

ANNEXURE 1



DEPARTMENT OF TRANSPORT

# **Public Transport Strategy**

**March 2007**

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## **A. INTRODUCTION**

1. Cabinet approved the release of the Draft Public Transport Strategy for public consultation in October 2006. The Draft Public Transport Strategy was circulated among a wide range of stakeholders and was also the subject of two days of deliberation at the Transport Indaba - hosted by the Minister of Transport in October.
2. The response to the Draft Strategy was supportive in the main and the Department of Transport has since incorporated most of the stakeholder comments into this final document, and (as requested by the Minister and endorsed by the Transport Indaba) is in the process of finalising an Action Plan to accompany the Strategy.
3. The Public Transport Strategy has two key thrusts: ***Accelerated Modal Upgrading*** and ***Integrated Rapid Public Transport Networks***. Accelerated Modal Upgrading refers to the current initiatives to transform bus, taxi and rail service delivery in the short to medium term. Integrated Rapid Public Transport Networks pertains to the upcoming Action Plan's focus on implementing high quality Phase 1 networks of Rail Priority Corridors and Bus Rapid Transit Corridors in especially the 6 metro cities.
4. The DoT's Public Transport Management Division is currently finalising Modal Upgrading Plans for Bus, Passenger Rail and Minibus and Metered Taxi. As far as possible, the Modal Upgrading Plans are being aligned with this Strategy as well as the upcoming Action Plan's focus on Phase 1 catalytic packages of rapid road and rail priority corridors.
5. Current progress with regard to developing the Action Plan has seen the DoT engage with 6 metropolitan cities and 6 other cities as well as the SA Rail Commuter Corporation (SARCC) - with regard to developing a Phase 1 (2007-2010) package of catalytic integrated rapid rail and road corridors. An estimated costing of these Phase 1 integrated rapid public transport networks is also being undertaken and this will be incorporated into a funding and institutional framework within the Action Plan.

## **B. VISION FOR A PUBLIC TRANSPORT LEGACY 2007-2020**

### ***Integrated Rapid Public Transport Service Networks***

Integrated rapid public transport service networks are the mobility wave of the future and are the only viable option that can ensure sustainable, equitable and uncongested mobility in livable cities and districts.

The expected peaking of global oil production within the next decade will mark the end of the cheap fossil fuel era. This, together with the increasing pressures for drastic cuts in climate change emissions – means that the mass motorisation of the South African population will not be possible, and neither is it desirable, nor equitable.

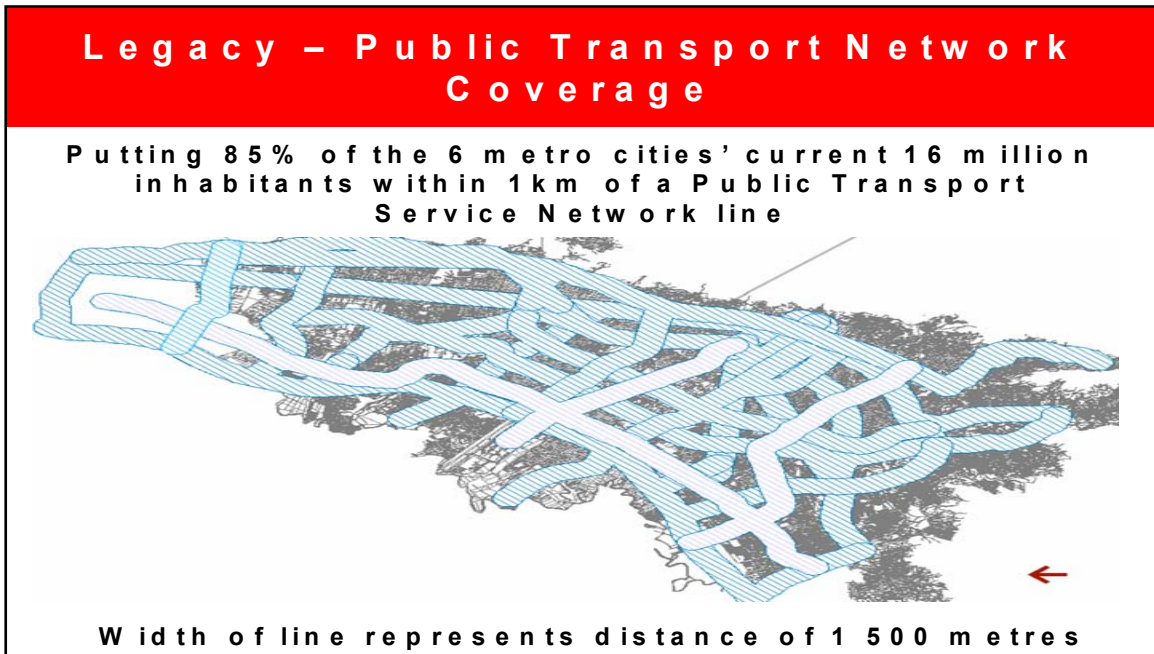
This does not mean, however, that the 70% of households without access to a car today are doomed to third class travel options. Integrated Rapid Public Transport Service Networks in the larger cities, as well as adapted versions for smaller cities and rural districts will be able to provide a mobility solution that is attractive to all – both current public transport users, as well as current car users.

### ***Phasing in a lasting legacy***

The legacy which the Public Transport Strategy aims to achieve is the phased but accelerated implementation of Integrated Rapid Public Transport Service Networks in metropolitan cities, smaller cities and rural districts. This phased implementation of Integrated Rapid Public Transport Networks will aim to have operating systems in place in 12 cities and at least 6 rural districts by 2014.

The longer-term vision until 2020 is to develop a system that places over 85 percent of a metropolitan city's population within 1km of an Integrated Rapid Public Transport Network trunk (road and rail) or feeder (road) corridor.

A further goal for the metropolitan cities by 2020 is to achieve a mode shift of 20% of car work trips to public transport networks. In 2003 there were 1.85m workers in metropolitan cities who used a car to work. Assuming a doubling of this to 3.7m in 2020 would mean attracting 750 000 (20%) of these workers to public transport networks.



By 2014 Phase 1 and 2 network implementation needs to be in place in the 6 metropolitan cities and at least Phase 1 implementation completed in the 6 smaller cities and 6 rural districts. This will cover 18 of the 53 metropolitan cities and districts in South Africa and will provide a rich implementation experience before embarking on a larger, nation-wide rollout from 2014 onwards.

**Service Quality that is car competitive**

Integrated Public Transport Service Networks will radically transform public transport service delivery from an operator-oriented, low quality system for captive users - to a user-friendly, high quality system for both public transport users and for current car users.

The principles behind Integrated Public Transport Networks stress affordable but rapid service to minimise travel times while also providing security, comfort and convenience to the user. These same principles have worked for some of the world's leading low cost airlines and will also be progressively applied to South African public transport networks (see figure below).

<b>Characteristics of successful low cost airlines that apply to Integrated Public Transport Service Networks</b>	
<u>Service Category</u>	<u>Product &amp; operating features</u>
<b>Vehicle</b>	Single type to minimise costs
<b>Routes and airports</b>	Uncongested
<b>Fares</b>	Low, simple, and unrestricted
<b>Distribution</b>	Electronic – Ticketless
<b>Service</b>	Single-class, high-density
<b>Frequency</b>	High
<b>Punctuality</b>	Very good
<b>Staff</b>	High productivity, high morale
<b>Customer service</b>	Friendly and responsive

### **Reduced travel time**

Journey times will be reduced to a level that is car-competitive. This means a door-to-door total journey time of under 60 minutes in the metropolitan cities. The key to a high-speed service is the development of **dedicated median busways and enclosed stations with pre-board fare payment for road trunk corridors and dedicated infrastructure and priority slots for passenger rail corridors**. On high volume road corridors the crucial elements for reducing travel time are having dedicated median busways and also pre-board fare collection and level boarding onto a bus vehicle with wide, multiple doors. Pre-board fare payment, level platform boarding and multiple doors significantly reduce the vehicle dwell time at a stop.

Coloured lanes (for road corridors), quality landscaping, and an attractive architectural design will help to raise the system's profile sufficiently to attract former car users. Other elements of the network's infrastructure (both road and rail) include **closed stations, terminals, depots, and a GIS-based control centre**.

### **Network coverage**

As mentioned above, the 2020 aim is to place nearly all residents of the large cities within 1km walking distance of the Network. In addition the Network will link major origins and destinations – including those that are currently not well served by public transport such as airports, hospitals, recreational facilities etc. Public Transport Networks that are designed and managed by a municipality (as opposed to operators) will also aim to minimise transfers and to develop direct routings between major nodes.

### **Service Frequency and Hours of Operation**

The major lever of a publicly controlled integrated network is the ability to specify minimum peak and off-peak service frequencies for the trunk and feeder services. In major cities it is envisaged that peak frequencies for trunk road and rail corridors should be every 5 to 10 minutes and off-peak frequencies every 10-30 minutes (depending on the time of day). In addition, the Network could have multiple routing options along its trunk corridors (all stops, skip stops and express – limited stops).

In addition, a publicly controlled network allows for specifying extended hours of operation to cater for off-peak travel, weekend and holiday travel and night-time travel. It is envisaged that at least 5am to midnight services should be provided in the larger cities.

### **High Quality Vehicles and Facilities**

Rail and Road Network vehicles will be upgraded to modern standards (interior space, lighting, heating/cooling, safety systems, wheelchair fastening systems, bicycle carriers, etc.) Vehicles will be operated in accordance with manufacturer standards and will be renewed well within their maximum lifespans in order to ensure high quality. Facilities will be designed as enclosed road/rail stations with attention to a dignified design that is secure, well lit and easily accessible to all users.

### **Retain and train workers**

The Network should create and retain jobs as the transition takes place from current operations. New jobs in security, customer service, fare collection, maintenance etc. will be created. Common conditions of service that enable a worker-friendly environment will

be initiated across all Network services. A key focus will be continuous worker training to ensure a user-friendly service environment.

The move to extended hours of operations, shift operations for drivers, higher frequencies, and the targeted growth in new users should lead to the expansion of sustainable jobs in the Network.

### **Multi-modal integration**

The network will consist of a core of road and rail trunk corridors with feeder systems. The aim is to achieve maximal physical and fare integration in the core. Physical integration implies a well designed transfer system with high quality public space and pedestrian and wheelchair friendly movement between corridors and/or modes. Fare integration means a common fare structure that encourages free transfers within the Network. This will extend the range of destinations available to a user for a single, affordable Network fare – the user will not have to pay twice when transferring.

In addition to the core services, integration with the pedestrian precinct environment, with bicycle feeder networks, with metered taxis, with motorised two and three wheelers, with long distance public transport terminals as well as with park and ride lots for car users – will ensure a range of flexible options that will extend the convenience of using the Network and will also serve to attract new users.

### **Access for Special Needs Users**

The legacy will see that the core Network (both road and rail corridors as well as their precincts and stations) is 100% accessible to wheelchair users and others with special needs such as the blind and deaf. In addition, the design of the space at the stations, terminals and on the vehicles should be user friendly and child friendly. Special needs user organisations will form part of the Network advisory planning and monitoring team.

### **Access for learners**

The core urban and rural public transport, walking and cycling networks will aim to link schools and communities as part of the mainstream service plan. Where required, special services can be supplied and will be contracted and monitored in line with the core system.

### **Network Image**

The Integrated Rapid Public Transport Network will NOT be a conventional bus or rail service. It will be a Rapid Public Transport service – with the entire network operating seamlessly and legibly as a single “mode”. In this regard, the Network will have a common branding and marketing image and critical image factors such as cleanliness, security and real-time user information will be actively managed to a high standard.

### **Public Transport Intelligent Transport Systems and Electronic Fare Payment**

The Network will be managed and controlled through Public Transport Intelligent Transport Systems – including Global Positioning System (GPS) tracking of all trunk and feeder road vehicles - linked in real time to a central Control Centre. Information displays at road and rail stations in real time will reduce “waiting stress” impacts on users. Closed Circuit cameras at station precincts will serve as one of the security measures. Traffic signal pre-emption and priority for public transport vehicles will be implemented. An electronic fare payment system which uses a smartcard will enable integrated fare structures, free transfers and targeted user-based subsidies.

### **Non Motorised Transport Networks**

Walking and cycling networks - that link with the Public Transport Network - create a wider range of sustainable mobility options for shorter trips. In this regard, the legacy will be the roll-out of at least 100km of high quality dedicated walkways and cycleways in each of the 18 cities and districts by 2014.

### **Metered Taxis**

Metered taxis play a limited role in South African cities at present. In parallel with the rollout of the Network, metered taxis will be regulated and contracted to provide an additional low volume public transport service for choice users, as well as an alternative to single occupant car use and a service for off-peak periods.

### **Long distance public transport services**

In line with the rollout of Integrated Rapid Public Transport Service Networks, there is a need to not only link the Network to major long distance stations and terminals but also to implement a phased strategy of upgrading and expanding long distance coach and rail services. By 2020 a planned long distance integrated network should be phased in – along similar lines as the local Network – this will include publicly planned routes, service quality and schedules; public management of facilities, stations and terminals; and contracting current informal operators to provide a higher quality, scheduled service.

### **Car use and parking demand management**

The Integrated Rapid Public Transport Service Network begins to form a viable, car competitive mobility option and hence enables stricter penalties and incentives to get car users to switch to the Network – especially for peak period trips. A range of demand management measures will be implemented including: peak period road pricing, citywide parking levies and restrictions, possible tax incentives to employers and individuals to switch to the Network, etc.

### **Staggering working and school hours**

A key component for achieving the legacy will be to seriously explore local options with regard to staggering working and schools hours. If successful, the benefits will mean a more widely spread peak period for private vehicles but also for public transport fleets. This will better utilise existing infrastructure and could also reduce the peak public transport fleet required and hence achieve better fleet utilisation – with possible major cost savings.

### **Rural district public transport networks**

As mentioned above, the legacy targets full scale Phase 1 implementation in 6 rural districts by 2014. This will include planned and contracted periodic public transport services that are scheduled and also includes the rollout of large scale walking and cycling infrastructure and services in smaller urban and the rural districts.

### **Urban CBD Renewal and Public Transport Network supportive land use**

Integrated Public Transport Service Networks form a major component of creating dignified and livable urban spaces. The legacy will be to actively integrate the Network into the urban regeneration efforts that are currently underway. A city's transport systems in the main dictate the look and feel of a city. A restructured, efficient Network for both public transport, walking and cycling has the potential to transform the quality of the public spaces in a city.



In addition, a prioritised Network will serve as a basis for anchoring land use development in order to maximise Network utilisation and to minimise travel distance and time. This Network will enable municipalities to be far more proactive with regard to channelling and regulating land use in a manner that integrates with the Network.

A redesigned network also does away with the need for private parking spaces and public transport ranks and parking spaces in prime city areas. Municipal-owned Network depots (that are close to major terminals and stations) linked to a network of on-street stations (road) that have scheduled services running pre-set routes – means there is no need for major ranks and parking areas as the vehicles are either continuously running scheduled routes or are returning to well located depots in the off-peak periods.

This freed up space can be used as public space or can be commercialised to generate a return for the municipality. The same principle also applies to the need for ever-expanding parking spaces for private cars -with the targeted 20% of car commuters switching to the Network.

**Conclusion – strategic shift to municipal controlled integrated networks**

Achieving the legacy articulated in detail above will require a municipality acting as a network authority that procures the required public transport infrastructure - including dedicated road space, dignified public space, good pedestrian and bicycle access, good park and ride facilities for car users, and high quality stations, stops, interchanges, terminals and depots. High quality vehicles are specified in the operating contracts and are tailored to meet a corridor's particular service requirements.

The public authority contracts an independent electronic fare collection service and receives the fare revenue and pays operators per vehicle kilometer. Operators do NOT compete for passengers on the road but rather on meeting performance quality standards and by supplying contracted vehicle kilometers. The public authority carries the final demand risk and can re-deploy operators at no revenue risk to the latter.

Minibus operators and employees are full participants in providing service in the corridor network - but only in terms of the integrated plan. The network is monitored and controlled through Public Transport Information Technology such as smartcards, vehicle tracking linked to a control centre, Public Transport priority at traffic signals, CCTV surveillance at facilities etc.

The focus of these upgraded networks is on the USER. Safety, security, cleanliness, reliability, comfort and image are addressed. To add user convenience, simple fare structures are developed that allow users to take maximum advantage of the network, through free transfers.

If implemented in conjunction with non-motorised options, disincentives for private vehicle use, and good land-use planning, then Integrated Rapid Public Transport Service Networks can assist in reducing the negative impacts of unconstrained vehicle growth as well as the lack of affordable access.

**C. PUBLIC TRANSPORT STRATEGY**

**Public Transport is at a Crossroads in 2006**

- 1) The public transport sector in South Africa in 2006 is at a strategic crossroads. Over the next decade it either:
  - Remains a third class service for captive users and thus loses ridership to private cars – an unsustainable future, or
  - It undergoes a phased overhaul (between 2007 and 2020) to form an integrated mass rapid public transport city network that is a viable, car competitive mobility option for ALL citizens in a city or district.
  
- 2) Looking 10 years ahead, the public transport market is likely to experience a continuous decline as households with more than R3000 in monthly income switch to

**Public transport sector in SA in 2006 is at a strategic crossroads!**  
*Over the next decade it either:*

<ul style="list-style-type: none"> <li>▪ Remains a declining, third class service - thus continuously losing ridership to private cars, or it</li> <li>▪ Undergoes a phased overhaul (from 2007-2020), becoming an Integrated Rapid Public Transport Network option for ALL - including car users</li> </ul>	<p style="text-align: center;">Trends in trips to work by Car and Public Transport</p> <p style="text-align: center;">Public Transport as a percentage of all trips to work</p>
<p><b><i>Car use to work rose 20% between 1995-2003. Public transport work trips rose 10%.</i></b></p>	
<p><b><u>PT Strategy &amp; Action Plan aims to spell out how to move:</u></b></p>	
<ul style="list-style-type: none"> <li>▪ <b>FROM</b> operator-controlled, commuter-based, uni-modal routes...</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>TO</b> user-friendly, municipal-controlled, fully integrated, mass rapid public transport networks</li> </ul>

cars (mostly second hand). Currently, one-third of all work trips are made by cars, and households with access to a car increased 33% (or an additional 808 000 households) between 1995 and 2003. Figure 1 shows the growth in work trips by car was double that of public transport between 1996-2003.

Figure 1

3) Despite the growth in car use, public transport and walking are still the predominant “lifeline” forms of mobility for the vast majority of South Africans in order to access work, schools and services. According to the National Household Travel Survey (NHTS 2003):

- **38 million citizens live in households with NO access to a car,**
- **40 million citizens do not have a driver’s licence,**
- **14 million learners walk to school, 7 million workers and learners use public transport,**
- **13.7 million used public transport at least once a week & 7 million used a car – (see Table 1).**

	Number of people that used mode at least once in the past 7 days			
	Train	Bus	Minibus-taxi	Car
<b>Number of users</b>	<b>1 083 000</b>	<b>2 566 000</b>	<b>10 080 000</b>	<b>7 088 000</b>

Table 1

Current users are very unhappy with public transport service quality. For example, the National Household Travel Survey (2003) shows that: 71% of train users, 55% of taxi users and 54% of user users are dissatisfied with the level of crowding on vehicles. In addition, 74% of bus users, 64% of taxi users and 53% of train users are unhappy with facilities at stops, ranks and stations.

**Transforming mode-based vehicle recapitalisation into Integrated Mass Rapid Public Transport Networks**

The Department of Transport is currently focusing on the following actions with regard to passenger transport:

- Fast track taxi recapitalisation and facilitate taxi industry participation in the current subsidised bus contract system;
- Convert interim bus contracts to tendered contracts;
- Consolidate passenger railway entities, establish a Railway Economic Regulator and develop and implement a passenger rail revitalisation plan;
- Manage car use in metropolitan areas;
- Implement priority infrastructure (e.g. dedicated lanes) for public transport, walking and cycling and multiple occupant cars (High Occupancy Lanes);

- Ensure a sustainable public transport and non motorised transport legacy from the 2010 FIFA World Cup projects; and
- Maximise opportunities to promote public transport and non motorised transport infrastructure through the creative use of Municipal Infrastructure Grant, and Expanded Public Works Programme funding.

### **Twin Responses: Modal Upgrading and Integrated Mass Public Transport Networks**

The Department of Transport's interim strategic approach (as endorsed by the Transport Lekgotla in April 2005) rests on two pillars.

#### **Modal Upgrading**

The first pillar involves effecting significant and urgent improvements in current public transport services. This **Modal Upgrading** entails stabilising the operating environment through short-term interventions such as:

- Consolidating the passenger rail sector;
- Rolling out the National Passenger Rail Plan;
- Implementing Taxi Recapitalisation - including improved regulation and law enforcement; and
- Transforming and optimising current subsidised bus services.

#### **Integrated Rapid Public Transport Networks**

The second pillar of the current interim public transport strategy entails the promotion of a growing public transport sector that is able to meet the needs of current and new users. The second pillar above covers what this document refers to as implementing **high quality, integrated mass rapid public transport networks**. It will be argued that the move to Phase 1 (2007-2010) Integrated Rapid Public Transport Networks needs to be accelerated (at least in the metropolitan cities) and current modal upgrading initiatives will need to be aligned to this Integrated Rapid Public Transport Network approach in these areas.

In support of both strategic pillars, (Modal Upgrading and Integrated Rapid Public Transport Networks) the DoT has also developed draft strategies with regard to Rural Transport, Special Needs Users, Black Economic Empowerment, etc. Additional work is currently being undertaken on Public Transport Subsidy Reform, Travel Demand Management and Electronic Fare Collection and further work will be undertaken to develop strategies for effective devolution to the most appropriate sphere of Government and to achieve corridor-based networks at city-wide scale.

Municipalities have developed Integrated Transport Plans and selected municipalities have developed plans for Strategic Public Transport Networks in their areas. Cabinet

has approved the Passenger Rail Plan and a World Cup 2010 Transport Action Plan. The World Cup Public Transport Infrastructure and Systems Fund has allocated three rounds of funding to municipalities, provinces and public entities so far.

### **Assessment of Current Modal Responses**

- 4) While the above initiatives are a positive start they are unlikely to halt the ongoing switch to cars from low quality public transport. There is a need to develop a robust municipal network vision and plan which facilitates speedy implementation. These plans need to adopt an integrated network restructuring approach that incorporates existing minibus operations into a publicly managed integrated network. The current Public Transport Action Plan engagement with 12 cities and SARCC aims to address this and to propose Phase 1 (2007-2010) catalytic packages of road and rail priority corridors and feeder systems than can ultimately merge into an integrated rapid public transport network.

### **South African Vision for Integrated Rapid Public Transport Networks**

- 5) ***Rapid public transport networks are NOT about particular modes or technology but are rather about a total service quality package over the entire user journey experience.*** They therefore combine both operations and infrastructure into a single tailored system – setting it apart from conventional modal public transport services. The following is a list of features found on some of the most successful Road-based Rapid PT systems (See Figures 2-6 below):



#### **Physical infrastructure**

- Segregated busways or bus-only roadways (Figure 2), predominantly in the median of the roadway
- Existence of publicly managed integrated “network” of routes and corridors
- High quality publicly owned and managed stops, stations, terminals and depots
- Enhanced stations that are convenient, comfortable, secure, and weather-protected
- Stations provide level access between the platform and vehicle floor
- Special stations and terminals to facilitate easy physical integration between trunk routes, feeder services, and other mass transit systems (if applicable)
- Improvements to nearby public space

#### **Operations**

- Frequent and rapid service between major origins and destinations
- Ample capacity for passenger demand along corridors
- Rapid boarding and alighting
- Pre-board fare collection and fare verification
- Fare-integration and free transfers between routes, corridors, and feeder services

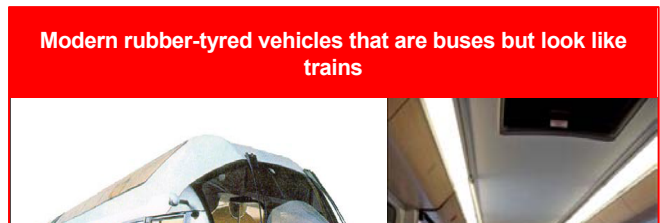
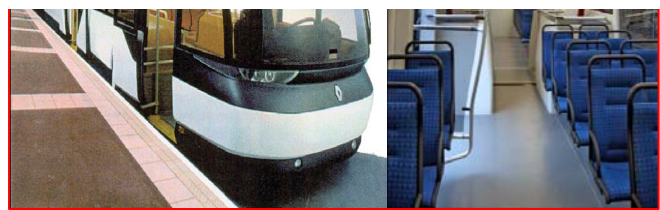


Figure 2

#### **Business and institutional structure**



- Quality control oversight from a specialised public entity/authority
- Entry to system restricted to prescribed operators under a reformed business and administrative structure (i.e. “closed system”)
- Fare revenue controlled by public network authority - not by operators. Operators’ revenues are de-linked from fares and based on vehicle kilometers supplied and, on quality of service - not on number of passengers carried. Therefore, no incentive to speed and drive recklessly.
- Competitively-bid and transparent processes for awarding all contracts and concessions – include informal operators fully


### Road Rapid Transit (RRT) characteristics

**“Full” RRT**

- Segregated, median busways with median stations
- Pre-boarding fare collection and verification
- Restricted operator access (closed system)
- Free transfers between corridors and modes
- Competitively bid concessions

**High frequency service and low station times**

- Clean bus technologies
- Modal integration



High frequency

Minimum time at stop station (dwell time)

**Figure 3**

BUS OR MINIBUS (ROAD) TRANSIT IS FAST (RAPID) relative to general traffic because it is congestion free. Because it is cheap & RAPID, it becomes attractive to car users

Figure 4 shows how rapid transit networks can be prioritised over private cars and can thus serve as an attractive alternative.


- Efficient management resulting in the elimination or minimisation of public-sector subsidies towards system operations
- Independently operated and managed fare collection system
- Explicit participation in new network by existing informal/formal operators and drivers, including job, wage and income guarantees to remove the perceived risks of change.

### Road and Rail Rapid Transit integration

**Integrated Rapid Transit system – same quality to user even though different modes**

- Free transfers between corridors and modes through fare integration and/or physical integration at platforms

Intermodal Transfers convenient across the platform



**Free Transfer**

Subway → Free transfer within 30 minutes → Bus

**Technology**

- Low-emission vehicle technologies
- Low-noise vehicle technologies
- Automatic fare collection and fare verification technology
- System management through centralised control centre, utilising applications of Intelligent Transportation Systems (ITS) such as automatic vehicle location
- Signal priority or grade separation at intersections

**Marketing and customer service**

- Distinctive marketing identity for system
- Courteous and safe driving style, and well trained drivers working short shifts
- Excellence in customer service and provision of key customer amenities
- Ease of access between system and other urban mobility options (such as walking, bicycles, taxis, paratransit, private motorised vehicles, etc.)
- Special provisions to ease access for physically-disadvantaged groups, such as children, the elderly, and the physically disabled



- Clear route maps, signage, and/or real-time information displays that are visibly placed within stations and/or vehicles
  - Private car use and parking restrictions
- 6) Rapid Public Transport Networks in the South African urban context would apply to all existing services - including commuter rail, and road-based modes.

Figure 6 shows level platform boarding at stops/stations. This allows for faster boarding, faster journey times and easy wheelchair access.

**Vision and Critical building blocks to achieve Accelerated Modal Upgrading and Integrated Mass Rapid Public Transport Networks in South Africa**

- 7) The overarching service vision of this strategy (captured in Figure 7 below) is to implement a continuous upgrading from the current basic commuter service to an upgraded modal service and (where possible) to an integrated rapid public transport network. This network will strive for maximum accessibility with a target of 85% of a city’s residents within 1km of the network (either a road or rail trunk corridor or a road or non-motorised transport feeder service to a trunk corridor).
- 8) In addition, this service will have high frequencies of 5-10 minutes in the peak along trunk corridors as well as 16 to 24 hour operations. Full special needs and wheelchair access for ALL trunk corridor road and rail vehicles will be implemented. This will allow for specialised feeder services to the trunk corridors for special needs users in “on-demand” services.
- 9) The network will integrate with metered taxis and long distance public transport to provide maximum coverage and interconnection. Integrated fares structures will be implemented through a common electronic fare system on all modes on the network – from payment for park and ride facilities to public transport modes to metered taxis.

**Strategic Approach 2007-2020:**

**Vision: From Basic Commuter operations... To Accelerated Modal Upgrading & Integrated Rapid Public Transport Networks!**

- 85% of all residents within 1km of Rapid PT Network by 2020
  - Upgraded modal fleet, facilities, stops & stations
    - Extended hours of operation (16-24hrs)
- Peak frequencies (5-10min) - Off peak frequencies (10-30min)
  - Full special needs and wheelchair access
- Safe and secure operations monitored by Control Centre
  - Electronic fare integration when making transfers
- Integrated feeder services including walking/cycling and taxi networks
- Integration with metered taxi services and long distance intercity services
- Car competitive PT option - enables strict peak period car use management

**Critical Implementation Building Blocks**

•Integrated Rapid Public Transport Network Implementation Plan

•Municipal control over Integrated Network

•Maximum stake for existing bus/minibus sector in Rapid PT Network operations

Figure 7



### **Metered taxis and Park and Ride facilities**

Integration of rapid public transport networks with metered taxis and park and ride facilities will ensure that (from the outset) these services will be an option for a segment of current car users. These will also play enhance the flexibility of the network through:

- Promoting connectivity of PT Network with hubs such as airports, stations, stadia,
- After hours mobility option for shift workers (hospitals, restaurants, security etc.)
- Night users' social service for taverns, restaurants, etc.
- Reliable service for tourists and long distance travellers.

### **Facilities**

The vision for public transport facilities is to ensure:

- Enclosed stops with good shelter
- Dedicated lanes
- Lighting
- Information kiosks
- Signage
- Depots
- Multi-modal terminals as service nodes
- Bicycle parking and Park and Ride facilities

### **Two and three wheelers**

The Integration of the rapid public transport network with bicycles, bicycle taxis as well as motorised two and three wheeler vehicles is also an option to enhance network coverage and service flexibility. Motorised Two and Three Wheelers and bicycles are under-utilised in SA and can be promoted to provide inner city feeder services, and can also be used as a lower cost personal transport option. The regulatory environment needs to accommodate these as a low volume PT mode.

### **Long distance public transport**

Long distance public transport is typically poor quality, informal and expensive. There exists a large market of migrant workers, students and occasional travellers which warrants a far more formalised and improved quality of service.

Rapid action is also required to establish some of the intercity service capacity needed for the World Cup. Steps include

- Recapitalisation of long distance minibus services into midi-bus and standard size coach operations (semi-luxury standards)
- Introduction of scheduled services on high volume routes
- Expansion of long distance rail services at improved service levels
- Improved long distance road and rail terminals

### **Rural**



Figure 8 below highlights the vision for rural public and non motorised transport.

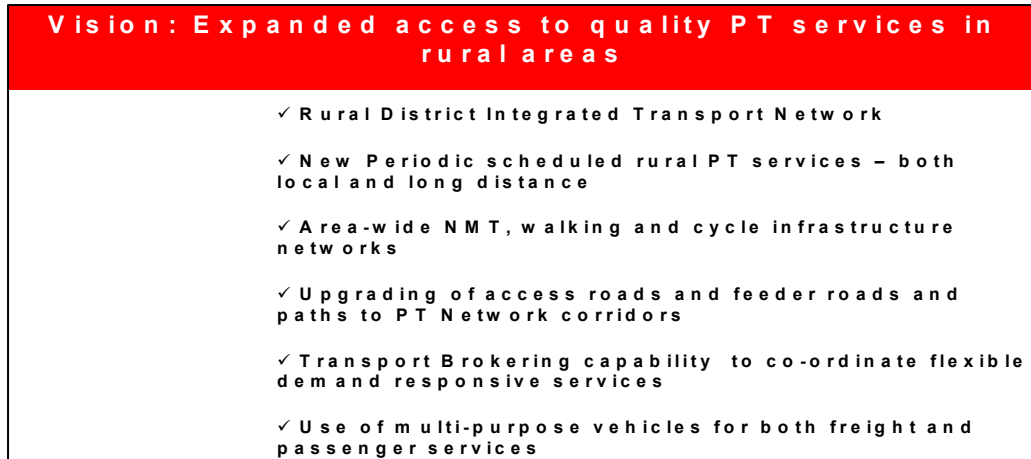


Figure 8

- 10) Cities therefore need to transform the low quality services of their semi-formal operators (like SA's minibus industry) into an integrated system that is planned and managed by the public sector while being operated by existing private operators. This should be done in a manner that gives existing operators, drivers and workers a guaranteed stake in a new mass rapid public transport network and leads to a win-win-win breakthrough that guarantees and improves wages for drivers, revenues for operators and service quality for users and Government.
- 11) The 2010 World Cup in South Africa will necessitate the use of high quality mass public transport systems to cater for high demand. This provides an opportunity to leverage Phase 1 implementation of integrated public transport networks through transport funding linked to 2010 (PTIF). This integrated network can serve as the legacy for the majority of South Africans and also as the catalytic breakthrough in pioneering implementation of high quality public transport systems in South Africa. The Public Transport Action Plan process is including 12 cities (including all Metros and 2010 venue cities) as well as SARCC to jointly develop Phase 1 integrated network packages that are implementable by 2010.
- 12) Figure 9 below describes the desired 2014 scenario.

Figure 9

**Phased Strategy 2007-2010-2014-2020**

13) To translate the vision into an Action Plan the strategy proposes 3 Phases:

- **Accelerated Recovery and Catalytic Projects** (2007-2010)
- **Promote and Deliver Basic Networks** (2010-2014)
- **Advance and Sustain Accessible Networks** (2014-2020)

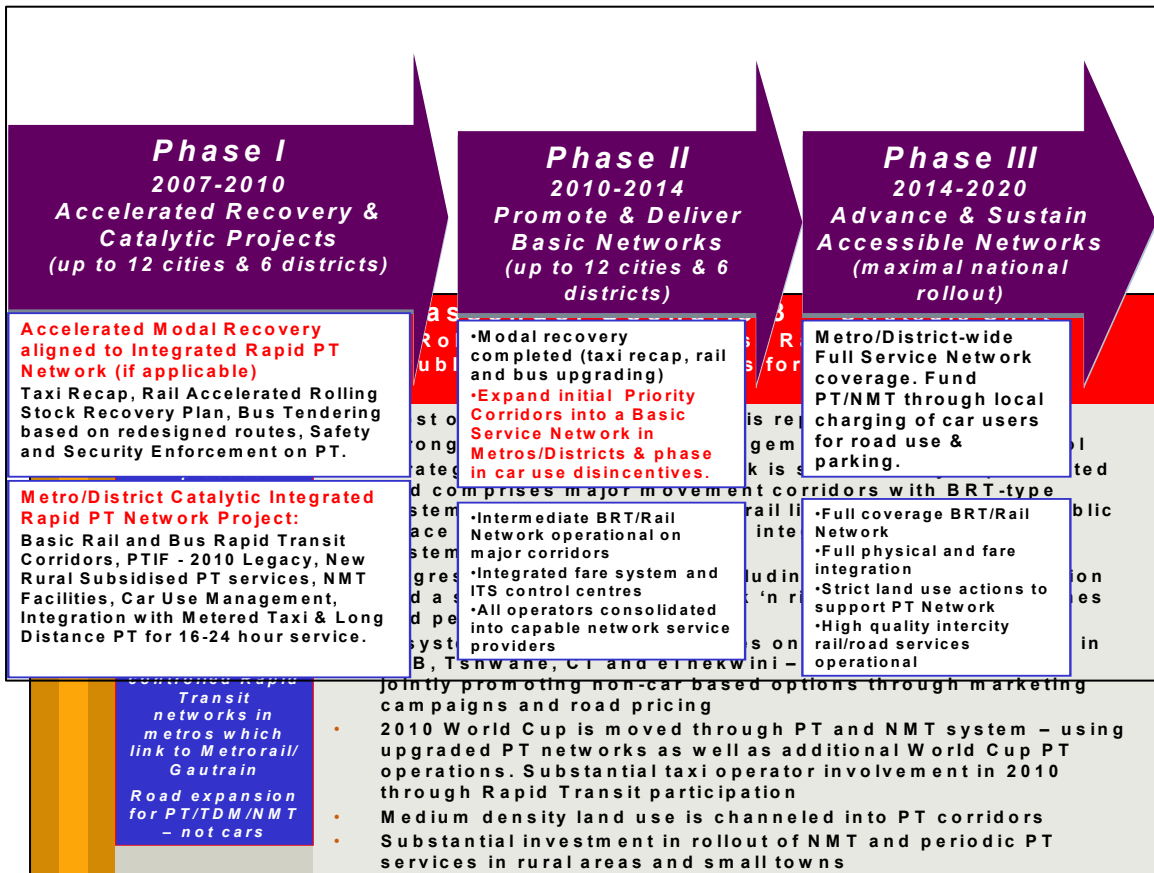


Figure 10

Figure 10 above summarises the phasing of the 3 action agendas.

**14) Overarching Strategic Approach:**

The 3 action agendas below are guided by a firm commitment to the following outcome:

- A phased implementation of a SINGLE, user-responsive, publicly planned and controlled system, that integrates routes into a multi-modal mass rapid public transport network, and provides maximum accessibility and coverage in a city or district for ALL citizens, both in the townships and suburbs as well as rural districts.

- This integrated network will provide extended hours of operation (16-24 hours a day) and will strive for maximum accessibility for users with special needs – especially on the high volume rail and road corridors and related stop/station infrastructure.
- This strategy makes an explicit commitment to further the empowerment of workers, women, users, people with special needs, black people and small business. This will be done through: improving working conditions and providing ongoing training as well as maximising the opportunities for entities that are women-owned, black-owned, special needs-owned and also small business.

### **Accelerated Recovery and Catalytic Projects (2007-2010)**

The strategic thrust of this action agenda is to stabilise the current passenger transport service delivery environment as well as to recover from the accumulated neglect of decades of under-investment in infrastructure and operations. It is an agenda for action for the short term and includes an **Accelerated Recovery Plan** to enhance the institutional building blocks and to fast track service improvements to end users.

The **Accelerated Recovery** components are to ensure:

- Investment in building local transport capacity for planning, monitoring, regulation and network management;
- Enhanced capacity for Operating Licence processing (both commuter, scholar, tourist, metered taxi and charter services) and Cross Border permit processing and the related alignment with transport planning;
- Enhanced enforcement, inspection, investigation and prosecution capacity and campaigns across all road-based modes (detailed action plan tied to the R2.2bn allocated for minibus recapitalisation regulation and enforcement);
- Capacity deployed to support municipalities to develop strategic integrated network plans, related 2010 operational plans, high quality public transport corridor plans, Travel Demand Management plans, and electronic fare collection plans;
- Local engagement with key stakeholders on the passenger transport vision and strategy and Phase 1 implementation projects - including incentives, guarantees and training for existing minibus/small bus operators and drivers;
- Accelerated initial rollout of fleet upgrading on all modes - Taxi, Bus, Rail recap;
- Plan fully accessible corridors for users with special needs;
- Detailed design and commencement of Phase 1 implementation of road-based integrated mass rapid public transport corridors. Includes non-motorised network, facilities and service rollout (including small cities and rural districts);
- Planning completed for implementation of High Occupancy car lanes and ride-sharing promotion;
- Pilot electronic fare collection and information system that is controlled by public sector in partnership with operators; and
- Completion of network design that includes all current subsidised bus services in an area and commence initial implementation of gross cost contracts with public control over fare income - in both metropolitan and district contexts.

A **Stabilise and Recover** Plan is the second component of the Accelerated Recovery Agenda and runs over the next 3 - 5 years. The key objective is to ensure the

achievement of an effective public transport implementation platform. The key components of the plan are to:

- Devolve funding to capable transport authorities in the long term;
- Refine quality local Integrated Transport Plans that demonstrates improved service delivery on immediate priorities and which include priority integrated mass rapid public transport network projects;
- Develop Public Transport Intelligent Transport Systems (ITS) tools and phase these in, in order to support planning, regulation and enforcement (e.g Electronic Fare Collection, vehicle tracking and control, etc.);
- Taxi, Bus, Rail recapitalisation and refurbishment continue;
- Phased implementation of revised gross cost contracts for subsidised services, in line with network vision;
- Improved service information, maps, timetables, marketing;
- Non motorised and public space network planning and phased implementation;
- Aggressive roll out of the Shova Kalula initiative: 1 million bicycles in partnership with stakeholders by 2010;
- Roll out rural public transport interventions, including piloting of subsidisation options;
- Engage with the Department of Education, provinces and municipalities to ensure maximum accessibility of learners through the public transport network;
- Implement improved safety and security inspection, enforcement and prosecution on all public transport modes;
- Enforce safer cycling and walking routes, particularly around schools, and through more human-friendly infrastructure design;
- Manage car use in the peak period in major urban congested corridors;
- Engage with Department of Provincial and Local Government, Department of Housing, Department of Land Affairs and Provinces and Municipalities to:
  - improve interdepartmental coordination with regard to housing, land use and transport integration;
  - fast track the identification of priority local transport corridors and the related location of medium density land use in support of these;
- Promote land use planning aligned to public transport network, non motorised transport and travel demand management planning;
- Promote low-cost accessible and class 1 type features - painting designated areas with high contrast colours, providing sufficient grab rails and push bells at certain accessible points, use of visible sign language, etc. - and improve operational service for special needs users; and
- Pilot full accessibility for users with special needs in all newly implemented mass rapid public transport corridors.

#### **Promote & Deliver Basic Networks (2010-2014)**

The strategic thrust of this action agenda is to incrementally enhance and expand the passenger transport system. It is an agenda for action for the medium term. The main components of the plan are to:

- Fully upgrade key integrated mass rapid public transport corridors – in all six metropolitan cities as well as in other cities and districts. To cover at least the top 20

mass corridors (rail/road) in the country; Finalise network planning and roll out revised gross cost contracts which include small bus and taxi operators; Roll out Passenger Transport Intelligent Transport Systems nationally; Implement Travel Demand Management and car use reduction measures in all metropolitan areas – including roadspace reallocation measures to prioritise public transport; Consolidate operators into capable entities that are able to provide high quality services in the formal, integrated mass rapid public transport networks; Implement supportive land use system on public transport corridors; Mainstream pedestrian and cycling implementation and promotion, including high quality facilities, infrastructure, public space and bicycle transport promotion;

- Ensure safer and secure operations through regulatory and enforcement regime;
- Roll out targeted public transport subsidies - user based and/or capital that are linked in the main to integrated mass rapid public transport systems;
- Increase the scale of roll out of rural/small town public transport services; and
- Expand roll out of mass rapid public transport networks that are fully accessible to users with special needs.

### **Advance & Sustain Accessible Networks (2014-2020)**

The strategic thrust of this action agenda is to significantly expand and transform public transport through large scale or critical mass implementation. It is an agenda for action for the long-term. The key components of the plan are to:

- Roll out fully interconnected integrated mass rapid public transport networks;
- Ensure that most public transport facilities, vehicles and infrastructure are of a high quality; Improve maintenance of public transport infrastructure and facilities; Promote high quality public space and non motorised linkages and networks;
- Implement aggressive car use restriction measures aimed at promoting switching to public transport and non motorised transport – including pricing measures;
- Promote and coordinate employer-based car trip reduction programmes, park and ride facilities, ride sharing, public sector employee ridesharing, etc.;
- Implement land use measures that support public transport corridor networks;
- Ensure ongoing investment in innovative local passenger transport public sector capabilities to plan, manage, promote, regulate, enforce, and monitor contracts, etc.
- Promote free minimum basic mobility for all citizens regardless of ability to pay – a lifeline mobility allowance;
- Expand rural passenger transport services and combined rural passenger and freight transport services; and
- Expand universally accessible vehicles and infrastructure for special needs users.

### **Public Transport Action Plan Phase 1 and 2 (2007-2014) targeting 6 metro cities, 6 other cities and 6 rural districts**

The DoT intends to finalise the Action Plan for Phase 1 for 6 metro cities, 6 other cities and at the same time develop an Integrated Rural Public Transport package for 6 districts. Using metropolitan cities as an example: according to the NHTS, in 2003 the 6 metropolitan areas of SA account for 15.44 million people. 49% of metro workers use public transport to work compared to 41% who use a car. Metro areas account for 4 million of SA's 8 million formal sector jobs and 1 million of SA's 3 million informal sector

jobs. In total metro areas account for 5 million of SA's 11 million jobs. 2.3 million of the 4 million public transport trips to work in SA, take place in metro areas.

Of the 4.5 million metropolitan students, 750 000 use a car to get to school and 700 000 use a taxi. 800 000 metro learners take longer than 45 minutes to get to school. 75% of metro train users are unhappy with the level of crowding on trains, 65% of metro bus users are unhappy about facilities at stops and 78% of metropolitan taxi users are unhappy with safety from accidents.

### **Elements of a Catalytic Flagship Integrated PT Network Programme**

Therefore, there is a need for a fast track implementation programme that targets the development of high quality, integrated, mass rapid public transport networks in the six metropolitan cities and 6 other large cities.

Some of the elements of these catalytic projects would include:

- Investment in public transport priority infrastructure (high speed busway corridors and upgraded rail corridors with high quality stops and stations), that link to form an integrated network that is well located,
- Investment in priority rail corridors that are integrated with the road-based network,
- Demand control measures in place over private cars, especially in peak hours - according to the NHTS, of the 1.5 million drivers who drive a car to work in metro areas, nearly 50% say they do not actually need to use their car while at work,
- Investment in high-volume, high frequency public transport corridor-based services and operations - that operate 7 days a week and 16-24 hours a day in the metropolitan areas,
- Strict control over metropolitan land use to ensure support for sustainable public transport corridor operations,
- Upgraded regulation and enforcement of public transport safety and security and operating licences.

### **Implementing the Public Transport strategy**

Figure 11 below highlights the alignment required to ensure integrated implementation.

<b><i>Strategic Alignment 2007-2020:</i></b>			
<b>Implications of Integrated Rapid PT Network approach for current Rail Plan, Bus Tendering and Taxi Recap roll out processes</b>			
	<b>Rail Plan</b>	<b>Bus Tendering</b>	<b>Taxi Recap</b>
<b><i>Phase 1 / 2 rollout of Rapid PT Networks in up to 12 cities and 6 districts 2007-2014</i></b>	<b>•Priority Rail Corridors to be upgraded to Rapid Network quality level and full Fare &amp; Physical integration with Road-based Trunk/Feeder services</b>	<b>•Develop Integrated Rapid PT network plan by June 2007 and link upcoming round of tendering to Rapid Network Trunk/Feeder gross cost contracts (fare revenue retained by municipality)</b>	<b>•Local Taxi Industry- Municipality negotiations (based on local Rapid PT Network Plan) to determine local options for full Taxi Industry participation in Rapid PT Trunk/Feeder services</b>
<b><i>Areas without Rapid PT Network</i></b>	<b>•Detailed Rail Plan study to assess service viability &amp; modal/service options</b>	<b>•Implement tendering with strengthened public sector planning and monitoring role, &amp; taxi &amp; small bus stake – option of either gross or net contract regime</b>	<b>•Fast track Recap rollout and improve enforcement and upgrade driver working conditions</b>

Figure 11

**Quality Partnerships**

Within government, better coordination and closer working relationships should be forged among national, provincial and local government. The Minister of Transport and his provincial and municipal colleagues will aggressively champion the delivery of the proposed improvement measures for the land passenger transport sector. The Minister of Transport will request Provincial and Municipal colleagues to translate the strategy into Action Plans that set out how they will contribute to the implementation of the Public Transport Strategy over the next decade of change.

Stronger partnerships with existing transport operators and employees are critical. This partnership is central to the new approach of this strategy. Turning the proposals in this strategy into reality will depend on the willingness of transport operators to buy in into the strategy and to commit and invest alongside Government. Transport drivers are often the first, and last person, you meet when using public transport. The transport drivers and the operators who employ them, are key people in the success of the public transport system and will play the most important role in achieving a successful outcome.

**Funding**

In order to deliver on the action agenda’s outlined above, a significant increase in funding is required. The DoT will need to make a strong evidence-based case for sustained Government funding in time for the 2008/9 MTEF cycle. More needs to be done to package the vision and strategy clearly and to ensure that municipal integrated transport plans are aligned and translate into strategic projects that can attract Treasury support.

In addition, the transport sector in Government has been slow to implement the planning and regulatory building blocks that will ensure the effective use of expanded funding and

investment. These include institutional devolution to the local sphere, effective regulation, and network redesign.

International road-based examples of high quality corridors range in cost from R10 to 20m per km for infrastructure and facilities. The National Passenger Rail Plan priority corridors should also be linked to this programme. Therefore, a Phase 1 programme in all six metros could target up to a total of R10bn in capital investment for road corridors (combined for all 6 metropolitan cities) over a 5 year period. In addition the Passenger Railplan funding is increasing to nearly R15bn for capital and operations for 2007/8 to 2009/10 combined.

This would be sufficient to implement high quality, Phase 1 corridor systems within 5 years in the 6 metro cities. It is proposed that this approach guide the allocation of the funds in the 2010 Public Transport Infrastructure and Systems Fund.

While careful estimates of required passenger transport expenditure are still to be made and will depend on the costing of municipal transport plans and networks, it would seem that an additional recurrent R5 billion expenditure per annum is required in order to arrest current decline in service levels and to fully implement high quality, integrated mass rapid public transport systems across the country in the next 10 –15 years.

This estimate will be interrogated and fully detailed in the Public Transport Action Plan and the detailed local project plans that will result from it in 2007.

### **Capacity to implement**

Implementing municipal integrated rapid public transport networks implies a major enhancement of the capabilities of local authorities to actively manage a network of services. In parallel with the implementation of the Phase 1 catalytic network projects, a related set of actions to enhance local capacity and to establish appropriate institutions will be implemented. In short, the overhaul of public transport and its transformation into local networks, requires the development of specialized and skilled capabilities that will be a quantum leap over existing local public transport management capacity.

### **Monitoring and review**

To ensure that progress is being made on the Public Transport Strategy, the Department will monitor delivery as part of the Action Plan implementation process and will ensure that progress reviews are a regular agenda item of the inter-sphere Government transport structures.

### **Conclusion**

The vision that has been articulated comprises a strong publicly controlled mass rapid public transport network that utilises the strengths of the public and private sectors appropriately. This network should ultimately comprise the priority rail and road-based mobility system for a local area and will serve as the alternative network to car use.

This network is an integrated system where modes are deployed in accordance with their optimal role and is based on: public control over fare income, operator contracts based on vehicle kilometers and not passenger numbers, and median lane rapid corridors with pre-board fare payment, that link to rail, feeder, non-motorised and public space systems.



The DoT intends to finalise the Action Plan for Phase 1 for 6 metro cities, 6 other cities and at the same time develop an Integrated Rural Public Transport package for 6 districts. The Action Plan which will be presented to Cabinet in early 2007 will translate this strategy into a tangible implementation programme for the period 2007-2010.