



The condition of provincial road networks.

A scope for partnership with industry?



Overview

- Problem statement
- Extent of provincial road networks
- Condition
- Challenges
- Conclusion

Problem statement

- The challenges that the road network development faces as articulated in the Road Infrastructure Strategic Framework for South Africa defines the scope for partnership between authorities and industry. For RPF the following are isolated:
 - Funding
 - Capacity/human resources
 - Information and decision support systems
..... extent of the network

What is the extent of provincial roads networks

Province	Surfaced (km)	Gravel (km)	Access (km)	Total (km)	% Kilometres
Eastern Cape	6233	34718	7631	48582	14.13%
Free State	7070	22046	20000	49116	14.28%
Gauteng	3487	1771	2410	7668	2.23%
KwaZulu-Natal	7489	19347	10571	37407	10.88%
Limpopo	6403	11866	10578	28847	8.39%
Mpumalanga	7062	10517	7479	25058	7.29%
Northern Cape	5630	53725	12023	71378	20.75%
North-West	6723	19161	10017	35901	10.44%
Western Cape	7172	24991	7822	39985	11.63%
TOTAL	57269	198142	88531	343942	100.00%

** Estimates presented to Transport Lekgotla, June 2008. Based on the most recent/available provincial assessment.*

In what condition are these networks?

- On average more than 30% of roads are in poor to very poor condition:
 - Eastern Cape (46%, 2000)
 - Free State (59%, 2007)
 - KwaZulu-Natal (46%, 2005)
 - Limpopo (60%, 2000)
 - Northern Cape (47%, 2004)
 - North West (45%, 2007)
 - Mpumalanga: Recently completed their assessments. Due to the haulage of coal in Gert Sibande and Emalahleni, % expected to be high)

** Averages presented to Transport Lekgotla, June 2008. Based on the most recently available provincial visual condition assessments.*

Funding...

- Provincial spending on road infrastructure increased by 17,6% annually between 2003/04 and 2006/07 (from R7.1b to R11,2b).
- This figure is set to grow at 13,6% annually from the 2007/08 MTEF with a significant proportion going to the Expanded Public Works Programme.

This growth has been from a significantly low base hence....

the estimated backlog far exceeds the current allocations.....

○ Need:

- Eastern Cape : R13,4 bn
- Free State : R2,9 bn
- Gauteng : R0,23 bn
- Kwa Zulu Natal : R1,7bn
- Limpopo : R10,4 bn
- Mpumalanga : R4,2 bn
- Northern Cape : R20 bn
- North West : R1,6 bn
- Western Cape : R0,4 bn

○ Total of R 54,8 billion required

○ Allocation*:

- Eastern Cape : 1,5bn
- Free State : R1.1 bn
- Gauteng : R1,1 bn
- Kwa Zulu Natal : R2,7 bn
- Limpopo : R1.7 bn
- Mpumalanga : R0,940 bn
- Northern Cape : R0,419 bn
- North West : R0,923 bn
- Western Cape : R1,2 bn

Total: R11.5 bn

* NT: 2008/09 estimates of total budget

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- Increased funding has brought with it related challenges of
 - Absorption capacity of industry – in the context of government massive infrastructure investment programme (investment in plant etc)
 - Overall, diminishing pool of technical expertise in engineering
 - Development of the labor intensive construction and maintenance programmes and capacity across the provinces

Capacity

- Technical staff employed in roads and transport departments (based on a 2006 survey of 5 provinces):
- Vacancy rate statistics indicated then that on average each department had 11 senior engineers, about 3 younger engineers and 2 candidate engineers. Whilst WC, Gauteng and KZN were relatively well resourced with senior engineers, anecdotal evidence shows a change on the down side for these provinces.

GP example*:

- Construction
 - Engineering: 4 out of 25 posts are filled
 - Technicians: 7 out of 27 posts are filled
- Maintenance
 - Engineering: 1 of 4 posts are filled
 - Technicians: 1 of 5 posts are filled
- Design
 - Engineering: 7 of 17 posts are filled
 - Technicians: 24 of 54 posts are filled
- Planning:
 - Engineering: 3 of 9 posts are filled
 - Technicians: 7 of 20 posts are filled.
- Totals:
 - Engineering: 15 of 55 posts are filled
 - Technicians: 39 of 106 posts are filled.

*Based on capex plan



Are we doing enough to address the skills shortage in the sub-sector?

- Commend RPF's capacity building focus over the past few years evidenced in resolutions of the various RPF meetings.
- Acknowledging various interventions at company and sub-sector level, including those of government.
- However are those enough?

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- + How many of RPF members have active/vibrant promotion programmes?
 - + How many have identified talent at high school level and offer study opportunities for young talents?
 - + Or adopt one of the 500 Dinaledi Schools to provide necessary but lacking science and math's resources?
 - + How many have active mentoring programmes geared at (a) improving through put ito registrations and (b) passing on skills?

The right information at the right time is critical in ensuring effective network management.....

- As recommended in RISFSA: DOT conducted an audit of road management systems used by authorities in 2005 which found that all provincial and metro roads authorities (incl. SANRAL) have a basic Pavement Management Systems which they utilise to optimise road management decisions. The following challenges apply in the information and management system environment:
 - Regularity of collection of data: a challenge to be address by authorities in programming their budgets.
 - Technical capacity for undertaking visual condition assessments: management of these systems in most cases is not in house but outsourced to private sector
 - Integration of varied systems within an authority
 - Standardisation of processes and procedures
 - Significant gap in the development of basic systems at municipal sphere's

Current processes at DOT

- **Development of a National Roads Asset Management System** –The system aims to collate defined road network information from existing systems, centralise such information at DOT to reduce the frequent disruption of provincial programme as and when information is needed.

Nationwide roads condition audit

- This is a desktop study with the aim of quantifying the overall condition of road infrastructure using one system in response to National Treasury's requirements for a comprehensive roads audit.
- Due for completion in March 2009, the study is being carried out on a National, Provincial and metropolitan municipality level and will aggregate, amongst others where urgent Visual Condition Assessments are needed.



Roads reclassification programme

- Draft guidelines have been developed for functional reclassification of South Africa's roads. It will assist roads authorities in the reclassification of their networks to that prescribed by RISFSA.
- The guideline does not address the issues ownership, responsibilities and funding allocation.
- Based on the classification 20% of the networks must be reclassified in 2009/10.



Potential?

- Capacity to plan, procure and implement VCA's
- Definition of appropriate road indicators
- Building and expanding information and decision support expertise in the roads sub-sector, especially wrt gravel roads.
- Reclassification of the network



Summary

- Funding: industry capacity to absorb investment and increase skills pool
- Capacity: longer term planning and programmes/projects to address skills shortage
- Information and decision support: implementation and human capacity
- Labour intensive industry development to support EPWP and approach.