ROAD REFORM IN SWAZILAND

P C LOMBARD,[1] **T M TSHABALALA**[2] **and L M DLAMINI**[2]

[1]Africon, P O Box 905, Pretoria 0001
[2]Ministry of Public Works and Transport, P O Box 58, Mbabane Swaziland

1. INTRODUCTION

The public roads sector in Southern Africa has shown constraints in recent years in delivering its services due to rising costs, inadequate resources and budget constraints. In addition, road use has been increasing steadily, placing increasing demands on limited resources. This has necessitated reform in the road sector, and significant progress has been made in various countries in this regard.

Within the broader context of service delivery, the Government of Swaziland has committed itself to promoting sustainable and long-term economic growth and development. The Ministry of Public Works and Transport (MPWT), in support of this Government policy, recently examined the operations of its various technical departments to enhance their efficiency. This was also done against the background of road reform in SADC, as promoted in the recent SADC Protocol on Transport, Communications and Meteorology, to which Swaziland is a signatory.

Concerning the management of the roads sector, the Roads Department is responsible for approximately 90% of all expenditure on roads in Swaziland, and the focus on reform in the roads sector should therefore be on the Roads Department. The MPWT initiated a study at the beginning of 2000 to investigate restructuring options for the Roads Department, in order for it to provide services in a more commercially orientated manner.

This paper presents a framework for institutional reform in the roads sector in Swaziland. It commences with an overview of the roads sector in the country, including the motives for change within the Roads Department. Based on this review, needs and gaps were established, and it was possible to establish a preferred end state model. As part of the investigation into this end state model, it was necessary to calculate what the financing requirements are, and to determine how these financing requirements affect the feasibility of identified options. A detailed road reform framework was developed, including a proposed time frame describing the activities that needs to be undertaken to implement this institutional reform. Finally, a view will be taken on the way forward, including lessons that were learnt in the process.

2. CURRENT ROAD INFRASTRUCTURE EXTENT, MANAGEMENT AND FINANCING

Road network

The current road network in Swaziland is divided into four broad categories of roads, as detailed in the Table below:

Road category	Paved km	Unpaved km	Total km
Main Roads	852	539	1392
District Roads	62	1534	1596
Urban Roads	200	188	388
Feeder Roads	-	1500	1500
Total	**1114**	**3761**	**4876**

This indicates that approximately 23% of the road network is paved.

Road network management responsibilities

Local authorities and the Roads Department manage the road network in Swaziland. Local Authorities consist of Town Councils, Town Road Boards and City Councils who are responsible for managing roads in their jurisdiction. Their responsibility however excludes through roads which are either main or district roads.

The Roads Department is responsible for the main and district roads as well as the feeder roads, in other words they are responsible for the bulk of the road network as shown in the table above.

The current activities of the MPWT include the following:

- Strategic and network planning
- Planning and management of project design and construction
- Operation of the Road Management System
- Traffic counts
- Surveying
- Training
- Road maintenance by bridges, district roads and bitumen services units
- District road construction
- Operation of a materials laboratory
- Operation of pipe and road sign manufacturing factories.

It is evident that these activities include policy, planning, and management as well as execution functions.

Current expenditure

The current expenditure on the road network is indicated in the table below:

Institution	Capital expenditure (1999-2000)	Recurrent expenditure (1999-2000)*
Local Authorities	E27.8 million	E12.4 million
Roads Department	E243.4 million	E114.9 million
TOTAL	E271.2 million	E127.3 million

* Includes loan servicing and repayment. E= Emalangeni, on parity with the rand

Note that the figure for recurrent expenditure includes loan servicing and debt repayment, which is not currently included in the MPWT's budgeted figures. The figure for loan servicing has however been included in the table above to give a complete picture of expenditure on roads in Swaziland.

It is apparent that the Roads Department is responsible for approximately 90% of recurrent road expenditure. A further E 9.4 million is spent on traffic management related to the road sector. In addition, a significant amount was spent on capital expenditure.

Reform needs

The Government, through its Second Economic and Social Reform Agenda (ESRA II) has committed itself to the participation of private sector enterprises in road management, both at institutional and operational level. This includes the goal to complete the privatisation of routine maintenance of the road network in the near future.

An investigation into the staffing composition of the Roads Department revealed that there was an apparent overstaffing of the Roads Department compared to Roads Authorities in other countries at the time. This comparison is detailed below:

Road Authority	**Length of network (km)**	**Number of staff**	**Number of staff per 100 km**
Namibia	40,000	200	0.5
Transit New Zealand	10,500	189	1.8
Finland	78,000	1,500	1.9
Sweden	97,908	2,000	2.0
South Africa	6,133	140	2.3
Ghana	14,100	688	4.9
Colombia	13,408	920	6.9
Korea	12,053	1,450	12.0
United Kingdom	10,500	1,600	15.2
Swaziland Roads Department	**3,000**	**815**	**27.2**

Source: Various

The high number of so-called unestablished posts filled by employees doing maintenance work accounts for the largest part of this apparent overstaffing.

3. RESTRUCTURING POLICY GUIDELINES

The Government of Swaziland has committed itself to restructuring principles that are documented in a number of policy guidelines. These policy guidelines includes the following:

- ***The National Development Strategy (NDS),*** which presents several macro economic principles for achieving the Government's Vision for long term development. The NDS describes specific strategies for road and road transport in the country.

- ***The National Transport Policy (NTP),*** which presents the Government's latest effort to define a clear transportation policy.
- ***The SADC Protocol on Transport, Communications and Meteorology,*** which explicitly states that the SADC member states agree to establish autonomous accountable National Roads Agencies. The Protocol also states that member states should seek to develop road funding policies which are based on a common understanding of the types and levels of road user charges.
- ***The Public Enterprises Control and Monitoring Act (PECMA) and the Public Enterprises Unit (PEU),*** which present a legislative and administrative background for establishing a Roads Agency.
- ***The Economic and Social Reform Agenda (ESRA),*** which focuses on inter alia carrying out public sector reform, including reform in the roads sector.

These policy guidelines presented the background for restructuring the Roads Department in Swaziland.

4. RESTRUCTURING THE ROADS DEPARTMENT

Roads are typically seen as 'common property', and have accordingly traditionally been provided by the public sector. However, various institutional weaknesses exist in Government's provision of roads. In contrast to the private sector where there is shareholder pressure on management, the public service often exhibits a lack of pro-active measurement, management and comparison of inputs and outputs/production.

Road activities take place within an environment that must be regulated by a central entity. Aspects include minimum design, construction and materials standards as well as minimum skills requirements. It is typically the public sector's duty to set this regulating environment. This function will be carried out by a proposed roads agency.

A diagram indicating the preferred end state model for road sector reform in Swaziland is presented below:

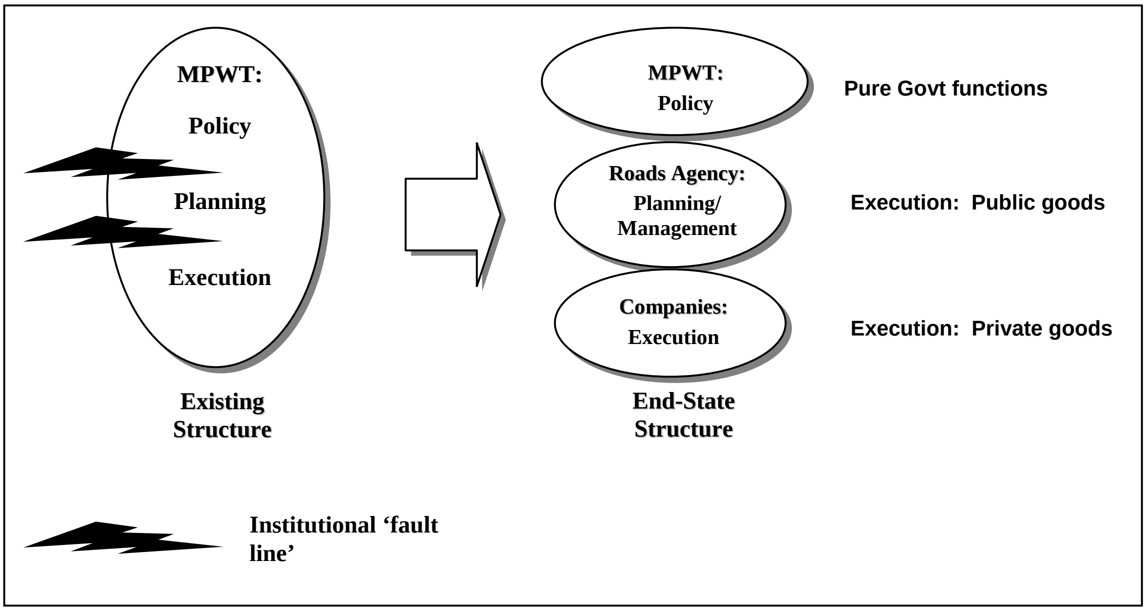


Figure 1 End State of Swaziland Road Reform

As indicated in the diagram, the basic spilt is between the policy and execution functions of the present Ministry. A further split is made between the planning or management functions of the Roads Agency and the contracting entities. However, it was important to ensure that the restructuring of the roads sector will be financially sustainable, and it was therefore necessary to investigate what the financing needs are for sustainable roads.

5. ROAD FINANCING

Institutions such as the World Bank advocate that the roads sector should be operated in a sustainable manner. This relates not only to creating the correct institutional mechanisms but also to ensure a stable and constant flow of funds.

To meet the needs of sustainable and stable financing for roads, a road user charges approach was used and translated into a Road User Charges Model for Swaziland.

The optimal road network costs resulting from the optimal maintenance strategy that should be applied to the main and district road network were determined, using dTIMs and the Swaziland Road Management System. The dTIMS analysis was done for a ten-year time frame, using an 8% discount rate.

A summary of the annualised figures is presented below:

OPTIMISED ANNUAL ROAD SECTOR EXPENDITURE IN SWAZILAND							
Expenditure items	**Maintenance**			**Capacity expansion**	**Capex**		**Support services**
	Routine	**Periodic**	**Rehab**		**New**	**Upgr**	
Main roads	6.72	15.47	16.72	5.00	42.12	5.00	
District roads	3.46	20.33	0.98			5.00	
Feeder roads	16.50						
Local Authority roads	12.50						
Traffic Management							9.42
RA Administration							5.17
Road Fund Administration							2.50
TOTAL	**92.69**			**5.00**	**42.12**	**10.00**	**17.09**

The total optimal funding including capital expenditure is therefore **E 166.9 million,** and **E 109.8 million** is required if capital expenditure and capacity expansion are excluded.

Currently, the recurrent expenditure of the Roads Department amounts to E 115 million per year, excluding financing of the feeder road network. Adding an estimated E 16.5 million to account for expenditure on the feeder road network results in recurrent expenditure of approximately E130 million per year, which includes debt servicing.

From the figures above, it is apparent that the current level of expenditure on roads approximates the optimal expenditure, excluding capital expenditure and capacity expansion. If these items are added, the optimal expenditure is significantly higher than the current expenditure and a notable increase in current fees and charges would be required to achieve this level of funding.

Based on the optimal level of financing as detailed above, the following two scenarios were developed and evaluated in terms of cost responsibilities per vehicle type, and for groups of vehicles:

- **Scenario 1 : Total financing : E 166.9 million**
  In this scenario the financing of the total road network in Swaziland is considered, including all recurrent expenditure and traffic management costs, as well as capital works and the administration of the Road Fund and Roads Agency.

- **Scenario 2 : Total maintenance and operational financing : E 109.8 million**
  In this scenario, only recurrent maintenance and traffic management costs are included. Capital expenditure on new links and capacity expansion are excluded.

It was recommended that Scenario 2 be implemented initially, as Scenario 1 would require a significant increase in both the level of license fees, as well as in the level of the fuel levy. After the initial implementation, it would be possible to gradually move towards implementing Scenario 1, by recovering an increasing amount of capital expenditure requirements from road users. It is important to refine systems to ensure full collection of revenue from road users through the various RUC Instruments.

Regarding the establishment of a dedicated Road Fund, it is recommended that the fund to be incorporated into the Ministry of Finance. It is however important that the funds collected through Road User Charging is deposited directly into the Road Fund Account and not transferred via the general fiscus.

6. ROAD REFORM PROGRAMME

The Road Reform Programme (RRP) was proposed to consist of the following broad activities:

- Establishment of a **Roads Agency** or **Authority**, responsible for the management of the road network. Current staff from the surveying and traffic counting sections as well as the laboratory function would be incorporated in the agency
- Establishment of a dedicated **Roads Fund** within the Ministry of Finance, that would be ring-fenced, into which revenues from road user charges would be paid and from which disbursements for road management would be paid
- Establishment of a **Pilot Contractor**, and later smaller contractors, with the intention of transferring eventually all force account staff to private sector entities
- Establishment of a stand-alone **Pipe and Road Sign Factory**, to be operated on commercial principles
- Retention of **training facilities** in the MWPT

It is envisaged that this reform process would take place in two main phases, namely the **preparatory** and **establishment** phases. The preparatory phase will be aimed at setting the scene for implementation, and will consist of activities including setting up of a Programme Implementation Unit in the MPWT, ensuring that enabling legislation is in place and launching a Contractor Preparation Project. A communication strategy will also be developed and implemented throughout this phase to inform employees, stakeholders and the public regarding the programme.

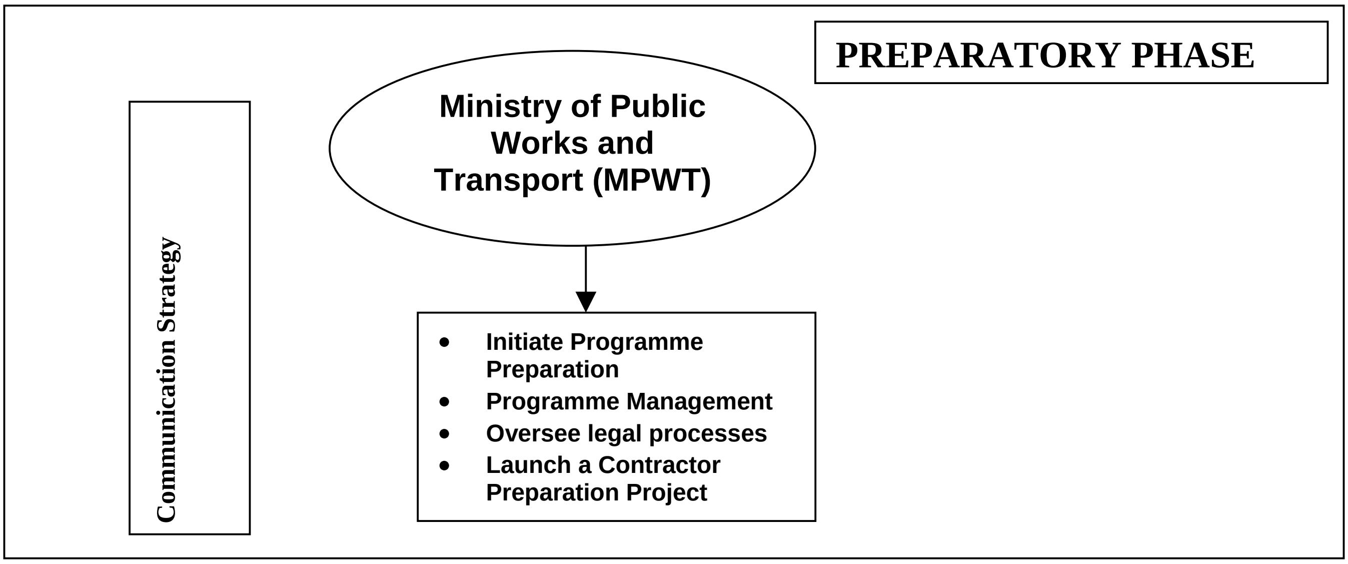
The establishment phase will consist of two main stages:

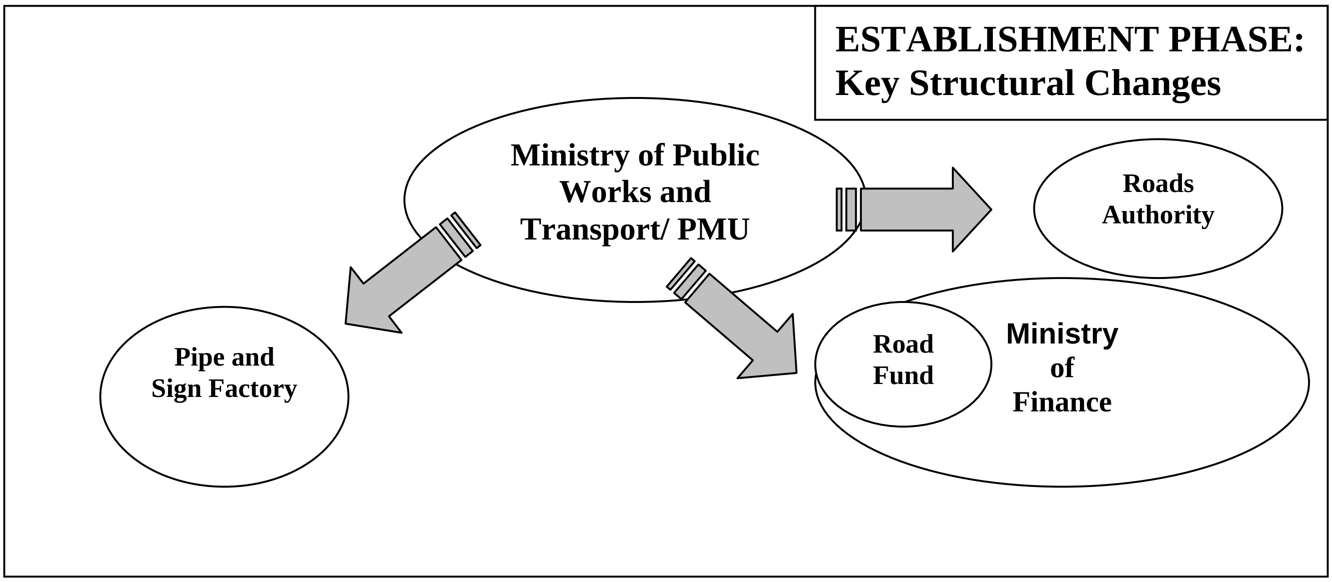
- In the first stage the emphasis will be on setting up the two main institutions, namely the Roads Agency or Authority, as well as the Road Fund mechanism, the latter within the Ministry of Finance. The Pipe and Sign Factory will also be set up
- In the second stage the Pilot Contractor will be created, followed eventually by smaller contractors. Roads Consultative Committees will also be set up to guide priorities at regional and local level.

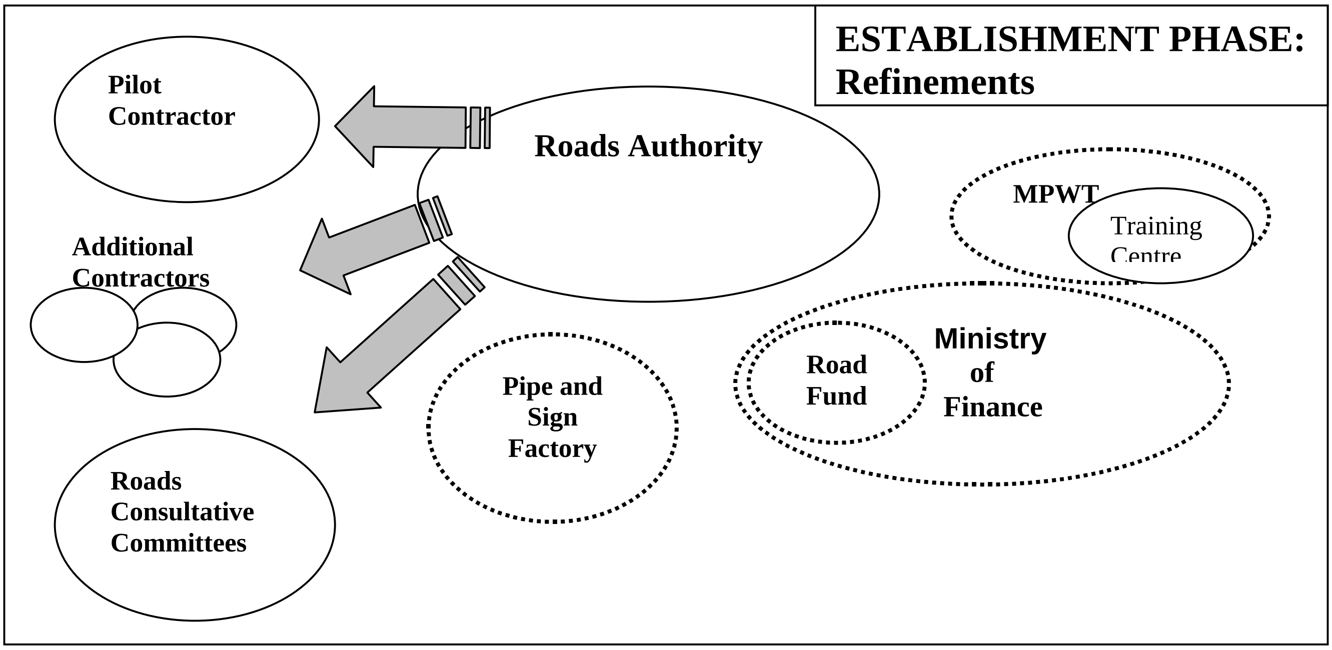
The two phases are depicted on the following page.

It is foreseen that the Reform Programme can be executed over a total period of three and a half years. Initially, the focus will be on securing support for the Programme and setting up systems and procedures. The legal and communication components and Contractor Preparation Project should commence towards the end of the first year. The restructuring activities could start roughly halfway through the second year. A broad breakdown of the activities is presented below:

PROGRAMME FOR ROAD REFORM				
Project/Activity	Year 1	Year 2	Year 3	Year 4
Roads Reform Programme Preparation				
Roads Reform Programme Management				
Legal Processes				
Communication Strategy				
Contractor Preparation				
Restructuring and Establishment				


PREPARATORY PHASE
Ministry of Public Works and Transport (MPWT)
Communication Strategy
Initiate Programme Preparation
Programme Management
Oversee legal processes
Launch a Contractor Preparation Project


ESTABLISHMENT PHASE: Key Structural Changes
Ministry of Public Works and Transport/ PMU
Roads Authority
Pipe and Sign Factory
Road Fund
Ministry of Finance


ESTABLISHMENT PHASE: Refinements
Pilot Contractor
Roads Authority
Additional Contractors
MPWT
Training Centre
Ministry of Finance
Road Fund
Pipe and Sign Factory
Roads Consultative Committees

7. CURRENT STATUS AND LESSONS LEARNT

The road reform programme in Swaziland is at Cabinet approval stage at the moment. Subsequent to this being achieved, the various rollout actions will commence.

The following important lessons emerged from the project up to this stage:

- The importance of identifying so-called institutional "fault lines" are crucial for identifying various options for reform
- It is deemed that a sustainable funding mechanism is critical for successful road reform, in line with World Bank guidelines. This does however require a mechanism with adequate checks and balances to ensure that all ministries are comfortable with dedicated funding mechanisms, which is not always the case
- Stable funding needs should be determined to ensure that road user charges do not vary significantly with time, and should be supported through the development and continued maintenance of appropriate tools, mainly embedded in a Road Management System
- While it may be argued that a more commercialised environment requires the suspension of certain activities, especially those that are not principally government or agency functions, job losses are seen as unacceptable from a social development point of view, and options need to be developed for accommodating this.

In summary, it can be stated that road reform in Swaziland is an important and crucial step towards achieving a sustainable road sector in that country.

ACKNOWLEDGEMENTS

The authors acknowledge with gratitude the contribution of Mr WM van Zyl, Ms S Texeira, Mr E Durr and Mr JS Rossouw to the material that was used in the compilation of this paper.

BIBLIOGRAPHY

1. Government of Swaziland, Cabinet Office 1999. Economic and Social Reform Agenda. Mbabane.
2. Government of Swaziland, Ministry of Economic Planning and Development. 1999. Economic Planning Office – Development Plan 1996 – 1999. Mbabane.
3. Government of Swaziland, Ministry of Public Works and Transport. 2000. Cabinet Paper on Feeder Roads. Mbabane.
4. Government of Swaziland, Ministry of Public Works and Transport. 1999. Priority Capital Investment Programme. Mbabane.
5. Government of Swaziland, Ministry of Public Works and Transport. 2000. National Transport Policy. Mbabane.
6. Government of Swaziland, Ministry of Public Works and Transport. 2000. Roads Department Annual Road Programme. Mbabane.
7. Heggie, I. 1994. Management and financing of roads: An agenda for reform.
8. SADC, 1996. SADC Protocol on Transport, Communications and Meteorology. Maseru.