

JOINT COMMUTER RAIL TRANSPORT STRATEGY

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1. INTRODUCTION

Due to the historically fragmented planning of road and rail transport in Gauteng, it was found that there was a definite and urgent need for public transport to be planned jointly by all role-players in the Province. Consequently, it was resolved that a committee be established to co-ordinate rail and road transport planning. These developments led to the establishment of the Gauteng Rail Planning Co-ordination Committee (GRP Committee) The GRP Committee represents technical officials from the SARCC, Metrorail, ACSA, the Provincial Departments of Transport and Public Works and of Development Planning and Local Government, the NdoT and the six Metropolitan Councils in Gauteng.

Although there is a real need in Gauteng to plan the rail transport system as an integral component of the total public transport system, it was decided that rail transport should be addressed on its own as a first stage to determine its status in the Province.

One of the tasks that was accepted as part of the terms of reference of the Sub-committee was to prepare a ***Joint Gauteng Rail Transport Development Strategy***.

It was agreed that a Joint Rail Transport Development Strategy would be prepared using a phased approach. The following phases were agreed on:

- 1) Phase One: Status Quo Assessment and First Phase Commuter Rail Strategy
- 2) Phase Two: Short-term Strategy (i.e. strategies to be addressed immediately) and Strategic Action Plans
- 3) Phase Three: Long-term Strategy and Implementation Programme
- 4) Phase Four: Comprehensive Integrated Strategy and Provincial Rail Transport Plan

Phase One was aimed at achieving, as far as possible, consensus among the GRP Committee members, and specifically the SARCC, on the planning system and approach that should be used for rail transport in Gauteng, and the priorities that should be included in the Gauteng Transport Co-ordination Plan (a multi-modal plan for the province). For this purpose, the information available on the current status quo of the rail system was assessed, and a broad description of rail transport in Gauteng was drawn up.

Furthermore, Phase One focussed more on the strategic issues rather than on the detailed planning / design aspects.

2. PURPOSE OF THE STRATEGY

The aim of this Strategy was to give guidance and provide a sound base towards the preparation of a Rail Transport Plan, and NOT to provide definite and practical actions and designated budgets for implementing the specific rail projects identified. These implementation strategies will form part of the future Provincial Rail Plan which is still to be prepared by the GRP Committee. *This document should thus not be viewed as a mechanism for speeding up the implementation of specific rail projects, but rather as a means of ensuring that the correct environment is created for the implementation thereof.*

3. APPROACH TO STRATEGY

The aim was for the results of this Strategy to feed into the Integrated Transport Plans (ITPs) of each local authority (future transport authorities), as well as into the “Gauteng Integrated Framework” (which will combine the Gauteng Spatial Development Framework Plan and the Transport Co-ordination Plan. (see **Figure 1**).

Each ITP will contain a rail transport component. This rail component is divided into:

- provincial-wide common issues, and
- unique aspects relating to the specific area of jurisdiction of the transport authority concerned.

As agreed, the “common issues” will be those that cover the whole of the Province, the cross-metropolitan boundary issues, issues of provincial significance, and aspects where a uniform approach is required, particularly the contextual approach to be followed.

The common issues were addressed JOINTLY by all the members of the GRP Committee, so as to ensure that conflicts and duplication are avoided. The common issues were identified during workshops with GRP members and are listed below:

- The railway network
- The existing network
- The active rail commuter services network
- Upgrading of the existing network
- Expansion and reduction of the services network
- Expansion of the rail infrastructure network
- Tariffs/Fares
- Legislation
- Funding principles/mechanisms
- Institutional arrangements

RAIL PLANNING IN THE CONTEXT OF TRANSPORTATION DIAGRAM

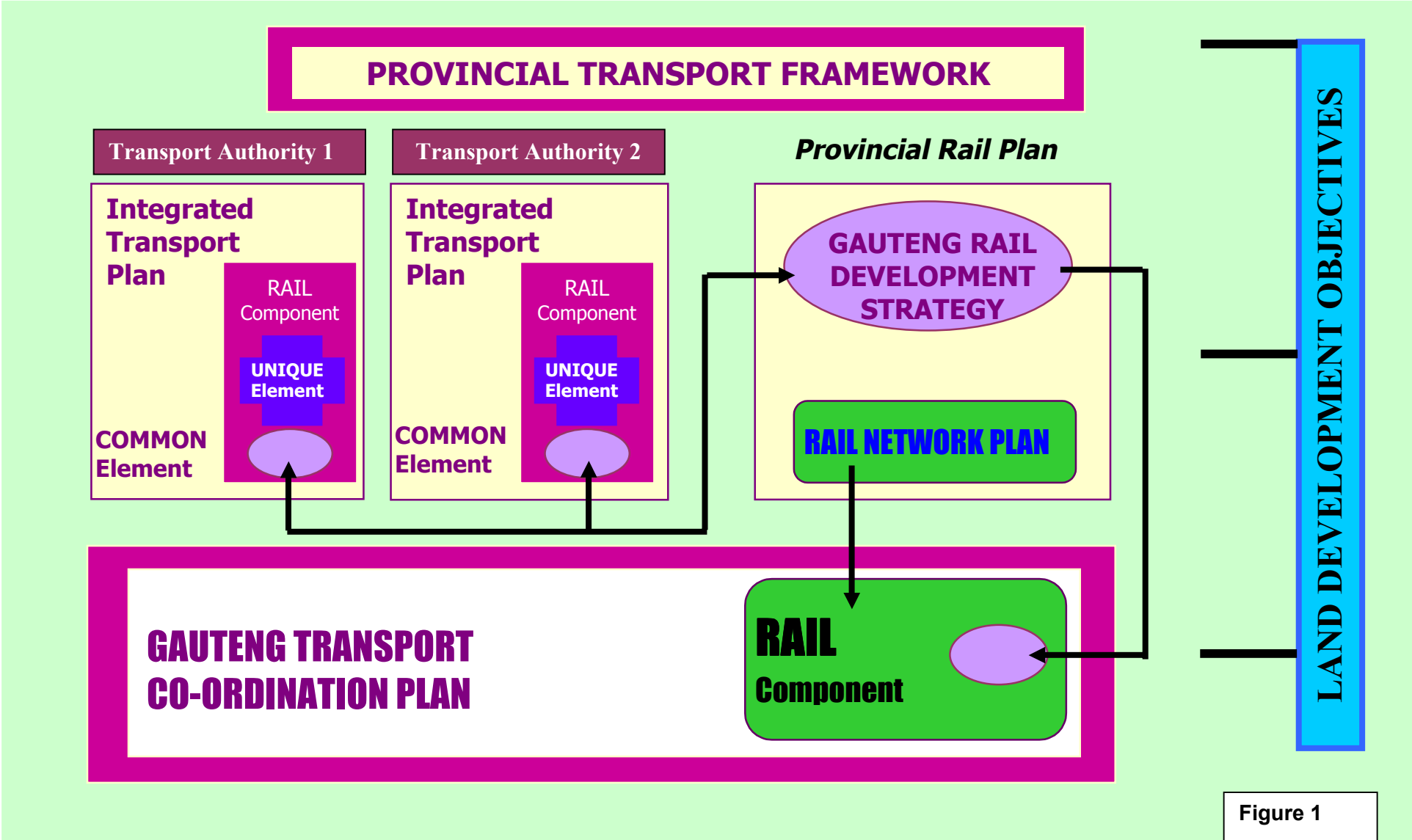


Figure 1

- Operational levels of service
 - Reliability norms
 - Punctuality norms
 - Minimum frequency norms
 - Times of operation
 - Criteria for train lengths
 - Security and safety levels
 - Express trains
 - Travel time
 - Capacity levels with regard to overcrowding
 - Comfort aspects
 - Cleanliness and condition
 - Service information and the accessibility thereof.

4. STRATEGY FORMULATION PROCESS

The strategy formulation process was divided into three phases (illustrated in **Figure 2**):

- **Phase 1: ORIENTATION PHASE**

- (1) During this phase, a broad vision statement and a specific vision statement for Rail Transport in Gauteng were formulated by the Task Team.
- (2) A Gauteng Rail Status Quo Assessment Report was compiled to determine the current trends and to identify the main problems and issues experienced with rail transport in Gauteng. (This report also provided input to the TPR2 process.)
- (3) Common issues were identified during workshops with GRP members.
- (4) The problems / issues were listed and prioritised by the GRP Committee members.

- **Phase 2: STRATEGIC PHASE**

- (1) A Strengths - Weaknesses - Opportunities - Threats (SWOT) analysis was done during a GRP workshop. The issues were then grouped under the following main components of the rail system:
 - Network
 - Rolling stock
 - Service
 - Infrastructure
 - Facilities
 - Passengers
 - Legislation / Institutional
 - Financial
 - Land use
 - Planning
 - Management.

STRATEGY FORMULATION PROCESS

PHASE 1

STATUS QUO

Background
(problems)
(issues)

VISION
(Opportunities)

PHASE 2

SWOT ANALYSIS

IDENTIFY COMMON ISSUES

STRATEGIC GOALS

- Network
- Rolling stock
- Service
- Infrastructure
- Facilities
- Passengers
- Legislation/Institutional
- Financial
- Land use
- Planning
- Management

IDENTIFY STRATEGIES

PHASE 3

DEFINE/ DEVELOP STRATEGIES

PRIORITISE STRATEGIES

Figure 2

- (2) On the basis of the Vision Statement, the issues and problems identified from the Gauteng Rail Status Quo Report, as well as from the SWOT-analysis, were prioritised.
- (3) Due to the lack of implementation and upgrading during the past decade, and because of other conflicting points of view from the important role-players, it was essential to consider future development scenarios and what the future role of rail should be in the Province. This led to the evaluation of possible approaches, and to the selection of the most appropriate broad strategy.
- (4) Goals were formulated for each of the components listed above.
- (5) The most significant issues that have a detrimental effect on the efficiency and effectiveness of the rail transport system were listed according to the identified goals.
- (6) Broad strategies were identified to address the stated goals.

- **Phase 3: DEVELOPMENT PHASE**

- (1) These strategies were defined and expanded to give a better understanding of what they entail.
- (2) The strategies were prioritised by the GRP Committee.
- (3) The prioritised strategies were transformed into projects.
- (4) An action plan programme was compiled to reflect implementation targets.

5. FUTURE ROLE OF RAIL TRANSPORT IN GAUTENG

5.1 INTRODUCTION

A number of strategies were formulated in the past to develop and improve rail transport. Most of them, however, were not successful due to ineffective co-ordination and lack of funding. One of the most important considerations in this regard that needed to be determined, was **the future role to be played by rail transport** as an important component of the integrated multi-modal public transport system and to reach agreement between the metros in this regard.

5.2 PROCESS FOLLOWED TO DETERMINE APPROPRIATE APPROACH

The method that was followed to determine the appropriate approach for this Strategy is summarised by the following steps:

- Step 1: Consider **future development scenarios** (three future scenarios were identified)
- Step 2: Identify alternative **future roles** for rail commuter transport (three alternative roles were identified)
- Step 3: For each of these roles, determine the **approach** that would achieve this
- Step 4: Consider the interaction between the scenarios and the approaches
- Step 5: Determine the ideal and appropriate approach

5.3 DEVELOPMENT SCENARIOS

The following development scenarios were identified:

SCENARIO 1: Low Economic Growth

For this scenario, the rail system will be an option to the poorer communities as a public transport mode, but investment in upgrading, replacing rolling stock and improving the rail system will be a low priority for Government.

Although the service will be adequate to provide minimum levels of access to work opportunities, it will not attract the expected investment. Growth around the nodal points and the railway stations will not depend on the daily commuters, or on the rail transport system as a catalyst for economic growth, but on other factors exogenous to the rail network.

SCENARIO 2: Steady Economic Growth

This development scenario reflects a situation in which South Africa can expect economic *growth that, at its best, equals the natural population growth.*

Although investment in rail transport will be better than in the Low Economic Growth Scenario, it will not be sufficient to improve the quality of the service beyond the current level. Little change is also expected to occur in the current commuter profile.

SCENARIO 3: High Economic Growth

In this development scenario, the *economic growth will be well above the natural population growth*, ensuring that the unemployment rate declines in absolute terms.

Public transport will not only be provided for and used by the poor. The socio-cultural integration process and the higher quality of public transport services will eliminate the so-called “love affair with the car” and promote a higher need for all modes of public transport. Under this scenario all the different socio-economic and cultural groups, including both sexes, will use the rail network and its services, without discrimination.

Due to the diversity of the end-user market, the income-generating potential of the rail transport system will be high, leading to an efficient system being provided in a safe and secure environment. Investment in economic infrastructure and job creation along the rail network will be high, attracting a wide range of trade, industrial, sport and recreation, social and tourism developments. The rail network will become a facilitator of growth and an ideal location for investment. The service will compare favourably with other services elsewhere in the world.

5.4 ALTERNATIVE ROLES FOR RAIL TRANSPORT

The following alternative roles can be identified:

ALTERNATIVE	DESCRIPTION
Alternative Role A: Long-distance link to low-income areas	Transport link between employment areas and residential areas where passengers from disadvantaged groups were formerly located as part of the policies of the previous government, thus serving mainly the long-distance, low-income passengers
Alternative Role B: Social service	Service with existing infrastructure almost exclusively for captive poor people with no other form of transport, as part of a social service by government
Alternative Role C: Economic service	Backbone of an integrated multi-modal transport system aimed at corridor and regional development

Considering the three alternative possible roles above, it is clear that the strategies for developing the selected role further will differ substantially. The main difference between the three alternatives is that the first is mainly, from a historical perspective, a politically motivated system, the second is a socially driven process, and the last is an economically driven alternative.

5.5 ALTERNATIVE APPROACHES TO RAIL TRANSPORT

5.5.1 APPROACH 0: Phase Out the Rail Commuter Services

This approach is linked to Alternative Role A. It implies that, for a certain number of years, people living in the apartheid dormitory towns should be compensated, but that this compensation can be withdrawn after a few years once the land-use distortions in Gauteng have been addressed. Cognisance is taken of the fact that people now have new choices about where to reside.

The continued rationalisation of services, which in practice means a curtailment of services, even with an increase in passenger numbers, forms part of such an approach.

As this is essentially a “Do Nothing” approach, it is identified as “Approach 0”.

5.5.2 APPROACH 1: Provide a Social Service

In order to develop Alternative Role B, the approach would be to maintain the social services as much as Government can afford. The rail services should then be viewed as essential social services, on a similar footing to the education and health services.

Any curtailment of services should be limited as far as possible, so as to ensure that the social goals are addressed. High frequencies would not be required, but adequate capacity for the captive users would be essential.

5.5.3 APPROACH 2: Upgrade the System with Reinvestment

The third approach is linked to the economic growth requirements of the Province. This would be aimed at similar strategies to those found in First World countries, where economic aspects, such as limiting overloading on roads, limiting road traffic congestion and other such economic goals are aimed for.

As part of this approach, each transport route in a transport authority area (or in Gauteng for the cross-boundary services) should be considered separately. The demand in and needs of the medium to longer term should therefore be determined, and each mode of transport should be viewed as an alternative solution. Using methods such as cost-benefit calculations, **the most appropriate mode of transport can be identified**, and the subsidy requirement would then be determined by comparing the economic benefits and the financial requirements.

5.5.4 APPROACH 3: Develop and extend the Rail Network

The fourth approach is an extension of Approach 2, also aimed at First World economic goals and also linked to Alternative Role C. The difference is that additional rail lines and stations would be built to expand the current rail network and services, and that the principle would be that transport development should underpin spatial and economic development. **The most appropriate mode for the future should be developed with such an approach.**

5.6 EVALUATION OF THE CURRENT SITUATION

- **Development Scenarios:**

From existing information, it is evident that we are currently experiencing the Low Economic Growth Scenario.

However, the main trend being experienced is that the country is moving slowly but surely towards a more globally competitive role and that civil society is becoming more integrated. This means that we can expect improved national economic performance, more development capital and more potential investment in public transport.

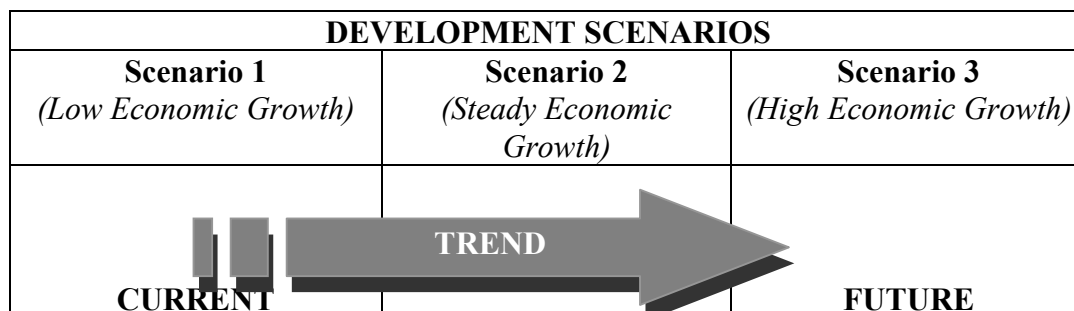


FIGURE 3: Trend in Development

- **Role of Rail Transport:**

The trend in the country at present is tending towards the closure-cum-phasing-out of the rail transport services.

There is thus a movement towards Approach 0.

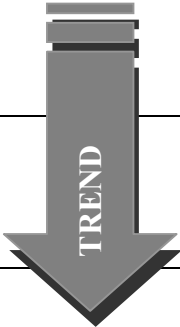
	MAIN TREND IN RAIL TRANSPORT (CURRENT)
Approach 3 <i>(Develop/extend the rail network)</i>	
Approach 2 <i>(Upgrade the system with reinvestment)</i>	
Approach 1 <i>(Provide a social service)</i>	
Approach 0 <i>(Phase out the rail commuter service)</i>	

FIGURE 4: Trend in Rail Transport

Given the above-mentioned trends, all indications are that we are experiencing a movement towards the future phasing-out of the rail transport services, despite the fact that the economy is showing strong signs of future growth, globalisation and socio-cultural integration.

If the relationship between the Scenarios and the Approaches is studied (see **Figure 5**), it is clear that economic development towards Scenario 3 will require an improvement in mobility and accessibility, and hence a movement towards Approach 3.

In addition, an improvement in the transport system will contribute to economic development in the Province. (This was recently supported yet again in the COLTO investigation on a Financing Strategy for Transport.)

The current trends (towards economic development and towards the phasing-out of rail transport services) are therefore very much in conflict.

This clearly indicates a need for the redirection of the rail transport trend, away from the phasing-out approach towards the upgrading, development and extension of the system.

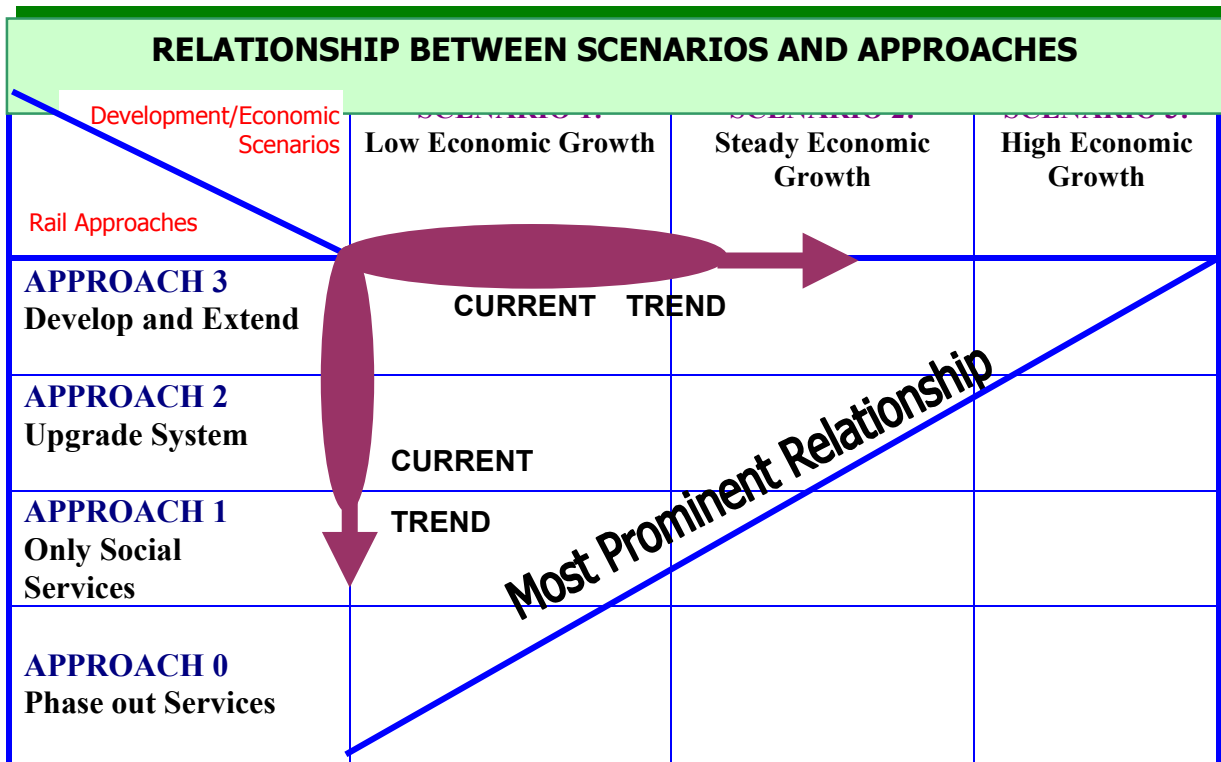


FIGURE 5: Combining Trends in Growth and Rail Transport

5.7 SELECTED APPROACH / ROLE OF RAIL

The proposal accepted by the GRP Committee, and which is supported by the remainder of this document, is that improved economic development should be facilitated, and that efforts should be made to move from the trend towards disinvestment, towards upgrading and further development.

Accordingly to enable this, a combination of Approach 2 and Approach 3 should be followed in all places **where rail transport is the most appropriate mode currently, or in the future.**

It should be noted that this proposed role for rail is not necessarily applicable to all the rail services. Some services may need to be curtailed or closed to improve efficiency. The most appropriate approach should be determined for each service, depending on the local circumstances. The OVERALL trend should, however, tend to follow Approaches 2 and 3 to ensure a general improvement in rail transport in Gauteng.

Figure 6 illustrates the proposed general direction of movement for obtaining growth in rail transport, i.e. the ideal or the vision.

PROPOSED FUTURE ROLE OF RAIL

Development/Economic Scenarios	SCENARIO 1: Low Economic Growth	SCENARIO 2: Steady Economic Growth	SCENARIO 3: High Economic Growth
Rail Approaches			
APPROACH 3 Develop and Extend			
APPROACH 2 Upgrade System			
APPROACH 1 Only Social Services			
APPROACH 0 Phase out Services			

FIGURE 6: Proposed Trend for Growth and Rail

6. VISION

The rail transport vision statement of the SARCC, as well as the visions of both the Provincial and Metropolitan Authorities active in Gauteng, were obtained to form the basis of a new combined and co-ordinated Rail Transport Vision for Gauteng. Similar elements were identified from these vision statements, of which the most relevant and important ones were included in a broad and more targeted vision statement to guide rail transport planning in Gauteng:

6.1 BROAD VISION STATEMENT

“An effective and efficient rail transport system which provides affordable and safe access, as part of an integrated public transport system in terms of the ITPs, and which enhances development in order to improve the quality of life of all people in Gauteng.”

6.2 SPECIFIC VISION STATEMENT

“An efficient rail transport system which stimulates land-use development in Gauteng, and which provides acceptable access to both captive and choice users.”

7. PRIORITISATION OF STRATEGIES

The strategies identified were rated by the Task Team members according to their priority for implementation. The strategies were divided into three groups, as follows:

- Strategies to be implemented immediately or during the next financial year (2000/2001)
- Those to be **initiated** during the next financial year (2000/2001), but which should be completed during the following years
- Those that are to be considered for implementation in the 2001/2002 financial year and beyond.

1) **Strategies to be implemented immediately or during the 2000/2001 financial year:**

- Map the existing rail transport network (distinguish between the active commuter and freight networks).
- Map the rail network (services and infrastructure) and make it available to all potential users.
- Distribute rail service information to all role-players and make it easily available to potential users of such information.
- Proactively plan the future network (including services and infrastructure).
- Establish a mechanism to ensure that plans are legitimate.
- Ensure that the ITPs contain a rail component and address access to railway stations.
- Develop a JOINT mechanism for implementing the strategy.
- Prepare a trainset cleaning strategy.
- The GRP should initiate the formulation of guidelines for minimum service levels.
- The GRP should assess the role of rail transport in Gauteng (modal niches).
- Monitor developments and progress with regard to rail concessioning.
- Determine the need for transfer facilities and prioritise.
- Prepare a facility-upgrade strategy.
- Determine minimum cleaning requirements.
- Determine passenger needs, attitudes and perceptions (rail and other public transport users).
- Formulate a strategy to meet passenger requirements.
- Develop a mechanism for the implementation of ITPs.
- Integrate rail and land-use planning.
- Determine funding needs / requirements.
- Determine the main reasons for and prepare a strategy to limit fare evasion.
- Develop means to avoid parallel services.
- Compile a future rail network and map it.
- Prepare an Individual Modal Choice Model.
- Determine criteria and a system for prioritising rail projects.
- Protect existing and future rail corridors.

2) **Strategies to be initiated during the 2000/2001 financial year:**

- Implement integrated land-use and transport planning.
- Report on the current situation and implications, as well as a rolling stock replacement / revitalisation strategy.

- Prepare and agree on a Planning Flow Chart.
- Formulate a joint strategy to ensure adequate funding.
- Identify projects / proposals of provincial significance and / or cross-boundary metropolitan projects / proposals and prioritise.

3) Strategies to be implemented during the 2001/2002 financial year:

- Develop a province-wide rail service plan.
- Develop a mechanism to ensure minimum service levels.
- Clarify the division of responsibilities (using Institutional Reform process as input).
- Prepare an infrastructure maintenance strategy.
- Determine the need for the upgrading of existing infrastructure and prepare a programme for upgrading.
- Draw up a joint province-wide rail network plan.
- Give careful consideration (an investigation) to the devolution of funding responsibilities.
- Develop a strategy to attract high-density development around railway stations.

8. WAY FORWARD

1. Phase One - Joint Commuter Rail Transport Strategy was submitted to the TCC for comments and acceptance.
2. Phase One - Joint Commuter Rail Transport Strategy should be presented to GALA with the aim of informing metropolitan technical and political officials about the latest attitudes towards and direction taken with rail transport in Gauteng.
3. Phase One - Joint Commuter Rail Transport Strategy should be officially approved by the Gauteng Transport Advisory Board (TAB), once this Board is active again.

9. IMPLEMENTATION

The GRP Committee took ownership of Phase One - Joint Commuter Rail Transport Strategy, and accepted an action plan to kick-start Phase 2, i.e. the development of the high-priority strategies that were identified to be implemented immediately.

The final implementation of the Rail Strategy will be influenced by the findings of the rail concessioning pilot project, and particularly the rail institutional review process currently underway. The allocation of the role and functions relating to rail transport to the different authorities/institutions may have some impact on the implementation of the strategy. It was, however, decided that the GRP Committee should proceed with certain tasks that were not influenced by these developments.

The Phase One - Joint Commuter Rail Transport Strategy was accepted by the Gauteng Transport Co-ordination Committee on 22 February 2000.

REFERENCES:

1. Gauteng Rail Passenger Transport Status Quo Assessment. Final. December 1998.
2. Gauteng Joint Commuter Rail Transport Strategy, Phase One. Final. October 1999.