Chapter 4

1.1 TRANSPORT SECTOR

1.1.1. Introduction
Transportation, both public and private, is a primary structuring component of the built environment. Infrastructure for transportation remains the largest single investment in the Western Cape. This section considers the provincial transport dispensation in order to identify the strategic infrastructure planning challenges as well as initiatives and projects to address these challenges.

In developing a SIP for transport, the context of the broader socio-economic environment must not be forgotten. Chapters 2 and 3 of this paper provide the overall context along with the transport-related issues highlighted by the other sectoral studies. Important economic and social trends identified which shape the transport dispensation include the following:

- A significant shift from rail freight to road freight, due to a decline in rail service efficiency and challenges with inter-mode changes associated with rail;
- A dramatic growth in exports over the last decade, due to globalisation and political transformation in South Africa opening new markets;
- An increase from 5% to 20% in the percentage of exports that constitute manufactured products;
- Government’s policy aimed at ensuring economic opportunity for all citizens, coupled with its policy to provide basic personal mobility for all, driving the demand for personal mobility, particularly public transport requirements.

In developing the SIP for the province one also needs to consider the following national transport initiatives that potentially impact on the provincial transport dispensation:

- The Moving South Africa (MSA) action agenda that has identified prioritised customer groupings, namely the poor rural and urban stranded and survival categories, selected tourist passengers and exporters of value-added manufactured products;
- The taxi recapitalisation project, currently scheduled for implementation in the 2006/07 financial year;
- The implementation of a revised bus contracting dispensation based on competitive tendering;
- Rail transformation, which includes the merger of Metrorail and the South African Rail Commuter Corporation and the establishment of a transitional regulatory authority; and
- Maritime transport policy, which includes the potential privatisation of cargo handling facilities.

These issues are expanded on in more detail in the relevant sections of the chapter.
The key components of the overall transport system are discussed in the following sections, highlighting the status quo, key issues, strategic priorities and the implications of these issues for projects.

1.1.2. Public transport

1.1.2.1. Context

The public transport challenge
The lack of adequate public transport systems within the Western Cape is well documented. Currently the elements of public transport systems that exist provide limited services, are not effectively integrated, and are not accessible to all communities. Over the past few decades investment into transportation infrastructure has been focused on addressing the needs of road users, particularly users of private cars, over the needs of other commuters. Public transport has been underfunded both in terms of facilities and funding of operations.

Public transport can play a major role in addressing the socio-economic challenges facing the province. Table 1 summarises the key socio-economic challenges and their relationship to public transport.

<table>
<thead>
<tr>
<th>Socio-economic challenges</th>
<th>Relation to public transport</th>
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<tr>
<td>Unemployment (especially amongst youth and rural women)</td>
<td>Public transport can provide access to employment in both urban and rural areas</td>
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<tr>
<td>Inequality and poverty</td>
<td>Accessibility provided by public transport may help decrease inequality and poverty</td>
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<tr>
<td>Service backlogs</td>
<td>New public transport infrastructure and services can decrease some of the important backlogs</td>
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<tr>
<td>Social dysfunction and implosion</td>
<td>Improved public transport services can increase mobility and access to community services and economic opportunities, ultimately addressing social dysfunction</td>
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<tr>
<td>Lack of social cohesion between communities, undermining social and economic relations</td>
<td>Improved public transport services can increase opportunities for social and economic exchange, decreasing isolation and strengthening ties between communities</td>
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The key challenge for public transport reform is improved accessibility, essential for addressing the economic and social life of most people. The current motorised modal split for the City of Cape Town represented in the diagram below highlights the prominence of the private car (45%) over other modes of public transport.
Motorised transport modal split for the City of Cape Town, 2005

Reliable statistics on pedestrian, bicycle and motorcycle modes are not available. However, the graph below summarises the estimated modal split with the inclusion of pedestrian transport, based on the number of public transport trips undertaken per mode. The pedestrian trips were estimated using assumptions based on comparative norms and drawing from a recent survey conducted in Cape Town.

Representation of modal split based on public transport trips undertaken

The exercise highlights the likely importance of pedestrians as a mode of public transport that needs to be considered in developing a new public transport dispensation and in planning public transport infrastructure.

1.1.2.2. Overview

Minibus taxis
Nationally the minibus-taxi industry developed dramatically from the mid-1980s, with the Western Cape’s growth taking place predominantly in the 1990s. The provincial minibus fleet is estimated to be in excess of 10 000 vehicles, excluding the internal township “tjorries”. A structural problem with the minibus industry is that it has largely evolved to suit the needs of operators and minibus taxi owners and their associations, rather than the needs of passengers. Accordingly, the services offered focus on high-volume lucrative routes and times of the day when income can be maximised. In addition, the industry is over-traded, resulting in intense competition based on control of routes and rights rather than a
service- and cost-based customer choice. The competition for custom is a major contributor to the minibus taxi violence that has periodically surfaced in the province, and which creates fear and disruption for passengers. In March 2005 the potentially violent nature of the competition was again evidenced in the shootings that occurred in efforts to secure new lucrative routes around the Cape Gate development.

In addition to competition between minibus operators, significant portions of the minibus taxi services operate in direct competition with subsidised scheduled bus and rail public transport services. Minibus operators argue that subsidies should be extended to minibus taxis. They argue that the subsidised rail and bus services are eroding the viability of these services, impeding investment in vehicles (maintenance), forcing traffic violations (overloading, speeding) and contributing to a decline in service levels.

The informal nature of the industry results in relatively loose associations and has made it difficult for the industry to self-regulate effectively and for government to consult in terms of compliance and transformation of the industry.

An additional problem arises from the fact that the majority of minibus taxis are not owner-driven. Instead, drivers are employed under employment conditions that encourage dangerous driving habits in order to increase incomes.

Attempts to regulate and control the minibus taxi industry in terms of licensing and permits have been problematic. It is unrealistic to expect an operating licensing entity to grant approval of applications on the basis of market requirements. Accordingly licenses have been granted on the basis of compliance with specifications such as vehicle and driver fitness. This results in permits being issued in already over-traded markets. Similarly the granting of permits for a specific route draws the authorities into the turf battles between associations and operators.

There have been a number of initiatives to address the challenges facing the minibus taxi industry. These include:

- Implementation of improved processes for applications for operating licences, coupled with the “Be Legal” awareness campaign;
- Mobilisation of funds for capacity building, training and economic empowerment, planned for incorporation into the recapitalisation initiative;
- Initiatives to address the permit issues, focussing in particular on enabling provincial administration of operating licences on a route-based approach;
- The development in 2005 of a sectoral determination governing wages and conditions of work of minibus taxi drivers;
- The recapitalisation initiative of the national Departments of Transport and Trade and Industry, scheduled for initiation in 2006.
In respect of the last initiative, the review undertaken for the SIP exposed widespread concern that the capitalisation process required total buy-in from all operators. There is a concern that this may not be achieved, and that the initiative could ultimately be compromised. The Minister of Transport announced at the end of 2005 that the previous project had been discarded and that a new programme would be implemented over a seven-year period. This programme will enable minibus taxi operators to buy vehicles of their choice that conform to a new set of minimum safety standards, with once-off scrapping allowance of R50 000 per vehicle. It is understood that there is currently a socio-economic review being undertaken of the taxi recapitalisation project. The review encompasses an audit of the industry and, in particular, skills and an assessment of the possible impact of the recapitalisation implementation, specifically in terms of potential job losses.

Bus services
The scheduled bus services in the province, particularly in the metro, have declined dramatically over the past decade in terms of route coverage, frequency and quality of service. This has been largely due to the impact of increased competition from minibus taxis, which have provided a convenient alternative. Declining passenger numbers have impacted on profitability and the ability of the bus service to sustain routes and service levels. The age and condition of the fleet of buses has also been an area of concern, with replacement and maintenance being neglected, arguably due to the decline in profitability. In addition, the enforcement of vehicle fitness (roadworthiness) has historically been inadequately applied in the province, resulting in public transport operators providing illegal and unroadworthy vehicles.

The scheduled bus services currently offered in the Cape Metro are provided on a contract basis by a private sector service provider, Golden Arrow. There has been a process of trying to establish interim arrangements on a sound contracting basis, to ensure that user requirements are adequately addressed and that formats for subsidy payments are adequately specified. The process was reportedly impeded by legal action by Golden Arrow on the grounds of non-compliance with the National Land Transport Act. There has historically been widespread frustration with the industry operating in a vacuum because of an inability to resolve the contracting framework.

In 2005, a black economic empowerment (BEE) group, Hosken Consolidated Investments, acquired the entire shareholding of the Golden Arrow bus company. The group has secured the continuation of contracts across the Cape Peninsula, Cape Flats and unified City of Cape Town, transporting an average of 180 000 people per day. It is understood that the contract operates on a recoverable discount system based on clip cards operated in collaboration with a government-administered subsidy. Since securing the contract the company has reportedly invested in 40 MAN explorer vehicles.

There have been ongoing tensions between the scheduled bus services and the minibus taxi operators. As noted above, the minibus taxi operators view the
scheduled bus service as unfair competition due to the effective subsidy the bus service provider receives. The competition has been accompanied by sporadic violence and intimidation, in some cases resulting in bus drivers being targeted.

The contracting arrangements for scheduled bus services remain a challenge in terms of finding a resolution to the issue of bus vs minibus taxi subsidisation. It is exacerbated by the challenge of providing scheduled services in off-peak times and on unprofitable routes. The minibus taxi recapitalisation process should, however, partly address the challenge of competition and equitable distribution of public sector support to the respective service providers.

In respect of buses, the current plan is that the province will replace the current interim contract with a number of bus contracts to assist smaller BEE operators to tender for contracts. In addition, further contracts are to be considered to address the district municipal areas. In this regard, a review of the IDPs from a number of the district municipalities highlighted the rural transport challenges and the need in these areas for scheduled transport services.

**Passenger rail**

The South African Rail Commuter Corporation (SARCC) transports about two million people daily from 374 stations. It does this using 4,500 coaches, applying a total asset value of R5 billion. In the Western Cape, commuter rail operates only in the City of Cape Town and parts of the Winelands District Municipality. SARCC operates on 260 km of rail track, 14 rail service routes and 97 stations within the province. Overall, 66 train sets operate during the morning peak period. In 2005, Metrorail was moving 601,940 passengers per day, including approximately 12,000 per day from the Winelands to the City on the Wellington line, and 6,000 per day on the Muldersvlei – Stellenbosch line.

The legacy of the rail system being owned by SARCC and being operated under contract to the SARCC by Metrorail has impeded the province’s ability to integrate the commuter rail system within the overall public transport dispensation. The recent consolidation involving Metrorail and the SARCC should alleviate some of these challenges. Undoubtedly, the problems experienced within the rail service of safety and security on trains has led to a significant loss of patronage to road-based public transport, most of which has shifted to private cars in the more affluent communities (e.g. Southern Suburbs line) and minibuses in the less affluent communities (e.g. Cape Flats lines). Thus in 1982 about 45 million passengers travelled on the long-distance rail network per annum, but by 2001 this had dropped to 4.2 million per annum. Further, of the R29.7bn estimated total spend on transport by domestic and foreign tourists in 2003, only R0.75bn (2.5%) was spent on rail.

Capital replacement and operating costs present an additional challenge. In particular, vandalism and cable theft have resulted in the loss of valuable assets. Currently the SARCC is overhauling, improving and/or modernising about 380 coaches a year, with a significant portion of this being in response to vandalism.
Vandalism has also increased the need for increased security not only to protect the users, but also the rolling stock and rail infrastructure.

SARCC long-distances services are estimated to have transported about 500 000 luxury-class passengers in 2003. The long-distance trains currently operate at 90% capacity and if current capacity is maintained this market segment is expected to remain relatively constant in future.

Statistics provided by SARCC indicate that the number of Western Cape passenger journeys has stabilised around 155 million passengers measured in one-way trips. Significant efforts have been made to improve the Metrorail service to attract customers back into trains. Unfortunately, these efforts are continually undermined by incidents of crime and violence reinforcing the perception that trains are dangerous. This, coupled with increasing challenges to maintain a sustainable service in light of problems such as cable theft, is undermining the efforts being made to improve rail services.

There are a number of initiatives underway to facilitate the integration of feeder services, so as to facilitate interchange between road-based and rail-based public transport. Initiatives include the upgrading of the rail, bus and mini-bus taxi terminus and interchange facilities in Claremont. It is envisaged that the principles of intermodal change facilitation could extend to the introduction of integrated and exchangeable fare structures incorporated in the concept “through ticketing” to create more seamless travel.

Long distance road public transport

Long distance road public transport incorporates the inter-provincial services and the services connecting major centres within the province. The key components of these services are introduced below:

- **Inter-provincial services**: These services operate between major centres within different provinces, such as between Cape Town and Johannesburg. The services are predominantly offered by private sector long distance luxury scheduled bus operators such as Greyhound and Translux which link the major metropolitan areas in South Africa. The services generally operate from the central city locations within the metro area. There have been plans to relocate these interchanges to Phillipi so as to link with the Landsdown corridor as well as, more recently, to a site near Cape Town International Airport. In addition, there are budget-bus (e.g. Blueline bus service) and minibus taxi services for a high-volume weekend and holiday trade linking the old “homeland” areas through centres such as Bisho and Umtata. These services address the needs of the predominantly poorer township communities within the province and enable them to return to these areas for family gatherings, to attend to ancestral lands and for other purposes. The budget-level buses use informal interchange facilities within the townships and on the outskirts of major towns. Interchanges such as those at Langa/Epping and Khayelitsha Site C are characterised by overcrowding and a lack of amenities.
- **Intra-provincial services:** These services operate between major centres within the province, such as between Cape Town and George or Springbok. Long distance luxury scheduled bus services and minibus taxis offer these services.

- **Inter district:** There are intermediate services offered between towns in neighbouring districts, such as between Grabouw and Hawston or Hermanus. The services are predominantly provided by minibus taxis with local bus services being chartered for special events and holidays, particularly to resorts for club and church events.

The services provided by budget buses and minibus taxis are not effectively regulated and many of the vehicles are unroadworthy. The long distance rail passenger service is primarily servicing niche markets along the Cape Town-Johannesburg/Pretoria route, with limited travel between major towns, such as Paarl and Beaufort West.

Key challenges for long distance transport include the following:
- Addressing the infrastructure needs of the interchange facilities for the mass budget bus services;
- Consideration of a major interchange facility where passengers can interchange with all long-distance bus services and other transport modes, such as air and rail. It is understood that there are currently plans to consider a site close to Cape Town International Airport to facilitate tourists arriving at the airport and wishing to travel to other provinces or along scenic routes such as the Garden Route or Agulhas Route.

*Metered taxis*

The metered taxi services are currently concentrated around the metro, catering mainly for the overseas tourist market. They are regarded as being expensive in rand terms and so are hardly used by locals. As a result, they do not effectively complement the public transport system, as is the case in most city centres around the world. In addition, despite the increases in the number of tourists visiting the province and particularly the metro, the industry has seemingly not experienced significant growth. One sign of this is that relatively few additional permits have been granted to prospective operators over the past few years. Instead growth has taken place in shuttle services offered by major hotels and guided tour services. The latter are also using their vehicles to provide traditional taxi-type services to key destinations such as the airport. These “informal shuttle services” are provided in contravention of industry regulations under the guise of providing either tourist or courtesy services.

In conclusion, metered taxi operators need to be encouraged to structure their offer to suit not only the needs of tourists, but also to fill the gaps in the local public transport market dispensation. A key requirement will be to address the excessive current metered charges in rand terms.
**Air passenger transport**

South Africa has over 500,000 aircraft flights per annum, transporting over 21 million passengers. After Johannesburg, Cape Town International Airport has the most number of flights and passengers, with aircraft movements exceeding 60,000 in 2004. South African Airways (SAA) dominates the market, followed by British Airways domestic, Kulula, Nationwide and Sun Air. More recently, a further budget airline, 1Time, has entered the market.

Air traffic has shown tremendous growth over the past few years, due to both increased international and local tourism and business travel. In 2005, the Airports Company of South Africa (ACSA) was predicting that the total number of passengers at Cape Town International would increase from 5 million in 2003, to 14 million by 2015.

A key constraint on South Africa’s, and specifically Cape Town’s, ability to capitalise further on the tourism market, particularly from Europe, is restrictions in terms of flight numbers to and from the country. This constraint is a result of the bilateral agreements, which provide airline allocations (quotas). Currently SAA hold more allocations than they service, due the airline not being able to secure appropriate landing slot allocations at major European airports, specifically Heathrow. SAA is acting in its own best interests, but the lack of seats available on international flights, particularly in terms of persons wishing to visit South Africa, is impeding the tourist industry and broader economy. At a national level there is ongoing debate on these issues.

**Other public transport services**

Given the importance of tourism to the country, and more particularly the Western Cape, the tour coach/bus industry is vital to the economy. The tourism and hospitality industries are the major users of the tour, charter and courtesy services.

The scheduled regional tour/coach industry is relatively structured with a representative body that ensures standards are maintained, particularly in terms of vehicle quality, maintenance and service levels. Four large company groupings are active in this segment of the market in the Western Cape, namely the state-subsidised Autonet (Translux), Intercape, Greyhound and Luxliner. It is estimated that the larger companies represent almost 98% of the total market segment, with about 20 smaller intra-regional groups contributing the rest.

In contrast, charter services are of an ad hoc nature and are offered by a variety of coach/bus and minibus owners, predominantly to provide groups with transport needs to and from sporting, recreational, social and business activities. The major chartered coach operations in the province are provided by Unitrans’s MegaCoach, Mega Bus and Elwierda. In addition, there are about 15 medium-sized operators who contribute an estimated 80% towards the total market.
Courtesy services are provided by organisations and companies as a convenience to ensure personnel travel safely, generally to and from work. Generally these services are provided at no charge to passengers. In many cases it is regarded as a salary perk. The use of courtesy services has increased dramatically over the past decade due to the lack of appropriately scheduled services, for example because of Metrorail discontinuing services, as well as concerns about exposure to crime during transit to and from work on other forms of public transport and at modal interchanges.

In conclusion, these services provide an important alternative, particularly to the business community and their employees given the limited accessible, safe scheduled public transport options available.

1.1.2.3. **Role of public transport**

A public transport system that is safe, efficient and cost effective for users is vital in enabling economic development to occur. A well-functioning public transport system supports economic development through:

- Providing the ability to move many people efficiently, reducing congestion in the transportation network, with the following resultant benefits:
  - Reduced travel time in the delivery of people, goods and services;
  - Improved reliability of delivery of goods, people and services, improving economic efficiencies;
  - Reduced social and economic costs associated with externalities such as emissions, noise and accidents;
- Promoting and supporting economic growth directly and indirectly as follows:
  - A larger public transport stimulates activity in the transport sector (increasing the market for vehicles, vehicle parts, fuel etc). The upgrading and recapitalisation of the minibus taxi industry, allowing vehicles to be maintained in good conditions, would provide additional economic impetus;
  - Supporting economic efficiencies through reducing congestion and thus saving time, particularly when diverting trips from private cars to public transport.
  - Supporting the development of other economic sectors such as tourism, hospitality and catering, retail and communications through providing greater accessibility for those who do not have access to private vehicles.

Interviews with key stakeholder groups confirm that the current public transport system does not adequately address economic requirements. The lack of an effective public transport system was cited by the Chamber of Business as the most important transport-related impediment to the economy. In particular, the following constraints were emphasised:

- The need to reduce congestion through the provision of a safe, reliable public transport system that comprises all modes, with efficient inter-modal changes, so as to provide commuters with a viable alternative to private cars;
The need for safe and reliable transport to move staff to and from work on a 24/7 basis. This includes, for example, the need for safe and reliable transport to move customers to hospitality and catering venues over extended hours (particularly at night) and staff to and from work for the emerging call centre industry on a 24/7 basis; and

The need for safe and reliable transport to move customers, products, inputs, and goods required for small, medium and micro-enterprises (SMMEs) without own transport capacity and/or operating in marginalised areas.

In addition to supporting economic development, public transport is critical for social development. In a province where the majority of people do not own private vehicles, access to social services and sporting and cultural events is made possible through the provision of public transport. In particular:

- A public transport system which promotes the principle of universal access ensures that the vulnerable groups in communities (young, disabled and aged) can lead full lives, integrated in all aspects and activities of the community;
- Public transport also contributes to the preservation of the environment. An efficient public transport system helps to reduce congestion in the transportation network, thereby reducing emissions and other pollutants, as follows:
  - Greenhouse pollutants impacting on climate, such as carbon dioxide emissions; and
  - Local pollutants directly affecting human health, such as nitro oxides and particulate matter.

### 1.1.2.4 Strategic initiatives

The provincial Public Transport Improvement Programme

The province has initiated a Public Transport Improvement Programme (PTIP), which consists of a number of inter-dependent and mutually reinforcing strategies and plans aimed at addressing the public transport challenges and achieving the following objectives:

- Making public transport more affordable to users and government;
- Ensuring that public transport contributes to Ikapa Elihlumayo by reducing the cost of doing business, building social capital and supporting sustainable development;
- Paving the way for the transition from the interim bus contract with Golden Arrow to tendered and/or negotiated public transport contracts;
- Giving consideration to all citizens in the province in the provision of public transport;
- Reducing the amount of travel by private motor vehicles by improving the quality of service received on public transport system; and
- Preparing for hosting the World Cup 2010.

There is close alignment between the PTIP proposals and the provincial lead strategies, as summarised in Table 2.
Table 2 Relationship between lead strategies and PTIP proposals

<table>
<thead>
<tr>
<th>Provincial lead strategies</th>
<th>Relationship to PTIP proposals</th>
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<tbody>
<tr>
<td>Micro-economic development</td>
<td>Support to the minibus taxi industry</td>
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<td></td>
<td>Open transport market for new operators</td>
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<td>Infrastructure development</td>
<td>New roads, pavements and facilities</td>
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<td></td>
<td>New models of ownership</td>
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<td>Provincial spatial development framework</td>
<td>Urban development and transport plans</td>
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<td>Human capital development</td>
<td>Training of transport operators and expertise</td>
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<td>Effective financial governance</td>
<td>Reform of subsidy policy</td>
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<td></td>
<td>Restructuring of subsidised services</td>
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<tr>
<td>Coordination and communication</td>
<td>Inter-governmental public authority and development of local authorities</td>
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<tr>
<td>Province – municipal interface for integrated development</td>
<td>Public transport authority as inter-governmental entity</td>
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City of Cape Town mobility strategy
The City of Cape Town has launched a mobility strategy as a direct response to the needs of commuters and operators of public transport. The mobility strategy is considered part of the Ikapa Elihumayo initiative and is regarded as an implementation vehicle for the provincial vision of “public transport first”. The strategy aims to restructure public transport in the City of Cape Town to ensure a sustainable, accessible, reliable, safe and affordable public transport system for all users. The strategy links with the following:

- The national requirements and principles of the national Department of Transport’s Moving South Africa strategy;
- The provincial government strategy incorporating the five-year strategic vision and 22 delivery plans;
- The City of Cape Town’s development strategy

The first phase of the City strategy is the Klipfontein Corridor project. Mobility strategies are also being developed in Beaufort West, George, Mossel Bay and Saldanha.

1.1.2.5. Key strategic issues
The strategic issues facing the provincial public transport dispensation are discussed in the following sub-sections, based on the key elements of the proposed PTIP.

Subsidised public transport
Reform of the subsidy regime is a powerful tool that can be applied in attempting to ensure accessibility for all and address the imbalances of the apartheid legacy. If a purely market approach were adopted in the provision of public transport, the services would be deregulated, allowing the private sector to seize the initiative. The ultimate result would be a service only catering for those that are able to pay. Under such a dispensation the role of public transport in supporting socio-economic development and environmental protection would be lost. Clearly in the South African context public transport has a role to
play in addressing the socio-economic and developmental challenges of a developing society and, in particular, in correcting historical disparities. This implies the need for an appropriate subsidy regime that supports those who can not afford to pay a market tariff but does not enable inefficiencies or exploitation by private operators. The challenge is to find the correct balance between equity and market efficiency in the system of subsidisation and/or cross-subsidisation.

As noted above, commuter rail services are currently provided by Metrorail, operating under contract with SARCC. Both Metrorail and SARCC are public entities under the Department of Transport and the two are currently being merged. Bus services are operated on a contract basis, with Golden Arrow being the dominant supplier in terms of an interim contract with the Department of Transport and Public Works in the province. Minibus taxi services are provided by independent operators and do not receive any form of subsidy. None of the services in communities outside the City of Cape Town receive any subsidy apart from the rail services to Stellenbosch and Wellington.

Table 3 shows the subsidy amounts paid to operators of the different public transport modes for the financial year 2004/2005, and indicative market shares.

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<th>Mode</th>
<th>Modal share</th>
<th>Subsidy</th>
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<tbody>
<tr>
<td>Bus</td>
<td>9%</td>
<td>R 357m</td>
</tr>
<tr>
<td>Commuter rail</td>
<td>52%</td>
<td>R 228m</td>
</tr>
<tr>
<td>Minibus taxi</td>
<td>39%</td>
<td>R0</td>
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In terms of the PTIP restructuring of subsidised services is to be based on the following principles:
- Identification of priority corridors (rail and bus) supported by feeder services in a hub-and-spoke arrangement. Some of the priority bus corridors may act as feeders to the rail priority corridors;
- Use of appropriately sized vehicles on corridor and feeder links of the public transport network;
- Establishment of interchange and park and ride facilities at key nodes
- Introduction of regulated competition to:
  o Facilitate the transformation of the contracting regime from interim to tendered and/or negotiated contracts and commercial contracts;
  o Draw the minibus taxi and small bus operators into provision of scheduled public transport services;
  o Reduce destructive competition by encouraging competition for and not on routes and eliminating cases where subsidised services run parallel; and
  o Improve the efficiency of the public transport system by opening the system to more operators

The City of Cape Town has already made significant progress in identifying networks of priority corridors to facilitate the delivery of public transport services.
The approach is based on main transport corridors forming a network and being supported by feeder services and community services. The diagram below provides an example of the spatial services planned for Cape Town, highlighting the key transport corridors.

**Spatial representation of Cape Town public transport service corridors**

Some districts and towns are following the Cape Town example. George, for instance, is fairly advanced, having identified three priority corridors, namely:

- Sandkraal Road Corridor: Thembalethu – central business district (CBD);
- Beach "York Road Corridor": Pascalsdorp – CBD; and
- R102: New shopping mall – CBD.

The provincial strategy acknowledges that in addressing public transport requirements in the more rural areas there will need to be a different approach due to the low demand volumes. The diagram below presents the conceptual model developed as to how public transport services could be provided in a rural context.
It is proposed that key features of a rural public transport system could include:

- Combination of passenger and small freight transport;
- Establishment of transport brokering/booking services to improve efficiency and viability; and
- Incorporating periodic services to key social and community facilities, with schedules based on requirements and demand.

**Modal integration**

The current public transport system lacks effective modal integration at all levels, from pedestrian linkages with bus to linkages between minibus taxis and rail services. Key challenges needing to be addressed in this regard include:

- Coordination of schedules and timetables for services in strategic priority corridors as well as between feeder and corridor services;
- Integration of some of the minibus taxi services with scheduled services;
- Development of suitable facilities and infrastructure to facilitate transfers;
- Establishment of a common fare structure or negotiating transfer agreements and protocols between the different modes and operators, and setting up an integrated ticketing system;
- Upgrading of services offered by the different modes, starting with services in the priority corridors;
- Linkages for safe pedestrian walkways to, from and interconnecting minibus, bus and rail services; and
- Establishment of a common livery (signage) for public transport in the province to facilitate efficient inter-modal changes.
Fare collection system

There are currently three types of fare collection being used by the dominant modes of public transport, namely:

- **Minibus taxis**: Cash fares are collected from users inside the vehicles by “conductors” or by the drivers. Common tariff structures are generally applied based on route and destinations. Fares are charged for single trips, with no tickets issued or formal records retained.

- **Commuter bus transport**: Fares for single and multi-journey trips are charged. Tickets for single trips are generally purchased from the driver on boarding the bus. Multi-journey tickets are usually purchased from “ticket vehicles” belonging to the operator. These vehicles drive to specific locations in the different neighbourhoods, where they are accessible to commuters wishing to purchase tickets.

- **Commuter rail transport**: Tickets for the commuter rail system are sold at most of the larger stations. Both single and multi-journey tickets are available at stations, with no tickets being issued on the trains. Monthly and weekly concession tickets are available and most commonly utilised by regular commuters. In addition, multi-journey tickets for bus and commuter rail transport are available usually on a weekly, monthly or bi-monthly basis.

There is no common fare regime which applies to all modes. There are thus no fare “concessions” when passengers transfer from one mode to another. Operators retain all money collected from fares as their reward for carriage.

In order to facilitate the integration of the different modes of public transport, improve the efficiency of the service, and make public transport more efficient, convenient and affordable to passengers, a new integrated fare management system is required.

The diagram shows the fare management system being proposed by the province:
It is envisaged that the new fare management system will be introduced as part of the PTIP. It will involve both the public and private sectors in a public-private-partnership (PPP) dispensation with respective responsibilities as follows:

- **Public sector:** Establishing the back office and management information system, managing the fares collected, managing the operator contracts, and paying the operators for services rendered;
- **Private sector:** Maintaining the infrastructure for ticket distribution and validation, providing supporting communication networks, and administering the fare collection system; and
- **Private operators:** Independent of the PPP, private operators will render the services in accordance with service level agreements.

**Establishment of a public transport authority**

A Transport Authority is essential for the planning and operation of an effective public transport system, particularly given the fragmented nature of existing governance and operational structure. The provincial public transport dispensation involves all spheres of government (national and provincial Departments of Transport, City of Cape Town and five district municipalities), other government agencies and parastatals (e.g. SARCC, Metrorail, ACSA, the private sector and civil society as users. Table 4 summarises the key functions and responsibilities of each of the government-related roleplayers.
Table 4 Functions and responsibilities of roleplayers

<table>
<thead>
<tr>
<th>Entity</th>
<th>Key responsibilities and functions</th>
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</table>
| National Department of Transport            | • Overall governance and control of the transport environment through legislated powers  
                                            | • Overseeing and directing national public transport policy and allocating funding accordingly  
                                            | • Driving the minibus taxi recapitalisation process                                                |
|                                            | • Licensing public transport entities from other countries                                          |
|                                            | • Administering of commuter rail and bus subsidies in conjunction with provincial counterparts    |
| Provincial Department of Transport & Public Works | • Approval of statutory plans (though provincial MEC)                                             |
|                                            | • Development of the provincial land transport framework                                           |
|                                            | • Budget for transport management, planning and public transport infrastructure and facilities in support of municipalities, including public transport subsidies not covered by national department |
|                                            | • Approval of pricing regimes such as for bus fares                                                |
|                                            | • Issuing of operating licences for public transport operators through the licence board          |
|                                            | • Acting as the contracting authority for tendered and negotiated public transport contracts       |
|                                            | • Together with national department, the administration of bus subsidies                         |
| National agencies: The South African Rail Commuter Corporation (SARCC) | • Undertaking commuter rail planning and acting as the contracting authority |
| Metrorail                                   | • Administering rail subsidies in conjunction with national department                           |
| Airports Company of South Africa            | • Undertaking rail commuter operations under the auspices of SARCC                                |
|                                            | • Managing commercial airports under the auspices of the national department                     |

Currently the provincial government and the City of Cape Town have different approaches to giving effect to the establishment of a public transport authority (PTA). The provincial government favours a PTA that encompasses all the roleplayers into a unified structure incorporating all districts, including the City of Cape Town. In this dispensation it is envisaged that the PTA as a integrated body would have collective resourcing and decision making. The City of Cape Town favours establishing its own transport authority to addressing the metro transport challenges. The authority would incorporate all roleplayers of relevance to the City. The provincial government would be an important participant, but the City would retain its responsibilities and its powers in respect of resourcing and decision-making.

The lack of consensus on the appropriate dispensation is hampering progress towards addressing the provincial transport and public transport challenges. In order to address the impasse the province proposes that a PTA be set up pulling together all the different roleplayers into a single structure, with the City retaining
a planning authority. The PTA would be an inter-governmental public entity with the following shareholding:

- national Department of Transport;
- provincial Department of Transport and Public Works;
- City of Cape Town;
- Five district municipalities; and
- Some of the B-category municipalities, such as George, Saldanha, and Oudtshoorn.

In addition, it is proposed that civil society, business and organised labour be represented on the PTA as they are viewed as important stakeholders in the public transport system and should be afforded the opportunity to influence decisions which affect them. The proposed structure and relationships are shown in the diagram below.

Although the provincial proposal calls for an inter-governmental entity, ultimately the province would be the leading player. The reluctance of the City to embrace this model suggests that there are concerns about boundary management between the roles and functions of the City and province. The City’s position finds support in the NLTTA [spell out] which requires that transport authorities be established in the municipal sphere of government, rather than the provincial sphere. It is understood that the province is currently making representations to enable the required amendments.
Intelligent transport systems applications in public transport

The PTIP proposes that information, communication and various advanced technologies be applied extensively to ensure that public transport is managed and run efficiently, and to promote integration between the different modes. There are five key areas which will be targeted for intelligent transport systems (ITS) applications, as follows:

- Traffic management, especially traffic signal pre-emption to give priority to public transport, as well as incident management systems;
- Enforcement of public transport priority lanes through the utilisation of number plate recognition technologies as well as close circuit television (CCTV);
- Safety and security in public transport through extension of coverage of CCTV at public transport stations, interchanges, in public transport vehicles and along public transport routes;
- Monitoring of delivery of public transport services and performance by operators through the application of a global positioning system (GPS)-based automatic vehicle location (AVL) system. It is proposed that this system initially be implemented to monitor subsidised services, but could be extended over time; and
- Integrated ticketing, based on smart-card technology.

These plans assume that the ITS capacity exists for development, implementation, maintenance and operation. In light of current concerns about the country’s skills shortages, soliciting and/or training of specialist resources may be necessary. In addition, the ITS proposals need to be justifiable in terms of relevance to needs and benefits against the costs of development, maintenance and operation. In considering adopting any higher-level technologies it would be prudent, prior to investment, to ensure that all existing mechanisms will be optimally applied and, where appropriate, supported through enforcement.

The table below gives the summary of the key areas currently being considered by province to be targeted for ITS applications, highlighting the ITS application to be employed.

Benefits anticipated from the implementation of the ITS applications include the following:

- Improved management of the public transport system;
- Improved planning of service delivery so as to match supply to demand. In this way the efficiency of the system will also improve;
- Improved performance of the public transport system, with improved safety and reliability; and
- More reliable passenger information.

Empowerment of public transport operators

The provincial minibus industry currently supports in excess of 10,000 entrepreneurs in the province. The informal nature of the industry has made it difficult for the entrepreneurs to evolve into public transport operators in the
formal business sector. In addition, the informal nature of the industry has militated against effective self-regulation, impeding compliance and industry transformation. Meanwhile, beyond the minibus taxi industry, there are increasing numbers of small bus operators emerging from historically disadvantage communities who could benefit from access to public sector transporting opportunities.

The PTIP identifies the need to support endeavours to empower disadvantaged minibus taxi and bus operators to enable them to participate meaningfully in the public transport system, migrating from informal operations to full inclusion in the formal economy. It is proposed that empowerment support include the following:

- Facilitating and supporting existing minibus taxi operators to move to larger vehicles in accordance with the recapitalisation initiative; and
- Providing opportunities for disadvantaged bus and minibus taxi operators to bid for contracts to provide transport services.

It is envisaged that the entry of small operators will be facilitated by various means such as, the inclusion of different size contract parcels, and joint venture and partnership mechanisms.

The province has also highlighted the importance of training and skills development programmes to support empowerment. Accordingly the province intends to embark on a range of programmes to support training and skills development.

**Improved regulation and law enforcement**

Currently the legal dispensation in respect of public transport is characterised by fragmentation of authority, reflecting the lack of integration of the components comprising public transport. The fragmented governance and operational structures both the public and private domains results in a complex jurisdictional dispensation of regulations and bye-laws. Within this context there is a lack of uniform standards in terms of safety or operational compliance. Similarly, there is an absence of coherent and consistent application of law enforcement practices. This situation has been exacerbated by an apparent lack of adequate resources, in terms of both human and financial capital. This has compelled enforcement agencies to focus on general traffic law enforcement strategies, rather than the more complex and demanding challenges of public transport law enforcement.

The province recognises law enforcement as a crucial element in managing an effective public transport dispensation and aims to prioritise it accordingly. The province proposes focussed investment in law enforcement systems that will provide relevant intelligence on the transport services. It is envisaged that the proposed PTA will play a central role in coordination supporting the alignment of regulation and law enforcement throughout the province. However, this does not imply that the PTA will be responsible for regulation and enforcement in a centralised system. Instead, it will facilitate and promote coordination.
Models of ownership, financing and delivery of infrastructure and facilities

The development of a quality and robust public transport system depends on the ability of the various agencies in government to deliver the necessary planning, operations and infrastructure. Currently, public transport in the province involves a complex web of national agencies, provincial government and local government ownership and provision. In this context many of the facilities that are key to the maintenance and upkeep of vehicles and rolling stock are owned by the providers of the service. Other general public transport infrastructure such as bus shelters and taxi ranks is provided and maintained by the municipality. The fragmented ownership structure impedes on the ability to plan and deliver a coordinated public transport system. Compounding the problem is the fact that each of the custodian entities has independent budgeting and planning processes.

To address these challenges some attempts to improve coordination have been ventured, such as collaborative project teams representing key entities. More formal coordinating mechanisms are being established between the spheres of government. Although these endeavours are improving coordination, challenges persist.

To address the challenges, the province envisages that an inter-governmental entity (IGE) be established alongside the PTA. It is proposed that this structure will allow the various roleplayers a formal opportunity to participate in ensuring a coordinated public transport system.

The province proposes that a further entity be established to ensure infrastructure delivery for the public transport system. The intention is that the various providers of infrastructure would contribute financially to the development of the infrastructure at municipal level and ongoing maintenance and upgrading of these facilities would then be undertaken by the new entity. In this dispensation the infrastructure would be owned by the municipality, but be made available to the public transport system by way of a legal servitude registered against the facility. There would be cross-shareholding between the operations and infrastructure entities to ensure coordination.

The province acknowledges that the proposed model would require changes to the NLTAA, specifically in relation to the constitution of transport authorities, as discussed above.

1.1.2.6. Major projects

The elements of the PTIP outlined in the preceding sub-sections have highlighted a wide variety of interventions required to give effect to the programme ['plan' or 'programme'? – need to standardise]. In turn, this translates into a complex list of interconnected projects in various stages of conceptualisation, planning and even implementation.
The overall riding public transport strategic priority is to ensure a safe and reliable transport system that serves the needs of the people of the province. To attain this, the following key aspects need to be addressed:

- Extending and improving rail network;
- Provision of dedicated bus lane infrastructure, particularly along development corridors;
- Providing interchange facilities to enable linkages between modes, including cycle and pedestrian;
- Providing infrastructure for addressing the minibus taxi challenges in terms of dedicated lanes and load and drop-off facilities;
- Integrating public transport modes, for example through inter-modal interchanges, coordinated scheduling and through ticketing infrastructure; and
- Extending public transport services, for example through expanding routes and duration of services.

At present, the Department of Transport and Public Works provides funding to municipalities for much needed public transport facilities, with the focus on non-motorised transport facilities. Table 5 provides an indication of the levels of funding currently provided and/or budgeted for.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Mobility strategies</th>
<th>Non-motorised transport</th>
<th>Public transport facilities</th>
<th>Shelters and embayments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>05/06       06/07</td>
<td>05/06 06/07</td>
<td>05/06 06/07</td>
<td>05/06 06/07</td>
</tr>
<tr>
<td>Cape Winelands</td>
<td>- -          2020 7825</td>
<td>- -</td>
<td>1685 2175</td>
<td></td>
</tr>
<tr>
<td>Central Karoo</td>
<td>2300 3000</td>
<td>2700 5250</td>
<td>- -</td>
<td>0.900 1450</td>
</tr>
<tr>
<td>City of Cape Town</td>
<td>- 2692</td>
<td>- 4000</td>
<td>2825 -</td>
<td></td>
</tr>
<tr>
<td>Eden</td>
<td>10000 2000</td>
<td>0.250 8354</td>
<td>2350 -</td>
<td>2150 9646</td>
</tr>
<tr>
<td>Overberg</td>
<td>- -          0.30 3210</td>
<td>0.50 -</td>
<td>1700 4090</td>
<td></td>
</tr>
<tr>
<td>West Coast</td>
<td>- -          0.65 4600</td>
<td>1850 -</td>
<td>1819 3400</td>
<td></td>
</tr>
</tbody>
</table>

Table 6 lists the high priority strategies, estimated capital expenditure and timing.

<table>
<thead>
<tr>
<th>Project</th>
<th>Capex</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Cape Town mobility strategy</td>
<td>R77m</td>
<td>2006-2008</td>
</tr>
<tr>
<td>Sandkraal Road mobility strategy</td>
<td>R33m</td>
<td>2006-2009</td>
</tr>
<tr>
<td>Mossel Bay mobility strategy</td>
<td>R10965m</td>
<td>2006-2008</td>
</tr>
<tr>
<td>Central Karoo mobility strategy</td>
<td>R11m</td>
<td>2006-2008</td>
</tr>
<tr>
<td>Bosmansdam pedestrian bridge</td>
<td>R10m</td>
<td>2007-2008</td>
</tr>
<tr>
<td>Saldanha Bay mobility strategy</td>
<td>R11m</td>
<td>2007-2009</td>
</tr>
<tr>
<td>Public transport impoundment facilities</td>
<td>R11m</td>
<td>2007-2009</td>
</tr>
</tbody>
</table>
1.1.3. Freight logistics

1.1.3.1. Overview
Over the past two decades, the South African economy has shifted from a primarily inwardly focussed economy with heavy reliance on primary export products to a manufacturing and service economy with an increasingly high export orientation. As the economy emerged in the early 1990’s from a formerly highly protectionist regime, it focussed on its competitive advantage in bulk export commodities. More recently, however, other sectors with less of a primary product orientation, such as processed steel, timber and chemicals, began to gain competitive advantages. Similarly, high-value sectors such as the automotive and other advanced and specialist manufacturing sectors have increasingly shown sustained competitive advantage.

As South Africa enhances its international competitiveness and further unlocks its industry potential, the freight logistics sector will play a key role in reducing costs and enhancing the reliability of moving goods both within the domestic economy and between South Africa and the country’s trading partners.

Exports grew by 25% between 1996 and 2000. The immediate benefits of restructuring the freight logistics sector will be a contribution to sustained economic growth, which in turn will create more employment opportunities and assist in the funding of social development needs.

South Africa is far from its global markets. The four largest export partners (the UK, USA, Germany and Japan) account for 33% of exports. Many of the regions against whom South Africa competes, such as South East Asia, Eastern Europe, and South America are closer to these markets. The geographic disadvantage is exacerbated by the fact that Gauteng, which is the dominant manufacturing hub, is located some 600 km or more from the major ports. Moreover, the logistics systems required to support the shift to a manufacturing and service economy have, for a number of reasons, failed to keep pace with changes in the national economy. This reduces South Africa’s competitiveness and growth potential, and as a result, government intervention is necessary. By ensuring that the freight logistics system is efficient and reliable, logistics costs, which currently account for 14.7% of GDP and are well above the global average, will be driven down.

The National Department of Transport is currently drafting a strategic framework for “streamlining” the national freight logistics system. The draft report on this initiative highlights the following trends and challenges in terms of freight transport:

- The challenges posed by globalisation and the need for South Africa to improve its competitive positioning in the face of reducing international trade barriers;
- The unresponsive supply chain environment, which is characterized by a lack of flexibility in meeting changing customer demands and encourages logistics costs to escalate;
The freight industry structure is identified as a central contributor to industry constraints, in part due to monopoly control within certain modes (e.g. rail) and poorly defined institutional relationships;

- The existent of two critical national corridors linking manufacturing and trading centres, one of which links Cape Town and Gauteng;
- The option of a “high road” based on enhanced competition, improved regulation and structural change along with greater customer orientation;
- Poor investment in ports, rail and secondary roads, against an apparent need for R160 billion in capital expenditure over the next 15 years. The report suggests that the need could be reduced through enhanced efficiency in service delivery and through public-private (PPP) participation.

In the provincial context some overall characteristics of freight logistics include:

- The Cape Town-Johannesburg corridor accounts for over 19 million tons of goods, of which 10% is export oriented and about 85% transported by road;
- The provincial freight profile has an emphasis on perishable agricultural exports, which places increased demands on performance; and
- There is a growing concern about the lack of rail performance resulting in excessive road freight traffic and capacity limitations on the corridor infrastructure.

1.1.3.2. Governance

In most instances, government or parastatals are responsible for providing infrastructure for freight logistics and its related activities in the Western Cape. However, the private sector has a key role to play in delivering services, as well as providing support infrastructure, such as cold storage facilities. In addition, government, through parastatals and agencies, is responsible for the movement of freight on both the road and rail system. The picture can be summarised as follows:

- **Road freight**: The South African National Roads Agency (SANRAL) is responsible for maintaining national roads, the provincial Department of Transport and Public Works for provincially proclaimed roads, and municipalities for the local network;
- **Rail freight**: Spoornet is responsible for operating the rail network, which carries all cargo;
- **Ports**: South African Port Operations (SAPO), a division of Transnet, operates the port. The National Ports Authority (NPA), also a division of Transnet, provides landlord functions to SAPO and other private operators, and as such, is responsible for the infrastructure planning;
- **Air freight**: ACSA is responsible for both the ownership and management of facilities for air-freight

1.1.3.3. Road freight transport
Overview
The characteristics of road freight transport have changed dramatically over the past few decades. Traditionally rail was the preferred mode of transport for the conveyance of freight, but over time road transport has become the preferred mode. This trend had taken place due to a number of factors, including:

- The lack of level playing fields between the transport modes, pertaining specifically to the recovery of the cost of infrastructure provision, management, operation, and maintenance costs. Thus road transport is indirectly subsidised as the full costs of infrastructure development, management, operation and maintenance are not fully recovered through user charges.

- Road transport provides greater flexibility, particularly in terms of a door-to-door reach, limiting the modal changes required. Rail transport is confined to operating on fixed tracks often necessitating modal changes.

- Poor operational performance and a lack of service orientation has also historically impacted on the ability of rail to retain market share. General perceptions of lack of adherence to time frames and service ethics have been cited by business and industry as reasons to change mode.

The road freight industry is extremely competitive, with operators adopting performance improvement enhancements such as technologies to monitor driving performance to minimise fuel and maintenance costs, and scheduling technologies to optimise fleet utilisation. The performance of the sector is solid, with a number of major freight operators being based within the province. Many are located in rural municipalities, such as Paarl, Wellington and Ceres. Other than intense competition, key challenges facing the industry include the following:

- Lack of sufficient law enforcement to ensure market equity, prevent overloading and ensure compliance with safety regulations;
- A shortage of skilled drivers within the province, noted by industry leaders as a major constraint;
- Concerns pertaining to social issues that impact on resources in the sector, including the prevalence of HIV/AIDS; and
- Competitive and employment pressures forcing drivers to work extended hours resulting in fatigue and accidents

In a provincial context, a key concern is the overburdening of the road network and its financial consequences. Clearly efforts need to be made to:

- Lobby at a national level for the structural changes that are needed to achieve relative equity between the transport modes; and
- Improve provincial law enforcement to prevent illegal and unsafe transport practices, particularly overloading.

Key freight corridors
There are three key road corridors within the Western Cape which are deemed to be of national importance with respect to the movement of freight. These are the N1, N2 and N7. However, within the province other road links are as
important when considering the need to move goods from areas of production to areas of manufacturing and/or consumption.

The key freight corridors include the following:

- **The Cape Town-Gauteng Corridor corridor (the N1)** accounts for over 19 million tons of goods. This corridor has two distinct sections, namely:
  - The N1 Beaufort West-Paarl has an average annual daily traffic (AADT) volume of approximately 3 219 vehicles. AADT refers to light vehicles only, and the average annual daily truck traffic (AADTT) is 1 180 vehicles of which 73% are longer combination vehicles (LCVs);
  - The N1 Paarl-Cape Town has significant amounts of light vehicle traffic from as far out as Paarl (AADT 45 584 at Kraaifontein). LCV traffic amounts to approximately 3 936 AADTT at Kraaifontein (33% of heavy goods vehicles), but increases to an AADTT of 5 565 at a point approaching the Milnerton-Port grade separation. At this point, light vehicle AADT is 68 565 and the combination of light and heavy goods vehicle traffic causes a daily traffic jam from 06h00 to 09h30. This is the worst congested freight traffic route in the Western Cape.

- **The N2 Corridor (Somerset West-Cape Town)** has light vehicle AADT of approximately 90 000 vehicles per day and is almost entirely congested from Langa to Mowbray from 06h00 to 09h00 each day. The heavy goods vehicles in the traffic stream are mainly small, rigid vehicles (54%) and articulated combinations (41%), with only 5% of all traffic being LCVs. This suggests minimal long distance traffic on this route;

- **The N7 Corridor (Malmesbury-Cape Town)**, once clear of the Cape Town metropole, has an AADT of approximately 6 091 vehicles and a heavy goods vehicle AADTT of 917, reflecting a relatively light utilisation level.

**Key strategic issues**

**Congestion**: It is apparent that the bulk of the freight vehicle traffic involved in the congested N1 route relates to the Port of Cape Town and the industrial areas of Paarden Eiland, Montague Gardens and the Maitland /Epping complex. Levels of AADTT are not exceptionally high, but when combined with excessive light vehicle traffic, heavy goods vehicles contribute to obstruction and safety concerns. Initial calculations show that about 26% of the traffic on the N1 (near the port) is container related. The critical problem of access to the ports is described in more detail in the ports sub-section below.

The real problem appears to be the numbers of light vehicles on both the N1 and the N2. Solutions may well rest primarily in developing an effective public transport system to reduce the number of private cars on the road. Providing diversionary routes for heavy goods vehicles to enable them to avoid the main congestion on the N1 may be feasible with extensive development of further freeway capacity to the port and industrial areas, and by realignment towards Milnerton around Montague Gardens from as far back as Plattekloof Road.

**Overloading**: From a provincial perspective a key concern is the deterioration of road infrastructure caused by land freight haulage, particularly in terms of
overloading. In this context, effective law enforcement is essential to protect the road infrastructure and ensure equitable competition within the road freight industry. There is a general perception that despite the increased efforts made by the provincial traffic authorities to address the problem of overloading, it remains a common practice, in part due to the intensely competitive nature of the industry.

**Key strategic interventions**

The interventions required in the short term for the road freight sector include specific actions dealing with overloading and traffic management actions related to the location and operations of weighbridges. In addition, the national freight strategy suggests that there should be selective access for heavy vehicles on provincial roads. Other actions proposed by the national Department in their freight strategy include:

- Ensure the effective functioning of all weigh stations across the country within 3 to 6 months;
- Introduce new weigh bridges at strategic locations within 24 months (this could include possible implementation of mobile overload control units);
- Relocate high-use provincial road routes to SANRAL within 12 to 18 months;
- Undertake a feasibility study for differential gross vehicle mass (GVM) limits on different parts of the network within 9 months;
- Enhance road infrastructure development on the identified high priority domestic and regional corridors

The provincial Department of Transport and Public Works has identified the following key initiatives to address freight requirements:

- Improve road linkages with Cape Town Port, to reduce the time taken for heavy vehicles to access the port. To this end a study is currently being undertaken to investigate the optimal road configuration from the N1 to the port;
- Address overloading on the provincial road network, the province intends to construct a further two weighbridges during the 2006/07 and 2007/08 financial years. In addition, electronic surveillance equipment is to be installed to target the real transgressors;
- Implement infrastructure improvements to four of the nine weighbridges in the short term to a value in excess of R 6 million during the 2005/06 financial years.

Various other road infrastructure improvement projects are being undertaken, which by their nature will improve the network for freight vehicles. These are reported upon in the roads infrastructure section.

**Major projects identified**

Major projects identified for the SIP in respect of road freight are as follows:

- In conjunction with the City and NPA to initiate a strategic plan for freight movement, particularly in terms of port access;
- Construction of two new weighbridges in 2006/07 and 2007/08;
- Infrastructure improvements to the weighbridges at Somerset West, Vredenburg, Moorreesburg and Klawer;
- Installation of electronic surveillance equipment at weighbridges to target transgressors.

1.1.3.4. Rail freight transport

Overview
The South African rail network operated by Spoornet carries over 180 million tons of cargo annually. As noted earlier, Spoornet has lost general freight volumes to the road freight sector, predominantly reflecting higher value commodities. The main reasons for the loss of market are the condition of the asset base and lack of performance and market orientation within Spoornet, which operates in a rail monopoly. The reliability of rail was shown in the results of a rail customer survey conducted by the Council for Scientific and Industrial Research (CSIR) to be the most important challenge facing the rail freight sector in South Africa. In addition, the skill levels of Spoornet employees were found to be lower than those of their international counterparts.

The national Department of Transport ascribes the problem to “a lack of point-to-point infrastructure, as well as out-dated managerial and operational systems”. A few pilot projects have been identified by the department as starting points to review the causes and consequences of the bottlenecks along the logistics chain and to prescribe remedies. Currently, the Gauteng-KwaZulu-Natal corridor has been identified as an important pilot project, whereafter attention will shift to the Cape Town-Beit Bridge and the Gauteng-TransKalahari corridors. The provincial situation is a reflection of the national picture, largely due to Spoornet operations being national. The provincial freight databank study confirmed that the provincial rail network has deteriorated and poor service levels have resulted in loss of most of the general cargo traffic to road transport.

The main freight rail lines within the Western Cape are as follows:
- Saldanha line carries the largest volume of rail freight due to iron ore component on the Orex (Sishen-Saldanha) line;
- Cape Town-Gauteng line conveys a wide range of commodities from maize to steel, to coal. At present, volumes indicate that the line has approximately 20% spare capacity;
- Mossel Bay-Worcester line transports various commodities and is considered to be currently significantly underutilised;
- Caledon line generally transports agricultural produce such as barley and wheat from the Overberg region and is currently significantly underutilised.
- The inbound line of Porterville line is generally used to transport cement, coal and gypsum, with a total tonnage of 31 000 tons. The outgoing commodities are cement and wheat, with a total tonnage of 132 000 tons. The line is currently under-utilised;
- George- Knysna Line has very little freight traffic and is totally under-utilised;
• There are five main lines within the Cape Peninsula. Limited freight is moved on these lines. For example the only freight moved on the Simonstown line is malt and coal to the brewery at Newlands.

With the decline in rail demand a number of lines have been closed, for example the Franschhoek, Wolseley-Ceres lines. Spoornet have expressed concerns about the viability of other lines. Historically Spoornet’s response to declining demand is to consolidate and curtail services, rather than to address other demand factors such as service levels. As a result the services offered are focused on the long-distance haulage of bulk commodities. There are isolated examples of other industries still being accommodated, such as a canning factory at Ashton, cement producers, malt producers, breweries and container forwarders, but all complain of indifferent and unreliable service levels and high cost structures.

**Key strategic issues**

Clearly there is a need to revitalise rail freight in the province and nationally. National attention is almost certainly required to address the lack of performance of Spoornet rail services, and ensure the introduction of an equitable pricing regime and recapitalisation of rolling stock and locomotives. The province may need to motivate this revitalisation to reduce road usage by agri-industries and exporters, amongst which there is evidence that many would shift back to rail if these issues were adequately addressed.

**Major projects**

The national freight transport strategy indicates that specific actions need to be undertaken such as instituting training programmes, ensuring that appropriate investment is made, as well as setting efficient targets and undertaking institutional reform. The following actions, specific to infrastructure have been noted:

- Increase volumes carried by Spoornet by 20% within 24 months through improving efficiency of existing asset and resource base;
- Invest immediately in critical rolling stock and equipment including signalling, IT integration, scheduling and tracking systems;
- Operate privately-owned rolling stock on behalf of large volume customers; and
- Invest immediately in critically required infrastructure.

No significant rail infrastructure projects identified at a provincial level directly addressing rail freight requirements, particularly in light of the Spoornet considerations being given to further consolidation and focus on bulk long haul services. A broader project pertaining to rail in general with some relevance to freight was noted, namely investment in critical infrastructure, rolling stock and equipment as part of the provincial critical investment plan.
1.1.4. Ports

1.1.4.1. Overview

Ports have a major role to play in minimising transportation costs, and creating opportunities for growth, employment and redistribution.

From an institutional perspective, Portnet has been replaced by the National Ports Authority (NPA) and SA Port Operations (SAPO). The NPA acts as the landlord, providing the fixed infrastructure which is operated by SAPO. The commercial port policy document adopted a few years ago provides the legal framework within which the NPA works. The National Port Authority Act has also been adopted but the implementation period is not yet established. Opportunities regarding concessioning agreements with respect to port operations, tariff and wharfage restructuring and land rental policy models are impacting on the NPA business model.

The Western Cape has three ports of commercial significance, with the following focus areas:

- The Port of Cape Town is a full service general cargo port, and caters for wide-ranging activities including container handling, liquid and solid bulk, break bulk commodities, fishing, ship repair, oil-rig maintenance, and occasional cruise liners. Major commodities handled include fruit, fish, petroleum, fertilizers and other agricultural products;
- The Port of Saldanha focuses primarily on the export of iron ore and related products, and the import of bulk crude oil;
- The Port of Mossel Bay maintains its former fishing activities, but now focuses significantly on activities related to Mossgas and oil/gas exploration, such as petroleum products and related industry maintenance.

The diagram indicates the “market share” of the various national ports based on tons of cargo. It shows the dominance in terms of cargo of Saldanha (iron ore), Richards Bay (coal) and Durban (Gauteng / Durban import/export).
This report focuses primarily on the Port of Cape Town, due to its relatively greater commercial and economic significance for Western Cape.

1.1.4.2. **Port of Cape Town**
The port has a restricted hinterland and small industrial base. The diagram shows the current port layout, indicating the allocation of activities.

**Layout of the Port of Cape Town**

The port can be roughly divided into three major areas:
- The Victoria and Alfred Basins presently house the local fishing fleet and port marine services in the form of tugs, pilots and crane vessel. The surrounding land areas have been re-developed as world class tourism retail and commercial ventures. Two of the port’s most important ship
repair facilities are also situated in these areas – the Shiplift and the Robinson dry dock (161m).

- The Duncan Dock stretches from A-berth in the one corner to M-berth in the other. On the north-west side lie the Fresh Produce Terminals (FPT), from which palletised fruit is exported. The south-west side is predominantly occupied by the Multi-Purpose Terminal (MPT), which handles bulk and break bulk cargoes, as well as some container traffic. The small craft basin is occupied by the Royal Cape Yacht Club. Adjacent to this is the Sturrock dry dock, one of the largest such facilities in the southern hemisphere (369m). The eastern side is occupied by the tanker basin, which handles all fuel import / export, and the Eastern Mole, which handles bulk liquid products such as chemicals and edible oils.

- The Ben Schoeman Dock was built in the 1970s, and is predominantly used for containerised cargo. The Cape Town container terminal occupies most of the berths ranging from berth 501 through to 604.

We now discuss the Port of Cape Town throughput in terms of volumes and capacity

Vessel traffic

Cape Town vessel traffic experienced an overall declining trend, from 9,528 in 2002 to 7,046 in 2005. The apparent decrease is, however, partly offset by increases in vessel capacity.

Table 7 shows the volumes of net cargo throughput for 2003/4 and 2004/5. (TEUs are twenty foot equivalent container units.) The table reveals that volumes in the three non-container categories are very erratic. Dry bulk and break bulk commodities are highly seasonal, and also dependant on whether a good or bad season occurs. For example, South Africa has recently high maize production, dry bulk imports have therefore diminished. Liquid bulk is dependant on the rand-dollar exchange rate, and whether the Caltex refinery can provide bunker fuels for visiting vessels. Container volumes are far less erratic, with a steady growth, as discussed further below.

<table>
<thead>
<tr>
<th>Cargo category</th>
<th>Volume per annum 2003/4</th>
<th>Volume per annum 2004/5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry bulk</td>
<td>652,333 tons</td>
<td>880,341 tons</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>2,833,744 tons</td>
<td>1,747,198 tons</td>
</tr>
<tr>
<td>Break bulk</td>
<td>987,582 tons</td>
<td>672,816 tons</td>
</tr>
<tr>
<td>Containers</td>
<td>550,000 TEUs</td>
<td>610,000 TEUs</td>
</tr>
</tbody>
</table>

Containers

The key growth area lies in container handling. Actual volumes in TEUs increased from 316 thousand in 1997 to 562 thousand in 2004, giving a growth rate of 4-5% per annum over this period.

In financial year 2005 throughput of containers was 610 thousand TEUs. Container imports comprise a general mixture of mechanical appliances, textiles, paper,
hardware, foodstuff, etc. Exports are dominated by fruit, beverages and fish products, as illustrated in the diagram.

**Container export mix**

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deciduous Fruit</td>
<td>27%</td>
</tr>
<tr>
<td>Beverages</td>
<td>24%</td>
</tr>
<tr>
<td>Fish</td>
<td>9%</td>
</tr>
<tr>
<td>Prepared Fruit</td>
<td>7%</td>
</tr>
<tr>
<td>Citrus</td>
<td>7%</td>
</tr>
<tr>
<td>Textiles</td>
<td>6%</td>
</tr>
<tr>
<td>Exotic fruits</td>
<td>4%</td>
</tr>
<tr>
<td>Household &amp; Personal</td>
<td>3%</td>
</tr>
<tr>
<td>Prepared Foodstuff</td>
<td>3%</td>
</tr>
<tr>
<td>Mech. &amp; Elec. Appliances</td>
<td>3%</td>
</tr>
<tr>
<td>Meat</td>
<td>3%</td>
</tr>
</tbody>
</table>

**Fruit:**
From a commodity perspective, fruit exports are a key industry. The current throughput is 1,14 million tons per annum, and a long-term growth rate of 3% per annum is expected. Cape Town handles 95% of the country’s deciduous fruit exports, mostly in reefer (temperature-controlled) vessels and containers.

**Bulk liquids:**
The bulk liquids throughput is currently 1,85m tons, or 53% of non-containerised cargo, and comprises mainly hydrocarbon/petroleum cargo.

**Bulk solids:**
The bulk solids throughput is currently 0,9m tons, or 26% of non-containerised cargo, and comprises mainly agricultural products, such as grain and fertilisers.

**Break bulk:**
The break bulk throughput is currently 0,75m tons (21% of non-containerised cargo), major commodities being timber, granite, steel, fish and cement.

**Ship repair:**
The NPA owns and operates all ship repair infrastructure, and currently approximately 345 vessels are repaired each year at the Shiplift and two dry docks.
Cruise liners:
Approximately 30 cruise vessels visit Cape Town annually, and 70% of vessels under 211m are accommodated at the dedicated facility in the Victoria and Alfred Waterfront. Larger vessels are accommodated in the commercial Duncan Dock area at E- or A-berth, which are not tourist-orientated facilities.

Table 8 summarises current capacity utilisation of the port facilities for the 2004/5 period.

**Table 8 Capacity utilisation at Port of Cape Town**

<table>
<thead>
<tr>
<th>Facility / Terminal</th>
<th>Volume per annum</th>
<th>Maximum theoretical capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Container terminal</td>
<td>565000 TEUs</td>
<td>750000 TEUs (stack capacity)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000000 TEUs (berth capacity)</td>
</tr>
<tr>
<td>Bulk liquid terminal</td>
<td>1.85m tons</td>
<td>4.249m tons</td>
</tr>
<tr>
<td>MPT: Solids</td>
<td>0.90m tons</td>
<td>1.324m tons</td>
</tr>
<tr>
<td>MPT: Break bulk</td>
<td>0.75m tons</td>
<td>1.324m tons</td>
</tr>
<tr>
<td>Fruit terminals:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- CT Container Terminal</td>
<td>1.14m tons</td>
<td>1.830m tons</td>
</tr>
<tr>
<td>- MPT</td>
<td></td>
<td>0.280m tons</td>
</tr>
<tr>
<td>- FPT</td>
<td></td>
<td>0.840m tons</td>
</tr>
<tr>
<td>Ship repair</td>
<td>345 vessels</td>
<td>420 vessels</td>
</tr>
</tbody>
</table>

Table 9 gives the breakdown of volumes handled by category, distinguishing between exports and imports, and indicating the key commodities in each category. The total cargo volume for 2004/5 was approximately 10.5m tons.

**Table 9 Volumes handled at Port of Cape Town**

<table>
<thead>
<tr>
<th>Category</th>
<th>Exports</th>
<th>Imports</th>
<th>Commodities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Break bulk</td>
<td>502590 tons</td>
<td>170266 tons</td>
<td>Fruit, granite, cement, steel, mechanical and electrical, vehicles, hardware, etc.</td>
</tr>
<tr>
<td>Dry bulk</td>
<td>7692 tons</td>
<td>880341 tons</td>
<td>Maize, barley, wheat, agricultural products, potash, fertiliser, etc</td>
</tr>
<tr>
<td>Petroleum</td>
<td>362585 tons</td>
<td>1384613 tons</td>
<td>Crude and refined hydrocarbon product</td>
</tr>
</tbody>
</table>

1.1.4.3.  **Port of Saldanha**

Saldanha has the deepest and largest natural port in Southern Africa and is partially protected by an artificial breakwater. With a circumference of 91 km, the land and sea area covered by SAPO jurisdiction totals 18 300 hectares.

Saldanha is the only iron-ore handling port in South Africa, and has a reliable connection between the port and the iron ore mines at Sishen, some 860 km north of Saldanha. The port also serves base metal mines, and the adjacent heavy minerals smelter, as well as the crude oil storage facility near the port. The crude oil is pumped via pipeline to the Caltex refinery in Cape Town. Also within the port area are the South African Navy Base, the SAS Saldanha and a fishing harbour, which is administered by the Department of Environmental Affairs.

A warehouse of 5 544 m² has been constructed so as to allow further expansion. The shed is being used to store 35 000 tons of galvanised steel.
1.1.4.4. Mossel Bay Port
Mossel Bay has always been a fishing port of substance with limited commercial activity. More recently, however, it has started to service the oil and gas industry as well. These two industries now play a major role in the development of the port.

Mossel Bay is the only South African port that operates two off-shore mooring points within port limits. It also serves as the oil-rig supply boat base. Since the launch of Mossgas in 1987 for the production of synthetic fuels and by-products, Mossel Bay has experienced increasing industrial development.

There is an excellent road and rail network which links Mossel Bay to the consumer markets and industrial zones of South and Southern Africa. Sites are available for leasing within the port for harbour-related commercial activity. Sites have been leased at the waterfront development project for tourism and recreational activities in the port.

1.1.4.5. Key strategic issues

Port of Cape Town
In general the physical infrastructure is dated. In many aspects it no longer meets commercial stakeholders’ evolving needs. While the port’s infrastructure was initially of the highest standard, historical spatial and transportation constraints, evolving shipping and handling methods, and new markets and cargoes all necessitate change. There has been little significant investment between the 1970s, when the Ben Schoeman Dock expansion was completed, and 1994. The NPA therefore effectively faces a 20-year capital investment backlog. The situation is exacerbated by the fact that the cost of port infrastructure provision is high, and lead times are long.

In earlier times insufficient consultation and planning undoubtedly also contributed to the above situation. The NPA is increasingly adopting a more consultative, integrated approach. The Cape Town Port development framework is a master plan developed in consultation with major stakeholders, and was updated in 2003. The NPA is also finalising a national ports master plan.

The Port of Cape Town port suffers from a sub-optimal layout of berths and facilities. The NPA port development framework therefore of necessity includes major relocation of facilities. Examples of layout problems are:

- Location of commercial fishing operations in the Victoria Basin, which is predominantly a tourism development area;
- Ship repair facilities situated in the Alfred Basin, which is part of the tourist area. These facilities are also remote from the Sturrock dry dock;
- Location of the Royal Yacht Club, which involves public/tourist activity, at the end of Duncan Dock, adjacent to the Sturrock dry dock industrial ship repair facility.
Ports productivity is relatively low compared to international benchmarks, particularly with regard to containers. For example, the container-handling rate at Cape Town is less than 17 per hour during certain periods of the year, compared with the NPA target of 20 per hour and an international benchmark of over 25 per hour. The major contributory infrastructural factors are:

- Lack of container stacking space near the quayside, and long distances to alternative stacking areas;
- Outdated container-handling technology;
- Increased (unmet) demand for reefer slots, i.e. with electrical connections to accommodate such temperature-controlled containers;
- Cape Town largely handles minor load adjustments, as it is generally either the first or the last port of call. This involves load balancing, which is inherently inefficient from a throughput perspective;
- As the first and last port of call, Cape Town also receives relatively small parcel consignments compared to Durban. This further curtails scale efficiencies;
- Approximately 10 working days are lost each year due to high wind conditions.
- Harbour access to larger vessels is limited by draft constraints such as the 15.9m entrance, 14m of Ben Schoeman Dock and 13m of Duncan Dock.

The continued development and expansion in areas surrounding the port is placing increasing pressure on facilities, in terms of available space, facility utilisation, traffic congestion, environmental aspects and aesthetic appearance. For example, the Syncrolift shiplift operations are constrained by Cape Grace Hotel activities. Key developments in and around the port are:

- The Victoria and Alfred Waterfront;
- The Clock Tower precinct;
- The Roggebaai Canal precinct;
- The Cape Town International Convention Centre; and
- Future Culemborg site developments.

The last-named should, however, also offer significant advantages to the port.

Road congestion is a serious problem, due to poor access, and private hauliers frequently queue for hours in the port area. The fruit industry is particularly negatively impacted by congestion on the road transport infrastructure surrounding the port. Meanwhile under-utilised rail infrastructure within the port area could be better utilised for port-related business.

Marine fuel oil is currently stored at the tanker basin, and pumped to most berths via an ageing pipeline network exceeding 26km in length. Some of this pipeline is redundant and still filled with old product. This constitutes an environmental hazard.

The port has very limited bulk liquid storage capacity relative to other ports. Cape Town bulk storage (CTBS) has five tanks ranging in capacity from 500-1400m³, which cater for petrochemical and solvents (paint and printing industries). Terminal capacity for handling bulk solids is limited, but a further
limitation is the capacity of private facilities to accept bulk solids. Any upgrade to NPA facilities would require a similar upgrade of the receiving facilities to enable vessels to be loaded and unloaded at higher rates.

Besides the suboptimal location of some repair facilities in the Victoria and Alfred area mentioned above, the ship repair industry suffers from a unique structural problem in that the private sector has little control over the repair facilities, which are managed by the NPA. Consequently they cannot readily react to ship repair tenders, since they have limited control over the NPA facilities. The ship repair industry is meanwhile experiencing growing demand for services from the oil and gas industry, and potential exists to service the floating production storage and offloading vessels (FLSO) market. Possible modifications to A-berth to extend capacity are being considered.

Cruise liners need to be accommodated as a complementary service to tourism, but the current activity level of 30 vessels per annum is extremely low. In addition, approximately 30% of vessels exceed 211 m in length and have to be accommodated at the fruit terminals in Duncan dock. The associated commercial activities and lack of services potentially impact negatively on tourists. Cruise liner visits are mostly transitory (24 hours), since Cape Town is not an “end-destination” and also does not constitute part of established cruise itineraries. Hence economic benefits are currently minimal.

The Port Industrial Park (PIP), formerly an Eskom power station, is currently under-utilised. It is ideally situated for port developments, lying adjacent to Duncan Dock berths 501-502, as well as the surrounding industrial areas. It is currently bounded by Marine Drive, the N1 and the Paarden island port entrance. Transnet owns the large Culemborg site, which lies adjacent to the port and offers vast potential for a range of developments – in particular dedicated road and rail access to the harbour.

Competition with other ports is not regarded as significant from a market share perspective, since Cape Town predominantly services a localised agricultural and industrial base. In terms of transitory flows, such as exports from Gauteng, the port forms a natural gateway to Europe and the Americas. Coega will also serve a localised hinterland, and the impact on Cape Town is expected to be negligible.

At national level, competition from an internal budgetary allocation perspective is problematic, as rival developments such as the Durban Container Terminal and the Richards Bay Coal terminal arguably receive greater priority.

In summary, Cape Town, as is the case with other ports, requires substantial investment in infrastructure to address both historical development shortfalls and market demand.
Port of Saldanha
Saldanha suffers from a similar historic backlog in terms of infrastructure development and upgrading for emerging market needs, except in relation to the iron ore-based industry. Given the growing demand from the offshore oil and gas industry, the old Mossgas construction site is being considered for development of facilities for offshore oil and gas industry fabrication and construction.

Port of Mossel Bay
Mossel Bay, too, requires infrastructure upgrading to handle emerging market needs – primarily oil and gas industry related.

1.1.4.6. Major projects

Port of Cape Town
The Cape Town port infrastructure plan of 2003 clearly outlines a detailed progression of infrastructure changes to reach an ideal port configuration in the long term (25 years). The plan is based on current statistics and forecasts. Since port operations have to be maintained, and because of capital constraints, the plan includes a number of interim stages, each comprising a number of projects. It is beyond the scope of this report to describe in detail all the projects and changes envisaged in the plan. We therefore focus on the principles behind the changes and the ideal end-state picture.

The core principles driving the major changes can be summarised as follows:
- Concentrate tourist and general public activities around the Victoria and Alfred basins;
- Consolidate commercial activities in the Duncan Dock and Ben Schoeman Dock areas;
- Upgrade all commercial facilities and cargo handling technology and skills to cater for forecast market demands and improve productivity;
- Ensure optimal development and utilisation of available adjacent land such as the Port Industrial Park and the Culemborg site; and
- Upgrade road and rail access routes and interchanges in liaison with the relevant parties such as the provincial and national transport authorities and Spoornet.

Projects are now listed in terms of three time-frames:

Short-term projects cover the 0-7 year period, and include the following:
- Expand the Ben Schoeman Dock container terminal by approximately 300m to the north-east, deepen berths 601-604 to 15.5m, and upgrade the container handling equipment. This will produce a major improvement in stacking space, will allow the port to handle new generation container vessels, and will increase handling capacity. More containers will be located closer to road/rail access links, facilitating inter-modal changes. All container functions will be located at the terminal, thus freeing up the
south-east end of the dock for alternative use. This initiative is currently undergoing the environmental impact assessment approval process.

- Start consolidating ship repair and maintenance around the Elliot Basin area:
  - Downgrade the Syncrolift shiplift in Alfred Basin to a small craft repair facility, thereby supporting the development of the local small boat industry, and complementing the envisaged world class fish market development;
  - Facilitate the development of a new ship repair facility in Elliot Basin;
  - Dedicate A-berth for ship repair, including for the offshore oil and gas industry.
- Relocate a major portion of fruit handling from berths B, C, and D;
- Relocate a portion of the fishing industry;
- Optimise MPT operations, Duncan Road access and backup areas;
- Start developing the Port Industrial Park, and relate non-essential business from the operational area to the Park.

Medium-term projects, covering years 7-15, include:

- Improve road access by redesigning and modifying the N1/Marine Drive intersection, and also providing access to Culemborg;
- Relocate the Combi Terminal;
- Integrate the Port Industrial Park within the port boundary, and complete the development, e.g. develop modern cold stores and convert the Blue Store to a racking system cold store.
- Develop a multi-purpose vessel facility which can accommodate cruise liners at berth A (but accommodate these in the short term at Victoria Basin number 2 jetty). Also continue with the development of ship docking and repair facilities – for offshore oil and gas industry services.
- Phase out all marine fuel oil bunkering within Victoria Basin and Duncan Dock berths A-M, and remove all redundant pipelines. Develop bunkering facilities in the Ben Schoeman dock (Eastern Mole), and also acquire a bunker barge.

Long-term projects, covering years 15-25, involve the consolidation of all the major port operations, including:

- Container terminal (berths 601-604);
- Fruit terminal (berths 501, 502, 600);
- Port Industrial Park;
- Ship repair hub (Elliot basin, Sturrock Dock, new shiplift, small craft basin, berth M);
- Lay-up, wet repair and general purpose quays on the Ben Schoeman side of the Eastern Mole;
- Liquid bulk terminal (Eastern Mole).
- Multi-purpose terminal (berths E-L), dedicating the entire Combi Terminal backup area to MPT cargo handling, accommodating potential MPT cargo growth at A-berth and at dolphin berths on the Ben Schoeman side of the Eastern Mole;
- Fishing industry terminal (berths B-D);
- General purpose facility at the end of A-berth for cruise liners, Antarctic research vessels, visiting naval vessels, etc.

The diagram illustrates the long-term vision.

**Port of Cape Town projects for long-term**

---

**Port of Saldanha**
The key developments envisaged are based on the development of the Mossgas construction site for facilities to service the offshore oil and gas industry. In the short term the focus should be on upgrades to facilitate the manufacture of jackets and modules. Planned developments include workshops, offices, security, and telecommunications. Medium-term needs include additional quay space for a dedicated “oil and gas village”, laydown areas and bunker fuel networks. Longer-term projections include facilities for the construction or conversion of very large crude cargo carriers (VLCCCs) to floating production, storage and offloading vessels (FPSOs), i.e. a dry dock, quay extension, bunker barge, dredging for VLCC access, etc.

**Port of Mossel Bay**
The key developments envisaged are:
- Upgrading of Quay 4 to accommodate increasing vessel volumes (2007–9);
- Provision of services to additional land required from Propnet and Spoornet (2007-8);
- General infrastructure upgrades: water and electricity, buoys, surface areas (2007-8).
1.1.4.7. Summary of major projects

Table 10 summarises key projects. The capex figures provided are rough estimates, in the process of being refined. NPA will in due course be able to provide updated figures.

Table 10 Summary of major port projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Capex</th>
<th>Timing</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Container terminal and stacking/handling facilities expansion in Ben Schoeman Dock.</td>
<td>R1,800m</td>
<td>2005-10</td>
<td>High</td>
</tr>
<tr>
<td>Fruit terminal expansion and relocation within Duncan Dock</td>
<td>R115m</td>
<td>2005-15</td>
<td>High</td>
</tr>
<tr>
<td>Port Industrial Park integration of the within the port, and further development, such as cold stores</td>
<td>R11m+</td>
<td>2005-15</td>
<td>High</td>
</tr>
<tr>
<td>Consolidated general ship repair facilities at Elliot Basin, including a new shiplift.</td>
<td>R300m</td>
<td>2005-15</td>
<td>High</td>
</tr>
<tr>
<td>Offshore oil &amp; gas industry servicing, Cape Town</td>
<td>R300m</td>
<td>2005-25</td>
<td>High</td>
</tr>
<tr>
<td>Offshore oil &amp; gas industry servicing, Saldanha</td>
<td>R350m</td>
<td>2005-25</td>
<td>High</td>
</tr>
<tr>
<td>General purpose facility at the end of A-berth for cruise liners, Antarctic research vessels, etc.</td>
<td>R100m</td>
<td>2005-15</td>
<td>Low</td>
</tr>
<tr>
<td>Multi-purpose terminal expansion &amp; upgrade in Duncan Dock</td>
<td>R350m</td>
<td>2010-25</td>
<td>Medium</td>
</tr>
<tr>
<td>Culemborg site development and integration</td>
<td>R300m</td>
<td>2010-25</td>
<td>Medium</td>
</tr>
<tr>
<td>Relocation of small craft basin to Victoria &amp; Alfred area and downgrade of the Syncrolift shiplift in Alfred Basin to a small craft repair facility</td>
<td>R30m</td>
<td>2005-10</td>
<td>Low</td>
</tr>
<tr>
<td>Upgrade Cape Town road and rail access routes and interchanges in liaison with the relevant parties such as the provincial and national transport authorities and Spoornet.</td>
<td>R300m</td>
<td>2005-15</td>
<td>High</td>
</tr>
<tr>
<td>Upgrade Mossel Bay Quay 4 to increase vessel handling capacity</td>
<td>R1,500m</td>
<td>2007-09</td>
<td>Medium</td>
</tr>
<tr>
<td>Provision of services to new land from Spoornet and Propnet, Mossel Bay</td>
<td>R65m</td>
<td>2007-8</td>
<td>Medium</td>
</tr>
</tbody>
</table>

1.1.5. Airports

1.1.5.1. Overview

ACSA owns and operates South Africa’s 10 principal airports, including two in the Western Cape, namely Cape Town International Airport (CTIA) and George Airport. Error! Reference source not found. provides comparative indicators for the two airports and South African airports overall.

Table 11 Comparative indicators of Western Cape airports

<table>
<thead>
<tr>
<th></th>
<th>CIA</th>
<th>George</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft landings</td>
<td>46,274</td>
<td>11,307</td>
<td>218,603</td>
</tr>
<tr>
<td>Departing passengers (000's)</td>
<td>3,121</td>
<td>246</td>
<td>13,341</td>
</tr>
<tr>
<td>Staff employed</td>
<td>313</td>
<td>54</td>
<td>1,766</td>
</tr>
</tbody>
</table>

Error! Reference source not found. indicates trends in growth of volume for the two Western Cape airports over the period 2001 to 2005.
Table 12 Volume indicators, Western Cape airports

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aircraft landings:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIA</td>
<td>46,274</td>
<td>46,222</td>
<td>49,076</td>
<td>46,125</td>
<td>41,969</td>
</tr>
<tr>
<td>George</td>
<td>11,307</td>
<td>11,085</td>
<td>9,933</td>
<td>9,791</td>
<td>9,636</td>
</tr>
<tr>
<td><strong>Departing passengers (000’s):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIA</td>
<td>3,121</td>
<td>2,748</td>
<td>2,584</td>
<td>2,382</td>
<td>2,328</td>
</tr>
<tr>
<td>George</td>
<td>246</td>
<td>199</td>
<td>154</td>
<td>133</td>
<td>137</td>
</tr>
</tbody>
</table>

*Error! Reference source not found.* gives the number of aircraft landings and passenger departures at South Africa’s three major international airports for the financial year 2005. In terms of volumes, CIA is clearly South Africa’s second largest airport, handling approximately half as much as Johannesburg International Airport and twice as much as Durban.

Table 13 Landings and departures: Johannesburg, Cape Town and Durban

<table>
<thead>
<tr>
<th></th>
<th>JIA</th>
<th>CIA</th>
<th>Durban</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aircraft landings</strong></td>
<td>93,718</td>
<td>46,274</td>
<td>21,878</td>
</tr>
<tr>
<td><strong>Departing passengers (000’s)</strong></td>
<td>7,364</td>
<td>3,121</td>
<td>1,631</td>
</tr>
</tbody>
</table>

The key trend in international commercial aviation is expected to be the consolidation of international long-haul traffic around approximately 40 mega-hubs, as opposed to the 180 or more international hubs which currently exist. The major growth in South Africa will therefore be concentrated in Johannesburg International Airport (JIA). Local flights will be routed to other airports in accordance with the hub-and-spoke principle.

International passenger arrivals at CIA are very seasonal, and also somewhat erratic. For example volumes in this sector grew by approximately 20% in 2004, but declined in 2005. Factors such as international exchange rates and major terrorist incidents have a significant impact. Domestic flights, on the other hand, show a strong, steady growth rate of approximately 15% at CIA over the past two years. This includes international visitors arriving at JIA and flying to CIA on a domestic leg. It is estimated that the overall 2005 level of approximately 6 million passenger flights via CIA will increase to 7 million by the end of the 2006 financial year.

Accurate figures for air freight are not readily available, but it has been estimated that JIA handles approximately 230 000 tons of cargo annually, whereas CIA handles approximately 54 000 tons. On a national basis, freight volumes are predicted to increase at 10% per annum for the next decade.

A key challenge in the South African airfreight industry is the configuration of the passenger airlines, with a cargo passenger split of 20/80 against international norms of closer to 50/50. The lack of dedicated freight space on passenger flights places pressure on the airfreight industry, intensifying competition for space. It also impacts on freight customer service levels, as passenger luggage is mostly given preference, with freight being “bumped” to the next available flight.
where necessary. High value products and perishables account for the majority of airfreight. In the Western Cape, high value perishable agricultural products such as cut fresh flowers and table grapes, and high value automotive/machine parts and pharmaceutical products are dominant. The air freight movements are primarily to JIA or European destinations, for example for cut flower markets). There are no international dedicated freight flights from CIA.

1.1.5.2. Key strategic issues
At the time of writing ACSA was in the process of completing its airports master plan, which is updated every five years. Unfortunately no drafts were available. However, CIA management expect the plan to reflect the issues and projects listed below.

The major strategic issues facing the Western Cape airports are:
- In accordance with envisaged positioning of JIA as an international “mega-hub”, CIA needs to install the appropriate infrastructure to retain its position as the major secondary airport of South Africa. In particular, management are considering runway and apron upgrades to accommodate A380 aircraft;
- The 2010 FIFA World Cup provides a natural deadline for completing all short-term expansions to facilities and services to meet the projected needs;
- CIA urgently needs to address an estimated 4-year backlog in terms of infrastructure development to handle customer volumes at its domestic terminals;
- Insufficient parking for both domestic and international customers at CIA is regarded as a key shortcoming - currently being addressed;
- Any CIA expansion has to be synchronised with complementary development of the surrounding road and rail infrastructure and transport services, requiring inter-modal coordination and collective involvement of a range of public authorities, including Department of Public Works and Roads, City of Cape Town, Spoornet, SARCC, and Golden Arrow;
- CIA and especially George Airport have recently experienced a rapid increase in passenger volumes resulting from the successful marketing of point-to-point packages by low cost carriers.

1.1.5.3. Major projects
The most important current and envisaged projects are shown in Error! Reference source not found..
Table 14 Priority airport projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Capex</th>
<th>Timing</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of current multi-storey parkade project</td>
<td>R100m</td>
<td>2006</td>
<td>High</td>
</tr>
<tr>
<td>Construction of second multi-storey parkade</td>
<td>R120m</td>
<td>2007</td>
<td>Medium</td>
</tr>
<tr>
<td>Major upgrade/rebuild of the domestic terminal, plus certain elements of the international terminal. This project will bridge the gap between the existing domestic and international terminal buildings, and will include the development of a “central processing unit” for passenger and baggage processing activities common to both terminals</td>
<td>R800m</td>
<td>2006-09</td>
<td>High</td>
</tr>
<tr>
<td>New fuel tanks (ACSA has already called for tenders)</td>
<td>R20m</td>
<td>2006</td>
<td>High</td>
</tr>
<tr>
<td>Runway upgrade (R200m) and apron parking facilities (R55m) to accommodate the new A380 aircraft</td>
<td>R255m</td>
<td>2009</td>
<td>Medium</td>
</tr>
<tr>
<td>Airport ring-road upgrade and rebuild to accommodate increasing traffic and improve CIA access. A traffic impact study has been done, but as yet no definitive capital estimates have been completed.</td>
<td>R60m</td>
<td>2009</td>
<td>High</td>
</tr>
<tr>
<td>In terms of passenger transport services from CIA to Cape Town, some discussions have been held with Spoornet and the City of Cape Town. ACSA understands that the City favours a bus terminal at CIA, but no concrete project plans have been developed.</td>
<td>NA</td>
<td>NA</td>
<td>Medium</td>
</tr>
<tr>
<td>An additional runway may be required after 2010, based on current growth rates. No capital estimates have been prepared as yet.</td>
<td>NA</td>
<td>2011+</td>
<td>Low</td>
</tr>
</tbody>
</table>

ACSA regards its current land as more than adequate for an additional runway, as well as any foreseeable expansion in the next 30 years. Hence there are no plans within ACSA to relocate the airport or part thereof to any new site.

ACSA regards JIA as the national freight hub of South Africa, and does not currently plan any major CIA investments related to freight handling. The existing freight handling facilities are regarded as adequate, and there is sufficient room for expansion on a demand-driven basis.

The recent pressure on facilities at George Airport will be assessed on a longer term basis to see whether the growth in business arising from low-cost carrier packages is sustainable and justifies expansion of facilities.

In terms of other airport-related developments of economic significance, ACSA is aware of the development of major shopping malls and a commercial hive for small business (an “Access Park” type facility) in Precinct 2A, close to the Pick & Pay distribution centre.
1.1.6. Roads infrastructure

1.1.6.1. Overview

The extent of the South African road network is approximately 752 000 km, comprising approximately 532 000 km of classified roads and approximately 220 000 km of unclassified roads. The province has three well-developed road transport routes, namely from the north (N7), north-east (N1) and east (N2), which all converge in the City of Cape Town metropolitan area.

The country road network has been generally highly regarded. It is, however, deteriorating rapidly as a result of inadequate maintenance. A major maintenance backlog has developed due to a protracted period of underfunding, which, in combination with other factors, has given rise to a crisis situation. This crisis situation has been recognised and the national Department of Transport is in the process of finalising the road infrastructure strategic framework for South Africa which attempts to redress the situation. In a provincial context the Department of Transport and Public Works’ strategic plan for 2005/06 to 2009/20 indicates that the current maintenance backlog is estimated to be in the order of R2.1 billion, with an annual capital budget allocation of R976 million. In response to concerns about backlogs the provincial transport budget has increased from less than R350 million to over R1.7bn over the past five years. This enabled the province to set aside R276 million in the 2005/6 budget specifically to start addressing the backlogs in the provincial road network.

The replacement value of the provincial road network, as assessed in 2002, is R11 355 million for the surfaced network and R220 million for the un-surfaced network. The maximum theoretical replacement value where the entire un-surfaced network as optimal gravel material and all surfaced roads are newly built is approximately R17 400 million. Therefore the current replacement value is 65% of the maximum theoretical replacement value.

1.1.6.2. Key strategic issues

Socio-economic development

The road network is the basis of the movement system throughout the province. No person would be able to access work opportunities, markets, recreational activities, etc without a road network, be it on a national, regional or local level. It is a common view that road infrastructure is one of the key preconditions for economic growth, particularly in a country with geographically spread centers of economic activity. Countries with a low standard of living are characteristically countries with inadequate means of moving. The reason for this relationship is obvious, namely transportation is an essential ingredient of almost everything that humans do to supply themselves with the necessities of life. In addition, poverty has been firmly linked to isolation. Characteristically the poor lack mobility and access to vital goods and services. In this context to address
the socio-economic challenges of marginalised communities characterised by poverty and unemployment, road infrastructure is critical as it ensures access to both basic services and economic opportunities.

Governance and responsibilities
The ownership and responsibilities for road infrastructure in the province are spread across the three spheres of government as follows:

- National roads are the responsibility of central government’s Department of Transport. The operational support is provided by SANRAL, which was established and operates under the auspices of the national department. It is a statutory company responsible for the planning, design, construction, operations, management, control, maintenance and rehabilitation of national roads. In the provincial context SANRAL is responsible for the maintenance and development of the national road network in the Western Cape. The possibility is currently being explored of the agency having additional components of the provincial road networks declared as national roads. Currently the agency is responsible for the following elements of the national road network:
  - N1 from the Old Oak Interchange to the provincial boundary near the Three Sisters
  - N2 from Grabouw in the Overberg District Municipal area, through the Eden Municipal area and exiting the province beyond Plettenberg Bay.
  - N7 from Trunk Road 11 (near Garies)

- Provincial roads are the responsibility of the provincial Department of Transport and Public Works. All road delivery functions are carried out by the province, such as policy formulation, performance management, contracting and service delivery. However, most of the delivery functions such as consulting and construction are performed on a contract basis by the private sector. The exceptions, which are dealt with in-house, are elements of routine and occasionally special maintenance.

- Municipal roads are the delivery function of municipalities. The funding for roads is predominately from provincial allocations. The delivery functions are increasingly being contracted out to the private sector. Concerns are arising regarding municipal capacity to undertake its functions and maintain the road infrastructure adequately.

- Toll roads are generally developed and maintained by specialist entities, under the auspices of SANRAL. Within the province, the agency is responsible for the oversight of the Huguenot tunnel and the Tzitzikama plaza, while Chapmans Peak toll road falls under provincial jurisdiction.

There is evidence that the spread of control and responsibility between the spheres of government has resulted in confusion with respect to the coordination of, and responsibility for, planning and delivery of the primary metropolitan road networks.

1.1.6.3. Major projects identified
The backlog in provincial road maintenance and rehabilitation is already partly being addressed through the increasing share of the budget being allocated for
infrastructure development. During the review the following major infrastructure initiatives and projects were identified:

- **Koeberg interchange:** Preparation work has been done for the upgrading of the Koeberg interchange. Although this interchange is regarded as one of the most pressing priorities in terms of city fringe congestion, the cost estimates have curtailed all proposals to date. It is understood that the department is currently budgeting for this work and that the upgrade is again on the table.

- **Blouberg City access:** Development along this axis has been dramatic, placing major pressures on the existing road network. It is understood that the City and province are considering alternative approaches to addressing the challenge. One possibility is the introduction of a rail system from a point in Milnerton, through Paarden Eiland into the City along existing rail servitudes. Media reports also exposed a private sector initiative to introduce a water ferry shuttle from Blouberg to the City. However, rough seas and capital mobilisation seem to be major obstacles.

- **N1 Corridor transit system:** This project was initiated by the province with participation of all key stakeholder groups, including the City, ACSA and developers along the corridor. The project aims to provide a public transport facility between the Northern areas, the City (Metro), CTIA, linking commercial developments along the N1 corridor and within the City CBD. It is envisaged that such a public transport system would alleviate road congestion, particularly in terms of the interface with the City.

- **N2 Corridor transit lanes:** This project involves the extension of the minibus taxi lanes on the N2 from its current termination point at the M5, with a logical continuation towards CTIA. The project aims to improve the bus services making this form of passenger travel more attractive and thereby reducing the use of private cars and congestion. Currently the dedicated lanes increase the congestion flows at the point of termination as minibus taxis then cut across the traffic flow to get into faster flowing lanes, including the inside service lane. Other opportunities to introduce dedicated bus lanes are being explored along the Sir Lowry and Klipfontein roads, with lanes already demarcated along some sections.

- **Toll roads:** There are currently two additional toll roads being mentioned for Western Cape, namely:
  - The N1-N2 Wineland toll highway;
  - The R300 toll (Two Oceans) highway, linking Blaauwberg, Strand and Melkbosstrand on the West Coast with Westlake and Muizenberg on the False Bay Coast, and comprising 61km of highway.

- **Bus stop demarcation project:** The first phase of a project to identify the need to improve scheduled service bus stops has been completed in conjunction with the broader public transport restructuring initiative. Status on the implementation phases has not been established.

- **District initiatives:** The district IDPs note a number of priority initiatives and projects related to rural road infrastructure. These include:
  - The proposed new road to Agulhas to promote tourism and the linkage of marginalised rural communities. This initiative forms part of a
broader tourism initiative to develop the Agulhas/Bredasdorp area as a premier tourist destination;

- Linked to this development, approval is being sought (possibly granted) for upgrading the Bredasdorp Heidelberg road to a sealed surface to promote tourism in the region, specifically linking the De Hoop reserve and the historical pont crossing;

- In the Central Karoo District initiatives in the pipeline include upgrading of the Beaufort West-Kwa-Mandlenkosi bus route; upgrading (sealed surfacing) of the road to Merweville; and upgrading of the Lainsburg main road;

- Alternative alignment/upgrading of the Mossel Bay-Plettenberg Bay N2 route due to its important tourism role. Concerns about the economic impacts of town by-passes coupled with environmental concerns have to date prevented this initiative being finalised. In addition, upgrading of the Touws River Bridge on the N2 was seen as a priority.

- City of Cape Town initiatives include:
  - The Inner-city Transport Project considering the feasibility of quality bus and light rail options to move people around within the City. The high capital costs associated with the initiative have to date curtailed its moving towards implementation;
  - Rapid bus transit system entailing a dedicated bus route from Khayalitsha to Mowbray, along with improved cycling and pedestrian paths. The Klipfontein Road corridor forms part of this overall initiative being undertaken jointly between the Department of Transport and Public Works and the City of Cape Town;
  - Conceptual design for the Diep River Bridge by the City of Cape Town
  - Conceptual design for the N7 / M12 Interchange by the City of Cape Town.

Table 15 and Table 16 list provincial and SANRAL road projects respectively.
<table>
<thead>
<tr>
<th>Projects</th>
<th>Capex</th>
<th>Timing</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehab N2 Phase 1/2/3</td>
<td>R185m</td>
<td>2007-2009</td>
<td>High</td>
</tr>
<tr>
<td>Wellington Hermon</td>
<td>R125m</td>
<td>2006-2009</td>
<td>High</td>
</tr>
<tr>
<td>Potsdam Phase 1</td>
<td>R66m</td>
<td>2006-2008</td>
<td>High</td>
</tr>
<tr>
<td>Bredasdorp -Gansbaai Phase ½</td>
<td>R99m</td>
<td>2006-2008</td>
<td>High</td>
</tr>
<tr>
<td>Worcester Bainskloof</td>
<td>R40m</td>
<td>2008/2009</td>
<td>Medium</td>
</tr>
<tr>
<td>White Bridge Knysna</td>
<td>R22m</td>
<td>2008/2009</td>
<td>Medium</td>
</tr>
<tr>
<td>Malmesbury Hermon</td>
<td>R40m</td>
<td>2006-2008</td>
<td>High</td>
</tr>
<tr>
<td>Plettenberg Bay</td>
<td>R20m</td>
<td>2008/2009</td>
<td>Medium</td>
</tr>
<tr>
<td>Elandbaai - Lambertsbaai</td>
<td>R20m</td>
<td>2008/2009</td>
<td>Medium</td>
</tr>
<tr>
<td>Plettenberg Bay</td>
<td>R20m</td>
<td>2008/2009</td>
<td>Medium</td>
</tr>
<tr>
<td>Nuwekloof Woiseley</td>
<td>R20m</td>
<td>2008/2009</td>
<td>Medium</td>
</tr>
<tr>
<td>Somerset West</td>
<td>R73m</td>
<td>2006-2008</td>
<td>High</td>
</tr>
<tr>
<td>Koeberg I/C</td>
<td>R163,500m</td>
<td>2008/2009</td>
<td>Medium</td>
</tr>
<tr>
<td>Algeria Road</td>
<td>R15m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>Bredasdorp Gansbaai Phase 1</td>
<td>R15.671m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>Citrusdal</td>
<td>R14m</td>
<td>2007/2008</td>
<td>High</td>
</tr>
<tr>
<td>Stellenbosch Arterial Phase 2</td>
<td>R12m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>Mount Pleasant Hermanus</td>
<td>R12m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>Pniel Simondium</td>
<td>R12m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>George Outeniqua Pass</td>
<td>R11,840m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>Pakhuis Pass</td>
<td>R20m</td>
<td>2006-2008</td>
<td>High</td>
</tr>
<tr>
<td>Citrusdal Paleisheuwel</td>
<td>R10m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>Marcuskraal Road</td>
<td>R10m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>Caledon-Hemelen-Aarde</td>
<td>R10m</td>
<td>2007/2008</td>
<td>High</td>
</tr>
<tr>
<td>Simonvlei</td>
<td>R10m</td>
<td>2008/2009</td>
<td>Medium</td>
</tr>
<tr>
<td>Nuwekllof Woiseley</td>
<td>R10m</td>
<td>2008/2009</td>
<td>Medium</td>
</tr>
<tr>
<td>Mossel Bay safety Phase 1</td>
<td>R12m</td>
<td>2006-2008</td>
<td>High</td>
</tr>
<tr>
<td>Wingfield</td>
<td>R9m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
</tbody>
</table>
Table 16 SANRAL road projects

<table>
<thead>
<tr>
<th>Projects</th>
<th>Capex</th>
<th>Timing</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>N2 George to Knysna</td>
<td>R96,5m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N1 Leeu Gamka to Koedesloop</td>
<td>R75,6m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N1 Platdoorns to Nelspoort</td>
<td>R75,5m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N1 Glen Heatlie to Kanetvlei</td>
<td>R49,9m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N1 Dywka to Weltevreden</td>
<td>R44,7m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N1 Touws River to Laingsburg</td>
<td>R44,0m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N2 Henkerville to Natures Valley</td>
<td>R38,0m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N2 Groot Brak to Kraibosch</td>
<td>R34,6m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N2 Caledon to Riveronderand</td>
<td>R26,5m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N2 Riveronderend Swellendam</td>
<td>R26,5m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N1 Hex River to Touws River</td>
<td>R25,0m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N2 Bot River to Caledon</td>
<td>R232m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
<tr>
<td>N1 Kanetvlei to Hex River Pass</td>
<td>R23,0m</td>
<td>2006/2007</td>
<td>High</td>
</tr>
</tbody>
</table>

1.1.7. Conclusion
The backlog of transport infrastructure pertaining to all modes is clearly impeding both social and economic development in the province, particularly in terms of specific growth challenges and opportunities. The SIP being developed in this report will help to ensure that appropriate infrastructure investment is undertaken in accordance with the social and economic requirements and priorities of the province, its communities and economy.