Limpopo Province: Department of Transport

First Rationalisation Plan
for
The Waterberg District Municipality

Final Report

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EXECUTIVE SUMMARY

1.1 Introduction

The Limpopo Department of Transport appointed ARCUS GIBB (Pty) Ltd on 26 January 2004, to prepare the Rationalization Plan for the Waterberg District Municipality (WDM).

The subsidized bus services are operated by private operators and parastatals, and are managed by the Provincial DOT. This function is envisaged to be devolved to Local Government (Transport Authorities). In this particular case, Local Government is the represented by the District Municipality. In the current financial year, the District Municipality, the Limpopo Department of Transport is assisting the WDM in the preparation of the Rationalization Plan, and is the client for the project, while the District Municipality is the key stakeholder in the project.

There are no Commuter Rail Services and Municipal Bus Services in the WDM.

In terms of Section 25 of the NLTTA, it is proposed that a public transport service being operated in terms of a subsidy, be continued after expiry of the basis in terms of which it is currently operated, in terms of a subsidized service contract or concession, the planning authority where services are provided must prepare a Rationalization Plan.

1.2 Method

The Rationalization Plan was developed in close coordination with the OLS for WDM. This was to ensure that the public transport supply and demand is balanced, and to determine the possibility of commercial contracts and the implementation of the New Taxi Vehicle.

The rationalization process considered short-term plans, and medium to longer-term plans. The short-term plans are based on identification of duplication and direct competition between subsidized services and between modes, and effectiveness in terms of utilization of the available capacity.

The medium to longer terms considerations is based on the detailed investigation of the public transportation system, and will result in the restructuring of the public transport system. Other criteria included cost effectiveness, appropriate mode, user convenience and benefit, consistency in policies, and availability of supporting infrastructure such as roads.

The design criteria for the Rationalization Plan were compiled from various academic research papers, legislation, planning guidelines, and projects. The objective of the assessment was to obtain an optimal solution considering the needs of individual objectives of the Government, Operator, and Passenger.

1.3 Status Quo

The dominant travel pattern of passengers is home to work in the morning and return trip in the evening. On most routes the demand peaks during the morning forward trip and evening return trip.

The Mokopane Transport and Lowveld Bus Service are the main subsidised operators in the Waterberg District Municipality. PUTCO and North West Star are also subsidised operators serving one route each to Modimolle and Bela-Bela respectively. The CPTR identified 60 subsidised bus routes in the WDM. The total supply of subsidised capacity for buses in WDM is 14 232 seated, and 4432 standing.

The Limpopo Department of Transport is the custodian for bus subsidies in the WDM. The current tendered contract with Lowveld bus service expires in June 2004, and will be renewed on a monthly basis until the new contracts are prepared. The GNT Bus Service expires in September 2006.

There are some private non-subsidised bus operations in the Lephalale area that operate without a fixed schedule, and as a result are in conflict with the taxi mode.

The current bus operation may be described as the conventional fixed route, fixed schedule system. It is evident that commuter travel is the main travel pattern in the WDM for the subsidized bus service. There are some very long routes (from 40km to 110km), and intuitively the journey time is in excess of two hours. Some buses depart as early as 3:40am. These factors question the standard of living for many people commuting long distance.

There is also speculation of a high demand for weekend travel. Most people in the rural areas tend to do business in the towns on Saturday only. It is highly likely that weekend demand may even supersede the weekday peak period for some routes. The bus schedules indicate morning and afternoon commuter trips on Saturdays. The need for additional service on weekends is assessed.

The road conditions are generally very poor, especially in the rural areas. Most villages in the Mogalakwena and Lephalale Local Municipalities are not accessible during wet weather. Such road conditions are a significant factor on the operating life of the rolling stock, operating costs, and level of service to the passenger.

There is no commuter rail service in the WDM.

1.4 Results

In a tendered contract between the Provincial Department of Transport and the operator, the subsidy is determined as the difference between the operating cost per kilometre and the estimated fare revenue. In most cases of subsidized public transport services, the subsidy/revenue ratio is 60/40 of the operating cost.

The Lowveld Bus Service in the Lephalale Local Municipality and the Great North Transport Bus Service in the Mogalakwena Local Municipality operate on tendered and negotiated contracts respectively. Putco and North West Star Bus Services in the Mookgopong and Bela Bela Local Municipalities respectively, operate with interim contracts.

Consistently, the rural subsidy per month is also approximately three times greater than the urban subsidy, and the average subsidy per passenger trip for the long distance trip is also almost 3 times greater than the short distance trip. The average subsidy per passenger from the deep rural area (>40km) is approximately R520 per month. That is almost three times greater than the average subsidy per passenger from the urban areas (<40km), which is R184.

The results are compared with the results from the NDOT Study – Report on the Optimisation of Subsidies, October 2002 in Table 1.

Table 1 – Optimisation of Subsidies

Performance Indicator	SA National Average 2002	Limpopo Provincial Average 2002	WDM Average 2002	Rationalization Plan 2003/4	
				Routes <40km	Routes >40km
Subsidy per passenger trip	R5.62	R4.57	R6.52	R4.00	R11.89
Subsidy per bus kilometer	R5.88	R4.14	R6.38	R10.08	R10.57
Subsidy per passenger per month	R198			R184	R520

The average income spent on commuting in the WDM according to the NDOT study is 7%. This is acceptable according to the objectives of the policies of National Government, that is, to maintain the cost of travel to less than 10% of the disposable income.

Further, it is evident that the subsidy per passenger trip, subsidy per bus kilometre, and subsidy per passenger per month in the WDM is relatively higher than the National and Provincial averages. This is due to the significant impact of long distance trips, sparsely populated villages, and the rural conditions in the WDM.

1.5 Recommendations

From the analysis of the subsidy data, the following is recommended:

- Discounted fares should be provided for students and the elderly
- Learners and pensioners should be subsidized too
- The subsidy per revenue kilometre in the urban areas should be increased

- Only bus journeys exceeding 10km should qualify for a subsidy
- For all subsidised contracts, in addition to subsidies for weekly and monthly tickets, cash fares should also be subsidized.
- The option of increasing fares may be considered, as it is a mechanism to raise revenue and subsequently reduce subsidies. To the contrary, the service to the passenger should not be compromised considering the socio-economic circumstances of the passengers.
- There is need for additional subsidized services on some routes, as analysed in Appendix E. If minibuses are considered for fixed routes, the operating cost of a minibus and a standard bus is common – driver's wage, fuel, shorter life span versus initial cost, unless the volumes are consistently low and terrain dictates. Articulated buses should also be considered on routes with consistently high passenger volumes.
- Subsidies should be allocated only for the optimal mode
- There is need for subsidised services from Thabazimbi to the Amandelbult mine, and Thabanzimbi to the Northam Platinum mine

Also, to ensure effective and efficient service, the bus contracts must be monitored and audited regularly. For example, buses older than 15 years are not allowed to operate on tendered contracts. Hence, the following recommendations should be addressed in the next round of tendered contracts, and are consistent with the recommendations from the NDOT Study – Report on the Optimisation of Subsidies, October 2002.

- Tendered contracts should be drafted with flexibility over the duration of the contract. Such flexibility should allow for the rationalization and restructuring of routes and services. Such flexibility could create uncertainty and risk for the operator and as a result increase tender price. Therefore, the client should have a defined plan for the restructuring of the public transport through this Rationalization Plan, and should incorporate the recommendations into the tendered contract.
- The budget must include escalation, contingencies, variations, and complimentary services
- The longer the contract duration, the lower the risk of short-term macro-economic fluctuations has an impact on service delivery. This implies that the risk of the variability of external factors (e.g. exchange rates, fuel price) to the operator should, in theory, reduce in the longer period for which the contract is awarded.
- Contracts should be at least 7 years
- The contract must specify the minimum level of service conditions
- Contracts should be performance based. Thus, the operator should be required to embark on an aggressive marketing exercise and apply innovative business practices to increase patronage. For example, revenue may be generated from advertising space on buses. Subsidy incentives should be provided for increased patronage, increasing operating speed and decreasing journey time, etc.

- Current interim and negotiated contracts should be converted to tendered contracts and all contracts should be based on the net cost model, where the sensitivity of fares and subsidies are tested.
- There must be incentives to tender with smaller capacity vehicles (such as taxi co-operatives) to provide feeder services and midday services
- Contracts must make provision for complimentary services, for example, elderly people travel free of charge
- Make provision for automated fare collection, passenger information service (provision of routes maps, time tables, etc.)
- Contracts must include measures for accessible transport for persons with special needs.
- Internally, the Provincial Department of Transport must employ staff to monitor and audit effectiveness and efficiency of the bus contracts.

The total cost implication for the WDM is in Table 2, and is categorised according to the implementation schedule. The bus contracts are scheduled as 7-year contracts. The GNT bus service is currently in the process of restructuring, and funding for the enterprise could be ring fenced. Therefore, a major part of the envisaged cost could be for the new enterprises, instead of the Provincial Government.

Table 2 – Proposed Projects and Cost Implications

TABLE 2: PROGRAM AND FINANCIAL IMPLICATIONS												
PROJECT												
	1	**2**	**3**	**4**	**5**	**6**	**7**	**YEAR 1**	**YEAR 2-5**	**TOTAL**	**Action**	**Duration**
BUS MODE (RATPLAN)												
Project-1: Implement Tender or negotiated subsidy contracts (7-years)								R20 000 000	R 80 000 000	R100 000 000	**DoT**	**7 years**
Project-2: Monitoring and Auditing of Project 10 (7-years)								R2 000 000	R 8 000 000	R10 000 000	**DoT**	**7 years**
Project-3: Implement Class 1 Improvements									R 300 000	R 300 000	**DoT**	**1 year**
Project-4: Review Rationalisation Plan									R 300 000	R300 000	**DoT/DM**	**2 months**
Total								**R22 000 000**	**R88 600 000**	**R110 600 000**		

There are several externalities to be addressed by the public sector, such as, the provision of inter-modal facilities, upgrading of roads, and training of law enforcement officers in public transportation, and integrated land-use planning. The Public Transport Plan and Integrated Transport Plan address some of these externalities that could enhance public transportation, and optimise subsidies.

2 INTRODUCTION

2.1 Background

There has been a significant change in transport policy since the White Paper on National Transport Policy, 1996. There is recognition of the transportation imbalance, and the need to undo the practice of the Apartheid planning principles, that is, decentralized residential nodes with limited access and mobility to economic activity nodes mostly for the Previously Disadvantaged. The restructuring of the public transportation system is a process, and one of the initial steps is the preparation of the Rationalization Plan.

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2.2 Transparency

To the extent possible, the project operated transparently, and opened to scrutiny from all stakeholders. It is not necessary to obtain comment from the general public. Due to the consultative process, the bus and taxi industry in the WDM is aware of the recommendations. Nevertheless, the recommendations are considered confidential until approved by the WDM and the Limpopo Department of Transport.

2.3 Capacity Building

One of the components of the project was to build technical capacity at the respective Municipalities and internally for the consultant, by the involvement of officials and staff on the project.

ARCUS GIBB postgraduate team members utilized the project to attain better understanding on the planning procedures of the South African Transportation policies and re-development of the South African Transportation System, specifically in the Limpopo Province.

Limpopo Provincial, District, and Local Government officials were presented with planning procedures and principles, analysis of public transportation data, and the criteria in preparation of recommendations for the restructuring of the public transport system. This is considered empowerment to officials who are not Transportation Engineers and Planners by profession, but project managers at the respective Departments. It is accepted that most officials involved in this project now have a better understanding on the planning and preparation of a Rationalization Plan, and are able to provide stronger leadership in subsequent projects.

2.4 Purpose of the Rationalization Plan (RATPLAN)

The Concise Oxford dictionary defines *rationalizes*, in context, as a verb to make (a business) more efficient by reorganizing it to reduce or eliminate waste of labour, time, and materials. Thus, a component of rationalizing in context is the optimisation of the transport services, by considering the objectives of the directly affected stakeholders, which are, the **Government** who provides subsidies, the **passenger**, and the vehicle **operator**.

A RATPLAN is required where the planning jurisdiction has subsidized public transport services operating in, to, or from the area. One of the main objectives is to rationalize the existing subsidized public transport service, by eliminating the poor practices of the past such as duplicating routes.

The purpose of the Rationalization Plan as extracted from the TPR 6 Guideline Document is:

- To eliminate inefficiencies such as duplication and under-utilization of services within the subsidized bus system, and between operators
- To create a framework for the restructuring of tendered bus contracts, taking cognisance of the total public transport system, to obtain a more cost effective and efficient public transport system
- To create a long term plan to address the restructuring of the public transportation system

2.5 Objectives of the study

Since this is the first Rationalization Plan for the WDM, it is imperative not to overcompensate and dramatically transform the public transportation system in a short period of time. The paradigm shift in the restructuring of the public transportation system should be gradually implemented over a period of five years. Therefore, the goals based on the objectives, are categorized as short-term goals, and medium to long-term goals. Hence, the short-term focus (year 1) is the rationalization of the subsidized bus services. The medium-term focus (year 2 and 3) is the development of a framework for the design of the future service contracts for an optimised transportation system. The long-term focus (year 4 and beyond) is the design of rail concessions for commuter rail, where necessary.

The objectives of the Rationalization Plan as extracted from the TPR 6 Guideline Document are:

- To determine which interim bus contracts and tendered bus contracts expiring in the near future
- To rationalize within and between public transport modes and across borders of planning authorities, and inter-provincial transport
- To determine the extent of subsidization of services
- To determine the extent of urban and rural services and subsidies
- To determine where and to whom subsidies should be targeted
- To determine the incorporation of the 35-seat New Taxi Vehicle through the Taxi Recapitalisation Program
- To focus on the development of rural areas
- To address the transport needs of special categories of passengers
- To minimize levels of subsidy by optimisation of the public transportation system
- To minimize competition between public transport services and operators
- To stimulate competitive bidding between public transport operators through the structuring of tenders
- To ensure that passenger demand is addressed effectively and efficiently
- To facilitate and promote modal integration and integrated land use and transportation development

2.6 Scope of work

The preparation of the Rationalization Plan for the WDM is developed through a sequence of stages, based on the NLTTA Section 25, the Guideline Document TPR6, and the Minimum Requirements for Preparation of Rationalization Plans. The scope of work is described through each stage.

Stage 1

- Review CPTR data
- Identify gaps in the database
- Recommend requirements for additional data
- Assess public transport status quo and develop specific policies
- Consult with interested and affected parties

Stage 2

- Prepare policy framework (transport vision, goals, and objectives)
- Analyse population densities and growth areas (IDP)
- Address objectives as stated above
- Develop short term and long term recommendations
- Consult with interested and affected parties

Stage 3

- Prepare transport implementation proposals
- Prioritise transport proposals and prepare an implementation program
- Prepare a financial plan for the implementation program
- Consult with interested and affected parties

Decisions on the approach towards subsidization must be guided by financial and economic principles. Given the flexible and phased approach in the preparation of the Rationalization Plan, the financial and economic implications will be addressed at a fairly coarse level for the short-term.

2.7 Study Area

The study area is the Waterberg District Municipality. The locality map is in Appendix A. The Census 2001 data provides the following statistics on the WDM:

- There are six Local Municipalities
  - Thabazimbi
  - Modimolle
  - Lephalale
  - Mookgopong
  - Mogalakwena
  - Bela-Bela
- The population of WDM is approximately 614 041, and the approximate population per Local Municipality is in Table 2.1.
- The unemployment rate is approximately 31%

Table 2.1 – Demographic Data for WDM

Local Municipality	Population		No. Of Households	Employed	Unemployed	Living below MLL	Physical Disabled
	Urban	Rural				%	
Bela-Bela	36901	22237	12279	14371	6965	51	578
Lephalale	14810	82531	23401	28673	5274	71	1163
Modimolle	32501	28468	17536	22799	6992	55	832
Mogalakwena	123417	192476	68010	37089	33698	55	3843
Mookgophong	20862	4622	6977	11196	2647	54	308
Thabazimbi	29276	37417	20280	26249	7045	59	443
Total	**257767**	**367751**	**148483**	**140377**	**62621**		**7167**

The WDM shares a Provincial border with North-West Province and Gauteng Province, and an international border with Botswana.

The WDM is mostly rural. Most communities are sparsely populated in low-density villages. The relatively densely populated, semi-urban areas are Mokopane, Lephalale, Modimolle, and Bela-Bela. There are no Transport Authorities and Metropolitans Municipalities in the WDM.

There is gradual economic development specifically in agriculture, mining, and tourism. Mining is significant in the Lephalale and Thabazimbi Local Municipalities. The projected growth for the semi-urban areas in the WDM is 1.1% annually till 2006 and thereafter 1% annually till 2008.

Car ownership is low and commuters depend on public transportation. Further, mobility of communities is a serious concern. The travel time on some bus and taxi trips are very long, greater than one hour up to two-and-a-half hours. The trip distance is over 40km up to 120km in some cases.

2.8 Format of the Report

The document contains the following chapters. The contents of each chapter is discussed briefly:

Chapter 1 – Introduction

The Introduction describes the terms of reference for the consultant, and outlines the purpose, objectives and goals of the Rationalisation Plan. The introduction also describes the study area; the nature of consulting services rendered, the client responsible for the project, the validity period for the implementation of the Rationalisation Plan, and the various chapters of the report itself.

Chapter 2 – Assessment of existing Subsidised Services

The status quo of the bus service is described from data obtained from the Current Public Transport Record (CPTR), and the Subsidy Management System (SUMS). The bus routes are assessed and efficiencies and effectiveness of the service are determined, categorised in peak and off-peak service, and urban and rural service. Bus routes are superimposed on taxi routes, and timetables, fares, and operating conditions are compared to determine the competition between operators and modes for the same market. Bus routes are analysed to determine demand/need, capacity, duplication of routes, subsidy allocation, journey time, overcrowding, frequency, etc.

Chapter 3 – Policy framework

The legislative policy framework was derived from the White Paper on National Transport Policy, the NLTTA, MSA, PLTF, IDP Review 2003/2004, Report on the Optimisation of Bus Subsidies, Short Term Strategic Framework on Accessible Transport Second Draft July 2003, and the Guidelines and Minimum Requirements for the Preparation of the Rationalisation Plan. The technical framework that complemented the legislative framework was derived from various technical papers and project reports. The technical data is used as a guideline in the assessment and evaluation of the transportation system in the WDM.

Chapter 4 – Results and Recommendations (Rationalisation, Restructuring, and Evaluation)

The assessment of the current public transportation system in terms of bus routes (and taxi routes) is based on the policy framework. Proposals on rationalisation and restructuring of the transportation system are developed and prioritised. The assessment considers the impacts on other modes, infrastructure, and facilities, the objectives of the Government, the passenger, and the operator. The impacts and benefits in terms of user convenience, quality, and financial are documented and quantified where possible.

There is particular emphasis on the impact on subsidies and the level of service to the passenger. The restructuring and prioritisation is based on fundamental public transport planning principles. The RATPLAN proposals should be consistent with the OLS proposals and are presented accordingly. The financial implications are consolidated into a budget proposal.

Chapter 5 – Stakeholder Consultation

The Rationalisation Plan is not necessarily presented to the general public. There are representatives on the WDM Transport Forum to address the needs of the commuters. The stakeholders are identified and the consultation process is described. The respective roles and responsibilities of each stakeholder are described. The input of the stakeholders on the results and recommendations are also noted.

Chapter 6 – Implementation and Associated cost

A list of projects is identified in the short, medium and long term, and the cost estimated cost implications are also included. The projects should be considered in the IDP Review 2004/2005.

2.9 Deliverables

The specific deliverable for the project is a report on the Rationalization Strategy for the Waterberg District Municipality. The list of definitions, and detailed analysis is attached to the appendices.

2.10 Implementation of the Rationalisation Plan

This is the first Rationalisation Plan for the WDM. Considering the lack of comprehensive data, the results and recommendations are not prescriptive. This document should be considered a guideline and applied with discretion.

3 ASSESSMENT OF SUBSIDIZES SERVICES

3.1 Method

The Rationalization Plan was developed in close coordination with the OLS for WDM. This was to ensure that the public transport supply and demand is balanced, and to determine the possibility of commercial contracts and the implementation of the New Taxi Vehicle.

The rationalization process considered short-term plans, and medium to longer-term plans. The short-term plans are based on identification of duplication and direct competition between subsidized services and between modes, and effectiveness in terms of utilization of the available capacity.

The medium to longer terms considerations is based on the detailed investigation of the public transportation system, and will result in the restructuring of the public transport system. Other criteria included cost effectiveness, appropriate mode, user convenience and benefit, consistency in policies, and availability of supporting infrastructure such as roads.

The design criteria for the Rationalization Plan were compiled from various academic research papers, legislation, planning guidelines, and projects. The objective of the assessment was to obtain an optimal solution considering the needs of individual objectives of the Government, operator, and passenger.

3.2 Design Criteria

3.2.1 Key Performance Indicator for Stakeholders

It was essential not to assess the public transport system from an operational and financial perspective only, but to consider the user needs also. The following key indicators are significant for the optimisation of the public transport system:

Key indicators for passengers:

- Walking time
- Waiting time
- In-vehicle time
- Fare per trip
- Comfort (crowding)
- Security
- Reliability

The acceptable walking time in South African conditions and circumstances is one (1) kilometre or fifteen (15) minutes.

The bus timetable indicates the frequency, in-vehicle travel time, and supply of service. The CPTR data does not provide walking time, distance, waiting time, and level of security. The SUMS data indicates the number of buses deployed per month, and the penalty imposed for delays.

Key indicators for the operator:

- Number of passengers (market share)
- Revenue
- Minimizing operating cost

Key Indicator for Government:

- Passenger satisfaction
- Utilization
- System operating cost
- System capital cost
- Revenue (fare/km)
- Subsidy
- Effective service, including the provision of transport to the needy and disabled

3.2.2 Bus Utilization

The bus capacity is 65 seated and 20 standing passengers for a regular bus. The articulated bus capacity is 100 seated and 40 standing passengers. The optimisation of routes is focused on eliminating 'unproductive' routes where the utilization is less than 50%. Services in direct competition with subsidized services should be relocated. A utilization of greater than 85% or more than four persons per square meter is considered as overcrowding. The maximum headway for bus service in the peak period is 30 minutes.

A standard bus route should be eliminated from the system and replaced with another bus route or mode if the peak hour demand is less than 90-120 passengers per hour, depending on the land use. However, the route could be served with smaller capacity vehicles such as the midibus (20 minute headway) or minibus (8 minute headway). Similarly, a minibus taxi route with less than 25 passengers per hour in the peak hour could be eliminated and passengers would be assigned to the nearest alternative route.

The CPTR database does not provide line haul passenger volumes, that is, number of passengers boarding and alighting at each stop. However, for

commuter trips, it is assumed that most passengers board at one origin and alight at a common destination. The exact revenue cannot be determined because fares are distanced based.

If fares were the main criteria for mode choice, then the bus mode would attract more passengers. Factors such as comfort, safety, reliability, speed, etc., have a bearing on mode choice. The relative attractiveness of the public transport mode for some bus routes cannot be quantified because the rural terrain dictates the mode accessibility. Thus, for such routes the passengers are captive to bus mode. Thus, in the evaluation of the routes, the road pavement conditions also served as a critical factor to determine the appropriate mode for the route.

Most commuters purchase weekly and monthly tickets, but the database does not indicate the number of tickets and the number of cash paying passengers.

The revenue calculation in this study utilized the cash fare for the full length of the route, assuming most passengers travel the full length of the route.

The average bus utilization is determined by the following equation:

$$\text{Average Bus Utilization} = \frac{\text{(number of passengers per month)} \times 100\%}{\text{(Number of trips per month)}}$$

3.3 Planning of bus routes

3.3.1 High Rider-ship Corridors

Although the broader region of the Limpopo Province is rural, in context of this study, routes less than 40km are considered urban, and routes greater than 40km are considered rural.

Typically 40 000 or more passengers/day per direction:

- Corridor is likely to support rail or dedicated public transport road infrastructure in congested areas (fixed guide way)
- Line haul on road based corridors should be served by bus
- Feeders and distributors by bus or taxi

3.3.2 Moderate Rider-ship Corridors

Typically 10000 to 40 000 passengers/day per direction:

- Corridor is likely to support road infrastructure with partial priority for public transport
- Line haul on road based corridors should be served by bus
- Feeders and distributors by bus or taxi

3.3.3 Low Rider-ship Corridor

Typically less than 10000 passengers/day per direction:

- Corridor is likely to support road infrastructure with partial priority for public transport
- Line haul on road based corridors should be served by taxi
- Feeders and distributors by taxi modes
- Preferably, routes should be paved

3.4 Circuitous Routing

Circuitous routing is the deviation of the vehicle from the trunk route, where the trunk route is from the suburb to the business district. This type of operation is acceptable when the dominant passenger volumes are at mid route. When the majority of the passengers are from the origin of the route then circuitous routing at mid route is not acceptable because the majority of the passengers are delayed. A graphical presentation of circuitous routing is in Figure 3.1.

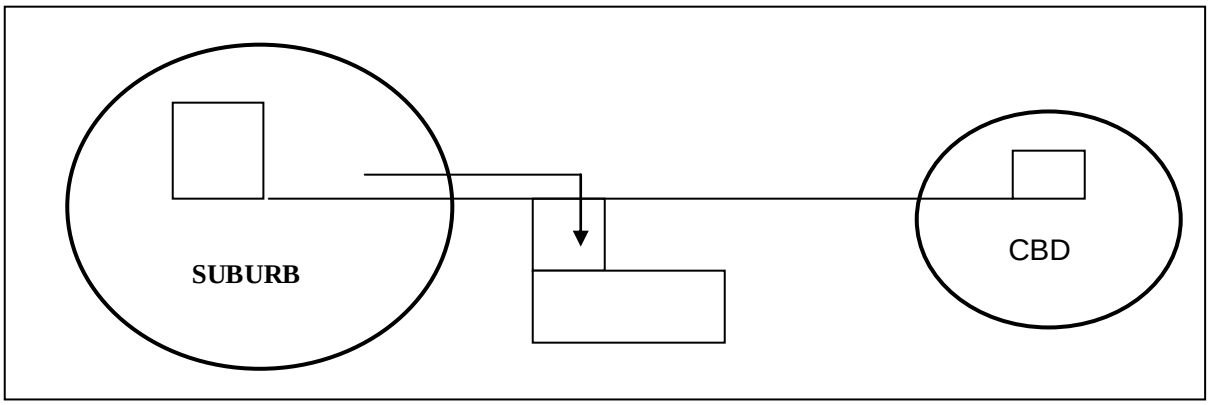


Figure 3.1 - Circuitous Routing at Mid-route

3.5 Subsidies

A tendered contract and negotiated contract are based on revenue kilometres, while an interim contract is based on multi-journey weekly and monthly ticket sales. A negotiated contract is a contract that is converted to a contract that subsidizes revenue kilometres without a competitive tendering process.

Most public transport services around the world are subsidized and designed with similar technical specifications and guidelines. However, most South African commuters are captive public transport users, as they have no choice of alternative private transport. As a result, the main beneficiaries of current passenger transport subsidies in South Africa are the captive passengers from the segregated settlements, and not to provide mobility and accessibility to the unemployed, very poor, the aged, persons with disabilities, and learners and students.

In the WDM, the Great North Transport (GNT) Bus Service provides subsidised service in the Mokopane area through a negotiated contract with the Limpopo Department of Transport. The Lowveld Bus Service provides subsidised service in the Lephalale area through a tendered contract with the Limpopo Department of Transport. Lowveld Bus Service also provides a service from Thabazimbi to the mines in Northam and Amandelbult. The mines contract the service.

The rationale for subsidizing public transport is that if the market provides services at market related prices without subsidies, and then it would result in less services or services that are not affordable, irrespective of the income groups. Thus, the very poor are further marginalized.

One of the stated principles of the NLTTA is that public transport must be given higher priority than private transport, and all spheres of Government must promote public transport. Private car users are normally targeted through subsidized public transport in developed countries in order to contain externalities such as congestion and pollution and improving the utilization of infrastructure.

3.6 The net cost contract model

The net cost contract model is currently used in the negotiated and/or tendered contracts by Provincial Departments of Transport. In the net cost contract model the difference between the cost of service provision and the estimated fare revenue is compensated for by subsidies. The fare revenue is based on the operator's passenger revenue forecast. The contract puts the commercial revenue risk as well as operational risk firmly with the operator.

The operating cost per kilometre for the bus operations is compared to the revenue and subsidy per kilometre. The revenue per kilometre is determined by the following equation:

$$\text{Revenue per kilometre} = \frac{\text{(fare for the longest segment) x (no. Of passengers per month)}}{\text{(Number of kilometres per month)}}$$

The following items make up the operating cost:

- Fuel
- Tires and tubes
- Lubrication
- Spare parts
- Salaries of bus drivers
- Salaries of maintenance personnel
- Salaries of other personnel
- Taxes, licenses, insurance of bus
- Depreciation of bus
- Renting of building and equipment
- Management and Administration
- Other general expenses
- All other depreciation

For the tendered and negotiated contracts the total number of passengers per month includes learners (ticket passengers). Revenue refers only to weekly and monthly tickets.

This study is partially an audit/review of the existing bus contracts to establish the financial efficiency of the contracts. The net cost contract model assessment process is described in Figure 3.2.

An example of the analysis in the net cost model is in Appendix B.

The analysis separated urban and rural routes to determine the respective subsidies. The operators were not willing to divulge operating cost information to determine the unit cost and to test the sensitivity of fares and subsidies, due to the restructuring and privatisation of the GNT Bus Service. Nevertheless, the current subsidy information was adequate to obtain the basic results and recommendations.

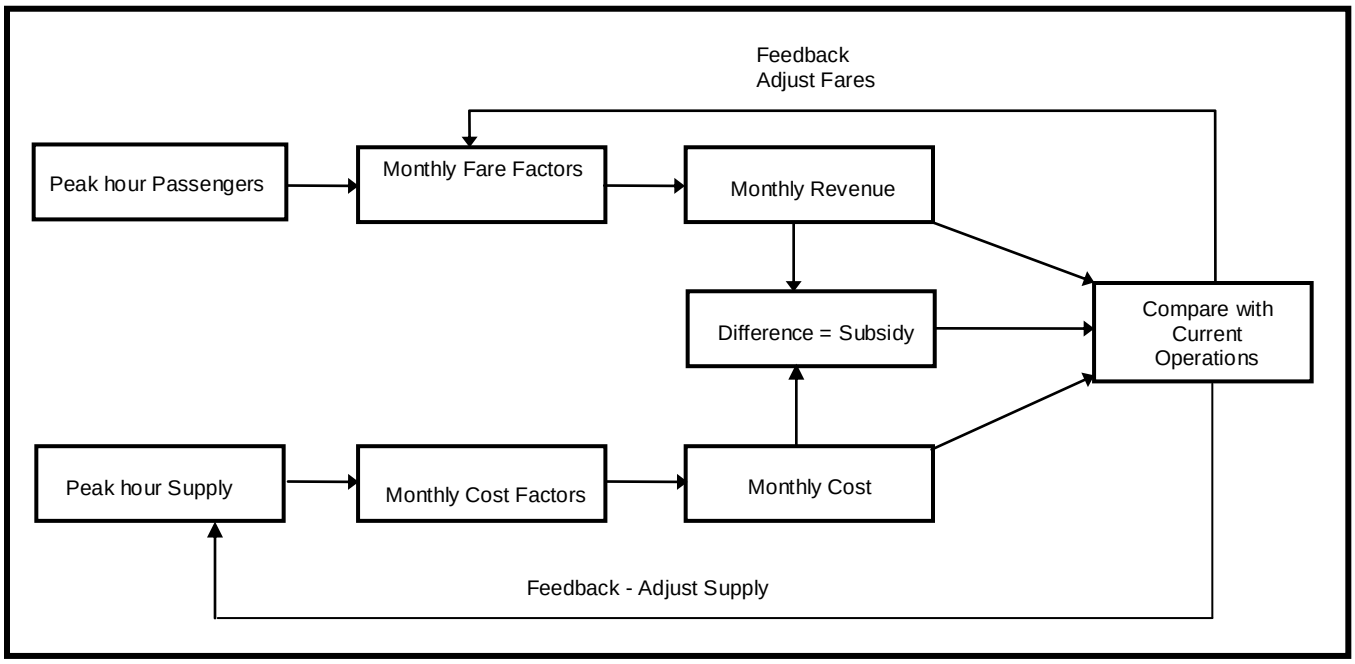


Figure 3.2 – Net Cost Model

3.7 Targeting of subsidies

There may be more innovative means of serving isolated communities through the appropriate mode of transport, instead of buses only. This is consistent with the NDOT vision of subsidizing journeys, not modes. However, allocating subsidies to the appropriate mode of transport should be achieved in a way that does not cause disruption and conflict in the public transport industry.

The study carried out by the NDOT in 2002 to determine the targeting of subsidies, assessed the subsidy data for all Provinces in South Africa. Table 2.1 presents the results obtained for the Limpopo Province and specifically the WDM. The results are compared with the assessment of the CPTR and SUMS data in the Rationalization Plan, to determine the relative changes in the subsidy allocation.

According to the NDOT study, the national average subsidy for each subsidized bus passenger is approximately R198 per month. The average subsidy per passenger trip amounts to approximately R5-62 while each bus kilometre operated is subsidized to the extent of R5-88/km.

Table 3.1 - Results from Report on the Optimisation of Subsidies (2002)

Municipality	Average Household Income	Urban (%)	Rural (%)	Subsidised Pass.trips/day	Subsidy per passenger trip	Average Income spent on Transport
Sekhukhune	2 109	5	95	12 027	0.95	6
Capricorn	2 091	13	87	32 227	6.04	5
Waterberg	2 489	24	76	8313	6.50	7
Vhembe	4 213	8	92	25 426	7.16	6
Bohlabela	1 617	4	96	15 714	2.12	5
Mopani	2 746	15	85	28 910	2.92	7

In this RATPLAN, the average subsidy per person per month is determined by the following equation:

$$\text{Average subsidy per person per month} = \frac{\text{No. Of trips} \times (0.9) \times (65)}{2 \times 22}$$

The following assumptions were considered in the above equation:

- 90% utilization per bus
- The bus capacity is at most 65 seats
- There are at least 22 working days per month
- Each passenger in the morning trip makes a return trip in the afternoon

3.8 Subsidy per passenger trip

This indicator shows the extent to which individual passenger trips are subsidized in absolute monetary terms. It is useful in comparing the relative subsidy that each passenger receives in the various areas.

According to the results from the NDOT Study – Report on the Optimisation of Subsidies, October 2002, the **subsidy per passenger trip** is as follows:

- National average = R5.62 (all contracts)
- Limpopo Province average = R4.57 (all contracts)
- Waterberg District Municipality average = R6.50 (tendered & negotiated contracts)

3.9 Subsidy per Revenue Kilometre

This indicator is the rate at which bus revenue kilometres are subsidized in absolute monetary terms. The rate is dependant on the operating cost, and is significantly impacted by the cost of fuel. This performance measure is useful in comparing the relative subsidy that each contract qualifies for, by region.

According to the results from the NDOT Study – Report on the Optimisation of Subsidies, October 2002, the **subsidy per revenue kilometre** is as follows:

- National average = R5.88 (all contracts)
- Limpopo Province average = R4.14 (all contracts)
- Waterberg District Municipality average = R6.38 (tendered & negotiated contracts)

3.10 Cost of Restructuring

Currently, there is need for additional service in the Lephalale LM, Mogalakwena LM, and there is need for subsidised service in the Thabazimbi LM.

Thus, in the restructuring of the bus services in the WDM, the estimated cost of the negotiated and tendered contracts are calculated, to ensure equitable and consistent application of bus subsidisation in the WDM.

The contracts are based on the following assumptions:

- At least two trips per day (one per peak period) on routes without passenger data
- The subsidy per revenue kilometre in the respective areas, is the same as the current rate for Lowveld Bus Service, and GNT Bus service

3.11 Assessment of the CPTR and SUMS Data

The assessment of the CPTR data identified the route details, timetable, capacity, and passenger volumes. However, the CPTR data only covers 'satisfied demand', and is not as representative as required for detailed planning. User needs and preferences are yet to be determined through the passenger forums represented on the DM Transport Forum. The SUMS database confirmed some of the CPTR information and additional information such as routes and number of trips per day, total number of trips per month, total operating vehicle kilometres per month, the tender price (subsidy) per kilometre, the average number of

passengers per month, and the subsidy claimed per month. The SUMS database is more reliable since an independent auditor audits the payment certificate.

The SUMS data included the escalation from the inception of the contract. The subsidy for the bus service supplied by Lowveld Bus Service in the Lephalale Local Municipality escalated by a factor of 1.71 as at September 2003, while the subsidy for the bus service supplied by the GNT Bus Service in the Mogalakwena Local Municipality escalated by a factor of 1.17 as at March 2003. In the assessment, the escalated values were applied, which reflects the current financial status of the subsidized contracts.

In general, the CPTR data was adequate to proceed with the basic analysis. However, there are several constraints in the database, as a result, the desired result is not comprehensive. The following constraints are identified.

- The bus routes should be described in greater detail
- There is no detail description of routes for non-subsidized bus operations
- Some routes only have the origin and destination
- The trip purpose is not quantified, for example, number of learners
- The routes numbers do not correspond to the route numbers in the SUMS database or with the guidelines in TPR5 – Operating License Strategy
- The CPTR data for Lowveld Bus service is in greater detail than the information in the SUMS database. As a result the routes were aggregated for the respective areas in the Lephalale Local Municipality.
- Cash fares are documented in increments of one cent; for example, the fare for a bus trip from Moshate to Mokopane is R2.09. This fare is not practical and contributes to delays. Therefore, it is highly likely that the fare is recorded incorrectly.
- There is no data on special needs passengers
- There are no GIS co-ordinates for the road network and public transport facilities
- There is no data on in-vehicle waiting time and queues, walking time, transfers, and en-route number of passengers boarding and alighting to determine the real demand, reliability of the service, and to determine the holistic demand and supply
- There is no details on unproductive kilometres
- There is no data on the number of ticket passengers (weekly and monthly tickets) and cash passengers
- There is no data on weekend trips
- The road pavement condition is not adequately described

Demographic data, including the number of persons with disabilities in the WDM was obtained from the IDP Review 2003/2004 and IDP Review 2004/2005 planning documents.

Every bus route and taxi route in the database was plotted by hand to obtain a graphical presentation of the bus and taxi operations in the WDM. In this way the competing routes were identified and analysed further. The data was tabulated and assessed for each route.

The input data are:

- Bus timetable
- Subsidy per kilometre (R/km)
- Cash fare per one way trip (R)
- Passenger trips per month
- Vehicles trips per month
- Route distance (km)
- Vehicle kilometres per month (km)

The analysis resulted in the following:

- Subsidy per route per month (R)
- Average bus capacity utilization per trip (%)
- Estimated revenue per kilometre (R/km)
- Average Speed (km/hr)
- Slowness (min/km)
- Average subsidy per seat (R)
- Average subsidy per passenger (R)
- Travel time (hr)

Each bus route or corridor of bus routes was compared with taxi operations. The table included the following taxi data:

- Taxi route origin and destination
- Route Length (km)
- Total one way cash fare (R)
- Number of passengers
- Operating period

Aligning the results with the design criteria, the following significant results are documented:

- Salient public transport corridors
- Potential Circuitous Routes
- Average trip utilization for buses
- Total Subsidy per month for WDM
- Rural and Urban revenue and subsidy per kilometre ratio
- Average subsidy per passenger trip
- Average subsidy per bus kilometre
- Average subsidy per passenger per month
- Potential routes with direct and indirect competition between taxis and subsidized bus operations
- Efficiency of bus operations

4 POLICY FRAMEWORK

4.1 White Paper on National Transport Policy

The Vision for SA transport is of a system, which will:

Provide safe, reliable, effective, efficient, and fully integrated transport operations and infrastructure which will best meet the needs of freight and passenger customers at improving levels of service and cost in a fashion which supports Government strategies for economic and social development whilst being environmentally and economically sustainable.

The SA transportation system is inadequate to meet the basic accessibility needs (to work, health care, schools, shops), and many developing rural and urban areas. In order to meet basic accessibility needs the transport services offered must be affordable to the user. The transport system will aim to minimize the constraints to the mobility of passengers and goods, maximizing speed and service, while allowing customers choice of transport mode or combination of transport modes where it is economically and financially viable to offer a choice of modes. This demands a flexible transport system and transport planning process that can respond to customer requirements, while providing on-line information to the user to allow choices to be made. It also requires infrastructure to be tailored to the needs of the transport operators and end customers.

Government will seek a reduction in the cost to the state of the subsidization of transport operations, predicted on a more effective and efficient public transport system being developed.

Strategic Objectives

To encourage more efficient urban land use structure correcting spatial imbalances and reducing travel distances and times for commuting to a limit of about 40km or one hour in each direction.

Customer-based

- To ensure that passenger transport services address user needs, including those of commuters, pensioners, the elderly, scholars, the disabled, tourists, and long distance passengers.
- Walking distance to be less than 1km in urban areas.
- Commuters should be spending less than 10% of disposal income on transport.
- To replace operator permits with permissions issued in terms of approved transport plans.

4.2 National Land Transport Transition Act, Act 22 of 2000

Section 4 (1) (a) (iv) - The following principles apply with regard to the determination, formulation, development, and application of land transport policy – are so designed as to have appropriate modes selected and planned for on the basis of where they have the highest impact on reducing the total systems cost of travel, and this decision should be informed by an appropriate assessment of the impact on the customer and anticipated customer reaction to such change.

Section 4(1) (k) - The needs of special categories of passengers must be considered in planning and providing public transport infrastructure, facilities, and services, and these needs should be met as may be possible by the system provided for mainstream public transport.

Section 5(6) (b) - The Minister must set norms and standards of a general nature in respect of fares for subsidized public transport services by road and rail with a view to effective targeting of subsidy in terms of National policy, providing integrated fare and ticketing systems in public transport networks, and achieving cost recovery by operators.

Section 18 - Transport planning must be viewed as being a co-coordinated and continuous process. Land transport planning must be integrated with land development processes. Land transport planning must focus on the most effective and economic way of moving people. High priority should be given to public transport through, inter alia, developing high utilization public transport corridors, which are connected by development nodes within the corridors. Accessibility and utilization of public transport services, facilities, and infrastructure must be enhanced. The adverse impact of transport on the environment must be minimized. Co-ordination and integration within, and between, land transport modes must be ensured.

The chronological sequence of the policies described in this chapter indicates the inter-relationship between the subsequent plans derived from the policies, and is described in Figure 4.1.

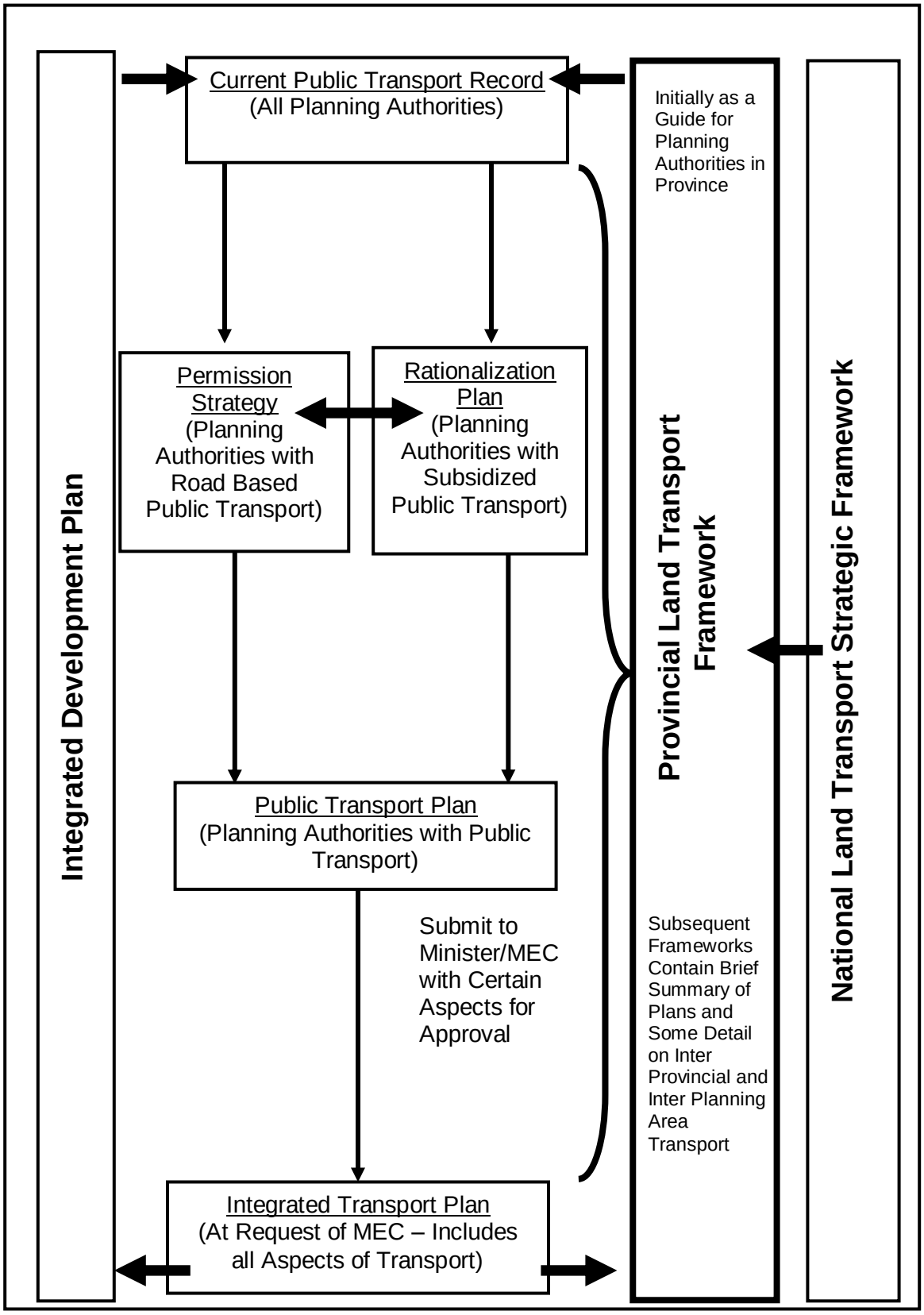


Figure 4.1 – Hierarchy of Transportation Plans

Section 25 (1) - Where it is proposed that a public transport service being operated in terms of a subsidy be continued after expiry of the basis in terms of which it is currently operated, in terms of a subsidized service contract or concession, every planning authority in whose area the service is operated must prepare a rationalization plan which must eventually become part of its Public Transport Plan, before the service to be operated in terms of the subsidized service contract is put out to public tendering, with a view to:

(a) Rationalizing subsidized services within and between modes;

(b) Determining where and to what extent subsidies should be paid;

(c) Rationalizing subsidized services across the borders of planning authorities and in relation to inter-provincial transport;

(d) Minimizing the level of subsidy;

(e) Minimizing competition between subsidized services;

(f) Structuring subsidized service contracts or concessions in such a way as to attract sufficient competitive bidding by qualifying tenders;

(g) Ensuring that routes and route networks are utilized optimally so as to meet passenger needs effectively and efficiently; and

(h) Facilitating the future development of an integrated public transport system.

Section 25 (2) - The rationalization plan must contain at least the following:

(a) The proposed changes to the existing routes or networks or both;

(b) The proposed changes to the passenger-carrying capacity of the services operated on the routes or networks, or both;

(c) The policy proposed for the structuring of contracts or concessions for competitive tendering;

(d) A statement setting out the potential impact of the rationalization on the various transport modes;

(e) An indication of the improvements to be effected for the benefit of passengers;

(f) An indication of the obstacles foreseen with regard to the implementation of the plan, and the strategies proposed to overcome them.

Section 31 (3) - A minibus may be used for the operation of an unscheduled service only where:

(a) There are no existing scheduled services on the same route or on another route in the same corridor; and

(b) Relevant transport plans allow for its use.

4.3 Moving South Africa

The study identified six market segments and concluded that in the short to medium term the prioritised customers should be the poor and very poor rural and urban passengers, who are also considered as "stranded customers" and the "survival customers" who currently cannot afford transport or captive to the cheapest mode of public transport.

Public Transport requires improvement in performance and productivity. There is need for well-planned tenders, effective industry regulation and enforcement, improved sustainability or operators through encouragement or re-investment and redirection of a portion of the subsidy towards capital investment, and the establishment of a stable and consistent funding framework. Optimise modal economics and service mix by selecting the optimal mode based on cost/service trade-off. Subsidies should only be provided for the optimal mode if at all. Subsidies should be targeted at affordable access to the optimal mode.

4.4 National Department of Transport 2003/2004 Business Plan

The Policy Objectives and goals emanate from the White Paper on National Transport Policy. The core objective of the Division of Public Transport is to manage public transport operations to best suit the needs of the public.

4.4.1 Manager – Bus and Rail Operations – Objective

- Effective management and administration of the road-based public transport subsidy and adherence to the Public Finance Management Act.
- Provision of cost effective and affordable public passenger transport driven by the economics of competition in the market place, through negotiated contracts or competitive tendering.
- The restructuring of the parastatal or municipal owned bus companies and/or the promotion of Black Economic Empowerment (BEE).

4.5 Limpopo Province Land Transport Framework (Limpopo in Motion)

4.5.1 Transportation Vision Statement for the Limpopo Province

The transportation vision is a safe, affordable, accessible, effective, efficient, and sustainable integrated transport system that meets the needs of stakeholders and customers.

4.5.2 Transportation Mission Statement for the Limpopo Province

The transportation mission is to develop, co-ordinate, implement, and manage an integrated, multi-modal transport system by:

- Effectively and optimally utilizing and developing available resources
- Encouraging and providing a safe transport environment for all users
- Planning and facilitating transport infrastructure provisioning and operations
- Being transparent, accountable, and responsible

4.5.3 Transportation Goals for the Limpopo Province

The transportation goals for the Province are:

- To develop, co-ordinate, implement, and manage an integrated, multi-modal transport system
- To support the process of democratisation, and reconstruction and development.
- To act as a catalyst for social upliftment and economic growth
- To ensure that the system is balanced, equitable, and non-discriminatory
- To ensure that the system is reliable, effective, efficient, safe, accessible, affordable, and environmentally friendly

4.5.4 Objectives for Transportation in the Limpopo Province

The relevant transportation objectives are:

- To monitor the need in the Province, identify issues and set priorities for transport within the framework of social and economic reconstruction and development objectives in the Province.
- To regulate and control the transport system to ensure that it's full potential can be achieved.

4.5.5 Policy Principals for Transportation in the Limpopo Province

- Social needs and Priorities – emphasis should be placed on the social needs of the disadvantaged communities, especially those in rural and other under-developed areas.
- Role of Government and the private sector – The limited ownership profile of the transport providers requires restructuring in order to broaden and democratise the current dispensation. There is need to ensure wider participation by the disadvantaged communities in the provision and maintenance of the transport system.

- Economic – the transport sector should be aimed at increased employment of the workforce.
- Financial Framework – the extent of subsidization for public transportation and funding for infrastructure, and the priority and funding balance between them.
- Financial Framework – the affordability problem for both the passengers in terms of fare levels and for the Government in terms of the budget requirements
- Land Transport service provision – Subsidized services or any transport service for which public transport permits are required, should only be within the framework of an approved transport plan.

(a) Strategies Based on Policy

- Provide effective financial and economic support to public transport
- Promote the most cost-effective mode of transport
- Gradually phase out subsidies for services longer than a prescribed minimum (possibly 40km) to encourage densification in the urban nodes.
- To introduce subsidy mechanisms that will encourage the business sector to create employment opportunities closer to residential areas
- Implement measure to promote shorter travelling distances
- Implement incentives to operators for affordable tariffs
- Focus on prioritised economic activity nodes and transport nodes in the transport plans
- Identify minimum service levels of the public transport services serving economic activity nodes
- Identify and award sustainable bus contracts
- Use financial and economic support measures to promote sustainability in the bus industry
- Develop a holistic and integrated funding strategy focusing on maximizing the transport budget from the Provincial allocation, and by achieving efficiency gains through better utilization of available funds
- Explore the possibility of additional funding sources

(b) Projects Based on the Strategy

- Develop OLS, RATPLAN, PTP, and ITP
- Feasibility Study for Seshego – Polokwane Rail Commuter System
- Feasibility Study for rail system along the Dilokong Corridor
- Implement the recommendations of the Rationalization Plan

- Determine transport needs of learners, elderly, and disabled
- Determine the routes where taxis play a more prominent role
- Investigate incentives for improved levels of efficiency and effectiveness of public transport services
- Investigate alternative funding options – the role of Public Private Partnerships.
- Develop Key Performance Indicators to measure the performance of service providers

4.6 Limpopo Province Integrated Rural Development Framework

One of the mechanisms to achieve sustainable model integration is to ensure that the provision of public transport is business driven and based on sound business principles.

Rural areas are defined as the sparsely populated areas in which people farm or depend on natural resources, including the villages and small towns that are dispersed through these areas. They include the large settlements in the former homelands created by Apartheid removals, which depend for their survival on migratory labour system and remittances. They are characterized by high level of poverty and economic underdevelopment. These areas should serve as the immediate focus of rural development.

The Poverty Report (1998) reveals that in the Limpopo Province, almost 18-percent of the people live in rural areas and live below the poverty line.

Access to quality employment is a paramount aspect towards sustainable livelihoods and thereby reducing poverty and inequality. The lack of access to physical infrastructure such as electricity, clean water, proper roads, transportation, and housing are closely linked to poverty.

4.7 Strategic Framework – Accessible Transport Strategy

4.7.1 The strategic objectives of the NLTSF are:

- Ongoing consultation will take place with the disability sector.
- Implementing authorities will be empowered to improve accessibility across all modes through the integrated planning process.
- “Reasonable accommodation” of persons with disabilities will be initiated by prioritising high-impact, lower-cost action and,
- Pilot projects will be launched in rural areas to test solutions and develop a rural accessibility strategy.

There are two primary strategic objectives to be met, which are:

- To integrate accessible transport into the public transport system
- To promote the provision of accessible transport across all modes of public and pedestrian transport.

Transport plays a significant role in the lives of ordinary citizen as a mechanism by which socio-economic opportunities can be accessed. Accessible transport is a basic need and it is constitutionally required to meet the rights of people with disabilities.

The implementation of the short-term strategy shall be practical and shall demonstrate accessible, affordable and connectivity to multi-modalism.

The objective of the strategy is to improve access to transport for people with disabilities, in a manner that promotes integration into the mainstream of public transport.

In addition, it promotes barrier free access in all modes of public transport and targets key access roads to ensure mobility on all elements of the travel chain.

A practical approach towards planning accessibility improvements shall be adopted to maximize the impact of accessible transport services. The short-term strategic actions intend to entrench this practice.

Integrated Transport Plans shall be conscious of integrating accessible transport actions that will promote seamless and hassle-free travel chain for disabled travellers. Through a phased approach accessible transport shall be gradually integrated into a fully-fledged accessible public transport system.

Table 4.1 compares the number of persons with disabilities in the Province and the District Municipality.

Table 4.1 – No. of Persons with Disabilities

Disability	Waterberg DM	Limpopo Province	RSA Total
Sight	11971	113088	1 091 022
Hearing	5438	51416	383 408
Physical	5577	60052	557 774
Mental	2316	22578	192 553
Multiple	1798	16019	154 236

(Source: WDM IDP 2004/2005 Review)

4.7.2 Accessible Transport Strategy's Action Areas

- Implement low-cost accessible features for ambulatory passengers. This will affect the exterior, entrance and interior designs of the three modes of public transport. Such accessible features are to be effected by reviewing the subsidy contract/tendering system and using it as leverage. This will be the case particularly with the bus and rail transport.
- Metropolitan municipalities shall facilitate the identification of accessible transport networks as well as corridors and link them to on-line infrastructure, in accordance with the guiding principles/recommendations of the NLTSF - towards achieving "reasonable accommodation", as part of their transport planning processes. The same is applicable to non-metropolitan municipalities falling under category B (i.e. local) as well as those falling under category C (i.e. districts).
- Where accessible corridors cannot be created solely by introducing new vehicles with Class 1 improvements already built into them, existing vehicles already in operation will be retrofitted with Class 1 improvements to provide the required level of accessibility in the corridor.
- Safety features to be introduced when existing vehicles are redesigned and refurbished. These safety features refer to the additional ones for usage by passengers with disabilities. All land transport operators shall make provision of suitable storage facilities for both long and short distance travel passengers to store their supportive devices (such as crutches, walking sticks, wheel chairs, etc) on rail coaches, buses and taxis, in support of inter-connectivity in the travel chain.

4.8 Waterberg IDP 2003/2004 Review

4.8.1 Vision of the WDM

The vision of the WDM is to be a caring and responsive Municipality with excellent service delivery, sustainable environment and prospering people.

4.8.2 Mission of the WDM

The mission of the WDM is: The WDM will through an inclusive and participatory process establish the needs of the its community and by the rendering of effective, efficient, and sustainable services, while maintaining present level of services address the backlogs in the infrastructure provision, socio-economic development and institutional capacity in order to ensure a better life for all.

Under the strategic plan for transport and related projects only road infrastructure is addressed. There are no plans and projects for the public transportation

system, except for the upgrading of roads. The 2004/2005 IDP Review Process is aligned with the recommendation of the respective transport plans.

4.9 Optimisation of Bus Subsidies – NDOT Study, October 2002

4.9.1 Regulated competition

As soon as local planning is in place, operating licenses and contracts will only be awarded in terms of an approved passenger transport plan. All road-based passenger transport modes including minibus taxis may compete for tendered contracts.

4.9.2 Commuters (workers)

Commuters are people travelling daily between home and work by means of public transport. Most South African commuters can be regarded as captive public transport users as they have no choice of alternative private transport. This category constitutes the main beneficiaries of current passenger transport subsidies in South Africa within the current subsidy system, not the unemployed or very poor.

4.9.3 Learners and students

The current bus subsidies budget makes little provision for learner transport, although some Provinces make limited provision. Subsidized buses serve mainly peak hour commuters and offer limited off-peak services to scholars and students.

4.9.4 Private car users

One of the stated principles of the NLTTA is that public transport must be given higher priority than private transport, and all spheres of Government must promote public transport. Private car users are normally targeted through subsidized public transport in developed countries in order to contain externalities such as congestion and pollution and improving the utilization of infrastructure.

4.9.5 Social Category

The motivation for targeting subsidies revolves mainly around the social obligation of Government to provide mobility and accessibility.

In terms of poverty, the rationale for subsidizing public transport is that, if the market provides services at market related prices without subsidies, it would result in less services or services that are not affordable to the very poor.

4.9.6 Economic efficiency through marginal costing

To encourage the use of public transport, the economic theory of second best pricing is applied by providing public transport services at a fare also below marginal cost and subsidizing the difference between the fare and the marginal cost of public transport.

Currently, the net-cost contract model is being used by Provincial Departments of Transport. The contract model puts the commercial revenue risk as well as operational risk firmly with the operator. In the net-cost contract model the difference between the cost of service provision and the fare revenue is compensated for by subsidies. The fare revenue is based on the operator's passenger revenue forecast.

4.9.7 Socio-Economic justification for subsidies

According to the NDOT study report, *Optimisation of Bus Subsidies, October 2002*, the majority of unsubsidised buses are operational in the Eastern Cape, Cape Town, Gauteng and **Limpopo** Provinces. Only 1.2 percent of the population in the Limpopo Province is subsidized, at an average value of R4-57 per passenger trip. The average subsidy per passenger trip for WDM is R6.50. Figure 4.2 indicates the average subsidy per passenger by Province in South Africa in 2002, and reveals that the Limpopo Province has the largest rural population and the second lowest subsidy per passenger trip.

Without affordable transport, people are deprived of employment opportunities, education, health services and social interaction. Affordability can only be achieved by subsidizing public transport. In areas with low per capital income, affordability (through subsidization) is of particular importance to prevent the exacerbation of the negative impacts of low income and high unemployment.

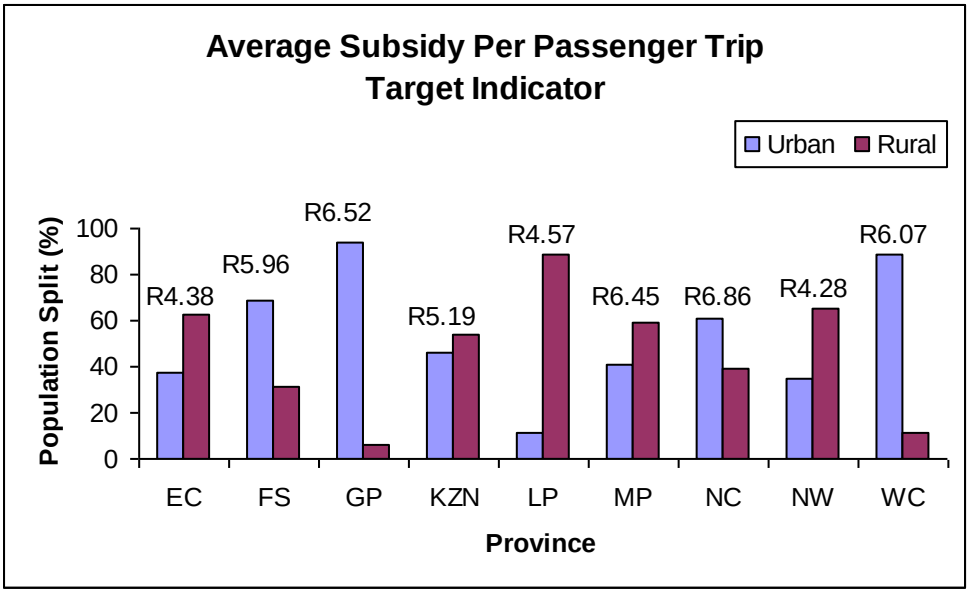


Figure 4.2 Average Subsidy Per Passenger Trip per Province

The Limpopo Province is largely rural, and sparsely populated. In light of the demographics and geographical location of the population, it is deduced that in the short term subsidies should be targeted to alleviate poverty, by providing accessibility, and mobility. In the medium to long term, subsidies should be structured to encourage densification, and improving level of service.

4.9.8 Option for the targeting of bus subsidies

There may be more cheaper and innovative means of serving isolated communities through the appropriate mode of transport, instead of buses. This is consistent with the NDOT vision of subsidizing journeys, not modes. However, allocating subsidies to appropriate mode of transport would have to be achieved in a way that does not cause disruption within the industry.

4.9.9 Tendered Contracts

The longer the contract duration, the lower the risk of short-term macro-economic fluctuations impact service delivery. This implies that the risk of the variability of external factors (e.g. exchange rates, fuel price) to the operator should, in theory, reduce. Therefore, seven-year bus contracts must be procured.

The objectives of targets set by the authority or Government should be clear, whether it is minimisation of subsidies, reducing congestion or increasing mobility for designated beneficiaries such as people with disabilities, low income groups, learners, students, and elderly.

Contracts should be performance based with incentives, and should be monitored by Provincial staff or independent auditors.

The following were recommended in the study, *Optimisation of Bus Subsidies, October 2002*:

- Services currently operating in terms of interim contracts be converted to negotiated contracts and all current tender contracts be put out to tender as soon as the existing contract term expire taking into account the rest of the recommendations
- All contracts are based on the net cost model
- A gradual movement in subsidies towards the (unemployed) poor, elderly, learners and students in rural areas and isolated communities across the country including the usage of taxis
- Short-term measures of accessible transport are implemented on all subsidised buses in order to assist passengers with special needs
- The adjusted CPI formula where fuel is a separate but smaller component of the formula be developed and used for all subsidised services
- The duration of contracts is extended to 7 years
- The average age of the bus fleet is set at 15 years per contract

- Confirm the appropriate mode of transport in areas being subsidised
- Interim contracts with excessively high subsidies be identified and addressed
- Staff and monitoring be established between the NDOT and Provincial Department of Transport to ensure constancy and value for money in the management of the negotiated contract process.

4.10 Paradigm Shift in Public Transportation Planning

There is a continuing decline in both the performance of the transportation system and the relevance of public transportation in meeting emerging needs. Reinvention in local public transportation is essential. Travel needs should not be viewed in engineering terms only. Transport is understood to be a 'derived demand'. Most people travel to satisfy fundamental needs – to reach activities ad opportunities to increase economic well being, health, welfare, and personal security, and the quality of the environment.

The distinction between rural transportation needs and rural transportation demand must be defined. Demands are registered in a market and are therefore related to the user's income level. Those with low incomes, or no automobile, are less likely to demand travel.

Travel needs are a fixed amount of travel that is deemed necessary to provide an adequate standard of living, a quantity not affected by the price of travel. One may have a need to travel independent of the ability or willingness to pay.

4.11 Funding and Subsidies

Is public transport a Public service or is it market driven? Are subsidies an investment or a waste of taxes? What are the main social and economical objectives aligned with transport subsidies?

For the Limpopo Province, it is intuitive that public transport is a need, and subsidies are necessary to provide access mobility to ensure an adequate standard of living for most people in the Province. Thus, the current circumstances qualify subsidies as an investment in the Limpopo Province.

Public transportation is a service with reasonable economics, where the bottom line should not be the dictating factor. Transit does not outperform private mode in a free market environment. There are several non-monetary, non-tangible benefits to society. These benefits are not marketable. Reducing capital and operating costs by deregulation must still consider the basic needs of the passenger.

Availability of needed funds as a basic condition for implementing the permanent provision of attractive services that can respond to increasing demands for high quality, high volume public transportation. Similar to highways and other passenger transportation facilities, transit investments come mostly from public funds.

Where mass transit is a public service, the Public Sector must set the standards, funding, and fares, and Government must ensure transportation is a basic right for its citizens.

The Limpopo Department of Transport must guard itself from the "irresponsible supply cycle", where there is little or no control on the contracted operator. Where control is defective, the operator neglects the passenger needs, and passengers look for an alternative mode, which could result in the 'illegal' supply of public transportation, decreasing fare revenue, increasing operating cost, increasing subsidies, and possible conflict. Some passengers are captive, and are violated in their pursuit to accessibility and mobility.

The preferred modes of public transport are the bus and taxi. Currently, the higher capacity buses operate during the peak periods only, while the lower capacity taxi mode operates during the off-peak period on the same primary route. However, on some routes the taxi mode is in direct competition with the bus mode, and is not viable. There is potential for some routes to be converted to taxi routes only due to the low passenger volumes. There is potential also, for taxis operators to be contracted by the bus operator and effectively provide a subsidized service. The details of which are described in the results of the study.

The Limpopo Department of Transport must also resolve subsidies for learners, students, and elderly. The current data does not categorize the passengers as learners, students, disabled, or elderly. If these categories of passengers are included in the total number of passengers then they are subsidized at the same rate as commuters. There is need for a concession for these categories of passengers, and should be investigated further. There is also a need for a specific funding allocation for the provision of Class 1 improvements not only for contracted operators, but also for tourist bus operators too.

4.12 Alternative/Innovative Funding

In addition to the fixed sum of bus subsidy from the National Department of Transport, the Provincial Department of Transport must research alternate funding mechanisms for public transportation. For example, advertising on buses is a lucrative generator of operating funds. The Department of Transport must correspond with the Department of Environmental Affairs and Tourism to obtain funds through the National Environmental Management (Air Quality Management) Act to reduce emissions by upgrading the rolling stock. Similarly, the Department of Education must also contribute funds for the transportation of learners and students, and the Department of Social Development must contribute funds for the subsidisation of the elderly.

4.13 Adoption of Policy

In addition to the Provincial Land Transport Framework in the form “Limpopo in Motion”, the policy framework compiled in this chapter provides particular guidance for provision of subsidized public transport services for the medium to long term.

The impact of the planning policies of the Apartheid South Africa is severe. Therefore, this policy framework must be addressed with discretion, and the applications should be practical and feasible. For example, the reduction of subsidies will only be realised with the progressive transformation of the Institutions, and improvements to integrated land use and transportation planning, and the upgrade of infrastructure.

5 RESULTS AND RECOMMENDATION – RATIONALIZATION, RESTRUCTURING AND EVALUATION

5.1 Status Quo

5.1.1 Subsidised Bus Operations

The dominant travel pattern of passengers is home to work in the morning and return trip in the evening. On most routes the demand peaks during the morning forward trip and evening return trip.

The Mokopane Transport and Lowveld Bus Service are the main subsidised operators in the Waterberg District Municipality. PUTCO and North West Star are also subsidised operators serving one route each to Modimolle and Bela-Bela respectively. The CPTR identified 60 subsidised bus routes in the WDM. The total supply of subsidised capacity for buses in WDM is 14 232 seated, and 4432 standing.

The Limpopo Department of Transport is the custodian for bus subsidies in the WDM. The current tendered contract with Lowveld bus service expires in June 2004, and will be renewed on a monthly basis until the new contracts are prepared. The GNT Bus Service expires in September 2006.

There are some private non-subsidised bus operations in the Lephalale area that operate without a fixed schedule, and as a result are in conflict with the taxi mode.

The current bus operation may be described as the conventional fixed route, fixed schedule system. It is evident that commuter travel is the main travel pattern in the WDM for the subsidized bus service. There are some very long routes (from 40km to 110km), and intuitively the journey time is in excess of two hours. Some buses depart as early as 3:40am. These factors question the standard of living for many people commuting long distance.

There is also speculation of a high demand for weekend travel. Most people in the rural areas tend to do business in the towns on Saturday only. It is highly likely that weekend demand may even supersede the weekday peak period for some routes. The bus schedules indicate morning and afternoon commuter trips on Saturdays. The need for additional service on weekends is assessed.

The road conditions are generally very poor, especially in the rural areas. Most villages in the Mogalakwena and Lephalale Local Municipalities are not accessible during wet weather. Such road conditions are a significant factor on the operating life of the rolling stock, operating costs, and level of service to the passenger.

The CPTR indicated that WDM has a total of 9 bus terminals. Table 5.1 indicates the number of terminals (formal and informal) in each Local Municipality.

Table 5.1-Statistics on Bus Terminals

Local Municipality	Total Number of Bus Terminals	Total Number of Formal Bus Terminals	Total Number of Informal Bus Terminals
Bela-Bela	1	0	1
Modimolle	1	0	1
Mookgopong	0	0	0
Mogalakwena	4	0	4
Lephalale	3	3	0
Thabazimbi	0	0	0
Total	**9**	**3**	**6**

5.1.2 Rail Industry

The TPR2 – Rail Report, March 2001, indicates an existing double line from Pretoria North to Pienaarsrivier in the WDM, and is partially a commuter line in the Gauteng Province.

The CPTR indicates that the whole rail network in the WDM is owned and operated by Spoornet, and that the rail service only serves long distance passengers. Also, the available infrastructure is in relatively good condition and the rail stations in Mogalakwena, Modimolle and Bela-Bela are the main stations serving mainline passengers only.

There was a commuter rail service from Polokwane to Dikgale from Monday to Saturday. The service was cancelled and buses and taxis became the more attractive mode.

Passenger demand/need dictates the need for rail commuter service. Technically, passenger volumes greater than 40 000 passengers per day per directions justifies commuter rail. Currently, there seems to be relatively low need for rail commuter services, considering the relative number of passengers currently travelling by bus and taxi. The rationalization will confirm this hypothesis.

Currently, there are no other existing commuter rail services in the WDM.

5.2 Results

The assessment of the bus service in the WDM include the following:

- Impact on passengers and the quality of service
- Impact on the taxi mode
- Subsidy, revenue, and operating cost
- Availability and condition of infrastructure
- Efficiency and effectiveness of service

- Confirmation of data and results through the stakeholder consultation and participation process

The details of the analysis for the bus routes are in Appendix C, and a map with the bus routes is in Appendix D.

5.2.1 Level of Service for Passengers

(a) Long Distance (Rural) Routes

Most long distance routes occur in the Lephalale Local Municipality from Seleka, Melkbosch, Olifant, and Shongoane, northeast of the town of Lephalale. In the Mogalakwena Local Municipality, the long distance routes are from Lesodi, Nkidikitlane, and Dikgopeng north of the town of the of Mokopane.

Most rural routes are more than 80 kilometres and the pavement condition of the residential end of the route is gravel. For the Lowveld Bus Service, routes are subsidised up to 88km. The commuter bus service operates mainly in the morning and afternoon peak period only. There is no subsidized service during the off-peak period. The same applies for Saturdays. The in-vehicle time for most rural routes ranges from 1.5 hours up to 2.5 hours. Some trips start as early as 3:40am. The prominent service routes are summarized in Table 5.2.

Table 5.2 – Long Distance Service Routes

Primary Route	Weekday				Weekend			
					Saturday		Sunday	
	AM	Freq. (Bus/peak hour)	PM	Freq. (Bus/peak hour)	Peak	Freq. (Bus/peak hour)	Peak	Freq. (Bus/peak hour)
Robroy to Kopanang & Overwacht	3:40am to 7:00am	2	13:00pm to 18:00pm	1	4:00am to 6:30am	2	14:30 to 18:00	2
Melkbosch to Koponang	4:00am to 7:00am	2	14:00pm to 18:00pm	2	4:00am to 7:00am	2	-	-
Olifant to Koponang	4:15am to 7:00am	3	15:15am to 17:40pm	2	4:15am to 7:00am	2	15:00	1
Shongoane to Koponang	4:15am to 7:30am	1	14:00pm to 17:40pm	2	6:00am	1	-	-

The Lesodi to Mokopane, Nkidikitlane to Mokopane, Mapangula to Mokopane, Dikgopeng to Mokopane, and Kalkfontein to Modimolle routes have only one trip in the morning and one trip in the afternoon, on weekdays and Saturdays. The GNT Bus Service operator indicated that additional non-subsidized kilometres are traversed on alternative routes since the major flood damage in 2002.

There is no data to determine the level of security of the passengers while walking, waiting, and on-board the vehicle. Further, there is no waiting time data to determine the reliability of the service.

The utilization on all buses is over 50%. (Utilization greater than 130% is indication that there are more than 20 standing passengers, and the bus is overloaded.) Therefore, all bus trips identified are justified and should be subsidized. Some buses are running at capacity, some buses have standing passengers, and some buses are overloaded. Considering the long journey time, standing passengers and overcrowded vehicles is poor level of service for the passenger. Further, comfort of the passengers is compromised, while overloaded vehicles are dangerous and illegal.

Conveniently, since there are no bus services during the off-peak, taxi services operate during the off-peak period from 7am to 13:00pm from Robroy to Kopanang, Seleka to Witpoort, and Melkbosch to Shongoane 3.

The taxi service does not compete with the bus service. The rest of the long distance routes in the Lephalale LM do not have midday public transport operations.

(b) Short Distance (Urban) Routes

There is only one significant short distance subsidized bus route in the Lephalale Local Municipality, that is, from Marapong to Lephalale. The commuter bus service operates mainly in the morning and afternoon peak period only. There is no subsidized service during the off-peak period. The same applies for Saturdays. The in-vehicle time for the urban routes is 45-minutes. The prominent service route is summarized in Table 5.3.

Table 5.3 – Short Distance Service Route

Primary Route	Weekday				Weekend			
					Saturday		Sunday	
	AM	Freq. (Bus/peak hour)	PM	Freq. (Bus/peak hour)	Peak	Freq. (Bus/peak hour)	Peak	Freq. (Bus/peak hour)
Grootestryd to Kopanang	5::00am to 8:45am	6	16:10pm to 18:15pm	6	6:00am to 7:00am	2	-	-

The average utilization of subsidized buses is 70%. The Grootestryd area is a rapid growth area, and the Lowveld Bus operator is supplying additional non-subsidized services due to the additional need. As a result there is need for upgrading infrastructure and facilities.

There are several short distance routes in the Mogalakwena Local Municipality destined for the town of Mokopane. Almost every route has only one or at most two buses per peak period. Although the route distance is less than or equal to 40km, the in-vehicle travel time for some routes is more than one hour. Utilization

on these routes exceeds 50% and even 130%. As a result most buses are running at capacity and some buses are excessively overloaded.

There are many subsidized commuter bus routes in direct competition with the taxi service. The taxi fare is almost equal to the bus fare. Further details of the assessment are in the assessment table in Appendix C.

Considering that most buses are crowded and that the fares are almost equal, many passengers have a choice in the mode of travel. However, buses are subsidized and must consider adding capacity on routes where buses are overcrowded, such as the introduction of articulated buses.

The recommendations address the competition between buses and taxis by route in more detail. Routes currently in direct competition with taxis are:

- Ga-Mokaba to Mokopane
- Sekgakgapeng to Mokopane
- Moshate to Mokopane
- Mahlwelereng to Mokopane
- Tshamahansi to Mokopane
- Ga-Madiba to Mokopane
- Mosesetjane to Mokopane

5.2.2 Circuitous Routing at Mid-Route

There is no line haul data to determine the number of passengers boarding and alighting at each stop along the bus route. Hence, circuitous routing could not be identified with passenger volumes only. However, the route description reveals on most routes the bus traverses through several villages before heading to the town. It is not possible to determine the number of passengers being delayed by circuitous routing. Due to the geographical location of villages in the rural areas, it is highly likely that most routes are circuitous routes at mid-route.

Currently, this practice is unavoidable due to the spatial location of commuters, the lack of subsidies, and inevitable need for higher utilisation.

Due to the sparsely populated rural villages, buses traverse through several villages to obtain higher utilization. The operators indicated that for long distance trips, at least one hour of the trip is occupied in the residential end of the route. Melkbosch to Kopanang is a possible circuitous route at mid route. The mid-route is from Olifants to Shongoane to Taffelkoppe. There are other buses already operating from Olifants and Shongoane. Therefore the Melkbosch to Koponang route via Olifants and Shongoane should be eliminated.

The Kalkfontein to Modimolle via Settlers and Kalkfontein to Bel-Bela via Settlers routes are circuitous routes at mid-route.

5.3 Public Transport Corridors

Local Municipality	Town	Corridor	Corridor Length	Ave. daily passengers per direction
Lephalale	Kopanang	R561 Setateng to Kopanang	40km	11 109
		R572 Rietfontein Route to Kopanang	60km	13 315
		Marapong to Kopanang	27km	11 473
Mogalakwena	Mokopane	N11 Tshamahansi to Mokopane	25km	14 800
Mogalakwena	Mokopane	R101 Mahlwareng to Mokopane	14km	12 600
Mogalakwena	Mokopane	R518 Mmalepeteke to Mokopane	25km	21 000

Table 5.4 – Public Transport Corridors in the WDM

The public transport corridors identified in the WDM are described in Table 5.4. The average daily passengers per direction include bus and taxi passengers. It is evident that the passenger volumes on the dominant corridors justify the bus and taxi modes.

The corridors identified according to passenger volumes per peak period per direction, support road infrastructure with partial priority for public transport. The trunk line should be served by bus mode with feeder and distribution service by bus or taxi modes. During the off peak period the appropriate public transport mode is a smaller capacity vehicle such as the taxi vehicle. Thus, there is need to prioritise the upgrading of roads, and other safety improvements, with specific attention for public transport vehicles.

5.4 Subsidies

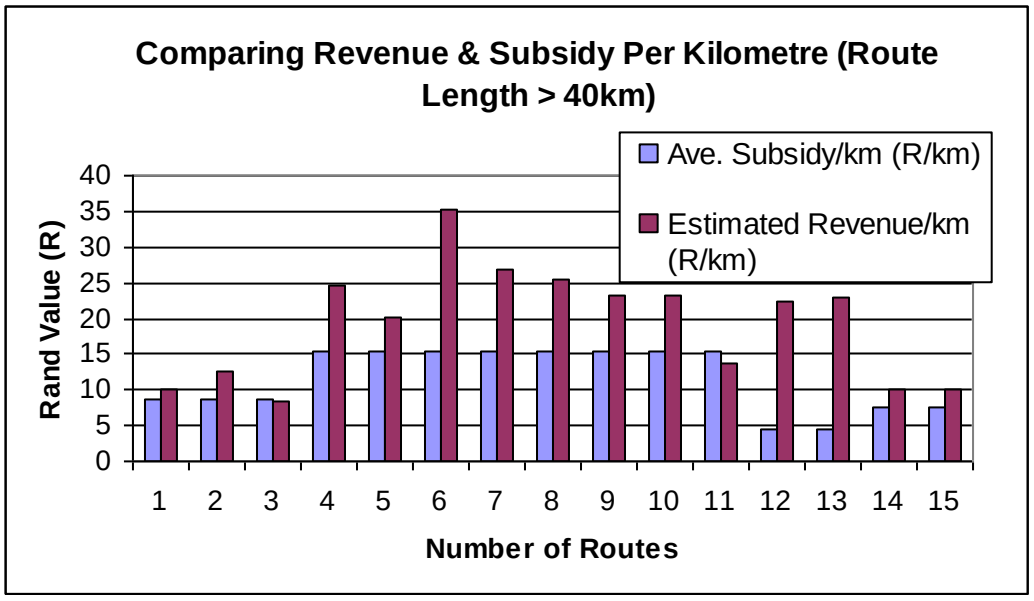
In a tendered contract between the Provincial Department of Transport and the operator, the subsidy is determined as the difference between the operating cost per kilometre and the estimated fare revenue. In most cases of subsidized public transport services, the subsidy/revenue ratio is 60/40 of the operating cost.

The Lowveld Bus Service in the Lephalale Local Municipality and the Great North Transport Bus Service in the Mogalakwena Local Municipality operate on

tendered and negotiated contracts respectively. Putco and North West Star Bus Services in the Mookgopong and Bela Bela Local Municipalities respectively, operate with interim contracts.

For the rural long distance routes in the WDM, the subsidy per kilometre is less than the revenue per kilometre. There is no consistent trend in the ratio; therefore, the 60/40 ratios are not evident. There are some routes where the revenue per kilometre is substantially higher than the subsidy per kilometre. The ratios are presented in Figure 4.1.

Figure 5.1 – Comparing Subsidy & Revenue for Routes > 40km



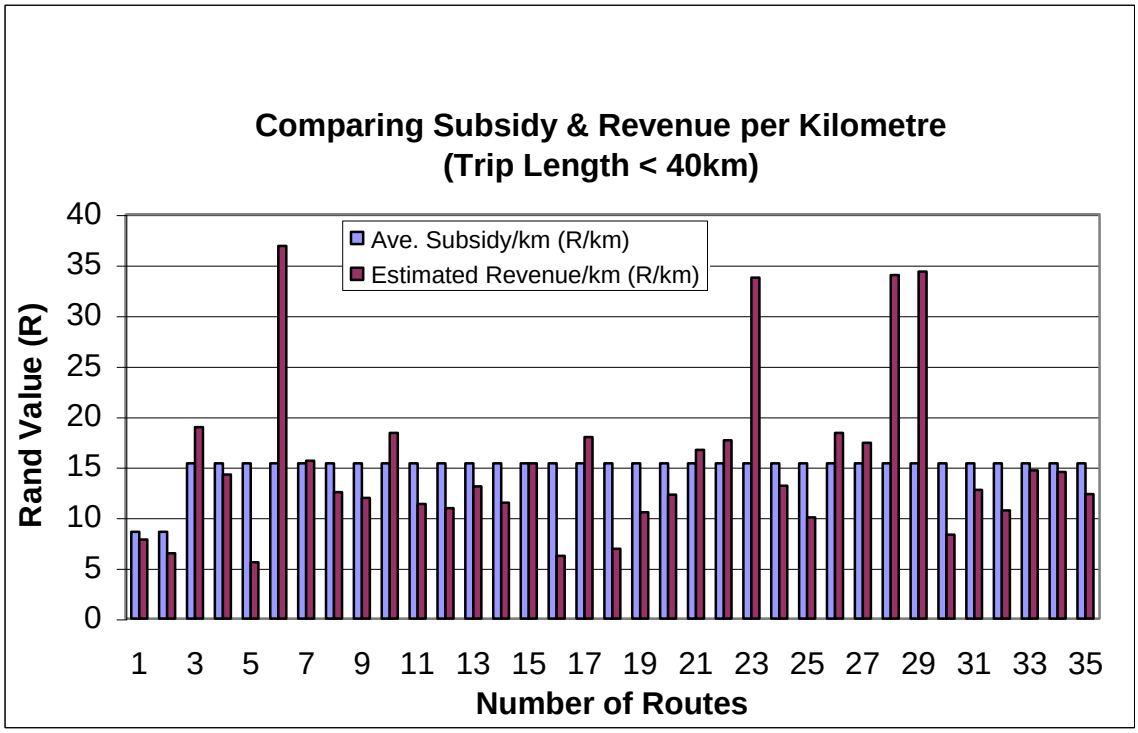
For most short distance routes in the WDM, the subsidy per kilometre is higher than the revenue per kilometre. There are some routes where the revenue per kilometre is equal to or substantially higher than the subsidy per kilometre. The ratios are presented in Figure 5.2.

On the routes where the revenue per kilometre is greater than the subsidy per kilometre, the utilization exceeds 130% per trip, that is, there are standing passengers and the bus is overloaded. Intuitively there is a greater demand for the bus service on such routes, and additional buses are required.

Table 4.2 summarizes the efficiency and effective of the bus service in the WDM. For the long distance routes the utilization is greater than 90% on most trips and the fare revenue is high due to the longer route distances. Relatively, there are approximately 8500 less passengers per month than the urban areas travelling from the deep rural areas (long distance routes), but the bus kilometres per month is almost three times more than the bus kilometres in the urban areas.

Consistently, the rural subsidy per month is also approximately three times greater than the urban subsidy, and the average subsidy per passenger trip for the long distance trip is also almost 3 times greater than the short distance trip.

Figure 5.2 – Comparing Subsidy & Revenue for Routes < 40km



Route Distance	Bus Trips per month	Passengers per month	Bus km per month	Total subsidy per Month	Ave. subsidy per passenger trip	Ave. subsidy per bus.km	Ave. subsidy per passenger per month
> 40km	1283	74 469	87 866	885 725	11.89	R 10.08	R 520
<40km	1357	82 915	31 359	331 517	4.00	R 10.57	R 184
Total	**2640**	**157 384**	**119 225**	**1 217 242**			

Table 5.2 – Bus Operations & Subsidy Indicators

The average subsidy per passenger from the deep rural area (>40km) is approximately R520 per month. That is almost three times greater than the average subsidy per passenger from the urban areas (<40km), which is R184.

The subsidy per bus kilometre for the long distance trip is approximately 50-cents less than that for the short distance trips. This is negligible considering the number of assumptions and heuristics applied to the calculations. It is accepted that the average subsidy per bus kilometre should be the same for the long distance and short distance routes.

The results are compared with the results from the NDOT Study – Report on the Optimisation of Subsidies, October 2002 in Table 5.3.

Table 5.3 – Optimisation of Subsidies

Performance Indicator	SA National Average 2002	Limpopo Provincial Average 2002	WDM Average 2002	Rationalization Plan 2003/4	
				Routes <40km	Routes >40km
Subsidy per passenger trip	R5.62	R4.57	R6.52	R4.00	R11.89
Subsidy per bus kilometer	R5.88	R4.14	R6.38	R10.08	R10.57
Subsidy per passenger per month	R198			R184	R520

The average income spent on commuting in the WDM according to the NDOT study is 7%. This is acceptable according to the objectives of the policies of National Government, that is, to maintain the cost of travel to less than 10% of the disposable income.

Further, it is evident that the subsidy per passenger trip, subsidy per bus kilometre, and subsidy per passenger per month in the WDM is relatively higher than the National and Provincial averages. This is due to the significant impact of long distance trips, sparsely populated villages, and the rural conditions in the WDM.

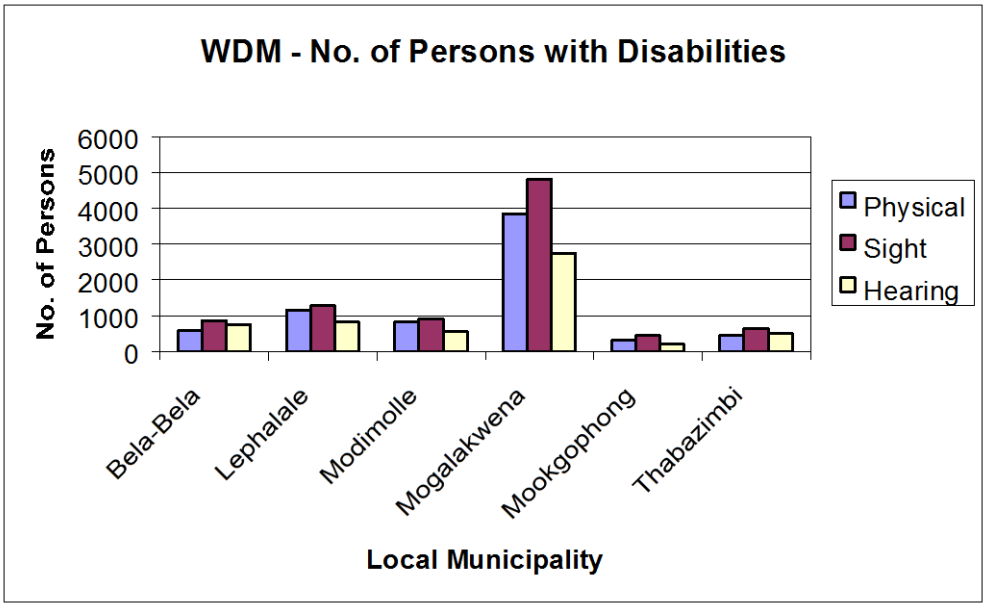
5.5 Provision for Persons with Disabilities

The Rationalization Plan guideline TPR 6 indicates that provision for Special categories of passengers should be addressed as part of the Public Transport Plan. However, the demographic data in Figure 5.3 indicates the number of persons with disabilities in the WDM, and implies the need for transformation in the current bus operations, with specific attention to persons with disabilities.

The CPTR and IDP/Census data does not indicate the economically active among the disabled. Nevertheless, there are a significant number of persons with disabilities in the Magalakwena Local Municipality.

At least Class 1 improvements, which are provisions for the blind and deaf, are mandatory for new buses, and in new bus contracts. Class 1 improvements are features that increase the accessibility of a transport system to all life cycle and impairment passengers, but not those who use wheelchairs. Such improvements include small design changes in vehicles (such as installing sufficient grab-rails, or using high-contrast colours on steps and hand-holds to improve visibility), improved infrastructure (such as sheltered and safe bus stops), and improved operational practices (such as keeping the vehicle stationery until elderly and disabled passengers are seated).

Figure 5.3 – Number of Persons with Disabilities in WDM



Class 1 improvements could also include the training of drivers to be sensitive to the needs of the blind and the hearing impaired. For example, when the blind passenger boards, the driver should note the alighting point of the passenger.

Class 2 improvements are features that allow wheelchair users to board and ride vehicles in their chairs. This is usually achieved through a combination of vehicle and infrastructure improvements, such as low-floor buses with sufficient kerbs, high-floor buses with wayside platforms.

5.6 Learners, Students, and the Elderly

There are several bus trips with learners. Learners do not qualify for subsidies. However, the bus operator provides concessions for learners. Currently, students and the elderly do not qualify for subsidies or concessions. Learners and students fares could be discounted up to 50%, while the elderly could travel for free.

5.7 Recommendations

The socio-economic circumstances and current public transport inefficiencies in the WDM dictates the recommendations. Specifically, the unemployment rate in the WDM is approximately 31%, approximately 55% of the residents live below the minimum living level, and the average household income is approximately R2500 per month. Currently, the average proportion of disposable income spent on commuter travel is 7%. There is no direct subsidy for learners, students, and

the elderly, and subsidized provisions for persons with disabilities. Thus additional services and subsidies are necessary to empower and enhance the quality of life for the people of WDM.

5.7.1 Subsidies and Contracts

The short-term rationalization process has limited efficiencies gains, mainly intra-operator. Interim contracts provide very limited scope for major restructuring and large gains in financial effectiveness. Tendered bus contracts provide an opportunity for major restructuring of bus services and bringing about substantial savings in subsidy.

The detailed breakdown of operating cost data is not available due to the sensitivity of the information. Otherwise, the net cost contract model could have been used to determine the sensitivity of fares and subsidies. Nevertheless, the results indicate that the bus service is effective but little inefficiency is evident. The subsidy per passenger in the urban areas (<40km) is relatively lower than the national average, while the subsidy per passenger in the rural areas (>40km) is exceedingly higher than the national average.

Most commuters in the WDM are lower income persons. Therefore the bus service is a need and not a demand, and should be continued. However, there is need for improvements to the current bus service. The subsidy per revenue kilometre in the urban areas should be increased. Assuming the number of commuters remain constant, the subsidy per passenger in the urban areas will increased at least in the order of the national average of R198 per person per month.

From the analysis of the subsidy data, the following is recommended:

- Discounted fares should be provided for students and the elderly
- Learners and pensioners should be subsidized too
- The subsidy per revenue kilometre in the urban areas should be increased
- Only bus journeys exceeding 10km should qualify for a subsidy
- For all subsidised contracts, in addition to subsidies for weekly and monthly tickets, cash fares should also be subsidized.
- The option of increasing fares may be considered, as it is a mechanism to raise revenue and subsequently reduce subsidies. To the contrary, the service to the passenger should not be compromised considering the socio-economic circumstances of the passengers.
- There is need for additional subsidized services on some routes, as analysed in Appendix E. If minibuses are considered for fixed routes, the operating cost of a minibus and a standard bus is common – driver's wage, fuel, shorter life span versus initial cost, unless the volumes are consistently low and terrain dictates. Articulated buses should also be considered on routes with consistently high passenger volumes.

- Subsidies should be allocated only for the optimal mode
- There is need for subsidised services from Thabazimbi to the Amandelbult mine, and Thabanzimbi to the Northam Platinum mine

Also, to ensure effective and efficient service, the bus contracts must be monitored and audited regularly. For example, buses older than 15 years are not allowed to operate on tendered contracts. Hence, the following recommendations should be addressed in the next round of tendered contracts, and are consistent with the recommendations from the NDOT Study – Report on the Optimisation of Subsidies, October 2002.

- Tendered contracts should be drafted with flexibility over the duration of the contract. Such flexibility should allow for the rationalization and restructuring of routes and services. Such flexibility could create uncertainty and risk for the operator and as a result increase tender price. Therefore, the client should have a defined plan for the restructuring of the public transport through this Rationalization Plan, and should incorporate the recommendations into the tendered contract.
- The budget must include escalation, contingencies, variations, and complimentary services
- The longer the contract duration, the lower the risk of short-term macro-economic fluctuations has an impact on service delivery. This implies that the risk of the variability of external factors (e.g. exchange rates, fuel price) to the operator should, in theory, reduce in the longer period for which the contract is awarded.
- Contracts should be at least 7 years
- The contract must specify the minimum level of service conditions
- Contracts should be performance based. Thus, the operator should be required to embark on an aggressive marketing exercise and apply innovative business practices to increase patronage. For example, revenue may be generated from advertising space on buses. Subsidy incentives should be provided for increased patronage, increasing operating speed and decreasing journey time, etc.
- Current interim and negotiated contracts should be converted to tendered contracts and all contracts should be based on the net cost model, where the sensitivity of fares and subsidies are tested.
- There must be incentives to tender with smaller capacity vehicles (such as taxi co-operatives) to provide feeder services and midday services
- Contracts must make provision for complimentary services, for example, elderly people travel free of charge
- Make provision for automated fare collection, passenger information service (provision of routes maps, time tables, etc.)
- Contracts must include measures for accessible transport for persons with special needs.

- Internally, the Provincial Department of Transport must employ staff to monitor and audit effectiveness and efficiency of the bus contracts.

There is concern that the National Department of Transport already set a budget for subsidies, while there is need for additional subsidized services in the WDM. The WDM and Limpopo Department of Transport must engage with the NDOT for additional funds to upgrade and add subsidized services in the WDM. Further, pilot projects for the provision of transport to special needs passengers should be investigated and funded by the NDOT.

The National Department of Transport, and Limpopo Department of Transport must correspond with the Department of Environmental Affairs and Tourism to obtain funds through the National Environmental Management (Air Quality Management) Act, to upgrade the rolling stock, justified by the reduction of particulate matter.

Similarly, the Department of Education must also contribute funds for the transportation of learners and students, and the Department of Social Development must contribute funds for the subsidisation of the elderly.

5.7.2 Route Optimisation

(a) Short Term

Refer to the assessment table in Appendix C. On several routes, there is need for mid-day services, and there is need for additional capacity in the form of articulated buses in the peak period. Off-peak bus service may not be feasible due to the low demand. However, smaller capacity vehicles are an option for midday service.

Similarly, there is need for additional services on weekends, at least on Saturdays.

Particularly, the routes identified for additional service on weekends are:

- Reitfontein to Kopanang Routes
- Melkbosch to Kopanang
- Olifant to Kopanang
- Shongoane 1, 2, 3 to Kopanang
- Grootestryd to Kopanang
- Lesodi to Mokopane
- Ga-Matlou to Mokopane
- Nkidikitlane to Mokopane
- Vianen to Mokopane
- Moshate to Mokopane

- Sterkwater to Mokopane

Further, the WDM Transport Forum identified farm workers transported to towns by the farmers, mostly at month end. There is need for bus service to be organized especially for the month end activity of farm workers. Such trips should also be subsidized. The bus operator and WDM should identify such routes and motivate the need for additional subsidies to the Provincial Department of Transport.

Thus there is need to expand services in the current bus contracts, and redesign the bus contracts to incorporate the new routes and services, and to revisit the specifications for an improved level of service.

(b) Medium Term

Bus operators should procure the services of the taxi industry to provide scheduled services during the off peak period. The Limpopo Department of Transport must encourage the formation of a consolidated taxi company to tender for routes as a joint venture with the bus companies. This process provides opportunities for emerging enterprises.

The cumulative boarding time for all passengers is approximately half the journey time. There is need to improve the efficiency of the service and the level of service for the passengers. To reduce the boarding time, and journey time, a prepaid fare collection system must be implemented. Also, buses should be modified so that there is a separate door for boarding and alighting passengers, or a wider door to allow free flow, higher volumes of boarding and alighting passengers.

(c) Long Term

Some routes should be re-designed to feeder and distributor type service. Specifically, the bus services in the Reitfontein area in the Lephalale Local Municipality, where all buses merge on the trunk road from Seleka to Rooipoort, and from Rooipoort and southwards to the R561, are prospective trunk routes for the bus service. The feeder service vehicles may be higher frequency taxi vehicles. As a result, an inter-modal facility is proposed at Rooipoort and Setateng. This concept and proposal must be investigated further.

5.7.3 Land Use Development

In general, residential densification in the urban areas should be the ultimate objective of integrated planning. Currently the long distance subsidy is in the order of R520 per person per month, which is approximately three times greater than the national average. Improving the quality of life, by travelling shorter distances on a daily basis (<40km or one hour), and maintaining the monthly travel cost below 10% of disposal income is dependant on the value to time of the passenger. Nevertheless, it is assumed that the value of time for the economically active passenger is relatively higher.

(a) Medium Term

It was found that, in the *Manual for Traffic Impact Studies (RR93/635), National Department of Transportation*, there are no explicit guidelines for the proactive measures in supplying public transportation in a new trip generator (township establishment, industrial area, etc).

According to RR93/635, Town Planning engages in "Forward Planning" and "Development Control". Forward Planning is the formulation of development strategies, policies and plans to guide the physical development of regions, towns or cities. Development Control is public control over the development and use of land in order to achieve the aims of planning and to ensure order.

Considering the dynamic changes to public transportation and the emphasis thereto in the National Land Transport Transition Act, it is equally necessary for the District and Local Municipalities to initiate the following concept.

Every new township establishment should have an appointed public transportation operator, through a tendered process, or the new route/s should be added to an existing contract in proximity of the new development. This avoids destructive competition, the induced conflict among operators, over-supply of public transport services, and a fragmented public transport system in the area.

Thus, there is need for continuous liaison and coordination between Town Planning, Provincial Department of Housing, and Transport Planning including the OLB and Registrar, to ensure control in public transport supply in new developments.

There are several new mining and residential developments in the WDM. The current bus operators are supplying new services or additional services on existing subsidized routes. The new services are not subsidized. Specifically, there are new developments in Marapong, Masodi, Mahwelereng, Sterkwater (PPL mine), and Motlohotlho. Some of the mines already provide a bus service for mineworkers only, for example Lowveld Bus Service from Thabazimbi to the Amandelbult mine.

However, there is need for subsidised services from Thabazimbi to Amandelbult mine and Northam.

(b) Long Term

Ideally, the rural population should relocate to the urban area to attain densification. However, it is not practical and job opportunities in the urban areas dictate the desire to relocate from the deep rural areas to the urban areas. The relocation of the economically active people from the rural to the urban areas is progressive. Currently, many people travel long distances from the Rietfontein area to Lephalale mainly from home to work and back. Therefore, Town Planning in the Lephalale and Mokopane towns must plan suburban housing developments, and not perpetuate the planning practices of the Apartheid regime.

However, the cost of living in the urban areas is relatively higher and a disincentive for rural residents to relocate to the suburbs. Nevertheless, town planning must consider lower cost housing to promote densification, and as a result reduce travel time, the cost of travel and subsidies.

5.7.4 Persons with Disabilities

(a) Short Term

Subsidized Transport for persons with disabilities should be addressed through the Class 1 improvements in the short to medium term. Further, there is need for data on the number of person with disabilities, and the particular need on specific routes. The District Municipality must also identify the NGOs currently providing the service to persons with disabilities. The Limpopo Department of Transport must provide subsidies for such services where necessary and procure the services of operators including NGOs already supplying such services, to provide a specific service to persons with disabilities instead of major changes to the current bus fleet. Also, all buses in the current contracts must have Class 1 improvements.

Where there are no such services for persons with disabilities at all, the bus operators in the tendered and negotiated contracts could introduce paratransit service with customized vehicles at a marginal cost.

The WDM must ensure that all public transport facilities are designed and constructed with provisions for persons with disabilities. The standard design guideline is available from the National Department of Transport.

(b) Medium Term

In the medium to long term the Department of Transport must implement Class 2 improvements where necessary, through the tendered and negotiated contracts. Again, it is feasible for the operator to supply a Paratransit service instead of transforming the whole bus fleet.

5.7.5 Infrastructure and Facilities

The short term and medium term improvements to public transport infrastructure and facilities is addressed in more detail in the Public Transport Plan. Several existing formal and informal inter-modal facilities require renovation and upgrading, and are also addressed in greater detail in the Public Transport Plan.

(a) Long Term

There is indication that the poor condition of the rolling stock is attributed to the poor conditions of the road network. Also, the poor road conditions contribute to the longer journey time. Thus there is need to upgrade roads to ensure an efficient public transport service, and in general, improved access and mobility for all residents in the respective region.

Specifically, in the Lephalale Local Municipality, the road from Rooipoort to the R561 should be paved.

In the Mogalakwena Local Municipality the District road from Nkidikilana to Mokopane should be investigated for upgrade. The WDM must consult with the Road Agency Limpopo to prioritise these roads for upgrading.

There is need for inter-modal facilities at various locations on the public transport network. In the Lephalale LM, where feeder and distribution service is recommended in the Reitfontein area, an inter-modal facility is needed at Rooipoort and Setateng. Also, there is need for an in inter-modal facility in Marapong.

In the Mogalakwena LM, there is need for an inter-modal facility at Mahlwelereng. Also, in the town Modimolle, there is need for an inter-modal facility.

5.7.6 Law Enforcement

There is need for consistent law enforcement to monitor compliance to specifications and regulations. The ultimate objective is to ensure the safe transit of passengers, and a safer road environment. Buses should be tested and inspected every six months for roadworthiness and renew its operating permit annually. Bus drivers should be in possession of the code EC driver's license and a professional driver's permit.

Therefore, law enforcement officers must monitor buses and drivers at the depot for the applicable licenses and permits. It is not practical to inspect the vehicle during operations, as passengers could be delayed, unless the vehicle is overloaded.

There is also a need for law enforcement officers to be trained in the application of public transport policies and regulations.

5.7.7 CPTR

The CPTR 2003 did not have adequate data to assist in the preparation of a comprehensive analysis. Therefore the next CPTR should be designed according to the requirements of the CPTR guideline TPR 4, Rationalization Plan, Operating License Strategy, and the Public Transport Plan.

For example, there are bus services contracted by mines. There is no data in the CPTR to confirm the routes and schedules of non-subsidized bus services, to compare with the current subsidized services. It is likely that non-subsidized bus operations are in direct competition with the subsidized services, or there could be a duplication of service that cannot be detected, etc. Therefore, there is need for stringent control and management from WDM, to compile the CPTR.

6 STAKEHOLDER CONSULTATION

6.1 Introduction

The success of the consolidation of the Transport Plans is significantly dependent on the interaction with the relevant stakeholders. It is extremely important to involve all role players to ensure that the process is acceptable and reliable. Interested and affected parties were identified with the assistance of the District Municipalities. An introduction meeting and subsequent presentations were planned with the stakeholders.

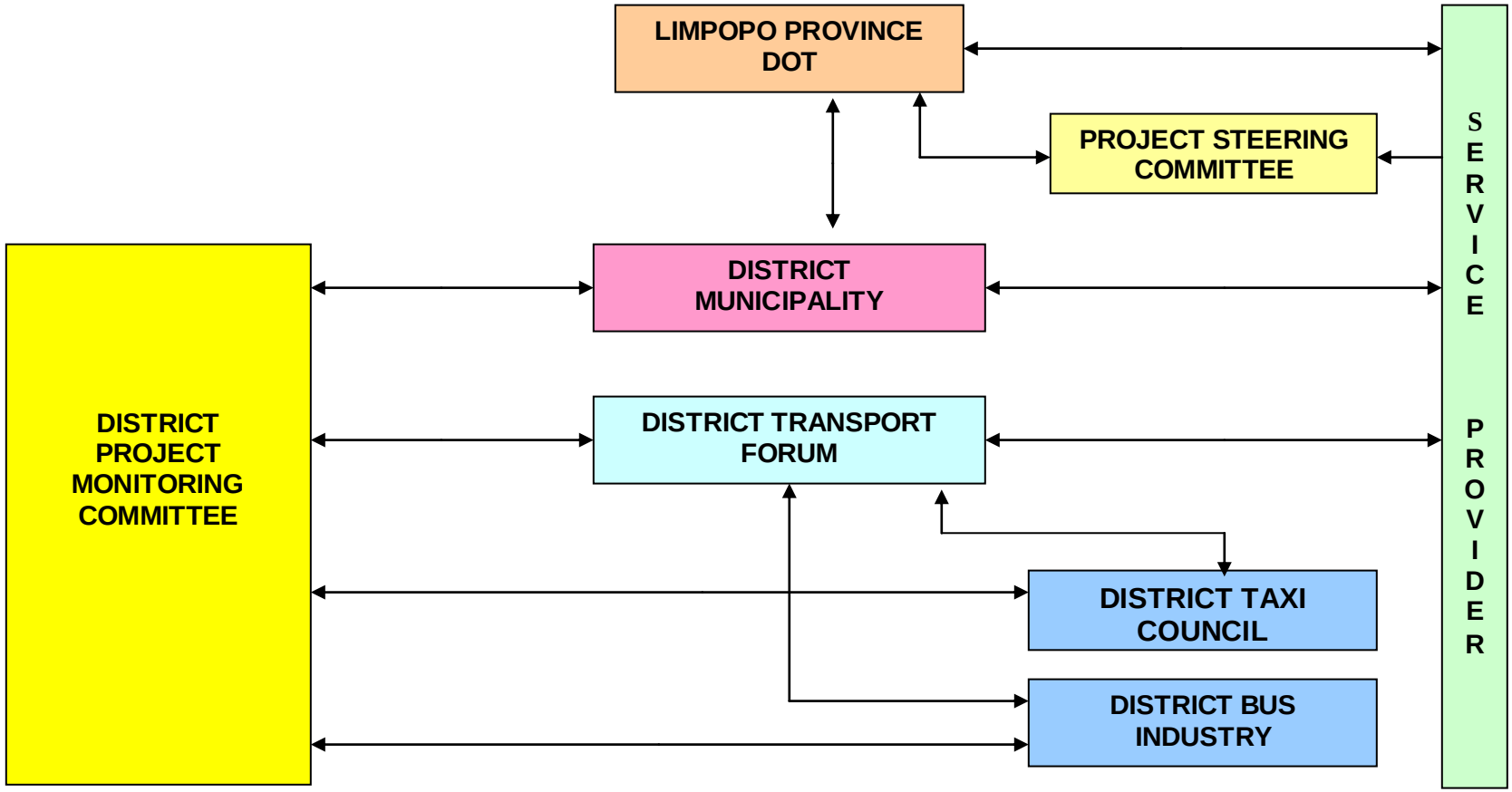
Representatives from the District Municipalities, Local Municipalities, Local Transport Forums, and NGOs, formed the District Transport Forum, and are effectively the technical committee for the project.

The communication and liaison structure, and the respective functions were guided by the Limpopo Department of Transport, and are described in Figure 6.1.

Consultation and liaison are an integral part of the process to confirm and validate data, and to determine the transportation needs as deduced from the data. The users of the system should have confidence in the process as well as in the results. The following role players were identified in District Transport Forum:

- Limpopo Province Department of Transport – Public Transport Division
- Limpopo Province Department of Transport – Registrar of Taxis
- Limpopo Province Department of Transport – Operating Licence Board
- Waterberg District Municipality – Economic Development and Planning Division
- Transport Manager of each Local Municipality
- Bus Operators
- Regional Taxi Council
- Law Enforcement
- Commuter Forum

FIGURE 6.1 - COMMUNICATION STRUCTURE FOR THE PREPARATION OF TRANSPORT PLANS



6.2 Functions of the Various Structures for the Preparation of District Transport Plans

6.2.1 Limpopo Department of Transport

(a) Politicians

- Project financers and responsible for payment of the Service Provider.
- Provincial Project Coordinator
- Liase with the Provincial Steering Committee
- Liase with the District Municipality

6.2.2 Provincial Steering Committee

(a) Representative of National Department of Transport
(b) Representatives from the Provincial Department of Transport
(c) Representatives from the District Municipalities

- Recommend payments of Service Provider
- Evaluate and recommend approval of the reports
- Liase with the Provincial Department of Transport
- The Provincial Steering Committee liase with Service Provider

6.2.3 District Municipality

(a) Officials
(b) Politicians

- Liase with Provincial Department of Transport.
- Liase with District Transport Forum
- Liase with the District Project Monitoring Committee
- Liase with the Service Provider

6.2.4 District Transport Forum

(a) All public transport role players

- To ensure involvement on grass root levels
- Report to their respective structures

- Advising the service provider
- Provide their support for the plans

6.2.5 District Project Monitoring Committee

(a) Representative of the District Municipality

(b) Representative of the Local Municipalities

(c) Representative of the Provincial Transport Department on District level

- Liase with the District Municipality
- Liase with the Transport Forum
- Monitor the progress of the project
- Liase with Bus and Taxi Liaison Structures

6.2.6 District Taxi Council

(a) Representatives of the District Taxi Council

- Work together with the Service Provider and the Project Monitoring Committee to ensure the plan is accepted by Taxi Industry.
- Liase with the Taxi Industry such as Taxi Associations as well as the Provincial Taxi Council.

6.2.7 District Bus Industry

(a) Representatives of Bus Operators

- Work together with the Service Provider and the District Project Monitoring Committee to ensure that the product would be acceptable for the Bus Industry.

6.2.8 Service Provider

(a) ARCUS GIBB

- Prepare RATPLAN
- Liase with all the structures
- Consult with the Provincial Department of Transport, Provincial Steering Committee, District Municipality, District Project Monitoring Committee, District Transport Forum, District Taxi Council and Bus Industry.

6.3 Progress to Date

6.3.1 Steering committee Meeting

The Limpopo Province Department of Transport is effectively the primary client for the project. There was consistent liaison with the project manager Mr. Walter Raedani and project director, Ms. Mihloti Hetisani, at the Department of Transport.

There were two meetings with the steering committee that comprised of the officials from the Provincial Department of Transport, District Municipalities, National Department of Transport, Provincial Taxi Council, and Operating Licensing Board. The progress was presented to the steering committee on 15 March 2004 and 22 April 2004.

5.3.2 Technical Committee Meeting

There was consistent liaison with the Waterberg District Municipality Transport Manager, Mr. Moses Sithole, who in turn arranged the technical committee meeting with the District Transport Forum. There was one meeting with District Transport Forum on 2 April 2004. All stakeholders were present, except for the commuter association/forum.

5.3.3 Manager – Bus Operations

There was regular communication with the manager of bus operations at the Limpopo Department of Transport, to obtain SUMS data and the status quo of bus operations throughout the Province.

5.3.4 IDP Review Process

There was also a presentation to the IDP planning team on the progress of the project, on 25 March 2004. Emphasis was placed on the need for public transport improvements in the WDM, and potential projects were identified to be included in the IDP 2004/2005 Review.

6.4 Conclusion

The District Municipality before adoption by the Provincial Department of Transport must endorse the final document for each Transport Plan. The process is ongoing.

7 IMPLEMENTATION AND ASSOCIATED COSTS

7.1 Review of Recommendations

The extent of the public transport system is complex and the rationalization and restructuring of the public transport system should be implemented gradually, to avoid a sudden change in the system, and cause inconvenience to the passenger and operator. Thus, a flexible and phased approach in the rationalization and restructuring of the public transport system is recommended.

The short-term focus is on optimising the subsidized bus service and balancing the supply and demand for public transport, and eliminating direct competition between modes and operators. The medium term focus is directed at establishing a framework for rationalization and restructuring of the public transport system as a whole.

The implementation of infrastructure projects is addressed in detail in the Public Transport Plan, and subsequently in the Integrated Transport Plan, and the Integrated Development Plan Review 2004/2005.

7.2 Bus Operations

There are no major changes in the current bus operations. However, there is need for additional capacity on many routes. On several routes, there is need for mid-day services, and there is need for additional capacity in the form of articulated buses in the peak period. Off-peak bus service may not be feasible due to the low demand. However, smaller capacity vehicles are an option for midday service.

There is need for additional subsidies for the bus operations in the WDM. Table 7.1 describes the bus operations and the additional subsidy required. The proposal is the minimum service needed in the peak periods, and excludes midday trips. Details of the analysis are described in Appendix E.

Table 7.1 – Cost of New Bus Services

Local Municipality	No. of Trips/mth Needed	Total km/mth	Current Subsidy/mth (R)	Tendered Contract (R)	Total Subsidy (R)
Mogalakwena	244	12 172	560 759	187 100	747 859
Lephalale	44	1188	685 524	10 181	695 705
Bela-Bela/Modimolle			25 040		25 040
Thabazimbi	264	11220	0	172 500	172 500
Total	**552**	**245 580**	**1 271 323**	**369 781**	**1 641 104**

The GNT Bus Service is currently in the process of restructuring. Therefore, it is likely that the parastatal could become an agency and its funding ring fenced. As a result, the subsidy implication for the Province could be negated.

7.2.1 Cost for Additional Capacity

The total subsidy for additional capacity, as recommended for the above mentioned routes, and described in Appendix E, is as follows:

In the Lephalale Local Municipality, assuming that the current operator (Lowveld Bus Service) adds regular buses, at a subsidy per kilometre rate of R8.57, the total additional subsidy is estimated at R10 200 per month.

In the Mokopane Local Municipality, assuming that the current operator (GNT) adds regular buses, at a subsidy per kilometre rate of R15.37, the total additional subsidy is estimated at R187 100 per month.

In the Thabazimbi Local Municipality, assuming that the current operator (Lowveld Bus Service) is awarded the tender at a subsidy per kilometre rate of R15.37, and that there is no contribution from the mine, the subsidy is estimated at R172 500 per month.

Since there is only one route each in Modimolle and Bela-Bela, there is no need to convert the interim contract.

In addition to the subsidies, there is need for monitoring of contracts and auditing of the monthly payments certificates by an independent service provider. Monitoring could be implemented manually or electronically. The capital cost for the electronic mechanism is glorified and expensive. Nevertheless, the electronic mechanism is more effective. For the interim contracts the estimated cost for start-up, manual monitoring, auditing, and project management is 5% of the subsidy contract value, that is, R1250 bi-monthly.

For the tendered contract, the estimated cost for start-up, electronic monitoring, auditing, and project management is 10% of the subsidy contract value, that is, R75 000 per month for services in Mogalakwena LM, and R87 000 per month for services in the Lephalale and Thabazimbi LM.

7.3 Provision for Persons with Disabilities

7.3.1 Project – Class 1 Improvements to Current Fleet

Subsidized Transport for persons with disabilities should be addressed through the Class 1 improvements in the short to medium term.

7.3.2 Project – Data Capturing and Feasibility of Paratransit Service

There is need for data on the number of persons with disabilities, and the particular need on specific routes. The District Municipality must also identify the NGOs currently providing the service to persons with disabilities. The Limpopo Department of Transport must provide subsidies for such services

where necessary and procure the services of operators including NGOs already supplying such services, to provide a specific service to persons with disabilities instead of major changes to the current bus fleet.

The data capturing of transportation needs for persons with disabilities should be prioritised in the preparation of the next CPTR. Therefore, there is no specific cost for this effort. However, the feasibility for a paratransit service should be an independent study. The pilot study must be funded by the NDOT.

7.3.3 Project – Non-Motorised Transportation for Learners

Where schools are within a 5km radius, there is potential for non-motorised transportation such as bicycles and donkey carts for learners, including safer walkways. This will be addressed in more detail in the Public Transport Plan.

7.3.4 Project – Design and Construction

The WDM must ensure that all public transport facilities are designed and constructed with provisions for persons with disabilities. The standard design guideline is available from the National Department of Transport.

7.4 Alternative/Innovative Funding

In addition to the fixed sum of bus subsidy from the National Department of Transport, the Provincial Department of Transport must research alternate funding mechanisms for public transportation. For example, advertising on buses is a lucrative generator of operating funds. The Department of Transport must correspond with the Department of Environmental Affairs and Tourism to obtain funds through the National Environmental Management (Air Quality Management) for the upgrading of rolling stock. The primary motivation is based on the reduction of pollution through new vehicles, while the secondary motivation is based on the improved level of service to the passengers.

Similarly, the Department of Transport must correspond with the Department of Education to obtain funds for the subsidisation of learners and students, and the Department of Social Development should contribute to the subsidisation of the elderly.

Innovative funding is addressed in the Public Transport Plan. However, the Limpopo Department of Transport needs to research this subject, with the objective of improving and expediting service delivery, specifically in transportation.

7.5 Cost Implications

The total cost implication for the WDM is in Table 7.2, and is categorised according to the implementation schedule. The bus contracts are scheduled as 7-year contracts. The GNT bus service is currently in the process of restructuring, and funding for the enterprise could be ring fenced. Therefore, a major part of the envisaged cost could be for the new enterprises, instead of the Provincial Government.

Table 7.2 – Proposed Projects and Cost Implications

TABLE 2: PROGRAM AND FINANCIAL IMPLICATIONS												
PROJECT												
	1	**2**	**3**	**4**	**5**	**6**	**7**	**YEAR 1**	**YEAR 2-5**	**TOTAL**	**Action**	**Duration**
BUS MODE (RATPLAN)												
Project-1: Implement Tender or negotiated subsidy contracts (7-years)								R20 000 000	R 80 000 000	R100 000 000	**DoT**	**7 years**
Project-2: Monitoring and Auditing of Project 10 (7-years)								R2 000 000	R 8 000 000	R10 000 000	**DoT**	**7 years**
Project-3: Implement Class 1 Improvements									R 300 000	R 300 000	**DoT**	**1 year**
Project-4: Review Rationalisation Plan									R 300 000	R300 000	**DoT/DM**	**2 months**
Total								**R22 000 000**	**R88 600 000**	**R110 600 000**		

There are several externalities to be addressed by the public sector, such as, the provision of inter-modal facilities, upgrading of roads, and training of law enforcement officers in public transportation, and integrated land-use planning. The Public Transport Plan and Integrated Transport Plan address some of these externalities that could enhance public transportation, and optimise subsidies.

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