T4A, T4B, C9A and C9B was carried out for the 2025 scenario, to enable key infrastructure such as interchanges, stations and depots to be planned for adequate long term capacity.

The total annual passengers modelled to be used for Phase 1C (a) system in 2018, is 28 million. This demand requires 109 articulated buses and 32 rigid buses in 2018 including spares.

Although the service is expected to start in 2018, the demand will approximately increase by 5% by 2023. The output from the AM peak hour assignment is translated into individual route demand profiles which show passengers boarding and alighting at each stop location.

Table 13 shows the annual passenger kilometers, annual passenger numbers and bus fleet required for T4A, T4B, C9A and C9B.

*Table 13: Annual Passengers km and Passenger Numbers*

	<b>Route No</b>	<b>Annual Passenger kms</b>	<b>Annual Passenger Numbers</b>	<b>Bus Fleet</b>
Passenger demand	T4	352 116 363	4 079 107	109 Articulated buses
	C9	42 857 143	1 472 499	32 Rigid buses

### 7.3. Service design parameters for Phase 1C (a)

Table 15 sets out the specific service design parameters for Phase 1C (a)

*Table 15: Service design parameters*

<b>What</b>	<b>Parameters</b>
Hours of service	18 hours from 04h00 to 22h00
Service frequencies	Peak hour: <ul style="list-style-type: none"> <li>• T4 at two minutes headways</li> <li>• C9 at five minute headways</li> </ul> Off peak: <ul style="list-style-type: none"> <li>• T4 and C9 at 30 minutes headways</li> </ul>
Load factor on vehicles	0.85 utilisation of service capacity in the peak direction
Fleet pallet	Single-articulated bus: Capacity - 110 (44 seats) Rigid Bus: Capacity - 69 (up to 40 seats) Minibus-taxi: Capacity – 15 and 22 seats (no standees)
Spare fleet	5% of new fleet
Operating design speeds	T4 – 25kph C9 – 22kph Main and feeder services: 22 kph
In vehicle standing time	20 inutes

#### 7.4. Financial model

The financial impact on the operationalization of Phase 1C (a) is discussed below and detailed in **Appendix D**.

##### 7.4.1 Infrastructure

It is estimated that the cost for the construction of Phase 1C (a) will be approximately R2 billion and a significant amount of this infrastructure will support the full NEQ. This expenditure is funded from the Public Transport Network Grant (PTNG), and the conditions as per the 2017/18 PTNG allow for the capital expenditure to be funded from the grant. The 2017/18 allocation as per the Division of Revenue Bill adequately covers the expenditure.

##### 7.4.2 Buses

A total amount of R895 million has been allocated from City funding over the 2017/18 MTEF period for the procurement of the Rea Vaya and Metrobus buses. This amount will be adequate for the fleet required for the commencement of Phase 1C (a) services in October 2018. At least R624 million will be spent on Rea Vaya buses for the commencement of the Phase 1C (a) services. A summary of the required fleet and bus prices is as per the table below:

<b>Bus type</b>	<b>Bus fleet</b>	<b>Cost per bus</b>	<b>Total</b>
Articulated buses	109	R4 532 659	R494 059 842
Rigid buses	32	R4 042 642	R129 364 541
<b>Total</b>	<b>141</b>		<b>R623 424 383</b>

##### 7.4.3 Fare revenue

The projected revenue that will be generated from Rea Vaya fares for Phase 1C (a) over a three (3) period are as follow:

- 2018/19 - R97 million
- 2019/20 - R142 million
- 2020/21 - R150 million

The fare revenue is calculated based on the passenger kilometers as per the demand.

##### 7.4.4 Operation expenditure

The operational expenditure, excluding compensation for previously disadvantaged operators is summarized at a high level as per the table below:

<b>Expenditure item</b>	<b>2018/19 R'm</b>	<b>2019/20 R'm</b>	<b>2020/21 R'm</b>	<b>Funding source</b>
Direct bus operating cost	164	232	246	Funded by fare revenue (7.3 above) and City contribution
Indirect bus operating cost	21	30	32	Funded by the PTNG as per the current grant conditions
ITS cost	126	97	97	Funded by the PTNG as per the current grant conditions
Station management cost	15	16	17	Funded by the PTNG as per the current grant conditions
Staff cost	7	10	11	Funded by City contribution, however the station staff amounting to R5m in 2018/19 can be funded by the PTNG
Maintenance cost	5	9	10	Funded by the PTNG as per the current grant conditions
General expenditure	1	0.5	0.5	Funded by City contribution
<b>Total</b>	<b>339</b>	<b>394.5</b>	<b>413.5</b>	

#### 7.4.5 Compensation for previously disadvantaged operators

The total compensation that will be required to pay the effected operators is estimated at R805 million. This amount is based on the number of minibus taxi that must be removed based on the total number of seats of the 109 articulated buses and 32 rigid buses. As it is unlikely that all the effected vehicles will have to be replaced on day one, the amount can spread over more than year. Currently no budget is available to fund the compensation amount. This will need to be requested from the PTNG in future years and can lead to less funding being available for future roll out.

#### 7.4.6 Operational expenditure ratios

The coverage of the operating cost by the fare box is as below:

<b>Ratio</b>	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>	<b>Comment</b>
% of direct bus operating cost covered by fare revenue	59%	61%	61%	These ratios are higher than Phase 1A and 1B direct bus operating cost coverage, which is currently 31%
% of bus operating cost covered by fare revenue	52%	54%	54%	The lower coverage is due to the profit margin of 13% which is included in the bus operating cost
% of system cost (excluding compensation) covered by fare revenue	28%	36%	36%	The smaller coverage in 2018/19 is due to the higher ITS cost in 2018/19
% of total operating cost covered by fare revenue	8%	36%	36%	The compensation is included, which is based on the assumption that it will be paid in 2018/19