Comprehensive Integrated Transport Plan 2006 - 2011

CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

THIS CITY WORKS FOR YOU

2011 Annual Update

January 2012

CONTENT

CONTENT

ABBREVIATIONS

ASGISA	Accelerated and Shared Growth Initiative of South Africa
BRT	Bus Rapid Transit
CITP	Comprehensive Integrated Transport Plan
DDS	Draft Densification Strategy for the City of Cape Town
DFA	Development Facilitation Act
DoT	National Government Department of Transport
DRH	
GABS	Golden Arrow Bus Services
IDP	Integrated Development Plan
IPTN	Integrated Public Transport Network
IRPTN	Integrated Rapid Public Transport Network
KPI	Key Performance Indicator
MAP	Million Annual Passengers
MEC	Member of the Executive Council of PGWC responsible for Transport and Public Works
MLTF	Municipal Land Transport Fund
MSA	Municipal Systems Act (Act 32 of 2000)
NATMAP	National Transport Master Plan: 2005 to 2050
NCCS	National Climate Change Response Strategy for South Africa
NEMA	National Environmental Management Act
NLTA	National Land Transport Act (Act 5 of 2009)
NLTTA	National Land Transport Transition Act (Act 22 of 2000)
NMT	Non-Motorised Transport
NSDP	National Spatial Development Perspective
NSSD	National Strategy for Sustainable Development
PGWC	Provincial Government Western Cape
PLTF	Provincial Land Transport Framework
PSDF	Provincial Spatial Development Framework
SDF	Spatial development Framework for the City of Cape Town
SLR	Sea Level Rise Study for the City of Cape Town
SMART	Specific, Measurable, Attainable, Relevant, Time-bound
SNP	Special Needs Passengers
TDM	Travel Demand Management
WCR	Western Cape Regional Context

EXECUTIVE SUMMARY

1. Purpose

Urban transportation is a complex system of network elements, service characteristics and operational control components, to meet diverse demands for movement of people and goods at various times and frequencies. The system is governed and operated by a variety of stakeholders in all three spheres of government, as well as parastatal and private entities.

Transport planning has historically been fragmented between different modes and was typically done in isolation from land use planning, and *vice versa*. This often led to social marginalisation and isolation, negative impacts on the environment and high logistics cost on the economy.

The purpose of the Integrated Transport Plan is to identify current and future access needs for people, places, goods and services; and to identify interventions for a five year period. This plan informs decision makers on ways to manage the transport system and land use to best address these needs. This is done in terms of a "triple bottom line" approach to find a sustainable balance between the Social, Environmental and Economic needs of the community.

2. Overview of Content

The City of Cape Town produced a Comprehensive Integrated Transport Plan (ITP) for the 5-year period 2006 to 2011, in terms of the then National Land Transport Transition Act (NLTTA, Act 22 of 2000), and to support the City's 5-year Integrated Development Plan. The original 2006 document was updated during 2009 in the context of the then newly promulgated National Land Transport Act (NLTA, Act 5 of 2009). The updated document was approved by the MEC for Transport on 2 March 2010 and Gazetted on 25 June 2010, subject to conditions and recommendations to address in future updates or reviews.

The vision for transport supports the City's overall vision to create an enabling environment to become a prosperous city that achieves effective and equitable service delivery. The transport goals are set in line with National Transport Policy, which focus on achieving a significant modal shift from private to public transport. Areas of strategic intervention include, amongst others:

- Development of an Integrated Public Transport Network (IPTN);
- Revising the City's Rail Framework;
- Expanding Travel Demand Management (TDM) measures;
- Developing a comprehensive Parking Policy;
- Developing a Freight Strategy; and
- Expanding the Non-Motorised Transport (NMT) network.

3. Current Status

The term of the current ITP expires on 30 June 2012, after which a new, revised Comprehensive Integrated Transport Plan (CITP), valid for the 5-year period from July 2012 to June 2017, will take effect. The update 2011 forms that last update of this document.

4. Next Steps

The current update leads the way for the preparation of the CITP 2012 - 2017, and will not introduce new policies or projects that would require public participation or full Council approval.

Some of the important changes amongst the Strategic Informants that are considered during this review:

- The City's adoption of the new requirements and development responsibilities of the National Land Transport Act (NLTA, Act 5 of 2009);
- The revision, by PGWC, of the Provincial Land Transport Framework (PLTF) to be approved by mid-2011;
- The Cape Town Spatial Development Framework (SDF), which has been adopted by Council, and is currently being considered by PGWC for approval; and
- Research evidence of environmental changes that requires a shift in emphasis in transport planning.

1. INTRODUCTION

1.1 Background

The City of Cape Town produced an Integrated Transport Plan (ITP) for the 5-year period 2006 to 2011, in terms of the then NLTTA (National Land Transport Transition Act (Act 22 of 2000), and to support the City's 5-year IDP (Integrated Development Plan). The original 2006 document was updated during 2009 in the context of the recently promulgated NLTA (National Land Transport Act, Act 5 of 2009). The updated document was approved by the MEC for Transport and Public Works on 2 March 2010 (Annexure A) and Gazetted on 25 June 2010, subject to conditions and recommendations for future updates or reviews.

The term of the current ITP expires on 30 June 2012, after which a new, revised Comprehensive Integrated Transport Plan (ITP), valid for the 5-year period from July 2012 to June 2017, will take effect.

This document leads the way for the preparation of the 2012- 2017 CITP. No new policies or projects are proposed that would require public participation or full Council approval.

Some of the important changes amongst the Strategic Informants that are considered during this review:

- The City's adoption of the new requirement and development responsibilities of the National Land Transport Act (NLTA, Act 5 of 2009);
- The revision, by PGWC, of the Provincial Land Transport Framework (PLTF) completed in early 2011;
- The Cape Town Spatial Development Framework (SDF), has been endorsed by Council and is currently being reviewed by PGWC for approval in terms of the Land Use Planning Ordinance (No15 of 1985); and
- Research evidence of environmental changes that requires a shift in emphasis in transport planning.

In the MEC's letter of approval of the ITP the following matters needed to be addressed in this year's revision of the ITP:

a) *"A transport plan must indicate a clear timeline toward implementation, noting limitations of resources. The City's intentions of the role it is to assume in developing land transport policy and strategy, and the powers it will request in terms of the NLTA must be spelt out and scheduled.*

Its intentions in regard to the public transport system for the greater metropolitan area that is comprehensive; interconnected and intermodal must be detailed, with deadlines and the capital and operating costs estimated. In terms of Section 19 of the NLTA, the plan must consider whether the Drakenstein and Swartland municipal areas, and not only Stellenbosch, should be functionally coordinated;

b) Given both the importance and the potential of passenger rail, the plan must indicate a much closer and more coherent method of coordinating with PRASA/Metrorail in the future management and integration of public transport'

c) The importance of rail in freight transport requires greater emphasis and exposition. Neither Chapter 5.9 nor 7.4.5 make mention of rail.

d) The plan must make provision for the resuscitation of Incident Management.

These and other issues raised are addressed to various degrees in this document.

1.2 Transport Planning

The purpose with the preparation of an ITP, according to the guideline document (DoT, 2009), is to achieve a shift in emphasis in transport planning, especially the following aspects:

1) To integrate modally fragmented planning to the management of the entire transport system, in relation to land use policies;

2) Move away from "supply-side" response to road traffic congestion and a need for subsidised rail and bus services, to a "demand-based" focus to meet the travel needs of all sections of the urban community;

3) Implement a commitment to "public transport first" through prioritised investment in "integrated rapid public transport networks" and other "demand-based" interventions.

Firstly, the ITP is a Plan that is informed by a set of policies and frameworks.

Secondly, the planning components need to be integrated on several levels. Apart from integrating between transport modes and networks, integration also has to take place on an institutional level, on a geographic level, as indicated in Table 1.1.

Table 1.1: Example of integration of Transport Planning

Organisation	Vertical	Horizontal
Internal	IDP, SDF District & local area plans	BRT, Road Network, Safety, NMT network, Parking, Communication, Freight
External	National – NLTA, NLTSF Province – PLTF, PSDF.	District Municipalities, PRASA, SANRAL, Commuter and Freight Rail, Scheduled bus services, Minibus Taxi, Airports, Harbours, Provincial and National Roads

The current plan relies on the "Triple Bottom Line" approach (Social, Economic and Environmental objectives) to ensure integration.

The ITP should also contain a list of projects and programmes that would be implemented during its validity period. These should underpin the socio-economic, environmental and geographic objectives of City's IDP and SDF in the same planning period.

1.3 Integrated Transport Planning

The planning of transport infrastructure in the metropolitan area is done by a variety of sectors within the City, and by a variety of different levels of government. While not necessarily conflicting, the mandates and priorities of different plans, transport and other, are often not aligned. Integration of planning should happen in various dimensions, which are briefly described here.

i) **Institutional Integration:** The current state of fragmentation of the responsibility for transport in the metropolitan area needs to be consolidated in the City of Cape Town, as provided for in the National Land Transport Act. The Act makes provision for the City's current role as Planning Authority to be expanded over time to cover the Licensing, Regulatory, Contracting and Subsidy Allocation functions for all modes of Public Transport, including bus, taxi, bus rapid transit and commuter rail.

A further element of the institutional reform that needs to be implemented in terms of the NLTA is to ensure that the City sets itself up as the planning and regulatory authority for transport in the metropolitan area. The City should determine an appropriate mechanism to manage the provision of municipal Public Transport services in the Metropolitan Area.

Institutional reform should extend beyond the transport sector to include land use, economic development, housing and other departments. Beyond the City, integration should also be pursued more vigorously with Provincial Government, as well as with neighbouring authorities who fall within the functional region of the City of Cape Town.

ii) **Land use, Economic Development and Transport Integration:** Transport planning must be based on land use and economic development plans, and in turn, transport infrastructure development should facilitate further land use and economic development.

The integrated approach between these disciplines would ensure that Public Transport corridors and nodes not only service the surrounding catchment areas, but also, with proper alignment with appropriate incentive instruments such as zoning bonuses, bulk infrastructure and enhanced urban management that could, create favourable conditions for economic development. This could result in greater density along Public Transport corridors and by increasing potential customers and attenuating peaks, result in better patronized and more viable Public Transport.

For instance, public transport is more efficient in higher density corridors due to the increased ridership. Lower density environments do not warrant higher occupancy modes, while the provision of high occupancy modes does not automatically result in densification. ***Policy driven and coordinated planning*** is therefore necessary to ensure both land use and transport intervention occurs in a manner that is mutually supportive of each other. In an urban environment, moving from a lower density to higher density land use pattern therefore requires an incremental approach to implement higher occupancy modes such as Trolley bus, Bus Rapid Transit, Light Rail and Heavy Rail.

Similarly on a regional level, moving from lower occupancy modes to higher occupancy modes requires the strategic implementation of infrastructure to support the ultimate desired mode. Infrastructure planning, where different modes support each other, should be driven by travel demand and land use changes, and cannot be planned on a mode specific basis.

iii) **Multi-modal Transport Services**, consisting of the vehicles moving people and goods, which are managed by institutions and respective human resources, must be integrated with transport infrastructure on which they operate. The infrastructure should be designed to suit efficient and effective operations. Inefficient operations will require higher capacity infrastructure, with the solution to improve efficiencies and not providing costly extra infrastructure.

The role of the transport system is to serve the movement needs of persons and goods. A number of different modes, or technologies, have developed over the centuries that provide different levels of efficiency for a variety of trip purposes, volumes and distances of travel.

Transport services are provided by a large number of different passenger and freight modes, different vehicle types with different capacities and operating characteristics. The optimal selection and utilisation of the various modes and vehicle classes, as well as the integration of modes to complement each other, result in an efficient multi-modal transport system.

It is as important to recognise the operational efficiency of a mode that makes use of a particular type and form of infrastructure. Cars require much more road infrastructure than buses to move the same number of people, while trains are more efficient in moving high volumes of people and goods over longer distances. Figure 1.1 illustrates the impact of different modes (NMT, Car and Bus) on road infrastructure.

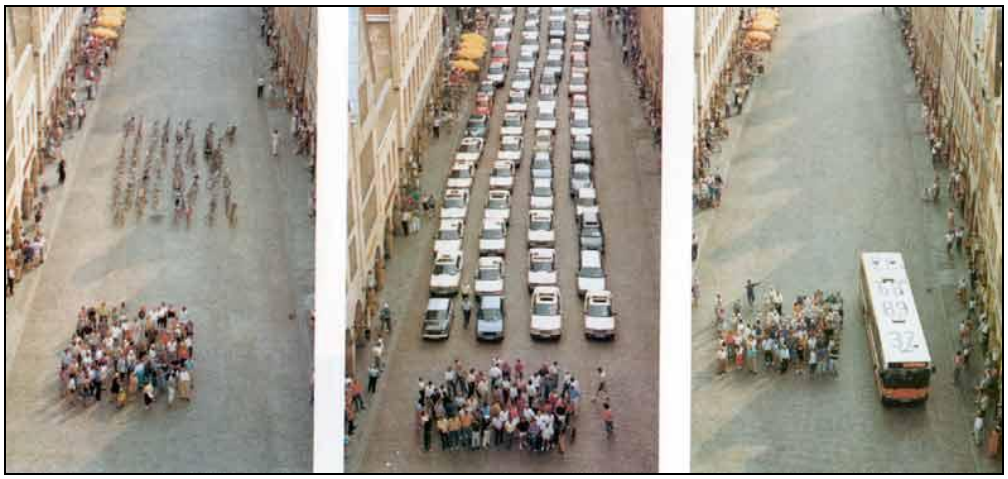


Figure 1.1: Demonstration of space requirement of Bicycle, Car and Bus
Source: http://www.geo.sunysb.edu/bicycle-muenster/

The following observations can be made with regards to Figure 1.1:

- Bicycle: 72 people are transported on 72 bikes, which require 90 square meters.
- Car: Based on an average occupancy of 1.2 people per car, 60 cars are needed to transport 72 people, which take 1,000 square meters.
- Bus: 72 people can be transported on 1 bus, which only requires 30 square meters of space.

iv) **Finance and funding:** Funding reform will go together with Institutional Reform above, but is separated for emphasis. Currently funding for Public Transport comes in a number of forms from national government for Infrastructure funding and Subsidy of operations. The Subsidy allocations for Bus Operations are directed to Province while the funding for Metrorail is managed directly from national government. There would need to be an engagement for the redirection of the Funding directly to the City, in line with the Institutional Reforms addressed above, as allowed for in the NLTA. There is also a significant need for additional funding sources, for instance linked to the Fuel Levy, which needs to be addressed and directed to Public Transport via the City.

The NLTA also states that City must establish a Municipal Land Transport Fund, which provides the City the opportunity to ring fence certain income streams such as parking levies. This fund and associated user charges, as defined in the NLTA, can act as an important funding source to support the implementation of the ITP. An overview of other funding forms is provided in chapter 9.

Integration should also be pursued with other infrastructure components which are supportive of each other, in order to have a well-functioning system. For example, investment in housing or institutional facilities by other government departments should be done in conjunction with the appropriate transport infrastructure or operations, in order to create synergy and optimise the investment impact.

v) **Environmentally Sustainable Transport:** An item that is increasingly being recognised as critical on all planning agendas is that integrated planning should be integrated with other environmentally sustainable development objectives of Local, Provincial and National Government. This includes the international awareness of the so-called “peak oil scenario”, which has been demonstrated by continual fluctuation in the price of oil and fossil fuels, as well as the trend of climate change. It also includes the development of an environmentally sustainable urban environment, or liveable city, with low levels of, for instance congestion, air and noise pollution.

vi) **Data:** Coordinated data of high quality is crucial for integrated planning, and if the planning data of different authorities are not supportive of each other in terms of timing, scope, and level of detail, the planning will be ill-informed.

1.4 Functional region

Cape Town is not functioning in isolation and is part of a wider functional region. The OECD (Organisation for Economic Co-operation and Development) defined the functional region of Cape Town based on: transport interaction, location of strategic infrastructure (harbours, airport, main roads, pipelines, railway and tourism), ecological connectivity and existing administrative structures. This resulted in a definition of a functional region that includes the municipalities Saldanha Bay, West Coast, Swartland, Drakenstein, Stellenbosch, Theewaterskloof and Overstrand (Figure 1.2).

Figure 1.2: Functional region

Source: OECD 2008

In order to increase the competiveness of the functional region, and thus the City of Cape Town, inter-municipal transport planning should receive more emphasis. It is recommend that future reviews of the ITP should provide further analysis of the functional region and present the necessary approaches to improve inter-municipal planning.

One of the implications of having a number of towns within easy reach of Cape Town is that transport planning by the City, West Coast and Cape Winelands Municipalities are interdependent at various levels. However, the priorities of the different planning authorities are diverse, which creates challenges for the integration of overlapping issues. The NLTA states that one of the responsibilities of the municipality is "the planning, implementation and management of modally integrated public transport networks ... and liaising in that regard with neighbouring municipalities".

1.5 ITP Approvals Process

As a "close-out" report, this document forms an integral part of the full suite of documents that forms the City of Cape Town's CITP 2006 - 2011. It accepts the current planning principles of the approved ITP, and focus only on updating technical information that became available since the 2009 update. It contains additional data analysis where appropriate and further discusses implications of strategic informants that may not have been fully developed with the previous update.

No new policy directives are introduced that would require public participation. Rather, where such issues are identified, these are presented for debate by relevant stakeholders, including the public.

The document also provides direction to the development of the CITP 2012 - 2017.

1.6 Internal review

The document has been distributed amongst internal stakeholders for comments. This provided valuable insights which have been incorporated in the document or will be addresses in greater detail in the 2012 to 2017 Review of the ITP.

The following has been highlighted as important actions that need to be addresses during the full review of the ITP in addition to the discussion captured in this document:

- Include the National Rail Plan and other new documents that are due to be published in the Review period.
- Unpack the City's SDF's key responses in Strategic Informants section. This Strategic Informants should directly feed into Vision, Goals and Objectives.
- Ensure that new/updated Goals and Objectives underpin maintenance and strong emphasis on modal shift - including the quantification thereof.

- Provide additional transport-density analysis with support from Spatial Planning and Urban Design departments.
- Explore the term Transit Oriented Development as a component of the strategic approach.
- Develop a comprehensive Facilities Management Strategy as a sectoral strategy, which would indicate the levels of funding required to sustain all elements of the transport system.
- Address the link between adequate levels of funding and the goals and objectives.
- Develop criteria that help to populate project lists and inform the budget allocation.
- Develop a financial agenda that indicates short, medium and long term funding needs to inform the ITP 2012 – 2017. This will provide a platform for discussions between the directorate Transport, Roads & Stormwater and the CFO.
- Include a detailed analysis of project list and 5 year implementation in the ITP Review.

2. STRATEGIC INFORMANTS

2.1 Introduction

The current document lists a comprehensive list of strategic informants, which are broadly classified as legislative, contextual and geographic.

- The legislative component includes
  - the objectives and policies from national and provincial legislation;
- The contextual component includes
  - socio-economic,
  - demographic, and
  - environmental realities relating to transport and;
- The geographic component translates the aforementioned into the spatial realities of the planning area.

It is not the intention to repeat the Strategic Informants in this document. However, since the 2009 review, significant changes have been, or are being, made in the informants below. These will be expanded on in this document.

- **NLTA (Act 5 of 2009):** while this was already enacted by the last review, the implications of the new Act, and specific regulations published in relation to the Act, are now being unpacked in some detail. These refinements therefore need a more refined response.

- **PLTF:** The Provincial Land Transport Framework is currently being reviewed. Until approved by the Minister, the implications of this document cannot be formally incorporated in the CITP. It is, however, likely that the PLTF will be approved in time to be incorporated in the 2012 update of the CITP.

- **CTSDF:** The City's Spatial Development Framework has been endorsed by Council and is currently in the final stages of the approval in terms of the Land Use Planning Ordinance (No. 15 of 1985). This process is likely to be concluded in time to fully inform the 2012 review of the ITP.

- **Environmental Awareness and Strategies:** This is a key strategic informant that affects different aspects of society and has become a significant driver of integrated planning. This update will reflect on the documents and issues affecting transport planning that were introduced since the 2009 review.

2.2 Legislative and Policy Informants

2.2.1 National Land Transport Act (NLTA)

The responsibilities of the Planning Authority in terms of the NLTA, has required that the Transport Department at the City engage in feasibility and due diligence investigations, to guide inter-governmental processes and decisions on the institutional funding and devolution reforms, as indicated in the NLTA.

The focus areas that are currently being investigated are:

- The Institutional Reform required within the City to accept and fulfil the functions of the NLTA that now reside with the City as Planning Authority, includes the establishment of an Inter-modal Planning Committee (IPC) and a Land Transport Advisory Board (LATB).

- The Funding Reform required by the above institutional reform and the need to secure dedicated funding to operate, maintain and further develop the transport system, includes the establishment of a Municipal Land Transport Fund (MLTF);

- Establishing an Integrated Public Transport Network (IPTN), including an Integrated Rapid Public Transport Network and associated Park & Ride Services;

- The feasibility and potential devolution and assignment of the Operating Licensing Function from Provincial level to the Metropolitan Authority;

- The feasibility and potential devolution and assignment of the Subsidy Function for Commuter Bus Contracts, Passenger Rail and other contracting authority functions.

2.2.2 Draft Provincial Land Transport Framework 2011 – 2016 (PLTF)

The PLTF presents a 2050 vision for the development of transport in the Western Cape. The following elements of this vision are relevant for Cape Town.

- Fully Integrated Rapid Public Transport Networks (IRPTN) in the higher-order urban regions of the Province.
- A Universally Accessible and Safe Public Transport system.
- A Well Maintained Road Network.
- A Sustainable, Efficient High Speed Rail Long Distance Public and Freight Transport Network.
- An efficient International Airport that links the rest of the World to the choice gateway of the African Continent.
- International-standard Ports and Logistics Systems.
- A Transport System that is resilient to peak oil.
- A Transport System that is fully integrated with land use.

The PLTF acknowledges the need to move towards regional network of cities and towns, where compact development should be supported by high quality transport linkages that accommodate the flow of passenger and goods in an efficient way.

Within this context, the future public transport system in the Western Cape is perceived to be a balanced intermodal public transport system, with multiple modes working together smoothly. Each mode has an ideal operating environment where the mode forms the most appropriate fit. For the City of Cape Town, it is envisaged that the Integrated Rapid Public Transport Networks (IRPTN) will consist of commuter rail and Bus Rapid Transit (BRT) that addresses missing links in the rail network. TDM should contribute to repositioning public transport as an attractive transport option.

The following goals and objectives will guide the Provincial Government during the validity of the PLTF. It should be noted that in order to achieve the goals and objectives set out here, collaborative efforts will be required from key transport role-players such as Municipalities, National Department of Transport, PRASA, SANRAL and Transnet. The Provincial Integrated Transport Steering Group is seen as the single coordinating and integrating body which will facilitate the achievement of the following goals and objectives of the Province:

- An efficient, accessible and integrated multimodal public transport system managed by capacitated and equipped municipal authorities
  - A 13% modal shift from private to public transport into Cape Town's CBD by 2014.
  - Increase the number of commuter rail train sets in operation to 117 by 2016.
  - Develop implementable safe and accessible mobility strategies and IPTNs in district municipalities by 2014.
  - Establish land-use incentives and NMT improvements around 10 underdeveloped public transport nodes of provincial significance by 2014 (Provincial Key Projects).
  - Fully implement a SNP accessible and multimodal IRT phase 1a by 2014.
  - Increase user satisfaction of public transport facilities by 25% by 2014.
  - Organise courses and seminars dealing with infrastructure management, transport planning and land-use planning for district municipalities by 2014.
  - Bring commuter rail network from D+ to a C maintenance level on A corridors by 2016.
  - Bring minibus taxi recapitalization rate on national level by 2016.

- NMT as a pivotal part of all forms of transport planning in urban and rural areas
  - Organise courses and seminars dealing with infrastructure management, transport planning and land-use planning for district municipalities by 2014.
  - Dedicated NMT Expanded Public Works Program projects by 2014.
  - Every provincial road project in the province must include a NMT component.
  - NMT Plans must be developed and implemented for each municipality of the Province, as a part of the mobility strategy and IPTN roll-out by 2014.
  - Dedicated cycle lanes in the Western Cape must be doubled by 2014.

- A well maintained and preserved transport system
  - Reduce the road transport infrastructure backlog by 16% by 2014.

  - Bring commuter rail network from D+ to a C maintenance level on A corridors by 2016.
  - Introduce economic decisions support tools to facilitate decision making with regard to road investment by 2014.

- A sustainable transport system
  - A 13% modal shift from private to public transport into Cape Town's CBD by 2014.
  - Shift in contestable freight haulage from road to rail by 10% by 2014.

- A safe transport system
  - Reduction of the number of fatalities on the Western Cape roads by 50% by 2014.
  - The provincial and the Cape metro incident management plan will be expanded to include lower roads by 2014.
  - Implementation of an integrated transport safety management system by 2014.
  - A transport system that supports the province as leading tourist destination
  - Introduce economic decisions support tools to facilitate decision making with regard to road investment by 2014.

The implication of the PLTF as strategic informant has not been included in this technical update, but it is recommended that the CITP 2012 - 2017 should move forward in the direction set out by the PLTF, by providing a local interpretation of the PLTF objectives. An improved alignment between provincial and local policy, will result in improved collaboration between these two spheres of government and improved leverage towards the National Department of Transport.

2.3 Energy and Environmental Informants

Section 4.7 in the current ITP deals with a comprehensive range of "baseline biophysical impacts". A biophysical impact that is increasing receiving more attention at present is human, population and health. A holistic transport response to these aspects is essential.

The following documents that deal with environmental issues relating to development and transport is analysed here, and should be read as expanding on the existing environmental discussion.

- NATMAP – The National Transport Master Plan 2050, which contains significant research on the matter.
- The National Strategy on Sustainable Development and Action Plan 2010 – 2014, published by the Department of Environmental Affairs as Government Gazette Notice 393 of 2010.
- A National climate change response strategy for South Africa, published by the Department of Environmental Affairs and Tourism in September 2004.
- The City of Cape Town's report on Sea Level Rise (SLR).

2.3.1 NATMAP

2.3.1.1 Background

The Energy and Environmental Working Group in the NATMAP process produced separate reports about these subjects. It also produced a Summary Report in which interdependencies between these and other planning issues are extracted (DoT, 2009). This section highlights key issues to consider for the preparation of Cape Town's updated ITP.

Six guiding principles were identified from their legislative framework, and relate to social, environmental and economic spheres within the context of sustainable development. The guiding principles are:

- Sustainable development - that ecologically sustainable development and use of natural resources must be secured while doing justifiable economic and social development.
- Equitable access and poverty alleviation.
- Land use, management and human settlement - promotion of the development of compact sustainable human settlements and integrated settlement patterns, while discouraging urban sprawl.
- Protection of natural resources and human health and safety.
- Energy security, efficiency and diversification.
- Greenhouse gas emissions - compliance with international agreements pertaining to energy matters and greenhouse gas mitigation.

2.3.1.2 Energy

The energy used in South Africa is summarised below, with Table 2.1 illustrating the energy consumption from different sources by the different transport sectors.

Table 2.1: Energy use in Transportation in South Africa

Transport Sector	Petroleum		Electricity		Total	
	TJ	%	TJ	%	TJ	%
International civil aviation	35178	4.9			35178	4.8
Domestic air transport	43510	6.1	180	1.4	43690	6
Road	**632489**	**88.6**	**71**	**0.6**	**632560**	**87.1**
Rail	2892	0.4	11810	94.3	14702	2
Pipeline transport			284	2.3	284	0.04
Internal navigation			181	1.4	181	0.02
Non- specified			1	0	1	0
Total	714069	100	12527	100	726596	100

Source: NATMAP (2010)

2.3.1.3 Environmental

The following environmental objectives (as amended to be relevant to Cape Town) were identified in the reports:

- Minimize noise annoyance for the population.
- Understanding the contribution of vehicles emissions to air quality.
- Reduce emissions of the gasses responsible for global climate change.

- Transport consumes large areas for the construction of roads, railways, airports and ports, excluding them from other uses.
- Preserve townscape (the physical and social characteristics of the built and un-built urban environment and the way in which we perceive those characteristics).
- Preserving heritage resources.
- Fully comply with international guidelines and national environmental legislation.
- Preserve water environment according to the importance of its attributes.
- Promote health through physical fitness by enabling people to have an increased physical activity.

2.3.1.4 NATMAP Conclusions and Recommendations

The main conclusions and recommendations from the report that are relevant to the City of Cape Town are:

- In the short term there is scope for effecting savings on liquid fuel through more effective use of private cars (carpooling, lower speed limits, other traffic management measures).
- In the medium term a switching to non-oil based source of energy for transportation will have to be effected; electricity appears to hold the greatest potential, especially as such a small part of the system is currently electrically powered.
- Significant parts of the transport system need to be moved from liquid base to an alternative fuel base within the next 20 years.

Preparation to manage the changes properly has to start timeously (immediately). The immediate focus should be on Transport Demand Management, while longer term action should focus on a modal shift from road to rail, and implication from liquid fuel to electricity (coal). The following action is proposed:

- Short term (next three years)
  - Create an energy awareness programme
  - Promote non-motorized transportation
  - Promote fuel efficient measures
  - Plan for new long term transportation infrastructure

- Medium term (up to seven years)
  - Continue further public education and awareness programme
  - Finalise long distance infrastructure investment and planning
  - Implement transport mode shift
  - Review earlier short term measures

- Long term (up to ten years)
  - Implement long distance infrastructure
  - Expand the quantity of goods and number of people affected by transport mode shifts
  - Review earlier medium term measures

2.3.2 National Strategy on Sustainable Development (NSSD) and Action Plan

The NSSD Plan defines Sustainable Development as the selection and implication of a development option which allows for the achievement of appropriate and justifiable social

and economic goals (based on meeting basic needs and equity) without compromising the natural system on which it is based.

2.3.2.1 Directing the development path towards sustainability

Historically most of South Africa's towns and cities have been characterised by urban sprawl, with the predominant housing model being of detached, single family houses. Furthermore, communities are not integrated, with low-income housing and informal settlement generally located on the outskirts of urban areas, far removed from job opportunities and community services, while at the same time, safe and efficient public transport is generally lacking.

In this context, the following are suggested as strategic goals:

- To reduce resource use as well as the carbon intensity of the economy.
- To provide equal access to resource and decent quality of life for all citizens.
- To ensure effective integration of sustainability concerns into all policies, planning and decision – making at national, provincial and local levels.

2.3.2.2 The action plan and National Framework for Sustainable Development (NFSD) strategic priorities

The key directives from this document are:

- Sustaining our ecosystem and using natural resources efficiently (Priority 2)
- Towards a Green Economy (Priority 3)
- Building sustainable communities (Priority 4)
- Responding effectively to Climate Change (Priority 5)

Road infrastructure places a much higher demand on natural resources than rail, both in initial construction and in continuing maintenance over the life of the infrastructure. Roads used by buses, e.g. BRT, require much less materials, and energy in construction, than the roads required to move the same amount of people in private cars. It therefore follows that, from a natural resources point of view, dedicated public transport infrastructure, especially rail is preferred above roads for general traffic.

2.3.3 National Climate Change Response Strategy for South Africa

This document discusses the issues necessary to deal with the challenges expected from climate change at a strategic, national level. It makes reference to the following interventions and objective regarding transport, which would impact at a metropolitan level:

- Intervention: Initiating the Government's joint implementation strategy for the control of exhaust emissions from road going vehicles.

- Intervention: Implement a transport sector mitigation programme through the National Department of Transport, in conjunction with the Government's energy efficient strategy (2003) and the joint implementation strategy for the control of exhaust emissions from road going vehicles. Response measures should include addressing issues of urban and peri-urban planning in relation to passenger and commercial transport.

On the passenger transport side, the most significant challenge is to improve the currently inadequate public transport system significantly enough to retain the daily commuters it currently carries. Mitigation options include public transport initiatives, energy efficiency improvements, fuel switching and new propulsion technologies.

- Fuel switching could include liquefied petroleum gas, biochemical fuels, compressed natural gas and electric and hybrid electric propulsion technology.

- Travel demand management offers significant opportunity to mitigate growth of emission from private car users.

- The management of public transport systems must be radically improved. Measures include provision of new vehicles, security on public transport and in non-motorized transport use, integration of modes and their timetables / services, the introduction of clear information and customer service training, increased maintenance of vehicles, stops and stations, and formalisation of the minibus taxi sector.

- Municipalities and operators should be encouraged to introduce a wide variety of more efficient public transport propulsion systems and pilot alternative fuel use. These technologies and systems include bus rapid transit and bio fuels.

- Non-motorized transport can be encouraged through appropriate planning, provision of infrastructure, and marketing of these emission-free, low cost modes.

- Objective: Improve the level of education, training and awareness regarding climate change in South Africa and capacitate the government and other sectors to deal with climate change issues effectively to the benefit of the country.

2.3.4 City of Cape Town Sea Level Rise Study

This study evaluates scenarios about the potential impact of sea level rise and more frequent storm surges, on developments along the Cape Town coastline. The threat to private and public infrastructure (buildings, roads and rail) is that these become temporarily inaccessible or unsafe to use. It also results in damage which could eventually result in the infrastructure becoming too costly to protect against or repair. The long term impact is that certain pieces of infrastructure may have to be abandoned and relocated to areas not affected by this threat. This study should inform capital investment and asset maintenance decisions.

2.4 Geographic Informants

2.4.1 Provincial Spatial Development Framework

Cape Town is a significant node in the spatial context of the Western Cape, housing more than 50% of the population in the province. Significant levels of activity have occurred between the metro area and towns like Stellenbosch and Paarl for a long time. However, the level of activities and interaction is increasing up to Saldanha in the north, Worcester in the east and Hermanus in the south.

2.4.2 Cape Town Spatial Development Framework (SDF)

The City's SDF was endorsed by Council in April 2011, and is currently reviewed by the Provincial Department for approval.

The SDF discusses the issue of the compact city, development corridors - especially the Urban Core - which broadly runs between the CBD and Bellville, and includes Epping Industrial Area and Montague Gardens. The key strategies from the SDF are:

- Plan for employment and improve access to economic opportunities.
  - The economy should be encouraged to concentrate in highly accessible locations.
  - The "urban core", especially declining areas thereof must be supported through infrastructural investment.
  - SMME development must be supported and encouraged by facilitating access to bigger market places for these enterprises.
  - Regional linkages and the city's function within the Western Cape Province need to be strengthened.

- Manage urban growth and create a balance between urban development and environmental protection.
  - The City will have to adopt an approach that balances growth.
  - Urban development will be shaped by incremental responses to the need for secure tenure and housing in Cape Town.
  - The need to identify the areas that are most suitable for development, and those that should be avoided.
  - The need to be economically resilient in adapting to, and mitigating, the anticipated effects of climate change.
  - Adaptation measures need to be put in place to address the impacts of climate change on urban infrastructure, biodiversity and livelihoods.

- Build an inclusive, integrated, vibrant city.
  - Future urban growth needs to integrate different income groups to redress social and land use fragmentation, and create environments that provide a mix of land uses.
  - To address the housing backlog, the City should identify land for subsidised and gap housing, and proactively support publicly led land reform and the delivery of new housing opportunities.
  - The quality of the city's built form must be enhanced, and good urban design which orders the relationship between people, urban space and the built, cultural and natural environment should be promoted.
  - Cape Town's heritage, cultural landscapes and unique sense of place are fundamental to the identity and character of Cape Town.

The key responses required from the City's ITP are interpreted as the following:

- Missing links in public transport network should be added to connect the urban nodes and support intensification areas.

- Assets management (infrastructure and facilities) should receive additional attention in intensification areas in order to retain existing employment opportunities and attract new development.
- Public transport should be upgraded to address the existing demand and to provide an alternative for existing car users.
- Transport investment should be logically aligned with intensification corridors and support a higher level of activities.
- NMT links should be added to logically extent the catchment area of public transport stations and improve the inclusiveness of existing neighbourhoods.
- The existing freight rail linkages in the city should be protected so that future modal shift from road to rail is not compromised.
- Inter-municipal planning should be improved within the functional region of Cape Town (Saldanha Bay, West Coast, Swartland, Drakenstein, Stellenbosch, Theewaterskloof and Overstrand).

2.5 Summary of Strategic Informants

This section summarises the objectives, goals and strategic guidance that are derived from the Strategic Informants, both the above and those discussed in the current ITP.

- *City structuring.* The City needs to restructure in order to effectively plan for and manage the operation of all public transport services operating within the Municipal Area, given that it takes over key functions currently provided under provincial or national government. This includes taking over the functions for issuing Operating Licencing and Contracting Transport Services (NLTA).

- *Land transport system funding*. The NLTA provides for significant changes to the future funding of land transport systems. The mechanisms, funding sources, and structures necessary to effectively deal with this responsibility require clear policy and strategic direction from the CITP.

- *Network Intermodal Planning.* The ITP need to include the development of an IPTN for the City as a key overarching strategy to guide sector plans (NLTA). This would include a description of the role of different modes within the multi-modal nature of the IPTN (PLTF).

- *Integrated planning*. The ITP shall be guided by the need to integrate land use and transport planning, both in terms of optimising current transport infrastructure, and to ensure that future development centres on the appropriate public transport mode (PLTF, DFA, MSA).

- *Densification*. The need to reduce overall transport demand, as well as to increase the share of NMT and public transport, are recurring themes throughout the informants. This includes the need for appropriate levels of infill development and brownfield re-development to contain urban sprawl (NSSD, DDS).

- *Functional transport zone*. The ITP should clarify the planning and coordinating role of the City of Cape Town in relation to its neighbours that forms part of its functional transport zone (PLTF, NSDP, WCRC).

- *Environmental challenges.* Transport planning should take due cognisance of the vast array of environmental and energy challenges that demands an urgent change in the way the transport system is developed from hereon. Strategies should result in reduced air and noise pollution by reducing vehicle emissions and increasing the use of public and non-motorised transport (NLTA, PLTF, NEMA, PSDF).

- *Lower energy demand.* The development of the transport system should ensure a lower overall demand on energy, as well as a substitution of fossil fuels with more sustainable alternatives (NATMAP, PLTF). A target of 9% reduction by 2015 was set in the NSSD.

- *Data collection*. The role of data collection and management should be emphasized to ensure it to provide the basis for the provision of sound transport policy and modelling (PLTF).

- *Poverty and unemployment*. Transport planning, as part of the City's IDP, should contribute to halving poverty and unemployment by 2014, as well as to achieving a 6% growth rate in GDP (ASGISA).

- *Redressing imbalances.* Transport should contribute to the process of redressing the legacy of apartheid spatial planning (PSDF).

- *Spatial realities*. The Draft CTSDF compels the ITP to respond to the spatial realities of transport needs within the City. Achieving the operational potential of transport infrastructure requires appropriate responses from the surrounding land use. This plan will address the Density, Diversity and Design elements required to create a sustainable transport system for the (CTSDF).

- *Local Area Transport Plans*. While becoming more geographically relevant, the ITP cannot contain detailed project planning information for the entire metropolitan area. It is therefore necessary to produce district-level, "Local Area Transport Plans" that would show in more detail how the strategies adopted in the ITP will be implemented in different sections of the City. These need to integrate and align with the *District Spatial Plans* developed for the same reasons from the CTSDF.

- *Lower transport emissions*. Developing the transport system should ensure lower emissions are generated in the human space, and rather be produced away from where transport services are provided (NATMAP, PLTF).

- *Sea level rise*. Transport infrastructure currently under threat of sea level rise of increased flooding should be protected, rebuilt to higher standards or relocated to secure its acceptable operational integrity (SLR).

- *NMT and Public Transport.* Larger reliance should be placed on NMT and public transport usage to contribute to the overall health and fitness of the population.

- *Accident cost*. Reduce the annual accident cost, which exceeds R1.9 billion in Cape Town, through strategic investment that will improve the overall safety of the transport system. I.e., select strategies that have a proven record of safety in transport system design.

It must be noted that these strategic informants provide goals and objectives that are not always aligned. It is necessary to ensure that alignment is improved during the preparation of the ITP 2012 - 2017. The output of this analysis should inform the formulation of the vision and goals.

Finally, the strategic informants section should include a summary of the integration elements of other ITPs in the functional region of Cape Town. The local municipalities that are part of the functional region are Saldanha Bay, West Coast, Swartland, Drakenstein, Stellenbosch, Theewaterskloof and Overstrand.

3. TRANSPORT VISION, GOALS AND OBJECTIVES

3.1 Introduction

While the CITP is a plan of action for a fixed period, it should be driven by a longer term vision which cannot be reached within the planning period. As such, while the vision and goals should be clear and attainable, they will have a longer horizon than the strategies, programmes and projects that define the plan.

3.2 Vision

The current vision for transport in the City of Cape Town reads as follows:

"A world class sustainable transport system that moves all its people and goods effectively, efficiently, safely and affordably"

A world class urban transport system comprise of a mix of modes that serves its population and visitors in a manner that allows universal accessibility, and a choice of modes to a wide variety of opportunities. At present the Public Transport System in Cape Town is under severe pressure with aging bus and rail fleet. Revitalisation of both the bus and taxi fleets has started, but newer vehicles typically expanded the fleets, while old vehicles are not replaced. The public transport system is not a viable alternative to the car for many trip purposes, while those compelled to use it are subjected to severe overcrowding low safety standards.

In their landmark study of sustainability of cities, "*Sustainability and Cities: Overcoming Automobile Dependence*", Kenworthy and Newman (1998) describes the correlation between a City's GDP and the urban form, with specific reference to the efficiency of its public transport system. As per the title, they define a world-class, sustainable transport system as one where the population is not dependant on a car to have access to opportunities.

3.3 Goals

The transport goals discussed in section 2.3 of the current document are summarised as:

- Develop a more compact city where land use and transport effectively support sustainability.

- Develop a quality transport system for economically disadvantaged that also provide a competitive alternative to the private vehicle.

- Ensure that the transport system is fully integrated and multi-modal for the optimal movement of all people and goods.

- Ensure that the transport system becomes energy and environmentally sustainable, by being able to adapt to technological innovation, while making optimal use of available technologies.

- The system design should discourage the use of inefficient modes, such as the private car, for trips that are better suited by walking, cycling and public transport modes.

- Ensure that the system will be universally accessible to the full spectrum of able and disabled users of all ages, including those who have access to, but choose not to use a private car.

- Develop a freight transport system that will allow seamless movement of goods to, from and within the City, considering the need to maximise proportion of goods transported by rail.

3.4 Objectives

The current objectives are listed below.

- To promote the systematic reduction of fatal and serious injury accidents on the transport system
- To promote travel demand management measures, that limit private car usage
- To align transport and land use planning to bring about a land-use pattern where the necessity to travel, especially by car, is minimised
- To promote sustainable travel patterns by encouraging walking, cycling and the use of public transport
- To improve safety and security at public transport interchanges, station car parks, and en-route to interchanges and stations.
- To provide better maintenance of facilities
- To provide non-motorised transport facilities and include their requirements in Traffic Impact Studies.
- To protect the environment from pollution through reduced vehicle emissions
- To manage the road network so that current road space utilisation is optimised, and to only invest in new roads where it provides accessibility and support to public transport.
- To promote and incorporate the Universal Design principle of design and construction of transport infrastructure and public transport services.
- To support the use of rail for freight use and to manage road based freight vehicles.
- To provide safe and convenient cycle and motor-cycle parking at stations, leisure facilities, public buildings and within employment areas, such as central business districts (CBD‘s).
- To apply reduced parking standards for developments in CBD‘s and that are on major public transport routes.

- To make better use of existing parking facilities – municipal and privately owned car parks should be made available for variable land use developments to increase their utilisation and return to the City.
- To provide safe and affordable Park and Ride facilities at stations and other key sites.
- To provide safe access to new developments through the application of the Roads Access Policy.
- To incorporate self-enforcing traffic calming measures in the design of new residential areas, and to apply the traffic calming policy for existing areas.
- To integrate land-use and transport.

3.5 Way forward

There should be a logical flow from the Vision, then Goals to Objectives and thereon to Strategies through to Programmes and Projects. The preparation of Goals and Objectives should be informed by the strategic informants, the transport register and the needs assessment in order to provide a framework that addresses both the prevailing situation in the City of Cape Town and the influential (policy) developments.

It should be noted that the current update will not prepare new KPIs, but acknowledges that the existing KPIs have limited value. It is recommended that the ITP 2012 – 2017 will include a set of KPIs that are logically aligned with goals (desired end state) and objectives (quantifiable objectives). This will ensure that KPIs can flow logically from the goals and objectives, such as has been incorporated in the PLTF.

In addition, the ITP 2012 – 2017 will also endeavour to respond comprehensively to the principles and framework of the SMART (specific, measureable, attainable, relevant, time-bound) approach.

4. TRANSPORT REGISTER

The Guideline for the preparation of a CITP (DoT, 2009) proposes that the data required for the planning of transport operations and infrastructure be presented in the following categories:

a) Demographic and socio-economic: Dashboard indicators; Km Road & Rail; train, bus, MBT, car fleets; Volume passengers per mode per peak / day;

b) General overview of transportation system demand and supply: volume; travel time; cost;

c) Description of the commuter public transport system: Seat-km per rail, bus, MBT, car in AM Peak;

d) Description of other public transport services: metered taxi, Dial-a-Ride; NMT;

e) Description of institutional and organisational set-up of public transport industry: City Planning Authority; Provincial Government Bus Subsidy & POLB; National DoT – PRASA; National Public Enterprises – TRANSNET;

f) A table providing detail of the major road network in relation to road authority, and giving detail of the length of road by functional class of road;

g) Freight transport: Provide a description of routes identified for travel by vehicles transporting abnormal loads and dangerous goods.

h) Financial information: State sources of income and expenditure by relevant municipal authority on all transport services and infrastructure within its area.

The MEC specifically requested for the information in (f) to be included in the update, while information referred to in (a) was included in the “Strategic Informants” chapter.

The Transport department is currently in the process of collecting new data on all aspects of the supply and revealed demand for transport through a structured surveys process. The current survey process does not include a household survey, through which potential latent and new demand patterns can be estimated.

For the final update of the ITP 2006 to 2011, this chapter will only reflect the changes that occurred since the 2009 update, including the specific items requested by the MEC in his approval.

4.1 Transport Network (Supply)

4.1.1 Rail Network

4.1.1.1 Infrastructure & Services

Figure 4.1 shows the passenger rail network with stations as it currently operates in the Western Cape region. While the majority of the network belongs to PRASA, the Monte vista Line and Main Line from Bellville through Kraaifontein and beyond (including all stations on these lines) belongs to Transnet. Metrorail operates on 914 km single line track of which 610 km belongs to PRASA and 304 km belongs to Transnet Freight Rail, serving 118 stations in mainly the Cape Town metropolitan area. The division of ownership of single line track is displayed in Figure 4.2.

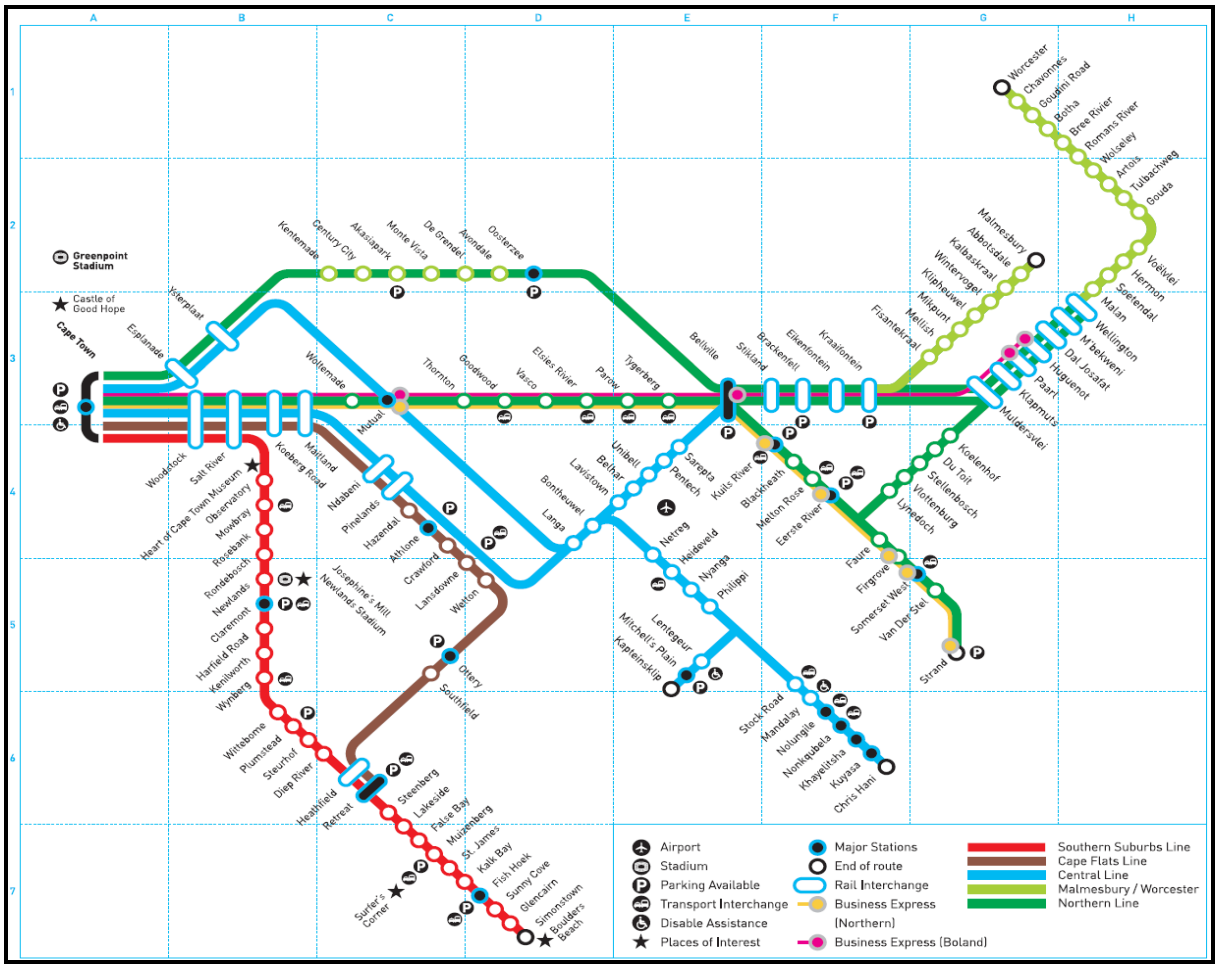


Figure 4.1: Map of Cape Town Metrorail Network

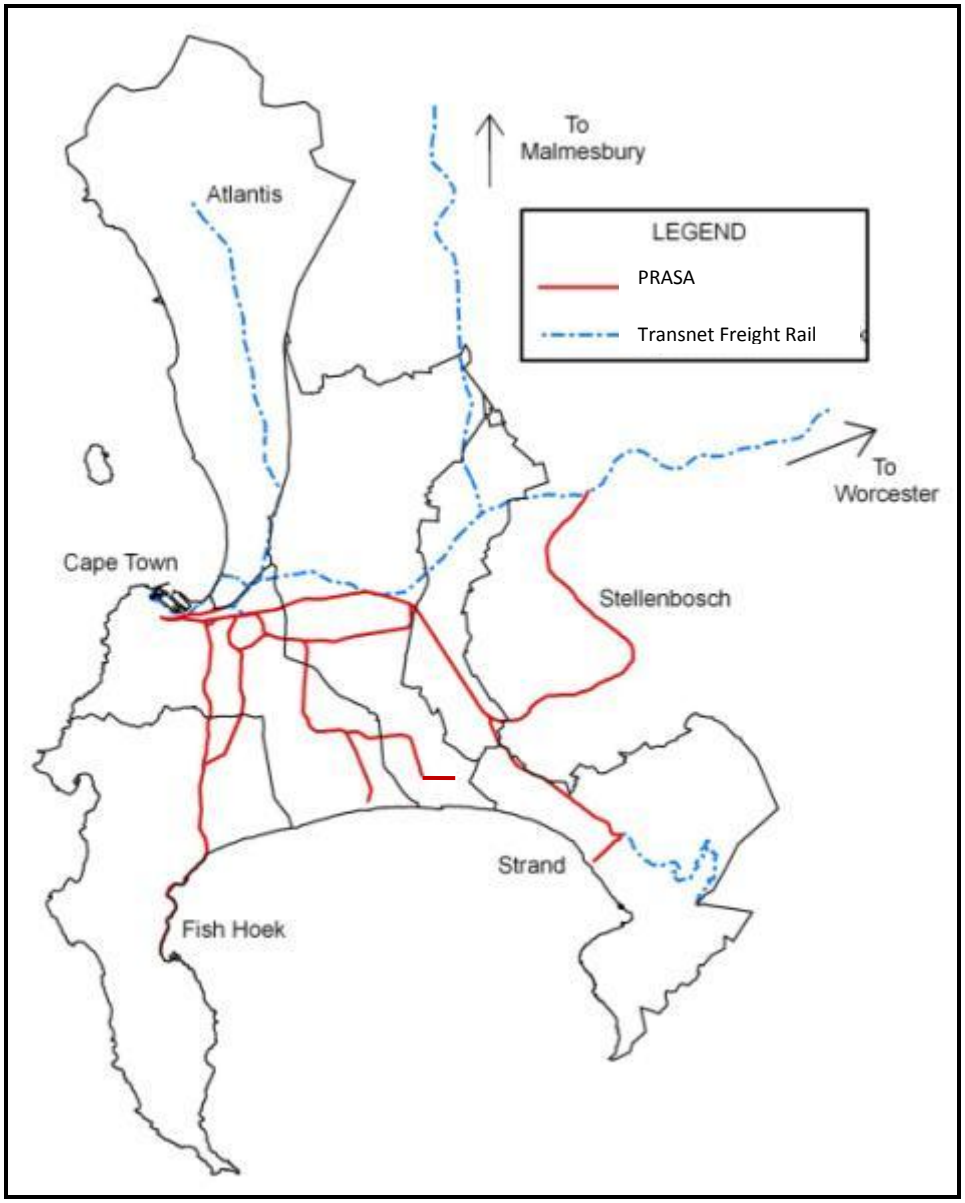


Figure 4.2: Overview of ownership within the Cape Metropolitan Area.

Source: Adapted from Metrorail 2008, Rail Inter-census 2008.

Future updates will include structural conditions of all rail corridors in Cape Town functional region according to the categories very good, good, fair, poor and very poor as displayed in the road network section.

4.1.1.2 Availability of train sets

The number of train sets in Cape Town reduced from about 95 in 1995 to about 85 in 2010, with the average age of rolling stock today exceeding 35 years. The reduction in rolling stock is the result of breakage, sabotage and vandalism which resulted in an inability to repair. In addition, some trains are running with fewer passenger coaches, so that the capacity of the remaining train sets is lower than 15 years back. The PRASA corporate plan 2010/11 – 2012/13 confirms this notion and states that in total 899 operational coaches in

February 2010 were available and consequently only 75 12-coach equivalent trains were available for service.

4.1.1.3 Punctuality

The punctuality (trains on time) of the train services are provided in Figure 4.3. While the target for punctuality is set at about 90%, the performance fluctuates between 80 and 90% for A and B corridors.

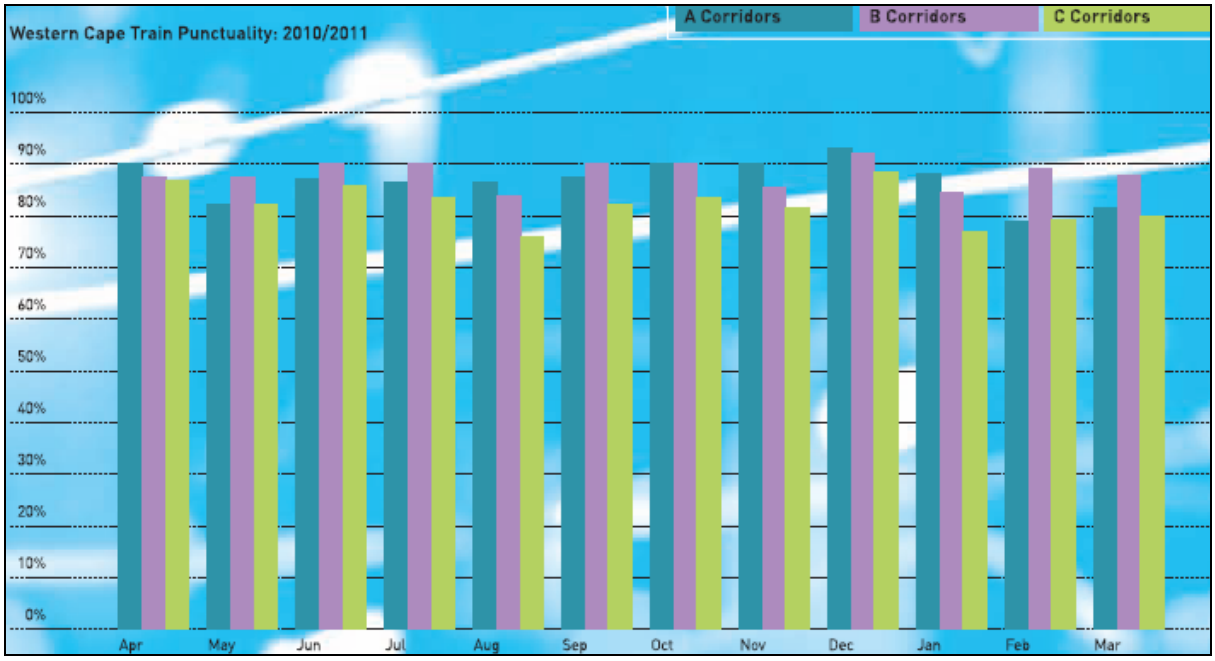


Figure 4.3: Train punctuality and train cancellation.

Source: PRASA annual report 2010/11.

Metrorail states that the three most important causes for lower punctuality and train cancellations in the City of Cape Town are (PRASA, 2009):

- Rolling stock (37%)
- Operations (12%)
- Signals (8%)

4.1.1.4 Business express train

The Metrorail concept of business express service aims to change the public's perception of rail by:

- demonstrating the comfort and convenience of train travel;
- providing commuters with a choice of rail services;
- restoring dignity to rail travel; and
- responding to customer willingness to pay for a superior service.

Table 4.1 provides an overview of business express trains in Cape Town. The services are one way in the morning and one way in the evening. During the off peak period, the train

sets are not being utilised. This constitutes inefficiency in the system which suffers from a severe shortage of train sets that can be deployed for several trips during the peak periods.

Table 4.1: Business Express trains in functional region of Cape Town

Service	Description
Boland Express	Route: Huguenot to Cape Town Seating Capacity: 300 Stopping Stations: Paarl, Kraaifontein, Brackenfell, Stikland, Mutual Route length: 62 km Travel time: 70 min (instead of 81 min) 13.5% faster than normal service
Premium Express	Route: Strand to Cape Town Seating Capacity: 252 Stopping Stations: Strand, Somerset West, Firgrove, Eerste River, Kuilsriver, Mutual, Cape Town Route length: 54 km Travel time: 65 min (instead of 90 min) 28% faster than normal service

Source: Metrorail

4.1.1.5 Rail Fares

The rail fares in the Western Cape area are distance based, and were increased with effect 1 April 2011 for the first time in more than four years. Increases ranged from about 5 to 15%, with higher percentage increases for shorter distances. There were also distance category changes resulting in increases of more than 15% for particular origin-destination trips. The current fares are shown in Table 4.2.

Compared to the regular Metrorail services, the fare level for the business expresses is approximately five times higher than Metro fares, and roughly 2- 2.5 times more than Metro Plus. Weekly and Monthly tickets are available for sale.

Table 4.2: Rail fares 1 April 2011

	Single		Week		Month	
KM Zone	**MetroPlus**	**Metro**	**MetroPlus**	**Metro**	**MetroPlus**	**Metro**
1-10	7.00	5.00	56.00	30.00	168.00	90.00
11-24	8.00	5.50	64.00	33.00	192.00	99.00
25-35	10.00	6.50	80.00	39.00	240.00	117.00
36-50	13.00	7.50	104.00	45.00	312.00	135.00
51 - 135	16.00	10.00	128.00	60.00	384.00	180.00
136 -200	20.00	15.00	160.00	90.00	480.00	270.00

Source: Metrorail

4.1.1.6 Long distance

In the 2010, Shosholoza Meyl suspended services claiming either contract difficulties (between Transnet Freight Rail and PRASA) or unreliable trains. At the end of 2010 a new schedule was introduced:

- Cape Town - Johannesburg Sitter & Sleeper Class Sunday, Wednesday and Friday.
- Cape Town - Durban Sleeper Class Wednesdays.
- Cape Town – Johannesburg Premier Class Tuesdays and Saturdays.

4.1.2 BRT Network and Services

This network consists of approximately 17 km of special reinforced and specially coloured pink roads for the exclusive use of Trunk Rapid Transit buses. At present the Phase 1A of the network runs from the Civic Station in Hertzog Boulevard via Culemborg and Paarden Eiland and along the R27 to Table View. Construction of the BRT lanes in the CBD is currently under construction.

The number and type of buses in the fleet at the end of November 2010 is shown in Table 4.3.

Table 4.3: Cape Town BRT fleet November 2010

Bus type	**Number**
18m Articulated	8
12m Standard	28
12m Airport adapted	7
Total	**43**

Source: MyCiTi business plan

There are currently 16 trunk stations on the network, with the Airport, Civic and Stadium stations representing the largest structures, with ticket sales and information booths. Beside the trunk stations there a number of feeder stops that provide side curb boarding. In the CBD area there are 16 feeder stops, while in the Table View area there are approximately 50 feeder stops. The feeder stops are not permanent and are currently used to test the market in certain areas. On-board ticket sales are available in feeder busses.

The current average speed is approximately 30 km per hour with average station spacing between the Civic Centre and Table View of 1 200 meters. The shortest spacing between stations on the 16 km trunk service is 400 meters between the Paarden Eiland and Neptune station.

The following services have been launched:

- On the **Gardens-Civic-Waterfront service** in the inner city, buses will run from 06:00 until 20:00 on weekdays, between 07:00 and 20:00 on Saturdays, and on Sundays and public holidays between 08:00 and 20:00.

- The **Table View-Civic Centre trunk service** will run between 05:45 and 21:00 on weekdays, between 06:45 and 21:00 on Saturdays, and on Sundays and public holidays between 07:45 and 21:00.
- The **Table View feeder routes** will operate between 05:45 and 21:30 on weekdays, between 06:45 and 21:30 on Saturdays, and on Sundays and public holidays between 07:45 and 21:30.

Figure 4.4: Phase 1A BRT network June 2011

4.1.3 Road Network

The extent of the road network in Cape Town in 2007, in terms of its surfacing, is shown in Table 4.4, while the length and proportion of bituminous roads in each of the functional classes is shown in Table 4.5. While the City is the responsible authority for planning of all road types, SANRAL and the Provincial Government are responsible for the maintenance and management of some of the National Roads (SANRAL) and the Trunk Roads (PGWC) within the city.

Table 4.4: Extent of Cape Town road network according to surface type

Surface type	Distance (km)	Percentage of total
Bituminous	9 392.4	95.5
Block paving	106.5	1.1
Concrete	123.2	1.2
Gravel	214.0	2.2
Total	**9 836.1**	100.0

Table 4.5: Length of functional road classes in Cape Town (bituminous)

Functional Class	Distance (km)	Percentage of total
Freeways	133.0	1.4%
Expressways	213.2	2.3%
Primary Arterials	553.1	5.9%
Secondary Arterials	983.2	10.5%
Tertiary Roads	1 442.9	15.4%
Minor Roads	6 066.8	64.6%
Total	**9 392.2**	**100.0**

The condition of the road network in Cape Town is measured and expressed in terms of the surfacing, structure and functional condition. The surfacing relates to the quality of the riding surface as well as its ability to act as an impermeable layer to prevent the ingress of water. The structure relates to the ability to withstand traffic loads, while the functional condition relates to the level of service currently provided to the road user.

The surface condition assessment is expressed in terms of the functional road classes, and is shown in Table 4.6. Table 4.7 shows the structural condition of roads for the 8 districts in the City. While 7% of roads are structurally in a Poor and Very Poor condition, only 2% of

surfaces are Poor or Very Poor. This typically occurs when a road structure has failed, even though it does not appear as bad due to some form of surface treatment.

Table 4.6: Surface condition of road classes in Cape Town

	Very Good	Good	Fair	Poor	Very Poor
Freeways	68	18	15	0	0
Expressways	69	20	11	1	0
Primary Arterials	63	25	11	1	0
Secondary Arterials	61	24	13	2	0
Tertiary Roads	60	27	11	2	0
Minor Roads	58	34	7	2	0
Total	**61**	**30**	**9**	**2**	**0**

Table 4.7: Structural conditions of all roads per district in Cape Town

	Very Good	Good	Fair	Poor	Very Poor
Athlone	61	24	6	7	2
Bellville	60	26	6	6	2
Blaauwberg	72	19	3	3	3
Cape Town	50	33	6	7	4
Khayelitsha	66	19	4	7	4
Kraaifontein	63	27	4	3	3
Plumstead	58	32	4	4	2
Somerset West	65	24	5	4	3
Total	**62**	**26**	**5**	**4**	**3**

Figure 4.5 shows the latest updated version of the City's Road Network Hierarchical Classification, dated 23 April 2010. While this map was not officially adopted by the Provincial Roads Department, it includes a significant update from the previous version that was included in the 2009 update of the ITP. These updates were the result of extensive consultation, including the following:

- A workshop for each of the 4 City regions with representation from the regional roads, land use planning and TIA and Development Control officials;
- Technical sessions among senior roads and transport planning officials within the City's Transport Department;
- Distribution to professionals from the consulting engineering industry;
- Distribution to the local office of SANRAL

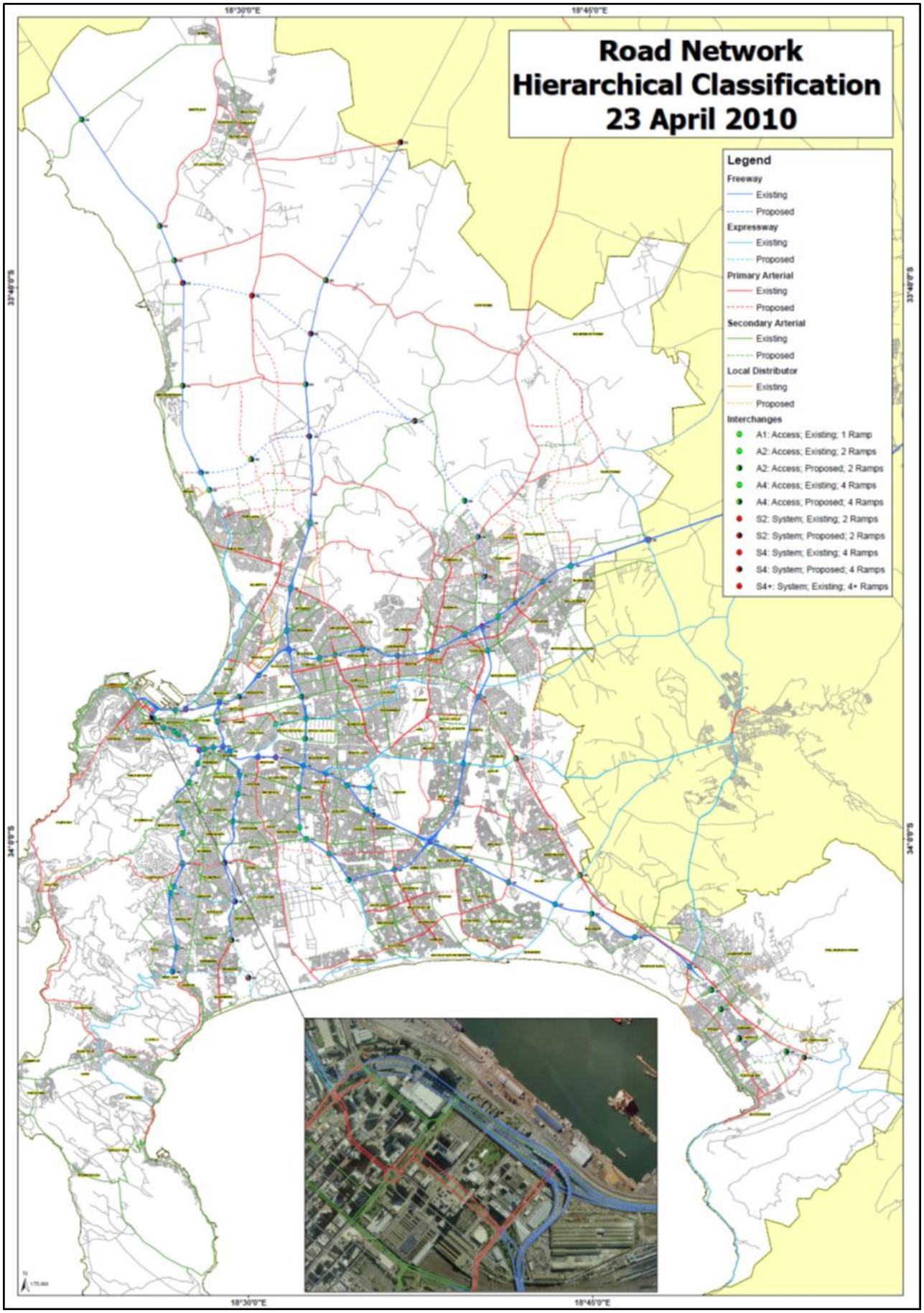

Road Network
Hierarchical Classification
23 April 2010
Legend
Freeway
Existing
Proposed
Expressway
Existing
Proposed
Primary Arterial
Existing
Proposed
Secondary Arterial
Existing
Proposed
Local Distributor
Existing
Proposed
Interchanges
A1: Access; Existing; 1 Ramp
A2: Access; Existing; 2 Ramps
A2: Access; Proposed; 2 Ramps
A4: Access; Existing; 4 Ramps
A4: Access; Proposed; 4 Ramps
S2: System; Existing; 2 Ramps
S2: System; Proposed; 2 Ramps
S4: System; Existing; 4 Ramps
S4: System; Proposed; 4 Ramps
S4+: System; Existing; 4+ Ramps
18°30'0"E
18°45'0"E
33°45'0"S
34°0'0"S

Figure 4.5: Road Network Hierarchical Classification

The plan will be submitted to the Provincial Roads Department and formally updated to be accurate by the end of 2011, to form the base map for the revised 2011 to 2016 ITP.

The map includes all Classes 1, 2 and 3 roads, together with some Class 4 roads. Only Class 4 roads that were assessed in terms of specific issues during the consultation process were included. The decision to include or exclude Class 4 roads from the map will be clarified during the final update process.

4.1.4 Non-Motorised Transport network

Figure 4.6 shows the City's High Order Pedestrian and Cycle Network.

4.1.5 Major Road Projects under Construction or Recently Completed

A description of major projects under construction or recently completed is attached in presentation format as Annexure B.

4.1.6 Other Transport Network Elements

In the Transport Management Centre the Transport Information Centre (TIC) is included, which consist of the public transport call centre, Traffic Management System with CCTV coverage and Variable Message Signs along the Freeway Network. The TIC is also linked to the City's Disaster Risk Management (DRM) function, which resulted in significant improvements in Incident Management.

4.1.7 Public Transport Facilities

Future updates of the ITP will include the status of the public transport facilities in Cape Town. For consistency, the categories very good, good, fair, poor, very poor should be considered.

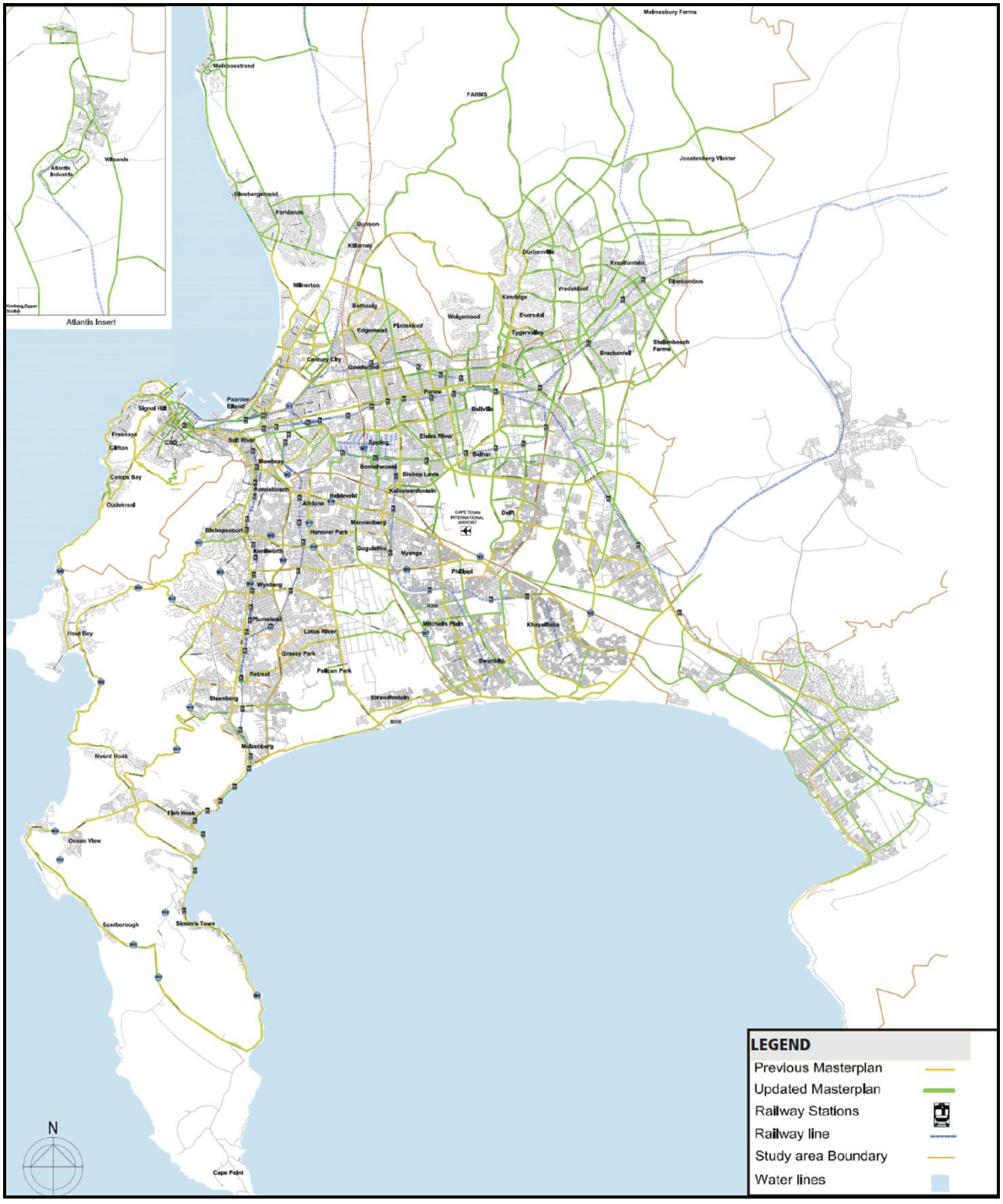


Figure 4.6: High Order Pedestrian and Cycle Network

4.2 Transport Network Utilisation (Revealed Demand)

As the heading indicates utilisation is only an indication of revealed demand on the prevailing supply for transport. This update therefore reflects on the utilisation of the current rail and road network, while latent demand is qualitatively discussed in the needs assessments chapter.

4.2.1 Rail Network Utilisation

According to the 2007 rail census, some 637,000 passengers are using the commuter rail system in the Western Cape. The inter-census in 2008 revealed that the ridership has grown by 20.2% over a single year. This has significant implications for the already overcrowded trains during peak hours. Figure 4.6 provides an overview of the train capacity utilisation for the main corridors based on the 2008 peak hour sample included in the inter-census 2008. The daily services to Malmesbury and Worcester are not included in this overview. It should be noted that this overview is based on a sample and a more detailed full census will be included in the review of the ITP when available.

The business express services between Paarl – CBD and Strand – CBD currently have a waiting list for monthly tickets, showing that this public transport service is well received by commuters.

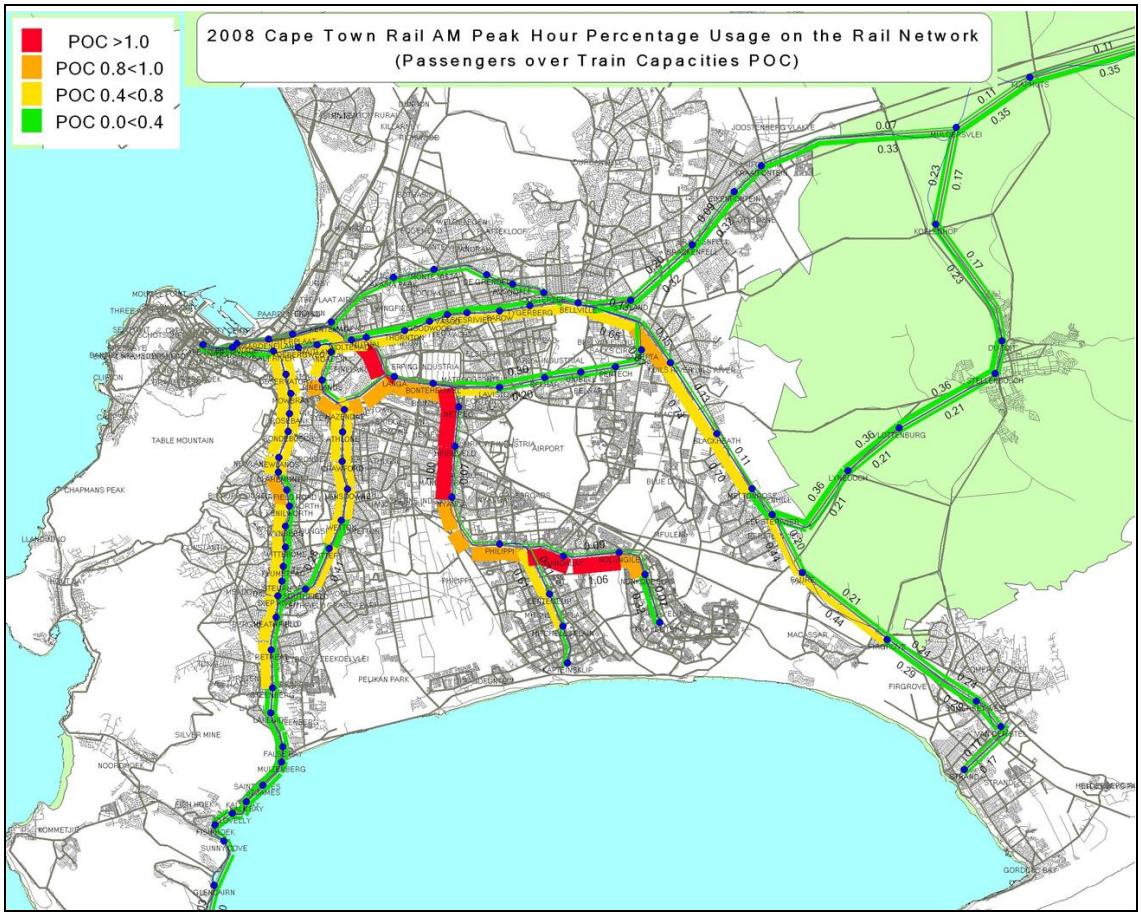


Figure 4.6: AM Peak hour Rail demand per line
Source: SARCC/Metrorail 2009

4.2.2 Road Network Utilisation

While specific detail is not available for Cape Town, in a typical metropolitan area, 80% of traffic occupies about 20% of the road network. The ITP 2012 – 2017 will discuss the extent of peak period creep on freeways over the recent past, as well as the "under-utilisation" of tertiary road network during the day. It is anticipated that the future update of the ITP will also include an extensive overview of the congested areas in the road network.

4.2.3 Road Based Modes

4.2.3.1 Bus

Table 4.8 provides an overview of the Golden Arrow Bus Services (GABS) statistics for 2010. While the introduction of the BRT service along the West Coast has replaced existing buses, it is not known to what corridors these busses have been redeployed.

Table 4-8: 2010 Statistics for Golden Arrow Bus Services (GABS)

Item	Description
Fleet (buses)	1126
Peak (buses)	1021
Departures per day	5419
Passengers carried (per year)	53,2 million per annum
Passengers carried (per day)	145 753 people per day
Kilometres travelled (per year)	65.9 million
Routes operated	900
Average trip length (km)	30.4
Average distance between stops (meters)	750
Staff	2560

Source: GABS

4.2.3.2 BRT

Two scheduled and two event related Bus Rapid Transit (BRT) (or Integrated Rapid Transit (IRT) as it is referred to in Cape Town to reflect the incorporation of the minibus taxi industry) services were introduced during the run-up to the 2010 FIFA World Cup (FWC). Subsequent to the FWC only the Airport service remained, with the inner-city service suspended in preparation of the necessary infrastructure.

Since May the Trunk route between Civic Centre and Table View is in operation. Two feeder routes are operational in Table View and one feeder service is running in the CBD between Orange road and Waterfront. Rates are currently established at R5 for feeder service single way and R10 for trunk single way including a free transfer to a feeder service.

The existing BRT components have been operational in isolation (CBD – airport link) or have recently commenced services. Therefore it is suggested to wait until the usage of the connected network is stabilised before proper analysis can be conducted.

4.2.4 Other Road Based Modes

No new data is currently available. This section will be updated in the review of the ITP for:

- Metered taxis
- Transport for learners
- Accessible transport

4.3 Freight Transport

The City is in the process of developing a Freight Strategy that will comprehensively deal with all aspects of freight transport planning within the City. The approach to this study, including the "Transport Register" component is included in Chapter 7 of the document.

4.4 Harbours

The 2008/2009 freight volumes in the functional region of Cape Town are included in Table 4.9.

Table 4.9: Freight volumes

	Port of Cape Town	**Port of Saldanha**
Total Bulk Handled (Metric Tonnes)	2 639 337	49 632 380
Total Break-bulk Handled (Metric Tonnes)	330 080	650 529
Total Cargo Handled (Metric Tonnes)	2 969 417	50 282 909

Source: Transnet 2008/09

4.5 Airports

Table 4.10 displays utilisation of the Cape Town International Airport (CTIA) in million annual passengers (MAP) for the past five years.

Table 4.10: Annual passenger volumes for the past five years through CTIA

Year	MAP			
	Domestic	Regional	International	Total
2005/06	5 503 690	149 489	1 167 661	6 820 840
2006/07	6 107 405	147 885	1 246 016	7 501 306
2007/08	6 950 061	145 858	1 309 822	8 405 741
2008/09	6 283 132	138 000	1 378 160	7 799 292
2009/10	6 391 079	122 584	1 284 990	7 798 653

Source: ACSA, Financial year from 1st of April to 31st March

Significant upgrades that were made in preparation of the 2010 FIFA World Cup (FWC), included:

- Central passenger processing unit.
- Second multi-storey car park (4000 parking bays).
- Upgrade to the road system.
- This upgrade was completed by July 2010 and increased the capacity of the CTIA to 15 MAP.
- ACSA will continue to develop the airport to keep at least 5 years abreast of the demand.

The capacity of the CTIA:

- The declared capacity is 30 aircraft movements per hour (arrivals and departures combined based on 5 nautical miles spacing between aircraft).
- The ultimate capacity is 80 movements per hour with the addition of a second runway.
- Current terminal capacity 15 MAP (2010).
- Ultimate capacity 40 MAP.

4.6 Non-Motorised Transport

4.6.1 Non-motorised Transport (NMT)

Since Pedicabs started operating during the 2010 FIFA World Cup as a new mode, many applications have been received from operators to expand the use of this mode. The definition of the mode is being developed and operating licensing uncertainties are being resolved. These are discussed in more detail under the OLS component of the document.

A policy position on whether electrically enhanced personal mobility devices are classified as NMT, and allowed in or on NMT facilities will be finalised for the ITP 2012 - 2017.

4.7 Summary and Conclusions

The update of the register shows that only limited new information is available for this update. In the comprehensive review of the ITP this information will be updated, with special emphasis on:

- Status of public transport facilities.
- Institutional arrangement.
- Usage of the BRT trunk and feeder services.
- Cross linkages between data.
- Comparison of Cape Town with its peers. This also requires the register to be formatted in a way that it makes comparisons with other Metropolitan areas possible.

5. NEEDS ASSESSMENT

5.1 Introduction

The purpose of a needs assessment should highlight the deficiencies in the current system to meet existing and future demand. As an integrated approach to planning, the total demand for travel is quantified, and then the optimal technological solution(s) are sought to meet the stated objectives within the timeframes of affordability.

The Guideline for CITPs (DoT, 2009) requires that the transport needs of a community should be determined and adequately described, based on the following analysis:

- An interpretation of the Transport Information Register, for example the identification of communities with no access to public transport, or areas of the municipality where roads are unpaved or in poor condition (badly maintained);
- Public participation and stakeholder feedback; and
- Transport demand estimation, determined for example by modelling, surveys or estimations based on a Spatial Development Framework.

In this technical update of the ITP, the transport need assessment is used to provide a qualitative interpretation of the latent demand, which is the demand that is currently not materialising due to deficiencies in the land use and transport system. This will complement the revealed demand presented in the transport register. The qualitative interpretation will form input for discussion towards the preparation of the ITP 2012 - 2017.

5.2 Towards identification of latent demand

For the City of Cape Town, the transport deficiencies listed below have been identified, and needs to be acknowledged while analysing the revealed demand as presented in the register. It must be noted that these deficiencies have different meanings for different income groups in Cape Town.

Figure 5.1 provides an overview of the implication included in the Draft Spatial Development Framework.

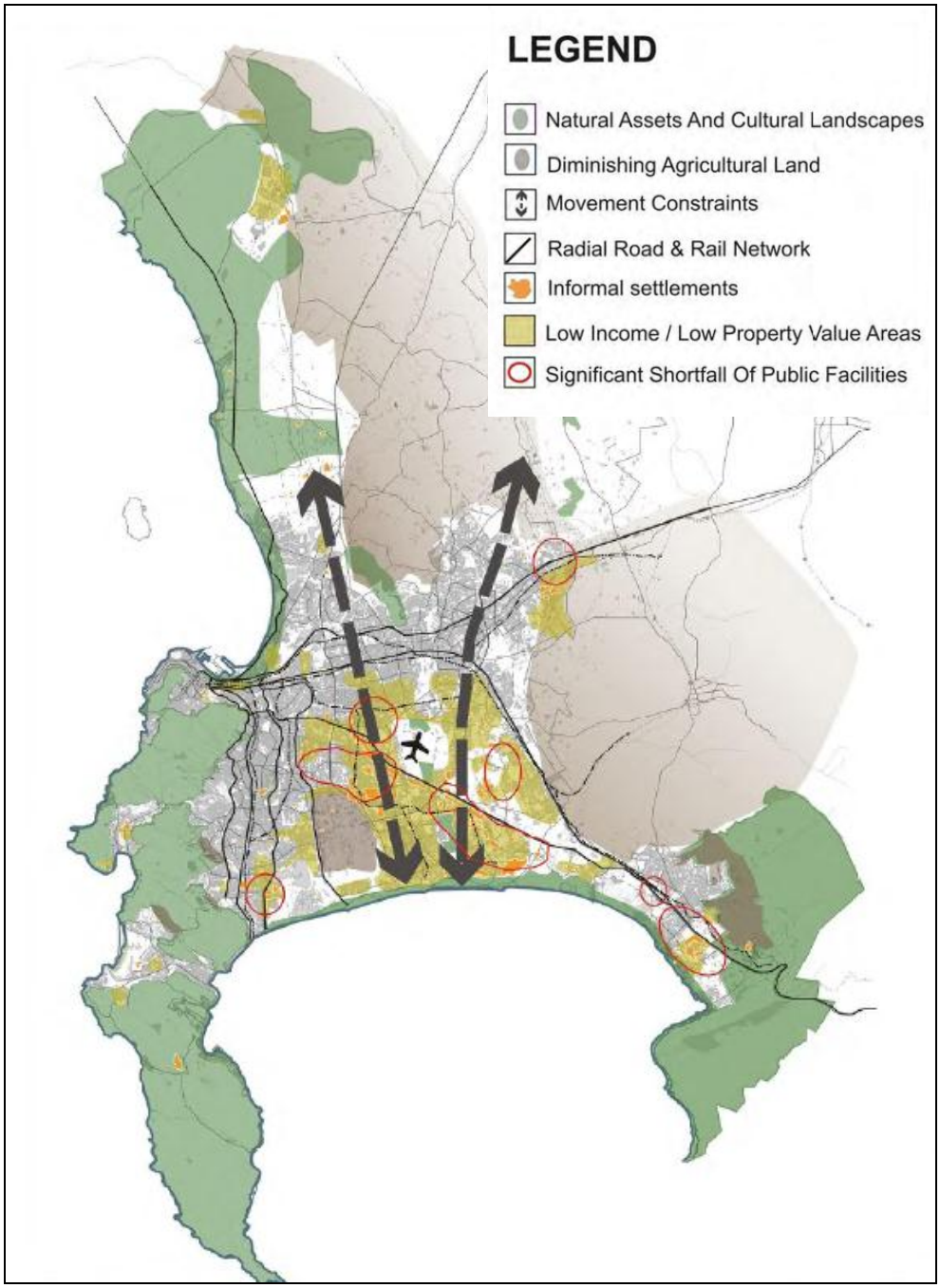


Figure 5.1: Spatial implications

The transport implications presented in this framework are:

- **Missing transport linkages between the Northern Suburbs and the South East.** Adequate public transport linkages between the South East area and the Economic Core and Northern Suburbs are missing. This contributes to a higher use of the taxi on this corridor. At the same time the lack of public transport connections between the Northern suburbs and the public transport backbone may results in higher car usage in this area.

- **Congested radially oriented rail service between the Metro South East area and the CBD, and sections on the Southern Suburb and Strand line.** Train services are congested resulting in an increased risk in terms of transport safety but also present low comfort standards for users. This encourages users to explore alternative, and less efficient, modes such as taxi and private car.

Besides the implications outlined above, the following deficiencies should be acknowledged while interpreting revealed demand:

- **Poor public transport quality of scheduled bus and commuter rail.** The lack of quality public transport that is competitive with the car in terms of level of service. The IRT system presents a huge improvement, but is not covering the majority of the city. Service intervals of commuter rail and scheduled bus services are peak oriented, which results in high forced car ridership.

- **High car ownership for low-income households.** The inability to rely on public transport for trips to work result in households prioritising the purchase of a car with their first available discretionary income. However, this prioritisation often comes at the expense of other household needs such as health and education for children.

- **Lack of NMT alternative for short distance travel.** The NMT network in Cape Town is receiving lots of attention, but proper links and NMT provision is still lacking in most areas. Short distance trips must be travelled by car due to the lack of links in the NMT network.

- **Poor perception of public transport facilities and fleet/rolling stock.** Public transport facilities such as bus terminals, taxi ranks, commuter rail stations and bus stops appear neglected and poorly managed. Even when public transport is appropriate, negative perceptions discourages and prevents car users from using public transport.

- **High cost of freight transport by rail.** Transport by rail is currently not competitive with road-based transport. High rail cost results in a continuous decline of rail freight, even while the freight rail network offers very good connectivity.

If the abovementioned transport deficiencies would not exist, travel pattern and mode choice will obviously be much different than currently captured in the register. Some changes that might be observed are:

- Reduced growth of car ownership in Cape Town.
- Reduction of number of trips by car.
- Modal share of public transport outside the low income areas will be much higher.
- Rail will be the appropriate modes for high capacity travel for both existing market and car users.
- More NMT use will take place in urban areas instead of short distance car trips.
- Increase of freight transport by rail.

Besides deficiencies that prevent travel patterns from happening that support the vision of the ITP, there are also transport constrains that support the realisation of City's vision. The

following constrains must be acknowledged as supportive developments for the realisation of the ITP's vision.

- **Limited parking provision & parking pricing.** The lack of sufficient parking bays in certain areas and high parking pricing causes people to refrain from making certain trips by car.

- **Increasing awareness of the importance of environmental sustainability.** There is an increasing awareness of sustainability worldwide. People are more aware about their own impact in the wealthier communities.

- **Rising fuel prices.** The increase of fuel prices in South Africa has implication for the budgets of householders and therefore on the choices they make. The increase of cost results in a growing cost sensitive user group – a group that might consider using public transport. Anecdotal evidence exists about a significant increase in rail users during periods of steep fuel price rises. Petrol prices are currently 60% higher than during the first years of the ITP (Figure 5.2).

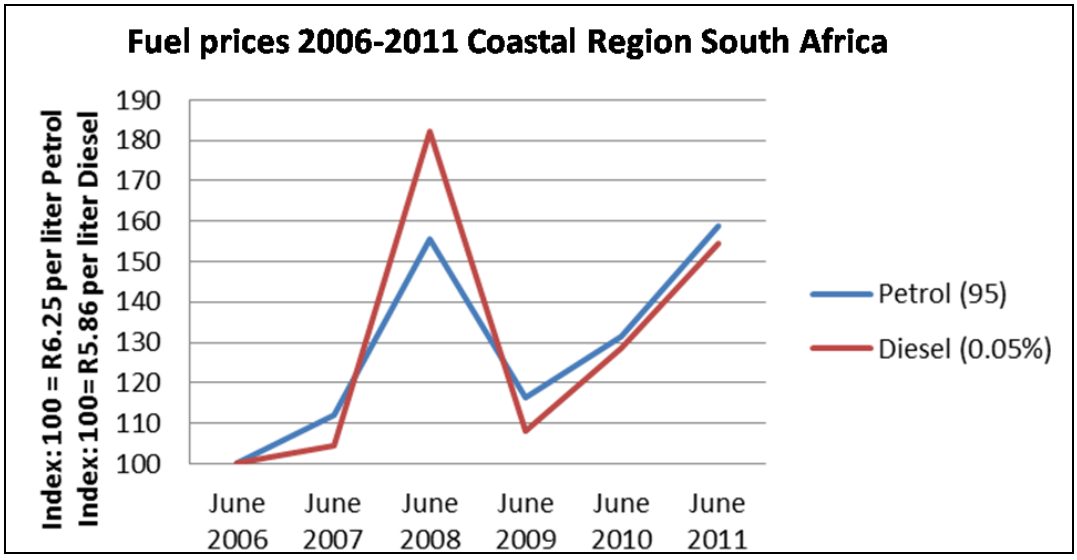


Figure 5.2: Development of fuel price during ITP 2006 - 2011 term
Source: Automobile Association of South Africa

Deficiencies should be understood while interpreting the transport register. It is however difficult to quantify latent demand causes by these deficiencies since multiple reasons exists why companies and individuals refrain from making certain trips or using certain modes.

5.3 Future Land Use pattern

It is recommended that the SDF implications be translated into a land use scenario that can be used in an EMME model exercise. This will provide an adequate interpretation of the transport implication of the spatial policy and the transport investment needed to accommodate the intentions of the SDF. It will further ensure that the ITP is properly

informed by the spatial intentions. This exercise will be included during the preparation of the ITP 2012 – 2017.

The following should inform integrated land use and transport planning:

- The Dorrington high growth scenario predicts a population of 5 million inhabitants by 2031. The medium growth scenario predicts 4.3 million inhabitants by 2031.
- The SDF aims for an average gross urban density for City of Cape Town of 25 dwelling units per hectare in the next 20-30 years.
- The current developed footprint of the City of Cape Town is 66 100 ha.
- The current urban densities range from about 120 dwelling units per hectare (du/ha) in Khayelitsha to less than 4 in Durbanville.
- Calculation shows that, even if we stay within the current developed footprint we cannot reach the desired density with the medium or even the high population growth scenarios (Table 5.1).

Table 5.1: Current densities and medium and high growth scenario

Date	Population	Dwelling units (du)	Average Residential density (du/ha)	Area (ha)
		3.7 inhabitants per / du		
2007	3,300,000	891,892	13.5	66,100
2011	3,820,000	1,032,432	15.6	66,100
		3.5 inhabitants per / du		
2031	5,000,000	1,428,571	21.6	66,100
2031	4,300,000	1,228,571	18.6	66,100

In total there is approximately 170 km of BRT and Commuter rail corridor in the metropolitan area. If this is corrected for overlap and undevelopable land such as where the line runs adjacent to the sea, say reduced by 10%, the following areas lay within the catchment of these public transport corridors:

- 2 000 meter distance from the corridors results in a surface of about 30 000 hectares.
- 400 meter distance from the corridors results in a surface of about 6 000 hectares.

A possible breakdown that could accommodate the high growth scenario is displayed in Table 5.2. The problem with this picture is that the very high densities that exist, and that are still being developed in the City, is more often than not, not situated within the 2 000 m buffer around the trunk transport system. The transport-density analysis will be expanded upon in the ITP 2012 – 2017.

Table 5.2: Indicative breakdown of densities

Area (ha)	Density (du/ha)	per/du	Population
5 000	70	3.8	1 330 000
10 000	35	3.5	1 225 000
19 000	20	3.5	1 330 000
21 000	12	3.3	813 600
11 000	10	3.3	363 000
66 000	**22**	**3.5**	**5 079 600**

5.4 Way forward

It is recommended that a more comprehensive needs assessment need to be developed, supported by as much quantitative information as possible. The needs assessment should inform the preparations of objectives.

6. STRATEGIC APPROACH

6.1 Introduction

The importance of integrating land use and transport is acknowledged in a wide body of literature. Land use and transport integration is supported by the optimal integration of modes into one coherent network. Cervero (2009) stated that the realisation of integrated development requires *strong leadership, forward-looking urban planning and efficient pricing of scarce resources* to make it happen.

The abovementioned means that the ITP should be consistent with other planning frameworks, such as the SDF and CIDP, but also ensure consistency and alignment over time. This creates the need to include a long-term framework that helps to guide transport investment beyond the validly period of the 5-year plan. The ITP should also acknowledge that scarce resources such as land, transport capacity and parking must be interpreted as a privilege rather than a right.

It must be acknowledged that three problems often prevent land use and transport integration from happening. According to Cervero (2004) these are financial, political and organisational barriers. In order to limit the possible impact of these barriers, the following should be promoted by the ITP 2012 - 2017:

- funding needs to be organised in such manner that the planning function and funding function are aligned effectively,
- stakeholders consulted and involved in the right order, and
- responsibilities should resort at the right organisations or departments.

6.2 Proposed Strategic Approach

Integrating transport modes requires planning the modes coherently, but it is also acknowledging the impact of certain improvement on other aspect of the transport system. In general, it can be argued that three aspects influence transport lifestyle, being: transport link quality, land use and chain mobility. These aspects are reciprocal and continuously influencing each other. Transport investment decisions must take not only the integration of these aspects into account, but also acknowledge the short, medium and long term impact of a change in any one of these aspects.

- Investment in major projects such as IRPTN encourages a different transport lifestyle, which results in favourable conditions for land use response and change of need in chain mobility requirements.
- Intensification of areas will result in higher concentration of activities and therefore the demand for public transport due to spatial constrains. The adequate facilitation of this demand requires the upgrade of public transport links. At the same time, higher densities require improvement of chain mobility that forms the last link between the higher order transport system and activities.

- Chain mobility influences the travel options people and businesses perceive and can determine the number of options that can be used. An improvement of chain mobility links, such as NMT, increases the demand for transport services and creates a more vibrant urban environment.

The logic here is that there is no *chicken* or *egg*, but a continuous and iterative process of interaction that needs to be *accommodated* and *balanced* in the ITP, and *reflected* in the transport investment it will guide. The balance of these aspects is different in each area. This mindset support the notion that the provision of transport capacity must coincide and enable intensification of land use and "Transit Orientated Development" in selected corridors, to maximise the utilisation of investment in infrastructure and operations. This requires strong alignment with the SDF in selecting corridors and areas for transport investment.

Figure 6.1 illustrates the interrelationships between the different components. It should be noted that each individual component contributes towards a transport lifestyle change, but only the three components that are fairly balanced will result in synergy and noticeable change. Again, the possible transport lifestyle change is different in each corridor or area in the city and does not necessarily result in a change in usage but it does change the perception and appreciation of other travel modes.

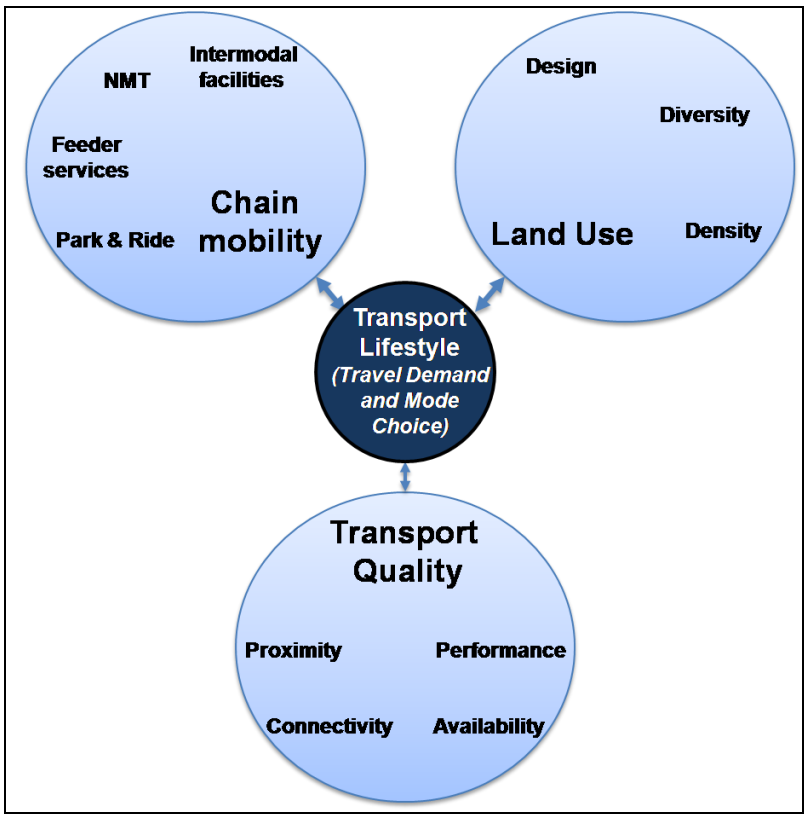


Figure 6.1: Changing the transport lifestyle (adapted from Van Dijk, 2008)

A number of strategies are selected to drive the execution of the plan by the different sectors in the transport realm. The following broad strategies are referred to, to achieve the objectives and goals:

- Institutional Reform
- Funding Reform
- Integrated Public Transport Network (IPTN)
- Travel Demand Management
- Improved Safety and Security
- Energy efficient transport alternatives
- Asset management

6.3 Institutional Reform

- The establishment of the Intermodal Planning Committee (IPC) and the municipal Land Transport Advisory Committee (LATB) that will ensure ongoing engagement and consultation with a wide range of stakeholders and partners.

- The City engages in processes to explore the options relating to devolution of operating subsidies to the City.

- The City engages in business improvement processes to respond to the institutional recommendations as per the NLTA.

6.4 Integrated Public Transport Network (IPTN)

IPTN refers to the defined network of PT services throughout the City. The network consists of a hierarchy of services depending on the capacity, speed of travel and type of destination served. These range from local access services or feeders to higher order public transport, at the bottom of the range, to the high capacity, high speed (or IRPTN) services at the top of the range.

Table 6.1 shows three levels of the hierarchy that are proposed based on the hierarchy identified in the SDF.

Table 6.1: IPTN hierarchy and components

SDF hierarchy	ITP hierarchy	Components
1) A rail service that provides a high-volume transit service;	IRPTN	**Trunk:** Rail and Dedicated BRT routes. The trunk system will form the primary, high speed and high capacity component of the transport system that links nodes generating large number of trips.
2) A trunk service provided by articulated and standard buses on dedicated right-of-way infrastructure ;		

3) A community (feeder and distribution) service provided by standard buses and smaller vehicles, which feed into the rapid bus and rail service, and provide access to community facilities; and	IPTN	**Feeders** for local access: BRT feeders and local MBT routes – lower capacity vehicles travelling in normal traffic at prevailing speeds. The feeder system acts as an extension of the Trunk to formally supplement the access range of the trunk to lower, but still significant nodes or routes of trip generation.
		Secondary main routes: These routes will serve lower order nodes for which trunk services are not warranted, and which fall outside the range where it can be linked effectively to the trunk with feeder services. It typically includes the current GABS routes with high occupancy vehicles, serving typically longer distances along routes that are not development corridors. Vehicles travel in normal mixed traffic at prevailing speeds, but measures could be introduced to give preference to buses at intersections, as a first phase to semi-dedicated right-of-way;

The total coverage of the public transport system, and which is described by the IPTN, should ensure that 90% of households are within a 400m walking distance from any access point to the network.

It is further important to find a balance between the three components of the system. Trunk services will have high frequency, high capacity services, supported by access interchanges offering a high quality environment, with a range of amenities. Feeder services will typically offer better peak hour service levels, with fewer services in the off peak. The secondary routes should offer reliable scheduled service to link these lower order nodes, while providing a reliable alternative to car travel.

As for any public transport system, feeding occurs with all modes, including walking, cycling, Park & Ride and Kiss & Ride, etc. Appropriate provision should be made at all access points to encourage the use of the desired feeder modes.

The IPTN process should carefully determine the appropriate mix of trunk and feeder services, especially to determine the optimal trunk network coverage. The optimisation requires a trade-off between trunk and feeders to maximise service levels, while also maximising utilisation. This balance should be encouraged by an appropriate supporting land use strategy.

The facilities served by these should be classified according to the level of routes served by it, as follows:

1. Class 1: Served by at least two trunk lines, excluding transfer stations that are not associated with a development node;

2. Class 2: Served by at least 1 Trunk service and interacts with main and or local access services;
3. Class 3: Served by Main and Local access services. Typically taxi ranks or PTI served by main bus and taxi services.

The Rapid routes is the core component of the IPTN, and describes the higher order PT links between key nodes, or in support of key corridors, typically situated between key nodes. A rapid public transport service can be supported by regular services that provide greater access to local destinations along the corridor. Figure 6.2 shows the existing and possible new links in the City's Integrated Rapid Public Transport Network.

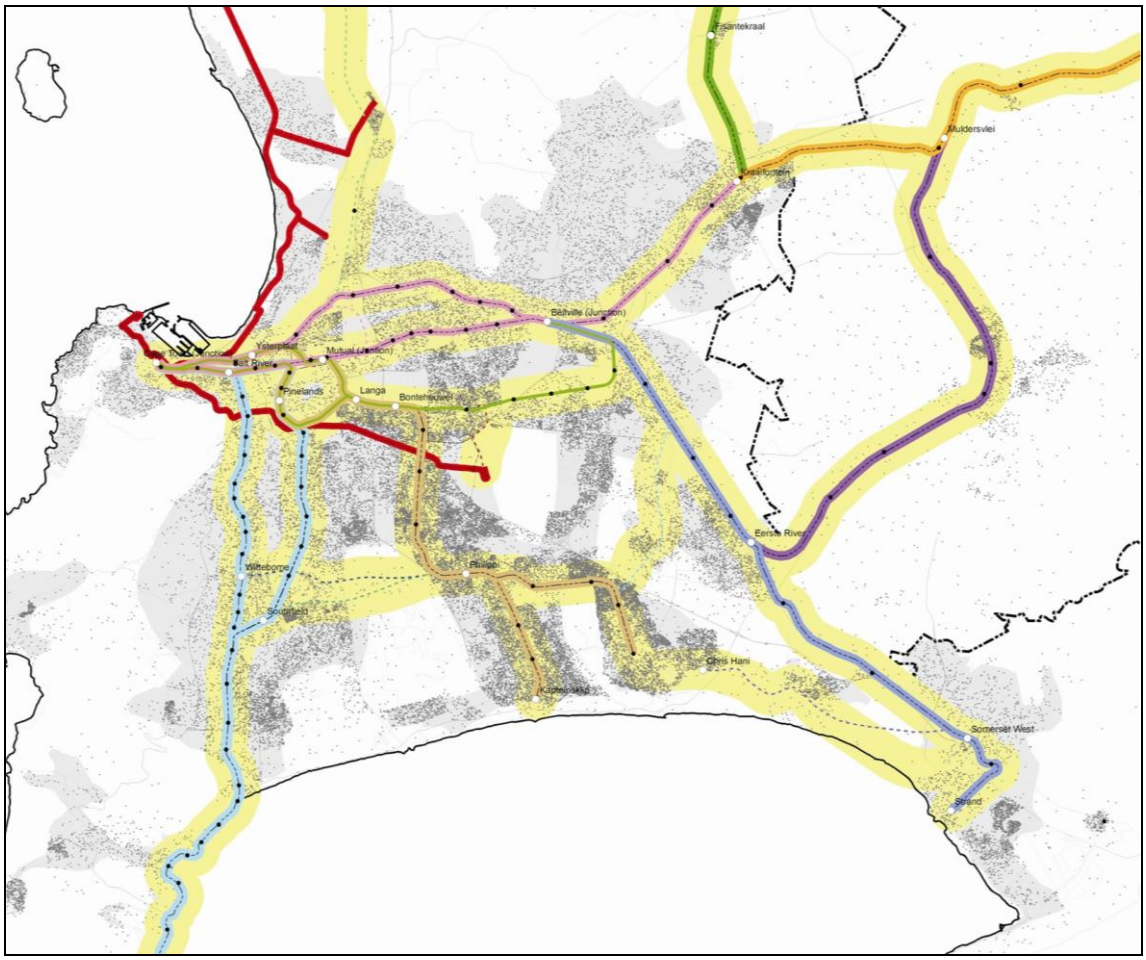


Figure 6.2: IRPTN (including BRT phase 1a)

6.5 Travel Demand Management

The programme to improve Park and Ride (P&R) facilities at key rail stations across the Metropolitan Rail network is continuing.

The second initiative in the Travel Demand Management programme, an Employee Trip Reduction programme, was launched in early 2011. Under this pilot project, five organisations with more than 500 staff members in their CBD offices are targeted to develop

a programme to assist staff to make use of more sustainable transport options. The project will be implemented by end 2011, and monitored until mid-2012.

It is suggested that parking provision and requirements should be used more pro-actively to support a change in travel behaviour. This should be logically aligned with public transport initiatives.

The P&R strategy is to support the access and utilisation of the public transport system, mainly as an alternative to feeder services, where these cannot be provided efficiently. The strategy should, however, not encourage sprawl by allowing counterproductive behaviour. For instance, if P&R facilities are provided on the periphery of the City, it could encourage sprawl as people are able to live further away and still benefit from the improved mobility once they reach the edge of the city. As a matter of principle, there should be a time and or cost penalty for someone travelling from outside the city before reaching the nearest P&R.

6.6 Improved Security

There should be enhanced safety and security measures on Public Transport as experienced during the 2010 FIFA World Cup. Visible policing, adequate lighting and CCTV cameras need to be deployed at Public Transport facilities and on Public Transport vehicles itself. Priority should be given to IRPTN links between the Metro South East and the CBD and IRPTN links that support the intensification areas defined by the SDF. Improved security will contribute to an improved sense of place or service.

6.7 Improved Safety

The maintenance condition of rolling stock, buses, minibus taxis and infrastructure needs to improve in order to safely cater for the growing demand for mobility in the functional region.

6.8 Energy efficient transport alternatives

In addition to the roll-out of high quality public transport, which is a more energy efficient form of travel compared to the private car, the following two strategies are proposed:

A strategy will be developed to explore and implement energy efficient options in the public transport system. This will initially focus on the IRPTN, where electrification provides benefits of removing emissions from where transport is used, while allowing the benefits of clean forms of energy to be accessed immediately. The strategy requires a new investment paradigm in public transport systems to promote rail and to evaluate the future applications of Light Rail (LRT) and Trolley-Bus technologies.

The second strategy is to further develop and promote the NMT network and establish it as a mode that can compete with short distance car travel and public transport so that capacity of road network and public transport network can serve medium to longer distance trips. As part of this strategy NMT needs to be better publicised, marketed and local area network information boards need to be strategically placed to inform local residents of the network.

6.9 Improved Management of PT Interchanges

Asset management[1] of public facilities such as commuter rail stations, bus terminals and taxi ranks should receive additional attention. Focus of asset management should be in areas that are earmarked as densification areas by the SDF.

Asset management will be expanded into a broader Facility Management Approach, where aspects such as cleansing, security, maintenance and upgrade of infrastructure, will be done in the context of meeting user needs in a manner that makes the public transport experience competitive with using the private car.

This approach will encourage the development of the full economic potential of a facility, which will in turn, generate income to off-set against the management expenses and on the long term even contribute to operating subsidies.

6.10 Summary of strategic approach

The strategic approach focuses on changing the transport lifestyle of people and transport choices made by businesses in order to achieve the vision of the ITP. The importance of chain mobility, land use and transport quality, forms the overarching strategic framework. These notions present the mind-set needed to achieve goals set out in the ITP. This framework and strategic directions have been added to fuel the discussion towards the preparation of the ITP 2012 - 2017.

[1] Asset Management is defined as: *"A systematic process of effectively maintaining, upgrading and operating assets, combining engineering principles with sound business practice and economic rationale, and providing the tools to facilitate a more organised and flexible approach to making decisions necessary to achieve the public's expectations." Source: OECD (2001) Asset Management for the Roads Sector.*

7. SECTOR STRATEGIES AND PLANS

7.1 Introduction

Every sector, both inside and outside the City that plays a role in the development of the transport system, should have focus areas and best practice approach to work that will reinforce other sectors' work, and result in an efficient integrated system.

The aim of the strategies and plans discussed here are to show how the Goals and Objective can be reached by addressing the Overall Strategies discussed in the previous chapter, and summarised here:

- Reform Institutional Structures
- Create an Integrated Public Transport Network (IPTN) plan
- Implement Travel Demand Management tools
- Improve Safety and Security
- Create energy efficient transport alternatives
- Improve Asset Management

7.2 Public Transport Operational Strategy

Public transport services in Cape Town are typically commuter based, with a significant drop in the number of services in the off peak compared to the peak. The low off peak supply is the result of limited demand, which on its own is partly caused by poor safety standard, especially on rail, and limited levels of service, especially by bus. The factors that result in low inter-peak demand has to be addressed to improve basic off peak service and to ensure better utilisation of existing infrastructure before additional infrastructure is provided.

The road-based services are typically those referred to in the NLTA as providing "Public Transport" services. Specialised services are excluded from this list, and are discussed in Section 7.6 below.

7.2.1 Integrated Public Transport Network

The City is in the process of developing an Integrated Public Transport Network, or IPTN, to give spatial structure to a yet to be defined hierarchy of public transport services. The IPTN will give guidance to the levels of service required on certain corridors to meet the demand for travel between nodes.

The IPTN will comprise the IRPTN, or Integrated *Rapid* Public Transport Network, as the highest order (i.e. capacity and speed) public transport services. The IRPTN will consist of Rail and Trunk BRT services, which are defined as Public Transport services operating on dedicated and semi-dedicated rights-of-way.

7.2.2 Rail Strategy

The strategy for rail will be better informed by the IPTN as this is developed. In the mean-time, the City is updating its Rail Framework, which puts forward the City's view on the current and future demand for rail. While the Rail Framework will be informed by the Rail Census to be completed during 2011, the approach and preliminary objectives are reflected here.

The role that the City plays in the development of the rail component to its ITP has significantly changed and stands to be increased even more in the foreseeable future. The previous cycle of planning, commencing in 2006, was the first occasion where the City provided a Rail Framework as input into the development of a PRASA Regional Rail Plan, whilst the latter was at the same time informed by a National Rail Plan. The Regional Rail Plan in turn informed City's ITP as it currently stands.

Whereas various aspects of the processes could be improved, based on lessons of the past, the most compelling thereof is that planning is futile if not backed up by a commitment to implementation. Very little of the current Rail Plan has materialised and future planning will include a strong focus on enabling institutional arrangements to capacitate the City, together to with relevant role players to drive the implementation of its planned rail component to its ITP.

Below follows a summary of the most pertinent aspects expected to emerge from an update to the City's Rail Framework and resultant update of the ITP:

- **Benchmarking of the year 2000.** Whereas the stated objective of returning the rail system service levels to the levels of the year 2000 was previously envisaged, it is imperative that the much stronger role for rail be defined. The rail system by the year 2000 had already deteriorated significantly even compared to its previous levels, not only as a result of lack of maintaining the system but also failing to plan and keep up with population growth. The "benchmark" of the year 2000 is way below the appropriate role for rail and will be reviewed in the next ITP.

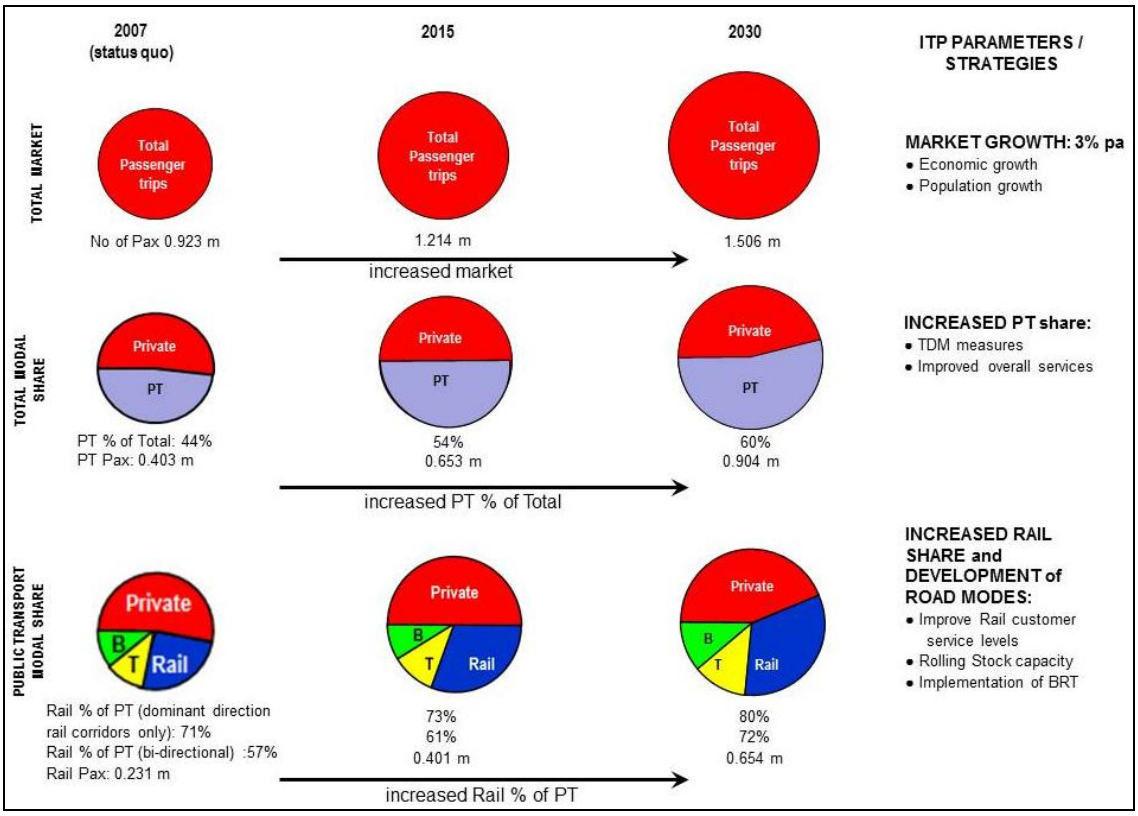
- **City draft Spatial Development Framework (Dec 2010).** The City's Spatial Development Framework (SDF) proposes that the spatial organisation of Cape Town shifts away from the existing radial movement patterns and towards a multi-directional, accessibility grid. The implications thereof may have implications for the prioritisation of rail projects and the identification of corridors for the BRT component of the IRPTN.

- **Institutional Arrangements.** The need for the clarification and formalisation of the respective roles of all role players in the provision of rail services is critical to the development of sound institutional arrangements. The establishment of local structures required in terms of (currently published for comment) draft NLTA regulations (such as the Intermodal Planning Committee (IPC) and Land Transport Advisory Board (LTAB)), as well as the current Rail Steering Committee (and sub-structures) need to be reviewed. In addition, the need for, and signing of, various applicable Memorandums of Understanding (MoU's) and Service Level Agreements (SLA's) are to be reviewed.

- **Increase modal share of rail (public transport).** Despite urban passenger rail services in Cape Town being the dominant mode of public transport, more than in any other city in the country, this position needs to be strengthened. Rail has an important role to fulfil in the City's quest to expand and increasingly integrate the overall public transport system.

  A number of specific factors contribute to a significantly increased future role for urban passenger rail services in Cape Town. Not only does forward planning need to allow for a growth in total population, but also for the strategic objectives of increasing the market share of public transport (as opposed to private vehicle use) as well as to significantly increase rail's modal share within public transport. It all adds up to rail services needing to improve dramatically as soon as possible but certainly over the next 20 years.

  The aforementioned concept is indicated diagrammatically in the figure below. It indicates how the respective increases in (i) the total market, (ii) public transport's share of the total market and (iii) rail's modal share of public transport all add up to expected significant ("almost dramatic") increases in rail patronage, all of which is subject to rail expansion and travel demand measures feasibility.



Legend:

Private	– private vehicle trips	B	– bus trips
T	– minibus taxi trips	Rail	– rail trips
PT	– public transport trips		

Source: Draft Rail Framework

Figure 7.1: Rail Modal Share Increase Concept for AM peak period

- **Implications of increased modal share for rail (PT).** To achieve the rail modal share increases envisaged on the current as well as new proposed system by 2030, will inter alia require 2 - 3 times current rolling stock (train sets). NB: the calculations are only notional and subject to rail expansion feasibility to be explored in conjunction with PRASA.

- **Strategic approach towards implementation of rail's defined role.** The City's preferred strategic approach towards achieving the defined role for rail over the next 20 years, based on a strategic assessment and which needs to be pursued in consultation with other stakeholders, is as follows:
  - To maximise the utilisation of rail line capacity on current lines – subject to potential rail trunk demand – by provision of additional rolling stock as soon as possible (short to medium term);
  - To increase the rail system capacity through additional rail lines, junction capacity, improvement of signaling systems and further additional rolling stock on current corridors (medium to longer term);
  - To create rail system capacity on new corridors where justified (including further additional rolling stock) (medium to longer term).

- **Corridor classification.** Based on the prescribed national rail plan (matrix) process, the priority of rail corridors remain as before except for the addition of the Strand – Bellville as an "A" corridor. The priority new lines, for implementation over the medium term, are the Blue Down link and Kraaifontein – Fisantekraal. Other corridors which are expected to meet the necessary patronage levels to justify rail over the longer term are (i) Chris Hani – Somerset West, (ii) Philippi – Southfield / Wittebome (Philippi link options 1 and 2) and (iii) Century City – Parklands. Corridors not expected to meet the viability criteria on patronage levels for prevailing land use plans in the short to medium term are Parklands – Atlantis and the Cape Town International Airport (CTIA) Rail Link and would require assessment in terms of strategic considerations.

- **Rolling Stock Plan.** Provisional Rolling Stock requirements have been (roughly) calculated, and requires to be confirmed by PRASA operational assessment, but City requires that PRASA's commitment to a 20 year rolling stock plan be prepared indicating:
  - Funding for rolling stock (planned and approved) (new / upgraded / refurbishment / maintenance) on an annual basis;
  - Available operational and spare train sets on an annual basis;
  - Details of new / upgrading / refurbishment program;
  - Planned improvements to quality of rolling stock (including accessibility requirements);
  - Other national and regional interventions which may impact on the City's services.

- **Service level requirements.** In order to meet the City's requirement for an increased rail modal share in the future, improved service level requirements need to be agreed with the operator in order to meet the needs of the users. These requirements include indications of the hours of service, train frequencies, punctuality, reliability, etc. A provisional list of service level requirements has been compiled and requires to be finalised in consultation with the operator as part of a SLA (service level agreement).

Pilot Projects. As part a focussed drive to increase the modal share of urban rail passenger services, it is recommended that the respective authorities embark on pilot projects to demonstrate the need and scope for improved rail services. It is proposed that the respective authorities focus their effort in support of these pilot projects, together with resource allocations to make it possible.

The current initiatives are:

- *Southern Suburb Rail Pilot*. This initiative consists of the extension of the hours of operation combined with increased security on trains and around stations, as well as the provision of Park and Ride facilities on the southern suburbs line.
- *Modernisation corridor.* This project consists of the overhaul of the Metropolitan South East corridors, which will be gradually improved in next 4 years to cater for the introduction of new rolling stock in late 2015. This project includes the revamp of stations, upgrading of track and signalling system, rail marshalling yards, depots and other infrastructure.

  It should be noted that marketing and communication are vital to ensure improved awareness and the success of these pilot projects.

- **Other urban passenger issues.** Other issues relating to urban passenger services are to be identified for further development and possibly joint agreement with PRASA, including perceived security risk, vandalism of rail infrastructure, rail census applicability and accuracy, level crossings, rail reserve fencing, rail infrastructure maintenance agreements, universal accessibility of the system, joint funding initiatives, funding, fares, bicycles on board outside peak hours, etc.

- **Long distance passenger rail services.** A chapter is to be included in the ITP to determine City's strategic role in the provision of long distance passenger rail services to and from Cape Town, and how it should be monitored. The reliability and punctuality of intercity rail serves is a major issue and requires an action agenda from all role players, an aspect to be explored in an updated ITP.

- **Tourism rail network and services.** A chapter is to be included in the ITP to determine the City's strategic role in the provision of rail tourist services to and from and in Cape Town, and how it should be monitored. The intention of the chapter is to identify the strategic role that rail plays in providing tourist services and to explore key actions that are necessary for the City to promote rail tourism considering the perceived shortcomings in the current system, including institutional, operational, and communication and marketing issues.

- **Freight Rail Network and services.** The City of Cape Town is required by the National Land Transport Act (2009) to develop a freight transport strategy covering the transport of goods to, from and through its area. Development of this strategy will be guided by the City's vision for freight transport. The chapter will consider the strategic role of rail to transport freight in each of the four different flow typologies that have been identified.

These are the City's expectations for freight rail; Transnet planned improvements to the system; perceived gaps in the collective system; and key actions to be pursued.

7.2.3 Bus Rapid Transit

This strategy is the National Government's response to the virtual absence of investment in public transport infrastructure in the country over the past three decades. It comprise a network of BRT services on semi-dedicated Right-of-Way (RoW), or trunk services, moving through traffic control devices shared by other road-based transport. These are supported by feeder services that focus on local trips in the corridor and access to the stations of the trunk services.

In October 2010, the Council approved the Business Plan for the IRT phase 1. This Business Plan is intended to inform and guide the City of Cape Town in the development, implementation and operation of the MyCiTi Integrated Rapid Transit Project, for Council approval. 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.

BRT services will be put in place to overcome the CBD orientated public transport network. In 2014 it is expected that the first phase is fully operational. In congested corridors, dedicated trunk lines will be provided.

To complete the fleet for the full implementation of the phase 1a, 310 busses are needed to run the scheduled service (Table 7.1). This means that 267 additional busses need to be procured before 2014.

Table 7.1: Number of buses required BRT Phase 1A

Service	**Vehicle size**	**Total**
Feeder	9m	+/-27
	12m	+/-165
Trunk	12m	87
	18m	31
Total		**310**

Source: MyCiTi business plan

In total, 43 trunk stations, 4 trunk services, 295 feeder stop locations will form part of the system. Although a new BRT service is already operational between Table View and the Civic Centre, the BRT phase 1A is not complete. It is recommended that this phase will be completed first before new BRT services in other parts of the City will be implemented. This provides the opportunity to monitor the system and reflect on lessons learned. These lessons could help to improve the financial model of the BRT for the existing phase but also the roll out in other areas.

7.2.4 Regular Public Transport Services

Main Bus / Golden Arrow Services
According to the IPTN, these services typically connect higher order nodes with lower order nodes, or lower order nodes with each other. Demand is typically high enough to warrant the deployment of buses, especially in the peak periods. In the off-peak, services are typically best service by minibus taxi-type vehicles.

These services should be scheduled, with the frequency of service depending on the demand and minimum standards. Services would eventually be run as commercial contracts until such time that it warrants conversion to higher order services. An example of such a service would include a bus link between Durbanville and Table View, or between the CBDs of Khayelitsha and Mitchell's Plain.

Minibus Taxi
This mode typically serves as feeder services to higher and lower order nodes. The vehicle would typically be not larger than a 16-seater minibus, and would typically not run on a schedule. It could even roam an area in the off-peak or respond to customer call out.

7.3 OLS and RATPLANS for areas not covered by IPTN Operations Plans

7.3.1 Background

Cape Town has a multi-modal transport system that range in capacity from heavy rail to the private car and non-motorised transport, with rail being the proclaimed "backbone" of the system. However, rail is a National Government competency and does not fall under the control of the City. Despite numerous motivations and requests for improvements, rail service levels have been declining for the last 27 years, with the trend accelerating in recent years.

The growing demand for public transport services over this period has been met by a dramatic increase in the number of road-based public transport services. The demand was mainly met by scheduled services provided by GABS, who operated on a subsidy administered by the Provincial Government, and unscheduled minibus taxi service that operate without a public transport subsidy.

The growing demand continues to put pressure on the City and the Provincial Operating Licencing Board (POLB) to issue operating licences to, especially the informal minibus-taxi sector. Section 55 of the NLTA stipulates the responsibilities of the City as planning authority and POLB to deal with the licencing function.

The City's drive to improve rail services continues, with indications from PRASA that significant improvements can be expected over the following 5 to 8 years. While many operating licences would still be granted during this period, the introduction of rail services could result in a reduced demand for scheduled and unscheduled road-based passenger services on some routes.

In the same light, bus rapid transit (BRT) services will continue to be rolled out by the City, which would lead to further transformation of the public transport arena. In this case, the existing operators would be given the opportunity to be incorporated into the new operator entities, as has been demonstrated in Phase 1 of the IRT programme.

The growth of the public transport system will be guided by the development of an Integrated Public Transport Network (IPTN), which highlights the ultimate roles of different modes in the system.

7.3.2 Issues of concern for ITP

The following list of issues should be addressed in the next update of the Operating Licencing Strategy for Cape Town.

- Lack of sufficient train sets resulted in disproportionate growth for bus and especially taxis (See Table 7.2).
- Lack of signal upgrades to allow increased service with the same number of train sets.
- Solution to long waiting times should be higher occupancy vehicles for peaks to reduce number of vehicle trips.
- Approach and methodology of rationalisation of MBT fleet when rail and BRT capacity is improved. Taxi licenses are issued for 7 years, while rail improvements are expected within the next 5 years.
- Significant discrepancies between security and operational control between BRT, Rail, GABS and MBT services.
- Special attention should be given to the issue of the Pedicaps and alignment with the Provincial Operating Licence mini-bus taxi policy. Pedicaps operate like meter taxis as they are not scheduled, and routes are controlled by passengers, not the driver. Issues of concern are that they are too wide to operate in parallel to traffic in streets, yet their speed does not allow them to operate in traffic streams without disruption to traffic flow. It must be noted that speed differential is a major contribution to traffic accidents.

Table 7.2: Change in patronage on main modes from 2004 to 2007 in Metro SE

Khayelitsha	2004	2007	% Change
Rail	49 854 (53,2%)	42 241 (42,6%)	- 15%
Bus	33 803 (36,1%)	43 410 (43,7%)	+ 28%
Taxi	9 985 (10,7%)	13 582 (13,7%)	+ 36%
Total	**93 642**	**99 233**	**+ 6,0%**
Mitchell's Plain			
Rail	21 895 (36%)	23 252 (33%)	+ 6%
Bus	33 729 (55%)	41 419 (58%)	+ 23%
Taxi	5 334 (9%)	6 247 (9%)	+ 17%
Total	**60 962**	**70 918**	**+ 16,3%**

7.3.3 Level of Service Standards

The City will develop standards for public transport utilisation to ensure that passenger density per distance is minimised. The issue relates to standing time while in the transport system, both in-vehicle and while waiting for a service. At present many commuters experience long travel densities at crush capacity, which result in people standing between coaches or hanging from open doors while the train is travelling at full speed.

- The first objective would be to increase capacity on overcrowded links in the public transport network, thereby relieving some of the existing pressure.

- Secondly, overall travelling distance should be reduced through land use planning that result in densification and mixed land use.

7.4 Transport Infrastructure Strategy

The focus of the Transport Infrastructure Strategy is on the provision of new infrastructure for the expansion of the Public Transport System, while maintaining the road network for private cars and freight logistics. Given the public transport capacity required for the modal shift objectives, and the lack of investment over decades, the bulk proportion of funding should be directed towards public transport infrastructure.

Infrastructure provision includes a variety of stages from conceptual planning through design to construction. While construction of Phase 1 of the BRT system will continue in the short term and subsequent phases will be designed, it is also necessary commence with the conceptual design of future phases of the system.

The focus is on the needs of the “Rapid” links, or the IRPTN, within the greater IPTN. As such it includes sections of the BRT network as well as critical rail links to complete the optimal performance of the rail network.

It is important to ensure that the integrity of the road network, used by general public transport vehicles, private cars and freight vehicles are well maintained. The strategy is to ensure the structural integrity of the network is maintained without increasing its capacity. This is necessary to promote and maximise the benefit derived from the investment in public transport infrastructure and operations. In determining the most appropriate type of infrastructure, decisions should be informed by space implication and lifecycle cost.

Car-based road infrastructure upgrades happen gradually over time (Figure 7.2) by adding additional capacity when demand exceeds what is available. The balance between supply and demand can therefore be restored frequently. Public transport improvements typically consist of a single major infrastructure and operational intervention, which creates much higher levels of capacity than required at the implementation stage. According to the diagram, even if very high levels of congestion (demand exceeds capacity) is tolerated, the surplus capacity of a public transport intervention will remain underutilised for long periods.

The infrastructure strategy should therefore be to find alternative operational measures to meet growing demand in the interim period, before expensive infrastructure is provided. Interim measures are typically lower cost and easier to implement while the more onerous planning, design and construction project can be rolled out. While not necessarily always avoidable, interim measures should ideally form part of the long term solution, and not result in abortive work.

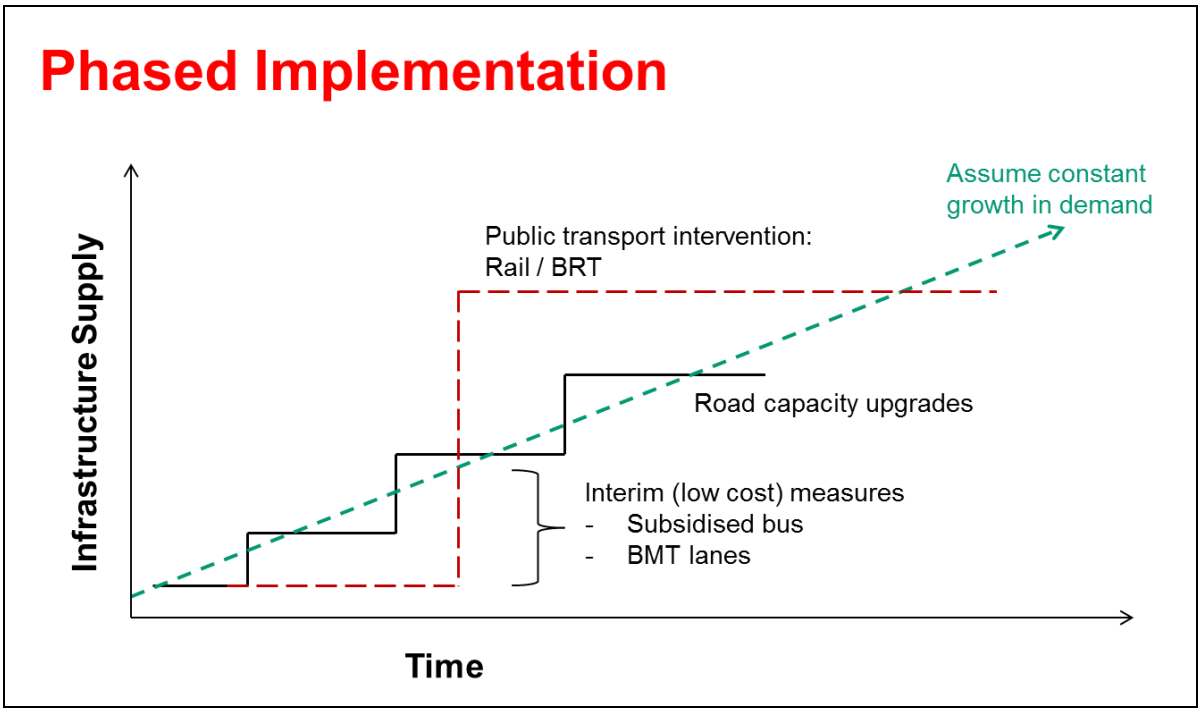


Figure 7.2: Phased implementation of road and public transport systems

An interpretation of phased implementation is the incremental approach as presented in Figure 7.3, where small interventions contribute to the establishment of a more mature public transport corridor in the long term. It should be noted that dedicated right of way such as BMT lanes should first be applied at local bottlenecks before full right of way should be considered.

The following basic considerations are perceived as critical:

- A corridor that is aligned with SDF framework and that provides opportunities for intensification.
- Long term commitment required.
- Alignment with other strategies is pivotal (NMT, TDM, etc) – see also Figure 6.1.
- Not only focus on capital investment but also enhanced asset management.
- Acknowledge funding limitations.
- Plan the land use development in conjunction with the infrastructure to influence the growth rate in demand for the intervention.

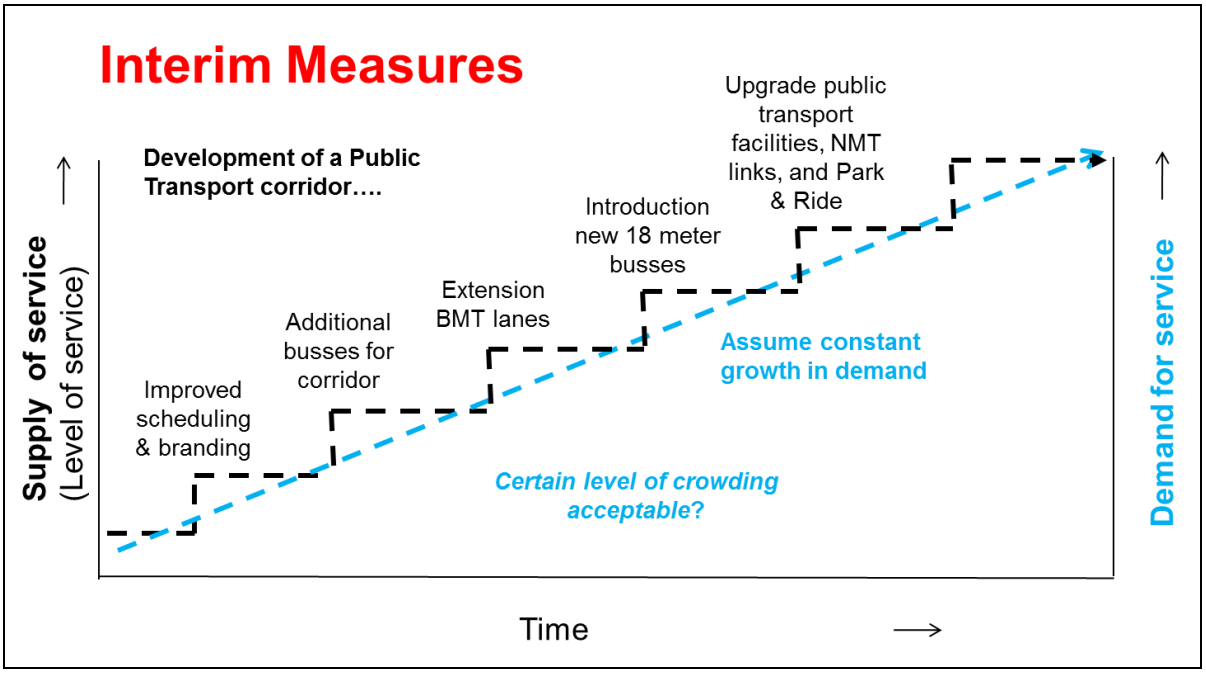


Figure 7.3: Incremental approach for the development of public transport corridors

7.4.1 Rail Network

Heavy Rail

The signalling system of the Cape Metrorail network is aging to the extent that it results in the interruption of services, with dire effects on reliability. The technology in use also limits the capacity of the system, even if many more train sets were available. New signalling technology could increase the capacity of the rail network by up to 50%. The replacement of the signalling system is therefore imperative to enable the optimal usage of additional rolling stock when it arrives.

Travel patterns discussed in the Needs Assessment chapter illustrate the need for the construction of the Blue Downs link, between Nolungile and Blackheath Stations. While the capital budget to construct this line should be prioritised in the next planning period of the CITP, the land ownership and design stage of the infrastructure development process should commence with immediate effect.

The need for this is exacerbated by the rate at which land development is being planned in vicinity of the line. Not only is it necessary to ensure the rail reserve is protected, but the timeframes and density of planned developments along the line, should be influenced by the presence and positions of future stations.

- Short term:
  - Blue Downs link reserve and conceptual design review
  - Conceptual design of Fisantekraal line upgrade
  - Design and urban planning of stations along Fisantekraal line

- Medium term:
  - Construction of Blue Downs link
  - Electrification and dualling of Atlantis line
  - Dualling of Malmesbury line through Fisantekraal
  - Conceptual design of Langa – Atlantis link

- Long term:
  - Construction of Langa – Atlantis link
  - Conceptual design of Airport link to secure land requirement

Blue Downs Link: Land acquisition transfer of land for rail reserve from other State Owned Enterprises (SOE's) or authorities. While the Development Facilitation Act (DFA) could allow transfer of land for rail, as for roads, it does not have this provision at present.

While there was a push for the Atlantis rail line to be upgraded, the introduction of BRT provides the public transport capacity to this corridor for the foreseeable future. The rail service should be revitalised only when this service, supported by feeder services from the eastern part of the corridor, reaches the infrastructures capacity, or earlier for strategic developmental reasons. This could include the efficiency gained by providing trunk services to major developments, including Atlantis, along the rail line, in order to reduce the need for feeder services to the BRT trunk.

7.4.2 Light Rail (LRT) / Trams / Trolleybuses

These technologies could be considered as an alternative to both BRT and sections of current or possible future heavy rail. An example would be at the end of an existing line – Simonstown and Kommetjie / Noordhoek to Fish Hoek could be replaced by LRT – which would allow and encourage densification and tourism development. It should be noted that the heavy rail and LRT system components must fit logically into one network instead of creating unnecessary transfers for users in the network. The LRT would form a complementing part of the Rapid component of the IPTN.

LRT can be considered when the following principles have been met:

- High passenger volumes
- Trunk corridors that accommodate few to few trips instead of a more diffuse many to many pattern
- LRT links the different IPTN components logically
- Peak oil scenario takes shape

7.4.3 BRT

BRT is a mode, just as rail and minibus taxis are modes within a multi-modal transport system in Cape Town.

A distinction is made between Infrastructure and Operations. Operations should be separated from planning function and should aim to maximise operational efficiency of the

service, rather than to compete with other subsidised modes for the same passengers in a corridor. Rather, efficiencies should aim to increase the total market for public transport.

The BRT infrastructure design should not exclude the conversion to the more energy efficient trolley bus or LRT on the long term.

7.4.4 Road network

The following directions have been identified for the road network.

- Public transport and NMT first.
- Maintain the existing network.
- Local upgrades where necessary and complete missing links within the built environment.
- New road links outside the urban edge should be avoided to prevent urban sprawl.

Abnormal Loads and Dangerous Goods

At present the inspection of movement of dangerous goods by the City is restricted to road based modes. No inspection is required for dangerous goods on rail or on ships that call in the Cape Town Port. Very often these items are in close proximity to land uses that present high risks. The inspection certificates that control the movement of goods are also not verified at disposal sites, which result in an opening in the control loop. It appears that audits are not performed to verify good practice to ensure licences can safely be re-issued.

In many instances the penalties for illegal operations are very low and do not deter operators from changing behaviour and refrain from illegal and dangerous actions.

The route network for abnormal loads and dangerous goods will be updated and included in the CITP 2012 -2017.

Toll roads

The City's policy on the imposition of road tolls states that the disadvantages of the imposition of road tolls for the purpose of raising early finance for the construction, operation and maintenance of specific routes, outweigh the benefits. The policy proposes that route specific tolling preferably be used exclusively for travel demand management and the creation of recreational / tourist attractions within the City.

If sufficient funding cannot be raised from vehicle licence fees, levies on vehicle fuel and other user charges to provide a satisfactory level of service and safety on the transport system, then road pricing primarily to ration road space should be introduced in the form of a "shadow toll" collected at service stations located within the City. This approach is far more cost effective and more equitable than route specific tolling, and would result in fewer adverse effects.

7.4.5 NMT network

The NMT network strategy needs to be work shopped. The following directions are included for discussion.

- Energy efficient modes such as cycling, walking and pedicabs need to be encouraged in order to lower carbon footprint of households.
- NMT should provide an alternative for short distance travel and not compete with public transport.
- NMT should provide linkages between local urban environment and public transport interchanges.
- NMT linkages should be logically aligned with other linkages and other transport investment.
- NMT infrastructure should not only address revealed demand.
- NMT should be prioritised in intensification areas identified by the draft SDF.

7.4.6 Public Transport Facilities

The level of service of Public Transport Facilities should be logically aligned with actual usage and future usage of the facilities. The existing level of service of Public Transport Facilities needs grow incrementally with the role of the Public Transport Facility within the network.

1. Class 1: Served by at least two trunk lines, excluding transfer stations that are not associated with a development node;
2. Class 2: Served by at least 1 trunk service and interacts with main and or local access services;
3. Class 3: Served by Main and Local access services. Typically taxi ranks or PTI served by main bus and taxi services.

It should be noted that for taxi facilitates there is a clear distinction between holding bays and loading bays, where the latter provides additional amenities for public transport users the former only acts as waiting area.

The comprehensive review of the ITP should include an overview of Class 1, Class 2 and Class 3 public transport facilities in the current network and address the functional quality of these facilities.

Supporting facilities such as Bus depots and rail marshalling yards should be located outside of prime land use areas, but at the same time distributed evenly over the network as far as possible. Mixed land use should be considered in places with high land value.

7.5 Freight Logistics Strategy

Urban freight movement is typically a marginal component of the urban transport planning process, with freight volumes often only expressed as a percentage of total recorded traffic flow. The fact that the proportion of heavy vehicles are typically in the order of 3 to 5% of total flow is considered justification for the little attention it receives. However while heavy

vehicles constitute a significant proportion of freight movement on rural roads, urban freight also move in an array of smaller vehicles while many service providers travel in inconspicuous private vehicles or unmarked LDV's. It is therefore argued that business traffic, as opposed to commute and other person trips movement, make up a much more significant portion of the traffic and therefore warrants more detailed attention.

This argument can be extended to rail as well. While rail is seen to be only viable over long distances, there may be factors that motivate for a need to move more freight by rail in the urban context in the future.

A freight strategy is currently being developed that will quantify the extent and make-up of freight movement in the City, and propose appropriate plans to deal effectively with freight in the urban context. The freight strategy will be composed along the content discussed below.

7.5.1 Status Quo / Register

This section shows the analysis of demand information that is available in the City for movement into, out of, and within the metro area. Various sources have been consulted, including work done by CSIR the Provincial Government of Western Cape and Stellenbosch University. The register will also analyse the main industrial areas within the metro of which Port of Cape Town is a significant generator of freight movement.

An important part of the register is the current higher order road, and rail access to the main freight demand zones.

While it is important to analyse the local distribution of goods movement in the metro area, this will not be done in the current document. The current priority is to complete analysis of the higher order movements.

7.5.2 Needs assessment

This section will aim to answer the question: What should the freight transport system look like and how can it operate efficiently? The needs will be assessed in terms of different zones ranging from Port, heavy and light industrial areas, commercial nodes and even local distribution to end users. Transfer facilities will be highlighted as an important freight land use, similar to stations in the passenger transport environment.

Freight will be classified broadly as goods and services. The next level of detail will include whether bulk, liquid bulk, containers, hazardous and abnormal loads, while services types will be classified to highlight movement characteristics, for example plumbing and garden services and waste collection.

The modes and vehicles types will be analysed with a special emphasis on understanding the potential to shift some movements to more sustainable modes or to reduce trips. Examples include the potential to move certain goods by rail to reduce heavily congested corridors, or to move certain goods or services via public transport vehicles, similar to the movement of freight in passenger airplanes.

Some reflection will be given to the logistics system. Alternative goods distribution systems will be analysed to understand their impact on the supply chain, as well as on the urban transport system. Other elements that will be addressed include time and spatial restrictions of freight movement.

Specific elements to be included in the assessment are:

- Impact of Port and CBD expansion plans on each other. Combined growth puts significant pressure on the already constrained transport feeding this area.
- Sharing of goods and passenger trains on the Monte Vista line.
- Appropriate long term use of the Belcon site and its impact on either or both goods and passenger movement.
- The rail link between Saldanha Port and the City, specifically the Port of Cape Town.
- The future of rail sidings in the Metro. While the trend is to move away from local distribution of freight by rail, environmental factors and scheduling system technology could contribute to this trend being reversed in the future. Sidings should therefore be protected in the short term.
- Location and access requirements of future industrial areas.
- Potential rejuvenation of Atlantis Industrial Area.
- Reflection on the rail – road interface in the design of the Epping Industrial area.

7.5.3 Freight Transport Strategies

This section will discuss strategies that will aim to address the needs identified before in a manner that will ensure that the goals and objectives of the ITP, and thereby also the IDP, are met. Policy recommendations will be developed to effectively deal with conflicting objectives, or to deal with current realities that may be addressed through other City strategies.

7.5.4 Institutional Framework

This section will address the relationship between various planning agencies, operators and systems that may or may not have conflicting objectives, and will aim to develop policies and strategies that will ensure improved management systems for the movement of goods and services in the urban context.

7.5.5 Other Sections

Other components of the Freight Strategy document will include:

- Programmes and projects for implementation in the short, medium and long term.
- Funding and financing of the different components of the system.
- Monitoring and evaluation of trends and interventions.

7.6 Other Transport Related Strategies

7.6.1 Universal Design

- New infrastructure such as public transport stations should accommodate for Special Needs Passengers (SNP).
- SNP interventions need to link up logically on different scales:
  - micro (access within a station),
  - meso (access within direct catchment area of facilities)
  - macro level (infrastructure should be aligned to facilitate origin destination movements as far as possible.

7.6.2 Safety and Security Strategy

Public transport nodes need to be upgraded. The standards developed and adhered to during the 2010 FIFA World Cup need to become the norm rather than the exception. Minibus taxi fleet should be recapitalised in order to increase vehicle safety.

7.6.3 Parking Policy

The availability and cost of parking plays an important role in travel mode choice. It forms an important tool that could be used to discourage car travel in the City. A comprehensive parking policy for the whole metropolitan areas is currently being drafted. This document will link the different parking initiatives in the City, such as the parking standards included in the Cape Town Zoning Scheme, the Parking by-law 2010 and the Parking Management plans.

7.6.4 Marketing and Communication

A business plan for marketing and communication should be developed, which include the following notions:

- Marketing and communication strategies need to be aligned with corridors where public transport is being upgraded.
- Access to information and quality of road based public transport information needs to be improved gradually (bus network maps).
- Choice users should receive special attention, since they have the availability over car but are still sensitive to low fares (cost sensitive) and level of service (quality).
- The link to database development, data requirements and data format and value, is important in the marketing and communication strategy.

7.6.5 TIA and Development Control

The function within the Transport Department that deals with Transport Impact Assessments and Development Control (TIA & DC) for land development plays a very important role in executing many of the intentions of the ITP and provides, on a case by case basis, one of the only real opportunities to integrate land use and transport planning considerations. It is here where the policies are being effected by the programmes and projects selected to support development.

It is also here where the difficulties in implementing new policies are experienced. This is often due to perceived and real, sometimes unintended, practical consequences imposed by new policies. If anything, any uncertainty introduced into the development process raises the perceived (and sometimes actual) risk to both developers and the local authority. It is often easier to revert back to established practices to minimise the perceived risks, than to push forward with the policy objectives.

It should be an integral part of any ITP update to clarify the internal and external factors that lead to policy and strategic amendments. It is as important to show how these changes has to be addressed in all sectors, not least the TIA & DC section.

The current ITP does not give explicit guidance on how to address development applications in different parts of the Municipal Area. To address this, it is the intention to produce Local Area (LA) ITP documents that will guide this process in more detail. However, as this LA ITP'S will be rolled out over the 5 year term of the new ITP, and initial set of guidelines will be developed to ensure a uniform approach in the interim period. The procedure followed will be based on current best practices employed within the City, which are further developed in terms of the ITP policies and international best practise.

Issues that will be addressed include:

- Size and type of development in m^2 of GLA;
- Proximity to different forms of public transport access points – existing and planned;
- Whether in a priority densification corridor or node.

This list of key factors to consider, as well as points of view around each, will be developed by the officials currently dealing with development applications, in conjunction with the ITP, TNID and other relevant branches within the department.

The TIA & DC component is often the entry point and first introduction of proposed developments into the City. It is therefore important that other relevant transport departments are notified timeously of significant input that may be required of them.

The guidelines and regulations pertaining to Transport Impact Assessments, as prepared by the Provincial Government of the Western Cape, is a central instrument in managing and guiding policy intentions. These regulation need to be concluded as soon as possible to assist and ensure consistency in the conditions and development practices in municipalities.

7.6.6 Comprehensive Maintenance strategy

A comprehensive maintenance strategy should to be developed incorporating all transport elements under the City's responsibility including roads, streets, depots, bridges, fencing, sidewalks, signs, signals, bus lanes, FMS, CCTV, etc. The strategy feeds into the capital and operational expenses and could prioritise projects. This should be included in the full review of the ITP.

7.6.7 Facility Management Strategy

A Facility Management Strategy has been developed for Commuter rail stations and Park and Ride areas. This could be expanded to cover all facilities in the city and provides custom fit management strategy for Class 1, 2 and 3 public transport nodes.

7.6.8 Event Transport

A standard events transport plan need to be developed, based on the lessons and successes learnt from the World Cup. This includes, but is not limited, to:

- The use of other land uses for temporary Park & Ride purposes during major events.
- Memorandums of Understanding with public transport service providers.
- Facilitates used for event transport need to accommodate for influx of use (design) and must be, amongst others, wheel chair and physically challenged friendly (SNP accessible). Examples are items such as railings, adequate lighting, signage, disabled parking, etc.

7.6.9 Incident management

The emergency services have been consolidation in the Transport management centre. This provides an increase of efficiency with regard to incident management. The effectiveness should be monitored and where necessary improved.

7.6.10 Institutional

The establishment of the Intermodal Planning Committee and the municipal Land Transport Advisory Board, which will ensure on going engagement and consultation with a wide range of stakeholders and partners, is critical. Partners should be identified that need to be included in these communication platforms.

8. FUNDING STRATEGY AND BUDGET

8.1 Introduction

According to the NLTA, the City of Cape Town is responsible for financial planning with regard to land transport within or affecting its area, with particular reference to transport planning, infrastructure, operations, services, maintenance, monitoring and administration, with due focus on rehabilitation and maintenance of infrastructure. This section will briefly discuss the planned budget for the Transport, Roads & Major Projects directorate and discussed alternative funding options.

8.2 Expenditure items

Phase 1A of the IRT system is expected to operate with an operational deficit of between R86.0 million and R145.3 million a year. In total R3.894 billion is budgeted for infrastructure and vehicle cost and R702 million for transitional matters, design and implementation cost. The main source of funding is the Public Transport Infrastructure and Systems Grant (PTISG). The funding is supplemented with funding by the City of Cape Town.

Operational costs of both Metrorail and Golden Arrow Bus Services are funded directly by National Government. The factors considered to devolve this funding to the City, in terms of the NLTA, are currently investigated. A summary of the issues raised in this process will be included in the relevant future update of the ITP.

8.3 Draft Medium-term capital budget

The Draft capital budget is for the Transport, Roads & Major Projects directorate is included in the table 8.1. For the financial year 2011/2012, this budget includes:

- IRT related infrastructure - R1 202 million
- Reconstruction of Metro Roads - R58 million
- Reconfiguration of Green Point Common - R52 million

Table 8.1: Draft capital budget for Transport, Roads & Major Projects directorate

Proposed Provision 2011/2012	% total budget	Proposed Provision 2012/2013	% total budget	Proposed Provision 2013/2014	% total budget
R1 876 606 419	36.87%	R1 569 260 189	32.93%	R1 713 002 800	33.93%

Source: Cape Town Budget 2011/12 to 2013/14, June 2011

8.4 Alternative funding options

The NLTA states that: "*every municipality that is establishing an integrated public transport network must establish a fund for its area known as a Municipal Land Transport Fund"*. Once the regulations are published and finalised, and processes are in place to establish the MLTF, the City should engage with the process to establish this fund. According to the NLTA, the following will be paid into this fund:

- money appropriated by the Minister for that Fund;
- money appropriated by the MEC for that Fund;
- user charges;
- interest on invested cash balances belonging to that Fund; and
- donations and contributions to that fund from any other source, including foreign aid agencies.

Once the Municipal Land Transport Fund has been established, the NLTA supports the following types of user charges for:

- specified classes of motor vehicles entering specified portions of its area at specified times;
- land, buildings or other developments that generate the movement of passengers, including land or buildings of which the State is the owner, in its area; and
- the parking of motor vehicles in a building or on land in specified portions of its area;
- parking places for, or the use of ranks, stops and terminals by, motor vehicles in such portions.

This Municipal Land Transport Fund creates the possibility for the City of Cape Town to ring fence income that can be used to implement the Integrated Transport Plan and perform the duties outlined in the NLTA.

It is recommended that:

- The Municipal Land Transport Funds should be established as soon as possible and used to ring fence existing parking levies that are collected Cape Town CBD, Bellville, Claremont, Sea Point, Gordon's Bay, Somerset West, Strand.
- The use of the Municipal Land Transport Fund should be further expanded over time incorporating other user chargers that support the realisation of the ITP's vision.

Besides the Municipal Land Transport Funds, other possible funding sources that are not covered by the NLTA need to be explored. Table 8.2 provides an overview of possible funding sources that are mentioned in the CITP guidelines.

Table 8.2: Draft capital budget for Transport, Roads & Major Projects directorate

Activity	**Possible funding sources**
Planning	National government, including the Public Transport Infrastructure and Systems Fund (PTIS)
	Provincial government
	Municipality

	Bi-lateral assistance agencies e.g. GTZ, USAID, JICA, Sida
	United Nations Agencies e.g. UNDP, UNEP, UNCRD
	Global Environment Facility (GEF)
	World Bank, regional and national development banks e.g. DBSA, ADB, AFD
	Private foundations
Operations	Fare revenue
	Government-funded operational subsidies
	Leasing of commercial space at facilities
	Advertising
	Merchandising
	Emissions trading
Infrastructure	National government, including the PTIS
	Provincial government
	Municipality
	Fuel levies
	Road pricing/ congestion charging
	Parking fees
	Traffic fines
	Land value taxation
	Sales or leasing of commercial space at facilities
	Advertising
	Merchandising
	Emissions trading
	Commercial banks
	Municipal bonds
	World Bank, regional and national development bank loans
	International Finance Corporation (IFC)
	Public-Private Partnerships (PPPs)
	Rental from commercial services in the road reserve such as optic fibre cables telecoms, etc.
Equipment	Operators/ fare revenue
	Vehicle/ rolling stock manufacturers

	Equipment manufacturers and suppliers, e.g. ITS
	Export credit agencies
	Commercial banks
	International Finance Corporation (IFC)
	Possibly PTIS as long as assets are not directly transferred to the private sector
Maintenance	National government
	Provincial government
	Municipality
	Fuel levies
	Road pricing/ congestion charging
	Parking fees
	Traffic fines
	Public-Private Partnerships (PPPs)

Source: Department of Transport CITP guidelines 2009, p 139.

8.5 Way forward

It is the intention that a detailed funding strategy will be included in the CITP 2012 – 2017, which:

- is logically linked to the vision, goals and objectives.
- shows the potential of the user chargers defined in the NLTA.
- states other alternative funding options.

9. PROJECT LIST

In the ITP 2012 – 2017, this chapter will serve to summarise projects identified in previous chapter into one list, and then to analyse the list according to priority areas (spatial, functional, hierarchical, etc.). A set of criteria needs to be developed to structure this project list. These criteria must result from all the business plans and strategies of all the departments within the directorate Transport, Roads & Stormwater and Major Projects.

As a matter of principle, all spatial, functional or hierarchical strata should always receive a minimum proportion of the budget or a minimum amount, with which to execute local priorities emanating from Local Area Plans. The bulk of the remainder of the budget should be employed on the focus areas within the City, whether spatial, mode specific or otherwise to achieve prioritised goals. A marginal proportion of the budget could be reserved for discretionary allocation to achieve other goals in order to fast track or compliment basic allocations.

Results from this exercise would feed back into the strategies to reprioritise if the balance between objectives is not met. The end result will be a prioritised list that would guide funding and implementation schedules.

10. 5-YEAR IMPLEMENTATION PLAN

The current approved 2011/2012 to 2013/2014 Capital Budget project list, sorted on budget, is provided in Table 10.1. This list only includes projects to be implemented by the City, and therefore excludes projects from other agencies like PRASA, SANRAL, etc.

Table 10.1: Prioritised projects

Department	WBS Element Description	Category	Proposed Provision 2011/12	Proposed Provision 2012/13	Proposed Provision 2013/14
TR&MP Office Support	Furniture & Fittings	General	43 121	0	0
TR&MP Office Support	Furniture & Fittings	General	0	43 121	0
TR&MP Office Support	Furniture & Fittings	General	0	0	43 121
Roads and Stormwater	Brackenfell Blvd - De Bron - Lang	Major Rds	4 000 000	4 000 000	3 000 000
Roads and Stormwater	Construct Rds:De Villiers Rd : EFF	Major Rds	0	100 000	2 000 000
Roads and Stormwater	Construct Rds:Bottelary/R300	Major Rds	0	0	1 000 000
Roads and Stormwater	Construct Rds:Broadway Extension	Major Rds	0	3 000 000	10 000 000
Roads and Stormwater	CSRM: Lotus Canal Widening:Gugulethu	Stormwater	6 000 000	2 000 000	1 000 000
Roads and Stormwater	Morkels Cottage	Housing	2 700 000	0	0
Roads and Stormwater	Morkels Cottage	Housing	1 500 000	1 500 000	0
Roads and Stormwater	CSRM: Somerset West 10HA: SW	Stormwater	2 000 000	0	0
Roads and Stormwater	Flood Alleviation - Lourens River	Stormwater	1 100 000	1 800 000	1 000 000
Roads and Stormwater	Bulk Stormwater Table View North - BICL	Stormwater	1 000 000	0	0
Roads and Stormwater	CSRM:Bulk SW Table View North-EFF	Stormwater	3 500 000	2 000 000	0
Roads and Stormwater	Bardale (erf 451): Bulk Roads (USDG)	Major Rds	0	10 000 000	0
Roads and Stormwater	ICS/Powerstation site	General	59 000	0	0
Roads and Stormwater	Foreshore Freeway: Bearing Replacement	Structures	3 000 000	0	0
Roads and Stormwater	Sheffield Rd Philippi:Plan and Design	Major Rds	0	0	1 000 000
Roads and Stormwater	Atlantis Dev Corr - M12:	Major Rds	3 400 000	0	0
Roads and Stormwater	Atlantis Dev Corr	Major Rds	0	5 000 000	2 000 000
Roads and Stormwater	Buttskop Rd upgrading	Major Rds	0	0	500 000
Roads and Stormwater	Land Acq: Broadway Blvd,Strand Erf 33427	Property Acquisition	350 000	0	0
Roads and Stormwater	WC:Klipfontein PT NMT Scheme:PGWC	World Cup 2010	5 000 000	0	0
Roads and Stormwater	Vlakteplaas Bulk Roads & S/water	Major Rds	0	500 000	0

Roads and Stormwater	Vlakteplaas Bulk Roads & S/water	Major Rds	5 500 000	16 000 000	3 000 000
Roads and Stormwater	Onverwacht Rd: Bulk Stormwater	Stormwater	4 500 000	0	0
Roads and Stormwater	Nonkqubela Minor Rds Phase 2	Minor Rds	2 100 000	0	0
Roads and Stormwater	Upgr: Gravel St's: Mission Grounds, SLP	Minor Rds	2 000 000	1 000 000	0
Roads and Stormwater	Dualling:Broadway Blvd:Beach Rd:MR27	Major Rds	0	200 000	1 000 000
Roads and Stormwater	Widening: Lourensford Rd: MR9 Parel Vall	Major Rds	0	200 000	0
Roads and Stormwater	Widening MR27:Strand:Piet Retief,Newton	Major Rds	0	100 000	0
Roads and Stormwater	Constr: Onverwacht Rd: Broadway to Faure	Major Rds	3 500 000	0	0
Roads and Stormwater	Pelican Park: Strandfontein Rd Upgr_USDG	Major Rds	24 000 000	20 000 000	30 000 000
Roads and Stormwater	Khayelitsha Rail Extention TI	Public Transport	17 500 000	10 000 000	23 800 000
Roads and Stormwater	Khayelitsha Rail Extension TI	Public Transport	5 000 000	5 000 000	32 000 000
Roads and Stormwater	WC:Ped Imprments to Somerset Rd:PTIF	WorldCup 2010	2 000 000	0	0
Roads and Stormwater	Extension of Broadway Blvd : Broadlands	Major Rds	0	0	300 000
Roads and Stormwater	WC:Green Point Precinct Ifra Relat Upgra	World Cup 2010	9 775 905	0	0
Roads and Stormwater	Croydon - Roads & Stormwater	Major Rds	1 700 000	2 000 000	1 500 000
Roads and Stormwater	South Fork, Strand - roads & storm water	Major Rds	0	300 000	0
Roads and Stormwater	Traffic Calming City Wide	Minor Rds	200 000	0	0
Roads and Stormwater	IM:Rehabilitation Coastal Structures:EFF	Stormwater	5 500 000	0	0
Roads and Stormwater	CSRM General Stormwater projects	Stormwater	2 000 000	0	0
Roads and Stormwater	IM: Construct Road Structures	Structures	3 000 000	0	0
Roads and Stormwater	IM: Construct Footway and Verges	NMT	9 000 000	0	0
Roads and Stormwater	SW: Coastal Water Quality Control Struct	Stormwater	2 000 000	0	0
Roads and Stormwater	Rehabilitation - Minor Roads	Minor Rds	2 000 000	0	0
Roads and Stormwater	Unmade Roads: Residential	Minor Rds	1 000 000	0	0
Roads and Stormwater	IM:Rehabilitation: Metro Roads (CMTF)	Major Rds	10 000 000	0	0
Roads and Stormwater	Prop. Acquis. - Hardship	Property Acquisition	1 000 000	0	0
Roads and Stormwater	Furniture, Fittings Tools & Equipment	General	500 000	0	0
Roads and Stormwater	Bulk Roads & Stormwater for Housing Proj	Housing	35 343 244	0	0
Roads and Stormwater	Roads & Stormwater Rehabilitation	Major Rds	5 000 000	0	0

Roads and Stormwater	IM: Reconstruct Roads Metro	Major Rds	58 033 953	0	0
Roads and Stormwater	Acquisition:Computer Hardware & Software	General	500 000	0	0
Roads and Stormwater	Soetrivier Upgrading	Stormwater	1 350 000	0	0
Roads and Stormwater	Palisade Fence Vanguard Dr	Ward Allocation	270 000	0	0
Roads and Stormwater	Green Point Promenade Upgrade	NMT	2 000 000	2 000 000	2 000 000
Roads and Stormwater	Contruct:Roundabout Eisleben & Caravelle	Transport Systems	1 300 000	0	0
Roads and Stormwater	IM:Rehabilitation: Metro Roads (CMTF)	Major Rds	0	7 000 000	0
Roads and Stormwater	IM: Reconstruct Roads Metro	Major Rds	0	29 243 829	0
Roads and Stormwater	Roads & Stormwater Rehabilitation	Major Rds	0	20 000 000	0
Roads and Stormwater	IM: Construct Footway and Verges	NMT	0	10 000 000	0
Roads and Stormwater	Bulk Roads & Stormwater for Housing Proj	Housing	0	40 293 381	0
Roads and Stormwater	Prop. Acquis. - Hardship	Property Acquisition	0	1 000 000	0
Roads and Stormwater	Rehabilitation - Minor Roads	Minor Rds	0	1 000 000	0
Roads and Stormwater	Furniture, Fittings Tools & Equipment	General	0	1 000 000	0
Roads and Stormwater	Unmade Roads: Residential	Minor Rds	0	1 000 000	0
Roads and Stormwater	OPS Upgrading of depot facilities	General	0	300 000	0
Roads and Stormwater	Bicycle & Pedestrian Facilities:NT URP	NMT	1 000 000	0	0
Roads and Stormwater	Non Motorised Transport: City Wide	NMT	20 000 000	0	0
Roads and Stormwater	Tarring of sidewalks in v. Riebeeckshof	Ward Allocation	60 000	0	0
Roads and Stormwater	Construct kerb & channelling Ward 65	Ward Allocation	300 000	0	0
Roads and Stormwater	Install speed hump Heron Rd Grassy P	Ward Allocation	36 000	0	0
Roads and Stormwater	Install footway Atkins Rd Grassy Park	Ward Allocation	100 000	0	0
Roads and Stormwater	Construct kerb & channelling Ward 66	Ward Allocation	300 000	0	0
Roads and Stormwater	Kerb & channelling Old Strandfontein Rd	Ward Allocation	200 000	0	0
Roads and Stormwater	Install one speed hump Grassy Park	Ward Allocation	20 000	0	0
Roads and Stormwater	Traffic Calming in Ward 48	Ward Allocation	100 000	0	0
Roads and Stormwater	Traffic Calming in Ward 49	Ward Allocation	100 000	0	0
Roads and Stormwater	Traffic Calming in Ward 60	Ward Allocation	100 000	0	0
Roads and Stormwater	Sidewalks at Focal Points Edgemead	Ward Allocation	50 000	0	0

Roads and Stormwater	Directional Signs Main Rd Bothasig Emead	Ward Allocation	30 000	0	0
Roads and Stormwater	Realignment Road kerbs and Footways	Ward Allocation	180 000	0	0
Roads and Stormwater	Premix sidewalk Meerlust & Cherry Ward 3	Ward Allocation	50 000	0	0
Roads and Stormwater	Gravel Ford Street Loumar Ward 3	Ward Allocation	15 000	0	0
Roads and Stormwater	Upgrading of sidewalks in Greenlands	Ward Allocation	95 000	0	0
Roads and Stormwater	Traffic Calming Alleyne & Labiance Str	Ward Allocation	120 000	0	0
Roads and Stormwater	Consinuation of pavement installation	Ward Allocation	140 000	0	0
Roads and Stormwater	Installation of speedhump Matroosfontein	Ward Allocation	30 000	0	0
Roads and Stormwater	Traffic calming Ward 3 South	Ward Allocation	30 000	0	0
Roads and Stormwater	Traffic calming: Ward 2: Olive Schreine	Ward Allocation	140 000	0	0
Roads and Stormwater	Traffic Calming measures: Ward 25	Ward Allocation	60 000	0	0
Roads and Stormwater	Traffic Calming Measure: Elsies River	Ward Allocation	50 000	0	0
Roads and Stormwater	Install Cats Eyes in Kommetjie Road	Ward Allocation	50 000	0	0
Roads and Stormwater	Traffic Calming Measures: Ward 68	Ward Allocation	50 000	0	0
Roads and Stormwater	Construction of raised intersection	Ward Allocation	65 000	0	0
Roads and Stormwater	Construction Tarring of parking area	Ward Allocation	80 000	0	0
Roads and Stormwater	Walk Way Appledene Road	Ward Allocation	100 000	0	0
Roads and Stormwater	Traffic Calming within Ward 43	Ward Allocation	100 000	0	0
Roads and Stormwater	Construct sidewalks in Ward 41	Ward Allocation	150 000	0	0
Roads and Stormwater	Sidewalks in NY69 Guguletu	Ward Allocation	200 000	0	0
Roads and Stormwater	Sidewalks ward 85	Ward Allocation	150 000	0	0
Roads and Stormwater	Curb stone pavement HelderbergCollege rd	Ward Allocation	100 000	0	0
Roads and Stormwater	Upgrading of tarmac Strand High	Ward Allocation	50 000	0	0
Roads and Stormwater	Paving Strand Beach Front	Ward Allocation	200 000	0	0
Roads and Stormwater	Tarring sidewalk Hospital to SAPS	Ward Allocation	125 000	0	0
Roads and Stormwater	Sidewalks Broadlands Park	Ward Allocation	140 000	0	0
Roads and Stormwater	TRS contingency provision - Insurance	General	200 000	0	0
Roads and Stormwater	Macasssar Housing: Roads & SW	Housing	2 700 000	0	0
Roads and Stormwater	Construct Roads Signs City Wide	Signage	500 000	0	0

Roads and Stormwater	Main Roads: Northern Corridor	Major Rds	6 000 000	0	0
Roads and Stormwater	Widening of Stock Road Phillipi	Major Rds	1 500 000	0	0
Roads and Stormwater	Raise intersection Ntileni, Tyhali,	Ward Allocation	80 000	0	0
Roads and Stormwater	Install speed humps Dyamala Rd	Ward Allocation	40 000	0	0
Roads and Stormwater	Install speed humps Ntileni Rd	Ward Allocation	40 000	0	0
Roads and Stormwater	Raise intersection Mxixi & Ntileni R	Ward Allocation	80 000	0	0
Roads and Stormwater	Plant and Equipment	General	1 200 000	0	0
Roads and Stormwater	Bosmansdam Rd Improvements	Minor Rds	490 000	0	0
Roads and Stormwater	Construction of the Watergate access rd	Minor Rds	1 500 000	1 500 000	0
Roads and Stormwater	Bicycle & Peds Facilities:PGWC	World Cup 2010	3 500 000	0	0
Roads and Stormwater	IM:Project Vukuhmbe Concrete Roads	Minor Rds	2 000 000	0	0
Roads and Stormwater	OPS Upgrading of depot facilities	General	600 000	0	0
Roads and Stormwater	WC:City-wide NMT Plan:PTIF	World Cup 2010	10 000 000	0	0
Roads and Stormwater	WC:Grade seperated Ped Facilities:PTIF	World Cup 2010	6 000 000	0	0
Roads and Stormwater	WC:Klipfontein PT NMT Scheme:PTIF	World Cup 2010	5 000 000	0	0
Roads and Stormwater	WC:PT and related Infrastr Upgrade:PGWC	World Cup 2010	4 600 000	0	0
Roads and Stormwater	Construct kerb & channelling in Ward 72	Ward Allocation	150 000	0	0
Roads and Stormwater	Traffic Calming measures in Ward 72	Ward Allocation	150 000	0	0
Roads and Stormwater	Install speed humps Chopin St Retreat	Ward Allocation	40 000	0	0
Roads and Stormwater	Raised intersection Barry & Colorado	Ward Allocation	60 000	0	0
Roads and Stormwater	Construction of Side Walks in Ward 91	Ward Allocation	300 000	0	0
Roads and Stormwater	Construction of Side Walks in Ward 94	Ward Allocation	200 000	0	0
Roads and Stormwater	Construction of Side Walks in Ward 90	Ward Allocation	300 000	0	0
Roads and Stormwater	Traffic calming within Ward 76	Ward Allocation	90 000	0	0
Roads and Stormwater	Traffic calming within Ward 78	Ward Allocation	70 000	0	0
Roads and Stormwater	Traffic calming within Ward 79	Ward Allocation	80 000	0	0
Roads and Stormwater	Traffic calming within Ward 81	Ward Allocation	200 000	0	0
Roads and Stormwater	Traffic Calming Measures ward 82	Ward Allocation	110 000	0	0
Roads and Stormwater	Construction of pavements	Ward Allocation	100 000	0	0

Roads and Stormwater	Installation of Bollards	Ward Allocation	40 000	0	0
Roads and Stormwater	Installation of signage	Ward Allocation	10 000	0	0
Roads and Stormwater	WC:PT and related Infrastr Upgrade:PTIF	World Cup 2010	3 050 000	0	0
Roads and Stormwater	Tarring of Sidewalk Hester Street	Ward Allocation	52 000	0	0
Roads and Stormwater	One Speed Hump Malamba Street	Ward Allocation	30 000	0	0
Roads and Stormwater	Construct Sidewalk Adelaide Mtiya St	Ward Allocation	105 000	0	0
Roads and Stormwater	Upgrade of roads in Ward 58	Ward Allocation	80 000	0	0
Roads and Stormwater	Riverside Road pathway	Ward Allocation	60 000	0	0
Roads and Stormwater	Upgrade parking area, Kenilworth Station	Ward Allocation	35 000	0	0
Roads and Stormwater	Upgrade area around Kenilworth Road	Ward Allocation	50 000	0	0
Roads and Stormwater	Traffic Calming Measures: Ward 69	Ward Allocation	100 000	0	0
Roads and Stormwater	Upgrade of footpath, Greenbelt Newlands	Ward Allocation	70 000	0	0
Roads and Stormwater	Parking upgrade Riverside Road	Ward Allocation	30 000	0	0
Roads and Stormwater	Upgrade of roads in Ward 73	Ward Allocation	115 000	0	0
Roads and Stormwater	Sidewalks Rusthof Ward 86	Ward Allocation	120 000	0	0
Roads and Stormwater	Speed hump Zone 18	Ward Allocation	20 000	0	0
Roads and Stormwater	Sidewalks in Unathi Village	Ward Allocation	100 000	0	0
Roads and Stormwater	Footways Milnerton drive	Ward Allocation	50 000	0	0
Roads and Stormwater	Traffic calming in Circle road	Ward Allocation	80 000	0	0
Roads and Stormwater	Traffic calming in Da Gama street	Ward Allocation	35 000	0	0
Roads and Stormwater	Sidewalks in Koeberg road Milnerton	Ward Allocation	170 000	0	0
Roads and Stormwater	Construction of footways in ward 23	Ward Allocation	100 000	0	0
Roads and Stormwater	Speedhumps Curlewis street	Ward Allocation	35 000	0	0
Roads and Stormwater	Traffic Calming in Alamien Road	Ward Allocation	35 000	0	0
Roads and Stormwater	sidewalk tarring Reygersdal rd	Ward Allocation	80 000	0	0
Roads and Stormwater	Traffic calming - Malgas and Fiskaal	Ward Allocation	80 000	0	0
Roads and Stormwater	Footpath Retchia road Hoheizen	Ward Allocation	40 000	0	0
Roads and Stormwater	Upgrading Street Names Ward 8	Ward Allocation	80 000	0	0
Roads and Stormwater	Traffic Calming Ward 21	Ward Allocation	80 000	0	0

Roads and Stormwater	Traffic Calming Ward 103	Ward Allocation	45 000	0	0
Roads and Stormwater	Sidewalks Sonstraal Heights	Ward Allocation	40 000	0	0
Roads and Stormwater	Entrance Wall: Philadelphia	Ward Allocation	20 000	0	0
Roads and Stormwater	Signage Mikpunt / Klipheuwel	Ward Allocation	10 000	0	0
Roads and Stormwater	Sidewalks Fisantekraal	Ward Allocation	80 000	0	0
Roads and Stormwater	Traffic Calming Ward 105	Ward Allocation	100 000	0	0
Roads and Stormwater	Philadelphia: Van Schoor Rd Upgrade	Ward Allocation	40 000	0	0
Roads and Stormwater	Tarring of Sidwalks Sub Council 21	Ward Allocation	400 000	0	0
Roads and Stormwater	CSRM General Stormwater projects	Stormwater	0	2 000 000	0
Roads and Stormwater	IM: Construct Road Structures	Structures	0	4 000 000	0
Roads and Stormwater	Acquisition:Computer Hardware & Software	General	0	500 000	0
Roads and Stormwater	Traffic Calming City Wide	Ward Allocation	0	200 000	0
Roads and Stormwater	Okavango Road : Link :Brackenfell	Major Rds	0	1 000 000	1 000 000
Roads and Stormwater	IM:Rehabilitation Coastal Structures:EFF	Structures	0	4 000 000	0
Roads and Stormwater	Construct Roads Signs City Wide	Signage	0	500 000	0
Roads and Stormwater	Non Motorised Transport: City Wide	NMT	0	37 000 000	0
Roads and Stormwater	IM:Project Vukuhmbe Concrete Roads	Minor Rds	0	2 000 000	0
Roads and Stormwater	SW: Coastal Water Quality Control Struct	Structures	0	2 000 000	0
Roads and Stormwater	WC:City-wide NMT Plan:PTIF	World Cup 2010	0	10 000 000	0
Roads and Stormwater	WC:Klipfontein PT NMT Scheme:PTIF	World Cup 2010	0	5 000 000	0
Roads and Stormwater	Rehabilitation - Minor Roads	Minor Rds	0	0	1 000 000
Roads and Stormwater	IM: Reconstruct Roads Metro	Major Rds	0	0	39 843 829
Roads and Stormwater	Furniture, Fittings Tools & Equipment	General	0	0	1 000 000
Roads and Stormwater	Unmade Roads: Residential	Minor Rds	0	0	1 000 000
Roads and Stormwater	OPS Upgrading of depot facilities	General	0	0	300 000
Roads and Stormwater	CSRM General Stormwater projects	Stormwater	0	0	2 000 000
Roads and Stormwater	IM: Construct Road Structures	Structures	0	0	4 000 000
Roads and Stormwater	Acquisition:Computer Hardware & Software	General	0	0	500 000
Roads and Stormwater	Construct Roads Signs City Wide	Signage	0	0	500 000

Roads and Stormwater	IM:Rehabilitation Coastal Structures:EFF	Structures	0	0	4 000 000
Roads and Stormwater	Non Motorised Transport: City Wide	NMT	0	0	20 000 000
Roads and Stormwater	Prop. Acquis. - Hardship	Property Acquisition	0	0	1 000 000
Roads and Stormwater	Roads & Stormwater Rehabilitation	Major Rds	0	0	20 000 000
Roads and Stormwater	SW: Coastal Water Quality Control Struct	Stormwater	0	0	2 000 000
Roads and Stormwater	WC:City-wide NMT Plan:PTIF	World Cup 2010	0	0	10 000 000
Roads and Stormwater	WC:Klipfontein PT NMT Scheme:PTIF	World Cup 2010	0	0	5 000 000
Roads and Stormwater	IM: Construct Footway and Verges	NMT	0	0	10 000 000
Roads and Stormwater	Bulk Roads & Stormwater for Housing Proj	Housing	0	0	43 017 700
Transport	Lentegeur & Mandalay Station PTI's:Dsg	Public Transport	15 000 000	10 226 000	23 000 000
Transport	Mitchell's Plain Station TI	Public Transport	14 000 000	14 000 000	6 000 000
Transport	Mitchell's Plain Station TI	Public Transport	39 020 000	8 220 000	8 000 000
Transport	Traffic Signal and system upgrade	Transport Systems	1 000 000	0	0
Transport	Traffic Signals Dev (Recoverable Works)	General	1 500 000	0	0
Transport	TR&S: Acquisition of computer hardware	General	386 142	0	0
Transport	Traffic Safety Bureau - Projects	Transport Systems	2 150 000	0	0
Transport	Transport Systems Management Projects	Transport Systems	1 000 000	0	0
Transport	Furn, Fittings, Tools & Equip -Transport	General	700 000	0	0
Transport	Site C Transport Infrastructure D	Public Transport	21 300 000	17 000 000	35 000 000
Transport	WC:Rail based Park&Ride Facilties:PTIF	World Cup 2010	42 324 173	0	0
Transport	WC:Long Distance Coach Terminals:PTIF	World Cup 2010	10 000 000	0	0
Transport	General PTI Improvements	Public Transport	9 000 000	0	0
Transport	Public Transport Facilities: Sign (PTIF)	Public Transport	4 650 000	0	0
Transport	Provision of Bus/Taxi shelters	Public Transport	21 800 000	0	0
Transport	Provision of Bus/Taxi shelters	Public Transport	0	3 000 000	0
Transport	Electronic Access Control	Public Transport	23 865 000	0	0
Transport	Public Transport Systems management proj	Public Transport	23 000 000	0	0
Transport	Public Transport Systems management proj	Public Transport	0	5 000 000	0
Transport	Travel Time Reduction	Public Transport	10 000 000	0	0

Transport	Travel Time Reduction	Public Transport	0	16 813 914	0
Transport	Joe Slovo Park	Parking	4 500 000	0	0
Transport	Dunoon Taxi Terminus	Public Transport	4 500 000	6 000 000	0
Transport	Retreat PTI	Public Transport	4 500 000	0	0
Transport	Samora Machel Taxi Rank Philippi	Public Transport	1 000 000	5 500 000	0
Transport	Masiphumelele (Site 5) Taxi Rank	Public Transport	0	5 500 000	0
Transport	Nyanga Main Taxi Rank	Public Transport	9 000 000	9 000 000	0
Transport	Wynberg TI Holding Facility	Public Transport	2 000 000	13 000 000	0
Transport	Imizamo Yethu Taxi Facilities, Hout Bay	Public Transport	200 000	1 300 000	0
Transport	Nomzamo PTI: Strand	Public Transport	4 500 000	10 000 000	0
Transport	Traffic Signals Dev (Recoverable Works)	General	0	1 500 000	0
Transport	Transport Systems Management Projects	Transport Systems	700 000	0	0
Transport	Lentegeur & Mandalay StationPTI's:Dsg	Public Transport	0	25 000 000	0
Transport	Somerset West PTI	Public Transport	9 500 000	0	0
Transport	Khayelitsha CBD PTI	Public Transport	2 800 000	0	0
Transport	New Taxi Lay Bays in Van Riebeeckhof Rd	Ward Allocation	50 000	0	0
Transport	WC:Rail Based Park& Ride Facilities:PTIF	World Cup 2010	0	27 000 000	0
Transport	Depot: Upgrade	General	150 000	150 000	0
Transport	Provision of embayments in DuNoon	Ward Allocation	20 000	0	0
Transport	Electr Demand Side Mngmnt:Traffic Signal	Transport Systems	7 543 860	0	0
Transport	ATC:System Upgrades(SCOOT)	Transport Systems	1 000 000	0	0
Transport	Traffic Calming: Ferndale and Helling	Ward Allocation	100 000	0	0
Transport	Traffic Calming: Galtonia, Potgieter	Ward Allocation	40 000	0	0
Transport	Transport Active Network Systems	Transport Systems	0	1 000 000	0
Transport	Traffic Signal and system upgrade	Transport Systems	0	2 286 142	0
Transport	TR&S: Acquisition of computer hardware	General	0	600 000	0
Transport	Transport Systems Management Projects	Transport Systems	0	2 000 000	0
Transport	Furn, Fittings, Tools & Equip -Transport	General	0	150 000	0
Transport	Transport Active Network Systems	Transport Systems	0	0	1 000 000

Transport	Traffic Signal and system upgrade	Transport Systems	0	0	2 286 142
Transport	TR&S:Acquistion of computer hardware	General	0	0	600 000
Transport	Transport Systems Management Projects	Transport Systems	0	0	2 000 000
Transport	Support Services: Photocopiers	General	0	0	150 000
Transport	Furn, Fittings, Tools & Equip -Transport	General	0	0	150 000
TR&MP Strategic Support	Furniture & Fittings	General	81 534	0	0
TR&MP Strategic Support	Furniture & Fittings	General	0	81 534	0
TR&MP Strategic Support	Furniture & Fittings	General	0	0	81 534
2010 World Cup Operational	Labyrinth in Urban Park - Green Point	Ward Allocation	40 000	0	0
2010 World Cup Technical	2010 Reconfiguration of Common	World Cup 2010	52 038 545	0	0
IRT Implementation	IRT:Integr Rapid Transit Syst(Ph1A):PTIF	BRT/IRT	65 965 854	55 438 929	16 895 130
IRT Implementation	IRT:WestCoastCorridor:PTIF	BRT/IRT	156 586 723	815 428 318	576 195 908
IRT Implementation	IRT:InnerCityService:PTIF	BRT/IRT	10 100 845	0	0
IRT Implementation	IRT:Feeder Stations:Inner City:PTIF	BRT/IRT	93 059 102	27 516 690	0
IRT Implementation	IRT: Trunk Stations:PTIF	BRT/IRT	113 389 620	49 290 805	111 597 687
IRT Implementation	IRT:Prop Acquisition:InnerCityDepot:PTIF	BRT/IRT	91 656 000	0	0
IRT Implementation	IRT:Depot Infrastruc:Potsdam Depot:PTIF	BRT/IRT	81 689 383	0	0
IRT Implementation	IRT:Depot Infrastruc:Atlantis Depot:PTIF	BRT/IRT	119 052 751	0	0
IRT Implementation	IRT: NMT:PTIF	BRT/IRT	40 000 000	15 346 800	15 346 800
IRT Implementation	IRT: Infrastructure Scenario 1:PTIF	BRT/IRT	0	0	413 992 217
IRT Operations	IRT: Vehicle Acquisition	BRT/IRT	200 000 000	0	0
IRT Operations	IRT: Vehicle Acquisition	BRT/IRT	0	0	211 745 979
IRT Operations	IRT: Control Centre	BRT/IRT	44 148 261	73 831 466	0
IRT Operations	IRT: Fare Collection	BRT/IRT	186 360 403	40 799 260	7 656 753
IRT Operations	IRT: Vehicle Acquisitions	BRT/IRT	0	40 000 000	0
			1 876 606 419	**1 569 260 189**	**1 713 002 800**

REFERENCES

1. City of Cape Town, Business Plan Phase 1A of Cape Town's MyCiTi. November 2010

2. City of Cape Town, Draft Densification Strategy, Augustus 2009

3. City of Cape Town, Draft Spatial Development Framework, 2010.

4. Department of Transport, National Land Transport Act, Act 5 of 2009.

5. Department of Transport, National Land Transport Transition Act, Act 22 of 2000.

6. Department of Transport, NATMAP – Energy and Environmental Working group: Summary Report, July 2009.

7. Department of Transport, White Paper on national Transport Policy, 1996

8. ACSA statistics as included in Provincial Land Transport Framework, April 2011

9. Cervero, R, Public Transport and Sustainable Urbanism: Global lessons. In: Curtis, C., Renne, J.L. & Bertolini L., Transit Oriented Development, 2009

10. Cervero, R., Murphy, S., Ferrel, C., Goguts, N. & Tsai, Y. Transit-Oriented Development in the United States: Experiences, Challenges and Prospects, TCRP

11. Report 102, Washington DC, 2004.

12. City of Cape Town, Draft Budget 2011/12 to 2013/14, June 2011.

13. City of Cape Town, Integrated Development Plan: 2006 to 2011, 2006.

14. City of Cape Town, Integrated Transport Plan: 2006 to 2011, October 2009.

15. Department of Transport, NATMAP – Energy and Environmental Working group: The implications of global oil depletion for transport systems in South Africa (EE/1/01 – 2009), January 2009.

16. Department of Transport, NATMAP – Energy and Environmental Working group: Environmental Report (EE/2/07 – 2009), July 2009.

17. Department of Transport, Technical Transport Planning guidelines for CITPs to be prepared by Type 1 Planning Authorities (1st Edition), February 2009.

18. GABS 2010 statistics as included in Provincial Land Transport Framework, April 2011.

19. OECD. Asset Management for the Roads Sector, 2001.

20. OECD, Territorial Reviews: Cape Town, South Africa, 2008.

21. PRASA, Annual Report 2010/11, 2011

22. PRASA, Annual Report 2009/10, 2010.

23. PRASA, Corporate Plan 2010/2011 - 2012/2013, 2010.

24. Provincial Government Western Cape, Draft Provincial Land Transport Framework, April 2011.

25. Provincial Government Western Cape, Provincial Spatial Development Framework. Statutory report, 2009.

26. SARCC / Metrorail, Western Cape Rail Passenger Inter-Census September 2008, May 2009.

27. Transnet 2008/09 statistics as included in Provincial Land Transport Framework, April 2011.

28. VAN DIJK, E.N.R., 2008. Opportunities for Public Transport. A multidisciplinary corridor approach (Dutch). Amersfoort (NL): DHV

Internet sources:

1. Space impact of different modes - http://www.geo.sunysb.edu/bicycle-muenster/ accessed 30 June.

2. Development of fuel prices - http://aa.co.za - accessed 30 June.

ANNEXURE A: LETTER FROM THE MEC

myo 250310

Ministry of Transport and Public Works: Western Cape
Ministerie van Vervoer en Openbare Werke: Wes-Kaap
Isebe Lezothutho Nemisebenzi Yoluntu: Lentshona Koloni

The Executive Mayor
City of Cape Town
Private Bag X 9181
CAPE TOWN
8000

For the attention of: Mayor Dan Plato

OFFICE OF THE EXECUTIVE MAYOR
CITY OF CAPE TOWN
0 3 MAR 2010
KANTOOR VAN DIE
UITVOERENDE BURGEMEESTER
STAD KAAPSTAD

Dear Sir

APPROVAL OF THE INTEGRATED TRANSPORT PLAN OF THE CITY OF CAPE TOWN

Please be advised that the Integrated Transport Plan of the City of Cape Town has been approved in terms of Section 36(4)(a) to (h) taking cognizance of Section 32 and 36(1) of the National Land Transport Act (NLTA) of 2009 (Act 5 of 2009): subject to the following conditions:

a) A table must be included showing conditions of major roads in terms of length, very poor, poor, fair, good or very good conditions as prescribed in the minimum requirements and guidelines.
b) That Figure 8 (page 31) in the CITP be removed until the road classifications have been approved.
c) That approval is granted only for the financial implications portion of the plan for which formal funding agreement exist between Province and the City.

Approval is further granted on the following recommendations:

a) The City should illustrate improved financial alignment in terms of its projects / programmes and the associated strategies and objectives.
b) The City should update the 2007 Operating Licence Strategy.
c) The future reviews and/or updates should incorporate the construction of a set of Key Performance Indicators which are responsive and logically aligned to the Objectives and Strategies proposed in the plan.
d) The future reviews and/or update should incorporate SMART principles (i.e. Specific, Measurable, Attainable, Realistic and Time-bound) in the construction of the objectives and related strategies. It is envisaged that such principles will be incorporated into future updates of the Provincial Land Transport Framework (PLTF).
e) That the financial model of the Integrated Rapid Transit System is re-evaluated.

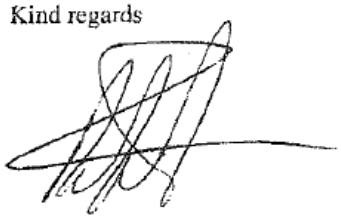
Ministerie, Dorpstraat 9, KAAPSTAD 8001 | Ministry, 9 Dorp Street, CAPE TOWN 8001
Posbus 2603, KAAPSTAD 8000 | P O Box 2603, CAPE TOWN 8000
(021) 483-2200 | (021) 483-2217
www.capegateway.gov.za/tw

I wish, however, to record some matters that need to be addressed in next year's plan:-

a) As indicated in our replying document, a transport plan must indicate a clear timelined path toward implementation, noting the limitations of resources.
The City's intentions of the role it is to assume in developing land transport policy and strategy, and the powers it will request in terms of the NLTA must be spelt out and scheduled.
Its intentions in regard to the public transport system for the greater metropolitan area that is comprehensive; interconnected and intermodal must be detailed, deadlined and the capital and operating costs estimated. In terms of Sectoin 19 of the NLTA, the plan must consider whether the Drakenstein and Swartland municipal areas, and not only Stellenbosch, should be functionally co-ordinated.
b) Given both the importance and the potential of passenger rail, the plan must indicate a much closer and more coherent method of co-ordinating with PRASA/Metrorail in the future management and integration of public transport.
c) The importance of a rail in freight transport requires greater emphasis and exposition. Neither Chapter 5.9 nor 7.4.5 make mention of rail.
d) The plan must make provision for the resuscitation of Incident Management.

I would like to take this opportunity to thank the City of Cape Town for producing a well composed Comprehensive Integrated Transport Plan, and look forward to continue working with the City to create an efficient and safe integrated transport system that provides people with increased access to a range of opportunities.

Kind regards



ROBIN CARLISLE
MINISTER OF TRANSORT AND PUBLIC WORKS
DATE: 2 MARCH 2010

Ministerie, Dorpstraat 9, KAAPSTAD 8001 | Ministry, 9 Dorp Street, CAPE TOWN 8001
Posbus 2603, KAAPSTAD 8000 | P O Box 2603, CAPE TOWN 8000
(021) 483-2200 | (021) 483-2217
www.capegateway.gov.za/tw