

2012 MyCiTi Business Plan

Phases 1A, 1B and N2 Express of Cape
Town's MyCiTi IRT system

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As submitted to Portfolio Committees



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This Business Plan, for Council approval, is intended to inform and guide the City of Cape Town in the development, implementation and operation of the MyCiTi Integrated Rapid Transit Project. The plan and associated development programme are based on current knowledge regarding system requirements and information currently available with regard to funding and other constraints.

Continuous detailed and in depth assessments will be required to achieve an optimal implementation programme. In response to this and further information on system needs, risk mitigation, reduced uncertainty, funding changes and the like, the Business Plan and associated development programme will be subject to change.

While every effort has been made to present accurate and current information, the City of Cape Town will not be held liable for the consequence of any decisions or actions taken by others who may utilise the information contained herein.

Note: This version of the 2012 Business Plan is still subject to copy edit and layout check. A final and cleaned version will be submitted to Council. If changes affect substance, a table in this regard will be tabled at the relevant Portfolio Committee meetings, or specified in a subsequent report to MAYCO.

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Abbreviations and key terms

AFC – Automated Fare Collection	MFMA – Municipal Finance Management Act (56 of 2003)
APTMS – Advanced Public Transport Management Systems (see also “Control Centre” or CC)	NDOT – National Department of Transport
ATM – Automatic Teller Machine	NLTA – National Land Transport Act (5 of 2009)
BRT – Bus rapid transit	OCC – Operations Control Centre
CBD – Central business district	Operations Management Unit – the structure responsible for managing MyCITI operations: initially the Department: IRT Operations
CC – Control centre	POLB – Provincial Operating Licensing Board
CCC – Control Centre Contractor	PTISG – Public Transport Infrastructure and Systems Grant
CCTV – Closed circuit television	PTOG – Public Transport Operating Grant
CRC – Continuous reinforced concrete	SARS – South African Revenue Services
CRR – Capital Replacement Reserve	SDA – Service delivery agreement
DORA – Division of Revenue Act	SS – Station services
EFF – External Financing Fund	TIC – Transport Information Centre
EMV – Europay / MasterCard / Visa	TMC – Traffic Management Centre
FS – Fare system	TR&S – Transport, Roads and Stormwater
GPS – Geographic positioning system	VAT – Value Added Taxation
IDP – Integrated Development Plan	VO – Vehicle operation
IPTN – Integrated Public Transport Network	VOC – Vehicle operator company
IRT – Integrated Rapid Transit	
ITP – Integrated Transport Plan	
ITS – Intelligent Transport System	
ME – Municipal entity	

Executive summary

The 2012 MyCiTi Business Plan provides for the extension of the MyCiTi system to Phase 1B and the N2 Express service, but it also incorporates and updates the content of the 2010 MyCiTi Business Plan, which addressed Phase 1A. Thus the 2012 MyCiTi Business Plan replaces previous business plan documents. In this regard, it is intended to inform and guide the City of Cape Town in the development, implementation and operation of the MyCiTi Integrated Rapid Transit system.

This summary focuses on aspects that have been updated or changed in the new business plan.

Background

In October 2010, Council approved the 2010 MyCiTi Business Plan titled "Phase 1A of Cape Town's MyCiTi Integrated Rapid Transit system". Minor amendments to this plan were passed by Council in February and October 2011.

There have been many developments since the approval of the 2010 business plan, including the start of trunk operations between the City Centre and Table View in May 2011, and the provision of a limited range of interim feeder services within the central area and around Table View. Tenders were awarded for the provision of an automated fare system and for the creation of a control centre to monitor and direct vehicles, and ensure they run to schedule. Both these systems are now largely implemented but not yet fully operational. Station services and related activities have been provided on an interim basis by two of the vehicle operating companies, and a tender for the provision of these services for a further six years is in the final stage of adjudication. The tender for further vehicles has been awarded, and includes the provision of nine-metre, low-floor vehicles. These are being assembled in Cape Town and the first of them will be brought into service later in 2012.

More than 4.5 million passenger journeys have been provided since the start of the MyCiTi interim service.

Vision for public transport

The City's vision for public transport is driven by the need to integrate various modes of public transport into a single effective and seamless service. This includes the establishment of a full public transport network, with high-quality rail and road services, that will place at least 75% of Cape Town's population within 500 metres of the system. The Bus Rapid Transit (BRT) network will link into the rail service, which will remain the backbone of public transport in Cape Town. The planning for this BRT service is guided by the principles of quality, equity, security, sustainability and integrity. This translates into design principles of universal access, passenger mobility, accessibility, modal integration, customer convenience, safety and security, sustainable transport, congestion management, the optimal use of scarce resources and transport that supports economic development.

There is a clear linkage with the City's Integrated Development Plan – which envisages a prosperous city that creates an enabling environment for shared economic growth and development, achieves effective and equitable service delivery, and serves the citizens of Cape Town with a well-governed and effectively run administration.

Phased implementation

The system will be rolled out in four phases, for completion in 15 to 20 years. Phase 1 focuses on the central city and the Blaauwberg corridor towards Table View and Dunoon, as far as Atlantis and Mamre. Phase 2 addresses the public transport needs of the metro south-east, including Khayelitsha and Mitchells Plain, linking these to the rest of the city. Phases 3 and 4 extend the system to the Durbanville, Delft and Helderberg areas. The N2 Express service is a short-term intervention to relieve pressure on existing services, such as rail, between the metro south-east and the central city. It will also allow certain innovations and lessons learned from Phase 1A to be tested in the south-east prior to their adoption as part of Phase 2.

System plan

The system plan, which forms part of the business plan, is informed by revealed travel data, lessons learnt from the operations of the system to date, and lessons from public transport systems in South Africa and abroad. The ability to accurately model travel behaviour is a challenge worldwide. The accuracy of the modelling results is enhanced through continuous improvement and refinement by calibrating the model with new transport data as it becomes available.

Several years of planning and research have identified critical missing transport links in the public transport system. The Khayelitsha-to-CBD rail service, in particular, is running at over capacity, but this is driven to a large degree by a desire to access the Bellville and Wynberg/Claremont area from the metro south-east. The Chris Hani rail corridor has been identified for a significant upgrade and will be the backbone of the N2 corridor, which links the metro south-east to the Cape Town CBD. Meanwhile, the City has prioritised four further transport corridors for implementation, namely the West-Coast corridor, the East-West Lansdowne-Wetton corridor, the North-South Symphony Way corridor, and metro south-east to West Coast corridor. Given that it is not feasible at present to build rail lines along these routes, they will need to be served by bus rapid transit services.

The N2 Express route network will consist of direct routes only, with existing services remaining to provide feeder services. This service will operate in both mixed traffic and the dedicated N2 BMT lane. There will be a few open stops with on-board fare collection and verification, and enclosed terminal stations with off-board fare collection and verification. High-capacity vehicles with a high seating ratio are being investigated for use with universally accessible infrastructure.

Low-floor and high-floor buses

Level boarding (as is possible at MyCiTi stations, where the bus floor is level with the station floor) is an important component in providing a high-quality service which allows universal access and quick boarding and alighting, but requires station and bus stop platforms to be of the same height as the vehicle floor.

The high-floor buses that were chosen for Phase 1A made more floor space available for passengers, cost less, weighed less and had less complex maintenance issues than low-floor buses, but required high station platforms. These buses offered both high-floor doors on the right side of the bus and a low-entry door with steps on the left hand side of the vehicle, enabling them to be used at feeder stops if necessary. However, the stepped entry on the left side into high-floor vehicles does not comply with required universal access standards, and results in buses having to dwell for longer periods at stops as passengers board through the single left-hand door, up the steps. The decision to implement a high-floor bus trunk system in combination with a low-entry feeder system also resulted in a number of infrastructure challenges in the implementation of Phase 1A, increasing the number of station platforms required, even where the demand is low.

Using low-floor technology for trunk as well as feeder vehicles makes it easier to operate the same vehicle on both trunk and feeder routes, offering a more convenient, universally accessible service and greater flexibility in vehicle utilisation; however, such vehicles are more costly to purchase and maintain. The City thus intends introducing a low-floor trunk express bus service to Mitchells Plain and Khayelitsha as a test case for this new technology. Assuming the associated maintenance and cost challenges can be successfully addressed in future, the low-entry system will offer greater flexibility as the service extends into the high-density areas of the metro south-east.

The system will be fully accessible for passengers in wheelchairs and passengers with disabilities such as sight impairment. The network of dedicated bicycle and pedestrian pathways around the main bus trunk routes will also be a key feature.

Because of their close integration, the system for Phase 1B must be the same as for Phase 1A, namely high-floor vehicles operating on the trunk routes and low-floor feeder vehicles on the feeder routes.

Contactless card payment system

The contactless card payment system remains part of the system's development into future phases. The City's contactless card, the myconnect card, is a core component, although any EMV compliant contactless cards can be used. Payment will take place at stations or on board the vehicles. Once fully implemented, the fare system will permit distance-based pricing capped at a defined maximum fare. Discounts will also be offered for frequent users.

Business structure

In the initial phase, the central implementation, coordination and management of the system will take place through the MyCiTi Project Office within the City administration, reporting to the Executive Director: Transport, Roads and Stormwater, and consisting of two

departments, namely the Department: IRT Implementation and the Department: IRT Operations.

The City of Cape Town has overall responsibility for MyCiTi. The City determines where the system is to be rolled out, builds and maintains the infrastructure, and sets the terms under which the system operates. This includes the framework for establishing fare levels and, through negotiations with the MyCiTi Operations Management Unit, the level of additional finance to be contributed by the City to run the transport operations.

Six main functions are envisaged regarding MyCiTi operations:

- The MyCiTi Operations Management Unit, which is responsible for managing MyCiTi operations. This function presently falls within the City Department: IRT Operations.
- Vehicle operations, provided by contracted vehicle operators, also referred to as vehicle operating companies (VOCs).
- Automated fare collection (AFC).
- Control centre (CC).
- Station management (SM).
- An advertising contractor, responsible for advertising on MyCiTi infrastructure and for maintenance of bus stops.

At the heart of the MyCiTi system will be the VOCs, who are responsible for operating the vehicles necessary to provide the service.

The City may sign contracts with three VOCs in Phase 1. However, if a reasonable agreement cannot be reached with any one or more of these companies, then contracts may be concluded with fewer companies.

For phases 1A, 1B and the N2 Express, the City will purchase the initial fleet of vehicles with funds from the Public Transport Infrastructure and Systems Grant (PTISG). The vehicles will be held as City assets and made available to the VOCs at no cost, to be used and maintained by the VOCs for the length of the contract, during which time the vehicle supplier may be contracted to maintain the vehicles. After the initial 12-year period, the operators may be required to purchase their own vehicles. Vehicles purchased in addition to the initial fleet are expected to be purchased by the VOCs and paid for out of fare revenue.

The City has identified the sale of advertising space on MyCiTi infrastructure as a source of income for the system. To help realise this revenue opportunity, the City has awarded the advertising contract to an outdoor media company to act as the City's agent for marketing and managing advertising on IRT infrastructure. The advertising contractor is also responsible for the maintenance and cleaning of MyCiTi bus stops, funded from the sale of advertising.

The City intends that retailers or others be awarded concessions to make use of retail infrastructure at MyCiTi stations, depots and staging areas.

Transport Authority

Further development of possible institutional arrangements for the management of MyCiTi will depend to some degree on the intended creation of the Transport Authority, and the form that this will take. The roles and responsibilities of the Transport Authority will include:

- Planning
- Contracting, in terms of which it would contract services such as MyCiTi operators and the current Golden Arrow Bus Services.
- Municipal transport regulation, in terms of which it would issue operating licences and regulate the minibus-taxi and broader public transport industry.
- Myconnect, the card-based fare system that will be rolled out across all public transport operators
- Transport Management Centre and Transport Information Centre.
- Setting of standards and monitoring and evaluation.
- Rail management, in terms of which the City will exercise some level of control over the rail function in the City.

This will impact on the institutional arrangements and staffing of MyCiTi in ways which will become clearer once the Transport Authority is formed. Authority for transport cannot be externalised from the City, hence the responsibility for key functions will remain with the City. However, the City will be using external mechanisms of various kinds to implement some of its responsibilities, and may create a municipal entity to perform some of the tasks.

Costs and funding

The costs of the MyCiTi service consist largely of the once-off capital expenses that are essential for initiating a quality service. These include road works, the construction of stations and stops, setting up the quality automated fare system, and the control system, which monitors safety and reliability. This includes ensuring that vehicles run to timetables and informing users about when buses will arrive.

Costs also include the expenses of business and system design and planning, and the compensation of minibus-taxi operators who are giving up their rights to operate in the area. While infrastructure must be maintained, the substantial costs required for initial implementation will not need to be repeated.

This and other capital expenditure is all funded by national government's PTISG.

Besides the once-off capital costs, there are ongoing recurrent costs incurred in running the system. Besides maintenance costs, these recurrent costs include the cost of contracts with service providers such as the vehicle operating companies, the fare collector, station management and the control centre. Fare revenue and advertising pays for a significant of these costs, with the remaining deficit currently shared between national government and the City. In Phase 1A, for the 2011/12 financial year, the City contributed R187 million from its property rates and other general revenue sources towards these recurrent costs.

Both national government and the City are seeking funding and implementation approaches which, while ensuring high service standards, incentivise the containment of costs and

encourage prudent spending. By including the private sector and role-players from the industry, on a competitive basis where feasible, but retaining public control over the overall network, costs can be contained.

The city's urban form, with unusually low densities and long travel distances, together with peaked travel demand patterns and high income inequalities, makes the provision of quality public transport challenging and expensive. But a quality public transport system is essential to economic growth and ensuring that Cape Town achieves its full potential.

In its request to the national government for funding MyCiTi for the Medium Term Expenditure Framework period, the City has proposed that national and City authorities share equally the burden of recurrent costs not covered by system revenues. This is in line with an earlier suggestion by National Treasury, and would incentivise containment of costs by the City while sharing the burden with national government. In the Council Resolution approving the 2012 MyCiTi Business Plan, Council approved that the City would contribute to payment of recurrent costs not covered by system revenues, but subject to a cap of four percent of the City's rates income, a level slightly above 2011/12 spending levels. The City will engage with national government with the aim of reaching agreement in this regard.

The City proposes that the City and national government would fund R128 million for the current financial year, increasing to R212 million for the 2015/16 financial year, for Phase 1A, Phase 1B and the N2 Express services combined. These amounts are all below the envisaged cap.

The City is taking a conservative approach to cost and revenue modelling. Recent modelling suggests that fare revenue may well be as much as 25% higher than the figure assumed in the business plan, in which case the required contribution from Council's own funding, as well as the national government subsidy, would be lower.

Value Added Tax (VAT) contributes a substantial 14% to the costs. As a provider of public transport, MyCiTi has been classified as "VAT exempt", which means that while VAT must be paid by contractors setting up and running the services, it cannot be recovered by the City from South African Revenue Services (SARS). National Treasury acknowledges the anomalies of this VAT approach (since the City can claim back VAT spent on other services, such as on the cost of building roads for use by private cars) and is investigating the matter. This anomaly is an example of a challenge being confronted by all cities in the implementation of this new system.

The PTISG funding already received, and confirmed for the future, will cover the capital expenditure for Phase 1A, Phase 1B and the N2 Express, while co-funding recurrent costs. Up until end June 2012, the City had received R3.74 billion of the PTISG, and a further R3.94 billion has been committed until June 2015. National Treasury has provided a total of R7.7 billion to public transport in Cape Town between 2005 and 2014, largely dedicated to the MyCiTi system.

Transition from existing to new vehicle operators

Chapter 8 of the business plan describes the City's approach to directly affected road-based public transport operators. A complex process is followed to determine the affected operator's existing market share. The operator is then given an option to be paid out this share in order to exit the industry, or to be given the determined value as a percentage

share in the new vehicle operating company for the area in question. There are three possible rounds for payment of compensation, namely early exit compensation, early compensation and final stage compensation.

Drivers and assistants who may lose their jobs when operators take up exit compensation will be given preference for training to qualify for new positions in the MyCITI system. One of the main aims of MyCITI is to improve the work environment for those currently employed in the minibus taxi industry.

For the N2 Express service, it is proposed that two core VOCs be established through a negotiated process or a tender process.

Executive Summary added after submission of the Business Plan to Portfolio Committee, to serve as a summary

1. Introduction

1.1. MyCiTi Business Plan 2012

This document is an updated Business Plan for MyCiTi, addressing Phases 1A, 1B and the N2 Express.

In October 2010 Council approved the MyCiTi Business Plan entitled 'Phase 1A of Cape Town's MyCiTi Integrated Rapid Transit system. Relatively minor amendments to this plan were passed by Council in February and October, 2011. The current document thus represents a revised Business Plan for Phase 1A but adds Phase 1B and the N2 Express service for which no Business Plan has previously been developed.

This document thus replaces the October 2010 Business Plan and its revisions in February and October 2011. In doing so it restates key elements from the earlier Business Plan, although leaves out some detail which is no longer relevant or has been superceded in other ways.

The document is structured so as to be able to distinguish between Phases 1A, 1B and the N2 Express where feasible.

Phase 1B is a relatively small extension to the initial Phase 1A and closely integrated with the routes already approved in the West Coast area. The N2 Express extends the service to the metropolitan South East, but is not regarded as part of Phase 2. It is aimed at temporarily reducing pressure on the services from the metropolitan South East while rail services are upgraded, but also enables the City to test new approaches before finalising them for application when Phase 2 is implemented. Phase 2 will be the subject of a further Business Plan.

The new plan is also being tabled in the context of important initiatives related to the design and implementation of new arrangements aimed at integrating management and control over all public transport modes and operators in Cape Town under a single authority located within the metropolitan government.

1.2. Background

The improvement of public transport is one of eight key strategic focus areas identified by the City of Cape Town in its Integrated Development Plan (2012 – 2017) for achieving its long-term vision and developmental goals. Public transport plays a vital role in providing all citizens and visitors with access to opportunities and facilities, whether for economic, education, health, recreation or social purposes.

In February 2007 the City performed a scoping study on an integrated public transport network. The report, *City of Cape Town – Public Transport Implementation Framework*, saw the potential for a city-wide network of bus rapid transit (BRT) routes and related motorised and non-motorised feeder services to complement the existing rail system as part of an integrated public transport system. The concept for this road-based system was modelled on highly successful projects in cities worldwide, including Beijing, Bogotá, Curitiba, Guayaquil, Los Angeles, Ottawa, Paris, Pereira, Quito, and Seoul.

In October 2007, a project office was established to plan an Integrated Rapid Transit (IRT) system in Cape Town. The term 'Integrated Rapid Transit' was used rather than 'Bus Rapid Transit' to emphasise the need for integration with other modes, especially rail, the backbone of public transport in Cape Town. It is also consistent with national government's policy for creating 'Integrated Rapid Public Transport Networks' in cities. The City is receiving substantial financial support from the national Public Transport Infrastructure and Systems Grant (PTISG) fund initially established by National Treasury to improve public transport for the 2010 FIFA World Cup, and now focussed on further transforming public transport in South Africa.

On 27 August 2008, the Council approved the implementation of Phase 1A, which includes the inner city and airport services, and certain routes on the corridor between the inner City and Blaauwberg and Atlantis, in terms of the October 2012 Business Plan.

Phase 1A serves a region of high growth not served by rail, linking it to the Central Business District (CBD) and to the rail network. This initial phase had two clear aims – to meet the requirements for the 2010 Host City Transport Operations Plan and to leverage this investment to achieve a legacy of improved public transport for the City of Cape Town.

During the course of planning, it became apparent that costs would be significantly higher than initially estimated. In October 2009, the Council agreed to continue with the project, limiting initial implementation to that covered by the then allocation of national funding. Council also decided that initial services must be provided to meet the FIFA requirements for the hosting of the World Cup and the conditions set by the Environmental Impact Assessment regarding the Cape Town Stadium. Lastly Council resolved that the Chief Financial Officer and the Executive Director: Service Delivery Integration (subsequently Transport Roads and Major Projects or TR&MP) should investigate further funding.

Flowing simultaneously from the October 2009 meeting a process was initiated to thoroughly review all aspects of the project, including undertaking a due diligence audit and a detailed assessment of the operational modelling by independent professional experts.

In response to the funding constraints national government indicated a readiness to substantially increase its Public Transport Infrastructure and Systems Grant (PTISG) allocations, including a readiness to partly fund operating costs from the grant. This new funding environment was then incorporated into a draft Business Plan, which was published in July 2010 for consultation with the public and other stakeholders, and finalised in October 2010 based on the responses.

While raising a number of detailed issues the national Department of Transport (NDOT) stated that *'Overall, the MyCiTi Business Plan (2010) is well constructed and detailed'*, and added that *'The plan in many respects can serve as an example for other South African cities'*. The response from National Treasury was contained within a letter which also confirmed the City's PTISG allocations as contained in the Division of Revenue Act for the outer years of the Medium Term Expenditure Framework. It proposed to explore further with the City its envisaged approach to bus ownership and noted approvingly of the City's proposed fare system and related elements, adding that they *'appear to offer considerable advantages in reducing the risk of fare evasion or collusion'*. National Treasury stated that it *'sees no impediment to the City entering into contractual commitments beyond the three-year MTEF period'*.

Since then the National Department of Transport (NDOT) and National Treasury, through the annual Division of Revenue Acts (DORA) has allocated a total of R3 425 million to the City for Public Transport Infrastructure and Systems (PTIS) over the period 2010/11 to 2012/13, and secured R2 594 million for the two outer years of 2013/14 and 2014/15 combined.

In May 2011 the trunk service between Civic and Table View stations started operating together with a number of feeder services in the central city and Table View areas, referred to as Milestone 0. The feeder services have made use of available high floor trunk vehicles, with curb side boarding making use of the left front door and steps into the bus interior.

The current Milestone 0 services are being provided by three vehicle operators (VO's), namely Golden Arrow Bus Services (GABS), Kidrogen, and Transpeninsula, constituted out of existing operators in the areas from the formal bus sector as well as minibus taxi operators. Negotiations are currently underway to sign 12 year contracts with these service providers to operate vehicles throughout the area of Phase 1A. Assuming acceptance of this business plan such negotiations will be extended to include the area of Phase 1B.

Since the approval of the 2010 Business Plan:

- the tender was awarded for the provision of an automated fare system, and the initial fare system which used paper tickets migrated to an electronic card system. The capabilities of the card system are being progressively enhanced as hardware and software are implemented in terms of the tender. The key specifications of the card system - in particular, the requirement that it be EMV (Europay / MasterCard / Visa) compatible are set by national regulations. This is new technology for transport systems globally which presents both advantages in terms of inter-operability with other card systems as well as significant challenges.
- the tender for the control centre was awarded and is currently being implemented, but is not yet fully operational.
- station services and related activities have been provided on an interim basis by two of the vehicle operating companies. Tenders have been submitted for a long term contract to provide station services and are in the process of being evaluated.
- the tender for further vehicles has been awarded, including nine meter low floor feeder vehicles. These vehicles are currently being assembled in Cape Town and will be brought into service later in 2012 with the implementation of milestone 1.

Since the start of operations MyCiTi has provided over 4 million passenger journeys. Based on the feedback received directly from the public as well as the many media reports, there is overwhelming support and appreciation for the quality of the service experienced on the MyCiTi buses and stations.

1.3. Purpose and outline of the document

1.3.1. Purpose

This document sets out the updated business plan for MyCiTi Phases 1A, 1B and N2 Express with:

- a summary of the main parameters of the project.
- extent and estimated budget of Phase 1A, 1B and N2 Express of the MyCiTi system
- an updated system and roll-out plan of operations,
- updated institutional and financing arrangements
- an explanation of key infrastructure decisions
- an updated explanation of the policy on compensation of the directly affected operators in the current public transport industry for Phase 1A and 1B, and a proposed approach to industry transition for the N2 Express service.

Because Phase 1B is so closely linked to Phase 1A most of the design elements, such as vehicle floor height and the use of stations as opposed to stops cannot be altered. However in Phase 2 there is more scope for making changes based on lessons learned from Phase 1A.

The N2 Express is not regarded as part of Phase 2. However, it permits the testing of certain innovations that are intended to be introduced in Phase 2. These innovations include:

- Using low floor vehicles with doors on both sides for both trunk and feeder services to allow much greater flexibility between trunk and feeder routes
- Creating stations only where demand requires it and using stops served by the left hand door even where the route follows the median
- A new approach to industry transition

This document will be updated from time to time as the Business Plan is adjusted to meet the challenges that inevitably arise in a project of this scale and complexity. Updates and developments will be reported in the regular progress reports of the MyCiTi project. Where material changes to the Business Plan are proposed, this will be reported to Council for approval.

1.3.2. Outline of document

Chapter 1 sets out the background, purpose and outline of this document.

Chapter 2 confirms the vision of an integrated rapid public transport system and the rationale for the project. It also highlights the particular challenges faced by attempts to provide public transport in Cape Town, especially from a financial perspective.

Chapter 3 demonstrates the project's consistency with key policies, including the Integrated Development Plan and the Integrated Transport Plan, both of which are statutory requirements.

Chapter 4 is a summary of the system plan and phases. It includes details of the routes, vehicle specifications and passenger demand. It indicates a phased roll out over time, with phases determined by factors, such as operational coherence and financial sustainability.

Chapter 5 describes key engineering design features, including vehicles, stations and roadway, and the motivation behind them. It includes a discussion on the rationale for seeking to test low floor trunk vehicles on the N2 Express service.

Chapter 6 describes the envisaged business structure and contractual relationships through which the MyCiTi system is managed and operated. These seek to combine public and private sector elements to create incentives for efficiency and effectiveness, in terms of a set of mandates, service delivery agreements and contracts. This chapter describes the contracts for vehicle operators, the fare system, the control centre and the station services.

Chapter 7 addresses the institutional and the staffing structure. The recent decision to create a Transport Authority has significant implications for the institutional and staffing structure of MyCiTi, which will become clearer in the near future. This chapter sketches some of the background and describes the current and planned staffing arrangements for MyCiTi, which will be responsible for the implementation of Phases 1A and 1B and the N2 Express

Chapter 8 deals with financing, including the full range of costs arising from the project and key sources of finance. It indicates how it is envisaged that costs be covered. While capital costs represent the bulk of the costs over the medium term these present fewer long term risks than the costs of running the system on an ongoing basis. This chapter thus places significant emphasis on recurrent costs and associated risks of running Phases 1A, 1B and the N2 Express.

Chapter 9 describes the mechanism for industry transition from existing to new vehicle operators. An important component of the business plan involves incorporating existing service providers as operators of the new system. In Phase 1 the system has been designed to largely displace the current road-based minibus-taxi and scheduled bus operators. Incorporating them in the new system is important in order to maintain livelihoods, but is also required because in terms of current legislation existing operators cannot be forced to give up their operating licences. A key issue here is the compensation of directly affected operators as the new system is introduced.

Industry transition in Phase 2 will be approached differently, as detailed in this chapter. While the N2 Express service is not part of Phase 2 it is within the Phase 2 area; thus industry transition for this service will be approached with the wider Phase 2 transition in mind.

Chapter 10 outlines a customer relations strategy.

2. The vision of an integrated rapid public transport system for Cape Town

2.1. Responsibility for public transport

Public transport is a key mechanism for achieving the City's transport vision of providing a sustainable transport system that moves all its people and goods effectively, efficiently and safely without compromising people, the economy or the environment. It is essential to elevate the quality and status of public transport of all communities in a unified, integrated way so as to create a substantial shift from private to public transportation, thus increasing public transport market share, revenue generation, and urban efficiency while improving air quality. Effective and efficient public transport is critical to the social and economic upliftment and development of urban areas and and to rectify the historical imbalances in service delivery.

Currently public transport is often unsafe and inconvenient to both citizens and visitors. In Cape Town, as in other cities in South Africa, public transport has been widely regarded as inadequate. Subsidised bus and rail systems have relatively low fares, but peak services are uncomfortable and overcrowded and off-peak services are inconvenient, where they exist at all. There is a public perception of a lack of safety and security, while the practice whereby minibus taxi operators wait to fill their vehicles before moving is frustrating for users. Inadequate public transport results in greater use of private vehicles and a sharp rise in traffic congestion with higher vehicle emissions and pressures for costly road expansions.

Improving public transport is thus a strategic priority for national, provincial and City government. At the same time, there is now an understanding that responsibility for public transport is best situated at metropolitan government level, given that cities are primarily responsible for the servicing and management of the urban 'built environment'. Cities make the key planning decisions influencing urban form, and they are responsible for most of the infrastructure-related services that determine that form. Public transport is integral to the management of the 'built environment' and thus needs to be run in a manner that is fully consistent with related services.

The National Land Transport Act of 2009 and other national government initiatives and statements support the trend towards devolution of public transport responsibilities to city governments. Once responsibility for public transport is fully devolved – and particularly if the rail services are included – metropolitan governments, and specifically the City of Cape Town will be able to truly achieve integrated, efficient and effective public transport through the creation of one system, one ticket, one timetable, one network and one brand. There will be a major impact on metropolitan government, with the turnover represented by the public transport function possibly becoming the largest of all municipal services, including electricity.

2.2. Bus Rapid Transit (BRT)

Accompanying the need to improve public transport and devolution of authority to metropolitan municipalities is the emergence of BRT as a highly effective urban public transport mode. One of its key strengths is its flexibility, both in serving varying passenger demand levels as well as penetrating the existing urban fabric. By combining different vehicle sizes and frequencies it can meet a wide range of demand levels conveniently and cost effectively. With its network of trunk and feeder routes it can penetrate the urban fabric to a finer level. The BRT in Cape Town will seek to complement the rail system, which forms the main trunk network, by providing further trunk routes through its dedicated lanes.

BRT also supports the shift from private to public transport by providing a high quality of service. Typical features include:

- Dedicated busways
- Trunk routes for fast movement along congested, high movement corridors.
- Enclosed trunk stations with pre-boarding fare collection and verification to allow large numbers of passengers to board and alight quickly.
- Level boarding and high-quality fittings provide universal access and offer a comfortable service to all.
- Short waiting times between buses add to convenience and should encourage more people to use public transport.
- Extended hours of operation improve mobility and increase choice

Over the years, internationally, the business model for running BRT systems has been refined to maximise efficiencies while accommodating pre-existing operators in the running of new systems. This includes:

- Modern information and communications technology, which allows vehicle movement to be monitored and controlled centrally and services continually tailored to better suit passenger needs.
- Centralised vehicle control and fare management, which enables vehicle operations to be outsourced to more than one company, fostering competition to serve the market while avoiding the 'chasing down' of passengers in current competitive practices.
- Relevant parts of the existing minibus-taxi and scheduled bus operators being accommodated competitively within the new system, providing opportunities for the economic empowerment of informal service providers.

Based on these capabilities, BRT is viewed internationally as the most sophisticated and effective form of road-based public transit available and by national government in South Africa as an appropriate and cost-effective approach, especially in the context of low-density South African cities. This has led to significant support through the PTISG to cities embarking on such initiatives.

2.3. Integrated public transport network

The City's vision is not based on a single mode, but rather is driven by the need for integration of the various modes into an effective single seamless public transport system. To achieve this, the City has approved the implementation of an Integrated Rapid Transit

system, over a provisional timeframe of 15 to 20 years, including the establishment of a full public transport network, with high-quality rail and road services, that will place at least 75% of Cape Town's population within 500 metres of the system.

As described in more detail below, the BRT trunk routes will form part of the core trunk network, along with rail, while the remaining areas of the city will be served by feeder services. Feeder services may form part of the formal MyCiTi service or be provided by other independent service providers. In Phase 1 all minibus services are being replaced by MyCiTi services; in further phases it is likely that models will be pursued in which both co-exist.

2.4. Design principles

Planning of the BRT is guided by the following principles:

Quality – delivering a car-competitive service that is based around customer needs, including rapid travel times and frequent services, few transfers, safety and security, service integration, universal access, comfort and convenience, clean vehicles, and helpful staff.

Equity – ensuring that all segments of society receive an equal, high-quality public transport experience, especially through consideration of the special needs of low-income earners, women, children, the elderly, and those with physical disabilities.

Security – a system that gives customers confidence in their personal safety and security.

Sustainability – a system that is financially and economically viable, environmentally responsible, and which promotes social equity.

Integrity – implementing in an open, transparent, and participatory manner.

These translate into the following design principles:

- Universal access
- Passenger mobility
- Accessibility
- Modal integration
- Customer convenience
- Safety and security
- Transport that is sustainable
- Congestion management
- Optimal use of scarce resources
- Transport that supports economic development.

The above principles will be taken forward in the City of Cape Town's Transport Authority as the basic management parameters for integrated, intermodal and sustainable transport across the metropolitan area.

2.5. Phased implementation

The MyCiTi system is designed to be rolled out in four phases, for completion within 15 to 20 years. Phase 1 focuses on the central city and the Blaauwberg corridor towards Table View/Du Noon, as far as Atlantis and Mamre. Phase 2 is intended to address the substantial public transport needs of the metro south-east, including Khayelitsha and Mitchells Plain. Phases 3 and 4 include the Durbanville and Delft/Helderberg areas respectively, as shown in Figure 1. The N2 Express service is not regarded as part of Phase 2, but as a short term measure to relieve pressure on existing services between the metro south-east and the central city which at the same time offers the opportunity to establish a presence in the south-east and test certain innovations prior to the roll-out of Phase 2.

There is a detailed description of Phases 1A and 1B and the N2 Express in Chapter 4.



Figure 1. Phased implementation of the IRT

2.6. Financial viability of operations

2.6.1. Cost factors in the provision of public transport services in Cape Town

There are a number of features which make the provision of public transport in Cape Town and South Africa in general more costly than its equivalent international counterparts.

Dispersed urban form

Cape Town's population densities are extremely low by international standards. Access in Cape Town is further constrained by mountain and sea, which leads to even longer trip distances than are suggested by comparison of density figures.

Dispersed urban form leads to passenger numbers being low along many routes resulting in small vehicle size requirements and long headways. Smaller vehicles lead to higher driver and other costs per passenger carried. This can be mitigated by longer headway times, but this reduces convenience, which is a key factor in service levels.

High peak to base ratios

The capacity requirements of a system are determined by the peak load. Systems with high peak load requirements and low off-peak usage are expensive to run since much of the investment is significantly underutilised outside of the peaks.

Cape Town public transport demand as in all South African cities is highly peaked. Demand is mainly commuter demand, travelling to work in the morning and returning home in the evening.

Single direction, point to point demand

The commuter based demand combined with urban form whereby residential areas are at a distance from places of work results in single direction demand from point to point. Thus vehicles travel full in one direction during the peak, but empty on their return trip. This is inefficient, but a short to medium term reality until densification and infill can be achieved.

Furthermore, the demand patterns result in low levels of seat renewal along the route, which further reduces financial viability.

High income inequality with low income levels amongst most public transport users

South Africa has high levels of income inequality with a significant proportion of public transport users having low incomes. This combined with long trip distances and other factors driving costs higher leads to a higher subsidy requirement.

Where a system aims to attract both low and middle income users the pricing of services is a challenge. The potentially higher fares affordable to middle income users are not affordable by low income users, who make up most of the demand.

High formal sector costs

Formal sector wages in South Africa are relatively high given average income levels, especially for some categories of workers. Because the public transport sector is fairly labour

intensive this increases costs. Regulation in the formal sector also elevates the cost structure.

Strong private car orientation

The difficult cost environment faced by the public transport sector in Cape Town combines with particularly high levels of motor car convenience and a strong private car orientation that has been established over a number of decades. There is an extensive highway network, which is relatively free-flowing by international standards for most of the day, while many destinations are oriented mainly towards car users.

Parking is relatively easy and inexpensive compared with many other cities.

The established private car orientation is difficult to shift since the space required by private motorcars makes implementing the higher densities required for successful public transport systems difficult to achieve.

2.6.2. Factors affecting the MyCiTi cost structure

The MyCiTi system seeks to offer a considerably higher level and quality of service than is provided by the current road-based public transport operators at fare levels that are more or less comparable.

Key considerations include:

- The degree to which a service is available at certain locations (coverage, service frequency, hours of operation)
- The quality of the service (speed, attractiveness, comfort, convenience, safety, security, and system coherence).

MyCiTi represents a shift from a system aimed at peak period commuter travel to an 18 hour public transport system. Vehicles are safer and more comfortable than current vehicles, travel times are shorter, because of dedicated trunk-route busways and pre-boarding fare collection, and the off-peak services are more frequent.

During peak demand periods, the MyCiTi service can be provided more cost-effectively than the current service due to the following features:

- Fleet size can be matched with projected demand while maintaining relatively high service frequencies.
- Different vehicle sizes (18 metre, 12 metre and 9 metre) further facilitate matching services conveniently to demand.
- The dedicated roadways allow vehicles to move faster in peak periods as they are removed from the congested traffic, providing scope in some cases for more than one trip per vehicle in the peak period. This reduces the required trunk vehicle fleet size and maximises the use of the fleet.
- Rapid boarding and alighting of passengers, including the disabled, minimises dwell times at stations, which positively influences operational costs.
- The control centre tracks all vehicles and monitors compliance with the schedule. This minimises wastage and ensures that demand and supply are optimised.

- Attracting increasing numbers of users from private vehicles reduces operating cost per passenger through economies of scale.

On the other hand, there are features which increase costs when compared with the historical bus system. These include:

- Increased capital outlay and other costs arising from dedicated roadways and other fixed infrastructure that must be provided and maintained.
- Higher frequency of service during off-peak periods increases operational cost.
- Stations and an independent fare collection system need to be operated and extensive security provided on the system.
- Additional costs associated with the control centre, which controls and schedules vehicles in real time, as well as the municipal entity or department required to manage the various contracts and the system as a whole.
- The replacement of current informal business practices with a more formal system with improved employment conditions.

A critical contributor to cost effectiveness is the difference between peak and off-peak demand. The overall capacity of the system is driven by the requirements of the peak. But much of this is idle during the off-peak period. By smoothing the peaks and increasing off-peak demand, costs can be reduced and income increased.

The traditional approach to public transport deals with low demand in the off-peak period by cutting back severely on services. On many routes the existing bus operators do not provide any off-peak services. Minibus-taxis wait to fill up with passengers before proceeding. MyCiTi provides an acceptable and predictable level of service in the off-peak periods providing the basis over time to smooth the peaks and increase off-peak usage.

2.6.3. Modelled and actual costs

In planning Phase 1A extensive modelling was done, based on cost estimates, which sought to optimise the system plan against financial viability. The modelling showed that while vehicle operations can be covered by fare revenues to a significant degree, other elements, including stations and station services, the control centre, the fare system and the overall management of the system, require funding from other sources to a greater or lesser degree.

Actual operating costs have tended to be higher than anticipated in some cases. Some of the actual costs currently faced are exacerbated by factors that may not endure. For example the fact that three firms are providing a relatively small service leads to inefficiencies which should diminish as the system is expanded. There are also additional costs arising from temporary requirements, such as with the incremental fare system roll-out pending implementation of the permanent system.

Nevertheless substantial ongoing subsidies will be required. This is recognised in the wording of the Public Transport Infrastructure and Systems Grant, which is the main source of funding currently, which requires that direct vehicle operating costs be covered by fare

revenue and other own revenue sources but implies other costs could be subsidised on an ongoing basis.

It is, however, evident that contrary to initial estimates the ongoing subsidy requirement for the system once rolled out across the whole city would significantly exceed the current subsidy levels to provincially operated bus subsidies. While in the medium term and for the servicing of a limited portion of the City the associated financial risks appear able to be addressed, there are substantial risks associated with a wider roll-out over the long term if these are not contained as discussed in Chapter 8 on Finance.

These issues are discussed more fully in Chapter 8.

2.6.4. Innovation to reduce costs

It is necessary that the City constantly re-appraise its approaches in order to reduce costs and increase income so as to contain the subsidy requirement.

For example, a key cost element greater than initially anticipated that has emerged based on tendered prices rather than initial estimates is the cost of running stations. Stations are critical to facilitating the rapid boarding of large numbers of people, as occurs currently at Table View and Civic station during peak periods. The stations make it possible to pay prior to boarding avoiding queuing on entry, while also providing weather protection and security. However the current patterns of demand result in many stations having very low levels of usage.

This has resulted in new BRT innovations for further phases of the MyCiTi system that will only provide for stations at points of high usage, and provide for stops elsewhere on trunk routes. However this needs to be combined with using low entry trunk vehicles with doors on either side which can be used both at stations in the median and stops on the left if universal access is to be achieved.

Having low entry trunk vehicles with doors on both sides allows vehicles to be used inter-operably as feeder and trunk vehicles while still providing for level boarding in both instances. This will reduce cost and enhance system flexibility.

Further adaptation may relate to the extent to which MyCiTi attempts a comprehensive roll-out of formal services and termination of the minibus taxi services in an area or seeks rather to co-exist with the minibus taxi industry albeit on a different regulatory basis. This would mean that those in the on-demand industry wishing to opt into the scheduled services being given such opportunity with a concomitant contained restructuring of operating licences to increase feeder capabilities to support the dedicated trunks.

These issues are addressed in this Business Plan, with N2 Express beginning to reflect and test new elements which may be incorporated into further phases.

2.7. Integration with other functions

2.7.1. Urban planning and public transport

The above discussion on cost factors demonstrates the crucial link between urban planning and public transport. Land use planning and urban designs that facilitate the cost-effective provision of public transport can result in significant operational savings and enhanced urban efficiencies.

A crucial motivation for devolving public transport to metropolitan governments is the need to integrate public transport with other 'built environment' related functions. Not only is alignment between these functions necessary, but there are opportunities for synergy if integration is well managed. Public transport can unlock a variety of urban planning possibilities, while well-designed urban forms can facilitate the provision of sustainable public transport solutions.

However this linkage needs to be operationalised within the City of Cape Town.

Administrative mechanisms are required so that the results of transport modelling for MyCiTi and other public transport operations are systematically taken into account in planning decisions, such that the financial sustainability of good quality public transport can be enhanced.

This represents a key tool for enhancing urban efficiency in Cape Town and, over the medium to long term, should render significant economic benefits.

Similarly, detailed planning around individual stations and stops, and the ease and safety of moving between station and origin or destination can greatly enhance the attractiveness and success of the system.

2.7.2. Integration with other functions

MyCiTi requires integration with a variety of other functions, including, in particular, other transport functions, safety and security and economic development.

Features of the MyCiti *system*

Infrastructure

- segregated bus ways or bus-lanes mainly in the middle of the roadway
- stations that are convenient, secure, and weather protected
- stations that provide level boarding between the platforms and the vehicle, facilitating wheelchair access.
- special stations that provide integration and convenient transfers between trunk routes, feeder routes and the rail system

Operations

- new fleet of modern vehicles
- frequent and rapid service
- rapid boarding and alighting
- pre-board fare collection, and pre-board fare verification on trunk routes
- integrated fare system using smartcards
- improved pedestrian connections
- integrated pedicab and motorised three-wheeler feeder services at select stations
- integrated bicycle rental at select stations
- secure bicycle parking at select stations
- improved facilities for non-motorised travel

Business and institutional structure

- reformed business model bringing in existing bus and taxi operators with the City to provide services
- transparent process for awarding contracts
- independent fare management system
- minimisation of public sector subsidies for the operations

Technology

- low emission, low noise vehicle technology
- automated fare collection
- Intelligent Transportation System (ITS) management of operations and vehicle location
- signal priority for public transport at intersections

Marketing and customer service

- distinctive identity
- high standard passenger information at stations and vehicles
- good signage and maps
- special provisions for passengers with special needs

3. Alignment with corporate plans and policies

3.1. Introduction

The City's Vision is to, by 2040, turn Cape Town into one of the world's greatest cities in which to live and learn, work, invest and discover – a place of possibility and innovation, with a diverse urban community and all the opportunities and amenities of city life, within a natural environment that supports economic vibrancy and inspires a sense of belonging in all.

There has been substantial change in the public transport environment in South Africa and over the past ten years. There is now a need to consolidate all the initiatives and interpretations into a single action agenda for the City of Cape Town. This single action agenda is critical towards achieving a more sustainable, efficient and effective integrated transport, in accordance with the transport roles and responsibilities assigned to metropolitan municipalities in the National Land Transport Transition Act, 2009 (NLTA).

The MyCiTi IRT project must be consistent with key policies of the City of Cape Town. These include the Integrated Development Plan (IDP), the overarching strategic plan for the City which is updated annually, and the Integrated Transport Plan (ITP), which is the statutory transport component of the IDP.

The City of Cape Town Comprehensive ITP consists of the 2009 update, which was further expanded in the 2011 update. The ITP was developed in terms of the National Land Transport Act (NLTA, Act 5 of 2009). The NLTA aims for cities to take greater control over 'planning, regulating, implementing, and monitoring' public transport services, and requires the implementation of 'publicly controlled integrated transport systems'.

South African cities are in general inefficient and unsustainable by design and there is a lack of multiplicity of land uses, due to historical apartheid policies, resulting in longer travelling distances, especially for those in low income communities.

This has resulted in the fact that there are not only increased inefficiencies in the provision of public transport but also that low income households are spending up to 40% of their income on access. The International acceptable norm is between 5% and 10%. The City of Cape Town has embarked on an integrated public transport strategy that aims to roll out a unified high quality service to all communities, with the focus on infrastructure-led economic development and the stimulation of densification, upgrading and renewal.

3.2. MyCiTi and the Integrated Development Plan (IDP)

In the IDP¹, the City's vision is threefold:

¹ The most recent comprehensive IDP is for the period 2012 to 2017. It is reviewed each year and revised where necessary. The most recent revised IDP was approved by Council in May 2012 and is available on the City of Cape Town website (<http://www.capetown.gov.za>).

- To be a prosperous city that creates an enabling environment for shared economic growth and development;
- To achieve effective and equitable service delivery; and
- To serve the citizens of Cape Town as a well governed and effectively run administration.

The IDP recognises the contribution of public transport to attaining this vision which is built on the following five key pillars (also known as strategic focus areas).

- *The opportunity city* – Ensure that Cape Town continues to grow as an opportunity city
- *The safe city* – Make Cape Town an increasingly safe city
- *The caring city* – Make Cape Town even more of a caring city
- *The inclusive city* – Ensure that Cape Town is an inclusive city
- *The well-run city* – Make sure Cape Town continues to be a well-run city.

It should also be noted that one of the key objectives of strategic focus area

1 (i.e., the opportunity city) is: “To ensure mobility through the implementation of an effective public transport system.” The IDP identifies the MyCiTi BRT as one of the key programmes necessary in achieving this objective.

Improved public transport also works as an enabler for the other strategic focus areas.

It is thus evident that MyCiTi is consistent with key elements of the IDP and is a fundamental part of the City’s overall development strategy.

STRATEGIC VISION

OPPORTUNITY CITY
Reduced travelling times
Responsive Integrated Public Transport

CARING CITY
One Timetable, Ticket & Single Authority

SAFE CITY
Road Safety, Safe & Secure Public Transport & Easy Interchange

INCLUSIVE CITY
Premium Status, Integrated Public Transport for All

WELL RUN CITY
Efficient Service, up to date information
Involvement of Stakeholders

3.3. MyCiTi and the Integrated Transport Plan (ITP)

As the NLTA gives the mandate to metropolitan cities to plan and implement transport strategies, the integrated transport network which incorporates rail and road based transport interventions, is the key driver for current and future interventions and investment decisions. Coordination will be achieved through the Integrated Transport Plan after years of underinvestment in rail, bus, taxis operations and infrastructure.

In terms of the ITP², public transport plays a vital and essential role in providing the opportunity for all its citizens and visitors to access the full range of facilities which the City offers, for work, education, recreation, health or social functions. It also emphasises the socio-economic challenges in relation to accessing these facilities by the poorer sections of the community.

Through its mobility strategy, the City is committed to improving access and mobility for all its residents, goods and services, by 'putting public transport, people and quality of life first'. In practice, this must take into account the city's socio-economic diversity and seek to re-balance the development of Cape Town in an environmentally responsible manner.

The vision is for a full public transport network, encompassing high quality rail and road services, which will place at least 75% of Cape Town's population within 500 metres of the system within the foreseeable future. The City's Comprehensive Integrated Transport Plan (2006 – 2011) vision is to *'... provide a world-class sustainable transport system that moves all its people and goods effectively, efficiently, safely and affordably.'*

To achieve this, the City has identified a number of strategic objectives, which overlap partly with the IDP, the most relevant being to:

- Strive towards a complete and balanced sustainable transport system. This is expanded upon by the "Public Transport Action Plan" which requires a fully integrated multi-modal public transport system in terms of the Integrated Public Transport Network (IPTN).
- Promote public transport over the private car.
- Promote and encourage non-motorised transport and universal access.
- Promote and incorporate the principles of universal access in design and construction of transport facilities.
- Provide a safe, efficient and well-managed road network that enhances the efficiency of public transport.

Public transport is the key to achieving a more balanced, sustainable transport system. The ITP envisages an integrated public transport system that includes:

- The development of rapid mass road-based public transport services on priority high volume corridors which are not served by rail, in support of an integrated network with rail.
- The development of a unified road-based scheduled service bringing the bus and taxi market into a unified service under contract using the appropriate vehicle size for financial and operational efficiencies.
- The introduction of an integrated fare management system.
- The development of the non-motorised transport network to integrate with the rail and bus priority networks.
- A comprehensive passenger information system.

² In mid-2008, Council approved the inclusion of the Integrated Rapid Transit initiatives in more detail into the Integrated Transport Plan of 2006 to 2011 (2011 update approved by MEC on 26 January 2012).

- Uniform branding of all public transport.
- Increased security on public transport.

The ITP notes that since the initial approval of the Integrated Transport Plan (2006 – 2011) the City has embarked on a process of transforming its public transport system into an Integrated Rapid Public Transit Network in line with the NLTA.

A Comprehensive Integrated Transport Plan (CITP) for the next 5 years is being developed. The CITP will focus on the development of a set of key performance indicators, standards and guidelines for the provision of integrated transport services and operations that can and will be monitored continuously under the Transport Authority.

3.4. Transport for Cape Town

In response to the requirements of the National Land Transport Act, the City of Cape Town is in the process of establishing a Transport Authority (TA). The overall objective of the TA is to improve the provision of transport services and to set standards which will change the way in which transport services and operations are managed and implemented. Transport operators should expect major changes within the operating environment. These changes are required to give effect to the sustainable transport methodology and ensure that their business and related public transport operations are sustainable and equitable.

Transport Networks in the larger urban areas are to be successfully established. However, it is easy to waste considerable resources on public transport without achieving desired objectives. Success is dependent upon many different elements, which tend to be determined largely by institutional factors. Key considerations include:

- Clarity of accountability;
- Integration of land use planning with transport;
- Effective integration of public transport modes;
- The right business model based on competition for the public transport market but not in the public transport market;
- Safety, security and effective enforcement;
- Pro-active maintenance
- Sufficient, reliable, predictable financial streams

The City of Cape Town as the Transport Authority, aims to manage the activities and infrastructure related to the multi-modal network in an integrated, cost effective way, for the benefit of all commuters across the City. Further, this is undertaken within the context of the five pillars in the Integrated Development Plan.

- Infrastructure that is well maintained and is at a unified, high standard across the City.
- The Commuter experiences a seamless, safe and reliable public transport across all modes.
- The Integrated Transport Plan, System and ITPN (Integrated Public Transport Network) is comprehensive, responsive, well managed and integrated road and rail network.

- The governance structure for the rollout of the integrated transport is sound, strong and within the legislative parameters. The City is in the process to formally establish its Transport Authority to have the following functions under its management:
 - Planning Authority
 - Municipal Land Transport Fund
 - My Connect/ Single Ticket
 - Contracting Authority
 - Regulating Entity
 - Monitoring and Evaluation
 - Rail Management

4. System Plan

4.1. Introduction

The system plan is a detailed description of the structure, design, coverage and roll out of the system, and associated transport demand modelling, which projects passenger demand and utilisation of the system. This is an input to determine fleet and system operational requirements, as well as infrastructure design, system cost modelling, business structure, contracts and industry transition. In earlier documents regarding the Integrated Rapid Transit System (IRT), the system plan was referred to as the operations plan.

The system plan presented here is based on the most up-to-date information available at the end of August 2012. The system plan is an iterative and dynamic process based on revealed travel data and lessons learnt from actual operations of the City's system as well as other cities here and abroad. The ability to accurately model travel behaviour is a challenge worldwide, however the accuracy of the modelling results is enhanced through continuous improvement and refinement by calibrating the model with new transport data.

It is envisioned that MyCiTi IRT be rolled out across the metropolitan area in four broad phases over the next 20 years, starting with the first part of Phase 1 (being Phase 1A) by end of 2013, to match funding availability. This will then be followed by Phase 1B to complete Phase 1 by end of 2014. Phase 1A and 1B broadly cover the West Coast portion of the City of Cape Town's metropolitan area. This plan also introduces the N2 express service to provide additional capacity between the Metro South East and Cape Town CBD until the rail service to the CBD is upgraded accordingly.

The scope of this system plan chapter covers the following areas:

- Overall City Public Transport Strategy
- Service Categories
- System structural elements for:
 - Phase 1A and B
 - N2 Express Service
- System Plan & design for:
 - Phase 1A & B
 - N2 Express Service
- Roll-out Plan

4.2. The Public Transport Strategy

Several years of planning, research and investigation have identified critical missing transport links in the public transport system in Cape Town. These missing links and the impact thereof are best described through an evaluation of the rail network utilisation.

Figure 2 describes the rail system (i.e., the city's transport backbone) in terms of passenger over capacity on the rail network.

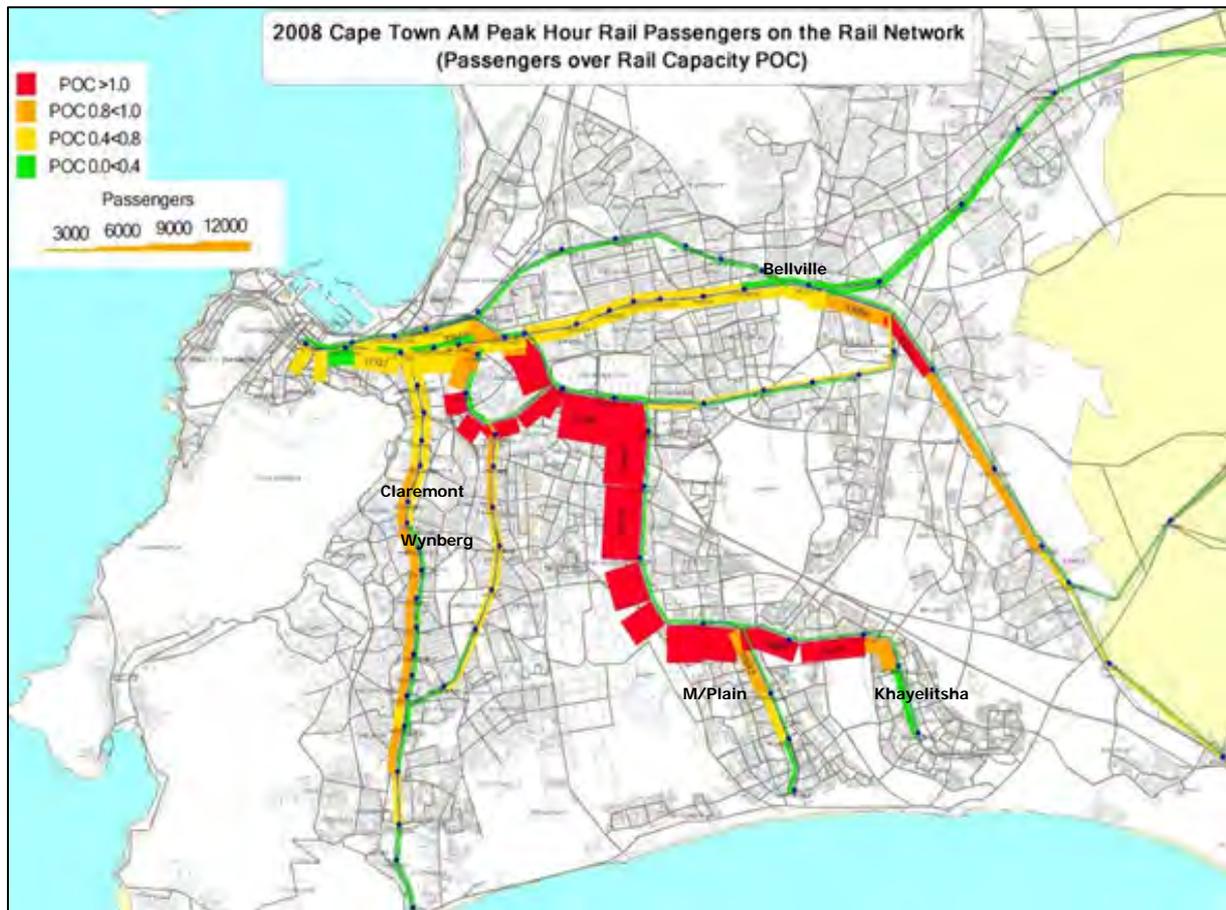


Figure 2: Passenger Capacity on Rail Network

The Khayelitsha to CBD Rail service, in particular, is running at over capacity (as shown by the red shade) until it connects with northern lines towards Bellville and southern lines towards Claremont and Wynberg. This dynamic identifies the actual desire for movement from the Metro South East towards the Bellville and Wynberg/ Claremont area, but due to the lack of a direct, dedicated transport link to these areas, commuters travel a roundabout way to their final destination. Note that Figure 2 also shows areas not covered by rail.

It is therefore planned that BRT be implemented to address these critical public transport missing links as schematically shown in Figure 3 below:

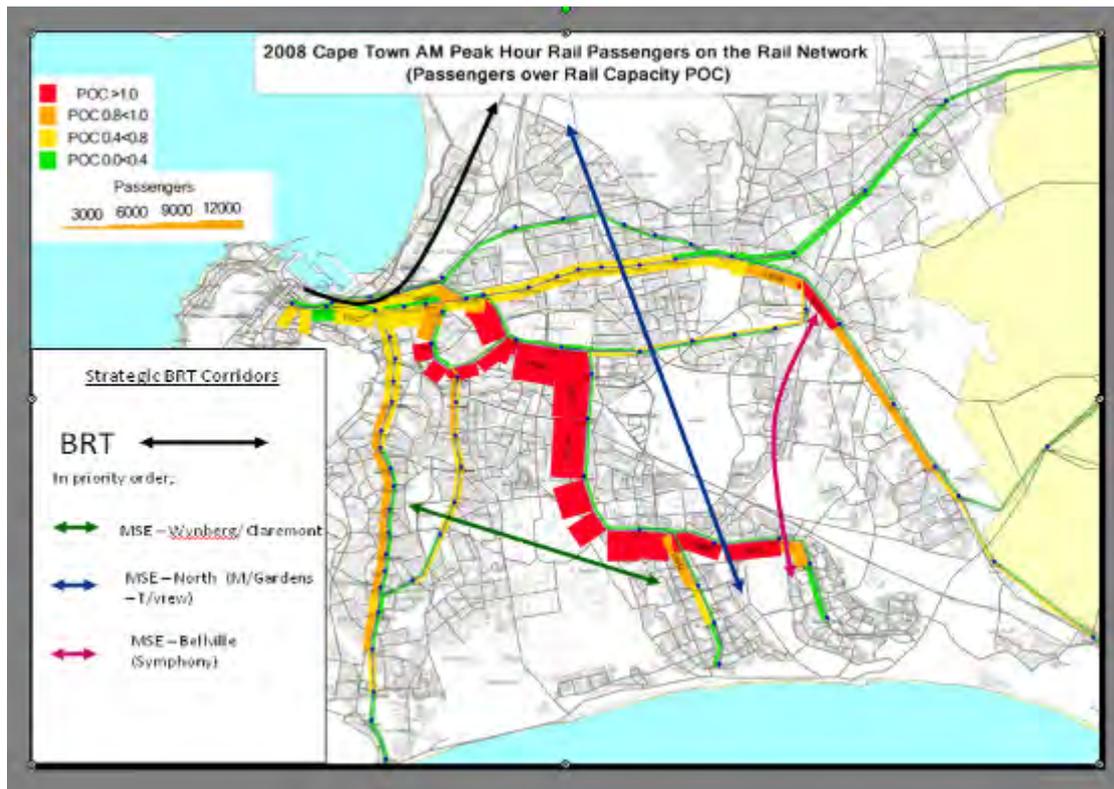


Figure 3: Missing Transport Links

In addition to these BRT Corridors, the Chris Hani Rail Corridor has been identified for a significant upgrade and this rail link will be the backbone of the N2 Corridor which links the MSE to Cape Town CBD.

In Summary the City has prioritised five (5) transport corridors for implementation, namely:

- West Coast Corridor
- N2 Corridor (Rail)
- East-West Lansdowne Wetton Corridor
- North-South Symphony Way Corridor
- MSE to West Coast Corridor

N2 Corridor (Rail)

Over time, the road based public transport demand between the Metro South-East (MSE) and the Cape Town CBD has grown significantly. This is due to passengers moving from rail to both bus and mini-bus taxi services because of the lack of capacity and perceived safety and security concerns by passengers on the rail system. Until these concerns have been addressed, there will always be a requirement to provide a road based public transport alternative to the CBD.

Accordingly PRASA has responded in their recent Rail Plan by identifying the Chris Hani (Khayelitsha) to CBD rail service as a 'modernisation and demonstration' project. This Rail link will be the backbone of this N2 Corridor. Until then, an *express BRT service* is proposed for operation by December 2013. Any infrastructure built and fleet procured for this express service should be compatible with future MSE trunk services. It should be noted that the N2 express service is not a phase of the IRT system but a supplementary MyCiTi service that

performs a specific function until rail is adequately upgraded. The long term role of the N2 express service will be reviewed in the update of the Integrated Public Transport Network. This review will also involve the role of Klipfontein and Main Roads within the N2 Corridor.

Providing this road based solution to bridge the gap until the rail is upgraded comes with the following challenges and contributes to its poor operational performance:

- Running parallel services (bus, rail and taxi) which competes for the same passengers;
- Inappropriate mode to respond to this direct, high volume and line haul service;
- Strong tidal peak flow which requires significantly high fleet requirements for a short time period;
- No boarding and alighting along the route which impacts revenue
- Long route with long cycle times results in a higher fleet requirement with associated drivers and therefore increases operational costs; and
- Industry transition challenges.

It should also be noted that the selection and the prioritisation of all of the above mentioned corridors will be confirmed during the City's IPTN development in the next 12 months. These corridors form the framework of the City's Public Transport implementation plan. These corridors are shown in the City's Public Transport Implementation Plan as summarised in Figure 4 below:

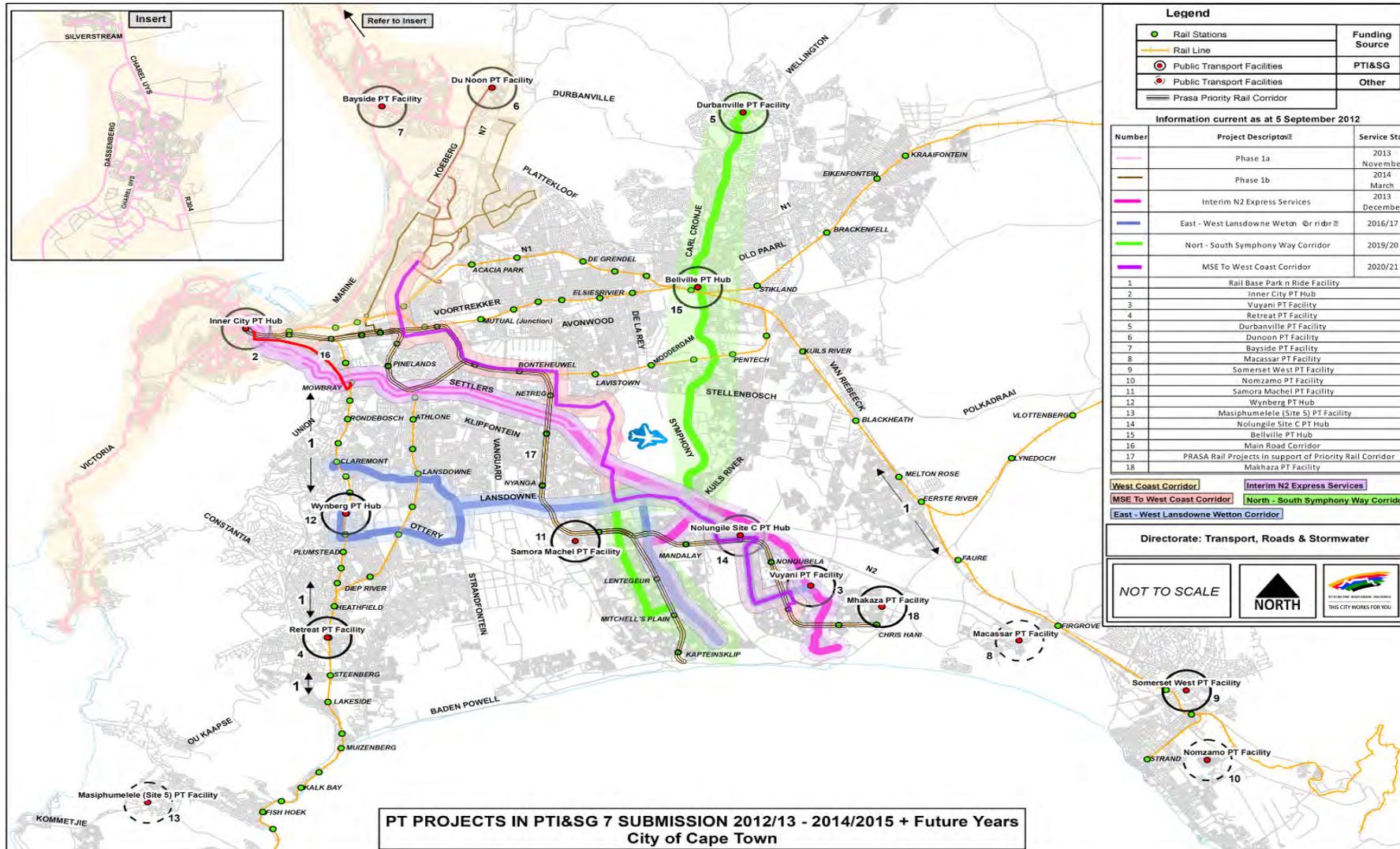


Figure 4: City of Cape Town's Public Transport Implementation Plan

4.3. Service categories

A service category describes the type of operations available on a route. The service categories for the City's MyCiTi IRT System Plan system are all scheduled services as shown in Figure 5 below. A scheduled service is one that offers a regular service at fixed times, with the services adhering to a prescribed timetable. The merits of unscheduled (On-demand) services will be investigated in detail in the full system roll-out.

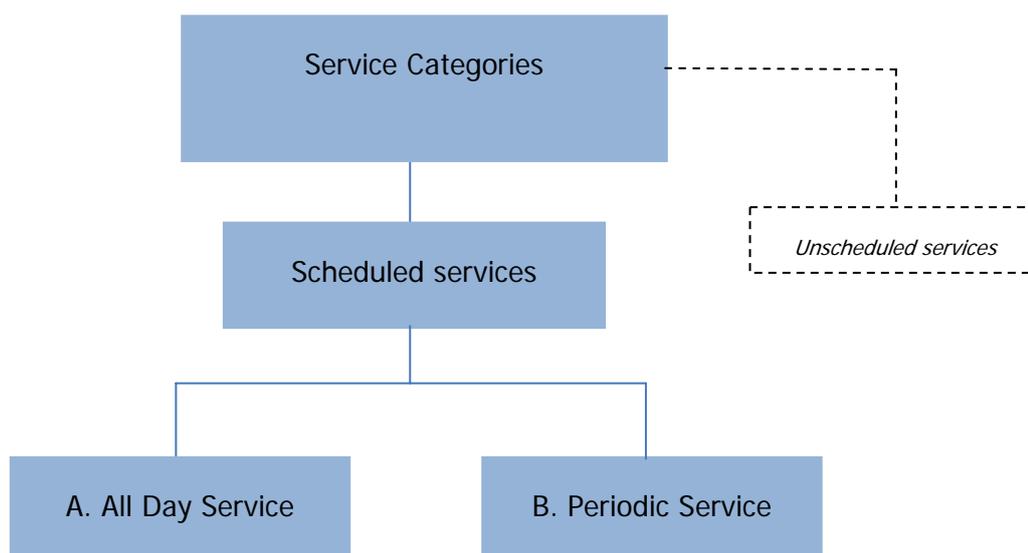


Figure 5: Service Categories

Service categories are not dependent on or influenced by vehicle types. In theory, any vehicle type may be allocated to any service category. Table 1 provides a more detailed description of each of the available service categories.

Table 1: Description of Service Categories

Category	Description of the Service
Scheduled Services	A service with prescribed headways and hours of operation on a specified route with defined stops.
<ul style="list-style-type: none"> All Day 	A scheduled service that operates throughout the day. In general the hours of operation will include a morning and afternoon service with different headways in the peak period and longer headways in the off-peak.
<ul style="list-style-type: none"> Periodic 	A scheduled service that operates for a specific period of the day in response to a periodic demand. This service responds to specific demands at key times of the day, week, month or year.

The trunk services will operate as a closed system in mostly segregated busways, mainly in the middle of the road (as shown below), with pre-board fare collection and verification.



Figure 6: Pictures along R27 Trunk Route

In summary, the key characteristics of Trunk Services are:

- Rapid movement and high carrying capacity;
- Dedicated median busways (mostly);
- Arterials where intersection spacing are ideally not below 600-700m;
- Station spacing of 800m (desirable minimum);
- Bus accommodation measures at intersections;
- Enclosed median stations with off-board fare collection and verification; and
- Universal access including level access between station platform and vehicle.

Feeder services

Feeder routes are generally those services that feed high volume trunk services and also function as a distribution service within a local community (i.e., between homes, schools, shops and other community facilities). Accordingly, the MyCiTi IRT feeder services will feed the trunk services and also provide distribution within the local area. In areas where topography or road geometry is restrictive, even smaller vehicles will be employed to serve this function. Feeder services will generally operate in mixed traffic lanes with kerbside stops. Fare collection and verification will typically be on-board and will operate as an 'open system'.

Closed stations for the feeders may be considered where high boarding and alighting occurs and where there are substantial transfers between feeder routes. The integration of trunk and feeder routes will be facilitated at major transfer stations, with the right-side door permitting feeder vehicles to make use of the enclosed median trunk and feeder stations. Where required and technical feasible, bus priority measures will be employed.

In summary, the key characteristics of Feeder Services are:

- Feed trunk services and provide a distribution service within a local community;
- Lower capacity vehicles (e.g. 9m and 6m vehicles);
- Operation in mixed traffic with docking primarily at open kerbside feeder stops;

- At selected locations, feeders will dock at closed stations to allow transfers with other routes;
- Where congestion is significant and road space can be made available, dedicated rights-of-way will be provided;
- Universally accessible (except 6m vehicle in the short term); and
- On-board fare collection and verification.

Trunk Extensions

Trunk Extensions will be introduced, as an additional service, in an attempt to further enhance customer convenience, better fleet utilisation and reduce system operational cost. This service is a periodic scheduled service, as defined above, which operates for a specific time period to respond to a demand for travel. During this specific time period, this service extends beyond its trunk origin and/or destination and operates on a feeder route as a feeder service. This service will operate in mixed traffic and will dock at kerbside stops using its left sided door, which is not universally accessible. This service will not substitute the planned universally accessible feeder service but will supplement the feeder service.

In summary, the key characteristics of Trunk Extensions are:

- Trunk vehicles operating on feeder routes as feeder services;
- Mainly mixed traffic operations unless congestion and the environment dictates segments of dedicated routes;
- Not universally accessible for kerbside operations (due to steps on the left-sided door); and
- Supplements universally accessible feeder services.

Supporting pedestrian and bicycle routes

In order to reach the goal of providing accessible bus services within 500m of most homes and workplaces, special attention must be given to access arrangements for pedestrians and cyclists. As shown in Figure 7 below, Phase 1A and 1B will include infrastructure for non-motorised transport linking MyCiTi stations and stops to the surrounding areas as well as along trunk routes. This will assist potential users to reach the system, and in this sense serves as a feeder network.



Figure 7: Pedestrian and bicycle accommodation

4.5.2. Rights-of-way (ROW)

For the purposes of this document, Rights-of-way (ROW) refer to the thoroughfare on which the buses operate. These can either be dedicated or shared rights-of-way depending on the nature of service to be provided, congestion levels or geometrical constraints.

Dedicated ROW

In Phase 1A & B, the City's plan includes the provision of physically segregated median lanes for its trunk service operations. Figure 8 shows a picture of a portion of the R27 trunk corridor which shows the median dedicated ROW.



Figure 8: Dedicated median ROW

The main reasons for favouring median operations over kerbside is summarised as follows:

- The effect of kerbside friction and side street traffic is reduced towards the median. This friction, associated with kerbside operations, influences operational speed and jeopardises the objective of trunk services;
- Median stations facilitate all transfers between overlapping trunk services. Kerbside operations require open transfers or more complex route design;
- Median operations require one station per location; and
- Intersection treatments are simplified than in situations with kerbside operations.

Shared ROW

Shared ROW refers to mixed traffic conditions where the MyCiTi IRT vehicles will travel together with general traffic. In general, the proposed feeder services operate in share

ROW. However, where congestion significantly impacts operations priority measures will be investigated to improve operations.

In Phase 1A and 1B, there are trunk service segments which will operate in shared ROW and this is either due to the lack of congestion, like along the R27 north of Sandown Road towards Atlantis, or due to geometrical or environmental constraints that prohibited the provision of a dedicated lane. In the latter case, the City used Intersection Signalisation priority measures to give the bus first opportunity of the shared lane.

4.5.3. Passenger transfer facilities

In order to move from one route in the network to another or from one mode to another, passengers are required to transfer. The system facilitates the following transfers:

- **Closed transfers:** This pertains to passengers transferring from one route to another within an enclosed station. The passenger does not leave the enclosed station. Within the closed station, passengers will alight one service and either transfer from one platform to another or wait at the same platform for their desired subsequent destination. This can occur at enclosed stations which could be located in the median or on the kerbside, and could cater for trunk routes, trunk and feeder routes or feeder routes only.
- **Open transfers:** This is mainly when passengers transfer from one route to another at open kerbside stops. This also includes passengers transferring from an external mode (like car, bicycle or non MyCiTi service) or location, such as walking to the station or stop, or parking at a park-and-ride facility and transferring onto MyCiTi at a station or stop.
 - Passengers entering and exiting the median trunk stations will do this at designated safe pedestrian crossings which have been designed to account for pedestrian safety and convenience. At the entrance of these trunk stations, passengers will tap their cards at the access gate and enter the passenger waiting area within the station.
 - Passengers entering and exiting vehicles in an open environment will do so at relevant kerbside stops. When the bus arrives, the passenger will board the bus and taps his card on the validator inside the bus.

These transfers are facilitated by certain infrastructure; stations, stops and park-and-ride facilities as described below:

Stations

A station is generally defined as a physically closed area where the entrance and exit are controlled through access gates. Ticket validation occurs at the entrance of the stations as opposed to on-board the vehicle. Stations are generally located in the median, and kerbside stations are the exception to the rule. All stations provide level boarding and therefore in the Phase 1A and 1B area the height of the platforms inside the stations will vary depending on the vehicle docking at that platform. For example, large vehicles of 12 m to 18 m in length (referred to as “trunk” vehicles) are high-floor and require equally high platforms, while

smaller vehicles with low-entry (referred to as “feeder” vehicles) require low-floor platforms to facilitate level boarding. The following are types of stations in Phase 1A and 1B:

- **Median trunk stations** will be enclosed and located in the median, with raised platforms to facilitate ease of access with level boarding onto high-floor vehicles. The stations will also include a ramp for wheelchair access. A ticket booth and fare collection section will be provided at the station entrances to ensure easy access to ticket sales and pre-board fare collection.
- **Trunk to feeder transfer stations** will also be enclosed and located in the median but will consist of two areas namely trunk and feeder areas. The trunk area will be at a higher level to align with the high-floor trunk vehicles and the feeder area will be at a lower level to align with the lower floor feeder buses. Wheelchair access and fare collection will be similar to the median trunk stations.
- **Feeder to feeder transfer stations** will be enclosed and could be located in the median or along the kerbside. These stations will operate similar to median trunk transfer stations except that they will operate physically at a lower level to align with the low floor feeder buses.

Stops

A stop is generally defined as a location where passengers board and alight vehicles in an open environment. MyCiTi feeder stops will be open and located on the kerbside to provide access to the left-sided doors on the low-floor feeder vehicles. Fare collection and verification will occur on-board the vehicle as the passenger enters the bus. The stop floor level will be raised to ensure an acceptable level access to the 9m feeder buses.

Park-and-Ride

While the goal of the MyCiTi IRT network is to provide services within walking distance, the shift in behaviour towards public transport will take time to realise. In addition to this inertia towards the private car, there will also be areas not covered by feeder services. In these initial phases of the system the need for private cars to be used to access the system is understood and therefore limited park-and-ride facilities may be provided to encourage passengers to reduce the length of their car trip and transfer onto the MyCiTi services.

4.5.4. Vehicles

Within the Phase 1A and 1B area the vehicles that will operate trunk routes will be high floor vehicles and feeder routes will be operated by low floor feeder vehicles. The general characteristics of the vehicles that will be employed are outlined in Table 2 below.

Table 2: Typical vehicle characteristics

Vehicle type	Feeder services		Trunk services	
Vehicle	6m feeder bus	9m feeder bus	12m vehicle	18m articulated vehicle
Conditions for use	Either where the business	Standard feeder bus unless the	Optimum supply for projected demand.	Optimum supply for projected

Vehicle type	Feeder services		Trunk services	
	case advises or where the topography and geometry restricts the 9m bus	topography and geometry dictates a smaller vehicle	Fleet operational speed meets class of road requirements Where the road pavement design allows for.	demand. Fleet operational speed meets class of road requirements Where the road pavement design allows for.
Universal Access	Short term – Non compliant. Fully compliant vehicle is under investigation	Yes	Yes (access through right sided doors only)	Yes (access through right sided doors only)
Dimensions	Under investigation	Length: 9 m Width: 2.6 m	Length: 12.75 m Width: 2.6 m	Length: 18.4 m Width: 2.6 m
Floor height	Under investigation	Low floor: 300 mm	High floor: 940mm	High floor: 940mm
Number of Passenger Doors	1 left sided door	1 right-sided door 1 left-sided door	2 right-sided doors 1 left-sided standard door with stairs	3 right-sided doors 1 left-sided standard door with stairs
Wheelchair positions	Under investigation	1	1	2
Passenger capacity	Approximately 15 seated	50 (21 seated, 27 standing, 1 wheelchair)	Standard vehicle: 85 (41 seated, 43 standing, 1 wheelchair) Airport vehicle: 77 (33 seated, 43 standing, 1 wheelchair)	132 (53 seated, 77 standing, 2 wheelchairs)

The 9m, 12m and 18m vehicle types are shown in the following figures.



Figure 9: 9m Feeder vehicle



Figure 10: 12m Solo trunk vehicle



Figure 11: 18m Articulated trunk vehicle

4.5.5. Fare System and Structure

The intention is that passengers should pay fares using Europay / MasterCard / Visa (EMV) compliant contactless smartcards. As mentioned before, the payment of fares will take place at stations or on-board vehicles for open bus stop operations.

It should be noted that the IRT Full Fare System will permit distance-based pricing capped at a defined maximum fare. It will also allow discounts to be offered depending on time of travel (peak or off-peak) and the type of travel package loaded on the EMV smartcard. Accordingly, if the Full Fare System becomes available beforehand, the fares charged in the Phase 1A and 1B areas, including the N2 Express Service, will take distance travelled into account and will be capped at a maximum level. The fares will also be fixed at constant levels for specific travel distance bands. That is, the total fare cost for a particular journey will be the price charged for the distance band into which the journey falls, regardless of the transfers made (but provided each transfer is made within the defined free boarding window and transfer period).

The above will permit lower fares on short trips compared to the current flat fare and accommodate the longer trips made by low-income passengers. In addition, a number of different fare levels will be made available depending on whether travel begins in the peak or off-peak period, and whether a travel package has been bought or not, thus providing passengers with discounts.

The IRT Full Fare System design and structure is described in more detail in the 2012 – 2013 MyCITI fares report (approved by Council in June 2012).

4.5.6. Depots and staging facilities

Depots and staging facilities are key structural elements. Over and above their primary function of fleet management and maintenance, the location thereof is of critical system operational importance to eliminate dead mileage and to effectively assist in the network operations.

In accordance, the planned depots and staging facilities for Phase 1A and 1B operations have been carefully located to achieve the foregoing. The depots have been designed to include facilities for fuelling, cleaning, tyre repair, parking (vehicle circulation), access control and security, heavy and light maintenance, and administration as well as driver dispatch and ablutions. The staging areas have been designed to include facilities for parking (vehicle circulation), access control and security only.

The following is a detailed description of the planned N2 Express system structure elements.

4.6. N2 Express System Structure Elements

4.6.1. Introduction

An express service is a bus service that is intended to run direct between an origin and a destination (in this case, Mitchell's Plain/ Khayelitsha and Cape Town CBD) with no stops in-between.

This section describes the system structural elements of the N2 Express service. The N2 Express service is in principle different from the Phase 1A and 1B IRT System Structure. This difference is described in detail in section 4.6.8 of this chapter. The purpose of the Express Service is to provide a top-up service to the existing public transport services (rail, bus and minibus taxi). It is widely acknowledged that rail is the backbone of this corridor and is

technically the most appropriate mode. However, the existing rail rolling stock for the MSE to the City cannot meet the demand for travel during the peak period and, therefore, this proposed Express service attempts to provide additional capacity until rail is upgraded to an acceptable level, after which it will be re-evaluated.

4.6.2. Network of Routes

The N2 Express route network will comprise of direct routes only, with existing services remaining to provide feeder services. These are discussed in turn below.

Express Services

The direct express services will operate with large buses on limited stop routes (in the local area) and a nonstop route (along the N2). In addition, the express services will use a combination of rights-of-way types, i.e., they will use a combination of mixed traffic lanes and the existing bus and minibus taxi (BMT) lane on the N2. At stops, the direct express services will operate as an 'open system' with on-board fare collection and verification, and at stations, they will operate as a 'closed system' with off-board fare collection and verification. The direct express services are designed for high carrying capacities and travel speeds.

In summary, the key characteristics of the N2 Express Services are:

- Combination of mixed traffic and the dedicated N2 BMT lane;
- Open stops with on-board fare collection and verification;
- Enclosed terminal stations with off-board fare collection and verification;
- High-capacity vehicles with a high seating ratio (*still under investigation*); and
- Universally accessible infrastructure.

4.6.3. Rights-of-way (ROW)

The proposed direct Express services will utilise the existing Bus Minibus Taxi (BMT) lane along the N2 inbound lanes. This BMT lane is a dedicated lane, for the critical congested section of the N2, which is not physically separated from the adjacent mixed traffic lane.

In the outbound (from the CBD) direction, the services will operate in mixed traffic. The implementation of the BMT lane in the outbound direction is technically not feasible. Although the BMT lane along Main Road provides an alternative exit from the CBD, this option comes with Industry Transition issues which will negatively impact the delivery of the services by December 2013.

It should also be noted that vigorous enforcement of the BMT lane is crucial to the success of the Express services.

4.6.4. Passenger Transfer Facilities

In principle, the same rules apply as for Phase 1A and B already discussed in section 4.5.3 of this chapter.

4.6.5. Vehicles

An essential lesson learnt during Phase 1 concerned the trunk vehicle type. Accordingly, the City has motivated its case to the National Department of Transport (NDoT) to move to low-entry trunk vehicles for future phases beyond Phase 1. This motivation is contained in the System Planning document submitted to NDoT in October 2011 and summarised in section 5.2 and 5.3 of this document.

The express service provides the opportunity to evaluate the operations of the proposed low-entry trunk vehicles.

The general specifications of the vehicles that will be employed are still under investigation. The technical team is reviewing all vehicle types in order to maximise seating capacity without jeopardising passenger convenience, universal accessibility and operational efficiency. The following picture is an example of an 18m articulated low-floor vehicle.



Figure 12: Example of a 18m articulated low-floor vehicle

4.6.6. Fare System and Structure

In principle, the same rules apply as for Phase 1A and B already discussed in section 4.5.5 of this chapter.

4.6.7. Depots and staging facilities

The full establishment of permanent depots and staging facilities will not be complete by the time the N2 Express comes into operation due to the time required to identify land and to construct an adequately functional depot. The completion of the City's IPTN is a key informant to the location and size of such depots and therefore in the short term (for the N2 Express service) the use of the existing MyCiTi facilities in the CBD, together with short term arrangements in the MSE will be implemented for the December 2013 launch.

4.6.8. Summary: Difference between N2 Express Service and Phase 1A & B

In a nutshell, the difference between Phase 1A & 1B and the N2 Express service is shown in Table 3 below. As illustrated in the table, the N2 Express Service introduces a unique set of elements altogether.

Table 3: Difference between N2 Express Service and Phase 1

System Structure Element	MSE Express Service	Phases 1A and 1B
Network of routes	<ul style="list-style-type: none"> • Only direct Express Services • Other public transport services will remain to provide feeder services 	Trunk Services and Feeder Services
Busways	A combination of mixed traffic lanes and the dedicated bus and minibus taxi lane (BMT) lane on the N2. No physical barrier	<u>Trunks</u> <ul style="list-style-type: none"> • Dedicated bus lanes <u>Feeders</u> <ul style="list-style-type: none"> • Mixed traffic lanes
Stations and stops	<u>Stations (closed system)</u> <ul style="list-style-type: none"> • One closed station with one platform proposed in Mitchell's Plain and one in Khayelitsha Site C <u>Stops (open system)</u> <ul style="list-style-type: none"> • Limited stops proposed in local area • No stops en-route (N2) 	<u>Stations (closed system)</u> <ul style="list-style-type: none"> • Median trunk stations • Median trunk to feeder transfer stations • Feeder to feeder transfer stations (<i>median or kerbside</i>) <u>Stops (open system)</u> <ul style="list-style-type: none"> • Feeder stops (<i>kerbside</i>)
Type of passenger transfers	<ul style="list-style-type: none"> • External to stations • External to stops • Other public transport services to MyCiTi express service in an open environment • Express services to Phase 1A services at the closed Civic Centre station 	<ul style="list-style-type: none"> • External to stations • External to stops • One route to another at a station • Trunk to feeder service transfer in open environment • One route to another at a stop
Vehicles	High capacity, low-entry vehicles only <i>(still under investigation)</i>	<u>Feeders</u> <ul style="list-style-type: none"> • 6m low-entry feeder vehicle • 9m low-floor vehicles

		<u>Trunks</u> <ul style="list-style-type: none"> • 12m high-floor solo vehicles • 18m high-floor articulated vehicles
Fare System and Structure	Full Fare System with Distance-based pricing	Full Fare System with Distance-based pricing
Depots and staging facilities	Short term arrangements leading to permanent for dual functionality (N2 Express & future Phase 2)	Provision of depots and staging facilities
Impact on the Existing Public Transport Operations	Top-up service. Model discussed in the Industry transition chapter of this document.	City's Industry Transition Model

4.7. System plan and design

4.7.1. Full Phase Plan

The objective of the MyCiTi IRT project is to transform the entire public transport system in Cape Town, but the full system cannot be implemented at once. As mentioned before in the introductory section of this chapter, it is envisioned that the system will be rolled out in phases over the next 15 to 20 years, with the initial focus on implementing Phase 1A by end of 2013, to match funding availability, and the remainder of Phase 1 (i.e., Phase 1B) by end of 2014. The implementation of future phases will be matched to available funding. This means that services will be implemented as the funding for infrastructure, vehicles and other items necessary to operate the system becomes available in tranches over a number of years. Figure 1 in Chapter 1 shows the phased implementation of the IRT system.

The N2 Express service is a *direct express BRT service* that is proposed for operation by December 2013. As mentioned before, the N2 Express service is not a phase of the IRT system but a supplementary MyCiTi service that performs a specific function until the Khayelitsha to CBD rail service is adequately upgraded. The long term role of the N2 express service will be reviewed in the update of the Integrated Public Transport Network (IPTN), which is planned for completion by mid-2013.

4.7.2. Phase 1A

Network Plan

Phase 1A includes the Inner City (including extension to Hout Bay), Woodstock rail station, Paarden Eiland, Milnerton, Montague Gardens, Century City, Du Noon, Tableview, Melkbos, Atlantis and Mamre. It includes the rapidly growing residential areas in Blaauwberg north of the Diep River, and the low-income communities of Atlantis, Mamre, Du Noon and

Doornbach. This corridor faces some of the worst peak period congestion levels, especially to the south and east of the bridges over the Diep River, where there is dedicated rights of way public transport facilities in place. Figure 13 shows a map of Phase 1A, including the proposed trunk and feeder service routes.

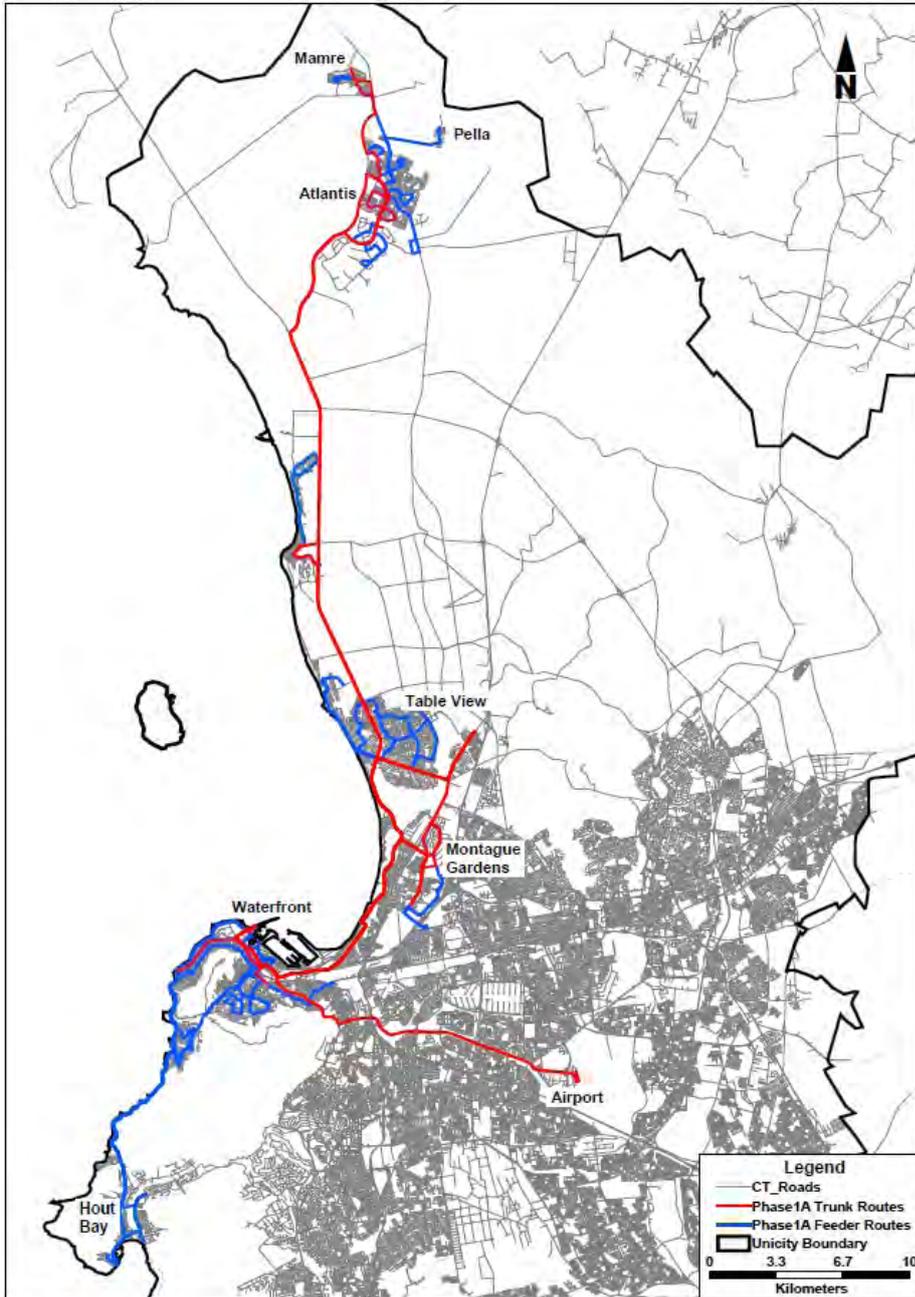


Figure 13: Phase 1A route network

Route Descriptions

The proposed route descriptions for Phase 1A are summarised in Table 4 below. The detailed route descriptions are given in Annexure B

Table 4: Summary of Phase 1A Route Descriptions

Service type	Route number	Route name
Trunks	T01	Du Noon - Table View - Civic Centre – Waterfront
	T01A	Montague Gardens - Civic Centre
	T02	Airport - Civic Centre
	T21	Atlantis - Table View - Civic Centre
	T22	Atlantis - Table View - Century City
Trunk Extensions	T04-AE	Atlantis to Mamre
	T03-AE1	Atlantis to Atlantis depot via Protea Park
	T03-AE2	Atlantis to Atlantis depot via Avondale
9m Feeders	F01	Hout Bay Beach - Hangberg - Hout Bay - Sea Point - CBD - Civic Centre
	F02	Camps Bay (clockwise) - CBD - Waterfront (Clock Tower)
	F03	Camps Bay (anticlockwise) - CBD - Waterfront (Clock Tower)
	F04	Queens Beach - Sea Point - Waterfront (Breakwater Boulevard) - Civic Centre
	F05	Queens Beach - Fresnaye - CBD - Civic Centre
	F06	Gardens - Vredehoek - CBD - Civic Centre
	F07	Salt River - Woodstock - Zonnebloem - CBD - Civic Centre
	F08	Gardens - Oranjezicht - CBD - Civic Centre
	F09	Hout Bay Beach - Imizamo Yethu - Sea Point - CBD - Civic Centre
	F14	Parklands - Table View - Big Bay
	F15	Sunningdale - Gie Road - Wood
	F16	Sunningdale - Wood Drive - Table View
	F70A	West Beach - Dolphin Beach - Table View - Sunningdale
	F68	Du Noon - Century City
	F70B	Montague Gardens - Century City

	F8	Mamre - Atlantis
	F9	Pella - Atlantis
	F10	Atlantis - Robinvale - Atlantis
	F11	Protea Park - Avondale - Atlantis
	F12	Atlantis - Saxonsea - Atlantis
	F13	Atlantis Industry - Foundry - Atlantis
	F15	Atlantis - Sherwood - Atlantis
	F70C	Duynefontein - Melkbosstrand
	F16	Witsands - Atlantis
6m Feeders	L1	Witsands - Atlantis Industrial area
	L2	Du Noon - Potsdam Road trunk stations
	L3	Flamingo Vlei - Wood and Table View Stations
	L4	Sunset Beach - Sunset Beach Station
	L5	Royal Ascot - Racecourse Road Station
	L6	Bo Kaap - Long and Loop Streets
	L7	Tamboerskloof - Kloof Street
	L8	Upper Vredehoek - Gardens Centre
	L9	Table Mountain Cable station - Kloofnek Road
	L10	Llandudno Beach - Victoria Road
	L11	Valley Road - Imizamo Yethu
	L12	Higgovale and Upper Oranjezicht - Kloof Street and Kloof Nek Road
	L13	Fresnaye - Regent Road, Sea Point (via Ocean View Drive & St John's Road)
	L14	Fresnaye to Three Anchor Bay (via Ocean View Drive and Glengariff Road)

	L15	Fresnaye to High Level Road, Green Point (via Ocean View Drive)
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Phases 1A is planned to become operational over a period of time and implemented in a stepped approach by milestones. The first service of Phase 1A (sometimes referred to as the MyCiTi starter service) has begun in what is known as Milestone 0. This service commenced in May 2011 and will be followed by Milestones 1, 2, 3, and 4. These milestones, in general, indicate the extension of the services into the inner city area (Milestone 1), Table View and Montague Gardens (Milestone 2), Atlantis and Melkbosstrand (Milestone 3) and Dunoon (Milestone 4). As indicated before, it is planned and programmed that Phase 1A be fully operational by November 2013.

Operating characteristics

Phase 1A operating characteristics per route are as shown in Table 5 below.

Table 5: Phase 1A operating characteristics

PHASE 1A ROUTE DESCRIPTIONS			Operating Characteristics					
<u>Service type</u>	<u>Route number</u>	<u>Route name</u>	<u>Projected Cycle Time</u>	<u>Vehicle type</u>	<u>Vehicle Capacity</u>	<u>Demand</u>	<u>Peak Hour Frequency</u>	<u>Fleet required</u>
<u>Trunks</u>	T01	Du Noon - Table View - Civic Centre - Waterfront	114	18m	124	2276	15	24
	T01A	Montague Gardens – Civic Centre	54	18m 12m	124 65		4	4 x 18m 2 x 12m
	T02	Airport – Civic Centre	67	12m	36	293	3	4
	T21	Atlantis - Table View - Civic Centre	149	12m	65	976	10	36
	T22	Atlantis - Table View - Century City	148	12m	65		12	
<u>Trunk Extensions</u>	TE031	Cape Town - Queen's Beach Sea Point	Operating characteristics to be finalised with the VOCs					
	TE032	Cape Town to Cape Technikon via Darling and Keizergracht streets						
	TE033	Atlantis - depot via Protea Park	21	12m	45		0 early am peak/5 late am peak	
	TE034	Atlantis - depot via Avondale	20	12m	45		0 early am peak/5 late am peak	
	TE041	within Montague Gardens	Operating characteristics to be finalised with the VOCs					
	TE042	Atlantis - Mamre	38	12m	45		9	
	TE043	Atlantis - Mamre	32	12m	45		2	
	TE051	within Montague Gardens	Operating characteristics to be finalised with the VOCs					
<u>Feeders</u>	F01	Hout Bay Beach - Hangberg - Hout Bay - Sea Point - CBD - Civic Centre	166	8.8m	45	904	15	34
	F02	Waterfront Silo (Clock Tower) - Civic Centre - Camps Bay (clockwise)	111	8.8m	45	2021	3	7

F03	Waterfront Silo (Clock Tower) - Civic Centre - Camps Bay (anticlockwise)	103	8.8m	45	2024	3	7
F04	Sea Point - Waterfront (Breakwater Boulevard) - Civic Centre	66	8.8m	45	255	2	1
F05	Sea Point - Fresnaye - CBD - Civic Centre	62	8.8m	45	1400	12	16
F06	Civic Centre - Gardens - Vredehoek	69	8.8m	45	945	8	7
F07	Salt River - Woodstock - Zonnebloem - CBD - Civic Centre	64	8.8m	45	2224	3	5
F08	Civic Centre - Gardens - Oranjezicht	51	8.8m	45	1580	3	7
F09	Hout Bay Beach - Imizamo Yethu - Sea Point - CBD - Civic Centre	153	8.8m	45	874	20	25
F14	Parklands- Table View - Big Bay	58	8.8m	45	1099	3	7
F15	Sunningdale - Gie Road - Wood	44	8.8m	45	226	7.5	6
F16	Sunningdale - Wood Drive - Wood	45	8.8m	45	693	7.5	6
F70A	West Beach - Dolphin Beach - Table View - Sunningdale	56	8.8m	45		6	6
F68	Dunoon - Century City	76	12m	65	1438	15	14
F70B	Montague - Century City	75	8.8m	45	1336	6	6
F8	Mamre - Atlantis	46	8.8m	45	676	6	5
F9	Pella - Atlantis	34	8.8m	45	117	2	2

F10	Atlantis – Robinvale - Atlantis	20	8.8m	45	757	3	2
F11	Protea Park – Avondale - Atlantis	19	8.8m	45	1093	5	13
F12	Atlantis – Saxonseas - Atlantis	23	8.8m	45	658	10	5
F13	Atlantis Industry - Foundry - Atlantis	38	8.8m	45	1063	10	7
F15	Atlantis - Sherwood - Atlantis	21	8.8m	45	634	5	2
F16	Witsands - Atlantis	32	8.8m	45	1115	3	2
F70C	Duynefontein - Melkbosstrand	44	8.8m	45	741	4	7
<u>6m Feeder vehicles</u>	Due to the nature of the model these smaller areas could not be accurately modelled. A regular 10 min service is proposed for these services						

4.7.3. Phase 1B

Network Plan

The intention of Phase 1B is to address the services that remain within the West Coast corridor which are operated by Phase 1A MyCiTi operators, and is required as an essential part of the industry transition process within the Phase 1 area. This provided the City to address services between the following areas, namely Montague Gardens, Century City, Summer Greens, Edgemead, Richwood, Maitland and Salt River Rail Stations. Figure 14 shows a map of Phase 1B, including the proposed trunk and feeder service routes which are scheduled for operation by the end of 2014.

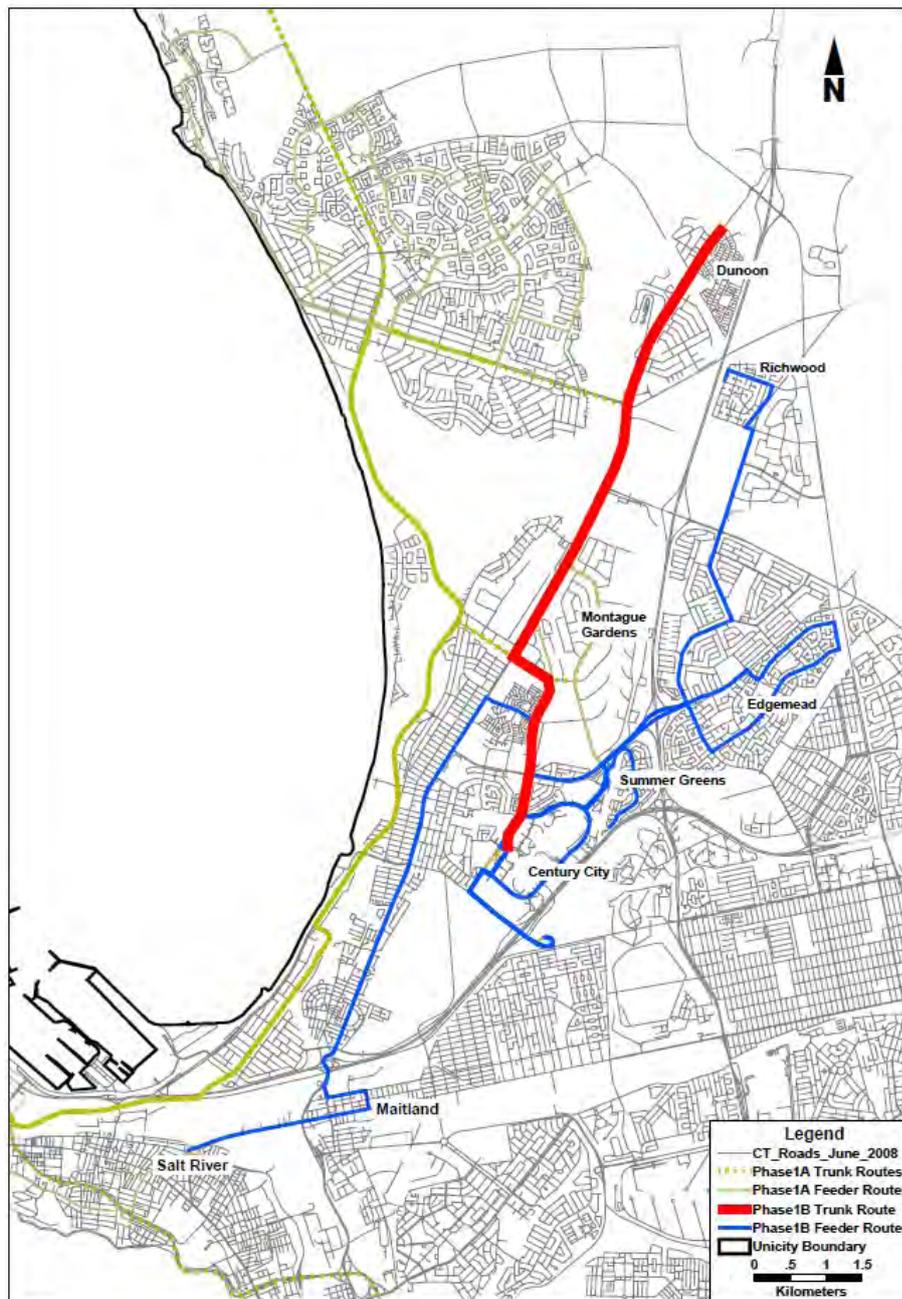


Figure 14: Phase 1B Route Network

Route Descriptions

The proposed route descriptions for Phase 1B are summarised in Table 6 below. The detailed route descriptions are given in Annexure B

Table 6: Phase 1B Route Descriptions

Service type	Route number	Route name
Trunks	T20	Du Noon to Century City via Montague Gardens
Feeders	F16	Salt River to Montague Gardens
	F19	Summer Greens to Century City
	F18	Edgemean to Century City
	F15	Richwood to Century City

Operating characteristics

Phase 1B operating characteristics per route are as shown in Table 7 below.

Table 7: Phase 1B operating characteristics

Phase 1B Route Descriptions			Operating Characteristics					
<u>Service type</u>	<u>Route number</u>	<u>Route name</u>	<u>Projected Cycle time (min)</u>	<u>Vehicle type</u>	<u>Vehicle Capacity</u>	<u>Demand</u>	<u>Peak Hour Frequency</u>	<u>Fleet required</u>
Trunk	T20	Du Noon - Century City via Montague Gardens	76	12m	65	1438	8	11
Feeders	F16	Salt River to Montague Gardens	115	8.8m	45	1461	10	33
	F15	Richwood to Century City	85	8.8m	45	996	12	5
	F18	Edgemoor to Century City	61	8.8m	45	888	8	7
	F19	Summer Greens to Century City	47	8.8m	45	460	3	2

4.7.4. N2 Express service

Network Plan

The proposed N2 Express service will provide express connections between Mitchells Plain/ Khayelitsha and the Cape Town CBD using the N2 freeway, currently planned for operation by December 2013. As indicated before, during the development of the IPTN, all routes in the N2 corridor will be evaluated including Klipfontein and Main Road, as either supplementary routes or alternatives. The proposed direct Express services will utilise the existing BMT lane along the N2 inbound lanes. In the outbound (from the CBD) direction, the services will operate in mixed traffic. In Mitchell's Plan and Khayelitsha, the service will operate along major arterials with quick access onto the N2. Figure 15 shows a map of the N2 direct Express services.

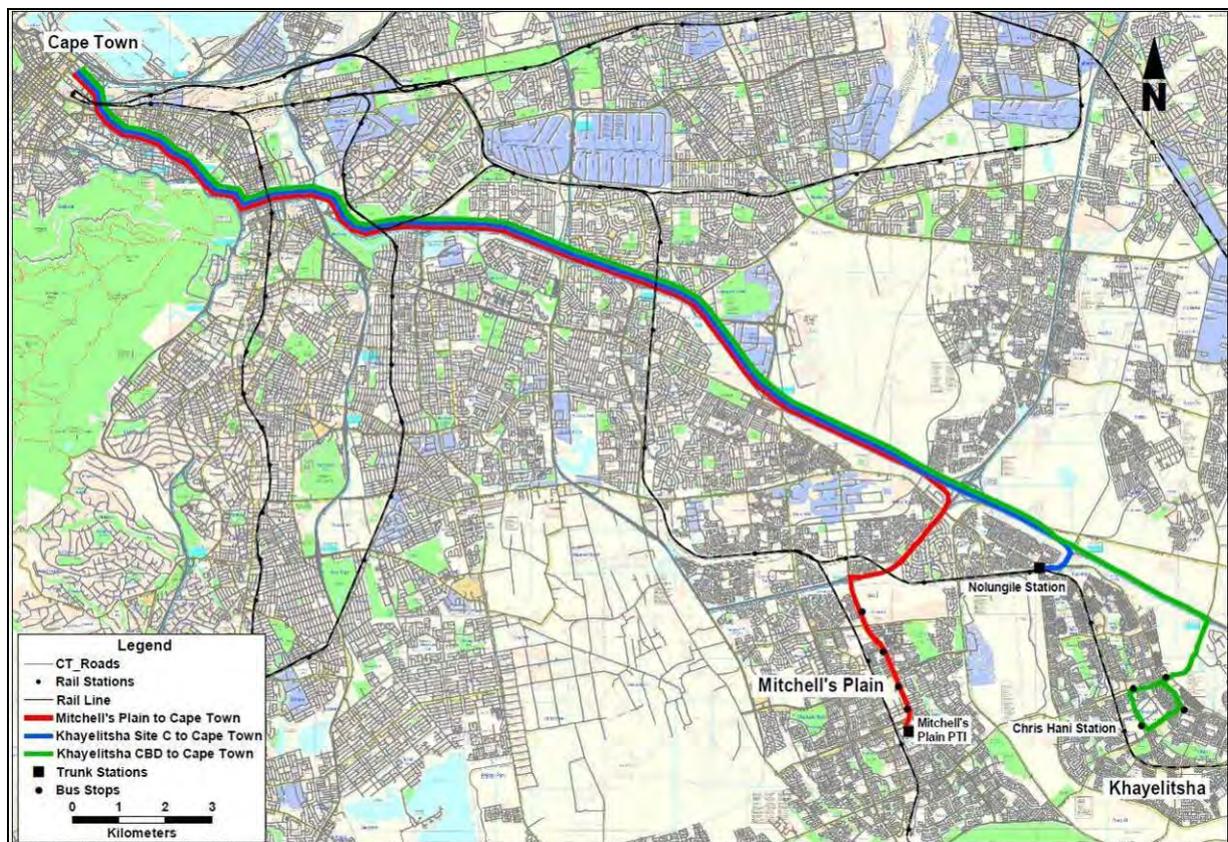


Figure 15: Proposed N2 Express Routes

Route Descriptions

The proposed route descriptions for the N2 Express Service are summarised in Table 8 below. The detailed route descriptions are given in Annexure B.

Table 8: N2 Express Service Route Description

<u>Service type</u>	<u>Route number</u>	<u>Route name</u>
Direct services	-	Mitchell's Plain to Cape Town
	-	Khayelitsha Nolongile (Site C) to Cape Town
	-	Khayelitsha CBD to Cape Town

The express services will make use of the 2 low-floor platforms at the closed Civic Centre station in the CBD (i.e., the destination station) to allow level boarding into the low-entry vehicles. The express services will also share existing public transport facilities with other public transport services (i.e., the Mitchell's Plain Town Centre bus terminus, Khayelitsha rail station and Nolongile (Site C) rail station). One station with one low-floor platform (to provide level boarding) will be built in Mitchell's Plain and one in Site C, Khayelitsha. The proposed stations will be closed and fare collection and verification will occur at the entrances of the stations. Shelters will be provided at the kerbside stops proposed in the local areas. The stops will be open and fare collection and verification will occur on-board the vehicles.

The following figures show the two low-floor platforms at Civic Centre station and some of the different shelter types.

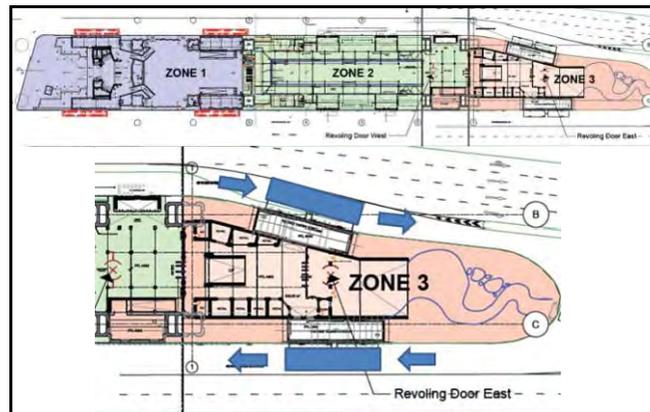

Figure 16: 2 low-floor platforms at Civic Station

Figure 17: Feeder bus shelters

Service operating characteristics

The Metro SE express service operating characteristics per route are as shown in Table 9 below.

Table 9: N2 Express service operating characteristics

N2 Express Service Route descriptions			Operating Characteristics						
<u>Service type</u>	<u>Route number</u>	<u>Route name</u>	<u>Projected Cycle time (min)</u>	<u>Vehicle type</u>	<u>Vehicle Capacity</u>	<u>Demand</u>	<u>Peak Hour Frequency</u>	<u>Off-Peak Hour Frequency</u>	<u>Fleet required</u>
Direct services	-	Khayelitsha CBD to Cape Town	104	18m	97	482	6	2	11
	-	Khayelitsha Nolungile (Site C) to Cape Town	87	18m	97	488	6	2	9
	-	Mitchells Plain to Cape Town	91	18m	97	523	6	2	10

4.8. Rollout Plan

The cost of items required for Phase 1A to be operational has been estimated and grouped in a number of packages that make up the building blocks for implementing the MyCiti system. These packages have been combined in a number of different sequences to create operational milestones for Phase 1A. The implications of each sequence for the duration of roll out, implications on existing services and company formation, system legibility and costs, among other matters, have been assessed and discussed in detail. The detailed operational milestone rollout for Phase 1B and other future phases is currently being planned based on the experience of Phase 1A.

The following subsections provide the proposed sequence of roll out for Phase 1A and 1B as well the N2 Express service.

4.8.1. Phase 1A roll-out plan

Milestone 0: The addition of Inner City feeder services

Milestone 0 interim routes are shown in Figure 18 below. Milestone 0 began operations in May 2011 and consists of two trunk routes and four interim feeder routes.

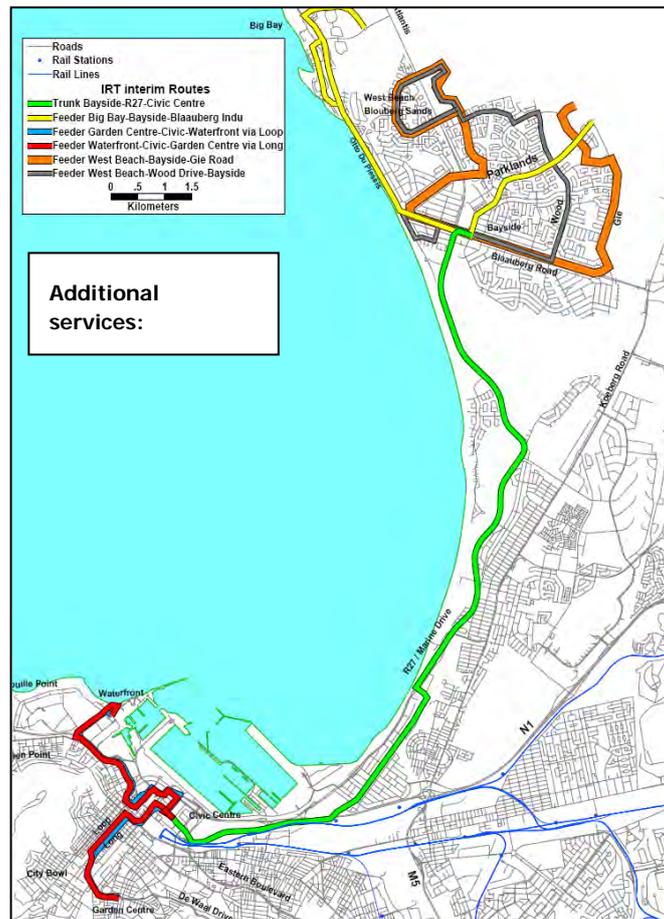


Figure 18: IRT - Milestone 0 interim routes

The trunk routes are:

- T01: Table View trunk station to Civic trunk station along the R27
- T02: Airport to Civic trunk station along the N2

The interim feeder routes are:

- F01: Gardens to Waterfront via Civic Centre (Cape Town CBD)
- F14: Big Bay to Table View to Parklands East (Table View)
- F15: Parklands to Table View to Blouberg Sands (Table View)
- F16: Marine Circle to Table View to Blouberg Sands (Table View)

Milestone 1: The addition of Inner City feeder services

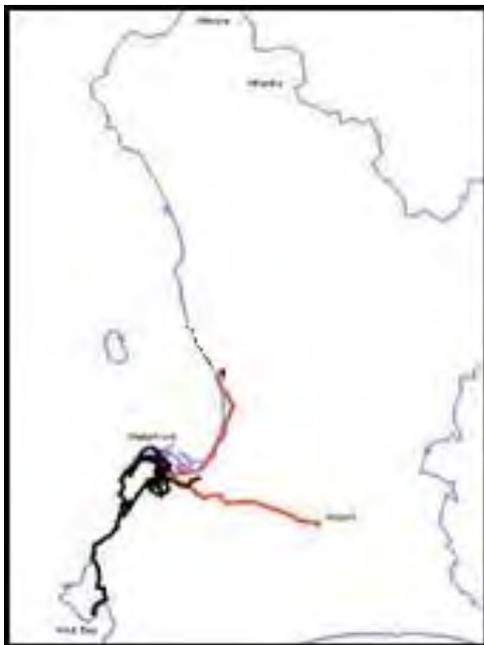
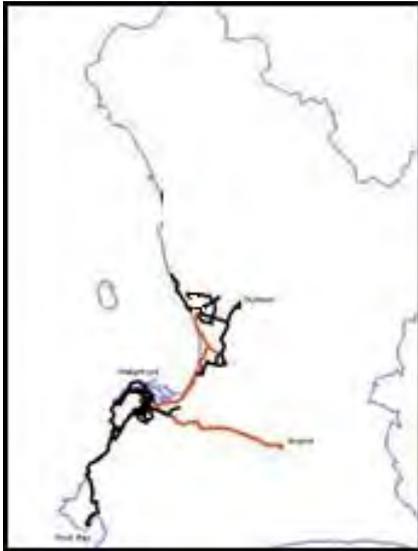


Figure 19: Milestone 1 permanent infrastructure

This milestone sees the addition of all the feeder routes in the Inner City from the foreshore to Hout Bay. These feeder routes will be supported by the Inner City depot and feeder stops, including closed feeder-to-feeder stations. These routes will make use of the smaller 9m type vehicles.

The full Inner City feeder services are targeted to be operational by May 2013, with the first routes being operational from December 2012. Interim feeders in Table View will continue in support of this milestone until Milestone 2 is complete.

Milestone 2: The addition of the Table View, Du Noon, Montague Gardens and Century City feeder services + trunk into Montague Gardens



This milestone introduces the following feeder and trunk services:

Table View feeders to serve the R27 trunk and provide a distribution service within the Table View area.

Du Noon – Montague Gardens - Century City - Woodbridge feeders.

Trunk into Montague Gardens

Milestone 2 is targeted to be fully operational by mid-April 2013.

Figure 20: Milestone 2 permanent infrastructure

Milestone 3: The addition of Atlantis trunk and feeder services with connection to Melkbosstrand.



In this milestone, the following services are added:

Trunks to Atlantis with connection to Melkbosstrand

Feeders within Atlantis serving trunk and local travel desires.

This milestone is targeted to be fully operational by end of June 2013.

Figure 21: Milestone 3

Milestone 4: The extension of the Bayside trunk to Du Noon



In the final milestone of Phase 1A, the trunk from Bayside to the CBD is extended from Bayside to Du Noon. This trunk route will require the construction of dedicated bus lanes on Blaauwberg Road and Potsdam Road. Once this milestone is implemented Phase 1A will be complete.

The target date for this milestone is November 2013.

Figure 22: Milestone 4

4.8.2. N2 Express service roll-out plan

The following activities are planned to take place during the financial year 2012 / 2013:

- Construction commences on facilities for the N2 Express stations and stops.
- Procurement of buses

During the financial year 2013 / 2014 it is envisaged that new low-entry buses will be delivered for the N2 Express services.

These express services are planned to commence operations by December 2013.

4.8.3. Phase 1B roll-out plan

Phase 1B is planned to begin operations by end of 2014.

5. Infrastructure and related design and cost issues

5.1. Introduction

This Chapter gives some detail on elements of the system infrastructure, with an emphasis on indicating why certain infrastructure decisions were adopted. The infrastructure design development process has responded to the need for a more flexible system.

5.2. Phase 1A Motivation to Adopt High-Floor Trunk

The system will make use of trunk and feeder vehicles. The previous section has indicated the variety of vehicles that will be made use of in the system. As indicated, a key design principle is that there should be level boarding. An important decision that had to be taken early on was the height of the trunk vehicle floor, which, in turn, determines the floor height for the trunk stations. In essence, the options were to adopt low-floor, or high-floor technology.

The advantages of high floor technology included the following:

- Wheel wells, fuel tanks and other mechanical and electrical equipment minimally protrude into the bus floor hence maximising the available floor area and the number of seats. Low-floor bus designs were believed to typically lose between 4 and 8 seats to wheel well intrusion, even where relatively small wheel and tyre sizes are used.
- Since the wheels, engine and other mechanical equipment are housed below the 940mm high floor a constant level surface, free of steps, is maintained between the doors, improving access for the physically disabled within the vehicle.
- At the time of the decision, high-floor buses cost less, weighed less and had less complex maintenance regimes when compared to low-floor buses, where space is limited for packaging mechanical and electrical equipment. A disadvantage of low-floor bus designs is that mechanical and electrical equipment and fuel tanks must either be stored inside the vehicle, where they take up space, or put on the roof, where they are difficult to service. Hence reduced acquisition cost, maintenance costs and reduced axle load on the road pavement all contribute to limiting the overall operating cost of the system.
- High floor technology creates a more definable presence for the trunk routes including the self-enforcement of the system due to the raised floor of the vehicle and stations.

5.3. Motivation to Adopt Low-Entry Buses for Future Phases

The decision to implement a high-floor trunk bus system in combination with a low-entry feeder bus system has resulted in a number of infrastructure challenges in the implementation of phase 1A:

- The difference in floor heights between the trunk and feeder bus systems has increased the number of station platforms required and has contributed to the development length of transfer stations.
- This level difference has also required the introduction of ramps between feeder and trunk platforms which has further increased the development length of transfer stations.
- High-floor platforms, coupled with the need to adhere to maximum gradients required to facilitate universal access, has resulted in long entrance and escape ramps.
- The potential to extend trunk bus services along feeder routes is limited, since high floor buses are not compatible with the feeder bus infrastructure. Due to this incompatibility universal access could not be achieved along feeder routes using the high floor buses.

The advantages of low floor technology include:

- Stations are visually less intrusive
- It is easier to operate 'complementary services' i.e. services where vehicles run partly on trunk and partly on feeder routes because feeder and trunk stations are then the same height

At the time it was decided that the arguments for high floor trunk vehicles were stronger; especially because, while the high floor doors are on the right side of the bus, it is possible in addition to have a low entry door with steps on the left hand side of the trunk vehicle, enabling it to be used at feeder stops if necessary.

The implementation of infrastructure that is compatible with both the feeder and trunk fleet offers huge operational flexibility and significant infrastructure savings. Considering the above challenges, the lessons learnt and the associated benefits of low-floor, the CoCT intends implementing low-entry vehicles for all future phases. The introduction of the low floor trunk express bus service to Mitchell's Plain and Khayelitsha offers an ideal test case with which this new technology can be trialled. Going forward the low-entry system will offer greater flexibility as the service extends into high density areas of the Metro South-East.

5.4. Kassel Kerb and Boarding Bridges at Trunk

Apart from the vehicle and station platform floors being level with one another, ease of boarding requires a minimal gap between the edge of the bus and the platform. To minimise this gap the driver has to bring the vehicle as close to the platform as possible. According to operators in other BRT systems the most expensive operating cost next to fuel is the cost of replacing tyres. This is because, in many systems, tyre sidewalls are often damaged by contact with the kerb or station when attempting to dock at the station.

To ensure optimal alignment of the bus and the platform *MyCiti* designers are employing the use of a specially shaped Kassel Kerb at stations. The smooth surface and profile of the Kassel Kerb minimizes tyre sidewall wear. Operators have reported a reduction in sidewall damage of up to 40% when compared with conventional concrete kerbs.

Additionally, the *MyCiti* buses are equipped with boarding bridges which are automatically lowered just before the bus doors open at the trunk stations. This closes the gap between the station edge and the bus, allowing for fast boarding of many passengers, and reducing the risk of injury.

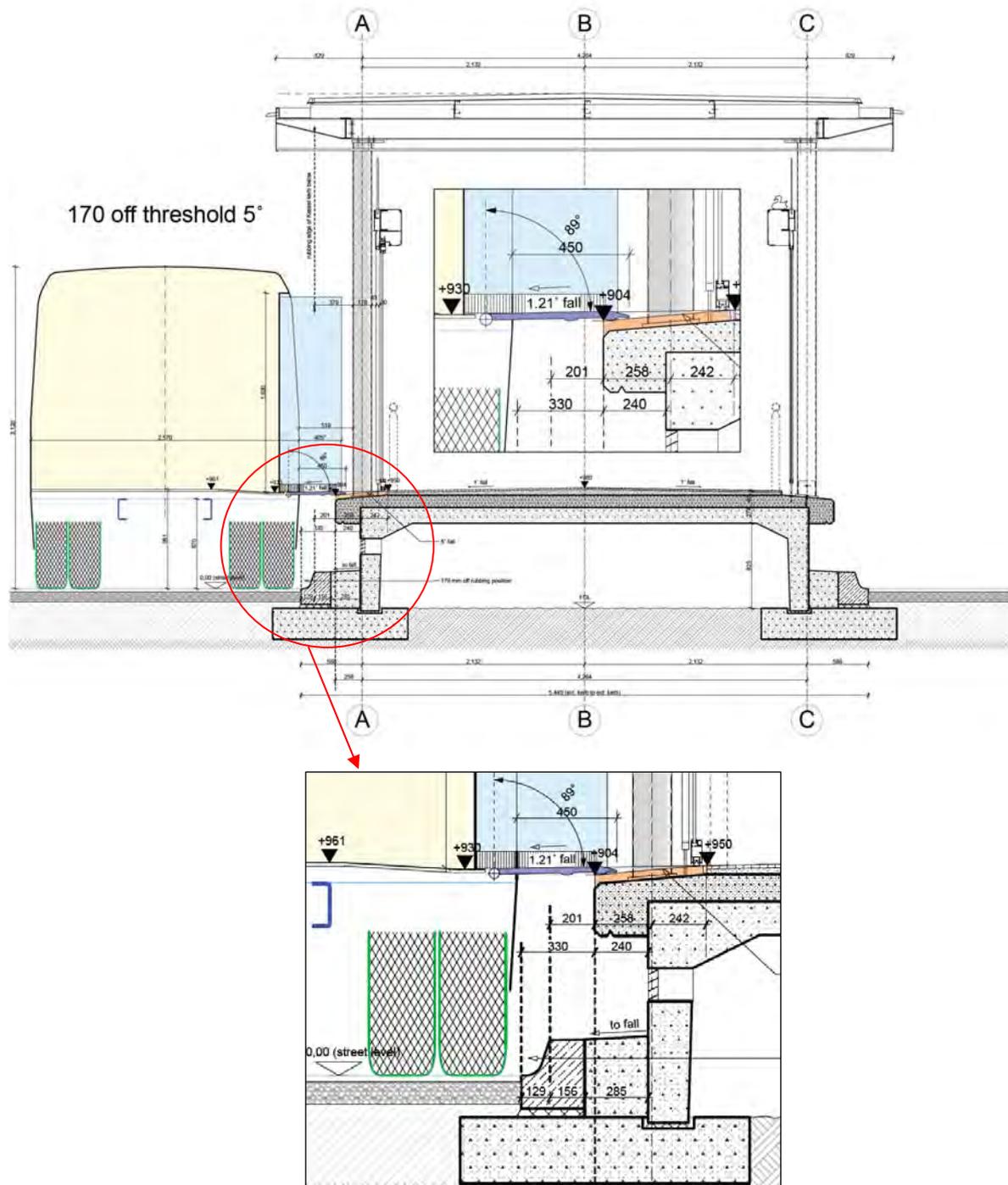


Figure 5-1: Drawing showing high floor trunk vehicles and stations, Kassel kerb and bridge

5.5. Delineator Kerb along Busways

Delineator kerbs separate the bus lanes from the general traffic lanes and prevent general traffic from entering the bus lanes. These kerbs have the following features:

- Their sloping profile minimises the risk of a vehicle rolling, should it strike the kerb
- They are painted a retroreflective yellow, with a 100mm white line adjacent on the side of the general traffic, to demarcate the outer edge of the traffic lane
- In some instances, the speed limit of the general traffic is reduced, for safety reasons
- There are 100 mm wide drainage gaps every two metres. The gap width and spacing was calculated using the Rational Method, based on a worst-case scenario that assumes crossfall towards the bus lane, flat terrain and a short duration, high-intensity rainfall event

5.6. Treatment of Signalised Intersections

The placement of dedicated bus lanes on the median side of the road poses a problem at intersections. The obvious conflict is the through movement of buses with right-turning general traffic.

It was decided that right turns would not be banned along trunk routes as this would lead to traffic diversion and safety concerns. Two traffic signal prioritisation schemes have been adopted to cater for both public transport and general traffic.

1) Default treatment: Shared stop line

Signalised intersections have a shared stop line (i.e. buses and general traffic all stop at the same stop line). A bus phase runs in conjunction with the general traffic's through phase, followed by a protected only-right-turn phase for general traffic. This treatment requires adequate road reserve at the intersections to cater for the general traffic's through lanes and right-turn lanes as well as the exclusive bus lanes. It requires the use of special bus signal aspects and "ST boards," which are supplementary traffic signal arrow signs mounted above the signal heads.

2) Alternative treatment: Pre-signal

The use of a secondary stop line in advance of the intersection is controlled by a pre-signal. During the general traffic phase buses wait at the secondary stop line. Thereafter the bus phase commences and general traffic has to stop at the secondary stop line, allowing the bus to either travel through or turn left or right. This alternative treatment may be used in two cases:

- a) in instances where there is inadequate space for both right turn lanes and exclusive bus lanes, thus right-turning traffic and buses have to share the same lane (separated in time).

- b) to cater for bus turning movements.

5.7. Open Feeder Bus Stop Platform Interface

Similarly a key design principle of the feeder infrastructure is that there should be level boarding, which is linked the vehicle floor height, which, in turn, determines the height for the bus stop platform.

The following criteria were considered when assessing the design options available for open feeder bus stops:

- Universal access:
 - Completely eliminate the gap for all passengers using a device that bridges the gap
 - Reduce the space between bus and platform to a nominal gap for all passengers, using various methods of gap reduction – bumper strips, Corrugated platform edge, guide wheels
 - Cape Town has opted to control the gap for all passengers, ensuring accurate docking by implementing Kassel kerbs along the leading edge of the stop, and by eliminating the gap for wheelchair users and others with disabilities by means of deploying a cd-style mini ramp on-demand.
- Mechanisms available to bridge the gap between the stop platform and the bus:
 - Use of fold out full ramps on demand
 - Use of automated full ramps
 - The CoCT has opted for cd-style mini ramps on all feeder buses
- The vehicle fleet and platform height
 - Conventional low floor buses have a floor height of between 260 and 285 when kneeling is engaged and an operating floor height of approximately 340mm above road level
 - Ultra low floor buses have a floor height of about 200mm when kneeling is engaged and an operating floor height of about 265mm above road level
 - A platform height of 200mm above road level was chosen, since both ultra-low floor buses and conventional low floor buses were compatible at this level. Ultra-low buses are able to deploy a cd-style ramp from an operating height of approximately 270mm while conventional low-floor buses would be able to deploy a cd-style ramp from the same level while in the kneeled position.
- System flexibility
 - The decision to opt for a bus stop platform with height of 200mm above road level ensures fleet compatibility and flexibility going forward.

- Ultra low-floor feeder buses equipped with cd-style mini ramp can operate along a standard 160mm road edge when kneeling is engaged. This allows the use of temporary stops along envisaged routes, after which stop locations can be refined, prior to the construction of permanent stops
- Safety and wear and tear on feeder bus fleet
 - A platform height of 200mm above road level coupled with a bus operating floor level of 270 eliminates the risk of the bus impacting the edge of the bus stop

A number of options were considered for open feeder bus stops and ultimately it was decided to implement stops with a platform height of 200mm above finished road level.

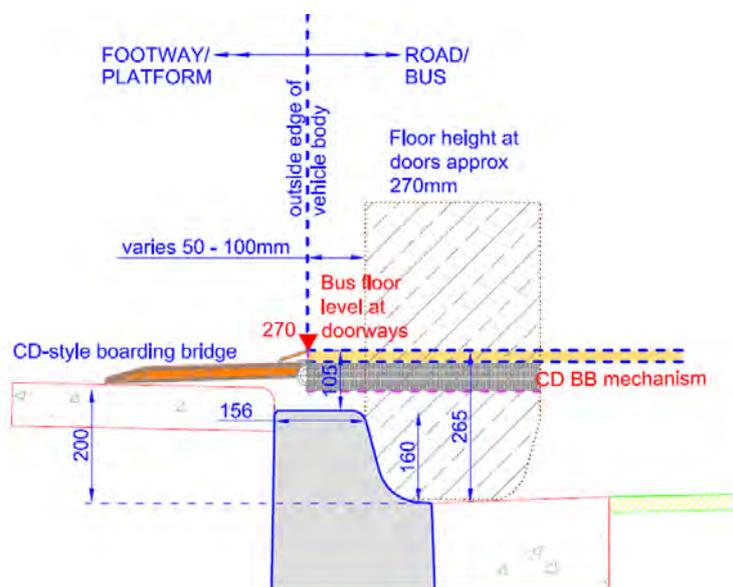


Figure 5-2: Drawing showing the interface between low-floor feeder vehicles and bus stop platforms, Kassel kerb and cd-style mini ramp

5.8. Pavement design: continuous reinforced concrete and red pigmentation

MyCITI designers had the option of using a continuous reinforced concrete (CRC) surface or a conventional flexible asphalt alternative.

The design decisions for the trunk route surfaces were based on the ultimate development of the *MyCITI* system taking into account future bus traffic loading of the system; and on the following information on articulated bus axle loads supplied by vehicle operators:

- Front axle maximum load 7.5 tons
- Middle axle maximum load 11.5 tons
- Rear axle maximum load 12.3 tons.

A key issue was the related ongoing maintenance costs. While capital infrastructure cost comparisons revealed that the CRC rigid road pavement costs 10% more than that of a conventional flexible road pavement, this is more than compensated by reduced maintenance costs.

When compared with a conventional flexible road pavement, the CRC road pavement option requires little to no maintenance over its 40-year design life. These benefits are two fold in that besides saving on direct maintenance costs, it also reduces the bus lane operational downtime.

The decision to provide a red pigment surface that clearly demarcates bus lanes exclusively reserved for BRT buses also influenced costing and maintenance regimes for the pavement options considered. The red pigment used with the CRC was able to be mixed into the concrete. Where asphalt is used a specialised coloured surface treatment of the asphalt pavement is necessary to achieve a red surface. The most viable option for this was found to be Tyregrip, an epoxy based resin incorporating red pigmented granite aggregate, both of which are imported. When the asphalt is resurfaced, as would be required during its 20 year design life, this surface treatment would also have to be renewed at significant cost.

Hence the decision to demarcate red bus lanes further increases the maintenance cost associated with the flexible pavement option when compared to the pigment CRC pavement.

This reinforced the decision in favour of concrete. The Due Diligence report, referred to earlier, also concluded that CRC is the most feasible option with best returns over the life time of the IRT.

The decision to construct CRC pavement does not come without its own challenges:

- access to services covered over by the CRC bus lanes is almost impossible;
- future service crossings are complicated since trenching across the dedicated bus lane would involve breaking and reinstating the CRC pavement; this can however be overcome by employing a directional trust boring construction technique;
- reinstatement of the CRC pavement would result in unacceptable disruption to the IRT service;
- the construction of a CRC pavement requires concrete to cure for a minimum of 21 days before trafficking, and hence would necessitate long term road closures which in turn would result in unacceptable traffic delays during construction.

Hence for the following reasons *MyCiti* engineers took the decision to revert to a conventional flexible road pavement construction at intersections:

Constructability and operational impacts: - a flexible road pavement, made up of a combination of both gravel and asphalt, is much quicker to repair than CRC pavement and hence would minimise the IRT operational downtime;

Impact on Traffic: - flexible road pavements can be repaired quickly without the need of lengthy road closures or diversions;

Repairs and Maintenance: - flexible pavements are easier to trench and repair, and can be trafficked almost immediately after construction;

Access to services: - the majority of service crossings are located at intersections, for which utility companies would require access to undertake repairs.

5.9. Disability access – the system seeks to thoroughly accommodate disabled

The system will be fully accessible for passengers in wheelchairs and passengers who have other disabilities such as sight impairment. All trunk stations will have level surfaces at entrances and exits as well as a level surface between the platform and the vehicle. Likewise, all feeder vehicles will be equipped with ramps that can be deployed on demand to allow wheelchair access into the vehicles. Inside both trunk and feeder vehicles there will be designated open spaces for securing of wheelchairs. These enhancements will benefit a large number of customers and not just those with long-term physical disabilities. Persons with temporary disabilities or injuries, parents with prams, the elderly, and the young will all benefit from the ease of access at stations and within vehicles.

Facilities to address disabilities include dropped curbs at all intersections, textured (tactile) paving to guide the blind and partially sighted and wide, even pavement surfaces. All new traffic signal road intersections will be fitted with a vibrating button which emits an audio signal when it is safe to cross. The device provides both audio and tactile signals indicating that the pedestrian green man symbol is lit and that it is therefore safe to cross the road. Turnstiles have been designed taking into account wheel chair access.

5.10. Non-motorised transport (NMT) infrastructure

A key feature of the *MyCITI* system is the network of dedicated bicycle and pedestrian pathways around the main bus trunk routes. The Blaauwberg starter service features a smooth three metre wide shared pedestrian/cycle facility running along its entire 16km length from the city centre to the middle of Blaauwberg. The shared pedestrian/cycle facility along *MyCITI* trunk routes is completely separate from the roadway, and therefore much safer.

To help people reach the main route, a secondary network of cycleways has also been designed for 500m along all its intersecting roads, although due to lower usage, these will generally consist only of painted cycle lanes on the existing roads. As far as possible such networks will be extended along all *MyCITI* trunk routes as the system is expanded.

An exceptional feature of the *MyCITI* cycle system is that on the main routes cyclists can opt to switch to a bus to finish the journey. Bicycles will be allowed onto the buses, which have been designed together with the stations to make it as easy as possible to board. Some of the features include wide doors and entrance gates, level boarding into the middle of the buses, and ramps leading up to the station platforms. The stations have been placed at all intersections with the route, about 600m apart. Commuters will also have the option of leaving a bicycle at lockup facilities placed within view of stations.

The bicycle lane surface changes as it approaches intersections from about 20m, then changes again in the area immediately surrounding the intersection. These subtle variations, together with warning and yield signs, provide a clear signal that pedestrians or vehicles may be present in the area, particularly as cyclists could be travelling up to 25km an hour along some stretches. At intersections where high pedestrian movement is expected it is intended that cyclists will reduce their speed appropriately.

6. Business structure and contractual relationships

6.1. Introduction and overview

As indicated in the Business Plan of 2010, MyCiTi operations can be run optimally if responsibilities are divided appropriately amongst the City of Cape Town and private sector companies which perform most of the actual operational tasks under contract to the City.

The business structure and contracts are described here based on present plans. It may be necessary to change elements of these during the processes of tender and negotiations for the various services.

In the initial phase the central implementation, coordination and management of the system will be done by way of a MyCiTi Project Office within the City administration, reporting to the Executive Director: Transport, Roads and Stormwater, and consisting of two departments, namely the Department: IRT Implementation and the Department: IRT Operations. These departments are proposed to fall under a Transport Authority as set out in Chapter 7.

It is envisaged that six functions are required regarding MyCiTi operations:

- A MyCiTi Operations Management Unit. This term 'MyCiTi Operations Management Unit' is used to refer to the structure which is responsible for managing MyCiTi operations, presently falling in the City Department: IRT Operations.
- Vehicle operators, also referred to as vehicle operating companies (VOCs);
- Automated fare collection (AFC);
- Control centre (CC);
- Station management (SM)
- An advertising contractor, responsible for advertising on MyCiTi infrastructure and for maintenance of busstops.

The City of Cape Town has overall responsibility for MyCiTi, through the Department IRT Implementation, in conjunction with, in particular, the Department IRT Operations. It determines where the system is to be rolled out, builds and maintains the MyCiTi infrastructure, and sets the terms under which the system operates. This includes setting the framework for establishing fare levels and establishing through negotiations with the MyCiTi Operations Management Unit the level of additional finance contributed by the City to run the transport operations.

VOCs will transport passengers. On trunk routes they will have a very limited responsibility for fare collection, but will have an important role to play on feeder routes. Responsibility for the fare system (including access control infrastructure and fare software), used by both the SM contractor and on feeder buses, will rest with the AFC contractor. The actual on-station ticket sales and access control at trunk stations will be undertaken by the SM contractor. The SM contractor will pay the collected fares over to the bank account of the City, which will be responsible for paying VOCs and the other service providers out of the fare revenues and other revenues. The stations and its precincts will be managed by the SM contractor.

The MyCiTi Operations Management Unit will be responsible for directing the scheduling and control of vehicles. However, the MyCiTi Operations Management Unit has contracted the CC contractor to set up the scheduling and controlling systems and operate them for an initial period.

While establishing four separate sets of contracts, conforming with international best practice, this approach does present challenges to ensure effective integration between the contracts. Special attention has been paid in designing the systems to ensure seamless integration. From a technology point of view, the AFC contractor is responsible for integration between the fare system and control centre.

These roles, relationships and contracts are summarised in more detail further in this chapter.

A number of the contracts involves income generation activities. This includes income generated through the advertising contract, through lease or concession of retail facilities and management of parking. All such income will be accounted for as income to MyCiTi operations, to be used to fund the MyCiTi services.

6.2. Contracting the required services

The design of business contracts, as set out in this 2012 MyCiTi Business Plan, is practically the same as that described in the 2010 Business Plan. The 2012 MyCiTi Business Plan, however, does reflect clearer definition and division of responsibilities between the different contractor, due to the detailed work that has been done on developing tenders and contracts since the adoption of the 2010 Business Plan.

This chapter describes the business design as was originally developed for Phase 1A, as further developed since 2010. It is envisaged that the same design will be used regarding Phase 1B and the N2 Express. The process of contracting these services is summarised below. In some cases, this is elaborated upon in more detail in the remainder of the chapter.

It is planned that the services for these sub-phases be procured as follows:

- VOCs:
 - The long-term services for Phases 1A and 1B are planned to be provided through VOCs by way of contracts negotiated in terms of the NLTA. If no agreement is reached with the relevant VOCs within a reasonable period, the City would put the remaining contracts out to tender.
 - Regarding the N2 Express, the VOC contracts are to be concluded as set out in Chapter 9.
- Vehicle suppliers – as discussed in paragraph 6.4 below.
- Station Management services:
 - The services for Phase 1A and 1B will be provided by a single contract, awarded by way of a tender.

- Subject to compliance with the City's procurement policies, the stations required for the N2 Express service, should be provided by the same SM contractor.
- AFC and CC contractor:
 - These contracts have already been awarded for Phase 1A. Subject to compliance with the City's procurement policies, it is planned that the AFC and CC contracts be expanded to cover Phase 1B and the N2 Express.

6.3. Vehicle operating companies (VOCs)

6.3.1. Overall description

At the heart of the MyCiTi system will be the vehicle operating companies (VOCs) responsible for operating the vehicles necessary to provide the service.

The City may contract with three VOCs. However, if a reasonable agreement cannot be reached with any one or more of these companies, then contracts may be concluded with fewer companies.

For Phases 1A and 1B, the division of the required services between the VOCs and the process of allocating the current industry actors to one or other of these companies is discussed in Chapter 9 on industry transition.³

The VOCs are planned to be appointed through a negotiation process to be run by the City. This negotiation is clearly subject to achieving a reasonable negotiated agreement within a reasonable period. If no agreement is reached through negotiation by a time to be specified by the City, it may procure the urgent or immediate services through other means of procurement.

The costs of providing the services, is the key element to be negotiated between the City and these companies. The preferred payment model is described in paragraph 6.3.2 below.

The City will provide the initial fleet required to provide the services at no cost to the VOCs – as described in paragraph 6.3.2. The VOCs will use the vehicles solely to fulfil their obligations to the MyCiTi Operations Management Unit, or for additional services (for example, contract services) authorised by the City.

The VOCs must be ready to test and train the drivers in advance of the system start and will need to work with the City through the MyCiTi Project Office on coordination of vehicle procurement, infrastructure construction, and system start.

In terms of these obligations, each VO will be responsible for operating specified feeder vehicles on feeder routes and trunk vehicles on trunk routes. The routes and the expected phasing of these routes are described in Chapter 4. The detailed programming of services to be provided on the routes and frequency of services will be determined by the MyCiTi Operations Management Unit, subject to the City's contracts with the VOCs.

³ Added clarification: This relates to directly affected operators, who are those whose services are proposed to be replaced by a particular phase of MyCiTi, whose legal rights are affected and who have agreed to surrender their operating licence and operating vehicle.

The terms of the VOC agreements will be negotiated with the VOCs. As such, where changes are made during negotiations resulting in changes in the model as described in this chapter, such changes will be reported to the Council by way of the section 33 report, for Council's consideration.

6.3.2. Vehicle ownership

The issues of vehicle purchase and ownership are dealt with differently in the initial phase of MyCiTi. The City considered a range of options, which were described and discussed Annexure C to the 2010 Business Plan.

The option for Phases 1A and 1B, and for the N2 Express, chosen as the most appropriate to reduce the City's operating costs and to enable the City to be protected from the risk of the loss of the vehicles should the VOCs be liquidated, is as follows: In Phase 1A the City will purchase the initial fleet of vehicles, funded by the Public Transport Infrastructure and Systems Grant (PTISG). The vehicles purchased by the City out of the grant will be held as City assets and made available to the VOCs at no cost, to be used and maintained by the VOCs for the length of the contract, apart from the initial period, during which the vehicle supplier may be contracted to maintain the vehicles.

This arrangement is being adopted in the first phases because the expected fare revenue will be insufficient to cover the cost of vehicles and because the City has been able to secure grant funding for these vehicles.

Vehicles purchased in addition to the initial fleet are expected to be paid for out of fare revenue. Such vehicles would only be required in the event of significantly higher demand than anticipated, and thus should be able to be covered out of the fare revenue. The VOC contracts should make provision for both these options.

When these phases are put out to tender after the initial 12 year period, it is possible that the VOCs will be required to purchase their own vehicles and the interest and principal will be paid for out of a tendered fee per kilometre, or similar mechanisms, depending on whether a capital subsidy is still required to reduce the operating deficit of the system.

6.3.3. Payment model

The City plans to pay the VOCs through the following categories of payments:

- a **fixed cost** expressed as an amount not linked to the number of kilometres completed or the number of vehicles utilised by the operator;
- a single **driver-related cost** in respect of all of 18m trunk vehicles, 12m trunk/feeder vehicles, and 9m feeder vehicles directly linked to the ***number of drivers*** utilised by the operator as scheduled by the city's driver optimisation software;
- a single **bus-related cost** in respect of all of 18m trunk vehicles, 12m trunk/feeder vehicles, and 9m feeder vehicles directly linked to the ***number of buses*** required by the operator as scheduled by the city's bus optimisation software;
- a **variable cost** in respect of **each** of 18m trunk vehicles, 12m trunk/feeder vehicles, and 9m feeder vehicles directly linked to the ***number of scheduled kilometres*** completed by the operator with a relevant vehicle, as scheduled; and

- a **6m single kilometre rate cost** in respect of all the 6m feeder vehicles, which will take all direct driver-related, bus-related, variable and other costs pertaining to 6m vehicles, other than for costs included in fixed costs above.

The exact payment method to be used is, however, subject to negotiation with the VOCs.

6.3.4. Quality of service mechanisms

The monthly payments to the VOCs will be subject to deductions for penalties for non-compliance with quality of service standards. The draft operating contract includes a number of 'quality of service' indicators. As an incentive, every quarter a portion of the penalty payments made by VOCs in that period will be paid to the best performing VOC, provided that it met a high standard of performance during that period.

Penalties will be imposed against a VO for infringements such as:

- Failure to comply with the bus schedule
- Failure to follow the timetable and route programming
- Vehicle breakdowns as a result of non-compliance with the maintenance schedule
- Failing to display correct destination information
- Failing to pick up or set down passengers at authorised stops and stations
- Vehicles in an unsatisfactory condition, for example, a dirty exterior or interior
- Speeding and violation of other transit regulations.

On the other hand, the City will guarantee that the MyCiTi segregated lanes and corridors will not have illegal competitors, subject at all times to the provision of the NLTA.

6.3.5. Assignment of routes and control of driver

At the start of the contract, feeder and trunk services will be assigned to stated VOCs, in alignment with the VOCs' market share as determined in Chapter 9. No VOC will have exclusive rights to any of the routes. Therefore, more than one VOC can be required to operate vehicles on any route. Additional trips, services and routes identified by the MyCiTi Operations Management Unit may be added during the contract period – and the relevant kilometres will be allocated to the best performing operator on a basis as will be set out in the VOC contracts.

On leaving the depot the vehicle will be under the control of the MyCiTi Operations Management Unit, which will have direct contact with the driver. Generally, on MyCiTi routes no other scheduled bus or minibus-taxi services will be allowed to run, subject to the provisions of the NLTA in terms of which existing operators can refuse to accept the compensation payments offered and continue to operate in competition with the MyCiTi system until their licences expire; and subject to the continuation of most of the services which only partially overlap with MyCiTi routes. Some services, which do not run in competition to the MyCiTi service but merely intersect with MyCiTi routes (eg metered taxis and contracted bus services), will also continue to run.

The depots will be owned by the City and provided at no cost to the VOCs. If the City charged rental for such facilities it would merely have to pay this back to the VOCs through

higher fees. The depots will be provided with the major fixed infrastructure such as buildings, parking areas, maintenance pits, wash bays, fuel tanks, fencing and service connections. The VOCs will be responsible for the day-to-day and other minor maintenance of the depot and for the supply of all the required staff and equipment, such as tooling and office equipment, as well as payment for all services such as water, electricity and security. Heavy maintenance will be the responsibility of the City, which will continue to own the depots.

The space and buildings for the administrative offices of the companies and the maintenance yards will be provided at the depots and owned by the City. All of the equipment, furniture, maintenance tools and other costs associated with outfitting the depots will be borne by the VOCs.

The City remains responsible for the insurance of the infrastructure it provides, and the operator for all its equipment. Insurance of the vehicles may be managed in terms of the tripartite agreement between the City, financial institution and VOCs.

After an initial maintenance period that may be provided for in the City's contract with the vehicle supplier, the VOCs will be responsible for the maintenance of the vehicles. They will either provide it in-house or subcontract it out to the manufacturer or manufacturer-authorized company.

Each of the vehicles will be fitted with the necessary equipment, such as such as GPS transponders and on-board computers, to enable the MyCiTi Operations Management Unit to schedule departure and arrival times at particular points and to monitor and control their movements. The scheduling and monitoring equipment will also be utilised to ensure compliance with the requirements stipulated by the MyCiTi Operations Management Unit. Most of this equipment will be provided initially through the Control Centre contract (see paragraph 6.6.1).

The VOCs will be fully responsible for their drivers. The MyCiTi Operations Management Unit will specify the training requirements and carry out regular checks and examinations.

The VOCs will not be responsible for fare collection on the trunk service, but they will be responsible for taking steps with regard to fare evasion on feeder vehicles and allowing security staff to board the vehicles and carry out their functions.

For trunk vehicles, fare collection will occur only at the stations, and not in the vehicles, and through the use of smartcards (apart from services at the start of operations, where some fare measures may be included on trunk vehicles). For feeder services, the vehicles will have smartcard readers on board, provided by the AFC contractor. Feeder vehicles may have electronic cash boxes where passengers without smartcards can pay the fare; however, the driver will not manage cash.

The VOCs will not manage the process of advertising on vehicles, since such advertising will be used generally to provide income to the system as a whole, and will be managed by the MyCiTi Operations Management Unit or a company contracted for this purpose. The VOCs must allow the MyCiTi Operations Management Unit and advertising contractor access to vehicles to facilitate installation of facilities for infotainment, within the limited and specified spaces in the vehicle set aside for this.

The vehicle operating contracts will be for a specified duration. The maximum average number of kilometres for the fleet has not been finalised, but will be around 1.4 million kilometres per trunk vehicle, and 1 million kilometres for feeder vehicles. The life of the contract will correspond with the expected commercial life of the 18m articulated trunk vehicles, up to a maximum of 12 years.

6.4. Vehicle procurement

Fifty two trunk service buses (44 x 12 m rigid and 8 x18 m articulated buses) have been procured and delivered, and are in service at the date of submission of the 2012 Business Plan. These buses have been assigned to the MyCiTi trunk route services and as a temporary measure, the feeder routes in the CBD and Table View areas. The buses are being operated by the three VOCs and maintained under a maintenance contact by the vehicle supplier, Volvo SA (Pty) Ltd and the bodybuilder Marcopolo.

The City has also procured the supply of 190 x 9meter, low-entry feeder buses from the winning tenderer, Busmark. These vehicles are Optare buses, manufactured in the UK and being assembled in Elsie's River.



Figure 25. Optare SR buses on the assembly line in Elsie's River and a completed feeder service bus finished in the MyCiTi livery

The preparation of tenders for the balance of the fleet for Phases 1A and 1B and for the N2 Express service fleet were under preparation when the 2012 MyCiTi Business Plan was submitted for Council consideration.

6.5. The Automated Fare Collection (AFC) contractor

Passengers will travel using mainly their smartcards, which they can purchase and subsequently top-up at stations or at retail outlets.

An automated fare collection (AFC) contractor has been contracted by the City and will be responsible for creating and operating an effective, efficient and transparent AFC system.

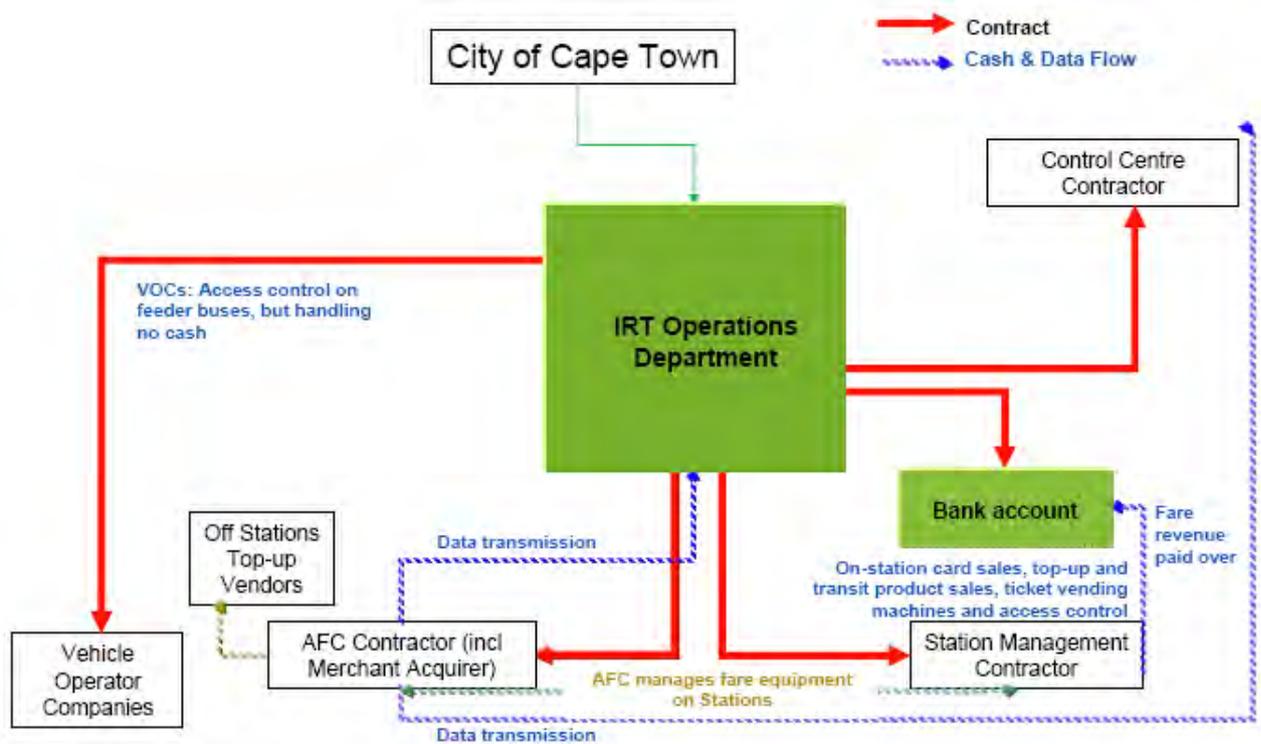


Figure 4. The AFC system workflow

6.5.1. Using smartcards

The City's AFC system has been specifically designed to capitalise on recent developments in the banking industry, and to integrate with their emerging systems. In South Africa, South African banks have been issuing contactless cash, or 'e-purse', cards to bank account holders since 2010. The MyCiTi-related contactless card is called the **myconnect** card, which was launched in November 2011. As is planned, the MyCiTi system also accepts contactless cards issued by other banks or operators, such as the Tap-i-Fare card issued in collaboration with the minibus-taxi industry, and the Muvo-card linked to EThekweni's public transport system.

The maximum cash value that can be loaded onto the card at any one time is R1500.00 – the maximum monthly cash turn-over being R3 000.00. These cards allow for transactions of up to R200 to be made without having to go online to the bank or be verified by signature or PIN, as is currently the case with all debit and credit card transactions. Such low value transactions qualify for the exemption from the Financial Intelligence Centre Act, granted by the Minister of Finance.⁴ These restrictions do not apply to bank cards issued by banks to their clients, where there are no maximum balances or loading limits.

For those people who, for example, do not have bank accounts, a wide variety of anonymous contactless EMV cards will ultimately be available through retail outlets and

⁴ Exemption In Terms Of Financial Intelligence Centre Act, 2001 (Act No. 38 OF 2001) - Government Notice 454 of 28 May 2010.

public transport operators – all cards of this type subject to the same financial limitations as described above.

The use of both account based and non-account based (anonymous) EMV compliant contactless smartcards in preference to cash is expected to become widespread, with a wide range of retailers set to introduce systems to accept these contactless payment cards issued by the banking industry. There is significant benefit to retailers, since it significantly reduces the security risk of dealing with notes and coins, and it speeds up the payment process at cashiers.

Any EMV compliant contactless smartcard issued by the banking industry, which is likely to become common regarding new cards issued in South Africa, can be used on the MyCiTi bus system.

All EMV compliant contactless card issuers are required by regulations, in addition to e-purse functionality, to incorporate the electronic data structure as defined by the National Department of Transport. This means that apart from being able to load cash onto the card, the card holder will also have the capability of purchasing 'transit products', or electronic prepaid tickets, as defined and sold by public transport operators such as MyCiTi. A transit product could, for example, be a set of tickets for the week comprising a specified number of trips for a particular distance or a ticket allowing multiple trips within a fixed period of time i.e. per day, week or month. The MyCiTi card validators are programmed first to establish whether there is a valid transit products stored on the card for the trip and only if a transit product does not cover the trip, then to deduct cash value from the card's e-purse.

A mechanism has been developed to deal with passengers making use of the MyCiTi bus system who have insufficient funds on their card's e-purse and no stored transit products.

The integration of the City's MyCiTi AFC system with that of the banking industry's newly developed banking standards, has placed the MyCiTi fare system at the forefront of modern fare system technology. It has only been made possible as a result of the establishment of agreements between all the participating banks in South Africa, and their cooperation with the National Department of Transport. This has not only made it more convenient for the implementation of an AFC system, but has also lightened the financial burden in that the City's AFC system will not have to maintain costly back office IT payment systems such as those implemented worldwide.

For the usage of cards to be successful, a network of points is required for the purchasing of cards as well as the loading of cash value and/or transit products onto the card. Currently, these are located at MyCiTi station kiosks and at participating retail outlets. There is also a growing network of cash receptor automated teller machines (ATMs) for the loading of cash value, and in the future transit products, onto the card – of particular use for those who do not have bank accounts. For those with bank accounts, ABSA (the bank that won this contract for the initial period) is already offering the facility to its accountholders to transfer funds from their accounts via the internet or via ATMs to their **myconnect** cards. In time, it is expected ATMs will become the favoured point for loading cards directly from any bank's account, involving no handling of cash.

It appears that the City will not, as a result of the introduction of this system, have to accept payment by credit card for City services – only to load cash and/or transport related products on to the card.

6.5.2. Getting the revenue collected to the City

When a contactless card is used to gain access to a MyCiti trunk station or feeder bus, the fare reader (or validator) will deduct the appropriate fare from the card when 'tapped' by the passenger. A record of the transaction is then stored on the validator. At the end of the day all the transactions stored on the validator will be sent via the secure network to the back office at the Transport Management Centre (TMC) where they will be packaged and sent via the secure network to the ABSA back office in Johannesburg for reconciliation into the City's bank account.

Since a flat fare structure was implemented for the interim, with effect from November 2011, by the AFC Contractor, with all fare deductions being made from the card's e-purse, the City receives payment for its service the night of the following day. Thus the City only receives payment made from the cash portion of the contactless card *after* providing the service to the passenger.

However, when transit products are introduced and sold by the City from early 2013, the City will receive payment for the entire transit product purchased by the passenger the night of the following day. Thus, in the case of transit products, the City receives payment before providing the service.

A full audit trail with high levels of security will apply to all transactions.

The substantial amounts of data that will be generated by the AFC system will be seamlessly transferred via the network to the Back Office located at the TMC. It is envisaged that these data, which will include information such as number of passenger trips, time, location and passenger kilometres, will assist the City in optimising vehicle operations according to the demand.

6.5.3. The AFC contractor

In early 2011 an AFC contractor was awarded a seven year contract by the City to design, supply, deliver, install, test and commission an AFC system as well as supply and distribute the **myconnect** card and, maintain and operate all relevant services.

Included in the supply, is all the AFC related software and functionality (including inspection), and hardware related to EMV compliant fare media readers/writers, gates, card vending machines, card office machines, loading terminals, backoffice equipment (e.g. payment gateway, servers) and communications (e.g. wi-fi, GPRS). The AFC Contractor may be required to supply automated cash boxes for feeder buses (and other categories of buses, where appropriate) for the dispensing of single trip tickets. If installed, these boxes will not give change so as to avoid boarding delays and to encourage passengers to use a smart card. The plan is that, over the longer term, access will be allowed only through the use of smart cards – thus also eliminating all risk of cash handling where the bus Operator is concerned.

The ownership of all AFC equipment will pass to the City when the seven year contract come to term.

The fare system hardware in the stations, in particular the access gates, has had to be specifically designed and contributes substantially to the overall total cost of the AFC

contract. Other factors which have also had an effect on the overall cost of the AFC system are the mechanisms that have had to be included for the prevention of fare evasion, wheelchair accessibility and longevity.

Apart from being further responsible for ensuring that the AFC and CC systems are fully integrated, the AFC Contractor is responsible for the day-to-day management of the AFC system and is required to adhere to the system's goals for good customer service and experience. However, their responsibility does not include operating the station kiosks and cash handling within the kiosks or the security on the stations, which is a responsibility of the Station Management contractor.

6.5.4. Phase 1A – AFC contractor deliverables

Interim System

The interim system is currently operational and requires that all fares be collected through the use of battery operated devices known as validators.

At trunk stations the validators are handled by the passenger management staff of the VOCs, who are responsible for access control during the interim period. On the feeder buses these validators are mounted in cradles, in a way that they can still be detached, near the driver.

After the last service has ended, the VOCs must ensure that the validators are 'parked' in their docking stations. When 'parked', the transactions (i.e. the fares collected) are uploaded from the validators via the secure fibre network to the bank – where the reconciliation of fares takes place. This uploading of transactions is also referred to as 'milking'. The docking stations located at all the trunk stations, are connected to the main power supply and also serve as chargers to charge the validators. All the validators have also been enabled for GPRS, in particular for redundancy purposes, which means that the 'milking' process can take place automatically and not require manual intervention.

These same handheld validators are also used by inspectors for fare related inspection purposes.

The flat fare structure requires that the passenger validates on entry only and not on exit to the system. This is different to full solution, when the passenger will be required to validate off when leaving the system.

A payment flow system was specifically designed and implemented at the closed stations to take into account 'free' transfers.

Passengers are able to purchase their smartcards from the kiosks at the trunk stations where the cards are initialised using a value loading terminal, readying the card for the loading of cash onto the card and subsequent use on the MyCiti System - the number of value loading terminals installed at each kiosk has been dependent on the space constraints. These kiosks, as with any other place capable of loading value through the use of a value loading terminal, may also be referred to as points-of-presence (POP).

In due course, passengers will also be able to purchase **myconnect** cards and load value all City cash offices and libraries as well as public transport interchanges.

Full AFC System - implementation has already started

Passengers will be able to take advantage of a fully automated fare collection system (see Figure 5), which will include transit products, distance based fares and card personalisation. The interim system of validation through the use of handheld validators will be replaced with access gates at the stations and permanent validators on the bus. The handheld validators will be used for redundancy purposes and also continue to be used by inspectors for inspecting cards as described above.

The paper ticketing system for passengers making use of the Airport service, which operates from the Civic IRT station only, will be fully replaced by the EMV compliant contactless Smartcard.

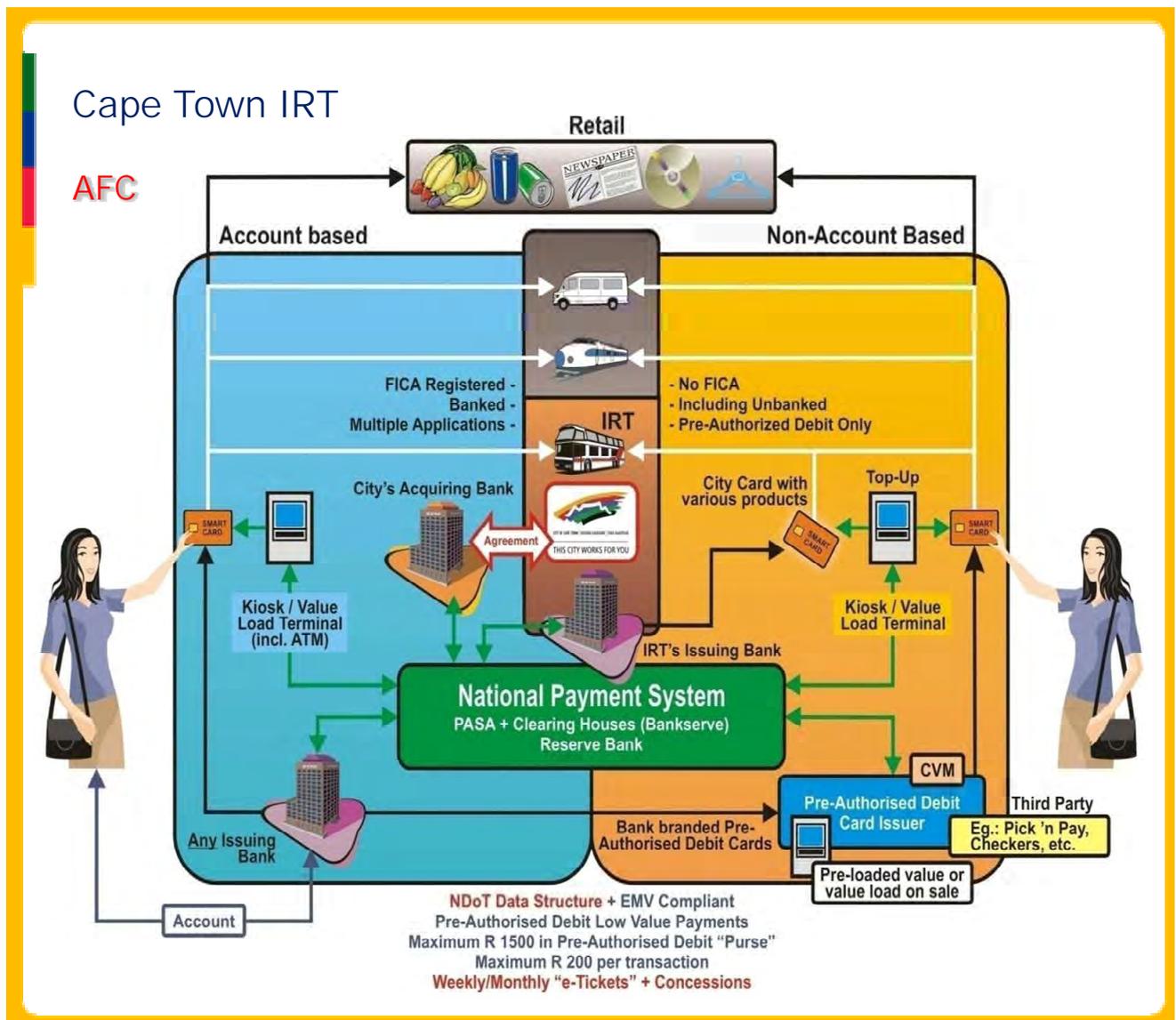


Figure 5. The City's AFC system explained

Electrically powered paddle type access gates (see Figure 28) are currently being installed at the trunk and feeder stations with at least one access gate being of universal access

(wheelchair friendly) type. All fares at the trunk stations will be collected electronically through the use of EMV compliant contactless validators (see Figure 28) installed onto the access gates (both directions configured) – connected internally to fare media processors installed within the gate pedestal.



Figure 28. The gates being installed - and the gate validator

The transactions will automatically be uploaded from these validators on the access gates via the secure fibre network to the bank for fare reconciliation and as such, does not require any manual intervention.

Passengers will only be able to enter and exit closed stations through the access gates. Once passengers enter the station, or closed system, through the access gates, no further validation is required when boarding the bus. Similarly, passengers exit the station through the access gates and will, therefore, not be required to validate on the bus before alighting. Whenever a feeder bus arrives at the closed system, passengers will always alight from the door on the right.

At open feeder stops passengers will be required to validate upon entering and exiting the bus from the door located on the front-left of the bus onto the kerb.

All the detachable battery operated validators on the feeder buses will be replaced with electrically powered (from the bus) and GPS enabled permanently mounted validators (see Figure 29).

The transactions will automatically be uploaded from the validator to the bank, via the secure Wi-Fi network, installed at the bus depots and at the timing points along the trunk and feeder routes for fare reconciliation and as such, does not require any human intervention. For redundancy purposes, these validators have also been enabled for GPRS, which means that the transactions can still be automatically uploaded from the validator to the bank without any manual intervention, should the Wi-Fi network fail.

Electrically powered card vending machines are intended to be installed at selected trunk stations and inside selected shopping



Figure 29. Permanent bus validator

malls. These card vending machines (CVM) will have the capability of activating **myconnect** cards, which means passengers can purchase cards through the use of a CVM, and loading value – and, will mainly serve to maximise customer convenience and minimise waiting times at kiosks.

All AFC infrastructure will be able to be accessed remotely from the backoffice via the fibre network and will include, for example, selecting functions such as changing the direction of validation on access gates and the updating of fare rules onto the fare media.

The planned distance-based fare structure with the associated business rules, unlike the interim flat fare structure, will require that passengers validate on entry and exit to the system – the calculation of distance-based fares made possible through the integration between the AFC and CC system.

6.5.5. Phase 1B & N2 Express

It is intended that the existing AFC contract be extended to include the additional stations and buses for Phase 1B and N2 Express at the current tendered AFC rates.

In comparison to Phase 1A, no additional costs are anticipated for Phase 1B & N2 Express where the following are concerned:

- Backoffice systems, including the payment gateway – since scalability has already been built into Phase 1A for future expansion should it be required;
- Depots – unless additional Depots are built or used; and
- Software development – since the same fare structure with the same business rules will be implemented.

The City's AFC system is a 'first in the world', and as such should keep consistency where extension into new phases is concerned. Bringing on board another contractor before the currently being implemented AFC system has been fully tried and tested will create unnecessary additional complications. For this reason it is recommended that the current contract be extended to cover these other sub-phases.

6.6. The Control Centre

6.6.1. Introduction and overview

The Control Centre (CC) is a vehicle management system which includes systems for use in route planning, vehicle scheduling and dispatching, automatic vehicle location, advanced traveller information and communication, security and surveillance (CCTV and emergency phones) and data management. Without the CC the City would have inadequate knowledge of whether its services are operating optimally and thus be unable to maintain standards. The CC further assists with reconciling payment to the VOCs since it tracks where the vehicles were, whether or not they was running on the appropriate route, whether they ran to schedule and what distance each vehicle had travelled.

The following two CC related functions should be distinguished:

(i) The Control Centre contractor (CCC) is the contractor responsible for installing IT equipment on buses and in stations and for building a facility in the TMC from which the system is monitored. This contractor will also be responsible for maintenance and fault correction for the full CC contract period, which will be seven years.

(ii) The Operations Control Centre (OCC) is the facility initially installed by the CCC but once installed is operated by the IRT Operations Department (or the CCC for an initial period of up to 2 years).

Through Global Positioning Systems (GPSs) the tracking system will monitor all vehicles in real time – and this information is used by the OCC or the VOCs to direct and control overall bus operations.

Role of the Transport Management Centre

The operations nucleus of the MyCiTi service is housed in the Transport Management Centre (TMC) in Goodwood. The TMC facility was designed and constructed to accommodate 24/7 operations in an easily accessible user-friendly but secure environment. Twenty-two operator workstations for the management of MyCiTi operations have been allocated in the TMC's Core Operations Area (COA) where MyCiTi operations function adjacent to other essential Cape Town Transport and Traffic operations, including Freeway Management, Urban Traffic Control and Traffic Services.

The Metropolitan Police Department is housed one level up but will monitor MyCiTi CCTV cameras in a dedicated surveillance area next to the COA on the first floor. This accommodation arrangement ensures direct and immediate contact between critical stakeholders in Public Transport, Traffic and Safety-and-Security operations. Back office space for fare collection and other MyCiTi operations has been provided in an area directly adjacent to the COA. Office space for MyCiTi planning functions – 11 closed offices and a boardroom – has been allocated on the second floor.

The Transport Information Centre (TIC), currently responsible for the collection and dissemination of public transport information in Cape Town, is situated on the first floor behind the COA.

The current two-storey TMC building was constructed to accommodate a third storey if/when required by expanded MyCiTi operations in future.

The COA has a large video wall display shared between the different operational entities in the area, but this wall will be extended as part of the scope of the Control Centre contractor to make a dedicated area available for MyCiTi operations. Bus schedules, tracking information and CCTV footage will typically be displayed in this video wall. The MyCiTi operators in the TMC's COA will have direct communications links with buses and stations and will collect, process and disseminate MyCiTi management and operational information. Operators in the TMC monitor bus progress per pre-planned and approved schedules and can intervene where/when necessary and will contribute to incident management processes where MyCiTi services are affected. A call centre will be in operation that will deal with the maintenance issues and queries for the (infrastructure) equipment on stations and on buses related to the Control Centre and Automatic Fare Collection (AFC) contracts.

A specialised server room – the hub of the citywide MyCiTi communications backbone – will house all the centralised MyCiTi hardware and software.

6.6.2. The Control Center contractor

The CC Contractor has been awarded a seven year contract by the City to design, supply, deliver, install, test and commission and, maintain a Control Center system.

Included in the supply is all the CC related software and functionality, and hardware related to passenger information boards, CCTV cameras, intruder detector alarms, intercoms,

onboard vehicle logic units, network video recorders and electronic digital displays, backoffice equipment (e.g. servers) and communications (e.g. wi-fi, GPRS).

The CC contractor is required to set up and resource a fully operational control centre in the TMC and ensure that all relevant parties are fully trained as to the functions of the Control Center. As indicated above, the OCC will be run by the MyCiTi Operations Management Unit and will be performing the role of system controlling, including all aspects related to monitoring and scheduling. The CC contractor will be operating the OCC during the first 12 to 24 months of operation – this time period largely dependent on the state of readiness of the MyCiTi Operations Management Unit to take over.

The hardware in the stations and onboard the busses has had to be specifically designed to address passenger safety and security as well as fare evasion, and as such has contributed substantially to the overall total cost of the CC system contract. Another factor which has had an effect on the overall cost of the CC system is the mechanism that had to be included for longevity, in particular due to the highly corrosive environment where all the equipment is to be installed.

Where security on the stations is concerned, the responsibility of the CC contractor is to provide the tools for use by the contractor responsible for securing the stations – namely the Station Management contractor.

Phase 1A – CC Contractor Deliverables

Figure 8 provides an overview of the principle components currently being implemented by the CCC, which form a key part of the strategic management of the system.

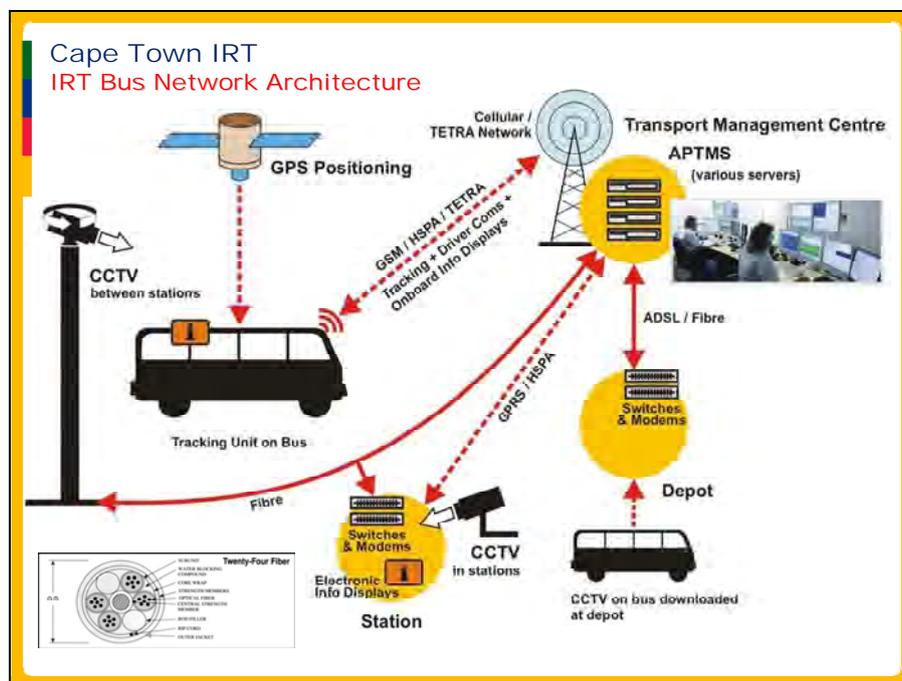


Figure 8. Overview of the key components addressed by the CCC

The OCC has been set up at the TMC and is currently being operated by two shifts of four System Controllers per day.

Figure 32 is an example of the ITS equipment currently installed on the buses, and Figure 31



Figure 32. The Driver's CCTV display



Figure 31. Information and emergency intercom installed on platforms

of the equipment installed on stations.

6.6.3. Phase 1B & N2 Express

It is intended that the existing CC contract, which first focused on Phase 1A, be extended to include the additional stations and buses for Phase 1B and N2 Express at the current tendered rates.

In comparison to Phase 1A, no additional costs are anticipated for Phase 1B & N2 Express where the following are concerned:

- Backoffice systems – since scalability has already been built during Phase 1A for future expansion (within limits), should it be required;
- Software Development – since no additional development will be required.

It is important to be mindful that this is the first time in South Africa that bus operators, in particular their drivers, are to be controlled from a centralised location to the extent envisaged. Bringing on board another contractor before the currently being implemented CC system has been fully tried and tested may create unnecessary additional complications.

The estimated cost to supply, install, test, commission, and maintain (for a period of six years) and operate

- five Phase 1B stations with all the relevant CC hardware is R7.5 million (Vat & CPA inclusive);
- 40 additional buses with all the relevant CC hardware is R18 million (Vat & CPA inclusive); and
- one additional Depot with all the relevant CC hardware is R1.8 million (Vat & CPA inclusive).

6.7. Station Management (SM) contractor

The City will conclude one or more contracts with Station Management contractor(s), which will be responsible for general management services on the stations and for upholding the MyCiTi system's quality goal of good customer service. This section sets out the functions and responsibilities of the SM contractor when fully rolled out for the phases covered by this Business Plan.

The main responsibilities of the SM contractor will be:

- cash management and payment systems, including the supply and management of card and ticket sales at trunk station kiosks, and cash management;
- passenger management, access control, validation and fare evasion;
- security and CCTV surveillance;
- cleaning;
- information (including provision of passenger information at kiosks and through station staff), call centres and communication;
- technical facilities management, including minor maintenance at stations;
- maintenance of landscaping at stations and possibly also along exclusive busways;
- the management of parking in the areas surrounding the stations, both as a source of revenue as well as a way to enhance security in the area around stations, when so assigned to the SM contractor;
- the management of retail at stations.

A tender has been issued for a single SM contractor for Phases 1A and 1B. The tender is for a period of six years (with a City option to terminate the contract after 2.5 years). During Milestone 0, and until the SM contract takes effect, core services regarding station management are fulfilled through the interim contracts with the VOCs.

Subject to compliance with procurement requirements, this contract should be extended to cover the stations to be operated regarding the N2 Express.

6.7.1. Overall station management, supervision and cash collection

The SM contractor will have responsibility for and control nearly all functions within and around the station, as listed above. The contractor's personnel at the station are required to be trained and skilled to multi-task and, in addition to fulfilling the role of entity in charge of the station, will undertake the role of cash collection using the cash office as a base from which to also take charge of the station(s).

Multi-tasked personnel will, in addition to issuing cards, receive cash and reconcile takings, be responsible for personnel undertaking card validation, security in and around stations and may undertake parking management adjacent to stations. The supervisory staff in charge of stations are required to be in constant communication with staff at the station and at the TMC so that information and reports of incidents, faults and damage can be reported, and the appropriate response immediately actioned. CCTV images from surveillance cameras located both inside and outside of the station will be accessible to SM personnel via a monitor located in the station and viewing consoles located at the TMC.

The SM contractor will be responsible for enforcing the MyCiTi Rules (see www.capetown.gov.za/MyCiTi, click on *MyCiTi Rules*) on the station and in the station precinct.

6.7.2. Access control and related services

A key element of the SM function is to control fraud and fare evasion at stations. However, this requires working closely with the VOCs, which have access control responsibilities in a feeder bus environment. Since the responsibilities regarding access control and fare evasion intertwine between the SM contractor and the VOCs, this section addresses their respective responsibilities.

Should a passenger breach access control measures (eg jump the gates) and board a bus, and the bus depart before action can be taken, the SM contractor shall inform the next scheduled station who shall take appropriate action as described in the SM contract and, if possible, alert the bus driver through the control centre.

In addition, where VOC staff or an inspector identify fare evasion on a feeder bus, and are unable to deal with it without delaying the service, the VOC / inspector shall inform the SM contractor for its further action (as per the City's predetermined protocol, either directly or via the control centre). Where a bus driver becomes aware of any fare evading activities, the driver shall inform the next scheduled station via the control centre. The SM contractor shall ensure that adequately trained staff are available to prevent any further fare evasion or to apprehend the culprit if necessary. If required and if possible, the bus driver must identify the culprit to the SM staff on arrival at the station and provide a statement if necessary without causing unreasonable delays to the service. Where significant delays to service may result, the driver must complete the scheduled route and issue a statement at the earliest possible opportunity. In instances where the bus driver is unable to identify the fare evader, the driver shall inform the SM contractor who shall, on arrival of the bus at the station, inspect the cards of all passengers.

Where VOC staff or an inspector become aware of faulty cards or cards with insufficient funds on a given vehicle on its way to a station, the VOC staff or inspector shall inform the SM contractor for its further action once the vehicle arrives at the station (as per the City's pre-determined protocol, either directly or via the control centre). The SM contractor shall ensure that adequately trained staff members are available on arrival of the bus to assist the relevant passengers to resolve faulty cards or to load value before continuing with their trip.

Certain multi-skilled personnel of the SM contractor are to be trained to monitor access gates at stations for fraud and fare evasion, and to take the necessary action if any component of the access gates, such as the 'validator' device or glass paddle, is malfunctioning or broken. In this event the personnel undertaking the security function will undertake actions according to standard procedures, which may include using a hand-held validation machine, manually over-riding the access gate or some other prescribed action.

The personnel responsible for the security function will work in conjunction with the cashier both of whom will require special training by the AFC contractor so that procedures for fare collection and fare evasion respectively are undertaken competently.

SM staff undertaking security in stations and who perform the function of gate surveillance and control may also be required to perform basic customer services, directing customers to information on travel, directing them to the cashier or vending machines and informing them where complaints may be lodged.

In cases where it is necessary to override automated gates according to procedures set out by the AFC contractor, SM staff undertaking security will be able to manually allow access through the gates. This may be necessary in the case of an emergency or a malfunction of systems.

6.7.3. Other activities of the SM contractor

Passenger information and assistance to passengers

The SM contractor must make every effort to provide access to information on its services and connections with other public transport services, so that users are informed of the service schedules, use of EMV compliant contactless smartcards and mechanisms for top-up, fare products and options, latest changes to timetables, and any rules of conduct that should be known to passengers on the system.

Cleaning, facilities management and minor maintenance

The SM contractor will be responsible for a full range of facilities management services of the station and equipment, including minor maintenance. Major station maintenance will be the responsibility of the City.

Safety and security of passengers

The experience with landmark cases won against Metrorail launched by the Rail Action Group points towards the responsibility of the public transport operator for safeguarding its customers from harm, be it from accidents that may occur or from theft and / or personal attacks by criminals.

The SM contractor will ensure security at stations and in the designated area of responsibility around stations to ensure that threats of muggings, bullying and other anti-social behaviour are kept to the absolute minimum and take appropriate action when such incidents do occur.

CCTV monitoring and response

The SM contractor will have its own CCTV surveillance staff located in the TMC, where it will make use of consoles to view images from surveillance cameras located both inside and outside of the station, and from where they will communicate with the City's security staff as required. The contractor is required to use such surveillance to ensure delivery of high quality service, and to enhance safety and security.

Protecting MYCITI stations and assets

The SM contractor will be responsible for protecting the station and all its associated assets.

Landscaping and cleaning

The SM contractor will be responsible for maintaining landscaped areas forming part of the station precinct. It may also be made responsible for landscaping along the bus routes.

Cash collection at stations and depots

The SM Contractor will be responsible for collecting cash received by the station supervisors/cashiers at stations, including from ticket / card vending machines and (if requested to do so) from cash boxes on feeder buses whilst these buses are stationary overnight at the depots and staging areas. The company is liable for any money lost or stolen and will ensure cash taken at station kiosks is deposited into the appropriate bank account prescribed by the City.

Management of parking at stations

The SM contractor may be requested to provide management services regarding parking in the areas where MyCiTi services are rendered, with the exception of areas forming part of the current CBD managed parking areas. Both the parking and retail functions (discussed below) are subject to feasibility studies concluding that the relevant function is appropriate and identifying where and how these functions will be fulfilled.

Retail at stations

At certain stations where space allows, the City may establish, or the SM contractor may be requested by the City to establish, retail facilities and spaces to be managed in terms of specifications prescribed by the City.

Scheduled events

The SM contractor will be responsible for staffing and operating the stations, according to the event plan as agreed with the City, for events where the City agrees to provide MyCiTi Services (as per service notice issued by the City).

Public/Passenger Services

The provision and staffing of a customer walk-in centre and information desk where information will be available to the public regarding MyCiTi services, personalised cards, fares and any other relevant information as well as the management of lost property.

6.7.4. Related services

Security and law enforcement

The City's Metro Police will undertake security outside the station precincts and between stations, while Traffic Services will ensure against infringements of bus lanes and station embayments. The Specialised Services Unit (SSU) will be responsible for management of the CCTV camera system in stations and along busways, although this function may be assigned to the SM contractor in due course.

Fare equipment

While the fare system contractor is responsible for procuring, installing, and maintaining the equipment in the stations for fare collection, the SM contractor will need to coordinate with the fare system contractor for maintenance and upkeep of the fare collection equipment within the station.

6.8. Advertising on MyCiTi infrastructure, and management of bus stops

The City has identified the sale of advertising space on MyCiTi infrastructure as a source of income for the IRT system. To help recognise this revenue opportunity the City has run a tender process which has resulted in the award of the advertising contract to an outdoor media company to act as its agent for marketing and managing advertising on IRT infrastructure. The advertising contractor is also responsible for maintenance and cleaning of MyCiTi bus stops, funded from such sale of advertising, and at no cost to the City.

The City will provide the advertising contractor with a monthly inventory of available sites, including additional opportunities identified by the advertising contractor. This inventory must be used as a basis for the advertising contractor paying the City for 60% of the space (whether advertising is sold or not). Regarding the remaining 40% of the space, the advertising contractor is required to pay only if it has sold the space. The advertising contractor must report on a monthly basis the media space utilised against the inventory provided; the maintenance schedule for bus stops; and the schedule of any repairs necessary for any reason (such as vandalism), and of damage to stations and buses that has resulted from their operations, and how this is being made good.

The City may issue penalties where there is any dereliction of obligation. For example, should the City identify that there has been inaccurate reporting, it may levy a fine of 10% of the advertising revenue properly due to the City in that month.

6.9. Parking management

Overall responsibility for parking policy and for parking management resides with the Transport Department. Off-street and on-street parking on City land within 500m of MyCiTi stations and stops (excluding areas already under parking managed on the date that this business plan is approved), referred to as the *MyCiTi managed parking zone*, may be managed by the Department of IRT Operations, subject to the above principle and the discussion that follows.

The primary objectives parking management and control mechanisms in areas where IRT is implemented are:

- To manage parking in areas of higher parking demand.
- To minimize the negative impact due to additional parking demand from IRT passengers around IRT stations and stops upon the surrounding neighbourhoods and on traffic flow.
- To use the presence of staff managing parking areas to increase surveillance of non-motorised transport (NMT) corridors, and thereby to provide a deterrent to theft and to improve the safety of pedestrians, including MyCiTi passengers.
- To promote the use of MyCiTi services specifically and public transport in general.

- To facilitate the use of the feeder services over time through parking tariffs.

Where it is proposed that an area within the MyCiTi managed parking zone be subjected to parking management, the following steps must be followed, prior to a decision to manage parking in this manner:

- The Director: IRT Operations and the Director: Transport must agree to the commencement of a feasibility study into such parking management;
- A technical feasibility study must then be undertaken, assessing the financial and technical feasibility of managed parking, taking into account the existing use of parking, and taking into consideration the impact of managed parking on local residents and commercial users;
- This investigation should include consultation with the local community and users. The Ward Councillor's comments must also be obtained;
- If the Director IRT Operations and the Director: Transport support the proposed management of parking, a report recommending such management of parking should be submitted to the relevant sub-council, and to the Portfolio Committee of Transport Roads and Stormwater.
- If the portfolio committee supports such parking management, an appropriate instruction to management parking may be given to a relevant contractor, or the services may be procured.

Users of the designated managed parking bays and areas in corridors where parking is being managed by the Department IRT Operations will pay a fee for parking as per the Tariff.

Areas initially excluded from such parking management (such as areas with managed parking at the time of adoption of this business plan) may be included in future parking management by MyCiTi.

Once the City's parking policy is adopted, the above measures may need to be amended to align with such policy, in as far as this is possible to do in terms of the contracts that are in place at the time.

6.10. Retail in MyCiTi infrastructure

The City intends for retail businesses or other users to lease or be awarded concessions regarding retail infrastructure associated with MyCiTi stations, depots and staging areas. For the purposes of this information statement the term "retail businesses" is used as including entities operating on a not-for-profit basis.

These retail businesses will be of a high standard and compatible with the specific needs of users of the MyCiTi services. In many instances leases granted to retail business will be of relatively short duration, but certainly may exceed a period of three financial years. The retail businesses will be granted the right to use the retail infrastructure in terms of lease or concession agreements. The term "lease agreements" and related terms are used here in a wide sense, including sub-leases (eg by the SM contractor) and contracts regarding concessions.

The City may require the SM contractor or VOCs to undertake the control and management of retail businesses including the infrastructure they occupy. Retail businesses will use the retail infrastructure under lease or concession agreements with the City or as a sub-lessee or sub-concessionaire of the SM contractor or VOCs.

6.11. Non-motorised transport (NMT) and other feeder system operators

The MyCiTi stations are designed to encourage people to reach the stations by walking, cycling, and small motorised cabs or non-motorised pedicabs. The City will provide the necessary parking and infrastructure for the operation of cabs, pedicabs, rental bicycles and secure bicycle parking.

In due course, the small cabs and pedicabs will operate differently to the MyCiTi buses, serving passengers on a door-to-door or door-to-station basis. In that respect, they will serve as feeders to the MyCiTi system and support its operations. They will complement the service provided by the feeder buses, increasing the coverage and improving the whole system's service and operations. Such small feeders can reduce the cost of vehicle operations by serving areas with very low demand at a much lower cost of operations than a bus, which will also be reflected in a better service for the customer. Non-motorised pedicabs are emission-free and their lower speed reduces risk of accident.

Since such cabs will be integrated with the MyCiTi system, they will have exclusive or preferred rights to access the stations and park in the designated areas. These pedicabs (or small motorised versions of these where pedicabs are not practical) can be introduced where viable, to attract more passengers to the system. However, the introduction of pedicabs will require the permission of the City and the vehicle acquisition will be for the operator's account.

Bicycle rentals will be an integrated part of the system but will not be part of the vehicle operations contract.

6.12. Legal compliance regarding the above contracts

6.12.1. Procurement requirements

In procuring and concluding all operational contracts, the requirements of national legislation and the City's Supply Chain Management Policy will be complied with.

6.12.2. MFMA s33 approval

In terms of section 33 of the MFMA the City is required to follow a specified process where it is intended that contracts with an external party for a period covering more than three municipal financial years. Regarding the major contracts a section 33 processes was started when the public and specified organs of state were invited to comment upon the proposals.

This process was concluded regarding the AFC and CC contracts, when Council approved the final version of the contracts in December 2010. Regarding the contracts with the VOCs, and

with the SM contractor, a further report to Council will be submitted once the contracts have been finalised.

Regarding the remainder of contracts, where contracts are proposed for a period requiring compliance with section 33, the requirements of this section will naturally be complied with.

6.12.3. Asset transfer requirements

The City will make available City capital assets for use, control or management by to the VOCs, the SM contractor, the vehicle suppliers, vehicle maintenance service providers and retail businesses, where these are required for provision of the services to the City, or to generate income for the City. Much of this is set out in more detail elsewhere in this chapter. The assets in question are buses, depots, staging areas, busways and stations or parts thereof. The relevant legislation refers to the making available for assets for use, control or management by others as *transfer* of such asset, although ownership of these assets will generally remain with the City.

The rights will be granted for the period during which the City has an agreement with these entities. Before long-term contracts are concluded, interim contract have been put in place, all for periods of less than three years. Thereafter long-term contracts are planned, in the case of the VOCs for 12 years, and in the case of the SM contractor, for up to six years. Retail business could be provided with lease or concession agreements of less than or more than three years.

The assets are proposed to be supplied as follows:

1. The VOCs will use the depots to service and accommodate buses, to house office and operational staff and to use the facilities for all administrative requirements, and parts of stations for related uses. They will use the City buses to provide the vehicle operator services required by MyCiTi. They may be provide parts of depots and staging areas to the vehicle suppliers and vehicle maintenance service providers to maintain vehicles.
2. The buses are moveable capital assets that may depreciate to a negligible value by the date of the termination of the agreement between the City and the VOCs. If the buses have been used for 90% of their commercial value (determined on the basis of kms travelled) or more by the end of the contract term, the intention is that the ownership of the buses will be transferred to the VOCs, thereby to incentivise the VOCs to provide a high level of maintenance in the final years of the contract. If the buses have been used for less than 90% of their estimated commercial life by the end of the contract, the buses may be sold to the VOCs at an agreed residual purchase price to be determined through negotiation prior to the signing of the contracts. These proposals may be amended during negotiations with the VOCs.
3. The SM contractor will be granted the rights to use, control or manage station assets, including retail infrastructure associated with stations, as well as certain surveillance facilities needed to ensure that the stations are safe and secure and that its staff provide services as required by the contract. The retail businesses will use the retail infrastructure under lease or concession agreements with the City or as sub-lessees or sub-concessionaires of the SM contractor, for the benefit of the City.

4. The vehicle suppliers and vehicle maintenance service providers are proposed to be permitted to utilise parts of the relevant depots in order to maintain the City vehicles.
5. The City intends for retail businesses or other users to lease or be awarded concessions regarding retail infrastructure associated with MyCiTi stations, depots and staging areas. The income from the lease or concessions is to be accounted for as income to MyCiTi.

In the case of depots, staging areas, busways, and stations the assets are planned to be provided by the City to the contractors free of charge. This will mean that the relevant contractors will not be required to procure and fit-out the relevant facilities repeatedly, each time at the beginning of their relevant contracts, and will not be able to add a mark-up to their operating costs in this regard – and this will reduce the operating costs of the relevant operating contracts and thus of the overall MyCiTi operations.

The Municipal Asset Transfer Regulations, issued in terms of the MFMA, sets out requirements regarding the approval of a right to use, control or manage a capital asset. In July 2012 Council approved such transfers to specific contractors for periods less than three years. Regarding long-term transfers, in August 2012 Council authorised a public participation process as required by these regulations. Further reports regarding long-term transfers will be submitted to Council once the proposals in this regard are ready for its consideration.

Further details regarding these processes are provided at www.capetown.gov.za/en/irt, by clicking on “Public participation”, and then on “Transfer of MyCiTi-related assets”.

6.13. Various municipal services

The provision of public transport is a municipal competence in terms of the Constitution and the NLTA. As part of the suite of services to be provided by municipalities, the implementation will affect all services. It is envisaged that the various municipal services will respond as required. Service Level Agreements may be entered into in respect of some of these services. Examples where Service Level Agreements may be required include:

- The Security Surveillance Unit, in order to monitor the additional CCTV cameras in busways and on stations;
- Solid Waste Department for the removal of refuse;
- Stormwater Department for the cleaning of streets and stormwater drains;
- Metro Police for the provision of policing and traffic management services required to maintain dedicated busways.

It is not envisaged that these services will impose major new obligations on other departments outside of normal growth parameters. These costs regarding services provided by other departments are divided into core and non-core, based on whether or not such costs are considered to be directly related to MyCiTi services (core), or whether they are considered an expansion of ordinary municipal services (non-core). The costs in this regard, and the principles for distinguishing between these two types of services are discussed in Chapter 8.

7. Institutional approach and current staffing structure

7.1. Background

The City is constitutionally responsible for the provision of ‘municipal public transport’ in its area. The National Land Transport Act says the City is responsible for:

the planning, implementation and management of modally integrated public transport networks and travel corridors for transport within the municipal area and liaising in that regard with neighbouring municipalities [s 11 (1)(c) (xviii)].

In the Business Plan passed in 2010 it was noted that the City’s strategic objective was to establish a single point of authority for transport, and was pursuing a strategy to establish an institutional framework in terms of which the City’s administration, guided by the ITP, would manage the following:

- strategic planning of the IRT system, including MyCiTi;
- network planning, inter alia determining where and when MyCiTi is to be rolled out, and
- building and maintaining MyCiTi infrastructure.

However the most appropriate mechanism by which the City ensured effective control of the management of MyCiTi operations was under consideration in terms of processes required by section 78 of the Municipal Systems Act (MSA) and section 84 of the Municipal Finance Management Act (MFMA).

In December 2008 Council had supported a Municipal Entity as the appropriate mechanism for the provision of municipal public transport services, including MyCiTi, subject to the process required in terms of section 84 of the MFMA. The section 84 process was, however, not concluded because the administration came to the view that the City should first achieve higher levels of confidence in the projected implications of the roll out of MyCiTi to identify and minimise the risks of the system to the City before creating any Municipal Entity.

Thus in May 2010, Council gave the City Manager approval to establish an internal structure in which the proposed tasks of the City and the Municipal Entity were combined in a MyCiTi Project Office within the City administration, reporting to the then Executive Director: Transport, Roads and Major Projects, and consisting of two departments, namely the Department: IRT Implementation and the Department: IRT Operations.

It was anticipated that, as the detail of contractual relationships between the various parties was clarified and stabilised, and were a Municipal Entity for public transport services established, the Department: IRT Operations would move into the Municipal Entity, while the Department: IRT Implementation would remain in the City administration.

The 2010 Business Plan noted that there are some serious risks in managing MyCiTi operations through an internal department. These include

- slower decision-making processes regarding key issues of relevance to MyCiTi,

- slower response times on corporate related services
- reduced ability to focus on the core business because of other corporate pressures

These concerns have proven somewhat valid, although many key decisions that have had to be taken related to the planning and implementation of the system have benefitted from the closer relationship with the political authorities which the internal departments allowed.

7.2. Proposed establishment of a Transport Authority

The focus on possible institutional arrangements for the management of MyCiti have now been superseded by a decision to pursue the creation of a Transport Authority, as proposed in Transport, Roads and Stormwater's Transformation and Action Plan 2012 (ref TR&S 07/06/12). This Transport Authority may or may not be established as a Municipal Entity (ME).

According to a recent document of the TR&S ('Assignment of the Contracting Authority function to the City of Cape Town: Business Plan and Motivating Memorandum' dated 24 August 2012), the Transport Authority would play the following roles

- Planning Authority
- Contracting Authority, in terms of which it would contract services such as MyCiti operators and the current Golden Arrow Bus Services,
- Municipal Regulating Authority, in terms of which it would issue operating licences and regulate the minibus taxi industry
- MyConnect, which is the card based fare system which will be rolled out across all operators
- Transport Management Centre and Transport Information Centre
- Setting of standards and Monitoring and Evaluation
- Rail Management, in terms of which the Transport Authority will exercise some level of control over the rail function in the City.

In line with this, key deliverables of the TR&S Transformation and Action Plan 2012 include:

- Establishment of a Transport Authority
- Establishment of a Municipal Land Transport Fund
- Assignment of the Contracting Authority (initially for the current provincially subsidised bus services)
- Assignment of Rail Subsidies
- Assignment of the Regulating Entity function.

Through, inter alia, these mechanisms, the establishment of various Service Level Agreements, other contracts and the allocation of public transport subsidies for all modes it is envisaged that the City will achieve a much more integrated and efficient public transport system with

- One communication platform
- Integrated and unified branding

- Integrated ticketing and fare management systems using the MyConnect Smart Card on all existing and future transport services
- Integrated timetabling and scheduling system
- Monitoring through the Transport Information Centre
- Integration with surrounding municipalities and district.

7.3. Implications for MyCiTi

The implications for the institutional arrangements and staffing of the MyCiTi project are clearly substantial, but not yet clear.

Authority for transport cannot be externalised from the City; thus the responsibility for key functions will remain with the City. However, the City will clearly be using external mechanisms of various kinds to implement its responsibilities.

Some of the capacity for planning and contracting of services that has been established in the MyCiTi Project office is likely to be expanded to cover a wider range of modes. Similarly, the card based fare system established for MyCiTi is intended to be extended to all services. It is possible that the scope of MyCiTi's control centre will also be widened.

Until there is greater certainty on these issues the Project Office, consisting of IRT: Implementation and IRT: Operations Departments will continue to function along current lines.

7.4. Background to the staffing framework for the MyCiTi Project Office

On 27 January 2010 the City resolved to amalgamate Transport, Roads and Stormwater and the then Service Delivery Integration Directorate (SDI) to form the new directorate Transport, Roads and Major Projects (TR&MP). Whilst all the departments involved moved to the new directorate as a going concern, two new posts of Director: IRT Implementation and Director: IRT Operations were created to manage the IRT Project.

Because the section 84 process on the establishment of a Municipal Entity has not yet been finalised, the City further resolved on 25 May 2010 to create an interim organisational structure for the IRT Project to meet immediate operational requirements.

The requirement to create capacity is also a condition of the Public Transport Infrastructure and Systems Grant, which reads: *Municipalities are required to establish an institutional structure/specialist capacity to manage and monitor public transport system contracts and operations supported by this Grant as well as to plan future expansions of the network*

Expanding on this, the Guidelines for PTISG applications issued in 2012 require that the City must:

- *Establish a dedicated project team to manage and oversee the planning processes and development of the initial project phases. As a minimum, municipalities should possess dedicated technical staff for each major project component (i.e. Project Management, Operations, Business and Institutions, Industry Transition, Marketing and Communications, and Infrastructure Design).*

- *Municipalities are required to establish specialist capacity to manage and monitor system contracts and operations as well as to plan future expansions of the network. This capacity must be in place in advance of the first operator commencing with service provision to the public. Municipalities must demonstrate that the institutional structure and arrangements are in place to ensure appropriate management oversight of the system.*

The City is complying with this through the establishment of the dedicated Project Office and consultants team with capacity to manage the design, implementation and operation of the IRT project. The office has been set up on the two bay side of the 15th floor of the Cape Town Civic Centre and is planned to be expanded to include portions of the 14th floor.

Staffing organograms, shown below, have been approved and the filling of posts is progressing well.

Support to under resourced critical functions is being provided by CoCT Line Directorates, the employment of professional consultant resources and the employment of staff through labour brokers. Fixed term contract appointments have in addition been made with respect to Revenue Department staff involved with ticket sales.

Specialist advice, assistance and oversight is being provided by specialist service providers (consultants) as well as other City Departments, including inter alia the Directorate's Capital Works Implementation Section, the Supply Chain Management Department and Internal Audit.

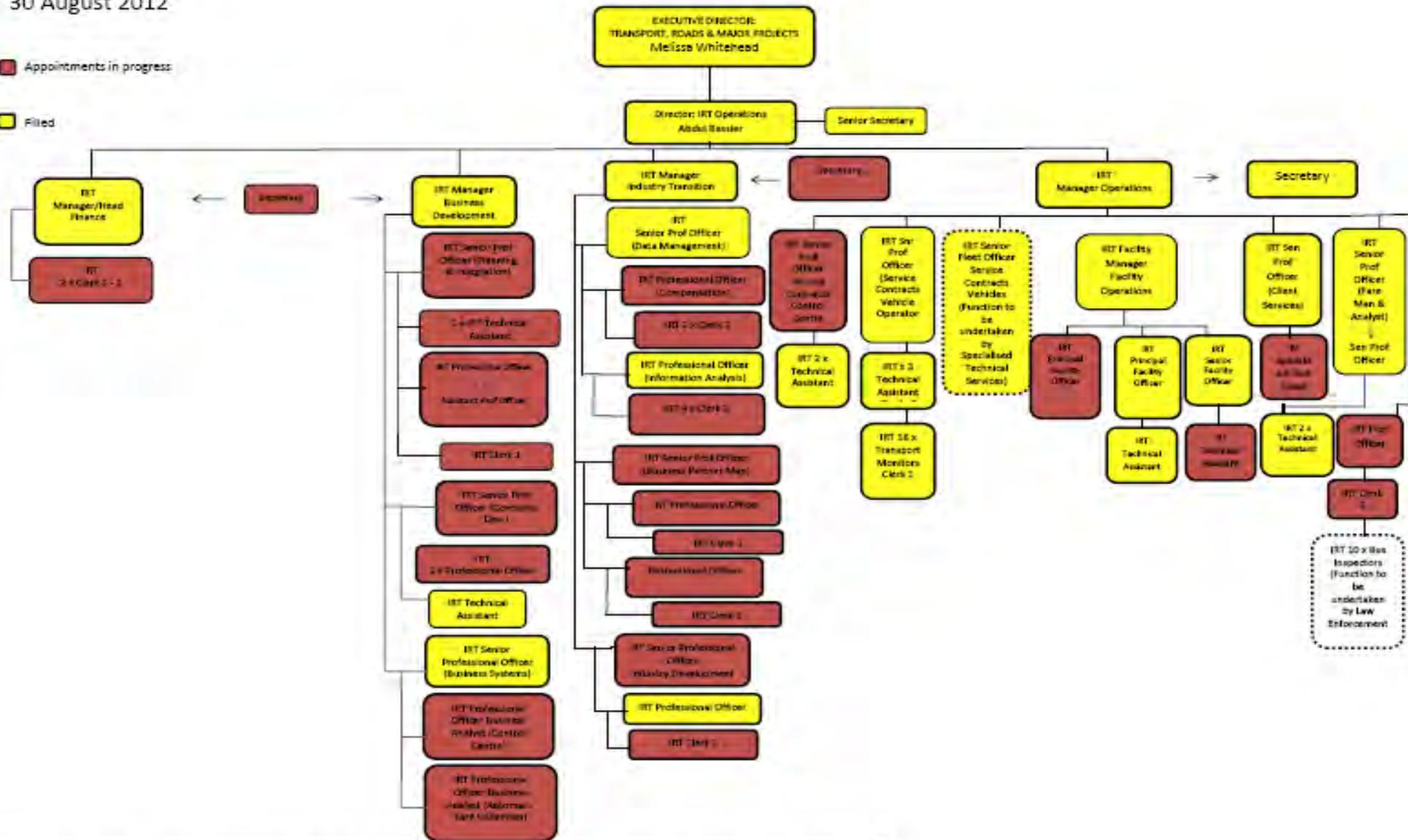
In terms of project oversight, the IRT Project Team prepares regular monthly progress reports which are submitted to Council's political and administrative oversight structures as well as other bodies.

Further, capital expenditure monitoring is undertaken through standard monthly progressive capital expenditure reports which are also submitted to the City's political and administrative oversight structures.

30 August 2012

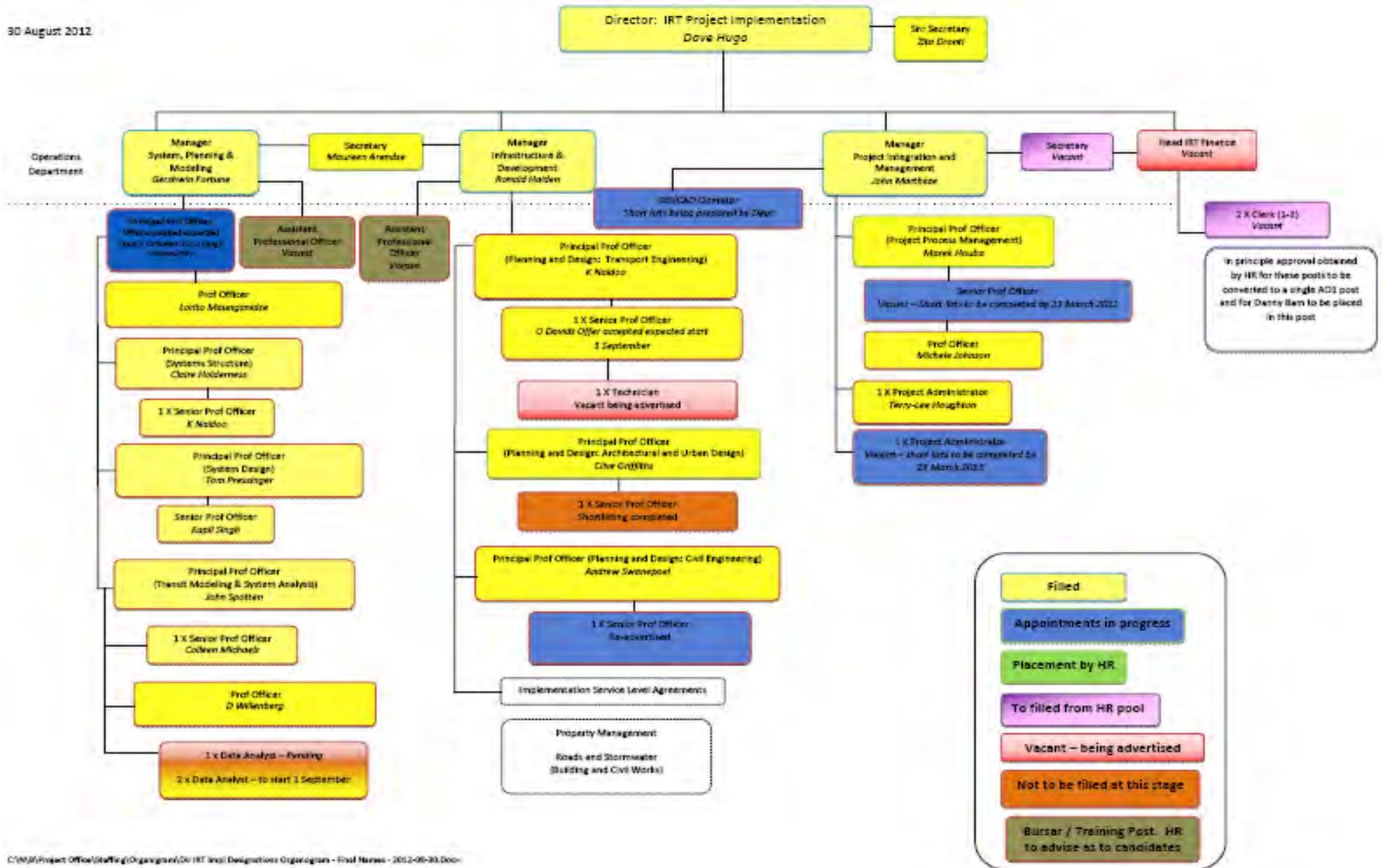
■ Appointments in progress

■ Filled



Marketing and Communication functions to be outsourced. Reporting line directly to Director: IRT Operations in consultation with Director: Communication

30 August 2012



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8. Financing MyCiTi

8.1. Introduction

This chapter summarises the financing of the MyCiTi system.

From a financial perspective there are four broad cost components to the MyCiTi system.

- The capital and operating costs arising from infrastructure and system implementation, including compensation of existing operators and those elements of the Project Office responsible for the design and implementation of the system;
- The cost of the key contracted service providers for running public transport operations, including vehicle operating companies, the Station Services contractor, the control centre and the fare collector.
- The cost of managing MyCiTi operations within the City of Cape Town administration or, in any entity that might be created to do so; as well as the associated marketing costs.
- The cost of services provided by other city departments which have arisen as a result of the MyCiTi system, some of which are closely linked to the system itself (and defined here as 'core' services, such as insurance, and others which are much more indirectly linked, such as additional street-lighting, landscaping and cleansing along the route.

The main sources of funding for the project are

- National government's Public Transport Infrastructure and Systems Grant (PTISG)
- System revenue, including fares and advertising revenues
- The City's own contributions, mainly for the funding of associated operating costs.

Initially the PTISG was intended to be used only for capital infrastructure and related implementation costs. However, as the scale of associated operating costs has become evident in systems both in Cape Town and elsewhere the grant scope has been widened by national government to help address these costs. This is discussed below.

Note that, unless stated otherwise, the figures shown in this chapter have been escalated using an inflation rate of 6% a year. It is important that this be understood when comparing with figures provided in the 2010 Business Plan, which presented figures in 2010 Rands and did not escalate for inflation.

8.2. Infrastructure and implementation costs

8.2.1. Capital and implementation costs

Table 8-1 and Table 8-2 show the past, present and future estimated capital and implementation costs of Phase 1A, 1B and the N2 Express. While some of these costs are classified as operating costs they are all once-off costs and are funded by national government's PTISG.

Note that the Directorate: IRT Implementation has been included here on the basis that it is mainly responsible for the planning, design and implementation of the infrastructure, and once the system is implemented would have a very limited role. Note, too, that the Directorate's costs include substantial Council costs for support services. Given the mechanism by which City overhead costs are distributed across line departments both directorates, namely IRT: Implementation and IRT: Operations, attract high support costs. In the 2011/12 financial year R29.4 million in Council support service costs were charged to IRT: Implementation and R24.0 million to IRT: Operations.

Note, too, that the estimated figure for compensation of existing service providers, which is a once-off expense, is also included in Table 8-2.

Table 8-1. Infrastructure and vehicle costs (including VAT)

PHASE 1A: Element	2006-2012	2012/13	2013/14	2014/15	TOTAL
Roadway Civil Works	1 149 578 277	268 616 612	22 981 463	950 000	1 442 126 352
Depots	119 310 044	108 971 960	4 011 466		232 293 470
Stations & Stops	250 832 012	220 360 039	10 376 833		481 568 884
Transport Management Centre	60 000 000				60 000 000
Land	252 349 983				252 349 983
NMT	22 892 165	519 410			23 411 575
Contingency					-
Escalation					-
Sundry	28 716 063	229 094			28 945 157
Control Centre	123 003 144	44 101 004	13 711 775	729 212	181 545 135
Fare System	128 067 836	173 540 394	12 403 061	14 589 306	328 600 596
Vehicles	122 648 050	576 456 458	235 862 893	37 806 247	972 773 649
TOTAL	2 257 397 575	1 392 794 971	299 347 490	54 074 765	4 003 614 801

PHASE 1B: Element	2006-2012	2012/13	2013/14	2014/15	TOTAL
Roadway Civil Works including NMT		90 498 000	148 482 000	10 000 000	248 980 000
Depots					-
Stations & Stops		24 270 000	97 930 000	20 000 000	142 200 000
Transport Mgt Centre					-
Land					-
Contingency		6 141 244	5 643 305	20 042 033	31 826 582
Escalation		7 983 617	7 336 297	26 054 642	41 374 556
Sundry					-
Control Centre			2 205 000	19 845 000	22 050 000
Fare System			2 142 500	19 282 500	21 425 000
Vehicles				201 600 000	201 600 000
TOTAL		128 892 861	263 739 102	316 824 175	709 456 138

PHASE N2 EXPRESS: Element	2006-2012	2012/13	2013/14	2014/15	TOTAL
Roadway Civil Works incl NMT		4 400 000	19 600 000		24 000 000
Depots (Also used for Ph2)		14 500 000	62 000 000	45 000 000	121 500 000
Stations & Stops		7 000 000			7 000 000
Transport Mgt Centre					-
Land					-
Contingency					-
Escalation		3 554 443	3 038 700	8 660 295	15 253 438
Sundry		4 620 775	3 950 310	11 258 384	19 829 469
Control Centre		1 400 000	9 800 000	2 800 000	14 000 000
Fare System		937 000	6 559 000	1 874 000	9 370 000
Vehicles		-	102 400 000	25 600 000	128 000 000
TOTAL		36 412 218	207 348 010	95 192 679	338 952 907

Table 8-2. Transitional, design and implementation costs

PHASE 1A, 1B, N2 EXPRESS Element	2006-2012	2012/13	2013/14	2014/15	TOTAL
Project Office IRT Implementation		42 385 000	47 516 000	50 605 000	140 506 000
Sundry (Office Equipment)		923 700			923 700
Business planning, contracting and industry transition	41 000 000	410 759 416	154 721 447	25 000 000	631 480 863
System planning, system design and implementation	333 264 062	5 250 000	14 875 000	14 875 000	368 264 062
Property related charges	9 043 155				9 043 155
Contingency		2 685 183	2 358 100	1 784 657	6 827 940
TOTAL	383 307 217	462 003 299	219 470 547	92 264 657	1 157 045 720

8.3. Tax and the impact on costs

8.3.1. Value added tax (VAT)

Public transport is defined as 'VAT exempt' rather than 'zero-rated'. This means that while the end consumer is not charged VAT on using the service, VAT on inputs for providing the service does need to be paid.

This results in a net increase in the cost of providing infrastructure for MyCiTi than would have been the case if it had been either 'zero-rated' or subject to normal VAT. The matter is now being investigated by National Treasury which acknowledges that there are anomalies that have to be addressed, and are exploring ways that this can best be done. However, while it may be that the MyCiTi system could be framed institutionally in a manner that leads to a more tax efficient treatment, it is not considered appropriate to drive institutional approaches on this basis, particularly give the possibility of imminent changes.

8.4. Contracted service providers

The contracted service providers represent the heart of system operations. They have been described in more detail elsewhere and include:

- Vehicle operators
- Fare system
- Control centre
- Station management services

The costs of the various contracted service providers have been modelled for Phase 1A, 1B and the N2 Express separately. The figures are based on actual costs and tendered prices

where these are available, together with modelled figures for expected ridership. Where estimates are relied upon a conservative approach has been taken. The figures for fare system, control centre and station management services are based on actual contracted or tendered amounts. The figure for vehicle operator costs has been estimated somewhat higher than the proposals made by the City in negotiations with operators.

Note that the recurrent costs are shown in R thousands.

Vehicle operator contracts

A full operator financial model was developed to estimate the vehicle operator contract cost. The model takes into account the full costs of operations including such elements as:

- Personnel costs including market related salaries with benefits and statutory levies.
- Direct vehicle operating costs such as fuel, tyres, parts, spares and maintenance;
- Fixed costs associated with the buses (such as licensing);
- Company fixed costs and overheads, and
- An allowance for profit based on sound commercial principles for this type of enterprise.

The cost structure in the financial model is based on three companies rendering Phase 1A and 1B services, and a further two companies plus Golden Arrow Bus Services rendering N2 Express Services. It is intended that by having more than one service provider a basis for competition between the operators will be created. However, the actual number of operators has been determined by how best to accommodate the existing industry. This is addressed in Chapter 9. For the small service of the N2 Express, especially, this creates quite significant diseconomies of scale.

The City will pay the operator for providing the service mainly on a per km basis, but with some payments based on fixed costs and others based on semi-fixed costs. A minimum number of kilometres will be guaranteed to the operator.

The fee per km has been based on the cost structure of the operation, plus a margin for profit. It will be adjusted monthly based on changes in certain input costs, such as fuel, CPI, and labour costs. To estimate the fee per km and hence the likely contract costs, a margin of profit was used based on commercial principles for this type of business.

The City is currently negotiating the contract with the future bus operating companies and actual costs will be based on the outcome of such negotiations.

The capital cost of vehicles is not included in these modelled prices since they are being paid for through the PTISG.

Fare System

The details of the fare collections system are described in section 6.5. The tender for the fare system has been awarded and is currently being implemented. The operational costs reflected in this model relate to costs of managing the system, including operations, maintenance and provision of spares and replacement of parts. The capital costs have been separately indicated above. The cost of selling and loading cards on stations is included in the station management contract.

Control Centre

The details of the control centre operation are described in section 6.6. The implementation of the Control Centre is almost complete. The operational costs relate to the management of the system, personnel costs, and system software and hardware maintenance.

Station Management

The details of the station management services are described in section 6.7. In summary the station management services will include the security at the stations, the cleaning of stations, passenger management, cashiers for fare collection and the management of on-street parking in the area of operations, especially around stations.

Tenders for the provision of Station Services have closed, and are in the process of being evaluated.

Table 8-7 to Table 8-10 summarise the costs over the current and following three years as the system is rolled out. Note that the Phase 1A and the N2 Express services are fully rolled out before the start of the 2014/15 and Phase 1B before the start of the 2015/16 financial year. In most cases an inflation rate of 6% has been used, but based on industry experience inflation of 8% per annum has been used in estimating Vehicle Operator contracts. The figures for the various contracted services have been combined since revealing these estimates is not appropriate in the context of current negotiations with service providers.

8.5. System costs – managing the Operators and Marketing the system

The institutional costs comprising the costs of MyCiTi operations management and costs of marketing and promoting the system are shown separately. These elements do not form part of transport operations. The functions are currently performed by the City administration.

Dept IRT: Operations (MyCiTi Operations Management Unit)

A Department: IRT Operations has been created which currently is involved both in the design and implementation of the system from an institutional, financial and business structure perspective as well as overseeing the operations of the existing Milestone 0 service providers. The term Operations Management Unit has been used in the past to describe this activity and is thus used here.

It has been postulated that this department should become a Municipal Entity responsible for the contracted service providers. This needs to be re-assessed in the context of the creation of a Transport Authority.

Design and implementation activity could arguably be categorised similarly to the Directorate IRT Implementation; however, for this exercise all costs have been included here as recurrent costs. As has been noted earlier, significant City support costs are included in this figure.

Marketing

Marketing the system is seen as a key ingredient for success, and is thus shown separately. The figure has been set significantly higher than in the 2010 business plan on the basis that marketing is especially important in the initial period of the implementation and running of the system.

The figures shown here are in line with current spending escalated for inflation. However as implementation shifts from Phase 1A to the N2 Express and Phase 1B funding has been assumed to shift accordingly. In reality the allocation of marketing costs between the different phases will be determined by circumstances current at the time.

Table 8-7 to Table 8-10 summarise the costs of IRT: Operations and Marketing for Phase 1A, 1B and N2 Express both combined and separately. Note that the IRT: Operations Department costs for Phase 1B and N2 Express are included in the costs for Phase 1A, since the marginal costs for extending these activities to Phases 1B and N2 Express are limited and difficult to identify separately.

8.6. Services provided by other City departments

A number of services which have arisen as a result of MyCiTi are performed by other city departments. Some of these services are directly related to MyCiTi operations, such as insurance of new City assets required for MyCiTi operations, and are referred to here as 'core'. However, others are of a more general nature related to the enhancement of public space in the vicinity of the MyCiTi system, such as additional cleansing, landscaping and street lighting along the route; and are referred to as 'non-core'. Some services are partly core and partly non-core. An example of this is some of the safety and security services. Personnel have been employed to ensure safety of MyCiTi users, but their function extends to ensuring safety and security in the general corridor area of MyCiTi, including parking and traffic related functions, or surveillance of the broad corridor in a manner which extends significantly beyond the MyCiTi system.

All costs have been shown here, and in estimating system costs below all costs have been included. However, in principle, it is envisaged that core costs be charged to IRT: Operations but that non-core costs are absorbed by the departments; with the proviso that for an initial period as required for the relevant departments to budget appropriately for such costs in future years, such costs be funded from the IRT budget. In most cases agreement has been established between IRT: Operations and the departments as to the allocation of costs, although in some cases, such as in relation to certain security costs this is still under discussion. A summary of the allocation of costs is shown in Annexure D.

In both the case of core and non-core services, it is appropriate that a service level agreement be drawn up between IRT Operations and the line function department, so as to ensure that the services required are agreed, and whether or not to treat the services as core, non-core, or a combination of the two.

The following tables show these costs for Phase 1A, 1B and N2 Express – identifying those regarded as core to MyCiTi. Note that, in some cases, in extending services into further phases no additional costs over and above what is required for Phase 1A are needed. In

some cases a service provided by Council departments in the first year is included in other items in subsequent years. For example, the implementation of the automated fare system results in no further need for City revenue staff to perform that role. Fleet management services will be provided by the Operations Unit from 2013/14, and landscaping is included in the station services management contract. In the summary tables these figures have been combined into two lines showing 'core' and 'non-core' costs.

Table 8-3: Cost of support from other City departments

Phase 1A	R 000s	2012/13	2013/14	2014/15	2015/16
Support from other City departments (core)		28 341	25 274	27 051	28 809
Support from other City departments (non-core)		21 036	23 319	25 213	26 852
Revenue Staff (core)		13 238	0	0	0
Law enforcement (non-core)		9 663	10 291	10 960	11 672
Security SSU (non-core)		3 820	4 068	4 333	4 614
Cleansing (non-core)		5 040	8 960	9 921	10 566
Fleet management (core)		105	0	0	0
Insurance (core)		12 270	20 009	21 310	22 695
Roads & Stormwater (core)		500	533	567	604
Utilities (core)		1 779	3 189	3 530	3 760
Major maintenance (core)		0	1 065	1 134	1 208
Landscaping (non-core)		2 514	0	0	0
Traffic information (core)		449	478	509	542

Phase 1B	R 000s	2012/13	2013/14	2014/15	2015/16
Support from other City departments (core)		0	0	4 662	4 965
Support from other City departments (non-core)		0	0	1 417	1 509
Revenue Staff (core)					
Law enforcement (non-core)					
Security SSU (non-core)					
Cleansing (non-core)				1 417	1 509
Fleet management (core)					
Insurance (core)				4 082	4 347
Roads & Stormwater (core)					
Utilities (core)				504	537
Major maintenance (core)					
Landscaping (non-core)					
Traffic information (core)				76	81

Phase N2 Express	R 000s	2012/13	2013/14	2014/15	2015/16
Support from other City departments (core)		0	2 389	4 937	5 258
Support from other City departments (non-core)		0	6 236	11 385	12 125
Revenue Staff (core)					
Law enforcement (non-core)			6 003	10 960	11 672
Security SSU (non-core)					
Cleansing (non-core)			233	425	453
Fleet management (core)					
Insurance (core)			2 128	4 533	4 827
Roads & Stormwater (core)					
Utilities (core)			166	303	322
Major maintenance (core)					
Landscaping (non-core)					
Traffic information (core)			96	102	108

8.7. Funding mechanisms

Funding sources for MyCITI consist of

- National government's Public Transport Infrastructure and Systems Grant (PTISG)
- System revenue, including fares and advertising revenues
- The City's own contributions, mainly for the funding of associated operating costs.

8.8. Public Transport Infrastructure and Systems Grant

The Public Transport Infrastructure and Systems Grant (PTISG) is a national grant. Its Strategic Goal is 'to support the National Land Transport Act (No. 5 of 2009) and Public Transport Strategy (PTS) and Action Plan in promoting the provision of accessible, reliable and affordable integrated public transport services' (Division of Revenue Act 2012).

The grant originated as a mechanism to support the provision of transport related infrastructure for the FIFA World Cup, but subsequently became the key mechanism for funding the road based aspects of national government's Public Transport Strategy and Action Plan – mainly new Bus Rapid Transit systems – and innovations arising from the passage of the NLTA. Rail is subsidised through a different grant funding stream.

Initially the PTISG was intended to support capital investment and related implementation costs, such as planning costs and costs related to the transitioning of the industry from the old to the new system. However as the cost of running associated operations became evident the scope of the grant was extended to allow it to be used for such costs.

Below is an extract from the PTIS grant framework as set out in the Division of Revenue Act (Act 5 of 2012). Note that the outputs of the grant include 'public transport infrastructure', 'public transport services' and 'plans related to the above'. The full PTISG framework is contained in Annexure E.

Outputs	<ul style="list-style-type: none"> • Public transport infrastructure including the development, upgrade and maintenance of dedicated lanes, routes, stations, depots, control centres and related information technology, and fare systems • Public transport services include public transport vehicles, security, station management, ticketing services, control centre operations, network management function and contributions towards the economic rights of existing operators • Number of average weekday passenger trips carried on PTIS Grant funded systems • Plans related to the above including: <ul style="list-style-type: none"> – network operational plans including universal access design plans – business and financial plans (including financial modelling, economic evaluation, and operator transition plan) – institutional network management plan – engineering and architectural preliminary and detailed designs – public transport vehicle and technology plans – marketing and communication plans
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The grant framework sets the conditions which must be met when utilising the grant. These are as follows:

Conditions	<ul style="list-style-type: none"> • Projects must support an integrated network approach as defined in the Public Transport Strategy and in the National Land Transport Act • Integrated public transport solutions should incorporate: i) integration between different public transport services, including non-motorised transport infrastructure; ii) fare integration between different services; iii) marketing integration with unified branding; and, iv) institutional integration between the services • Projects must be based upon an IRPTN/IPTN operational plan (including detailed financial modelling) approved by the municipal council • For each phase, final network routing and related financial modelling will be agreed with DoT before municipalities are to proceed with detailed infrastructure design • IRPTN/IPTN projects must meet the minimum requirements of the South African Bureau of Standards (including Part S of the Building Regulations) • From the start of operations, IRPTN/IPTN systems must recover all the direct operating costs of contracted vehicle operators from fare revenue, other local funding sources and, if applicable, from any Public Transport Operations Grant contributions. These direct operational costs consist of fuel, labour, operator administration and vehicle maintenance • If PTIS Grant funds are to be used to cover the costs of existing economic rights of affected operators, verified data on payments details and verified services must be provided to the Department of Transport for their agreement prior to entering into agreements on economic rights • If buses are bought with grant funds and are used by contracted operators, the municipality must retain ownership unless alternative arrangements are pre-approved by National Treasury and DoT • Municipalities are required to establish specialist capacity to manage and monitor public transport system contracts and operations supported by this Grant as well as to plan future expansions of the network
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The following table shows the amounts that have been received in PTISG funding so far, as well as amounts already provided for in the Division of Revenue Act of 2012 for 2012/13 to 2014/15. The column on the left shows the funds allocated by national government in PTISG each year. The column on the right shows the unspent portion at the end of each year, which was then rolled over into the following year.

It should be noted that amounts will be shown as unspent until they are actually paid. Thus a construction project, or the process of purchasing vehicles can be substantially completed but the money provided for them shown as unspent.

Most of the amounts provided in PTISG have been specifically earmarked by national government for the MyCiTi project. As of June 2012 6% had been spent on other projects.

Table 8-4: PTISG funding past and future

PTI&SG FUNDING & EXPENDITURE PROFILE					
FINANCIAL YEAR	FUNDING	CUMULATIVE FUNDING	EXPENDITURE	CUMULATIVE EXPENDITURE	NET EFFECT (FUNDING BALANCE)
2005-2006	8 000 000	8 000 000	0	0	8 000 000
2006-2007	120 000 000	128 000 000	65 189 801	65 189 801	62 810 199
2007-2008	336 200 000	464 200 000	35 980 996	101 170 797	363 029 203
2008-2009	318 642 000	782 842 000	330 405 310	431 576 107	351 265 893
2009-2010	882 500 000	1 665 342 000	816 659 453	1 248 235 560	417 106 440
2010-2011	468 355 000	2 133 697 000	520 578 980	1 768 814 540	364 882 460
2011-2012	1 608 300 000	3 741 997 000	930 039 983	2 698 854 523	1 043 142 477
2012-2013	1 348 702 000	5 090 699 000			
2013-2014	1 298 762 000	6 389 461 000			
2014-2015	1 295 571 000	7 685 032 000			

The full capital costs as shown in the Tables at the start of the chapter will be funded by PTISG. To the extent that PTISG funding falls short of capital requirements implementation can be slowed; or, if funds are received more quickly it may be possible to accelerate implementation. However, the lead time involved in building infrastructure or purchasing vehicles means that acceleration is not always feasible.

The funds already made available in terms of the 2012 DORA are sufficient to complete Phases 1A and 1B and the N2 Express.

Part of the PTISG provision will be used for funding of recurrent costs. This is discussed in more detail below.

While the three year national budget generally gives a good indication of future grant funding it is not legally binding on national government. It has been recognised that MyCiTi and other BRT projects need greater funding certainty because of the long lead times in projects of this nature. Section 8(4) of the Division of Revenue Act of 2010 was introduced to address this and has been carried through to each subsequent DORA. Section 8(4) in the 2012 DORA reads as follows:

8(4) Despite subsection (2), in respect of the Public Transport Infrastructure and Systems Grant, funding which is specifically approved by the National Treasury in relation to transport contracts for capital projects must be regarded as being firm allocations for the next financial year and the 2014/15 financial year that will not be altered downwards in the Division of Revenue Acts in respect of those financial years.

This is the only grant for which a specific provision of this nature has been made in the Division of Revenue Act.

This makes it possible to advertise and award tenders before funds are actually received by the City.

8.9. System revenue for Phase 1A, 1B and N2 Express

The revenue generated by the system comprises two components: the fare revenue from passenger fares, and revenue from advertising at stations, on vehicles, and through concessions around the stations.

The fare revenue has been estimated from detailed operational modelling of the system. The routes, frequencies, vehicle type, and fare structure and fare level have been modelled and optimised to increase levels of patronage and maximise fare revenue, while providing a high standard of service to the passenger. The figures assume that the automated fare collection system currently being rolled out is in place.

A conservative approach has been adopted in estimating fare revenues. Recent modelling suggests the revenues used for the purposes of this Business Plan are understated by 25%; however, given uncertainty it is prudent to assume the lower figure.

The fare structure has been explained in chapter 4.

The following Tables show the estimated system revenues for Phase 1A, 1B and 2 Express.

Table 8-5: Estimated System Revenue for 1A, 1B and N2 Express

Phase 1A	R 000s	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
System Revenue		112 998	294 039	311 090	329 756
Fare revenue		102 998	281 319	297 607	315 463
Advertising		10 000	12 720	13 483	14 292

Phase 1B	R 000s	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
System Revenue		0	0	57 162	60 592
Fare revenue		0	0	53 477	56 686
Advertising		0	0	3 685	3 906

N2 Express	R 000s	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
System Revenue		0	20 405	37 079	39 304
Fare revenue		0	20 405	37 079	39 304
Advertising		0	0	0	0

8.10. Property Rates and other municipal tax sources

The City's two main sources of general revenue are property rates and a share of the nationally collected fuel levy. In the 2011/12 financial year the following revenue was generated from these revenue sources:

Property rates	R5 519 million
Share of nationally collected fuel levy	R1 637 million

Thus in 2011/12 R55.2 million represented 1% of property rates income and R71.6 million represented 1% of these sources combined.

In the 2011/12 financial year the City of Cape Town contributed R187 million from rates and other general revenue sources towards the two IRT directorates, namely IRT: Implementation and IRT: Operations. This included payments to the current contracted service providers to run operations to the extent this was not covered by fare revenue. It also included the substantial amounts charged for support services.

8.11. Funding the operating costs

Amongst the grant conditions set out above is the following:

- From the start of operations, IRPTN/IPTN systems must recover all the direct operating costs of contracted vehicle operators from fare revenue, other local funding sources and, if applicable, from any Public Transport Operations Grant contributions. These direct operational costs consist of fuel, labour, operator administration and vehicle maintenance.

These are the amounts included under the item Vehicle Operator Contracts.

However, as has been shown above, there are significant further recurrent costs to be covered.

While the grant 'Outputs' indicate that the funding of most of the further recurrent costs is permissible in terms of the grant there have been indications that national government would like to constrain this in some way so as to avoid too great a proportion of the available resources being shifted from capital to operating costs, and to incentivise City governments to spend prudently. A proposal made by National Treasury in the formulation of the grant conditions for the 2012 DORA was that municipalities should move towards contributing from their own resources half of the total recurrent costs not covered by fare revenue. This was, however, not adopted when the grant framework was finalised between the national Department of Transport and National Treasury since it appeared to be more stringent than some cities could realistically achieve.

In its funding request for PTISG allocation for the coming MTEF period the City of Cape Town has proposed that sharing of system recurrent costs be based on sharing equally between the Council Funds and PTISG the total recurrent costs requirement not covered by fare and advertising revenue; but with the City's contribution capped at a level close to the contribution in 2011/12 – assumed in the funding request to be R150 million - escalated by 6% a year to account for the growth parameters for the City's overall budget, which include inflation. The figure of R150 million excluded depreciation charges, but this approach has since been revised to include depreciation charges both in measuring the costs and determining the split on an equal basis. As indicated above, the actual contribution from Council funds in 2011/12 was R187 million.

Assuming accuracy in the modelling of fare revenue and other projections, the contributions of PTISG and the City funding respectively is estimated to be as follows for the current and following three financial years (figures escalated for inflation):

Table 8-6: Sharing of recurrent costs

Sharing of recurrent costs	R millions	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Total recurrent funding requirement		368 166	624 637	798 740	854 054
System revenue					
Fare revenue		102 998	301 724	388 163	411 453
Advertising revenue		10 000	12 720	17 168	18 198
Funding requirement minus system revenues		255 168	310 193	393 409	424 403
Share between PTISG and City					
PTISG		127 584	155 097	196 705	212 202
City contribution		127 584	155 097	196 705	212 202
City funding cap (R187m escalated at 6%)		198 220	210 113	222 720	236 083

This basis for sharing meets the grant condition that the difference between direct vehicle operating costs and fare revenue be covered by local funding sources and contains the City's fiscal exposure below 2011/12 levels escalated at 6% per year as can be seen in the last row in the above table.

8.12. Summary of recurrent costs and funding

The following tables show the full recurrent costs and funding basis for the current and following three fiscal years for Phases 1A, 1B and N2 combined, and for each of the services separately. Note that the figures for the various contracted services are not shown separately since this is inappropriate given current negotiations with operators.

The deficit figures for Phase 1A are somewhat higher than was predicted in the 2010 Business Plan. The key differences are that Station Management costs are significantly higher; expected fares are lower (mainly because of significantly lower ridership than originally predicted on the airport route), and marketing costs have increased.

The higher Station Management costs have led to a re-assessment of system design for future phases whereby, as explained in Chapter 5, stations will only be used at high volume points and stops used elsewhere. The increased marketing budget is the result of an increased recognition of the importance of marketing, coupled with the additional demands relating to extended roll-out. The details are shown in Annexure D.

Table 8-7: Summary of recurrent costs and funding for 1A, 1B and N2 Express

PHASE 1A PHASE 1B AND N2 EXPRESS COMBINED					
R 000s		2012/13	2013/14	2014/15	2015/16
System Revenue		112 998	314 444	405 331	429 651
Including	Fare revenue	102 998	301 724	388 163	411 453
	Advertising	10 000	12 720	17 168	18 198
System costs					
Contracted service providers		258 191	482 622	633 876	678 592
Total IRT: Operations & Marketing		60 598	84 797	90 198	95 944
Including	Operations Unit	39 715	62 661	66 734	71 072
	Marketing	20 883	22 136	23 464	24 872
Other City Departments (core services)		28 341	27 663	36 650	39 032
Other City Departments (non-core services)		21 036	29 555	38 016	40 486
Total system costs (including City departments non-core services)		368 166	624 637	798 740	854 054
System costs less System Revenue		255 168	310 193	393 409	424 403
PTISG funding of recurrent costs		127 584	155 097	196 705	212 202
City funding of recurrent costs		127 584	155 097	196 705	212 202
City funding cap		198 220	210 113	222 720	236 083

Table 8-8: Summary of recurrent costs and System Revenue for 1A

PHASE 1A					
R 000s		FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
System Revenue		112 998	294 039	311 090	329 756
Including	Fare revenue	102 998	281 319	297 607	315 463
	Advertising	10 000	12 720	13 483	14 292
System costs					
Contracted service providers		258 191	436 338	480 744	514 239
Total IRT: Operations & Marketing		60 598	73 729	76 120	78 534
Including	Operations Unit	39 715	62 661	66 734	71 072
	Marketing	20 883	11 068	9 386	7 462
Other City Departments (core services)		28 341	25 274	27 051	28 809
Other City Departments (non-core services)		21 036	23 319	25 213	26 852
Total system costs (including City departments non-core services)		368 166	558 660	609 128	648 434
System costs less System Revenue		255 168	264 621	298 038	318 678
PTISG funding of recurrent costs		The funding split has been provided for all the phases combined			
City funding of recurrent costs		The funding split has been provided for all the phases combined			

Table 8-9: Summary of recurrent costs and System Revenue for 1B

PHASE 1B					
R 000s		FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
System Revenue		0	0	57 162	60 592
Including	Fare revenue	0	0	53 477	56 686
	Advertising	0	0	3 685	3 906
System costs					
Contracted service providers		0	0	67 899	72 772
Total IRT: Operations & Marketing		0	4 427	4 693	7 462
Including	Operations Unit	0	0	0	0
	Marketing	0	4 427	4 693	7 462
Other City Departments (core services)		0	0	4 662	4 965
Other City Departments (non-core services)		0	0	1 417	1 509
Total system costs (including City departments non-core services)		0	4 427	78 671	86 708
System costs less System Revenue		0	4 427	21 509	26 116
PTISG funding of recurrent costs		The funding split has been provided for all the phases combined			
City funding of recurrent costs		The funding split has been provided for all the phases combined			

Table 8-10: Summary of recurrent costs and System Revenue for N2 Express

N2 EXPRESS				
R 000s	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
System Revenue	0	20 405	37 079	39 304
Fare revenue	0	20 405	37 079	39 304
Advertising	0	0	0	0
System costs				
Contracted service providers	0	46 284	85 233	91 581
Total IRT: Operations & Marketing	0	6 641	9 386	9 949
Operations Unit	0	0	0	0
Marketing	0	6 641	9 386	9 949
Other City Departments (core services)	0	2 389	4 937	5 258
Other City Departments (non-core services)	0	6 236	11 385	12 125
Total system costs (including City departments non-core services)	0	61 550	110 941	118 913
System costs less System Revenue	0	41 145	73 862	79 609
PTISG funding of recurrent costs	The funding split has been provided for all the phases combined			
City funding of recurrent costs				

8.13. Financing risks

There are significant financial risks associated with the Phase 1A, 1B and N2 Express projects, which need to be managed.

8.13.1. Risk of less funding than envisaged being made available through PTISG for capital expenditure

The City of Cape Town has benefitted from the fact that it has been an early implementer of BRT in line with national government's Public Transport Strategy and Action Plan. As a result

competition for the PTIS grant has been less. More cities are likely to seek funding from the grant in coming years and it is not inevitable that the total grant amount will increase concomitantly.

On the other hand the amount already allocated to the City for the future years of the Medium Term Expenditure Framework is sufficient to cover the expected costs of the roll-out of Phase 1A, 1B and the N2 Express, and it is highly unlikely that this will not be forthcoming. The City is currently requesting National Treasury that amounts already allocated be regarded as firm in terms of section 8(4) of the 2012 DORA and this does not appear to be in dispute.

In the highly unlikely event that future capital is not forthcoming there remains potential to slow capital implementation to align it with funding availability.

8.13.2. Risk of increased recurrent funding requirement

The figures included in this chapter are based on a combination of estimates and confirmed prices from signed contracts. Where estimates are used a conservative approach has generally been followed, meaning that while all estimates are at realistic levels, income has tended to be estimated at lower levels, while costs have tended to be estimated at higher levels. Fare system and control centre costs are based on completed tender processes. The station services costs include some services which may be excluded when the contract is finally signed.

Vehicle Operator costs have been estimated at higher than the figure that the City has submitted for negotiations purposes and could reasonably be contracted at somewhat lower rates than estimated here. For modelling purposes Vehicle Operator Costs have been escalated at 8% per year, while revenues have been escalated at only 6% per year. In general the fare revenue figures are at the lower end of reasonable estimates. Latest estimates for fare revenue are approximately 25% above the figures used here.

Thus the risk of an increased recurrent cost requirement is somewhat unlikely. Nevertheless, it is prudent to test scenarios to assess the impact of such potential risks were they to eventuate.

A scenario has been run where fare revenue is 25% lower than anticipated and vehicle operator costs are 15% higher. Under these assumptions the crucial implication is that the gap between direct vehicle operating costs and system revenue is about 10% higher than the City's cap. But because this gap may not be funded by PTISG the City would be forced to exceed its cap.

Thus if the City is to maintain a cap of R187 million escalated by 6% per year it will not be able to sustain both a fare income reduction of 25% and a vehicle operator contract increase of 15% compared with the modelled figures in the outer years, and will have to manage this accordingly.

This could be done by

- increasing fare levels
- decreasing the number of vehicle trips

- increasing ridership, especially off-peak ridership

Increasing fare levels is likely to be unpopular and may lead to further reduction in ridership. Thus it is important that they be established at appropriate levels from the outset.

Decreasing the number of vehicle trips would most likely entail reducing off peak trips by increasing off-peak headways. Again, this lower level of service may reduce passenger numbers and be counter-productive.

Note, also, that the scope for decreasing vehicle trips is limited by the fact that Vehicle Operators will be guaranteed a minimum number of kilometres in the contracts being negotiated; this is in order to enable management of risk for pricing purposes.

Increasing off-peak ridership has better returns than increasing peak ridership since the latter can generally only be accommodated by further vehicle trips.

The sophisticated fare management system and other information technology in the system should enable these adjustments to be made reasonably scientifically.

For balance, a scenario has been modelled assuming fare revenues 25% higher than those presented here, and vehicle costs 15% lower. As can be seen, this results in City funding levels well below the cap established on the basis of 2011/12 actual spending.

	2012/13	2013/14	2014/15	2015/16
Share between PTISG and City funding assuming 25% fare revenue increase and 15% reduction in VO costs				
PTISG funding	101 289	90 765	112 967	122 736
City funding	101 289	90 765	112 967	122 736
City funding cap	198 220	210 113	222 720	236 083

This risk analysis emphasises the critical importance of containing all costs - but especially vehicle operator costs - and increasing system revenues, particularly given that the difference between these amounts may not be covered by PTISG funds given current conditions.

8.13.3. Recurrent grant funding uncertainty

As noted, the PTIS grant framework states that the PTISG is expected to continue for as long as national funding is required to support IRTPNs/IPTNs as envisaged in the NLTA and Public Transport Strategy of 2007.

There are indications that national government is willing to put substantial resources into the funding of public transport. However, at this stage, there is lack of clarity as to the precise resource envelope the City can rely upon.

The PTISG was originally established for capital funding purposes. In the face of high recurrent costs the scope has been widened. Yet until there is a clearer basis for allocation to recurrent costs there remains some uncertainty.

There have been strong indications that national government intends to introduce an operating grant for BRT type services that would be determined on a rational, formula driven basis once there is a clearer understanding of the actual recurrent costs involved, so that a realistic envelop can be established. Furthermore it is envisaged that the Public Transport Operating Grant, which currently flows through provincial government to fund services such as the existing Golden Arrow Bus Services, will be devolved to qualifying the cities together with the associated responsibilities.

There are various constitutional provisions aimed at ensuring that where functions are devolved they should also be adequately funded; and institutions have been created in terms of the Constitution which are intended to facilitate this – such as the Financial and Fiscal Commission.

National government has also indicated that it wishes to work with the cities to establish an adequate, fair, and predictable funding basis going forward. This is being taken up by the Executive Director: Transport, Roads and Stormwater and will pursued in consultation with the Executive Director: Finance.

However, as with any grant funding source there remains inevitable uncertainty as to whether funding would be adequate and reliable over the long term. Indeed, long term reliability would be much better ensured by the devolution of an own revenue source, such as an increased share of the fuel levy, rather than reliance on grants.

9. The transition from existing to new vehicle operators

9.1. Introduction

A key element of MyCiTi is the intention to incorporate existing directly affected road-based public transport operators into the new project. Directly affected operators are those whose services are proposed to be replaced by a particular phase of MyCiTi, whose legal rights are affected and who have agreed to surrender their operating licence and operating vehicle in return for compensation and / or participation as shareholders in the two vehicle operating companies, or VOs.

This section explains the division of contracts between the VOs in Phase 1A and the process for transitioning the current industry into the new system.

9.2. Division of Vehicle Operator Contracts

Initially vehicle operations have been split into two vehicle operator contracts. However, subsequently the City agreed to split the vehicle operations into three vehicle operator contracts. The City plans to award these three contracts to three different companies. International best practice suggests that having a system with a single VO company should be avoided. First, it is appropriate to build in competition for at least some components of the services on offer in the system, linked to the quality and price of their respective offers. Secondly, having more than one vehicle operator company would encourage competition between them and provide an incentive for the companies to operate efficiently; and ensure the City has a fallback when one company, for whatever reason, is unable to render the service.

9.2.1. Basis for the division

The initial basis for dividing the service into two contracts was geographic considerations, providing for a northern and a southern contract. However, the extent of the actual services contracted to each of the three companies will be based on the market share of the existing taxi associations and bus companies who will constitute the three companies. The determination of market share is explained later in this chapter and is set out in Annexure C. Accordingly, the contracts will be divided as set out in Table 11.

Table 11. Division of services between three VO contracts

Contract 1 Inner City	Contract 2 Blaauwberg	Contract 3 Blaauwberg
<ul style="list-style-type: none"> • All inner city feeder services (including City-Hout Bay) • Airport-City trunk service • Portion of the trunk services based on the City's calculation of current market share between constituent parties allocated to the three contract areas 	<ul style="list-style-type: none"> • All Blaauwberg feeder services (between Salt River and Atlantis) • Portion of the trunk services based on the City's calculation of current market share between constituent parties allocated to the three contract areas 	<ul style="list-style-type: none"> • Portion of the trunk services based on the City's calculation of current market share between constituent parties allocated to the three contract areas • Portion of feeders in the Inner-City area to make up the market share of the third operator

9.2.2. Assignment of operators to company groups

The assignment of taxi associations and bus companies to company groups is based on whether the taxi association or bus company operate their main services (that will become MyCiti feeder services), in either the Inner City area (Contract A) or the Blaauwberg area (Contract B) of Phase 1A.

Based on these criteria, the assignment of existing taxi associations and bus companies are set out in Table 12.

Table 12. Assignment of operators to company groups (for VOs)

Company A (Inner City)	Company B (Blaauwberg)	Company C (Trunk & Inner City)
<ol style="list-style-type: none"> 1. Peninsula Taxi Association 2. Central Unity Taxi Association 3. Devils Peak Vredehoek Taxi Association 	<ol style="list-style-type: none"> 1. Blaauwberg Taxi Association 2. Maitland Taxi Association 3. United Taxi Association 4. Ysterplaat Taxi Association 5. Du Noon Taxi Association 6. Sibanye (scheduled bus service provider) 	<ol style="list-style-type: none"> 1. Golden Arrow (scheduled bus service provider) 2. Sibanye (scheduled bus service)

Company A will therefore be awarded the Inner City Contract, Company B the Blaauwberg contract, and Company C the Inner City/Trunk contract. However, the value of the three contracts will be determined based on, inter alia, the relative share of the existing market.

At the time of writing the City was considering a proposal or reallocation of Sibanye to Company C which, if agreed to, would require adjustment of market share and allocation of services between Company B and Company C.

9.3. Approach to industry transition

The viability of Phase 1A is based largely on sufficient numbers of people using the service. The operating and financial modelling assumes that all existing bus and taxi users on routes that will be replaced by Phase 1A routes and services will use the new MyCiTi services. For this to be achieved, existing bus and taxi operations on these routes would need to cease operating, failing which the viability of the MyCiTi system is compromised.

National policy and guidelines on implementing integrated public transport networks indicate that:

- Existing operators, especially minibus-taxi operators, must form the nucleus of the vehicle operator companies;
- Minibus-taxi operators should not be worse off in terms of their current legitimate earnings compared to what they would earn when forming part of the service; and
- The new system should offer the same number of legitimate jobs as the current industry that it replaces.

An assessment of the financial viability of the existing taxi and bus industry versus the proposed MyCiTi system, viewed from a vehicle operator perspective, indicates that the existing industry will generate significantly more profits than what the corresponding MyCiTi vehicle operator company is projected to generate. Had the profits in the vehicle operator company been equal or better, it would be less of a challenge to convince taxi and bus operators to voluntarily surrender their existing permits and vehicles in exchange for a share in a new vehicle company.

In terms of the National Land Transport Act and regulations the City cannot terminate or withdraw an operating licence without the agreement of the licence holder, unless the licence period has run out. If the affected operator refuses to be part of the vehicle operator company, the City may have no alternative but to allow such an operator to continue to operate alongside the MyCiTi service until the validity period of the licence runs out (a maximum of seven years). If many operators elect to go this route and compete with the MyCiTi service, it will seriously undermine the viability of the system.

It is therefore essential that the deal offered to existing operators, especially the affected minibus-taxi industry, is sufficiently attractive.

To facilitate this transition, the City has in parallel recommended since late 2009 that all operating licences renewed or awarded in the Phase 1A corridor should be awarded subject to the condition that the licence period comes to an end upon the date where that service is replaced by comparable IRT services.

9.3.1. Challenges

The issue of difference in current versus future profits discussed above is one of three challenges that the proposed Compensation Model aims to address in implementing Phase 1A.

The second challenge is that of dealing fairly with shareholding in the new vehicle operator contracts. In Phase 1A (as is probably the case in all corridors) there are great differences in profits generated on the various routes and amongst existing minibus-taxi operators on the same route. Equal shareholding per operator in the new businesses would therefore not be fair or acceptable.

The third challenge is that of capitalising the new vehicle operator contractors. Capital is required to establish the companies including set-up costs, securing a performance guarantee as will be demanded by the City, and providing for a scheme where taxi shareholders are able to receive a regular monthly income, especially in the first few years of the contract when the dividend is likely to be low.

9.3.2. The compensation model

Having explored various options to determine a fair and equitable approach to transition existing operators into the new vehicle operator companies, the most practical, easy-to-understand-and-implement option is what has been referred to as the City's *minibus-taxi compensation model*.

The link between the compensation model and the remainder of the industry transition strategy is set out in Figure 33.

In this section the term 'operator' refers to a minibus-taxi operator. The difference between current legitimate profit and likely dividend from the vehicle operator contractor can be

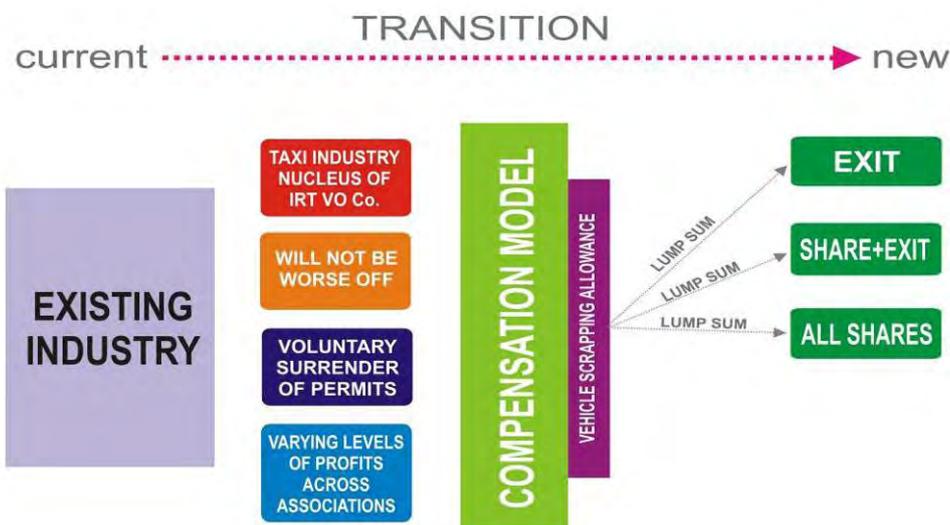


Figure 33. Compensation as part of industry transition

addressed in one of two ways. The first way offers the existing operators a share in a new vehicle operator company with a low dividend yield and makes up the difference with a monthly operating subsidy. The second way offers the operators a once-off lump sum payment and let them decide either to leave the industry or invest as shareholders in the new vehicle operator company.

To avoid an on-going operating subsidy, the latter option is preferred. Detailed surveys undertaken of existing services have enabled the City to calculate the existing profitability (actual and legitimate) of the existing taxi services and hence to develop a method to calculate a proposed lump sum payment for every affected taxi operator.

A four-step process is used to calculate the compensation. The steps are:

Step 1

Determine the market share between bus and minibus-taxi operators based on fare revenue information collected through extensive surveys.

Fare revenue is the current number of passenger trips multiplied by the fare paid by the passenger for each trip undertaken by the taxi or scheduled bus operator. The fare revenue calculation is based on actual surveys undertaken by the City and verified by the operators. Based on extensive surveys undertaken the impact of this information on market share division between the affected minibus-taxi associations and bus companies is shown in Table 13.

As indicated, regarding the scheduled bus operators the subsidy income is not taken into consideration in determining fare revenue. This represents an adjustment to the bus market share to account for the benefit enjoyed by the bus companies vis-à-vis the taxi industry as buses benefit from state subsidies and while taxis do not.

Table 13. Market share division between directly affected bus and minibus-taxi operators

Operator	Average Monthly Passenger Trips	Average Monthly Fare Revenue	Market Share
Blaauwberg TA	807 867	5 673 366	20.31%
Central unity TA	260 762	1 710 835	6.12%
Dunoon TA	497 617	3 134 191	11.22%
Maitland TA	281 445	1 802 932	6.45%
Peninsula TA	1 131 013	7 541 822	27.00%
United TA	58 309	361 145	1.29%
Vredehoek Devils Peak TA	75 220	413 646	1.48%
Ysterplaat TA	251 363	1 613 194	5.77%
Golden Arrow Bus Services	190 226	1 415 037	5.07%
Sibanye Bus Services	594 220	4 269 959	15.28%
Overall Total	4 148 042	27 936 127	100.00%

Note : Total Bus Market Share = 20.35%; Total Minibus-taxi market Share = 79.65%

The recommended factor to determine market share between minibus-taxi sector and the scheduled bus sector is fare revenue and not passenger trips, since it is a more accurate reflection of the size of the business that the relevant mode will contribute to the MyCiti system.

Step 2

For each of the affected minibus-taxi associations, determine the average legitimate monthly profit derived from their current business the IRT service is proposing to replace.

Average legitimate profit on a particular route is determined taking the fare revenue and deducting the average operating cost on that particular route. Legitimate profit is determined using the same average and appropriate costs across the area for the value of the vehicle, level of maintenance, insurance and tax. This means that these costs are assumed, whether a given operator incurs them or not – eg. what is the appropriate maximum distance a tyre should be used for, or what is the legally required tax to be paid. The initial (April 2011) approach adopted to calculate average legitimate profit was to use the daily target set by the operator (owner) on a particular route as the income, from which all the standard costs would then be deducted. In this approach, the number of vehicles assumed to provide the service was then the effective number of vehicles required to operate this service based on the Supply and Demand calculation used by the City's Regulation section when commenting on new permit applications.

However, with the adjustment of the survey (and fare revenue) figures in November 2011, the need to adopt an alternative method for calculating the average legitimate profit per association or on a particular route was highlighted. The alternative method adopted converts revenue, costs and profit into a kilometre unit. Additional "dipstick" surveys undertaken on all the routes allowed for the determination of actual fuel consumption (petrol vs diesel), driver and sliding door operator wages, and owner targets on these routes. The profit per kilometre is then multiplied by the total kilometres travelled on the routes as determined by the 4-day survey.

Step 3

Using the validity period of the operating licences within an association (maximum seven years), calculate the total profit over the period of the licences and convert that total to nett present value using a market-related discount rate.

Step 4

The nett present value lump sum figures per association are then presented to the relevant association for decision on distribution of the lump sum to its members.

Each association is required to determine an Allocation Formula for the distribution of the lump sum to its members. The determination of such a formula must have the support of at least 80% of its members, i.e. those operators whose vehicles have been active during the surveys and who have contributed to the compensation pot. If no agreement is reached within an association on how to distribute the lump sum, or the association fails to obtain

the support of 80% of their members, the City will apply the default distribution formula where 30% of the lump sum is divided equally amongst the members, and the remaining 70% on a pro-rata basis linked to the number of trips undertaken by each member (as per the survey). In the case of applying the default formula, additional measures will be used to determine the usual business of an active taxi that is not found in the survey on a given day (eg because it is in for repairs).

Linked to the compensation is the vehicle scrapping allowance. Every minibus-taxi operator wishing to participate in MyCiTi or to take up a compensation offer will also be required to surrender their vehicles for scrapping. The amount budgeted for scrapping of vehicles is R63100 per vehicle (as set in the parallel Taxi Recapitalisation Programme or TRP). Note however that whilst the vehicle scrapping process proposed in IRT is aiming to achieve some of the same objectives as the TRP, the IRT process will not be administered as, or necessarily subject to the same conditions as the TRP. The intention is not to scrap recently licenced vehicles, but the older fleet that pose more of a safety risk to passengers and other road users. When operators have newer vehicles they are encouraged to sell their vehicles and buy an older licensed vehicle that has been used as a minibus-taxi for a minimum of 180 days for the purpose of scrapping.

After the compensation has been determined and the scrapping allowance settled, each operator can exercise any of the following options :

- Option 1: Invest the total compensation in shares in the VO (subject to the maximum shares available);
- Option 2: Exit the industry with the lump sum payment; or
- Option 3: Use a portion of the compensation to buy shares in the vehicle operating company and retain the balance.

The cost (face value) of shares should be based on the cost of capitalising the new company (set-up, guarantee, and dividend equalisation) divided by the lowest compensation value (or lower) to allow every operator the opportunity to buy at least one share. The shares allocated to those who decide to exit the industry should be made available to the remaining operators within the association first, and then to the remaining minibus-taxi operators in other participating associations.

This model allows for all or a few operators to invest as shareholders in the new vehicle operator companies. For Phase 1A where the profits in the new VOs are relatively small, if more of the existing operators decide to exit the industry, the greater the shareholding and dividends available to the remaining operators who take up shares in the companies will be. The model shows that if the average operator invests their entire lump sum into shares, and if the company is run at an average level of efficiency and profitability, the dividend yield would be about the same as their current profits. If, however, the company runs a better than- average operation, the dividend yield per shareholder will obviously increase.

Operators who decline to choose Option 1, 2 or 3 will be allowed to continue to operate alongside the MyCiTi system until the validity period of their operating licenses runs out, at which point the City will not support the renewal of their operating licenses. In such cases the operator will not qualify for any compensation.

Impact of slower IRT roll-out on compensation

When the compensation model was first proposed and discussed with the various roleplayers, it was envisaged that the implementation of all the Phase 1A services would occur at more or less the same time. However, as the Business Plan now indicates, the Phase 1A infrastructure and services are planned to be rolled-out over a three year period. This means that operators will be required to come into the IRT system (by surrendering their license and vehicles) at different times during the roll-out period. Given that compensation to minibus-taxi operators is only payable at the time the operator surrenders his or her license and vehicle, compensation will therefore also now become payable at every milestone over the three year period.

Compensation will therefore be dealt with as follows:

1. The compensation calculated at the beginning of the process (prior the negotiations for 12 year contract have been concluded), and set at a date to be determined by the City, will hold firm irrespective of when during the roll-out period the compensation becomes payable.
2. In calculating the compensation, the following categories of operating licenses will be considered – as set out in Annexure F: Previously Indefinite operating licenses; Current Definite operating license;.

Payment of Compensation

Provision is made for three 'rounds' for payment of compensation, viz. *Early Exit Compensation, Early Compensation, and Final Stage Compensation.*

Operators receiving Early and Final Stage Compensation will be offered a financial management program arranged by the City.

Early Exit Compensation

At the request of some of the taxi associations whose operators are negatively affected by the interim MyCiTi services, the City is willing to consider the option of Early Exit Compensation.

Early Exit Compensation is aimed at allowing a limited number of operators from each association to take up the City's compensation offer upon surrendering their vehicles and route licenses prior to the City having appointed an agency to value surrendered vehicles. This is subject to the following:

- (i) The compensation offers to such operators are the offers made to the MyCiTi Phase 1 Associations in April 2011, duly adjusted to take the revised survey results of November 2011 into account, and calculated for individual operators by using the allocation formula agreed upon by at least 80% of association members, and approved by the City.
- (ii) For the compensation regarding the vehicle's value, operators will only receive the minimum Fixed Surrender Allowance of R63 100. Accordingly it is expected that only older vehicles (of value less than the Fixed Surrender Allowance), be surrendered as part of the Early Exit Compensation offer.

- (iii) Operators with more than one vehicle and more than one operating license (permit), have the right to exercise the Early Exit Compensation option for any or all eligible vehicles and route licenses they possess, subject to the number of vehicles the City agrees be surrendered linked to condition (x) below.
- (iv) Operators accepting Early Exit Compensation forfeit any rights to claim additional compensation even if later stages of compensation are higher than the Early Exit Compensation, and also forfeit the right to participate in any further negotiations with the City regarding compensation and the long-term VO contract.
- (v) An owner (operator) who chooses to accept Early Exit Compensation must surrender the vehicle associated with such licence, and must have his operating license / permit cancelled and must exit the system, and must surrender the right to buy shares in the VOC.
- (vi) Taxi associations whose members make use of Early Exit Compensation, are responsible for ensuring that drivers and other full-time employees of owners who choose to accept Early Exit Compensation are registered on the employee register. The VOCs must give priority to employing and training such drivers and employees during the interim contract, and at the commencement of the 12-year VO contract.
- (vii) Where a VOC confirms that Early Exit Compensation is supported by all its constituent taxi associations (see (viii)), the right to payment of Loss Compensation in terms of the interim VOC contracts will come to an end.
- (viii) The option of Early Exit Compensation is only available to the members of a taxi association forming part of a VOC where the executives of all the associations forming part of such VOC have confirmed in writing that their associations, acting on behalf of all of their members, support this option. Where a VOC supports this, the loss compensation payments in terms of their interim contracts will terminate.
- (ix) The Association whose members take up Early Exit Compensation, and the VOC to which it is a party, must commit to do all in its power to assist the City with the regulation of operations after the take-up of Early Exit Compensation, in order to ensure that these operators do not return with other vehicles to operate illegally on any route in the Phase 1 corridor. A VOC will be penalised if any member of a taxi association associated with that VOC, operates illegally.
- (x) Within each association, the number of vehicles to qualify for Early Exit Compensation shall be determined by the City based on its assessment of supply and demand on relevant routes to ensure that transport services to taxi passengers are not compromised. This number may be reviewed after the initial figure was determined.

The City will only accept applications for Early Exit Compensation from directly affected minibus-taxi operators, provided that (a) all the conditions above are complied with; and (b) the relevant minibus-taxi operator makes application for such compensation on the application form prescribed by the City. If the City receives applications for Early Exit Compensation from minibus-taxi operators of a given taxi association in excess of the maximum number that the City has determined, then the City will require of the relevant

taxi association to advise the City on criteria to be used to select the applications to be granted.

Early Compensation

Early Compensation is calculated in the same manner as Early Exit Compensation, the main difference being the way that the vehicle surrender allowance is calculated. In the case of Early Compensation the City will appoint an agency / dealer to assess the market value of vehicles surrendered and to offer market-related prices for vehicles surrendered where vehicles surrendered have a market value greater than the Fixed Surrender Allowance.

Early Exit Compensation will only be offered once the City is convinced that there still exists an oversupply of vehicles on a specific route. For those operators accepting Early Compensation after the City has indicated the number of vehicles that can be removed, they can immediately surrender their operating licences, immediately receive compensation, and immediately surrender their vehicles and immediately receive a Surrender Allowance..

Final Stage Compensation

In contrast with the above options for early compensation, Final Stage Compensation represents the last chance for minibus-taxi operators to accept the City's offer of compensation, based on the adjusted 2010 survey results and on the City's model to determine the legitimate profit of each operator observed during surveys. This compensation may be higher or lower than the early stage offers of compensation.

If the City's compensation offer is not accepted by relevant operators by the City's deadline therefore, and thus related operating licences are not surrendered, the operators will be allowed to continue operating in the Phase 1 corridor according to the terms of their licenses and until their licences expire, at which stage no compensation will be offered or paid by the City.

9.3.3. Shareholding

Market share between minibus-taxi and scheduled bus modes of public transport is explained in paragraph 10.3.2, step 1.

In terms of the final City survey results Golden Arrow Bus Service (GABS) has a 5.07% market share and Sibanye a 15.28% market share in the current Phase 1A area. Collectively the bus companies hold a 20.35% share in the Phase 1A area. The two bus companies will therefore have the right to shares equivalent to this market share, provided they contribute to company capitalisation (excluding the component relevant to the taxi dividend equalisation fund) in proportion to their market share.

The City intends to issue requirements and limitations regarding cross-shareholding between the companies, to enhance competition between them.

Determining shareholding by taxi operators

The following process is proposed for division of shareholding within taxi associations. The City has estimated the cash after-tax dividend flows likely to be generated by the new

vehicle operator companies, and is of the view that the total dividend to be generated by each of the companies will be insufficient to allow all current minibus-taxi operators to buy shares in sufficient quantities to generate future dividends equal to their current after-tax profits earned from operating within the taxi industry.

Where some operators within a taxi association do not take up the allocated minimum proportion of shares, the other operators in the association would be able to take up such shares against the relevant payment for the shares. Only if the available shares are not taken up within an association, can any other affected taxi operator within such vehicle operator company grouping be given the option to buy these shares. If any taxi shares remain unclaimed by affected taxi operators, the bus company shareholders can offer to take them up. The companies themselves will determine the cost per share (subject to City requirements) and the projected dividend (which will be a function of how profitably a company is run).

The vehicle operator company will be required to submit a proposal on the proposed base kilometre rates for each type of vehicle, for consideration by and negotiation with the City, as well as proposals regarding other methods of payment (if any) as determined by the City. The company will have to project the profit it is likely to yield, and determine its proposal on the kilometre rates and other payments based on this.

After calculating the kilometre rates and other methods of payment (if any) the relevant company plans to offer the City and after deciding on the number of shares to be made available, the company would also be in a position to calculate the projected average annual and monthly dividend per share.

Other shareholders

As each company may be required to identify personnel with experience deemed acceptable by the City for all management positions required to operate a modern public transport company, securing these management positions may require the distribution of some shares to certain key personnel in lieu of payment.

The partners of the company may invite an international company to join the consortium. Minibus-taxi associations may form strategic partnerships with an international company that can bring expertise in maintenance and labour management, access to spare parts suppliers, insurance, financing, and other inputs at lower cost than would otherwise be available to them. Securing the participation of such international partnerships may require a final reallocation of shares among the consortium's partners.

At the end of this process, the allocation of shares among the various partners of the new consortium should be complete. Whether the shares held by members of specific minibus-taxi associations are distributed to the individual owners of the minibus-taxi association, or whether the minibus-taxi associations in turn choose to create a corporate entity that holds their shares of the consortium collectively is up to the relevant groupings.

Limitation of selling of shares

For the first five years of the operating contract, shares cannot be sold outside the shareholders of the company, except if an increase in capital is required, in which case the

reduction may not be more than 50% of the total participation. However, shares may be traded between shareholders of the company, up to a maximum shareholding of 33% of shares in the hands of a single legal entity (including subsidiaries or parent company of that entity) or of a natural person. Any taxi shares made available for sale should first be made available to other taxi shareholders, before it is made available to sale to the bus shareholders.

After five years this limitation will be removed, subject to the terms of the relevant company's shareholders agreement.

9.4. Other categories of operators for compensation

There are two other categories of existing operators who may require compensation.

- Services that MyCiTi is not replacing but where these services are likely to be negatively impacted upon, to a significant degree. Examples include metered taxi services operating from the airport or in the CBD. If it is proven that IRT will have a significant negative impact on these services, the City should consider compensating these operators, if they are prepared to surrender their operating licences. These operators would then not be allowed, whether in their own name or through others, to apply for a similar operating licence within a period equal to the period used to calculate compensation.
- Existing minibus-taxi services that run from outside the Phase 1A MyCiTi area into the Phase 1A area and therefore will be operating a shortened service. This will require an amendment to the operating licence conditions and necessitate consultation and some form of compensation.

9.5. Other transition costs

The compensation model gives rise to other considerations with cost implications.

9.5.1. Entrepreneurship guidance

There is a concern that if large numbers of existing taxi operators elect to take the lump sum compensation offered and leave the industry and these operators are not well advised of how best to utilize the lump sum, many operators and their families may be worse off, over time. The City should make available entrepreneurship guidance and training to these operators. Provision has therefore been made on the budget for this and can take the form of appointing a consultant, NGO or other agency to put in place such a programme.

9.5.2. Agency costs

The scrapping allowance scheme assumes that minibus-taxi operators with newer vehicles will be able get a fair price for their vehicles when sold in the open market. However operators with newer vehicles who have recently bought these vehicles and have paid instalments regularly may owe more on the vehicle than can be realised in sales on the open

market, due to finance charges linked to vehicle loans. However, the new finance regulation requires that the instalment on vehicles financed through financial institutions include the capital cost of the vehicle. It is therefore unlikely that the settlement figure on vehicles is significantly more than the market value of the vehicle.

It is proposed that the City contracts an agency to trade in these newer vehicles (at market value) then reselling these vehicles to the licensed taxi operators in areas outside the IRT Phase 1A area who are willing to trade in their older vehicles for scrapping.

9.5.3. Re-skilling of taxi industry employees

One of the undertakings the national government has given to the taxi industry is that with the implementation of BRT there will not be significant job losses. This is interpreted to mean that the number of jobs available in a particular phase of MyCiTi should be the same as that currently available in the taxi and bus industry affected in that phase of the system.

The type of jobs in the new system will however be different with different skills requirements. To ensure that current taxi industry employees have a good chance of being successful in getting jobs in the new system, significant re-skilling will be required. Provision has therefore been made in the budget to allow for training and re-skilling of existing taxi industry employees, which is likely to be channelled through the contracts for specific operations (eg stations services), since these operators are best charged with such a training responsibility.

9.6. Mitigating employment impacts

It is noted that those minibus-taxi operators who have elected to take up the City's offer of early exit compensation would have a number of drivers and assistants who would no longer have a job. These drivers and assistants will be given priority in terms of training to qualify for new positions within the MyCiTi system.

9.6.1. Employment in the new system

One of the main aims of MyCiTi is to improve the work environment for those currently employed in the minibus taxi industry. Many of the current drivers and staff work very long hours and are without employment benefits such as paid vacation leave, sick leave, health care, maternity benefits and pensions. The new system will provide these benefits as well as safer working conditions, stable salaries and regular working hours, while promoting training, professionalism and career development.

The City is working to increase overall employment in the public transport sector. In the new MyCiTi System employment opportunities will exist in the fields of driving, station management, maintenance, customer service and security. Employment is expected to grow because of the emphasis on customer safety and quality of services, extended shift lengths and a demand for multi-shifts due to a reduction in the number of vehicles operating in the Phase 1 corridor.

9.6.2. Register of affected transport workers

Two registers of full-time workers directly affected by the MyCiTi roll-out will be compiled by the VOCs, in consultation with the taxi associations, using a template approved by the City:

- Employee Register 1: This register will consist of the following
 - Workers who are directly affected by the MyCiTi roll-out, in that they have full time jobs as at 1 May 2012 with directly affected operators in the existing industry. This register will not record additions of staff in the current system (excluding MyCiTi) after this date.
 - Workers who were such employees before the start of MyCiTi services, but who were subsequently employed by the MyCiTi or by the MyCiTi contractors.
- Employee Register 2: This register will consist of employees employed by the VOCs and by Revenue Services during Milestone 0, excluding workers listed in Employee Register 1.

The City will verify the registers to ensure that people on the registers were actually employed as at 1 May 2012, and the VOCs and taxi associations should provide all assistance in this regard, as will be required by.

9.6.3. Obligations of companies

Full-time workers in the affected taxi and bus industry will have preferential access to jobs in the new system. To achieve this –

- The City will provide each of the following companies with a register of fulltime workers, and their contact details: VOC, station services company, fare system company, control centre company, and the company managing advertising on MyCiTi infrastructure as well as bus stop maintenance.
- The companies must state in their recruitment advertisements, that people on the register will be preferred.
- When such preferred people apply for positions and identify themselves as being on the register, the companies concerned must then give careful consideration to such applicants, provided they meet the minimum requirements for the job. If in the view of that company, two or more applicants are substantially equally suitable for the advertised position, the company must employ the person on the register.

Each VOC and the Station Management contractor must employ at least 60% of their employees from the registers for at least the first three years after the effective date of its VO contract. Penalties will be levied for non compliance to this prerequisite.

Vehicle suppliers will provide driver training, as set out in Volume Two of the Prospectus and as addressed mainly through the extended interim VOC contracts for Milestone 0. In addition, maintenance training will be provided as set out above.

When considering the above together, it is clear that the government is taking steps to ensure that the IRT program as a whole will have no adverse overall impact on employment

levels and conditions under the new IRT system, when compared on the current minibus-taxi system.

9.7. Proposed Interim N2 Express Service

From an industry transition viewpoint, the approach to company formation adopted in Phase 1 is unlikely to be feasible for Phase 2. The main reason for this is the fact that whereas in Phase 1 where only 9 minibus-taxi associations and 2 bus companies were directly affected and had to be transformed into 3 IRT Vehicle Operator Companies, in Phase 2 there are approximately 100 minibus-taxi associations that could be affected.

Although the proposed N2 Express Service is treated as a stand-alone project with a very specific objective, from an industry transition viewpoint it cannot be dealt with in complete isolation of the Phase 2 industry transition process. The Express service is in principle different to the Phase 1A and 1B System Structure. The purpose of the Express Service is to provide a top-up service to the existing public transport services (rail, bus and minibus taxi). The existing public transport capacity for the Metro South-East (MSE) to City link during the peak period cannot meet the demand for travel and, therefore, this proposed service attempts to provide additional capacity until rail is upgraded to an acceptable level. The proposed service can therefore be described as follows :

- Trunk service only – no trunk extensions to replace or compete with existing feeder services
- Routes to run from Khayelitsha and Mitchells Plain to CBD (Civic Station) via Settlers Way (N2) and NOT along Main Road.
- The fares to be pegged at existing bus and taxi fares – should not be significantly lower or higher than existing bus and taxi cash fares
- Not a pure top-up service, but partial replacement of existing trunk services

Affected minibus-taxi operators are therefore the operators from Khayelitsha and Mitchells Plain providing direct services to the CBD via Settlers Way (Hospital Bend). Also affected are the bus services provided by GABS running from Khayelitsha and Mitchells Plain to the CBD and back. All the bus routes go along Main Road. A survey therefore needs to be conducted to determine the number of bus passengers travelling all the way to the CBD. This number of passengers would determine the extent to which the bus services would be affected.

9.8. Vehicle Operator Company formation

- For Phase 2 it is proposed that a total of 3 VOCs be established to provide all the services. One of the 3 VOCs already exists in the form of GABS. This means 2 additional taxi-based VOCs need to be established. Given the large number of minibus-taxi associations in Phase 2 (approximately 100) a different model to the one used in Phase 1 would be required to form the VOCs.

- It is proposed that 2 core VOCs be established through a negotiated or tender process. One of the requirements of these core VOCs is that they must have the necessary senior management and bus operational expertise on board. The minibus-taxi operators who are affected in each milestone of Phase 2 and who have elected to surrender the operating license and vehicle in exchange for compensation would then have the following rights in the VOC :
 - The right to shareholding in the VOC in proportion to their market share
 - The right to positions on the Board of the VOC in proportion to their market share
 - The right to some management positions in the VOC
- As each milestone is rolled out, the additional kms are assigned to these VOCs in proportion to the affected operators taking up their shareholding in the VOCs. For the N2 Express Service there are 3 affected operator groupings, viz. one bus operator and 2 taxi associations.
- *Option 1* is to facilitate the 3 affected parties to work together as a single contracting party to run this special top-up service.
- *Option 2* is where the 3 existing VOCs of Phase 1A will be used to run the services of the N2 Express, but that the affected operators acquire the shares pertaining to their share of the market.
- If Option 1 and 2 are not feasible, the City will pursue the Phase 2 model proposed above of setting up 2 taxi-based Vehicle Operator Companies (Option 2).
- MSE Express Services would then be provided by these VOCs, whether established via Option 1 or Option 2, through a negotiated contract. It is proposed that the contract period for this service be 7 years and reviewed once the 12 year Phase 2 contracts are negotiated.

9.8.1. Demand and Supply

- Although a minimum number of buses would be required to run a regular service at a reasonable frequency, any additional buses required would be linked to the number of effective seats surrendered by the affected taxi associations.
- Affected taxi operators will be given the option to surrender their license and vehicles in exchange for compensation or continue to operate in parallel with the IRT Express Service. However, should they wish to continue to operate their taxis, they will have no claim to any loss compensation.

10. Customer relations, marketing and communication

10.1. Introduction

Central to the success of MyCiTi, is professional customer relations, communication, marketing and stakeholder engagement capacity.

A comprehensive customer relations, marketing and communication strategy for the MyCiTi system is directed toward multiple objectives including:

- Achieving a high level of insight into the needs and characteristics of users and potential users;
- Providing information to users and potential users about the system, including effective and clear signage, maps, website, call centre and other channels;
- Maximising ridership and awareness of the system;
- Overcoming doubts and concerns related to the system;
- Responding to customer feedback and dealing with complaints in a responsive, service-orientated manner, that promotes transparency and a commitment to excellence and continuous improvement;
- Targeting different messages to specialised customer groups;
- Sharing information timeously with the public and stakeholders so that they are informed of construction and planning decisions that may impact them;
- Engaging with the media in a proactive and transparent way; and
- Working in an integrated way with the systems, operations and infrastructure components of MyCiTi to continuously improve the service offering of MyCiTi.

MyCiTi is a major City project. It is critical that communication engages at a strategic and high-level and works closely with the senior management responsible for infrastructure, operations and system development. Marketing and communication is integrated into the overall management of the system, so that both the back-end of the service and the front-of-house work together to achieve customer satisfaction.

The importance of strategic communication and marketing input into the decision-making process is critical as the system matures and is rolled out across the city. Conversely the operational decisions that shape the service need to inform public communication and marketing.

A careful balance needs to be maintained between raising expectations about the nature and scope of the service prematurely in each new phase, and launching a service that has been adequately communicated about and marketed prior to its commencement. This

balance can only be struck if communicators work closely with the teams responsible for infrastructure and operations to gain an understanding of the inevitable challenges along the way.

Given the high levels of investment and the sophisticated nature of a quality public transport service such as MyCiTi, once launched, appropriate resourcing of the customer relations, communication and marketing components is required. This is not only the face and voice of the service, but also the key channel for understanding user needs and tailoring services accordingly in an ongoing manner.

In the case of the MyCiTi system, there are additional factors underlining the need for significant and high-level communication and customer-relations capacity.

These include the fact that the city as a whole has not had experience of a customer-focused integrated public transport network, as envisaged by the National Land Transport Act of 2009 and the City's Integrated Transport Plan.

As each phase of the MyCiTi service is successfully launched, there will be a need for ongoing communication, implemented within the context of a clearly understood and articulated customer relations, communication and marketing strategy that has the buy-in and support of the entire management team and governance structures.

10.2. The MyCiTi brand

An important component of the marketing and communication strategy was achieved with the launch of the MyCiTi brand including a name, logo, colour palette and multi-lingual slogan: Siyajikeleza. Laat Wiel. Going Places.

The brand development, which included a comprehensive stakeholder engagement and two market research interventions to test the brand concepts, resulted in the public launch of the identity of the system on 6 May 2010. This coincided with the delivery of the first MyCiTi buses in their branded livery. This approach has been extended to the design of the livery for the fleet of nine-metre buses and is well established across all MyCiTi media.

But the brand is not only a name and identity. The brand encapsulates the fundamental change that is taking place in the provision of public transport services in Cape Town. It signals a move to a world class public transport service in which users receive an exemplary service, vastly improving the daily experience of captive users who have no alternative to public transport. It also encourages 'choice' users to make a modal shift

The brand provides an opportunity to extend 'ownership' of the city to those who were denied it in the past as well as vulnerable groups that South African public transport has to date not served very well. The MyCiTi brand also signals an inclusive service that is universally accessible and which meets the needs of wheelchair users, customers with sight and hearing impairments, physical disabilities and the elderly.

The ongoing development of the brand depends on the quality of the service offering and the extent to which it stands apart from existing scheduled-bus services and the notion that 'public transport is something that is not clean and not particularly nice, and should only be endured when truly necessary' (BRT Planning Guide 2007:665). Instead, the MyCiTi brand

aims to place public transport in a new light, appealing to residents and visitors to Cape Town – primarily MyCiTi aims to put the customer first.

Brand building activities that are underway positioning MyCiTi as a premium brand now and into the future include:

10.2.1. Development of a comprehensive brand manual

The brand is being implemented with the assistance of a comprehensive brand manual which is being developed as a series of volumes. A consistent brand image and identity flows through the above-the-line advertising, public engagement material, the website, system media such as fare pamphlets, and signage on stops, shelters and stations. The brand manuals help to guide the range of users who will be applying the brand to achieve consistency.

10.2.2. Marvin, mascot and brand ambassador

Marvin, the MyCiTi mascot was adopted in 2011, following a competition in which members of the public were invited to submit design ideas for a MyCiTi mascot. Marvin builds the brand further, can be used at events and activations and appeals particularly to younger users of the MyCiTi system.

10.2.3. Research

An important element of customer management is independent market research to obtain feedback from users of MyCiTi services.

This activity will inform business planning, operational and even infrastructure design going forward. Regular market research has been commissioned to measure customer satisfaction and brand strategy on a quarterly basis. Marketing and communication strategy will be responsive to this empirical data, which will assist in the rigorous monitoring and evaluation of the customer experience.

10.2.4. Direct marketing activations

A direct marketing resource, including a branded exhibition system is available to support launches and events related to MyCiTi and to drive awareness of themes within the system and to garner support and build awareness at external locations, such as shopping centres and large corporate headquarters. As the new routes are launched direct marketing activations will be held at appropriate venues ahead of time to market the new services and the **myconnect** card.

10.3. Communication with affected communities and stakeholders

Ongoing stakeholder and public engagement is critical to the success of large infrastructure projects and the development of new service offerings, especially given the challenge of achieving progressively higher levels of modal integration.

The MyCiTi system and the infrastructure development that proceeds it necessitates close and ongoing dialogue as households, businesses and communities are directly impacted by construction and the provision of these dynamic new services.

As the MyCiTi system has rolled out into new areas a public participation methodology has developed that aims to:

- Keep the public and stakeholders informed of infrastructure development in their areas
- Keep the public and stakeholders informed of infrastructure and services that impact on them.
- Provide forums and channels for members of the public to air their concerns and have their questions addressed.

This has been achieved by making use of a range of different forms of communication and working closely with the infrastructure team and their subcontractors. Typically when construction begins in an area the following communication channels are utilized:

Public meetings

These are convened to advise affected communities of the construction work that will be taking place in their area and warn them of potential inconvenience.

Proposed route and system information is also shared with the community. Public meetings provide a forum in which questions can be fielded and comments tabled. These two-way communication sessions enrich the MyCiTi team's understanding of the local area and its requirements and allows for the unique insights that local residents have to enrich the process of infrastructure and system development. It also allows the team to share information of a detailed nature with communities and treat them as important stakeholders in the implementation of MyCiTi services.

Public meetings have already been held in a range of affected communities including Table View, Big Bay, Milnerton, Dunoon, Atlantis, Camps Bay, Sea Point, City Bowl, Hout Bay and Melkbosstrand. These public meetings will continue as the service is implemented in new areas.

Public information open days

This mechanism for engagement with local communities was rolled out from July 2012. These local information days are used to canvass specific proposals in communities that will be impacted by MyCiTi services and infrastructure. For example in Sea Point, Vredehoek, Kloof St and Walmer Estate/ Salt River proposals to convert streets to one-ways and minimize public parking were canvassed. Experienced staff

and contractors are on hand at these events to address specific and detailed questions and concerns, or table comments.

Community media

Appropriate community media including local tabloid newspapers ('knock 'n drops') and community radio stations are used to advertise public meetings and forthcoming services, routes and construction. Once construction begins in an area regular communication with the affected community takes place through this channel.

Direct communication

As construction commences, contractors have found it helpful to distribute a 'construction briefing' pamphlet. This explains what MyCiTi services and infrastructure are planned for the area, includes a draft map of the route if appropriate and provides contact information regarding who to contact to find out more about construction or the MyCiTi project in general. These are distributed door-to-door along the proposed route.

Media releases

The transparent approach adopted means that communication takes place on a very regular basis with the media. Approximately two media releases are issued each week dealing with the various facets of the project. Information specific to particular geographic areas is also sent out through the City's media branch. Media tours, briefings and events are also regularly convened and the City's Integrated Strategic Communication and Branding department responds timeously to the frequent queries received about MyCiTi construction as well as other aspects of the system and its services.

Social media

Social media, including Facebook, Twitter and the MyCiTi page on the Cape Town website is also used to keep communities informed about MyCiTi developments that may impact upon them.

Communicating with local stakeholders

As infrastructure is rolled out in local areas a scan of affected stakeholders is conducted to make sure that local representative bodies are informed of developments and invited to public meetings. Ward and other councillors also play an important role in local engagement as do the subcouncils and their administrations.

E-mail newsletters stakeholders guides

Regular electronic newsletters and stakeholder guides are issued to user groups and individuals affected by MyCiTi.

As the MyCiTi system continues to roll out into new communities this successful methodology will be employed and modified to meet the specific and unique needs of

different communities in different parts of the city. Interaction like this provides an opportunity to build relationships with future champions and users of the system and to take into account stakeholder perspectives that might contribute to and enrich operational decisions.

While this kind of localised engagement may be viewed as time consuming and unnecessary, best practice internationally points to the benefits of stakeholder engagement as a means to build support and harness local knowledge and perspectives that may assist operational planning.

10.4. Customer information and services

As the MyCiTi service grows and evolves so does the need for user friendly system information that helps users to make use of the system with ease and efficiency. In the dynamic multi-media environment customers are accessing public transit information from a range of sources including print, web and mobile phone platforms.

10.4.1. System media

Clear system information is critical to enhancing the customer experience. This needs to provide information in a clear, consistent and brief form to enable busy commuters to use the system with ease. System brochures are updated regularly with scheduling, route and fare information. Clear system and geographic maps help customers to locate services. Stations and stops need to as far as possible provide space for customer communication to be clearly displayed. A series of videos aimed at users is also available.

10.4.2. Fare information

As the fare system matures ongoing communication is required with customers. The transition to the **myconnect** card has necessitated considerable behavior change on the part of users. As new fare infrastructure including gates and validators are installed further changes will need to be communicated to customers. The transition to the unique distance based fare system, will also trigger the need for intense communication.

10.4.3. Web and mobi services

The Internet and other new media are central to providing customers with real-time information about the range of services provided and changes that might occur. Increasingly this is a mode that South Africans (and international visitors) are making use of, often through a cell phone.

A new system website will be launched before the launch of new services in 2012. The new MyCiTi website (www.myciti.org.za) will be a one-stop shop of information for users both new and regular, and will also provide up-to-date information that media can access.

Information on the website will be updated on a real-time basis, and should be responsive to unforeseen operational changes. The MyCiTi website should be complimented by a mobile site as well which is being developed by MyCiTi Business Development.

As with all new media, quick and easy access to relevant information, via the Internet and increasingly mobile phone applications is critical. A new media strategy and instant communication capacity is an essential feature of the MyCiTi service going forward. This will be an important feature of MyCiTi's customer communication from late 2012.

10.4.4. Transport Information Call Centre

A multi-lingual call centre is necessary to provide an important back office service for general information while also being able to provide users with accurate operational information in the event of unplanned scheduling changes.

The call centre facilities provided by the Transport Information Centre have become an important component of the provision of public transport information in Cape Town, against the backdrop of public service offerings that lack a high degree of integration.

Advertising the call centre number and the fact that this service is available 24 hours a day, seven days a week continues to be an important message. Just as important is that all parts of the MyCiTi team work closely with the call centre to ensure that the brand values and high levels of service extend to the completeness and accuracy of the information provided by the call centre operators.

10.4.5. Communicating with the public via the media

As MyCiTi becomes established as a major brand and service offering in the public transport arena, so the need for direct communication with the media will increase. The focus of media coverage of the system is extremely wide, ranging from fares, ridership, convenience, customer service, quality of staff performance, cost of operations, operational safety, integration with other modes, funding models and impact on the market.

A single point of contact for the media is the City's Media Office with the authority to provide rapid and comprehensive responses to media queries in conjunction with the relevant Executive roleplayers. This requires an ongoing high-level of involvement at top-level with the overall strategic management and planning of the system as a whole. This enables both proactive and reactive engagement with the media and contributes to building a world-class brand that garners respect.

In collaboration the office of the Mayoral Committee Member responsible for Transport, Roads and Stormwater communicates directly with the media. Proactive communication with media will continue as the Phase 1A is rolled out and preparation for the N2 Express service.

10.4.6. Civic and public education

The MyCiTi system breaks with current public transport offerings and traditions and requires changes in user behaviour and civic education about different elements of the system, which

differ from current public transport systems. These are addressed through advertising and direct messaging posters to promote ideal behaviour in and around the system.

Some examples include communication about:

- The location of stations in the road median, which calls for safe pedestrian crossings.
- The dedicated bus lanes, which may not be used by pedestrians and other vehicles.
- The preferential signalling system, which gives buses right of way and which may appear confusing to car users.
- The need for bus users to dispose of refuse outside of the stations and the buses.
- The need for bus users to respect designated seating and facilities for special needs users.
- The need for users not to eat or drink on MyCiTi buses; and
- The need for a culture of respect for public infrastructure to be inculcated among all users and stakeholders.

10.5. Resources required

10.5.1. Personnel

The key locus of responsibility for customer relations, marketing and communication for MyCiTi should be situated at the senior management level within the team responsible for MyCiTi operations. Capacity for communications should also be established within the City's Integrated Strategic Communication and Branding function.

10.5.2. Finances

The finances required for this function will be dependent on a range of factors. The marketing budget will be higher in the initial years when the brand development is still underway, communication with affected communities and stakeholder groups is required at an intense pace and customer education is required as users make use of services for the first time. As new phases of MyCiTi roll out the requirements of the marketing budget will change. Some will grow, while others will contract.

Annexures

Annexure A. Reports to Council and Council Committees

Item No.	Subject	Date
C 46/03/08	Development of an IRT system for the City of Cape Town	27/03/2008
C 75/08/08	Implementation of the IRT system for the City of Cape Town	27/08/2008
C 47/08/09	Implementation of the IRT system for the City of Cape Town: Phase 1A: funding allocation and progress report	26/08/2009
C 71/10/09	IRT project (IRT): project status and a financial & strategic assessment.	28/10/2009
C 80/11/09	Transfer of Integrated Rapid Transport project from Transport Roads and Stormwater (TRS) to Service Delivery Integration (SDI) and the transferring of certain functions of Service Delivery Integration (SDI) to other directorates	26/11/2009
C 100/11/09	Funding and budgetary provisions for basic transport requirements for the 2010 World Cup in accordance with Council recommendation c71/10/09 of 28 October 2009	26/11/2009
TRS 04/02/10 (Item 16)	IRT Project Status and Progress Report No 1, December 2009	04/02/2010
TRS 04/03/10 (Item 08) C 06/03/10	IRT Progress Report No 2, January 2010 Tariffs for IRT services rendered during the 2010/2011 financial year and public transport services for the 2010 FIFA World Cup and other events planned at the Cape Town Stadium during 2010/2011 financial year	04/03/2010 31/03/2010
MC 16/03/10 (Item32)	Update on negotiations and contracts related to Council decisions of 28 October 2009	16/03/2010
MC 16/3/10 (Item 59)	Tariffs for services rendered by the Transport Department for the 2010-2011 financial year	16/03/2010
C 31/03/10 (Item 53)	Recommendation - IRT project: Update on negotiations and contracts related to Council decisions of 28 October 2009	31/03/2010
MC 29/4/10 (Item 22)	IRT Progress Report No 3, February 2010	29/04/2010
MC 18/5/10 (Item 14)	IRT Progress Report No. 4, March 2010	18/05/2010
MC 24/05/10	To obtain approval to incur additional expenditure on the Rapid Transit System (IRT) projects as a result of the latest VAT implications in the current financial year	18/05/2010
C 98/05/10	To obtain approval to incur additional expenditure on the Rapid Transit System (IRT) Projects as a result of the latest VAT implications in the current financial year	25/05/2010
MC 79/05/10 C 25/05/10(Item 118)	Provision of municipal public transport services: establishment of interim operational capacity for IRT	18/05/2010 25/05/2010
FIN 30/05/10 TRS 24/05/10 MC 38/07/10 C 28/07/10 (Item 64)	Report on the due diligence completed on the IRT System	03/05/2010 28/07/2010
TRS 03/06/10(Item 9) MC 08/07/10	IRT Report No. 5, April 2010	03/06/2010
MC 22/07/10	Transfer of funds from EFF to State Funding – 2009/10 IRT repayment of bridging finance	07/07/2010

Item No.	Subject	Date
MC 39/07/10	Business Plan for Phase 1A of Cape Town's MyCiTi IRT System	15/07/2010
C28/07/10 (Item 65)		28/07/2010
F2/08/10 (Item 13)	Authorisation for public participation process: Disposal of MyCiTi vehicles to a Financial Institution	02/08/2010
TRS 05/08/10 (Item 16)		05/08/2010
C 60/08/10		26/08/2010
FIN 02/08/10 (Item 14)	Provision of Municipal Public Transport Services: Expansion of existing Municipal Systems Act Section 78 (4) decision regarding MyCiTi Services	02/08/2010
TRS 05/08/10 (Item 15)		05/08/2010
MC17/08/10		17/08/2010
(Item SMC07/08/10)		26/08/2010
C26/08/10 (Item 59)		
FIN 02/08/10 (Item 19)	IRT Progress Report 6 – May/June 2010	02/08/2010
TRS 05/08/10 (Item 13)		05/08/2010
MC 17/08/10 (Item 15)		17/08/2010
M17/08/10 (Item 16)	MyCiTi proposed re-introduction of interim inner city bus service	17/08/2010
M17/08/10 (Item 60)	Tariffs for MyCiTi services rendered during the 2010/2011 financial year – concessions and new services	17/08/2010
C26/08/10 (Item 55)		26/08/2010
F04/10/10 (Item 07)	IRT Progress Report 7 – July, August 2010	04/10/2010
MC06/10/10 (Item 06)		06/10/2010
TRS 07/10/10 (Item 15)		07/10/2010
MC 19/10/10 (Item 48)	Business Plan for Phase 1A of Cape Town's MyCiTi IRT System	19/10/2010
C27/10/10 (Item 79)		27/10/2010
MC 19/10/10 (Item 49)	Establishment of an IRT Mayco Subcommittee	19/10/2010
FIN01/11/10 (Item 27)		01/11/2010
TRS04/11/10 (Item 21)		04/11/2010
MC 01/12/10 (Item 24)	MyCiTi vehicles title holding and use – authorisation sale and transfer to a financial institution, etc	01/12/2010
C09/12/10 (Item 22)	MFMA Section 33 MyCiTi IRT long term contracts (a) automatic fare collection system (tender 24G/2009/10); (b) control centre (tender 25G/2009/10)	09/12/2010
(Item 76)		
C09/12/10 (Item 77)	MyCiTi vehicles title holding and use – authorisation of sale and transfer to a financial institution, equivalent arrangement regarding vehicles still to be purchased, for on-leasing to MyCiTi vehicle operator	09/12/2010
FIN 17/01/11 (Item 6)	IRT Progress Reports – October and November 2010	17/01/2011
TRS 17/01/11 (Item 17)		17/01/2011
MC02/02/11 (Item 05)		02/02/2011
TRS 17/01/11 (Item 8)	Tariffs for MyCiTi services for 2011/2012	17/01/2011
TRS 17/01/11 (Item 10)	Tariffs for services rendered by the Transport & IRT Departments for 2011-2012	17/01/2011
MC 19/01/11 (Item 22)	Additional tariffs for MyCiTi services: 2010 – 2011 financial year	19/01/2011
MC02/02/11 (Item 37)	Tariffs for MyCiTi Services for 2011/2012	02/02/2011
MC02/02/11 (Item 38)	Tariffs for services rendered by the Transport & IRT Departments for 2011-2012	02/02/2011
MC 02/02/11 (Item 80)	MyCiTi IRT System: Milestone 0 Interim service and updating of Business Plan	02/02/2011
FIN 04/04/11 (Item 11)	IRT Progress Reports – January 2011 and February 2011	04/04/2011
TRS 07/04/11 (Item 18)		07/04/2011
MC 20/04/11 (Item 17)		20/04/2011
MC 04/05/11 (Item 4)	IRT Progress Report – March 2011	04/05/2011
TRS 05/05/11 (Item 15)		05/05/2011
FIN 06/05/11 (Item 07)		06/05/2011

Item No.	Subject	Date
C 11/05/11 (Item 88)	IRT – Introduction of Starter Service	11/05/2011
FIN 01/08/11 TRS 04/08/11 MC 16/08/11	IRT – Progress Report – June 2011 (Meeting Cancelled)	01/08/2011 04/08/2011 16/08/2011
TRS 02/09/11 (Item 25) FIN 05/09/11 (Item 38) MC 07/09/11 (Item 11)	IRT – Progress Report – July 2011	02/09/2011 05/09/2011 07/09/2011
FIN 03/10/11 (Item 18) MC 05/10/11 (Item 05) TRS 06/10/11 (Item 09)	IRT Progress Report – August 2011	03/10/2011 05/10/2011 06/10/2011
TRS 06/10/11 (Item 14)	MyCiTi IRT System – Update on Phase 1A and commencement of Planning etc	06/10/2011
TRS 06/10/11 (Item 15) C 26/10/11 (Item 33)	MyCiTi IRT – Amendment to Business Plan for Phase IA	06/10/2011 26/10/2011
C 26/10/11 (Item 34)	MyCiTi Integrated Rapid Transit System – Update on Phase IA and commencement of planning for Phase IB etc	26/10/2011
C 8/12/11 (Item 57)	Submission for Grant funding for Integrated Public Transport Network and Infrastructure for Khayelitsha: Cordaid Urban Futures and Dutch Government, Netherlands	08/12/2011
MC 17/01/12 (Item 29) C 25/01/12 (Item 36)	Tariff for MyCiTi Services for the 2011/2012 financial year amendments	17/01/2012 25/01/2012
TRS 9/02/12 (Item 20)	IRT Progress Report – December 2011	09/02/2012
TRS 9/02/12 (Item 23) MC 24/02/12 MC 59/02/12	MyCiTi automated fare system and myconnect smartcard: Status report	09/02/2012
TR&S 14/04/12 MC 16/04/12	MyCiTi IRT: funding of line directorate operational support	
TR&S 09/03/12	Tariff for MyCiTi services rendered during the 2012/13 financial year	
Annexure A, p 546	Final MyCiTi Tariff tables	May 2012
IPAC 19/07/12 C 94/07/12	MyCiTi IRT: Asset transfer – vehicle supplier and interim vehicle operator contracts (short term)	20/07/2012 25/07/2012

Annexure B. Route descriptions: Phase 1A

Phase 1A Route Descriptions

Route No.	Variation	Route Name	Description
Trunk Services – Dedicated Median operations			
T01	Parent	Du Noon - Table View - Civic Centre - Waterfront	Doornbach Station, continue Potsdam Road south, right Blaauwberg Road, Tableview Station, continue Blaauwberg Road, left Marine Drive, left Milner Street, continue Paarden Eiland busway, continue Culemborg bus lane, continue Hertzog Boulevard, Civic Centre Station, continue Hertzog Boulevard, left Heerengracht, right Hans Strijdom Avenue, continue Western Boulevard, right Granger Bay Boulevard, right Granger Bay Road, left Breakwater Boulevard, Waterfront Station
T01A	Parent	Montague Gardens - Civic Centre	Omuramba Station, continue Racecourse Road west, left Marine Drive, left Milner Street, continue Paarden Eiland busway, continue Culemborg bus lane, continue Hertzog Boulevard, Civic Centre Station
T02	Parent	Airport - Civic Centre	Airport Terminal, continue Airport Approach Road, continue N2, left Nelson Mandela Boulevard, continue Hertzog Boulevard, u-turn on busway, continue Hertzog Boulevard, Civic Centre Station
T21	Parent	Atlantis - Table View - Civic Centre	Atlantis Station, continue Reygersdal Drive west, left Dassenbeg Road, left West Coast Road, right Melkbosstrand Road, continue Ottu Du Plessis Drive, Melkbosstrand Station, left Birkenhead Drive, right West Coast Road, left Blaauwberg Road, Tableview Station, continue Blaauwberg Road east, u-turn, continue Blaauwberg Road west, left Marine Drive, left Milner Street, continue Paarden Eiland busway, continue Culemborg bus lane, continue Hertzog Boulevard, Civic Centre Station,

Route No.	Variation	Route Name	Description
T22	Parent	Atlantis - Table View - Century City	Atlantis Station, continue Reygersdal Drive east, right Charel Uys Drive, left Dassenbeg Road, left West Coast Road, right Melkbosstrand Road, continue Ottu Du Plessis Drive, Melkbosstrand Station, left Birkenhead Drive, right West Coast Road, left Blaauwberg Road, Tableview Station, continue Blaauwberg Road east, u-turn, continue Blaauwberg Road west, left Marine Drive, left Racecourse Road, right Omuramba Road, continue Ratanga Road, left Century Link, right Century Way, Century City Public Transport Terminus
Feeder Services: Type – Kerbside, mixed traffic conditions			
F01	Parent	Hout Bay Beach - Hangberg - Hout Bay - Sea Point - CBD - Civic Centre	Hout Bay Beach terminus, left The Promenade, left Main Road, left Princess Street, left Harbour Road, right Atlantic Skipper Road, continue Karbonkel Road, right Bayview Road, right Marlin Crescent to Hangberg terminus, left Karbonkel Road, left Atlantic Skipper Road, left Harbour Road, left Victoria Avenue, continue Victoria Road through Camps Bay, left Queens Road, right Regent Street, left Solomons Road, left Beach Road, Queens Beach Station, left Queens Road via Queens Beach Circle, left Regent Street, continue Main Road, continue Somerset Road, continue Riebeeck Street, left Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station
F01	Variation	Hangberg - Hout Bay - Sea Point - CBD - Civic Centre	Hangberg terminus, left Karbonkel Road, left Atlantic Skipper Road, left Harbour Road, left Victoria Avenue, continue Victoria Road through Camps Bay, left Queens Road, right Regent Street, left Solomons Road, left Beach Road, Queens Beach Station, left Queens Road via Queens Beach Circle, left Regent Street, continue Main Road, continue Somerset Road, continue Riebeeck Street, left Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station
F01	A - Bakoven turn around point	Bakoven - Sea Point - CBD - Civic Centre	Bakoven turn around point, continue Victoria Road, left Queens Road, right Regent Street, left Solomons Road, left Beach Road, Queens Beach Station, left Queens Road via Queens Beach Circle, left Regent Street, continue Main Road, continue Somerset Road, continue Riebeeck Street, left Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station

Route No.	Variation	Route Name	Description
F01	B - Queens Beach turn around point	Sea Point - CBD - Civic Centre	Queens Beach Station, left Queens Road via Queens Beach Circle, left Regent Street, continue Main Road, continue Somerset Road, continue Riebeek Street, left Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station
F02	Parent	Camps Bay (clockwise) - CBD - Waterfront (Clock Tower)	Camps Bay (Promenade Centre), continue Victoria Road, right Argyle Street, continue Tree Road, left Geneva Drive, left Camps Bay Drive, continue Kloof Nek Road, right Kloof Nek Road, left Kloof Street, left Buitensingel, right Loop Street, right Wale Street, left Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station, u-turn on busway, continue Hertzog Boulevard, right D F Malan Street, left Table Bay Boulevard, left Hereengracht, right Coen Steytler Avenue, continue Dock Road, right South Arm Road, left access to Waterfront Clock Tower
F03	Parent	Camps Bay (anticlockwise) - CBD - Waterfront (Clock Tower)	Camps Bay (The Fairway stop), continue Victoria Road, left Camps Bay Drive, continue Kloof Nek Road, right Kloof Nek Road, left Kloof Street, left Buitensingel, right Loop Street, right Wale Street, left Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station, u-turn on busway, continue Hertzog Boulevard, right D F Malan Street, left Table Bay Boulevard, left Hereengracht, right Coen Steytler Avenue, continue Dock Road, right South Arm Road, left access to Waterfront Clock Tower
F04	Parent	Queens Beach - Sea Point - Waterfront (Breakwater Boulevard) - Civic Centre	Queens Beach Station, continue Beach Road to Mouille Point, left Beach Road, left Granger Bay Boulevard, right Granger Bay Road, left Breakwater Boulevard, Waterfront Feeder stop, u-turn at circle, continue Breakwater Boulevard, left Port Road, right Dock Road, continue Coen Steytler Avenue, left Hereengracht, right Table Bay Boulevard, right D F Malan Street, left Hertzog Boulevard, Civic Centre Station
F05	Parent	Queens Beach - Fresnaye - CBD - Civic Centre	Queens Beach Station, continue Beach Road, left Queens Road via Queens Beach circle, left Kloof Road, right Avenue Disandt, left High Level Road, continue Strand Street, left Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station

Route No.	Variation	Route Name	Description
F06	Parent	Gardens - Vredehoek - CBD - Civic Centre	Gardens Station, right Maynard Street, right Mill Street, left Upper Buitenkant Street, continue Highlands Avenue, left Exner Avenue, right Davenport Road, left St James Street, left Derry Street, right Noordelik Avenue, left Gardenia Avenue, right Derry Street, continue Upper Mill Street, continue Mill Street, Gardens Station, Continue Mill Street, continue Annandale Road, continue Orange Street, continue Buitensingel, right Loop Street, continue Lower Long Street, right Coen Steytler Avenue, left Hereengracht, right Table Bay Boulevard, right D F Malan Street, left Hertzog Boulevard, Civic Centre Station
F07	Parent	Salt River - Woodstock - Zonnebloem - CBD - Civic Centre	Salt River Station, continue Foundry Road, left Alfred Street, right Albert Road, left Salt River Road via Salt River circle, right Victoria Road, left Roodebloem Road, continue Upper Roodebloem Road, right Rhodes Avenue, right Upper Mountain Road, left Chester Road, continue Keizersgracht, continue Darling Street, right Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station
F07	A - Salt River turn around point	Salt River - Woodstock (University Estate) - CBD - Civic Centre	Salt River Circle, continue Salt River Road, right Victoria Road, left Roodebloem Road, continue along Upper Roodebloem Road, right Rhodes Ave, right Upper Mountain Road, left Chester Road, continue Keizersgracht, continue Darling Street, right Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station
F07	B - CPUT turn around point	CPUT - CBD - Civic Centre	CPUT stop, continue Keizersgracht, continue Darling Street, right Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station

Route No.	Variation	Route Name	Description
F08	Parent	Gardens - Oranjezicht - CBD - Civic Centre	Gardens Station, right Maynard Street, right Mill Street, continue Mill Street, left Upper Orange Street, right Montrose Avenue, right Molteno Road, left Rayden Street, left Hof Street, right Kloof Street, right Camp Street, left Upper Orange Street, right Annandale Road, continue Mill Street, left Mill Street off ramp, Gardens Station, right Maynard Street, right Mill Street, right Buitenkant Street, left Darling Street, right Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station
F09	Parent	Hout Bay Beach - Imizamo Yethu - Sea Point - CBD - Civic Centre	Hout Bay Beach terminus, left The Promenade, left Main Road, continue to Imizamo Yethu, right Hector Petersen Ave, right to Hector Petersen terminus, left Hector Petersen Ave, left Main Road, right Victoria Road towards Camps Bay, continue towards Sea Point, left Queens Road, right Regent Street, left Solomons Road, left Beach Road, Queens Beach Station, left Queens Road via Queens Beach Circle, left Regent Street, continue Main Road, continue Somerset Road, continue Riebeeck Street, left Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station
F09	Variation	Imizamo Yethu - Sea Point - CBD - Civic Centre	Hector Petersen terminus, left Hector Petersen Ave, left Main Road, right Victoria Road towards Camps Bay, continue towards Sea Point, left Queens Road, right Regent Street, left Solomons Road, left Beach Road, Queens Beach Station, left Queens Road via Queens Beach Circle, left Regent Street, continue Main Road, continue Somerset Road, continue Riebeeck Street, left Adderley Street, continue Heerengracht, right Hertzog Boulevard, Civic Centre Station
F14	Parent	Parklands- Table View - Big Bay	Traffic circle future Koeberg Road, continue Parklands Main Road, continue Raats Drive, right Blaauwberg Road, Table View Station, continue Blaauwberg Road, right Otto Du Plessis Drive, left Sir David Baird Drive, left Otto Du Plessis Drive, right Cormorant Avenue, continue Cormorant Avenue to turn around at traffic circle

Route No.	Variation	Route Name	Description
F15	Parent	Sunningdale - Gie Road - Wood	Blaauwberg Hospital, right Sunningdale Drive, left Sandown Road, left Wood Drive, u-turn at circle, Parklands Secondary, continue Wood Drive, left Sandown Road, right Gie Road, left Cross Road, left Circle Road, right Merlot Avenue, left Wood Drive, left Blaauwberg Road, Wood Station
F16	Parent	Sunningdale - Wood Drive - Table View	Blaauwberg Hospital, right Sunningdale Drive, left Humewood Drive, left Ringwood Drive, right Wood Drive, left Blaauwberg Road, Wood Station
F70A	Parent	West Beach - Dolphin Beach - Table View - Sunningdale	Blaauwberg Hospital, continue Waterville Street east, right Sunningdale Drive, right Garden Drive, left Link Road, left Parklands Main Road, continue Raats Drive, right Blaauwberg Road, Table View Station, continue Blaauwberg Road west, right Marine Circle, right Viola Road, left Watsonia Road, right Stirling Road, right Drummond Road, right Warwick Road, left Sandown Road, continue Tryall Road, right Sunningdale Drive, right Waterville Street, Blaauwberg Hospital
F68	Parent	Du Noon - Century City	Doornbach, continue Potsdam Road, continue Koeberg Road, left Racecourse Road, right Omuramba Road, continue Ratanga Road, left Century Boulevard, left Century Way, Century City Public Transport Terminus
F70B	Parent	Montague Gardens - Century City	Omuramba Station, continue Racecourse Road east, left Omuramba Road, right Koeberg Road, right Montague Drive, continue Century Avenue, left Century Boulevard, right Century Way, Century City Public Transport Terminus, continue Century Way north, left Century Link, left Ratanga Road, left Sable Road, Century City Rail Station
F8	Parent	Mamre - Atlantis	Paradise Lane, continue Seemeeu Street, right Sand Street, right Goedverwacht Street, right Main Road, right Lord Somerset Street, continue Poiet Street, left Silverstream Road, right Dassenberg Road, continue Charel Uys Drive, right Arion Drive, left Reygersdal Drive, Atlantis Station

Route No.	Variation	Route Name	Description
F9	Parent	Pella - Atlantis	Pella Terminus, right Pella Road, left Charel Uys Drive, right Arion Drive, left Reygersdal Drive, Atlantis Station
F10	Parent	Atlantis - Robinvale - Atlantis	Atlantis Station, continue Reygersdal Drive south, left Meermin Road, continue Wesfleur Circle, right Sampson Road, right Curlew Street, left Starling Road, left Fiskaal Street, right Curlew Street, left Sampson Road, left Wesfleur Circle, continue Meermin Road, right Reygersdal Drive, Atlantis Station
F11	Parent	Protea Park - Avondale - Atlantis	Protea Park Terminus, continue Kerria Avenue east, left Gardenia Street, continue Grosvenor Avenue, left Palmer Avenue, left Meermin Road, left Reygersdal Drive, Atlantis Station
F12	Parent	Atlantis - Saxonsea - Atlantis	Atlantis Station, continue Reygersdal Drive west, right Grosvenor Avenue, left Hermes Avenue, right Kent Crescent, left Hermes Avenue, right Grosvenor Avenue, left Reygersdal Drive, Atlantis Station
F13	Parent	Atlantis Industry Foundry - Atlantis	Charel Uys Drive at Christopher Starke Street, continue Charel Uys Drive south, left John van Niekerk Street, left Charles Matthews Street, right John Heyns Street, right Neil Hare Road, right Louwtjie Rothman, right Charles Piers Street, left Neil Hare Road, right Charel Uys Drive, left Reygersdal Drive, Atlantis Station
F15	Parent	Atlantis - Sherwood - Atlantis	Atlantis Station, continue Reygersdal Drive west, right Grosvenor Avenue, right Anna Avenue, left Brutus Avenue, continue Sherwood Road, continue Knysna Road, left Newlands Road, right Sherwood Road, continue Brutus Avenue, right Anna Avenue, left Grosvenor Avenue, left Reygersdal Drive, Atlantis Station

Route No.	Variation	Route Name	Description
F16	Parent	Witsands - Atlantis	Atlantis Station, continue Reygersdal Drive south, right Bloembosch Road, right un-named road, right un-named road, left Reygersdal Drive, Atlantis Station
F70C	Parent	Duynefontein Melkbosstrand	- Melkbosplaas turnaround, continue Waratah Way west, continue Birkenhead Drive, right Otto Du Plessis Drive, Melkbosstrand Station, continue Otto Du Plessis Drive north, left Otto Du Plessis Drive, left Charles Hoffe Avenue, right Dunker Street, right Otto Du Plessis Drive, left Atlantic Avenue, right Samuel Crescent, left Napoleon Avenue, right Narcissus Avenue, continue Otto Du Plessis Drive, right Dunker Street, left Charles Hoffe Avenue, right Otto Du Plessis Drive, right Otto Du Plessis Drive, Melkbosstrand Station, continue Otto Du Plessis Drive, left Birkenhead Drive, continue Waratah Way, Melkbosplaas turnaround

L1	Parent	Witsands - Atlantis Industrial area	Saxonwold taxi facility, continue Saxonwold Road, through Witsands, right Bloembosch Road, continue John Dreyer Street, left Neil Hare Road, right Johan Heyns Street, left Charles Matthews Street, right John van Niekerk Street, right Neil Hare Road, left Tom Henshilwood, intersection with Charel Uys Drive at Christopher Starke Station
L2	Parent	Du Noon - Potsdam Road trunk stations	Dumani Road at Du Noon Station, continue Dumani Road, right Mnandi, left Ingwe, left Kwezi, right Mnandi, continue Usasaza to Potsdam Road at Doornbach Station
L3	Parent	Flamingo Vlei - Wood and Table View Stations	Bayside taxi facility at Table View Station, right Raats Drive, continue Pentz Drive, left Study Street, intersection with Blaauwberg Road, Wood Station
L4	Parent	Sunset Beach - Sunset Beach Station	Caltex Garage at Sunset Beach Station, right Ocean Way Road, right in Bay Beach Avenue, intersection with Albus Drive
L5	Parent	Royal Ascot - Racecourse Road Station	The Paddocks Centre Grand National Boulevard at Racecourse Road Station, continue Grand National Boulevard, left Milnerton Drive, left Racecourse Road, left Grand National Drive, The Paddocks Centre at Racecourse Road Station
L6	Parent	Bo Kaap - Long and Loop Streets	Dorp at Loop Street, continue Wale Street west, continue Yusuf Drive, left Voetboog Road, continue Upper Bloem Street, left Sachs Street, left Upper Pepper Street, right Pentz Road, right Wale Street, left Loop Street, right Shortmarket Street, right Long Steet, right Wale Street
L7	Parent	Tamboerskloof - Kloof Street	Villa Maria at Kloof Nek Road, left Kloof Street, left Park Street, left New Church Street, continue Kloof Nek Road, right St Michaels Road, right Camden Street, left Warren Street, right Albert Road, right Woodside Road, left Brownlow Road, right Milner Road, right Tamboerskloof Road, left Burnside Road, continue Kloof Nek Road at Villa Maria

L8	Parent	Upper Vredehoek - Gardens Centre	Deer Park Drive west, right Clairwood Road, continue Chelmsford Road, left Derry Street, left Exner Avenue, right Stethoek Road, right Vredehoek Avenue, right Upper Maynard Street, right Virginia Avenue at Gardens Station
L9	Parent	Table Mountain Cable station to Kloofnek Rd	Lower Cableway Station, continue Tafelberg Road, Kloof Nek Circle
L10	Parent	Llandudno Beach - Victoria Road	Llandudno stop at intersection with Victoria Road, continue Llandudno Road, right Llandudno Road, left Gully Road, right Llandudno Road, Parking area at Beach
L11	Parent	Valley Road - Imizamo Yethu	Valley Rd/ Disa River intersection, continue Valley Road, left Victoria Road, NR Mandela Road, right OR Tambo Road, left Unamed Road after Mkawayi Avenue, right NR Mandela Road, intersection with Hout Bay Road at H Petersen stop
L12	Parent	Higgovale and Upper Oranjezicht - Kloof Street and Kloof Nek Road	150 Kloof on Kloof Street, right Bellevue Street, left Higgo Crescent, left Higgo Road, right Invermark Crescent, continue Chesterfield Road, left Marmion Road, left Glen Crescent, right Rosmead Avenue, continue Kensington Crescent, left Hof Street, right Kloof Street, left Camp Street, left Kloof Nek Road, left Derwent Road, right De Lorentz Street, right Kloof Street, 150 Kloof
L13	Parent	Fresnaye - Regent Road, Sea Point (via Ocean View Drive & St John's Road)	Avenue St Louis, right Avenue Le Sueur, right Avenue Fresnaye, left Ocean View Drive, left St John's Road, left Beach Road, Miltons Pool stop
L14	Parent	Fresnaye - Three Anchor Bay (via Ocean View Drive and Glengariff Road)	Avenue St Louis, right Avenue Le Sueur, right Avenue Fresnaye, left Ocean View Drive, left Glengariff Road, continue Three Anchor Bay Road, left Beach Road, Three Anchor Bay stop

L15	Parent	Fresnaye - High Level Road, Green Point (via Ocean View Drive)	Avenue St Louis, right Avenue Le Sueur, right Avenue Fresnaye, left Ocean View Drive, left High Level Road, Skye Way stop
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Phase 1B Route Descriptions

TRUNKS		
Type	Route Title	Route Description
Dedicated Median	Du Noon to Century City via Montague Gardens	Doornbach, continue Potsdam Road, continue Koeberg Road, left Racecourse Road, right Omuramba Road, continue Ratanga Road, left Century Boulevard, left Century Way, Century City Public Transport Terminus.
FEEDERS		
Type	Route Title	Route Description
Mixed traffic, kerbside	Summer Greens to Century City	Summer Green, right Lodger Road, left Summer Greens Drive, left Century Avenue, left Century Gate Station, right Century Avenue, left Bosmansdam Road, left Ratanga Road, left Century Link, right Century Way, Century City Public Transport Terminus, continue Century Way south, right Century Boulevard, left Ratanga Road, left Sable Road, Century City Rail Station
Mixed traffic, kerbside	Edgemean Century City to	Woodhead Drive, right Louis Thibault Drive, right Edgemean Drive, left Bosmansdam Road, left Century Avenue, left Century Gate Station, left Century Avenue, right Century Boulevard, left Ratanga Road, left Century Link, right Century Way, Century City Public Transport Terminus, continue Century Way south, right Century Boulevard, left Ratanga Road, left Sable Road, Century City Rail Station

Mixed traffic, kerbside	Richwood to Century City	Woodlands Drive, left Richwood Avenue, left Helderberg Road, right Annandale Drive, right Buitengracht Drive, left Jonkershoek Road, right Tygerberg Road, continue De Grendel Avenue, right Vryburger Avenue, right Bosmansdam Road, left Century Avenue, left Century Gate Station, left Century Avenue, right Century Boulevard, left Ratanga Road, continue Sable Road to Century City Rail Station
Priority Lanes where required, kerbside	Maitland & Salt River Station to Montague Gardens	Salt River Circle, continue Voortrekker Road east, left Highclaire Street, left Royal Road, right Koeberg Road, right Freedom Way, left Omuramba Road, left Racecourse Road, Omuramba Station

N2 Express Service Route Description

Type	Route Title	Route Description
Express Service using N2 BMT inbound lane	Mitchells Plain to Cape Town	Mitchells Plain Town Centre bus terminus, right Wespoort Drive, left AZ Berman Drive, right R300, left N2, left Hertzog Boulevard, Civic Centre Station
Express Service using N2 BMT inbound lane	Khayelitsha Nolungile (Site C) to Cape Town	Site C Station, continue Lansdowne Road east, left Mew Way, left N2, left Hertzog Boulevard, Civic Centre Station
Express Service using N2 BMT inbound lane	Khayelitsha CBD to Cape Town	<i>Forward:</i> Khayelitsha Rail Station, continue Walter Sisulu Road north, right Spine Road, left N2, left Hertzog Boulevard, Civic Centre Station <i>Reverse:</i> Civic Centre Station, continue Hertzog Boulevard east, continue N2, right Spine Road, left Lansdowne Road, right Steve Biko Road, right Walter Sisulu Road, Khayelitsha Rail Station

Annexure C. Allocation of service costs to department budgets

Services required	%	Departmental budget
A. MyCiTi Core Operational costs		
Safety and Security: 50% of SSU costs*	50%	IRT Ops
Landscaping: Station precincts	100%	IRT Ops
Revenue Services	100%	IRT Ops
Fleet management (mainly staff)	100%	IRT Ops
Insurance	100%	IRT Ops
Facilities management	100%	IRT Ops
Electricity: Lighting at bus stops	100%	IRT Ops
Utilities at stations and in depots	100%	IRT Ops
Roads and Stormwater: maintenance of relevant sections	100%	IRT: Ops
Traffic information	100%	IRT: Ops
Major maintenance of MyCiTi facilities	100%	IRT:Ops
B. General Improvement in Municipal Services in MyCiTi corridors		
Safety and Security: 50% of SSU costs*	50%	S&S
Landscaping (excl station precincts)	100%	City Parks
Cleansing	100%	Cleansing
C. Costs absorbed by relevant Departments		
Safety and Security: Traffic police, metro police	100%	S&S
Safety and Security: Law enforcement officers	100%	S&S

*Subject to discussion with Department: Safety and Security

Annexure D. Comparison of operating deficit estimates for Phase 1A between 2010 and 2012 Business Plans

R 000s	Business Plan 2010 (Un-Escalated)		Business Plan 2010 (Escalated)		Business Plan 2012 (Escalated)		Variance 2012 vs 2010	Comments
	FY 2010/11		FY 2014/15		FY 2014/15		Increase (+) / Decrease (-)	
System Revenue	275 359		347 634		311 090		-36 544	
Fare revenue	260 359		328 697		297 607		-31 090	Airport ridership overestimated
Advertising	15 000		18 937		13 483		-5 454	New estimates based on tenders
System costs		360 832		466 944		480 743	13 799	Station Management tender higher than original estimates.
Operations Unit & Marketing		30 207		38 861		47 892	9 031	Extended milestone rollout required additional marketing
Operations Unit	25 000		32 162		33 549	##	1 387	
Marketing	5 207		6 699		14 343		7 644	
Total System Costs				505 805		528 635	22 830	
Midpoint Operating Deficit (Revenue less Costs)		-115 680		-158 171		-217 545*	-59 374	Strategies to reduce costs and increase revenue being pushed

* Based on Oct 2010 Business Plan the high point range escalated to 2014/15 is R199m.

IRT Operations Unit cost calculated as a 80% split of the IRT Operations Organogram structure for the management unit as opposed to operations implementation element, less the Support Services costs.

Annexure E. Public Transport Infrastructure and Systems Grant Framework

<i>Public Transport Infrastructure and Systems Grant</i>	
Transferring department	<ul style="list-style-type: none"> Transport (Vote 37)
Strategic goal	<ul style="list-style-type: none"> To support the National Land Transport Act (No. 5 of 2009) and Public Transport Strategy (PTS) and Action Plan in promoting the provision of accessible, reliable and affordable integrated public transport services
Grant purpose	<ul style="list-style-type: none"> To provide for accelerated planning, construction and improvement of public and non-motorised transport infrastructure and services
Outcome statements	<ul style="list-style-type: none"> Improved public transport network services that are formal, scheduled and well managed and which are accessible to an increasing percentage of the population of urban municipalities
Outputs	<ul style="list-style-type: none"> Public transport infrastructure including the development, upgrade and maintenance of dedicated lanes, routes, stations, depots, control centres and related information technology, and fare systems Public transport services include public transport vehicles, security, station management, ticketing services, control centre operations, network management function and contributions towards the economic rights of existing operators Number of average weekday passenger trips carried on PTIS Grant funded systems Plans related to the above including: <ul style="list-style-type: none"> network operational plans including universal access design plans business and financial plans (including financial modelling, economic evaluation, and operator transition plan) institutional network management plan engineering and architectural preliminary and detailed designs public transport vehicle and technology plans marketing and communication plans
Priority outcome(s) of government that this grant primarily contributes to	<ul style="list-style-type: none"> Outcome 6: An efficient, competitive and responsive infrastructure network
Details contained in the business plans	<ul style="list-style-type: none"> This grant uses Integrated (Rapid) Public Transport Network (IRPTN or IPTN) operational and related plans including financial modelling
Conditions	<ul style="list-style-type: none"> Projects must support an integrated network approach as defined in the Public Transport Strategy and in the National Land Transport Act Integrated public transport solutions should incorporate: i) integration between different public transport services, including non-motorised transport infrastructure; ii) fare integration between different services; iii) marketing integration with unified branding; and, iv) institutional integration between the services Projects must be based upon an IRPTN/IPTN operational plan (including detailed financial modelling) approved by the municipal council For each phase, final network routing and related financial modelling will be agreed with DoT before municipalities are to proceed with detailed infrastructure design IRPTN/IPTN projects must meet the minimum requirements of the South African Bureau of Standards (including Part S of the Building Regulations) From the start of operations, IRPTN/IPTN systems must recover all the direct operating costs of contracted vehicle operators from fare revenue, other local funding sources and, if applicable, from any Public Transport Operations Grant contributions. These direct operational costs consist of fuel, labour, operator administration and vehicle maintenance If PTIS Grant funds are to be used to cover the costs of existing economic rights of affected operators, verified data on payments details and verified services must be provided to the Department of Transport for their agreement prior to entering into agreements on economic rights If buses are bought with grant funds and are used by contracted operators, the municipality must retain ownership unless alternative arrangements are pre-approved by National Treasury and DoT Municipalities are required to establish specialist capacity to manage and monitor public transport system contracts and operations supported by this Grant as well as to plan future expansions of the network
Allocation criteria	<ul style="list-style-type: none"> The grant is focused on the implementation of quality public transport services in municipalities Budget requests will be evaluated in accordance with the outputs of a municipal plan which specifies the infrastructure, systems, transformational and operating costs of serving a defined number of passenger trips per average weekday
Reason not incorporated in equitable share	<ul style="list-style-type: none"> Public transport investment needs are not provided for in the local government equitable share allocations

Public Transport Infrastructure and Systems Grant

Past performance	<p>2010/11 audited financial outcomes</p> <ul style="list-style-type: none"> Allocated and transferred R3 699 million to municipalities with R2 958 million (80 per cent) spent by the end of the of 2010/11 municipal financial year
	<p>2010/11 service delivery performance</p> <ul style="list-style-type: none"> Johannesburg's Rea Vaya BRT system carried 315 000 fans during the Fifa 2010 Soccer World Cup. 11Km of dedicated trunk route of Phase 1b between Noordgesig in Soweto to Parktown in Johannesburg was constructed but not yet operational. 10 Stations were completed along the Phase 1b trunk route. A permanent depot at Dobsonville (for 270 buses) was under construction with 80% of the civil works completed Cape Town's MyCiTi starter service network carried over 6 000 passengers per weekday after 5 weeks of operation, with a total of 428 000 passengers having been carried during the financial year. MyCiTi services were operated with 43 high floor buses, purchased for about R100m, R90m of which was paid in 2010/11. One busway contract and the initial redevelopment of the Prestwich Street depot were completed during the 2010/11 financial year. By the end of 2010/11 further busways and stations, the large Stables depot and non-motorised transport infrastructure were under construction, and infrastructure and operational tenders on an automated fare system and control centre had been awarded Nelson Mandela Bay used 2010/11 funds to pay for the operations of the 2010 World Cup, bought 25 buses, completed an additional 1.6km of bus lanes, bought ITS equipment, control centre facilities and paid for design costs. Expenditure slowed due to the stalled negotiations with the affected operators Polokwane, Rustenburg, Buffalo City, Mbombela and eThekweni completed Operational Plans
Projected life	<ul style="list-style-type: none"> The grant is expected to continue for as long as national funding is required to support IRTPNs/IPTNs as envisaged in the NLTA and Public Transport Strategy of 2007
MTEF allocations	<ul style="list-style-type: none"> 2012/13: R4 988 million, 2013/14: R5 550 million and 2014/15: R5 871 million
Payment schedule	<ul style="list-style-type: none"> Transfers are made in accordance with an agreed payment schedule, approved by National Treasury
Responsibilities of the transferring national officer and receiving officer	<p>Responsibilities of the national department</p> <ul style="list-style-type: none"> Disburse PTIS funds and monitor PTIS expenditure Monitor IRPTN implementation progress in line with the National Land Transport Act and the Public Transport Strategy Verify reports from municipalities by conducting at least one site visit per annum Allocate the funds based on stated priorities through an allocation mechanism agreed to by the DOT and National Treasury Evaluate the performance of the grant annually
	<p>Responsibilities of municipalities</p> <ul style="list-style-type: none"> Ensure that projects are implemented in line with what is reflected in the integrated development plan of the municipality Reporting is done correctly on the management of this grant and all relevant DoRA requirements are adhered to provide budget proposals for the PTIS funding that are based on sound operational plans Establish a dedicated project team establish a specialist capacity to manage and monitor operations and to plan expansions Compile and submit data that indicates the efficiency and effectiveness of planned and actual services as requested by the DoT, including: <ul style="list-style-type: none"> number of weekday passenger trips on PTIS funded systems change, relative to the previous year, in the number and percentage of households within 500 metres of formal public transport access points planned/actual capital expenditure per passenger kilometre for PTIS funded systems planned/actual operational expenditure per passenger kilometre in the PTIS funded system the actual costs of procuring inputs including those for infrastructure, systems and transitional and regulatory items
Process for approval of 2012 MTEF allocations	<ul style="list-style-type: none"> Municipalities will be requested to submit budget proposals that are based on sound IRPTN operational plans by 16 July 2012 These requests will be evaluated by the DOT and National Treasury. Municipal provisional allocations will be finalised by 30 November 2012

Annexure F. City policy on compensation of minibus-taxi and other operators

A report was submitted to Council's September 2012 cycle, noting amendments that were made to the Compensation Policy for Phase 1A, as originally approved by way of the 2010 Business Plan.

The revised Compensation Policy set out in this Annexure is now extended to Phases 1B and N2 Express.

This document sets out the City's policy on compensation to the minibus-taxi operators who are directly affected, and those who are indirectly or partially affected. This policy must be read together with Chapter 9 on industry transition. Directly affected operators are those whose services are proposed to be replaced by a particular phase of MyCiTi, whose legal rights are affected and who have agreed to surrender their operating licence and operating vehicle in return for compensation and / or participation as shareholders in the two vehicle operating companies, or VOs.

1. Categories of Operators Qualifying for Compensation

- 1.1 Minibus-taxi operators who are directly affected by a particular phase of MyCiTi implementation and who have agreed to surrender their operating licence and operating vehicle would qualify for full compensation (as described in this document). These operators will also have rights to shareholding in the new Vehicle Operator company.
- 1.2 Operators who are indirectly or partially affected are: Services that MyCiTi is not replacing but where the City is satisfied that these services are likely to be negatively impacted upon, to a significant degree, and where there is a direct or indirect benefit for the MyCiTi system to pay compensation and to remove and adapt the relevant services. An example is the following: Existing minibus-taxi services that run from outside the Phase 1A, B and N2 Express area into an area serviced by MyCiTi, and agree to run a shortened service by delivering passengers for transfer onto the MyCiTi services. This will require an amendment to the operating licence conditions and necessitate consultation and some form of compensation.

2. Basis for determining compensation

Compensation is aimed at determining the value of the actual business of an operator that is being replaced by the new system. It is not aimed at replacing the rights on the operating licence. This means if an operator has an operating licence with authority to operate on a network of routes, but is exercising the rights on only one or two routes to generate an income, then compensation is aimed at replacing the value of the income and not the potential income that could be generated from the other authorities on the operating licence.

3. Methodology for calculating compensation

The following steps should be used to determine the compensation value in a particular phase or corridor where MyCiTi is to be implemented:

- 3.1 Identify all the directly affected and partially affected operators.
- 3.2 Market share per mode
 - a) Through detailed surveys of passengers trips on all directly and partially affected modes, determine the market share of each mode using fare revenue as a criterion.
 - b) In the case where the fare to the passenger on a particular mode is subsidised through government funding, the fare revenue directly linked to the subsidy for that mode should be adjusted to take account of the influence of the subsidy on passenger modal choice.
- 3.3 Market share per taxi association
 - a) Once the market share of the minibus-taxi mode has been determined, the market share of each route or association then needs to be determined using average legitimate profit as a criterion.
 - b) Average legitimate profit is defined as the fare revenue less the average and appropriate operating costs (*taking into account the costs a prudent operator of a transport business would incur, or would have to incur as required by law), including the repayment on the vehicle.
 - c) Average operating costs per vehicle on a particular route must include:
 - o Driver salary
 - o Insurance
 - o Vehicle payment
 - o Fuel
 - o Oil
 - o Brakes
 - o General repairs
 - d) To calculate the repayment costs on a vehicle, a standard vehicle cost needs to be applied. This is determined by considering the type and cost of a vehicle that would be required to render a service for a period equivalent to the average validity period of the operating licences on a particular route.
 - e) To determine the average fare revenue per vehicle, the total fare revenue per route must be divided by the number of vehicles per association that actually operate on that route with valid operating licences.
 - f) Total average cost and profit per route is calculated in the same way by multiplying the average cost/profit per vehicle by the number of vehicles required on the route.
 - g) Market share per route/taxi association is determined using the total average fare revenue for the association.

3.4 Lump sum determination

- a) The lump sum is the actual value of compensation to be offered by the City and is intended to reflect the value of the business to be replaced by the MyCiTi system.
- b) The lump sum is determined by calculating the average profit over the validity period of the operating licence and then converting it to nett present value.
- c) The validity period of the operating licence is the licence period reflected on the licence at the time the compensation is calculated and finalised.
- d) For the purpose of calculating the lump sum value, the following periods shall be used :

Category of Operating Licence	Period
Former Indefinite licence	7 years
Definite period licence	5 years

- e) The lump sum value thus calculated at the beginning of the process (prior the negotiations for 12 year contract being concluded), will hold firm irrespective of when during the roll-out period it becomes payable.
- f) The total lump sum for each of the two categories of operating licences is calculated separately to determine an 'indefinite licence pot', and a 'definite licence pot'.

3.5 Lump Sum Distribution

- a) The lump sum value is first calculated per association.
- b) Associations are then required to indicate to the City how they want the lump sum to be distributed to their membership in the most appropriate way.
- c) The membership of the association must be grouped into the abovementioned two categories, although the association may indicate a different treatment of the different categories.
- d) Within each category, agreement must be reached by at least 80% of the all the members *who are directly affected* on the basis for distributing the lump sum pot.
- e) If no such agreement is reached, the City will apply the following distribution formula: 30% of the pot to be divided equally amongst the members and the remaining 70% allocated on a pro-rata basis based on the number of passenger trips undertaken by each member.

- f) Where an operator was not surveyed as having provided transport services on the day/s of the survey the City may take further measures to establish the average / likely passenger load of that operator, and adjust the passengers moved by other operators who are members of the same association accordingly.

4. Application of compensation model

4.1 Market share and shareholding

The compensation model provides for a direct link between the market share, lump sum, and rights to shareholding in the Vehicle Operator company for both the individual operator as well as for the association as a collective. Market share and the associate right to shareholding must therefore be determined and agreed to upfront, i.e. prior to company formation.

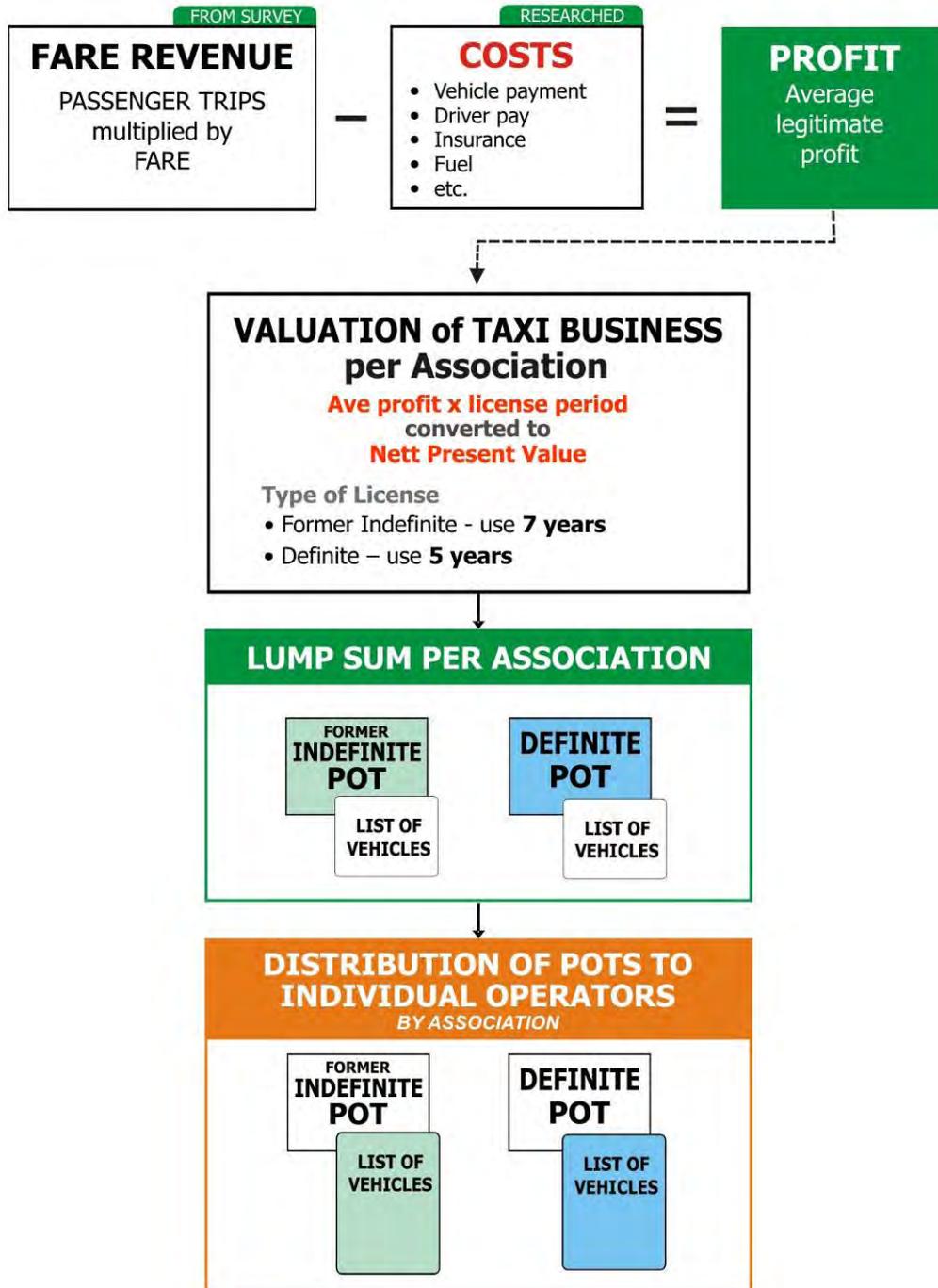
Where roll-out of a particular phase of the MyCiti project is planned to occur over a number of years, the market share and associated right to shareholding in the Vehicle Operator company agreed to prior to company formation, cannot be changed notwithstanding the fact that passenger demand may change during the course of the roll-out period.

4.2 Dormant operating licenses

Dormant operating licenses on any affected route should be identified and the POLB requested to follow a process of taking these operating licences off the system. Affected associations should then be given the opportunity to replace these dormant operating licences with applications for new operating licences.

4.3 Additional Operating Licences

The City should therefore not support, except in the case of replacement of dormant operating licences, the granting of any additional operating licences on the affected routes once the market share has been finalised. If some additional operating licences are granted by the POLB during this period, such licences will not have any impact on the agreed market share. In such cases the lump sum allocated to an association must then be shared amongst all the members holding valid operating licences.



Annexure G. Risk assessment

Introduction

Detailed Risk Registers are produced and monitored regularly by the project team for analysing all risks identified on the project that will have a significant or major impact, as well as assessing the impact of project roll-out. Mitigation measures for each item are carefully considered and actioned to avoid cost or time implications to the roll out, where possible.

This high level risk assessment extracts the four fundamental risks that will influence the implementation of the Business Plan to deliver an effective upgraded public transport system to the City of Cape Town.

These major risks at present are:

1.1 Procurement of Vehicle Operating Contracts

1.1.1 Phase 1A & 1B Services

The current negotiation process for the Phase 1A & Phase 1B long-term agreement is programmed to be in place prior to the end of February 2013. This process is based on multiple aspects such as agreement with existing operators on market share and compensation allowances, agreement with prospective operators on shareholding and allocation of IRT services / facilities, etc.. These all have variable outcomes that influence negotiation timeframes.

Mitigating measures

The roll out sequence has been rescheduled to accommodate the current delays to the Phase 1A and 1B industry transition process, and interim deliverable target dates have been set for all parties to work towards in order to achieve the revised implementation roll-out milestones.

Alternate scenarios have been identified should the initial negotiations not succeed, however delays in roll-out will be incurred.

1.1.2 N2 Express Service

The implementation of the service can only happen if there is a contract with the stakeholders (affected operators) of the Metro South East. The City is considering three options of procuring these contracts with the affected operators.

There remains a real risk of stakeholders objecting to the procurement process or the outcome, which will delay the award of a vehicle operating contract for the N2 Express service.

Mitigating measures

It is imperative to clearly define the vehicle operator contract procurement process, and identify the role players affected by the N2 Express service and

stakeholders in the future Metro South East area. Then engage with the industry as soon as possible to determine the feasibility of the proposal.

1.1.3 *Compensation & Scrapping – agreement on cost and quantity*

VOCs to agree on the amount of compensation and the value / quantity of vehicles to be scrapped. This is a critical part of the agreement and if delayed will have a direct influence on the finalization of the individual contracts.

Mitigating Measures

The agreement of compensation and the value / quantity of vehicles to be scrapped must be determined as soon as possible. Engagement with individual operators to be prioritised.

1.2 **Business Plan Approval:**

The progressive rollout of the IRT System, starting with Phase 1A and continuing with Phases 1B, & N2 Express, requires the Business Plan to be updated to reflect the current roll-out, future phases and general changes further to development over the past nearly two years.

The implications of not obtaining approval of the Business Plan would be:

- Phase 1A – Potential delay to operational roll-out.
- Phase 1B – Immediate delay to implementation and operational roll-out.
- N2 Express – Immediate delay to implementation and operational roll-out.

Mitigating Measures

Arrange workshops with Portfolio Committee's, MAYCO, Councillors and stakeholders to clarify and respond to queries and concerns, prior to adjudication of the Business Plan.

1.3 **Operational Expenditure:**

1.3.1 *Confirmation of National annual BRT Operational Grant funding.*

The value of the required operational subsidy has increased, further to current modelling predictions. Whilst these predictions may be conservative in part, the fact remains that there is a need for an annual operational subsidy which exceeds the City of Cape Town's reasonable affordability. Commitment from National / Treasury is required to cover these ongoing annual operational costs.

Mitigating Measures

The IRT Team to investigate opportunities to reduce the operational costs and increase revenue, without substantially altering the core IRT system brief

(including system functionality, quality and services), and monitor on a regular basis.

The City to submit an application to National / Treasury for an annual BRT operational grant, based on the current estimates.

Once the new System Planning team in place, a detailed modelling to be undertaken to assess the impact on the operational subsidy requirement of the full IRT System for all phases.

1.4 Institutional capacity to deliver

1.4.1 *City Resources – The procurement of resources in line with the approved Organogram*

Only 57% of the planned organisational structure for IRT Operations has been appointed to date. This results in a capacity constraint to deliver the planned roll-out of IRT for Phase 1A, 1B , N2 Express and Phase 2A. There is an urgent need for the full organisational structures to be in place.

Mitigating measures

Procure / support of resources from other City departments / directorates.

Expedited procurement of suitably qualified and skilled personnel in line with the approved organisational structures.

Additional Professional Services to be considered to allow a smooth transition from current professional services to the permanent employees.

1.4.2 *Business Plan / Industry Transition & Operation tender - delayed procurement*

The Business Plan/Industry Transition/Operation tender is essential to increase the capacity of the Business Planning / Industry Transition and IRT Operations team. The resources are critical to ensure the effective roll-out of the future phases.

Mitigating measures

Extension of existing Business Planning team contract is currently in place.

The procurement of the Business Plan/Industry Transition contract to be re-scheduled and tracked to ensure that the contract is in place as soon as possible.

1.4.3 *Systems Planning / IPTN tender – delayed procurement*

The System Planning/IPTN tender is essential to increase the capacity of the Systems Planning team and to ensure that future phases can be planned in line with the current programme.

Any delays to this process will have a direct effect on Phase 2A.

Mitigating measures

The procurement of the System Planning contract to be expedited.

1.5 Affected Stakeholders (i.e. Taxi Associations, Bus operators & Local communities) – Objections to the roll out process

Primary Risk

Existing bus operators and taxi associations either included or not included in IRT companies, as well as local communities opposing the progressive IRT rollout could delay the planned implementation and deliverable operational dates, by means of protest, civil unrest or legal action.

Mitigating measures

A pro-active approach by early engagement informing all affected parties including, Taxi Associations not directly affected by IRT, other public transport operators and stakeholders, local communities, councillors and politicians will minimize the likelihood of a negative reaction.

Legal and procedural challenges need to be considered and the impact on roll-out assessed.