

NATIONAL ROAD FREIGHT STRATEGY

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DRAFT REPORT

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Prepared by:

Nick Porée and Associates (Pty) Ltd
Box 2495 Prestondale 4021
Tel: 031-5665040
Fax: 0862723145
Cell: 0799804740
Email: nick@npagroup.co.za

Prepared for:

Department of Transport
Pretoria 0001
Tel: 012-3093045

NATIONAL ROAD FREIGHT STRATEGY

DRAFT REPORT 3

EXECUTIVE SUMMARY

The Department of Transport initiated the development of a Road Freight Strategy by commissioning a study in 2010, which was intended to explore and make recommendations on all aspects of the current road freight activities in the country as well as best practices in terms of regulation and coordination of the road freight sector. The project was shelved due to dissatisfaction with the draft report at that stage. The current study to develop the National Road Freight Strategy in 2016 is intended to complete the strategy development project and to make recommendations regarding implementation.

In order to develop a comprehensive strategy covering all relevant aspects of the road freight sector the study has examined the scope and nature of current operations, the regulatory and institutional framework, current control of operational quality and the implications of the negative externalities of the mode. In addition, the issues of road user cost recovery, road safety, road freight infrastructure, regional integration, cross-border logistics and intermodal competition are addressed.

This report describes the field of study and the identified current problems in the sector. The project duration is 6 months, during which time, the study team and the department have interacted with private sector transport user associations and operators to ensure that consensus is reached regarding the recommendations, and to ensure the practicality of the implementation proposals. The project has been guided by a project committee composed of officials of the Department of Transport.

It is recognised that it is essential that the Road Freight Strategy is compatible with the several policy studies which were initiated by the Department of Transport in 2015 including the review of NATMAP, the review of National Freight Logistics Strategy, review of the National Land Freight Strategic Framework, development of The Green Paper on Road Policy, the Green Paper on Railway Policy, White Paper on National Transport Policy, and the development of a transport economic regulatory framework with a single Transport Economic Regulator (STER).

Road freight strategy was broadly defined within the Road Transport Quality System (RTQS) which was devised in response to the deregulation of road freight transport in 1988. The deficiencies in the legislation and regulatory systems which were developed at that time have become more evident as the industry has expanded and changed in character, in response to the demands of the economy. The lack of a single National Road Transport Authority has left decision making fragmented and subject to manipulation by the various authorities and agencies now involved in managing the regulation of the sector. The wide range of sub-standard features in the regulation and management of the mode underscore the need for re-definition of the South African National Road Freight Strategy.

Regulation of commercial transport (passenger and goods) is an essential function of the transport authorities in all countries. This is necessary because transport activities take place in the public space, using state owned infrastructure and the transport operators must be held accountable for the externalities (accidents, pollution, infrastructure damage, congestion). It is also essential to ensure quality-regulated competition in the industry in the interests of optimal efficiency, to reduce externalities and avoid cut-throat and anti-social competitive practices. ensure

This project report makes detailed recommendations and provides suggestions for the implementation with due recognition for the fact that some aspects of the freight transport modes also involve other departments and agencies so that there will be the need for liaison and discussion to agree processes to create and manage the various programmes that are recommended in this report.

The vision for the Road Freight Strategy is a transition from the current situation to;
“An effective regulatory and institutional framework using international best practise systems, technology and efficient management to provide high standards of operational quality and minimal externalities in a sustainable road freight sector which provides efficient service to South African industry”.

The strategic objectives of the Road Freight Strategy are to optimise the efficiency of road freight services to industry and to reduce the externalities of the mode in terms of accidents, pollution, congestion, infrastructure damage and anti-social activities. To improve the effectiveness of regulation and enforcement of quality standards and to ensure equity between road freight transport operators within a system of quality-regulated competition. To create effective training and skills development options for all functions in the industry, to encourage professionalism in the management, operation and support of road freight operations, and to encourage increasing BEE participation in the industry. To provide for effective liaison between all role players in the sector; all tiers of government, private sector operators and industrial users and to promote optimal intermodal coordination and logistical efficiency as well as improving the planning of road freight infrastructure provision and management. To promote regional trade integration and improve cross border transport efficiency to enhance national competitiveness.

The project methodology includes literature analysis regarding road freight regulation and management in other countries, and the principles of transport regulation; a review of the South African road freight sector from available statistics and examination of the current legislative framework. The research has identified the major issues that have impacts on operational efficiency, control of quality, road safety, enforcement effectiveness, skills deficiencies, coordination and liaison between industry and government, and the current status of infrastructure. Proposed interventions are based on international best practises and include the results of consultation with role players, legal expert, industry participants, DOT steering committee and academics to test the proposals.

The identified issues in need of strategic interventions include wide range of regulatory and institutional changes which can be described briefly as follow:

There is need for an effective Transport Operator Regulation system as it a feature of commercial transport that economic pressures and profit motives frequently lead to sub-standard operations and externalities which can endanger public safety. It is international best practise to define criteria for evaluation of applications to be registered as commercial vehicle operators and to monitor the management of their operations, as evidenced by compliance with legislation and safe operating standards. The lack of effective control of operator quality is a national problem in South Africa, which has resulted from defective system design of the RTQS in the 1980s. The current system where operator identity is recorded via the vehicle registration forms (RLV) has several negative consequences.

There are several aspects of the current operational quality control systems that are mentioned in the National Road Traffic Act (NRTA) but are ineffective in controlling the quality of road freight operations. There are problems with capacity, systems deficiencies, need for modern equipment, more trained manpower and better communications in the

enforcement agencies at all levels. Prosecution and collection of fines are problematic with widespread allegations of collusion and corruption.

The current application of overloading control is complicated by the technicalities of the current system and there are current anomalies in the application of the national 9000 kg standard legal axle massload (LAM). The standard is applied for vehicles with 2-6 axles and then limits LAM to 8000 kgs for 7 or 8 axle vehicles. This effectively reduces the cost-efficiency of the longer combinations.

There is evidence for an urgent need to improve the facilities, standards and levels of transport industrial training and skills development at the technical, managerial, and operational levels as described in the NFLS study¹. In road freight transport at all levels, there are deficiencies in the systems for training of drivers, operations staff, managers and technicians due to skills, systems, institutional and resource limitations.

The issue of sustainability of the road freight sector is in need of urgent evaluation due to deteriorating road conditions on provincial roads and funding limitations for maintenance. This is causing increased vehicle operation costs (which are tax deductible), inflationary pressures on commodity prices and reduced competitiveness of local industry and agriculture. In addition, there are serious congestion and safety issues at specific points on the corridors and in urban areas that are in need of urgent attention as they cause inefficiencies in road freight logistics.

System development is required to permit third party development of coordinated road-rail logistics systems; the current railway system is highly effective for transport of bulk commodities but does not offer services for short-haul and breakbulk cargoes.

South Africa is part of SADC and therefore party to the drive for liberalisation of inter-state transport and promotion of regional trade. The current Tripartite initiative to harmonise quality regulation in the road freight sector through a regionally-linked operator registration system (TRIPS) will require RSA participation.

The repeal of quantity regulation (permits) and engagement in the Multilateral Cross-Border Road Transport Agreement (MCBRTA) will require some institutional changes and will present opportunities for improving the road freight regulatory system in the region and country. There is evident need for improvement of the logistical efficiency of the border posts with neighbouring countries in the interests of improving the cost-efficient movement of goods.

The current communication and coordination structures do not provide adequate liaison with the large numbers of road freight operators in all sectors of the economy. This is due in part by the fact that road freight operations are “embedded” in industries. The situation minimises the contacts between government decision makers and the users and providers of road freight logistics and hampers cooperation with the industry management and decision makers. The need for improved coordination is also evident between different levels of government and between the many authorities, agencies and departments that are the regulators of the road freight sector.

There is an on-going need for more information about road freight movements as a tool for planning and regulation of the sector. The lack of road accident and crash statistics is a major problem in the development of road safety strategies for improvement to the currently high level of road fatalities and injuries.

¹ Review of the National Freight Logistics Strategy: DOT 2016 (Ch. 8)

The abovementioned issues and challenges are described in some detail and the recommended remedial actions that are proposed in this report are described below.

The creation of the Road Transport Authority and definition of the Operator Registration system will require amendments to the NRTA and other legislation. It will be most effective if DOT appoints a task team to drive the process and to ensure coordination with the SADC TRIPS system.

Implementation of AARTO will support improvement to Operator Quality and coordination with all provinces in the revision of overloading control strategies, which will be an on-going process requiring a high level of interaction between tiers of government.

The road to rail strategic actions will be dependent on the implementation of the recommendations of NFLS 2016, as the creation of railway capacity must precede any plans to shift cargo and the decisions will be made by the private sector producers, importers and exporters of goods.

Improvement in the training of drivers will require the development of a strategy to provide for training institutions and the funding of suitably professional training institutions and provision for training bursaries for aspirant trainees. This should be coordinated with TETA and provinces.

The Department of Transport will coordinate the responses to the current SADC liberalisation and harmonisation initiatives in road transport which will also involve Foreign Affairs, Border Management Agency (BMA) and CBRTA.

Department of Transport should review the arrangements for collection and reporting of national accident statistics in order to permit planning and monitoring of road safety measures, in terms of international agreements.

The Road Freight BEE Charter has been accepted by the road freight sector to create opportunities for BEE.² The Department of Transport should evaluate options for supporting training and skills development to optimise the potential for creation of new black entrepreneurs (and the development of existing ones) who can participate in economic opportunities throughout the industry value chain.

The DOT will need to plan and define strategies to provide for improved coordination with various agencies, provinces, Treasury, parastatals, and other departments as well as the private sector industries and suppliers of road freight transport in order to implement all the recommendations in the Road Freight Strategy.

In addition to the abovementioned broad problems there are a number of incomplete, unresolved, or outstanding legislation issues that described in this strategy and are in need of resolution and implementation such as:

² Road Freight Sub-Sector Code for BBBEE – Gazette No.32511: 21 Aug. 2009

- ❖ AARTO (23rd Amendment to NRTA) Feb 2016
- ❖ PrDP
- ❖ Driving Hours (Reg. 272 A-E)
- ❖ Provisional Driving licences (Reg. 107, 108,109)
- ❖ Driver Age limits
- ❖ Driving Instructors (Reg.114 A-F)
- ❖ Driving School regulations (Reg. 114 G – Q)
- ❖ Speed limiters (Reg.215)
- ❖ Driving Hours
- ❖ PBS Vehicles
- ❖ RTMS

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DRAFT REPORT 2

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ACRONYMS AND ABBREVIATIONS

AADTT	Annual Average Daily Truck Traffic
AARTO	Administrative Adjudication of Road Traffic Offences
ARF	Accident Report Form
BEE	Black Economic Empowerment
BICO	Bureau for Industrial Cooperation (Dar es Salaam)
CSIR	Council for Scientific and Industrial Research
DOT	Department of Transport
ETA	eThekwini Transport Authority
FESARTA	Federation of East and Southern African Transport Associations
GHG	Greenhouse Gases
HGV	Heavy Goods Vehicle
HSRC	Human Sciences Research Council
ITP	Integrated Transport Plan
LCV	Longer Combination Vehicles
LDV	Light Delivery Vehicle
LAM	Legal Axle Mass Load
MTPA	Million tons per annum
MSA	Moving South Africa
NAMA	Nationally Appropriate Mitigation Action
NATMAP	National Transport Master Plan
NDP	National Development Plan
NRCS	National Registrar for Compulsory Specifications
NFLS	National Freight Logistics Strategy
NLFSF	National Land Freight Strategic Framework
NFMF	National Freight Monitoring Framework
NLTA	National Land Transport Act.
NRTA	National Road Traffic Act
NTPS	National Transport Policy Study
PBS	Performance Based Standards
PLTF	Provincial Land Transport Framework
PrDP	Professional Driver Permit
PTS	Public Transport Strategy
RAU	Rand Afrikaans University
RCP	Responsible Competent Person
RFS	Road Freight Strategy

RTIA	Road Traffic Infringement Agency
RTMS	Road Transport Management System
RTQS	Road Transport Quality System
SAAFF	South African Association of Freight Forwarders
SABS	South African Bureau of Standards
SANS	South African National Standards Authority
SAPS	SA Police Services
SAR&H	South African Railways and Harbours
SETA	Sectoral Education and Training Authority
SIPS	Strategic Infrastructure Plan
SOLAS	Safety of Life at Sea
STER	Single Transport Economic Regulator
TETA	Transport Education and Training Authority
TOR	Terms of Reference
UJ	University of Johannesburg
UNFCCC	United Nations Framework Convention on Climate Change

NATIONAL ROAD FREIGHT STRATEGY

DRAFT REPORT

1. INTRODUCTION

The Department of Transport is currently in the process of developing a Road Freight Strategy (RFS) for South Africa in order to address the many issues which have current negative impacts on the efficiency of the sector. The intention of the RFS is to create an integrated regulatory and operational framework which will enable South Africa to achieve best international standards of road freight operations. This is essential for the future logistical support of industrial growth, road safety, limitation of externalities and the creation of opportunities for employment.

In the development of a Road Freight Strategy for South Africa it is useful to note the historical developments which have led to the current situation. South African freight transport policy was established at Union in 1910 with high levels of monopoly operation of State-owned transport services in all modes to support the developing economy of the country. Subsequent economic development has led to transition from dependence on agriculture and mining to a sophisticated manufacturing and commercial economy with the need for a wide range of efficient freight logistics services.

The first major changes in the freight transport institutional structure came in 1985 when the National Transport Policy Study (NTPS), commissioned by the Department of Transport, led to supply-side (quantity) deregulation of road freight transport³. In the same period the four Provincial Road Traffic Ordinances were unified in the National Road Traffic Act (No. 29 of 1989) to create a road transport quality system (RTQS). The deregulation of supply of road transport led to rapid expansion of the industry which was necessitated by the growth of manufacturing and increasing international import and export volumes of industrial and consumer goods.

Road freight transport continues to increase (48% in last 10 years) with heavy goods vehicles (HGVs) making up 34% of traffic on the N3, and HGV accidents on that route at the same level as light vehicles. The levels of enforcement are not keeping pace with the growth of traffic thereby aggravating the cost of accidents (R300 billion p.a.)⁴. The accident management and reporting systems are failing to effectively monitor the causes and extent of the deficiencies in the enforcement systems thereby hampering efforts to improve road safety. Overloading control is ineffective due to systemic failures.

The National Development Plan (NDP) is based on a projected average annual growth in Gross Domestic Product (GDP) of 5.44% p.a. whereas the actual expansion of GDP was 2.66% between 2006 and 2013, and has now reduced further to an estimated 1.4% p.a. in 2016. The fiscal constraints resulting from the depressed economy have serious implications for the maintenance of infrastructure, industrial growth, employment and the balance of payments.

The total transport sector was estimated to contribute 5.5% to GDP and 4% to total employment in 2013 with the road freight sector being the largest section of the overall freight transport sector. The road freight industry faces a reduction of business activity, decreased revenues, rising costs due to deteriorating roads and the closure of businesses thereby increasing unemployment.

³ Transport Deregulation Act No. 80 of 1988

⁴ Minister Dipuo Peters: Transport Budget Vote 2015/16

The transport and logistics sector has failed to support effective regional integration and the development of trade within the region and faces increasing pressures for harmonisation of standards and liberalisation of transport in the interest of effective cross-border trade. This is affected by the speed of development of effective corridors and improved systems to support import/export trade in the region.

There is decreasing availability of technical, managerial and operational skills in the road freight sector and urgent need for revision and improvement of the processes and standards of training for trainers, drivers and examiners for commercial vehicles. The condition of heavy goods and passenger vehicles is unsatisfactory (with roadside inspections showing 65-80% defective vehicles)⁵ and the annual inspection system unable to achieve effective enforcement of quality standards.

The pressures of increasing costs of fuel, labour, vehicle finance and reducing turnover are forcing transport operators to do all possible actions to contain costs and increase efficiency. In many cases this process will lead to reduced vehicle maintenance, extending vehicle life, overloading and undercutting quotations in order to maximise vehicle utilisation.

In order to control the externalities of road damage, pollution, speeding, accidents and other negative actions by operators, the Department of Transport has identified the need for the revision of existing regulatory measures and enhancement of the planning, coordination and strategic framework of the road freight sector.

2. PROJECT METHODOLOGY

The methodology used in the development of this Road Freight Strategy followed a 6 step approach which comprised the following activities.

- i) Literature analysis which included the current regulatory framework, legislation, and institutional responsibilities regarding road freight regulation and management. Review of regulation in other countries, including the historical development of the mode and the principles of transport regulation that are universally applicable to achieve quality regulation and limitation of externalities. The review of the current legislative framework, stakeholder interviews, international benchmarking
- ii) Review of the South African road freight sector from available statistics and examination of the current legislative framework including contacts with legal and operational experts in the mode.
- iii) Definition of the major issues that have impacts on operational efficiency, control of quality, road safety, enforcement effectiveness, skills deficiencies, coordination and liaison between industry and government, and the current status of infrastructure.
- iv) Development of proposed interventions based on international best practises to address the identified challenges.
- v) Discussion and consultation with role players, legal expert, industry participants, DOT steering committee and academics to test the proposals
- vi) Preparation of a report describing the need, purpose and detailed proposals for the strategic interventions that should be included in the Road Freight Strategy and presentation of the recommendations to an industry stakeholder round table.

⁵ Fleetwatch – June 2016

- vii) Compilation of the Final Report on the Road Freight Strategy, including the feedback from the stakeholder consultations.

3. PROBLEM STATEMENT

Regulation of commercial transport (passenger and goods) is an essential function of the transport authorities (national, provincial and municipal) in all countries. In South Africa prior to 1988, the road freight industry was regulated by the Road Transportation Act which imposed a requirement for permits for road haulage over 50 kms in order to protect the railways. The road freight strategy was broadly re-defined within the Road Transport Quality System (RTQS) which was devised in response to the deregulation of road freight transport in 1988.

The regulation of commercial transport as a separate activity from road traffic management is necessary due to the fact that transport activities take place in the public space, using state owned infrastructure and the transport operators must be held accountable for the externalities (accidents, pollution, infrastructure damage). Quality-regulated competition in the industry “levels the playing field” for operators and increases efficiency whilst reducing externality costs to society and government.

The deficiencies in the legislation and regulatory systems which were developed at that time have become more evident as the industry has expanded and changed in character, in response to the demands of the economy. The lack of a single Road Transport Authority to manage the monitoring and control process has left decision making fragmented and subject to manipulation by the various authorities and agencies now involved in managing the regulation of the sector. The wide range of sub-standard features in the regulation and management of the mode underscore the need for re-definition of the South African Road Freight Strategy.

3.1 Operator Registration

Road freight operators are responsible for compliance with all standards defined for vehicles, drivers, loads, operations and elimination of externalities caused by their activities. The basic regulatory instrument is the National Road Traffic Act (No. 29 Of 1989) (NRTA) which is designed to control all vehicle movements on public roads. Contrary to international best practise, and basic principles of transport regulation, there is no effective regulation of road transport operators as business entities. This omission was caused by defective system development in the RTQS, by failing to define a National Road Transport Authority and to define criteria for operator registration with the mandatory nomination of responsible competent persons to monitor and ensure compliance with operational quality standards.

3.2 Law Enforcement

Ineffective Regulation and Enforcement

The need for re-definition of the South African Road Freight Strategy is underscored by the current problems with accidents, overloading and low levels of enforcement, caused by sub-standard features in the regulation and management of the mode. The lack of enforcement of the quality of road freight transport operations is evident in areas such as driving hours; driver; facilities; lifestyle; fatigue; operations pressures and schedules; effects of delays; speeding; vehicle condition; overloading; and lack of operator accountability.

These are aggravated by many areas of ineffective regulation and enforcement which include policing efficiency; hours; communications gaps to emergency centres; EMRS capacity shortages in many areas; emergency response capabilities; on site controls; ineffective accident monitoring and reporting systems; ineffective overloading control; minimal practical national road safety coordination; ineffective control of vehicle condition;

aggressive light vehicle drivers; damaged roads, urban and freeway congestion and lack of truckstops, rest and parking facilities.

There have been several amendments to standards and the introduction of regulations that have proved to be difficult to enforce and control. There has also been a very apparent lack of coordination between authorities and the transport operators, aggravated by the fact that the biggest proportion of road freight transport is “embedded” in other industries which operate vehicles for their own account. The lack of coordination is also apparent between levels of government and various agencies with involvement in the sector.

A further aspect that requires attention is the definition of standards and the methods for monitoring and enforcement of overloading. There is need for review and revision of the Legal Axle Massload (LAM) which is defined within the NRTA. Removal of some illogical anomalies in the LAM regulations can reduce corridor traffic volumes and improve the cost-effectiveness of freight transport. The current definitions are complex and difficult to control which has significant implications for the methods of monitoring overloading. Future use of High-speed-weigh-in-motion technology coupled to number plate recognition cameras and computerised databases will permit increased effectiveness. This will also increase efficiency of enforcement officers and at the same time reduce options for corruption.

There are a number of current regulatory anomalies, ineffective or impractical legislation and widespread avoidance, abuse and instances of collusion and corruption which are in urgent need of effective strategic intervention. Current regulatory issues include; management of Roadworthiness Testing Centres (RWTCs); Performance Based Standards (PBS) Vehicles; Road Transport Management System (RTMS); Decriminalisation of Road Regulations – AARTO; Professional Driving Permit (PrDP); Consignor /consignee regulations; Driving hours; Truckstops.

A further series of negative issues relate to the externalities of road freight such as; air pollution, spillage, leakage and littering of roads and verges; wear and damage to roads; road congestion; noise, dust and smells (pollution and noise); improper use of verges, pavements, open spaces, lack of control of road space; road obstruction or blockage, (slow travel, parking, load handling, breakdowns and crashes); road accidents and fatalities; anti-social behaviour, alcohol, smuggling, human trafficking, prostitution, drugs; need for policing, emergency rescue services, hospital casualty capacity. The current levels of emphasis of road safety are very low with minimal effective action being planned or implemented at all levels of authority, apart from some pockets of activity e.g. eThekweni and Cape Town.

3.3 Integrated Planning

The current communication and coordination structures between government and the road transport sector need revision to include liaison with the large numbers of road freight operators in all sectors of the economy. The current isolation from users and providers of road freight logistics hampers cooperation. There is need to create effective high level involvement by private sector as described in the National Freight Logistics Strategy. There is also a need for more effective coordination between different levels of government and between the many authorities, agencies and departments that are the regulators of the road freight sector.

The road freight corridors are the major arteries of the South African industrial logistics systems for intercity and urban distribution of consumer goods. There are serious congestion and safety issues at specific points on the corridors that are in need of urgent attention. There are inefficiencies in road freight logistics on corridors and in urban and rural areas and an evident need for integrated planning to address the problems including all tiers of government and relevant authorities.

The issue of sustainability of the road freight sector is in need of urgent evaluation due to deteriorating road conditions on provincial roads and funding limitations for maintenance. This is causing increased vehicle operation costs, inflationary pressures on commodity prices and reduced competitiveness of local industry and agriculture.

3.4 Road – Rail Coordination

The current railway system is highly effective for transport of bulk commodities but does not offer services for short-haul and breakbulk cargoes. There is a need for system development to permit third party development of coordinated road-rail logistics systems as mentioned in the NFLS study⁶.

3.5 Training and Skills Development

One of the most disturbing features of the current road freight situation is the growing problems with road safety in relation to road freight operations. This aggravated by a large number of deficiencies in the existing training systems for creation of capacity, competence and skills development. These include driver training and competence; driver licensing – age, categories, testing; technicians training; vehicle inspectors training; driver examiners training; supervisory and operations managerial training.

The 10th State of Logistics survey by CSIR made the following comments, *“South Africa spends more than 20% of its budget on education. It however remains doubtful whether this money is well spent. It is plainly visible across industries that the current education system does not provide the human skills needed in the public and private sectors. Without the appropriate human capital, the country will not sustainably obtain a growth rate of more than 2 – 3%, which in turn will cause a further rise in the official unemployment rate of 25%. Skills are either unavailable due to an inadequate education system or unattainable due to unrealistic wage requirements and stringent employment regulations”*⁷

*With South Africa’s dismal road accident track record, it is estimated that road accidents involving freight vehicles amounted to another R15 billion that was not reflected in the transport costs for 2012. Noise, congestion, land use and policing are other externalities incurred by the public. Together externality costs amounted to R40 billion in 2012 – this would have been a 10% increase in total logistics costs for 2012 if these costs were reflected on financial statements*⁸.

*The skills shortage in South Africa remains critical. The World Economic Forum’s Global Competitiveness Report 2013 - 2014 identifies that an inadequately educated workforce is the most problematic factor for doing business in South Africa. The 2014 Barloworld Logistics’ annual supply chain foresight report identifies the lack of relevant skills/talent as the key strategic business constraint and the fourth highest supply chain constraint.*⁹

3.6 Regional Coordination

South Africa is part of SADC and party to the drive for liberalisation of inter-state transport and promotion of regional trade. The repeal of quantity regulation (permits) and engagement in the Multilateral Cross-Border Road Transport Agreement (MCBRTA) will require some institutional changes and will present opportunities for improving the road freight regulatory system in the region and country. The current Tripartite initiative to harmonise quality regulation in the road freight sector through a regionally-linked operator registration system (TRIPS) will require RSA participation. There is also evident need for improvement of the logistical efficiency of the border posts with neighbouring countries in the interests of

⁶ Review of the National Freight Logistics Strategy: DOT 2016 (Ch. 8)

⁷ 10th Annual State of Logistics Survey CSIR – 2013 p5

⁸ Op cit p51

⁹ 10th Annual State of Logistics Survey CSIR – 2013 p76

improving the cost-efficient movement of goods.

3.7 Lack of Road Freight Information

There is a current lack of information about road freight operations and an on-going need for more statistical data about road freight movements as a tool for planning and regulation of the sector. The use of some of the modern technology now available and in current development by SANRAL and Provinces, such as High Speed Weigh-in-Motion (HSWIM) and number plate recognition cameras, will provide a means to improve this situation. The DOT needs to engage and commission research in this area. The information system must be developed to provide an integrated view of the total transport activities in all modes. The lack of national accident statistics is a major issue with impacts on road safety planning and monitoring of enforcement activities.

3.8 Promotion of BEE

The expansion of BEE business in the road freight sector is hampered by the currently depressed transport market due to the international and local economic situation. As the sector expands with increasing industrial output it will create further potential for BEE business creation. The implementation of the Road Freight Sub-Sector Code for BBBEE will assist this development. The Charter underscores the need for improving opportunities for training and development of supporting systems.¹⁰

4. STRATEGIC FOCUS

4.1 Vision

The vision for the Road Freight Strategy is a transition from the current situation to:

“An effective regulatory and institutional framework using international best practise systems, technology and efficient management to provide high standards of operational quality and minimal externalities in a sustainable road freight sector which provides efficient service to South African industry”.

4.2 Mission

The mission of the current process of development of a Road Freight Strategy for the country is therefore to identify the deficiencies in the current systems, procedures, structures, processes, standards and responsibilities and to devise improvements, changes and to remedy current defects by introducing best possible practises and systems.

4.3 Values

The values that define the effectiveness of the road freight regulatory system cover a range of different facets of the operations which may be described as follows;

Enforcement	-	monitoring and control of standards
Operator Fitness	-	competent freight transport operators
Road safety	-	competent drivers
Vehicles Fitness	-	vehicle condition, driving behaviour
Legal Loading	-	compliance with axle load limits
Infrastructure	-	protection of roads, bridges, urban property
Externalities	-	pollution, congestion, anti-social behaviour
Operations	-	load securement, driver hours, routing
Competence	-	competent management of operations
Competition	-	quality-regulated competition

¹⁰ Road Freight Sub-Sector Code for BBBEE – Gazette No.32511: 21 Aug. 2009 p4

The guiding principles and strategic focus of the recommended changes to the road freight strategy are the improvement of efficiency of all aspects of the sector, and optimising the use of resources.

This includes improvement to the efficiency of the regulatory system for control of all aspects of road freight operations; including, driver competence, accident recording and reporting, control of overloading, control of speed, fatigue, transport of dangerous goods and abnormal load. These improvements will be achieved within the proposed framework provided by effective Operator Registration with a Road Freight Authority and the development of supporting systems. They will include control of corruption and collusion by improved systems, monitoring and reporting. Improving the efficiency of cross-border transport to reduce delay and costs.

Improvement to communications between government and the private sector industrial users and suppliers of freight transport, in planning, formulation of regulations, allocating of costs for externalities and to cover the whole range of mutually important improvement required in the road freight and logistics sectors to support the national initiatives to accelerate the economy.

In order to achieve all the above mentioned improvements to the existing situation there will be need for well-planned execution of the recommendations in this report. The mission will be driven by the Department of Transport, but will require extensive consultation, negotiation, coordination and legislative and institutional change. The measures required to achieve international standards of “quality” of road freight operations are covered by the Strategic Initiatives described in this strategy.

The improvements to systems and processes described in this strategy will contribute to improved use of resources such as infrastructure, policing and enforcement costs, definition of cost responsibilities and recoveries, reduced wastage by coordinating intra-governmental communications and systems.

4.3 Strategic Objectives

The objectives of the present revision of the Road Freight Strategy are to optimise the efficiency of road freight services to industry and to reduce the externalities of the mode in terms of accidents, pollution, congestion, infrastructure damage and anti-social activities.

To improve the effectiveness of regulation and enforcement of quality standards and to ensure equity between road freight transport operators within a system of quality-regulated competition.

To create effective training and skills development options for all functions in the industry, to encourage professionalism in the management, operation and support of road freight operations, and to encourage increasing BEE participation in the industry

To provide for effective liaison between all role players in the sector; all tiers of government, private sector operators and industrial users and to promote optimal intermodal coordination and logistical efficiency as well as improving the planning of road freight infrastructure provision and management.

To promote regional trade integration and improve cross border transport efficiency to enhance national competitiveness.

4.4 Policy and Legislative Mandate

The main policy and regulatory structures that have impacts on the road freight sector are described below.

4.4.1 Constitution

In terms of the South African Constitution the overall responsibility for transport policy resides with the Department of Transport. It must however be noted that several other entities have jurisdiction over specified functions such as the Provincial implementation of the National Road Traffic Act and responsibility for roads. In addition, there are several other state entities and agencies of the DOT which have specific powers and mandates relating to freight transport, such as CBRTA, RTMC, RTIA, CSIR and SABS/NRCS.

In addition, road freight transport throughout the country is affected by municipal bylaws and regulations enforced by local authorities in the interest of reducing the impact of freight transport on urban populations. The municipal bylaws and regulations are unfortunately developed in isolation and although there is a commonality of purpose, the exact detail of municipal regulation with regard to road freight presents a problem to operators and to enforcement authorities.

Traffic management by municipalities includes definition of permissible speed, road signage and demarcation of prohibited areas, parking for freight vehicles, with the enforcement of stopping, parking and in some areas, the control of overloading. Transport of dangerous goods, in urban areas, is ineffectively managed by the local authorities and very little preparation is made for emergencies. The planning in urban areas by municipal authorities for effective freight transport movements is inadequate in even the largest and busiest municipal areas.

4.4.2 National Development Plan (NDP)

The emphasis of the NDP is on promoting efficiency in transport and effective regulation of externalities. The NDP vision includes recognition of the need for private sector participation: *“Government should recognise where competing service providers would best meet transport needs and enable licensing where appropriate, all within a framework of strong effective regulation of public and private transport”*.¹¹

4.4.3 National Road Traffic Act (No. 29 of 1989)

The National Road Traffic Act (No.29 of 1989) (NRTA) was promulgated to create a uniform set of road traffic regulations for the entire country. The intention of the Act was to introduce the harmonised Road Transport Quality System (RTQS) throughout the country. The elements of the system included registration of operators, responsible persons, professional driver permits, standardised credit card driver licences, a national vehicle register, unified licence fees, scale of fines, measures for control of overloading. The regulations cover standardisation of transport of abnormal loads, uniform terms for transport of dangerous goods, requirements for training and licensing of drivers, annual inspections for certificates of roadworthiness (COR), and initially, the standardisation of number plate formats for vehicles. Several of the abovementioned provisions were never implemented and the current performance of some regulatory activities is sub-standard and in need of further strategic interventions as recommended in later sections of this report.

The standardisation of traffic enforcement operations in all provinces was addressed in the NRTA to achieve uniform (or similar) standards for issues such as speed limits, road design, road signage. The RTQS included a requirement for mandatory national third party insurance on all vehicles. The control of road traffic in relation to registrations, payments and

¹¹National Development Plan – Vision p 161

enforcement, were derogated to the provincial administrations. The coordination of transport regulatory functions is fragmented and levels of control and enforcement are not optimal due to the need for improved coordination between different spheres of government.

With the growth of the South African economy and the growing emphasis on export of bulk mineral mining products, there were very rapid increases in the use of road transport for distribution of consumer goods from centralised distribution centres to smaller communities. There was also a trend to usage of heavy goods vehicles (HGVs) to transport agricultural commodities such as maize, wheat, fertiliser, sugarcane, timber and specialised transport of products such as fruit, vegetables and meat. The lack of adequate regulatory control of operational quality in the road freight sector has resulted from the defects in the legislation as described in later sections of this report.

4.4.4 TRH 11 – Abnormal Loads and Vehicles - 8th Ed: CSIR: Aug. 2009

The TRH 11 regulations for control of abnormal loads is the standard by which all abnormal vehicle and load movements are controlled by the nine provinces. The current application of the regulations is sub-optimal, with provincial authorities administering the processes and procedures in ways that frustrate the hauliers in this specialised and very expensive sector of the road freight industry. There is a need for standardisation of the abnormal load application and permit systems and processes both domestically and regionally in the interests of reducing delays and costs. It is to be noted that Western Cape have commissioned an IT system which may prove suitable for wider usage.

4.4.5 Regulation of Transport of Dangerous Goods

The transport of dangerous goods is regulated in terms the National Road Traffic Act as well as by references to a range of SABS standards for performance of the various activities involved in the storage, loading, transport and unloading of dangerous goods. The very detailed legislation developed by SABS (now NRCS) covers the specifications for vehicles, and the description of the Hazchem signage system which is intended to inform authorities and emergency services in the event of accidents.

Although the detailed regulatory framework and standards has been developed, and conform to international best practice, they are not supported by adequately trained, equipped enforcement authorities and emergency services. In many areas they are inadequate, unsatisfactory, or incomplete. The control of transport of dangerous goods is complicated by the large number of origins and destinations and the fact that much of the transport takes place within the urban areas controlled by a range of municipalities.

There is need for a national study of the application of current standards and development of monitoring and control systems.

4.4.6 Administrative Adjudication of Road Traffic Offences Act (AARTO) (No 46 of 1998)

In response to the problems with control of light and heavy vehicle operations the Department of Transport promulgated the Administrative Adjudication of Road Traffic Offences Act (No 46 of 1998) for the purpose of introducing a points-demerit system. The system has been extensively tested and modified but has not, after 18 years been successfully implemented on a national scale due to inherent problems with tracing offending individuals, and entities. The problem is that many of the drivers and vehicles move and change contact details frequently; whereas owner and operator records are linked to annual vehicle registrations. The definition of the terms and processes of AARTO has faced numerous challenges so that the system is still not practically operational in 2016. For freight transport, the introduction of operator registration will provide a positive business identification and greatly enhance the potential for successful implementation of AARTO.

4.4.7 Road Traffic Infringement Agency Act

The RTIA was created as an agency to administer the “infringements” incurred in terms of AARTO, but as the AARTO is still inoperative the only activity of the RTIA to the present has been the commissioning of the South African Road Safety Audit Manual (Second Edition in May 2012).

4.4.8 Road Traffic Management Corporation Act (No. 20 of 1999)

The Road Traffic Management Corporation (RTMC) commenced its operations in April 2005 with the objective of pooling powers and resources to eliminate the fragmentation of responsibilities for all aspects of road traffic management across the various levels of government in South Africa. The RTMC was established in terms of Section 3 of the Road Traffic Management Corporation Act, No. 20 of 1999, for co-operative and coordinated strategic planning, regulation, facilitation and law enforcement in respect of road traffic matters by the national, provincial and local spheres of government.

4.4.9 National Land Transport Strategic Framework (NLTsf) (2006)

National Land Transport Strategic Framework (NLTsf 2006-2011) was initiated in 2006 by the DOT and reviewed and gazetted in 2015. The NLTsf describes a broad overview of the various frameworks and plans that have been approved by government including NDP, SIPs, NLTA, Public Transport Strategy, ITPs, and PLTFs. With regard to freight transport the NLTsf notes the importance of planning to limit externalities and the need for action on the National Road Safety Strategy-2011-2020 (NRSS).

4.4.10 National Land Transport Act (No.5 of 2009)

The National Land Transport Act (NLTA) promulgated in 2009, made very brief reference to freight transport (Course 37). In terms of the Act, the Minister is required to develop freight transport strategy with due regard to national and provincial policies covering the following issues.

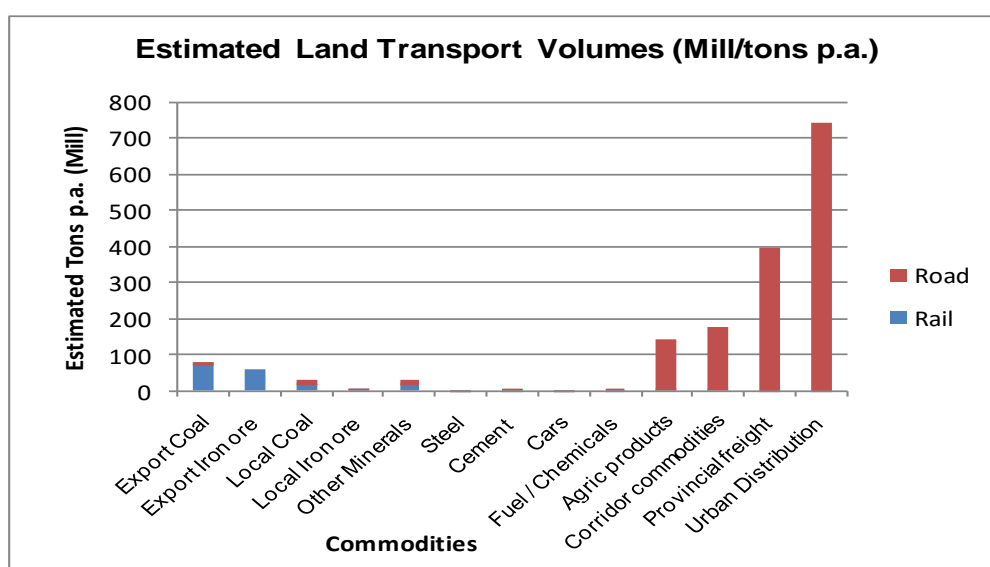
- a) Movement of goods to/from and through per area by rail or pipeline
- b) Movement of goods to and from ports and airports
- c) Identification of routes to promote seamless movements and avoid conflict with road traffic
- d) Strategic plans for movement of dangerous substances
- e) Designation of authorisation of persons transporting dangerous goods
- f) Sanctions for infringements of the above
- g) Requirement for registering authorities to apply effective regulation of fleet operations by means of the operator card system in Chapter 6 of the National Road Traffic Act (*to prevent damage to the road system and achieve the other objectives of this Act*)
- h) Publication of transport plans, and recording of substantial changes in land use and public transport infrastructure and services.

5. SITUATION ANALYSIS

5.1 Land Freight Transport

The road freight mode is the dominant means of land freight transport in South Africa. The current market shares of the land transport modes in South Africa are shown in Figure 5.1 below.

Figure 5.1: Estimated Land Freight Volumes by Mode (Mill/tons p.a. 2014)



As shown in Figure 5.1 the total land freight volume is approximately 1.67 billion tons p.a. with road freight transporting 1.5 billion and rail about 220 million tons p.a.

In the evaluation of modal potential and the scope for competition between modes the major determinants of modal choice are the “freight characteristics” of the commodities as well as the service demand of the industries which form the market for transport services for specific commodities.

The characteristics of the freight transport markets define which modes are most suitable to transport various commodities within the different transport market segments. These markets can be described as a continuum of industry and commodity characteristics from bulk to mixed and casual transport requirements, as shown in Table 5.1 below.

The upper section of the table shows the bulk commodities which are primarily transported by rail. The lower section shows the much larger break bulk volumes of industrial and FMCG commodities that are primarily transported by road. The bulk of these movements are in areas where there is no railway service; or in volumes too small for rail; or with product characteristics which make them unsuitable for handling by bulk railways.

It must also be noted that many commodities are transported several times due to movements from point of production as raw materials to their final form as finished industrial goods or consumer goods, foods or materials.

Table 5.1: Indicative Annual Volumes of Land Freight in South Africa by Freight Characteristics and Current Modal Usage (2014)¹²

Commodity Characteristics	Commodities	Annual Tons	Typical origins	Typical destinations	Modal Usage %		Primary reason for modal choice	Rail	Road
					Rail	Road		mtpa	mtpa
Bulk - Coallink Bulk - Orex Bulk - GFB	export coal	76.3	Mines	Ports	100	0	Full rail facilities	76.3	0.0
	export iron ore	59.7	Mines	Ports	100	0	Full rail facilities	59.7	0.0
	local coal	24.6	Mines	Powerstations	85	15	Some rail facilities	21.0	3.6
	local iron ore	12.0	Mines	Foundries	100	0	Some rail facilities	12.0	0.0
	local coal	9.5	Mines	Factories/ports	74	26	Few rail facilities	7.0	2.5
	other minerals	8.5	Mines	Foundries/ports	72	28	Some rail facilities	6.1	2.4
	other minerals	8.6	Quarries	Smelters	81	19	Some rail facilities	7.0	1.6
	Clinker	5.8	Quarries	Factories	86	14	Some rail facilities	5.0	0.8
	fuel/chemicals	3.9	Plants	Ports	90	10	Some rail facilities	3.5	0.4
	Grain	10.0	Silos/ports	millers	40	60	Some rail facilities	4.0	6.0
	steel	2.1	Foundries	Ports	53	47	Some rail facilities	1.1	1.0
	timber	8.0	Forest	mills /ports	75	25	Some rail facilities	6.0	2.0
	Paper and pulp	1.5	Port/plants	ports/plants	67	33	Some rail facilities	1.0	0.5
	Other bulk	4.0	Mines/agric	Plants/ports	100	0	Some rail facilities	4.0	0.0
TOTAL BULK		234.5			91	9		213.7	20.8
Break bulk	steel	1.0	Foundries	Wholesaler	1	99	No rail facilities	0.0	1.0
	cars	1.0	Ports/Plants	Ports/ Plants	40	60	Few rail facilities	0.4	0.6
	cars	1.0	Ports/Plants	Retailers	20	80	Few rail facilities	0.2	0.8
	containers	6.0	Ports/Terminals	Plants	30	70	Few rail facilities	1.8	4.2
	containers	14.0	Ports/Terminals	Ports/terminals	36	64.3	Few rail facilities	5.0	9.0
	chemicals	20.0	Factories	Users	0	100	No rail facilities	0.0	20.0
	fuel	30.0	Plant	Retailers	0	100	No rail facilities	0.0	30.0
Mixed	agric prods	111.0	Farms,silos	Farms / Mills	5	95.5	Few rail facilities	5.0	106.0
	industrial goods	550.0	Ports/factories	User industries	0	100	No rail facilities	0.0	550.0
	FMCG	500.0	Processors	Wholesale/retail	0	100	No rail facilities	0.0	500.0
	beverages	90.0	Plants	Wholesale/retail	0	100	No rail facilities	0.0	90.0
	packaging	40.0	Plants	factories/processors	0	100	No rail facilities	0.0	40.0
Casual	Construction	40.0	Suppliers	Sites	0	100	No rail facilities	0.0	40.0
	Building	20.0	Suppliers	Sites	0	100	No rail facilities	0.0	20.0
	Retail	20.0	distribution	stores	0	100	No rail facilities	0.0	20.0
TOTAL BREAK BULK		1444			1	99.1		12	1432
TOTAL LAND FREIGHT		1679	Million tons p.a.		13	86.5		226	1452

Source: NP&A

As shown in Table 5.1, out of approximately 1679 million tons of freight p.a. there is about 20 million tons of bulk cargo on road, some of which is not subject to inter-modal competition mainly due to consignments of less than train load (LTL) proportions, (for which services are not offered by the railways) or due to lack of sidings (either abandoned or at premises without rail access). In addition, there are about 30 million tons of breakbulk cargo on rail such as cars, containers and some agricultural commodities that are potentially vulnerable to

¹² National Freight Logistics Strategy – DOT 2016

road competition as it is seasonal, requires flexibility or has fluctuating volume and variable O&D requirements making it only marginally attractive to rail.

The total volume of profitable rail freight that is available for transfer from road to rail is likely to amount to considerably less than 30 million tons p.a. for reasons that are discussed further in later sections of this report.

5.2 Road Freight Sector

The total volume of road (and rail) freight transport in South Africa is not known precisely due to the diversity of operations, the fact that a large proportion of cargoes are not weighed, and the fact that there is no legal requirement to record or report any aspects of transport performance.

the total freight vehicle population in 2014 is shown in Table 5.2 below. The total number of Heavy Goods Vehicles (HGV) [including some of the “other and unknown” category is about 370,000 which amounts to 3.5% of the total motorised vehicles. Heavy load trailers, which includes semitrailers amount to 178,681 which indicates that approximately 60% of HGVs are rigid vehicles and 40% are trucktractors.

Table 5.2: Total Vehicle Population in South Africa – 2014

Descriptions	GP	KZN	WC	EC	FS	MP	NW	L	NC	Total	%
Motor cars and station wagons	2773847	913984	1144817	414645	295704	382495	287897	289051	118451	6620891	64.7
Minibuses	116114	47615	32202	21912	12005	21553	17144	20695	4518	293758	2.9
Buses, bus trains, midibuses	18699	7354	5237	3672	2751	7284	3674	5513	1630	55814	0.6
Motorcycles, quadricycles, tricycles	148035	35379	84339	23850	21202	20853	15230	10607	8548	368043	3.6
LDVs, panel vans, other light load veh's GVM <=3500kg	755381	331183	296246	185422	124484	194689	140555	200769	74384	2303113	22.5
Trucks (Heavy load vehicles GVM >3500kg)	135228	49346	39644	22225	21587	40488	18213	23400	9631	359762	3.5
Other self-propelled vehicles	35957	31938	35622	15031	37442	26720	23336	15794	8669	230509	2.3
Total self-propelled vehicles	3983261	1416799	1638107	686757	515175	694082	506049	565829	225831	10231890	100.0
Provincial % of total	38.93	13.85	16.02	6.71	5.03	6.78	4.95	5.53	2.21	100.01	100.0
Caravans	40704	7828	16771	5364	7940	10251	6692	5524	2987	104061	9.4
Light load trailers GVM <=3500kg	319823	79191	130844	52736	61369	60847	50743	38590	26923	821066	74.4
Heavy load trailers GVM >=3500kg	57611	24247	17948	7397	16622	29618	11233	8259	5746	178681	16.2
Total trailers	418138	111266	165563	65497	85931	100716	68668	52373	35656	1103808	
Provincial % of total	37.88	10.08	15	5.93	7.78	9.12	6.22	4.74	3.23	99.98	100.0
All other and unknown vehicles	5387	3205	4606	2712	4123	4216	4901	2655	1422	33227	
Total number of live vehicles	4406786	1531270	1808276	754966	605229	799014	579618	620857	262909	11368925	100.0
Provincial % of total	38.76	13.47	15.91	6.64	5.32	7.03	5.1	5.46	2.31	100	100.0

Source: eNATIS

By using the numbers in the above table and the mix of vehicle configurations from road surveys it is possible to categorise the freight vehicles by carrying capacity. When the categories are assigned typical annual kilometres and utilisation, it is possible to derive an estimated annual potential tons conveyed. The estimated tons derived from such a calculation are approximately 1.6 billion tons which can be broken down as follows:

Table 5.3: Estimated Tonnage by Distribution Area

National Corridors	140 million tons p.a
Provincial Main Routes	500 million tons p.a.
Urban Distribution	750 million tons p.a.
Rural	210 million tons p.a.
Total	1600 million tons p.a.

This agrees reasonably well with the calculations done by CSIR in the Annual Logistics Survey¹³. The calculation of average vehicle usage does not give indications of the commodities carried, weight of loads or routes used, so it is necessary to derive route and commodity information by other means. The lack of information about road freight movements is discussed in a later section of this report.

The 10th State of Logistics report 2013¹⁴ estimates that all transport costs in 2012 were 7.6% of GDP and amounted to R3138 bn p.a. the report goes on to say *“Simultaneously, the performance of the logistics industry, specifically the cost of logistics, affects the global competitiveness of South African industries. Logistics costs as a percentage of transportable GDP have grown significantly over the past four years.*

A deeper investigation of individual cost components and cost drivers shows that the increase in logistics costs is perhaps not so much the result of deteriorating efficiency in the industry but the disproportionate growth in cost drivers – especially fuel. To change the trends in underlying cost drivers or significantly mitigate their impact requires more than just operational efficiency enhancements, it requires bold steps in addressing the ingrained issues that stifle the economy as well as new directions in how supply chains operate.

The comment in the above-mentioned report lends further motivation for the development of more effective systems and the removal of the institutional and regulatory sources of inefficiency in the road freight transport sector. It must be mentioned that the transport cost figure does not include the very extensive logistics industry that is required to coordinate and support the effective import, export and distribution of goods throughout the country. It is also important to note that the “logistics” industry is not regulated by road transport legislation; only the road freight operators are.

The total of 1.6 billion tons of freight on road compares to 220 million total tons on rail (13%), which is mainly 170 million tons of bulk cargo, carried on “corridor” routes to ports, and to the major users of coal, iron ore, chemicals and fuels with smaller proportions of bulk general freight commodities to industries, ports and power stations. Road-rail market share is discussed in a later section of this report, but it can be noted that the private sector road freight and logistics industry is by far the largest component of the South African freight transport system, currently growing at a rate of 2.0 - 3.0 % p.a.

A large proportion of road freight vehicles are owned and operated by manufacturers, wholesalers, retailers, farmers and other industries in the course of their business (estimated to be about 75%). The remaining vehicles are operated for hire and reward (25%), by professional transporters that engage in the transport of a wide range of goods. The proportion of own account operators is higher in the urban and agricultural areas whilst professional carriers are more prevalent on the major long distance routes and in areas where bulk and high volume commodities such as coal, timber, grains and sugarcane are transported. There are increasing numbers of small BEE enterprises and a gradual increase in the numbers of trucking companies being transferred to BEE ownership. Due to the large numbers of small operators in the sector there are varying levels of BEE participation, but it includes several large companies e.g. Ngululu Bulk Carriers which was previously known as Lukas Potgieter Vervoer. Ngululu dominates the chrome transport sector in Mpumalanga and has contracts in Swaziland and Phalaborwa. And employs about 500 people.¹⁵ Imperial logistics has 3143 black managers in its various divisions.¹⁶

¹³State of Logistics Survey 2012: CSIR Pretoria

¹⁴ 10th Annual State of Logistics Survey CSIR - 2013

¹⁵ Engineering News – Jan 2013

¹⁶ Website www.imperiallogistics.co.za/transformation

Road Freight Operations

Corridors

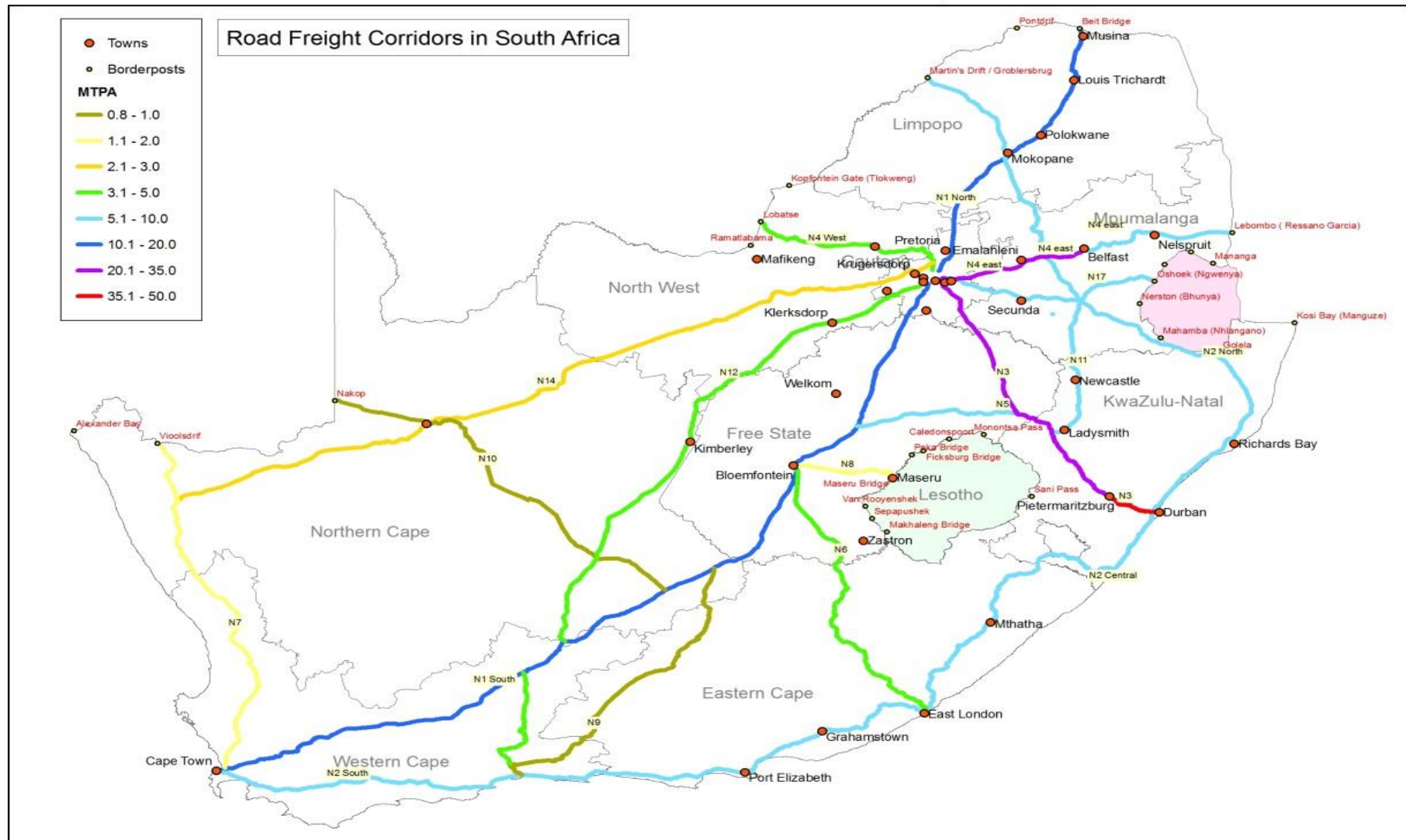
Definition of corridor

The road freight mode has expanded rapidly over the past twenty years, with volumes on the major corridors now 300% higher than in the 1980s. The expansion of the long distance freight traffic was initially into high value commodities that were formerly on rail but has continued to absorb the transport of commodities such as maize, fuel, coal, timber, vehicles, fertiliser, containers, cement and mineral ores which have been shed by the railways due to unsuitability due to consignment size, origins or destinations, and capacity constraints arising from the railways primary focus on serving their major customers for bulk commodities.

Estimation of corridor cargo volumes is dependent on records of road vehicle movements. On national roads they are monitored by South African National Roads Agency (SANRAL) and some provinces employ civil engineering and specialised traffic monitoring companies to produce data on traffic movements. The information is used for the management of the roads maintenance programmes of the different agencies. The vehicle data are divided into light and heavy vehicles and then heavy vehicles are sub-divided into short, medium and long vehicles or combinations. Axle loads are estimated and can therefore be used to derive route tonnage estimates. The information released from the systems is typically 12-18 months old and not all count points are surveyed every year, so that data for some count-points on national routes may be up to 3 years old and for provinces, even older.

The distribution of the road freight tonnage on corridors is shown in Map 5.1 below.

Map 5.1: Road Freight on National Corridors



There is no readily available information about road freight origin and destination (O&D) volumes, as there are no systems in place to record such data. Most of the information that is published has been derived from calculations based on road traffic volumes, surveys and industry data.

Table 5.4 shows the current estimated tonnage on the different corridors updated with information from SANRAL.¹⁷

Table 5.4: Estimated Road Freight on National Corridors (2014)

	CORRIDOR	CORRIDOR NAME	MTPA
1	N1 SOUTH	GAUTENG - CAPE TOWN	17.0
2	N1 NORTH	GAUTENG - BEIT BRIDGE	11.0
3	N2 SOUTH	CAPE TOWN - EAST LONDON	7.0
4	N2 CENTRAL	EAST LONDON - DURBAN	8.1
5	N2 NORTH	DURBAN - ERMELO	7.7
6	N3	GAUTENG - DURBAN	44.0
7	N4 WEST	GAUTENG - SKILPADSHEK	4.5
8	N4 EAST	GAUTENG - LEBOMBO	6.6
9	N5	HARRISMITH - WINBURG	6.5
10	N6	EAST LONDON - BLOEMFONTEIN	3.1
11	N7	CAPE TOWN - VIOOLSDRIF	1.8
12	N8	BLOEMFONTEIN - MASERU	1.3
13	N9	GEORGE - COLESBURG	1.0
14	N10	BRITSTOWN - NAKOP	0.8
15	N11	LADYSMITH - GROBLERSBRUG	6.9
16	N12	GAUTENG - BEAUFORT WEST	5.0
17	N14	GAUTENG - SPRINGBOK	3.0
18	N17	GAUTENG - OSHOEK	5.6
			140.9

Source: SANRAL Traffic Counts: NP&A Estimates

The “Corridor” concept, as shown in the above table, includes both the main national road and in some areas, the parallel provincial routes that are also used by road transporters between the major centres. A complicating factor in any discussion of corridor tonnage is the fact that there are varying levels of traffic and tonnage at different points on the “corridor” and it is difficult to define the extent of the “corridor” traffic as opposed to local and short distance traffic which uses a section of the route. Vehicle journeys may also include varying distances on several corridors.

The NFLS, 2005 made a comment on the N3 corridor capacity “*The required capacity for the Gauteng-Durban corridor was projected by MSA to reach 57 million tons in 2020....the corridor is already close to this capacity (53 million tons in 2004, 16 years sooner) and is expected to have grown by 38% by 2020.*”¹⁸

Due to reduced economic growth the increase in volume has been lower than the MSA projection, and current volumes are about 44 million tons in 2015 (only slightly higher than 2009). The most congested section is the Durban to Pietermaritzburg part of the route where HGVs account for 35% - 40% of total traffic.

In order to be able to evaluate the realities of “corridor freight” it is necessary to identify the various vehicle configurations and the cargoes carried. Analysis of the Heavy Goods Vehicle (HGV) traffic on corridor routes gives indications of the amount of bulk cargo, containers,

¹⁷ Traffic Count Yearbook – 2013: SANRAL& NP&A

¹⁸ National Freight Logistics Strategy 2005 p

liquid bulk tanker and other cargo types. An example of such an analysis at Cato Ridge on the N3 national route in 2013 is shown in Table 5.5 below.

Table 5.5: Analysis of Road Freight on N3 Corridor (Cato Ridge) 2013¹⁹

Cat No.	Vehicle Type	North	South	Total	North	South	Total	North	South	Total
		%	%	%	Vehicles p.a.	Vehicles p.a.	Vehicles p.a.	Estimated Tons p.a.	Estimated Tons p.a.	Estimated Tons p.a.
1	Tanker Dry Bulk	0.01	0.00	0.01	6,983	3,695	10,678	155,168	81,514	236,682
2	Tanker Liquid Bulk	0.09	0.11	0.10	73,682	108,894	182,576	1,637,293	2,401,937	4,039,230
3	Flat Deck	0.25	0.27	0.26	209,488	263,859	473,346	4,655,048	5,820,078	10,475,126
4	Dropside / Gateside	0.09	0.09	0.09	71,756	90,663	162,419	1,594,488	1,999,803	3,594,290
5	Beverage	0.01	0.00	0.01	4,575	4,681	9,256	101,662	103,251	204,913
6	Container Skeletal	0.08	0.06	0.07	64,532	54,447	118,979	1,433,969	1,200,969	2,634,937
7	Box / Pantehnicon	0.28	0.28	0.28	227,547	276,423	503,970	5,056,345	6,097,225	11,153,570
8	Refrigerated	0.09	0.08	0.09	73,682	80,316	153,997	1,637,293	1,771,564	3,408,857
9	Tipper	0.07	0.06	0.07	61,402	56,418	117,820	1,364,411	1,244,443	2,608,853
10	Car carrier	0.02	0.03	0.03	17,337	30,303	47,640	385,245	668,412	1,053,658
11	Lowbed	0.01	0.01	0.01	11,317	10,101	21,418	251,480	222,804	474,284
12	Other									
		1.00	1.00		822,300	979,800	1,802,100	18,272,400	21,612,000	39,884,400

Source : ETA : NP&A 2013

Note 1: Flatdecks (Cat.3) 363600 carry containers- 109746 carry general cargo.

Note 2 : Total TELs 651000 p.a.(31.2% of port volume transportable)

Note 3: Approximately 25% of containers have O&D in KZN. (Inland proportion 488,250)

Note 4 : General breakbulk cargo (Cat, 3,4,&7) 14,747,860 tons p.a.

As shown in Table 5.5 the total number of containers transported is approximately 651,000 p.a. with about 488,250 being transported beyond the borders of KwaZulu-Natal (KZN). There were approximately 2.6 million tons of dry bulk commodities and liquid bulk commodities amounted to about 4.0 million tons. The 11.0 million tons of breakbulk cargo in box and curtain sided vehicles includes a large amount of import and export cargo that is destuffed from containers as well as goods delivered between industrial concerns.

Urban Freight

In several of the major cities, there are indications of conflict between road freight vehicles and private motorists due to the increasing use of the road space for private and public transport, as well as increased freight volumes in some areas. In Durban, congestion around the port and South Durban Basin is already a major cause of inefficiency and cost and is projected to become critical in the future. In Johannesburg, the primary congestion occurs to the east of the CBD and residential areas as well as the older industrial areas to the south of the CBD such as Kaserne and City Deep. In Cape Town, congestion occurs on the N1 in the vicinity of the port as well as the links from N2 to the industrial areas and port.

There is scope for the Department of Transport to engage with industry and commerce as well as the municipal authorities to identify areas where freight transport is being negatively impacted by congestion, urban restrictions and crowding out by light vehicles, and where further trunk routes are required in order to improve the flow of freight transport in the interest of efficiency and in support of industrial growth. This is very necessary as the major metropolitan authorities are all seeking processes to “reduce the freight transport problem”

¹⁹ eThekweni Freight Logistics Study – ETA 2012

rather than planning for the ever increasing road freight load that will result from successful promotion of industrial growth.

The volumes of urban traffic continue to grow, with light vehicle growth of 5-7% p.a. and HGVs at about 3% p.a. The incidence of HGVs in urban traffic is highly localised to industrial areas and the routes between them and corridors. Several large municipalities have urgent traffic congestion problems, but they are due primarily to lack of public transport rather than increased freight traffic.

Studies in Durban²⁰, Gauteng²¹ and Cape Town²² indicate that there is need for those municipalities to improve planning of freight routes, land use and provision for truck parking and logistics areas in the major freight handling areas such as ports, terminals and large manufacturing and storage zones. The approaches to ports are of particular concern as the congestion is reducing logistical efficiency and increasing the costs of import-export cargoes. The issue of defining dedicated freight routes through cities and imposing bans for Longer Combination Vehicles (LCVs) is discussed in a later section of this report.

Rural Freight

Rural road freight operations can be classified as “agricultural rural” and “homeland rural” areas. There are significant differences between these two categories in that the agricultural rural areas are relatively well served with transport contractors which provide services to farmers, and in areas where there are larger agricultural undertakings, there is widespread provision of own account transport.

In the homeland rural areas there are severe problems with lack of freight transport due to the difficulty imposed by bad roads and the underlying problem of sporadic demand, lower incomes, and further difficulties regarding communications, financing, and in many areas the lack of facilities and equipment. As in many other countries, the provision of transport services into areas where minimal demand exists, poses a severe challenge which has generally proved intractable. The cost of transport imposes the most severe challenges to development of micro-agriculture in the remote areas, with road freight transport offering the only potential for movement of limited quantities of goods.

In order to examine the realities of freight transport demand in homeland rural areas it is essential for objective research, by area, to assess the needs and practicable solutions. In many areas the freight volumes cannot sustain any form of transport undertaking and the distances to markets make all commercial production unviable; thereby reducing the potential of those areas to barter and local sales.

The provision of services for homeland rural areas poses serious challenges as the very low volumes, seasonality; lack of processing facilities, quality of roads and the need for subsidisation are all very real challenges. There is need for area-specific research into the transport economic potential of these areas to support transport services. This must include the new Agripark developments.

²⁰ eThekweni Transport and Logistics Study - ETA 2014

²¹ Reduction of Congestion by Freight Management: Phase 1 – Gauteng Dept. Of Roads and Transport - 2013

²² Location and Extent of Current Heavy Freight Vehicle Movements in Western Cape: WC Metro 2005

6. CHALLENGES

The major current challenge is to update the freight logistics strategy to international standards within the limited resources available and within the existing institutional framework.

6.1 Operator Regulation

There is a challenge to introduce systems to monitor the effectiveness of the regulation of quality standards of commercial road freight transport. This is essential due to the fact that economic pressures and profit motives frequently lead to sub-standard operations and externalities which can endanger public safety. Current systems do not meet international best practice to identify and register commercial transport operators and to monitor the management of their operations, as evidenced by compliance with legislation and safe operating standards. It must be noted that improving the control of quality of operations will have impact on the profitability of some operators which currently benefit from the lack of control, so that not all improvements will be amicably accepted.

6.2 Law Enforcement

Implementation of regulations

The current situation is that there are a number of deficiencies in the regulatory and institutional structures that are creating inefficiency, obstructing effective enforcement of legislation and having impact on the competitiveness of South African industry. The current systems give considerable scope for corruption, collusion and profiteering due to defective systems, lack of monitoring and a culture of avoidance by "negotiation".

Enforcement Capacity

There are several aspects of the current operational quality control systems that are mentioned in the National Road Traffic Act (NRTA) but are ineffective in controlling the quality of road freight operations. There are problems with capacity, systems deficiencies, need for modern equipment, more trained manpower and better communications in the enforcement agencies at all levels. Prosecution and collection of fines are problematic with widespread allegations of collusion and corruption.

Legal Axle Massload (LAM)

There are current anomalies in the application of the national 9000 kg standard legal axle massload (LAM) for single axles on commercial vehicles. The standard is applied for vehicles with 2-6 axles and then limited to 8000 kgs for 7 or 8 axle vehicles. This effectively reduces the cost-efficiency of the longer combinations. There is also need to review the recent agreement by SADC to standardise on a 10-ton single axle LAM; (to which RSA is a signatory).

Overloading Control

The application of overloading control is currently complicated by the technicalities of the legislation. There is need to re-evaluate the effectiveness of current systems and to modernise the overloading control systems.

6.3 Integrated Planning

Roads for Freight – Corridors, Urban and Rural

The road freight corridors are the major arteries of the South African industrial logistics systems for urban and intercity consumer goods. There are serious congestion and safety issues at specific points on the corridors that are in need of urgent attention. There are inefficiencies in road freight logistics in urban and rural areas.

Coordination between Government and the Road Freight Sector

There is need to revise the current communication and coordination structures to improve liaison with the large numbers of road freight operators in all sectors of the economy. It is

important that government liaises closely with users and providers of road freight to achieve cooperation with the industry management and decision makers.

Intra-governmental coordination

It is also apparent that the South African constitutional separation of powers and responsibilities between national, provincial, municipal and other authorities and agencies will pose serious challenges to the creation of nationally cohesive, unified and controllable systems with sufficiently accountable management to ensure that they can give effect to the regulatory processes.

6.4 Road – Rail Coordination

The current railway system is highly effective for transport of bulk commodities but does not offer services for short-haul and breakbulk cargoes. The need for system changes to permit third party investment in coordinated road-rail logistics systems is mentioned in the NFLS study²³. The practicalities are described in this report.

6.5 Training and Skills Development

Skills Shortages

There is evidence of an urgent need to improve the training and skills development in road freight transport at all levels; there are deficiencies in the systems for training of drivers, operations staff, managers and technicians due to skills, systems, institutional and resource limitations. The shortage of skills in many areas means that implementation of advanced systems will be dependent on the availability of competent technical and managerial expertise.

Sustainable infrastructure

The issue of sustainability of the road freight sector is in need of urgent evaluation due to deteriorating road conditions on provincial roads and funding limitations for maintenance. This is causing increased vehicle operation costs (which are tax deductible), inflationary pressures on commodity prices and reduced competitiveness of local industry and agriculture.

6.6 Regional Coordination

There is evident need for improvement of the logistical efficiency of the border posts with neighbouring countries in the interests of improving the cost-efficient movement of goods.

South Africa is part of SADC and therefore party to the drive for liberalisation of inter-state transport and promotion of regional trade. The current Tripartite initiative to harmonise quality regulation in the road freight sector through a regionally-linked operator registration system (TRIPS) will require RSA participation. The repeal of quantity regulation (permits) and engagement in the Multilateral Cross-Border Road Transport Agreement (MCBRTA) will require some institutional changes and will present opportunities for improving the road freight regulatory system in the region and country.

6.7 Lack of Road Freight Information

There is an on-going need for more information about road freight movements as a tool for planning and regulation of the sector. The implications for better information as part of improving the regulation of road freight operational quality are described in this report.

Accident Statistics

Resolving the current problems with reporting and recording of national accident statistics will require coordinated action between agencies, provinces and the DOT.

²³ Review of the National Freight Logistics Strategy: DOT 2016 (Ch. 8)

6.8 Promotion of BEE

In terms of the Road Freight Sub-Sector Code for BBBEE the road freight sector has made commitment to promote increased access to skills, capital and opportunities and, therefore, raise the economic value added (or productivity) of every employee and enterprise in the industry. The challenge is to for stakeholders to recruit new black people into the industry and increase their skills to best-practice international levels.

There is also a need to facilitate the creation of new black entrepreneurs (and the development of existing ones) who can participate in economic opportunities throughout the industry value chain.²⁴ Achieving these objectives requires improvement of training and skills development to provide opportunities for BEE employment and ownership in the sector.

7. STRATEGIC INITIATIVES FOR ROAD FREIGHT STRATEGY

The development of an effective Road Freight Strategy is an important step in supporting industrial efficiency and national competitiveness in the production, import and export of a wide range of commodities. The following sections of this report describe the interventions required to introduce international best practises to the South Africa road freight sector and to achieve efficient enforcement and regulation in support of the industrial and economic aspirations of the country.

7.1 Operator Registration

Principles of Transport Regulation

The regulation of road freight transport has historically in many countries, including South Africa, been based on the concept of quantity (supply side) regulation (usually to protect railways). This has proved to be unsuccessful due to the impracticality of restricting “demand” and negative impacts of supply side interventions in regulated competition. It is however essential to regulate the quality of road freight operations in the public interest.

The term “regulated competition” in relation to the supply of transport services, should be construed as reference to the regulation of “quality” of all aspects of the transport operation and this is achieved through a set of standards, processes and procedures.

The processes should be identical for all operators in the country, whether they intend to perform cross-border or local transport operations. The systems must apply to all operators, both for hire and reward and for own account, as well as official vehicles. Transport quality control is a universal requirement in all modes, not limited to specific categories of transport operators.

Regulation and Control of Operational Quality

The control of all aspects of the quality of road transport operations based on the National Road Traffic Act. Compliance with all the standards and conditions in the NRTA is effectively the “Road Transport Quality System (RTQS)”. Compliance includes licenced drivers, well maintained vehicles, no overloading, management of driver behaviour e.g. speeding, fatigue, no alcohol; load securement, no illegal activities, compliance with vehicle licence regulations and adequate insurance. The Act is applicable to all users of the public roads in the country and makes no distinctions regarding the road safety aspects of commercial or private vehicle operations. The Act sets the standards for “quality” of road freight operations.

It is however a feature of commercial transport (in all modes) that there is need for monitoring of the effectiveness of regulation of quality standards due to the fact that economic pressures and profit motives frequently lead to sub-standard operations and externalities which can endanger public safety. It is international best practise (in all

²⁴ Road Freight Sub-Sector Code for BBBEE – 2009 p4

transport modes) to identify and register commercial transport operators and to monitor the management of their operations (as evidenced by compliance with legislation and safe operating standards).

Quality regulation must necessarily be based on defined, measurable, practicable standards for all aspects of the transport operation. The regulations must achieve the limitation of unwanted externalities at an affordable cost to the end users of the service. Excessively high standards (or costs, and terms of compliance) can price the transport service out of the range of the available market demand.

Management of quality regulation requires a process of defining standards and then monitoring them. This process is usually performed by authorities, but many of the actions can be successfully provided by dedicated service providers (as with vehicle inspections, weighbridges and testing stations) and may also be underwritten and controlled by associations or institutions (e.g. transport associations, insurers, accreditation bureaux). The ultimate aim of the regulatory system should be promotion of voluntary compliance.

Admission to the occupation “Road Transport Operator” should be dependent on criteria based on a profile of acceptable standards including identification of fixed domicile, legal entity, no criminal record, business registration, business plan that includes maintenance and insurance; and nomination of competent persons, (this may be supported by training, qualifications or affiliation to recognised institutions, and may initially include registration of all present incumbents, with a “grandfather clause”).

The registration and management system for commercial transport should be under the control of a Road Transport Authority (RTA) separated from the general vehicle licensing and traffic information system (though either system may inform the other). This is essential due to the need for a lot more information about quality of commercial transport operations and for frequent and regular interaction between regulator and operators. The RTA should be a registering and monitoring authority which analyses and reports operator violations to the enforcement authorities but does not engage in enforcement activities apart from operator grading and variations in certification and licencing.

The number of registered operators (including own account operators) will be relatively low and manageable by a RTA within the ambit of the Department of Transport. The establishment of the operator registers in consultation with transport associations will ensure that any deviations from standards are reported and remedied. A relatively simple but effective IT system is needed to manage the routine interactions between transporters and the registry office.

The need for changes to the “quality” regulation system is motivated by the existence of sub-standard road transport operations as evidenced by overloading, speeding, driver fatigue, illegal parking, poor vehicle condition, as well as high accident levels and costs (total RSA road accidents reportedly cost R300 billion p.a.²⁵). Freight vehicle accidents are usually attributable to fatigue, lack of driver training, operating pressures, poor vehicle condition, unlicensed drivers, overloading, and operational pressures; all of which are the responsibility of the operator. The effectiveness of the enforcement agencies is currently impaired by the difficulty in holding operators directly responsible for non-compliance with quality standards. Current monitoring systems such as eNATIS do not link vehicles and drivers to operators and therefore are unable to identify repeat offenders. The fragmented systems do not provide traffic officials with readily accessible operator information.

The basic quality standards are well defined in the National Road Traffic Act (NRTA) which

²⁵ Budget speech: Minister of Transport 2015.

provides the framework for the Road Transport Quality System (RTQS). The NRTA includes all the necessary regulations to achieve safety and protection of the infrastructure but is not achieving optimal quality of road freight operations due to ineffective current procedures and functional limitations in the supporting systems.

There are currently major problems with several aspects of enforcement of operator standards and all too often it is the driver who receives the summons and the operators are not implicated due to the overall ineffectiveness of the operator registration system. If the situation is to be changed in order to achieve effective regulation of the road freight industry, it is necessary to introduce a more effective Road Transport Operator Registration and Licensing System as described below.

Operator Registration

Operator registration is the registration of entities (individuals or companies) that have applied for registration as “Road Transport Operators” and have submitted evidence of competence and compliance with regulations.

For effective management of operator compliance, it is essential to have a National Road Transport Authority established for the specific purpose of managing the commercial transport sector (passenger and goods). The authority must have an interactive IT system that provides for continual contact with operators and maintains the database monthly including any changes to the driver and vehicle details recorded for each operator during the month and records of all offences committed by drivers, vehicles, operations or the management.

The elements of such a system are:

- | | | |
|---------------------------------------|---|------------------------------------|
| ➤ Operators | - | identification of entity: criteria |
| ➤ Responsible Competent Persons (RCP) | - | to be qualified and competent |
| ➤ Vehicle Records | - | vehicles to be roadworthy |
| ➤ Driver Records | - | drivers to be competent |
| ➤ Offences records | - | operator to be responsible |
| ➤ Certification and Grading | - | dependent on compliance |
| ➤ Monthly Updates and reports | - | performance to be monitored |

Register of Operators

The application process must provide sufficient detail to enable a competent registration authority to decide whether the entity (or individual) should be allowed to operate freight (or commercial passenger) vehicles on the public roads. The procedure requires applicants to provide details for evaluation by the competent registering authority, include identification of shareholders, directors, business addresses and telephone contact numbers, details of company bankers, insurers, maintenance providers and details of the location and facilities at each depot. All operators registered will be issued with unique numbers which identify the entity and all depots and operating centres of the entity, which are linked to the operator registration number.

Register of “Responsible Competent Persons” (RCPs)

Persons wishing to be registered as Responsible Competent Persons (RCP) in the management of transport operations will make application to the competent authority; the authority will examine the applicant’s credentials, qualifications, experience and decide on whether to register the applicant. The measure of “competence” will imply definition of acceptable “standards”. The RCPs who are nominated by operators for each depot will be linked to the Operator Register.

The standards for registration of RCPs will be defined, but it will initially be necessary to register present incumbents and allow “grandfather” clauses to kick-start the process. In order to provide for a measure of competence by which the RCP applicants can be judged, it will be necessary to establish training systems and testing procedures.

Such a process was initiated in South Africa in 1980 with the development of the RAU National Diploma courses on behalf of the Department of Transport. The courses were intended to provide the training for the Certificate of Professional Competence (CPC), which was never implemented. The courses are still offered at University of Johannesburg (more than 50,000 graduates to date). Typical Course content for qualification of Responsible Competent Persons will include the following subjects.

Basic Course Content for RCP Qualification

- | |
|---|
| <ol style="list-style-type: none"> 1. Road Transport 2. Road Traffic Law 3. Vehicle Specification 4. Driver Training and Management 5. Business Management 6. Operations Management 7. Records and Planning 8. Passenger Transport Operations |
|---|

The training must be as simple and effective as possible and the examination questions concise to permit ease and speed of marking. It will be possible to create a computerised program to be available for use throughout the country that covers all aspects and includes the material for training, and an examination and marking system, as has been done in UK.

The development of suitable training to qualify RCP holders may take some time to introduce in all areas so that it will initially, be necessary to register most incumbents nominated by the applicant Operators (excepting only those with criminal records or history of transport offences); and then to legislate gradual introduction of an examination and the training to meet the examination requirements.

Register of Employed Professional Drivers

All drivers (who will be holders of Professional Driving Permits (PrDP), will be registered and linked to the specific depot and RCP holder as well to the Operator Registration number.

The registration of all professional drivers employed by the applicant entity is necessary in order to link drivers to the depots from which they operate.

Register of Commercial Vehicles

All vehicles of over 3500 kgs under the control of the operators and their RCPs, will be recorded, for all depots defined in the in the Operator Register. The lists will include both the prime movers and trailers. Linkage to the existing national vehicle licence register will permit interaction between both databases, but the Operator Registration system must operate independently as it requires continual interaction with the registered operators.

All vehicles (including trailers) to be operated by the entity (including hired leased, borrowed, etc.) will be listed against the depots from which they operate, with a link to the RCP holder and links to the operator registration number. All vehicles will have the Operator Number painted on them. The intention is that all offences recorded against vehicles will be linked to the operator and to the RCP holder as well the driver (for driving offences).

Record of Certificate of Roadworthiness (COR), Insurance and Other Functions

This register records the declaration of the applicant and covers activities that are required to be performed to defined standards (all linked to the Operator register). The operator registration will include a record of vehicle insurance, public liability insurance and in the vehicle records section, the date of COR or periodic vehicle inspections.

Incidents and Offences register

The incidents and offences register will have links from the vehicles to the Operator Register, the Register of Responsible Competent Persons and the Register of Drivers (all violations by vehicles, drivers, operations staff, etc.).

A process will be created for collecting information about offenses and incidents relative to vehicles and drivers operated by the entity. There will be a need to include the Operator Number on all warning, Admission of Guilt, inspection, summonses and prosecution documents in addition to the driver and vehicle details.

This will permit the accumulation of information regarding operating quality. The monitoring process will include parameters for evaluation and non-compliance will result in options, for Grading as well as sanctions such as curtailment, revocation with deregistration and prohibition, for total non-compliance.

Monthly update and reporting system

The IT system will make provision for all registered operators to confirm their current details each month, and supply any amendments to Vehicles, Drivers, Competent Persons and Company details (preferably by EDI or submitted pro-forma lists).

The monthly reporting system is a crucial element of the entire operator registration system as the dynamics of transport operations are such that there are continuous changes of drivers, vehicles and company details, directors, etc. It is therefore essential that a means is provided for companies to update the information in the system at least monthly so that any offences performed by drivers and vehicles are linked to the correct entity.

The onus will be on the Registered Operators to ensure that their monthly returns are being received by the registrar and in turn, the IT system will create a return with an updated set of details each month. Where possible, this process can be handled electronically and companies can be enabled to peruse their information online as well as transmitting amendments and updates to the system. A system of passwords and controls is visualised to ensure that the system stays real and live (like a bank online accounting system).

Monthly Analytical Reports Generated by the Bureau

The IT system will provide analysis and feedback to authorities, associations and to the operators.

IT System Requirements

The development of the IT system will almost certainly rely on existing internet technology. The programmes and processes to create the necessary interlinked relational database information system will be decided by a competent service provider, but the characteristics and specifications of the system can be briefly described as follows.

The registration and database system is required to provide easily accessible interaction between operators and the RTA. The initial applications for registration by transport operators will require the competent authorities to implement a screening process to ensure that only accredited operators are registered into the system. The national database will be linked into a hub to enable access into the defined menu driven enquiry mode.

The system must permit updating of operator information on a regular (monthly) basis to ensure that all elements of the operator registration system are current. The system needs linkages to other databases in order to provide for recording offences and non-compliance with regulations. The inputs of offences must be processed and then recorded in the database against specific operators. In order to perform this function, it is implied that there will be coded linkages between drivers, vehicles, responsible competent persons, operations depots, and the unique registration number for each operator.

The system will need to provide for various means of communication between operators and the RTA offices in different areas (on-line, email, hardcopy returns, mail, and maybe various media connections) to suit the level of sophistication of the operator organisations and the available resources in the administration of the regional offices.

As the system will be designed to manage commercial road transport operations only (freight and passenger bus and coach), the database and number of records will be considerably smaller than the national traffic database (eNATIS). The operator registration system must however be dynamic and interactive between the Registered Operators and the RTA. It will be essential to design interfaces between the operators and the RTA that minimise the clerical and administrative burden, whilst maintaining accurate records. The system should integrate with the SADC-Tripartite regional TRIPS cross-border system.

It will be necessary to create a National Road Transport Authority independent of existing structures; with an efficient registration bureau, reporting, operator interaction and monitoring system to permit Grading and achievement of voluntary compliance.

Amendments to the National Road Traffic Act will require revised conditions for applications for Operator registration; registration of RCPs, training of PrDPs, and monthly returns of RCPs, drivers, vehicles, and linkage of offenses to Operators via an effective IT system. (Rationalisation of AARTO will be necessary to serve this purpose)

7.2 Law Enforcement

7.2.1 Enforcement Issues

In order to improve the effectiveness of enforcement procedures for road freight transport it is essential to address the issues of non-compliance, corruption, collusion, and lack of monitoring of all the quality aspects of the road freight environment. The failure to develop efficient monitoring systems has led to widespread disobedience in relation to safety and operational standards. The culture of non-compliance is aggravated by the ease with which drivers and operators can avoid penalties by bribery and corruption at weighbridges, borders, testing grounds, road side inspections and licencing authorities.

In the future development of monitoring and control systems it is important to include measures that deliberately remove the options for manipulation and to design systems in which automatic recording and control obviates possibilities for human interventions. There are many financial transactions that are performed via secure systems and the technology is widely available and used in the commercial world. The potential for improved performance of officials, better time utilisation, work place monitoring and ensuring accountability and performance must be an integral part of future monitoring system design.

The process of improving the enforcement of road freight legislation must necessarily include revision of some traffic legislation and liaison with the Department of Justice regarding the application of criminal procedures in relation to road freight offences. The introduction of AARTO will offer a means to relieve some of the current problems, but there will still be need to improve the relationship between the enforcement and prosecuting authorities.

The processes recommended in this project will lay the foundation for future efficiency and effectiveness of the road freight sector and improved regulation of all aspects of operational quality.

7.2.2 Administrative Adjudication of Road Traffic Offences (AARTO)

As mentioned in the section on Operator Registration, the lack of effective systems to record offences by operators is a major cause of ineffective enforcement. This is to be addressed by the introduction of AARTO. The introduction of the AARTO has been repeatedly delayed for over 10 years due to failure to resolve some fundamental issues that are blocking effective implementation. The issues include the following;

- a) Funding the system is a major problem. Prosecuting offenders via the National Prosecuting Authority is a Government function and Government pays for it with tax payers money. A policy which requires an organisation that is responsible for prosecutions of infringements to generate its own funds is fundamentally flawed. Traffic fines should never form part of a departmental budget as it distorts the objectivity of the law enforcement that is required to create safer roads.
- b) The fact that AARTO was created to be managed by an agency that needs to be self-sufficient is impractical because if the agency is very efficient it will reduce traffic infringements significantly and therefore will work itself out of funds.
- c) Summonses and communications of fines requires effective registered post services as the SA Post Office is the main supplier of postal service and was largely non-functional over the last few years it has severely affected the effectiveness of AARTO.
- d) A further major problem is that traffic departments budget for traffic fines. It is essential to redesign the system to equitably distribute or compensate for the revenue distribution to the current enforcement agencies. As stated in a) above, the concept of budgeting for fines is contrary to best practise for enforcement agencies but the reality is that alternative procedures are required if the system is to be made to work.
- e) It is apparent that traffic chiefs are resistant to the introduction of AARTO as they complain that it negatively affects the revenue stream that they receive from traffic fines. The main aim of reduced traffic offences and road safety are not the main focus. Many of the negative press statements on AARTO emanate from traffic departments which do not want national control over their local traffic fines.
- f) The application of AARTO to the general motoring public poses very serious problems due to the fact that large sections of the population (and businesses) do not have fixed addresses that can be reached by post. This will not be a constraint with regard to transport operators, once the registration system is in place but does represent a current barrier to the system.
- g) The definition of the penalties will require revision for the processes of notifying the Operator Register of violations by drivers, vehicles, operations and management which are linked to the specific depots and operating centres of transport operators.
- h) The implications for commercial drivers that exceed the points demerit limits will be instant dismissal and total employability as drivers during the "recovery" period. This will have serious implications for industrial labour relations.
- i) There is grave danger that with the introduction of AARTO there will be increased

bribery of traffic officers to avoid demerit points.

- j) The application of “demerit points” or other undefined penalties in the traffic regulations to consignors or consignees that do not operate transport may give rise to further litigation.

Revised draft regulations were published for comment in February 2016; resolution of the implementation issues is urgently required.

7.2.3 Overloading Control

Throughout South Africa, there is a failure to adequately control the overloading of goods vehicles. The primary causes of the ineffectiveness of the monitoring and control systems are; lack of coordinating management, lack of personnel, unavailability of funds for sustained 24 hour operations, lack of weighbridges to achieve geographic coverage, and inadequate legal support for the overloading enforcement system, all of which permit operators to practice avoidance of the system.

In terms of the International Maritime Organisation (IMO) SOLAS convention there will be a requirement from July 2016 for mandatory declaration of the weights of all cargo submitted for loading on vessels, including containers and break bulk cargo. No South African ports have operative road weighbridges, including Durban, which is the busiest port in the country. It is not yet clear how weights can be checked at the ports.

There are very significant variations in the control the overloading of goods vehicles in different parts of the country. It is particularly noteworthy that there is virtually no overloading control in the major metropolitan areas, and on large proportions of rural provincial roads, despite the fact that the 2-4 axle short haul vehicle groups tend to have the highest proportional overloads. It is also questionable whether there is effective use of the capital invested in weighbridges as 50% of weighbridges weigh less than 20 vehicles per day. There is high potential for use of more modern technology as described below.

There is a continual temptation for operators to overload in order to increase profit and it is therefore necessary for the control system to provide for 24-hour monitoring. The very large overloads that are apprehended on main corridors and persistent overloading by some carriers are flagrant non-compliance, which will be much more effectively controlled after introduction of the proposed national operator registration system. This is borne out by the comments regarding identifiable repeat offenders in the 2015 KZN Weighbridge report.²⁶

“there are still companies clearly disregarding the NRTA with respect to the mass regulations by continuing to implement policies of deliberate overloading “

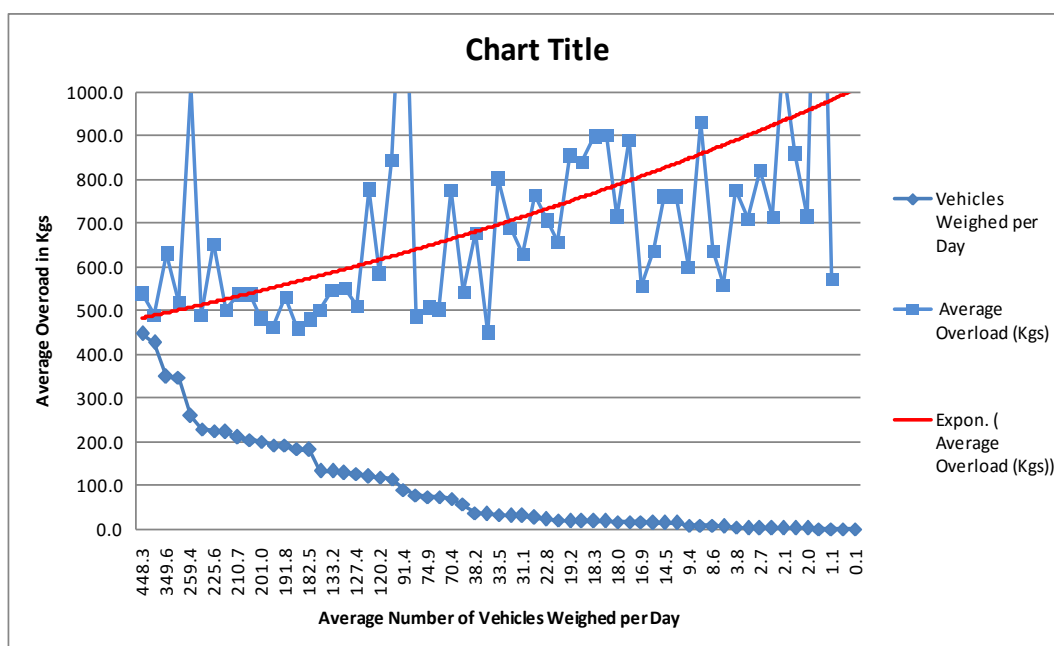
It is noteworthy that wherever there is effective overloading control and continual weighing activity throughout the 24-hour day, the levels of overloading are such that they pose no threat to the condition of the roads. The impact of regular weighing on levels of overloading is shown in Figure 6.1 below from the analysis of 195,000 loads in all provinces.

The lower curve shows the numbers of vehicles weighed per day at each weighbridge and the upper curve shows the average weight of overloads recorded at each weighbridge. The correlation between the level of weighing activities and the weight of overloads is very clear, with reduced weighing activity leading to operator complacency.

²⁶ KZN Annual Report: Overloading Control - Mikros/CSIR 2015 p13-3

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Figure 7.1: Correlation between Frequency of Weighing Activity and Average Overloads for 195,000 loads in all Provinces



Source: CSIR: NP&A

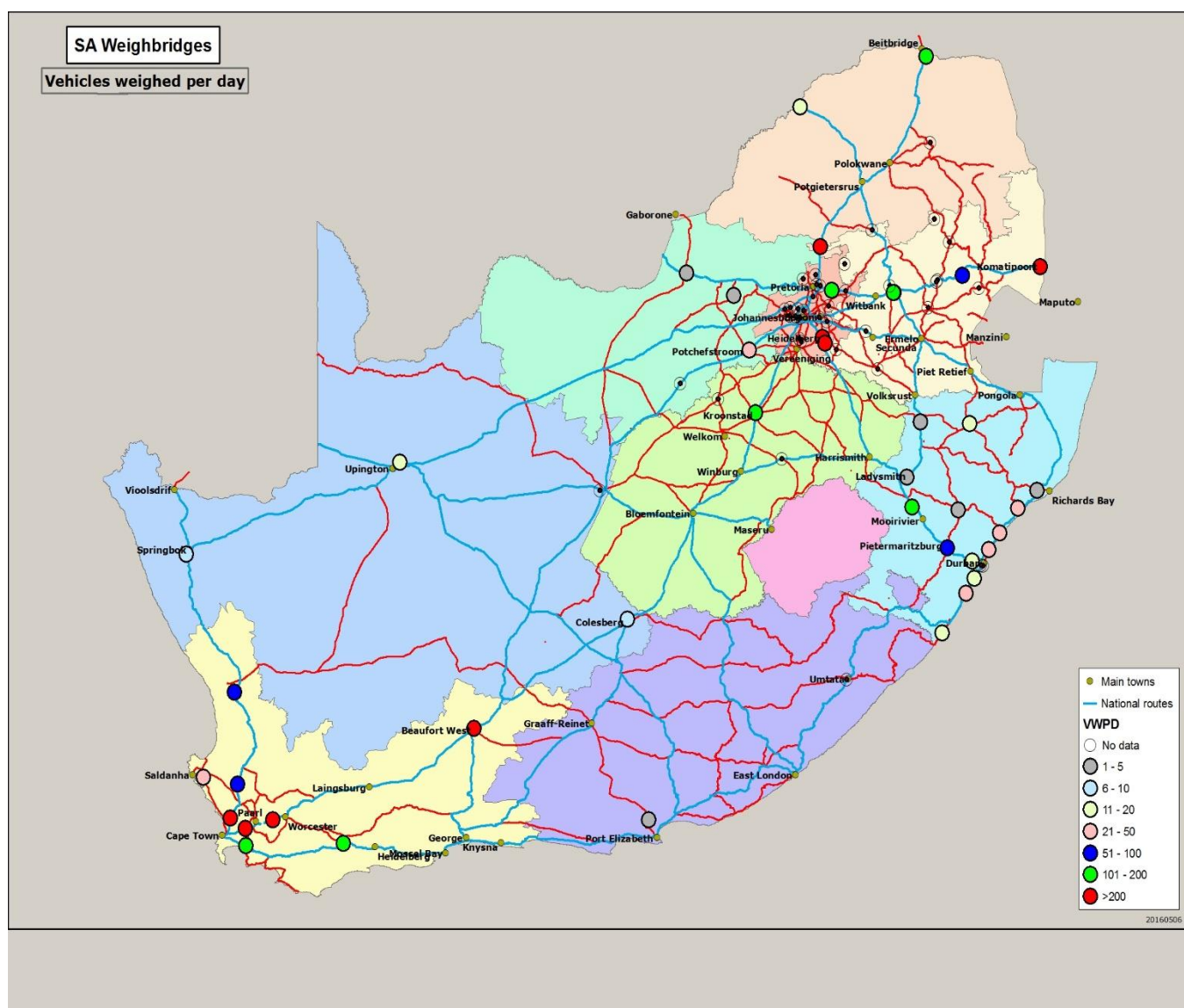
As shown in Figure 7.1 there is a direct correlation between the numbers of vehicles weighed per day and the level of overloading. The average level of overloading in the sample was 813 kgs, which is relatively insignificant in relation to the 56,000 Kgs GCM of the vehicles and the national 9000 kgs Legal Axle Massload.

The abovementioned analysis reiterates the need for a centrally controlled reporting and overloading control system that can monitor the effectiveness of the weighbridge activities as well the performance of the transport operators. In the sample of 60 weighbridges there were about 20 which weighed less than 50 vehicles per 24-hour day and only 20 that weighed over 100 vehicles per day. There are also about 20 weighbridges which do not report performance to CSIR at all. The locations of weighbridges are shown in Map 7.1.

It is also significant that the weighbridges that weigh large numbers of vehicles are located on the major freeways where there is the least impact from overloading due to the high standards of construction of the major corridor routes. The lower levels of overloading control take place where the roads are most vulnerable to overloading, and the limited operational hours at those weighbridges allow operators to easily avoid them when open.

There is also need to revisit the arbitrary 56 ton maximum GCM for 7 axle combinations as it is likely that the economic benefits of allowing full usage of axle load regulations would greatly outweigh the road maintenance cost. This is described in later sections of the report.

Map 7.1: Location of Weighbridges in South Africa



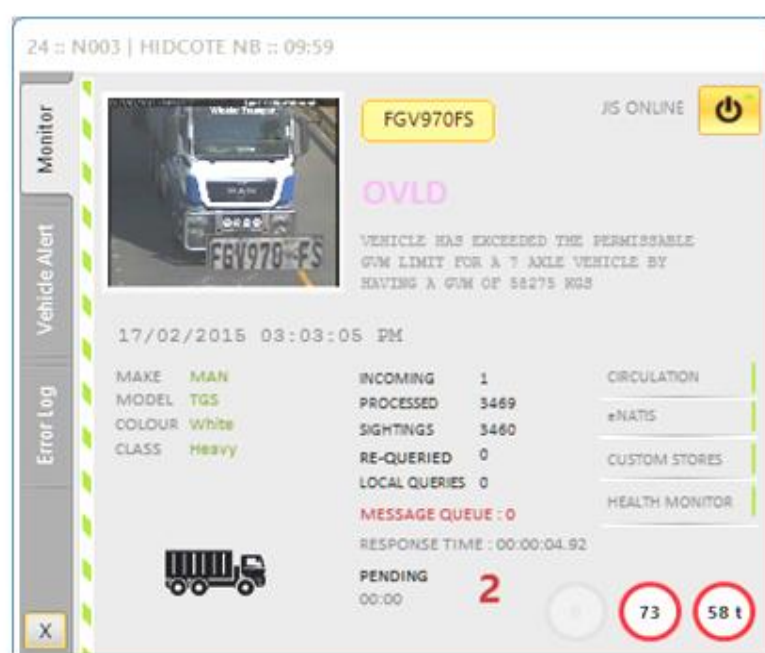
Source: NP&A

It is clear that if the existing freight transport legislation is coupled with proposed mandatory national operator registration, it can be totally adequate and effective if diligently applied. There is no need or purpose for imposition of further complex and unenforceable regulations to curb a marginal overloading problem that is more readily solved by professional overloading control systems and management.

There is already a trend to professionally managed PPP weighing installations in several provinces. This can be expanded by use of High Speed Weigh-in-Motion and number plate recognition cameras and integrated with an Operator Registration system to give cost-effective control of overloading and improved effectiveness of road freight transport.

From the successful development of the surveillance systems on the national freeways in collaboration with SANRAL it is apparent that an integrated solution to optimising the overloading (and other enforcement processes) is possible through use of improved technology. The systems using a range of high tech equipment such as number plate recognition cameras, high speed weigh in motion, average speed software programs, in-vehicle computers and centralised monitoring and the analysis of statistics hold the potential

to improve control, maximise manpower effectiveness and reduce the capital and operating costs of enforcement infrastructure. The road infrastructure and computer record from such a High Speed Weigh-in-Motion installation are illustrated below.



7.2.4 Legal Axle Massload

The legal axle massload (weight) in South Africa was changed from 8200 kgs to 9000 kgs in the 1980s despite seven separate studies showing that the changes would have negative impacts on roads by the shorter haul vehicles that are the predominant configurations in urban and rural areas. The benefit of the increased axle loading was truncated by the imposition of Reg. 237 of the NRTA which limits Gross combination mass to 56,000 kgs thereby reducing average axlemass for a 7 axle combination to 8000 kgs. This was introduced as an effort to restrict road competition with railways. The present situation is that the average overload on 195,000 weighings at 60 weighbridges is 870 kgs; an insignificant amount relative to GCM.

It is however conceded that the average overload conceals numbers of deliberate noncompliant offenders and it is these at which enforcement efforts need to be made more effective. As shown in the section on overloading control the first action is to increase weighing frequency by use of technology and systematic real time analysis of the weighing databases to assist traffic officers to trap the culprits instead of relying on the relatively low numbers of vehicle handled at fixed weighbridges.

From a transport efficiency perspective, the 56,000 kgs restriction has a negative effect on the cost of goods transport and minimal effect on the usage of roads. The specific regulation controlling mass on axles and axle groups (Reg. 240) limits steering axles to 7700 kgs, tandem-axle groups to 18,000 kgs, and tridem-axle groups to 24,000 kgs. It can be demonstrated that if those massloads are not exceeded, the number of axles on a combination are irrelevant in terms of road wear; for example, if 20 million tons of goods are transported on the N3 corridor by combinations with 5, 6 or 7 axles compliant with the abovementioned massloads the number of loads (vehicle movements) will be approximately as follows:

- a) 700,000 loads for 5 axles at R253 per ton
- b) 600,000 loads for 6 axles at R233 per ton
- c) 500,000 loads for 7 axles at R203 per ton
- d) If the 56-ton rule is applied the number of 7 axle loads will be 570,000 at R238 per ton

If Reg. 240 is repealed, the total number of axle loads to move the same tonnage will reduce and the cost difference per ton between option c) and d) is approximately R35 per ton or a saving of 2% of total cost.

The currently complex definitions of LAM contributes to difficulty of enforcement. It is proposed that the focus be placed on compliance with LAM and maximum loading of axle groups and repeal of Reg. 237. This will permit weighbridges and HSWIM devices to focus on the LAM. Enforcement can then be simplified by calculation of the overload mass in kilogrammes above the legal axle massload for each axle group and the penalty rate can be based on the total overload in Rands per kilogramme.

7.2.5 Speed Control

The control of speed is a major road safety issue for all categories of vehicles and is of special importance for loaded freight vehicles as the effects of excessive speed in accident causation are well documented. The traditional method of "speed trapping" has limitations in terms of location, is expensive, manpower intensive and is resisted by motorists flashing warnings.

The use of number plate recognition cameras to record vehicle speeds offers high potential for improving control of speeding. The sophisticated equipment and supporting computer programs have been developed to overcome some system deficiencies in the calculation of average speeds between points and these are linked to various registers to achieve improved control.

It is notable that where the average speed monitoring is in place it has not reduced average speeds, but has definitely reduced excessive speeds and resulted in 18% reduction in accidents. As with all other traffic monitoring, the enforcement and recovery of fines is still an unresolved issue.

7.2.6 Vehicle Condition

The control of commercial vehicle quality requires continual maintenance of the standards of the components of the vehicles to ensure safe and efficient operations. Heavy commercial vehicles receive special attention due to size of the vehicles and their impact on other road users.

Monitoring of the mechanical condition of commercial vehicles is part of the total responsibility of the authorities to promote public safety and protect infrastructure and environment. Periodic vehicle inspections or tests at Roadworthiness Testing Centres (RWTC) are elements of the overall control processes introduced by authorities to check that vehicles are maintained in road worthy condition. It has been estimated that 7-10% of accidents involve vehicle defects.

Analysis of the roadworthiness defects on about 7000 vehicles inspected at a busy RWTC gave the proportions of defective components by component area shown in Table 7.1 below.

Table 7.1: Analysis of Vehicle Roadworthiness Defects

2015	Identification	Elec System	Fittings	Brake System	Tyres tubes	Bodywork - suspension	Steering	Mech	Engine and Fuel System	Exhaust	Transmission	Instruments	Additional Req
Jan	11	351	139	282	75	351	67	111	18	85	2	313	1805
Feb	12	450	110	512	149	498	93	111	61	131	9	532	2668
Mar	5	402	78	455	116	486	128	94	35	126	3	449	2377
Apr	15	428	165	452	126	556	86	97	49	131	11	424	2540
May	17	387	109	424	166	474	74	88	51	130	5	356	2281
Jun	27	480	234	555	124	586	117	106	42	116	10	443	2840
Jul	23	528	581	510	97	452	103	117	34	111	4	315	2875
Aug	16	427	392	499	103	481	157	102	55	106	4	302	2644
Sep	27	453	389	415	258	346	85	74	65	68	0	283	2463
Oct	17	485	440	432	105	594	90	106	52	127	3	265	2716
Nov	18	378	315	343	114	489	83	116	37	109	2	220	2224
Dec	16	534	202	533	160	756	149	162	62	147	2	476	3199
	204	5303	3154	5412	1593	6069	1232	1284	561	1387	55	4378	30632
	0.67%	17.31%	10.30%	17.67%	5.20%	19.81%	4.02%	4.19%	1.83%	4.53%	0.18%	14.29%	100.00%

Source: NP&A

As shown in Table 7.1 the defects in safety systems were significant, with brakes (17.7%) electrical systems [lights, indicators) (17.3%), and bodywork and suspension (19.8%). There were on average about 4 defects per vehicle, on first inspection.

One of the problems with annual official COR inspections, is the fact that operators can in many ways negate the effectiveness of the inspection. This is done by substitution of number plates, swapping components, and in many cases resorting to collusion and bribery of test station officials to avoid the expense of performing repairs to pass the COR examination (the privatisation of testing stations may have aggravated this problem).

It is of course, also a fact that testing stations are in competition for business so that there is a definite temptation to perform perfunctory inspections to align the costs with the revenue and a temptation to be accommodating to customers in order to attract business. None of the foregoing observations negates the usefulness of the testing process but does raise questions regarding the monitoring of testing stations and underscores the need for more frequent, effective road side inspection systems.

As noted in international literature however, annual or biannual inspections of heavy commercial vehicles do not make a significant impact on the quality of vehicle maintenance²⁷. Reports of independent examinations of freight vehicles on the road confirm

²⁷ "Cost-Effectiveness of Periodic Motor Vehicle Inspection" University of Michigan (U.S.A.) Transportation

that the system is not currently achieving control with reports of 60-80% of commercial vehicles being found to be unroadworthy when inspected at road-blocks.²⁸ A heavy commercial vehicle that travels more than 100,000 kms per annum on indifferent roads requires a large amount of regular maintenance which is far more critical than the preparation of the vehicle for an annual Certificate of Roadworthiness (COR) examination. Even when annual examinations are professionally performed, the effects of the certificate of road worthiness inspection can be completely nullified in a matter of days by operating conditions and component failures. The annual inspection is however effective in identifying irregular modifications to vehicles and provides an opportunity to confirm registration and engine/chassis numbers.

For effective regulation of vehicle quality, it is essential for the roadside inspections to be recorded, monitored and linked in an IT system to the annual COR and the operator registration system in order to identify loopholes, to monitor vehicle inspections and to monitor the efficacy of the testing centres.

In order to rectify the situation provincial authorities must urgently develop effective roving roadside vehicle inspection capacity, with specially trained and equipped registered inspectors using effective inspection and follow-up systems.²⁹ The roadside inspections must be conducted in a professional manner by uniformed officials with badges displaying their names, position and identification number. They should be suitably uniformed and provided with assistants and fully equipped vehicles. The roadside inspection reports must be captured and linked to the operator register along with all other violations of the regulations.

7.2.7 Transport of Dangerous Goods

The National Road Traffic Act and Regulations, (Act 93 of 1996 - Section VIII) contains specific provisions regarding the transportation of dangerous goods by road. The inclusion of the references to the SABS codes of practice in the National Road Traffic Act (NRTA) has the effect of superseding the terms of the Hazardous Substances Act (introduced by the Department of Health in 1990). The functions necessary for the control of the transport of dangerous goods have been incorporated into a set of "Codes of Practice" by the South African Bureau of Standards (SABS: now NRCS), so that they could be incorporated by reference, into South African Law.

The inclusion of the control of transport of dangerous goods by road in the National Road Traffic Act also has the effect of placing the responsibility for implementation of the codes of practice and the enforcement of the legislation with the provincial governments through their Traffic Departments, and presumably the municipal police where applicable. There is also specific mention in the National Land Transport Act (No. 5 of 2009) of the responsibilities of provinces and municipalities with regard to control of transport of dangerous goods (Sections 37-38). Despite the extent of the regulations for control of the activity, the actual control systems are ineffective due to lack of monitoring systems, limited resources, some regulatory anomalies and the fragmented responsibilities of several levels of government and supporting agencies.

Apart from the dangers on the road and in crowded urban streets the road safety problem is particularly relevant in parking areas and truck stops where there are concentrations of loaded vehicles containing dangerous goods. The emergency responses to crashes and spills are often a further source of danger to lives as the first responders are often not fully aware of the dangers of chemicals and explosive substances.

Research Institute, January 1985 (PDF file)

²⁸ Frightening truth about SA trucks - motoring/industry-news / 30 November 2015: By: Jesse Adams

²⁹ Truck inspections should be priority in promoting road safety : John Robbie -17 October 2014

The current situation is that there is minimal control of road transport of dangerous goods by the authorities, and a reliance on voluntary compliance by transport operators and their customers. In the current dispensation the responsibility falls mainly on provincial and municipal authorities as well the freeway toll concessionaires and SANRAL.

The relatively infrequent crashes with dangerous goods vehicles lends some complacency to the situation but there is need to develop systems to improve the safety of dangerous goods operations on the road and in parking areas. Research into international best practise and professional system develop are required.

7.2.8 Transport of Abnormal Loads

The movement of abnormal loads in South Africa is controlled in terms of the National Road Traffic Act No. 93 of 1996, which defines the mass, dimensional limits and some operational parameters such turning radius and braking performance for road vehicles using public roads. Any vehicles or loads that exceed the legal limits are defined as abnormal and are then required to conform with specifications laid down in TRH 11 - Dimensional and Mass Limitations and Other Requirements for Abnormal Load Vehicles and particularly the Guidelines for Granting permits for Abnormal Loads.

Abnormal Permit Issues

The process for control of the issue of permits for Abnormal Vehicles and Abnormal Load is handled by the technical section of the Provincial departments of Transport located in the capital cities of the provinces. On submission of the detailed application forms qualified staff evaluate the proposed transport, the dimensions, mass, vehicle specifications, route etc. and make recommendations regarding conditions for compliance. The administrative section of the provincial DOT handles all the recording and paper work processes to provide the carrier with the necessary documentation. The process is manual except for the calculation of the mass distribution and fees which is done with the CSIR AL software program. Western Cape has commissioned the development of a software programme to handle the processing of applications and it will run in parallel trials from July – November 2016.

The permit issuing system poses continual problems for operators, as the time available from receipt of order to execution of the transport often requires permits within hours; when this is extended to days there are losses and complications. The uncertain time period for issue of permits aggravated planning problems as preparations can take weeks, but cannot be started until permits are approved and actually received. If there are then delays in the operation there is need for reapplication. This is aggravated when loads are to enter or leave provinces as there is then the need to collect the permit from another provincial office before leaving and the coordination of the permit times is a problem requiring the despatch of vehicles all over the country to collect permits. This is a national system deficiency as it is technically possible to coordinate permit issues electronically and to issue through permits from any agency in the country if the system was so designed and equipped.

Operational Problems

In addition to the abovementioned issues with permit applications there are operational problems. Abnormal vehicles may not travel at night and over weekends. The night ban may be defensible but there is no obvious reason for weekend bans except lack of traffic officials. The result is that abnormal convoys park on deserted roads over weekends and then start to move in time to join the Monday morning rush hour. On most routes, there are inadequate lay-by facilities in which to park abnormal convoys, causing conflict with the authorities over parking on roads. There are conflicts with abnormal loads being transported on national routes.

Permit fees include escort costs, but in many cases the use of own escorts would be cheaper and more effective, as all operations cease when officers are diverted to other

duties. No refunds are given when escorting officers are deployed elsewhere and own escorts have to be used. Escorts need to be properly trained to ensure public safety, but there are continual problems for operators in that they assist with training police officers, who then get redeployed to other duties and totally untrained substitutes are sent to do escort duties. Resolution of these issues will require a review of current abnormal load regulations and practises by the inter-provincial coordinating committees and DOT.

There is need for a well-designed commercial-standard electronic system that communicates with all the provinces to reduced delays, eliminate much of the corruption and increase operational efficiency, reduce costs and enhance the safety of abnormal load transport. It is to be hoped that the Western Cape system can become nationally standard and include the collection/payment of all fees electronically as is done in normal commercial transactions; for later distribution to the appropriate authorities.

7.3 Integrated Planning

7.3.1 Freight Route Planning

Studies in Durban³⁰, Gauteng³¹ and Cape Town³² indicate that there is need for those municipalities to improve planning of freight routes, land use and provision for truck parking and logistics areas in the major freight handling areas such as ports, terminals and large manufacturing and storage zones. The approaches to ports are of particular concern as the congestion reduces logistical efficiency and increases the costs of import-export cargoes.

All the major cities are making plans but the planning process is complicated by the number of authorities, agencies, parastatals, government departments and private sector property owners involved and the lack of coordinative structures between all parties.

In all the major cities there are extensive areas of residential property interspersed with retail and services clusters. The major industrial areas have in many cases been surrounded by the growth of residential areas causing increasing conflicts between commuters and heavy freight traffic (e.g. City Deep, Phoenix, Bayhead, Epping and Paarden Eiland). It is important for the future of logistics efficiency to analyse land use patterns to identify the main origins and destinations of freight to and from corridors, ports, industrial areas and primary services and utilities such as waste disposal operations, power stations and ports.

There are several key logistics areas which are suffering from the effects of inadequate road space at the current levels of economic activity e.g. access to the ports of Durban and Cape Town. From recent studies³³ it is clear that the existing freight routes will definitely not be able to support future industrial growth as increasing the GDP to 4-5% will require supply chains with efficient freight logistics and existing roads are inadequate in several areas. It is essential that cities develop future logistics strategies to ensure the efficiency of supply chains and to promote industrial growth, employment and prosperity³⁴. The objectives of the strategies should include the following:

- *Gaining freight sector and industry support for freight strategies and initiatives*
- *Improving journey time reliability of goods vehicles*
- *Assisting the journeys of goods vehicle drivers and reducing goods vehicle trips and kilometres*
- *Assisting freight transport companies at the point of delivering and collection*

³⁰ eThekweni Transport and Logistics Study - ETA 2014

³¹ Reduction of Congestion by Freight Management: – Gauteng Dept. of Roads and Transport - 2013

³² Location and Extent of Current Heavy Freight Vehicle Movements in Western Cape: WC Metro 2005

³³ eThekweni Freight Logistics Study – ETA 2014

³⁴ BESTUFS (Best Urban Freight Solutions) Guide:
NEA Transport research and training - Rijswijk The Netherlands

- *Reducing environmental impacts and the risk of accidents involving goods vehicles*
- *Creating freight handling and parking spaces*

It will be necessary for cities to follow international trends in the management of freight vehicle movements within the city limits³⁵. These include the following potentially useful measures.

- Freight transport partnerships
- Telematics for urban goods transport
- Signing
- Urban freight information and maps
- Road pricing
- Promoting night deliveries
- Defining Lorry delivery lanes (or no car lanes)
- Telematics for urban goods transport
- Signage and Directional assistance
- Lorry routes (to and from major logistics points)
- Simplification & harmonisation of vehicle weight, size and construction regulations
- Urban freight information and maps
- Urban consolidation centres
- Providing on-street loading bays
- Nearby Delivery Area (ELP)
- Urban consolidation centres
- Vehicle weight, size and emissions standards regulations
- Time regulations for goods vehicle access and loading
- Environmental zones
- Lorry lanes
- Infrastructure improvements
- Encourage use of environmentally-friendly vehicles
- Enforcement

The cities will need to define “HGV no-go” zones and establish “corridors” for the Longer Vehicle Combinations (LCVs) to specific industrial logistics areas. In South African terms this will mean that 22 metre inter-links, super-links and rigid and drawbar and PBS combinations will be confined to the defined “in-city corridors” that link to the national corridor routes. This is likely to require private sector development of “urban consolidation centres” truck parks and transfer facilities at which the loads from LCVs can be disaggregated into shorter combinations for local deliveries. It must be noted that several major FMCG chains have already developed their regional distribution centres in areas with good access to corridors and some cities such as Cape Town have already made major investments in urban traffic control technologies. There is need for professional research and system development for discussion with all involved agencies.

7.3.2 Government and Industry Liaison

There is urgent need for the Department of Transport to establish formal effective, active, and continual liaison with the industrial users and service providers in the road freight sector. In the current situation the governmental decision processes are based on the premise that the official pronouncements will result in change, whereas the reality is that the commercial world makes its own decisions, based on the policy pronouncements from government. In the current South African situation, it is critical that the private sector decision makers are given reason to support official policies and for that reason they must be party to the decision making process.

³⁵ Ibid p12

An effective communication structure will obviate some of the impractical proposals for interventions and ensure that planning is based on the realities of the commercial undertakings that are the decision makers regarding the industrial development which is the sole driver of the road freight sector. The range of negative perceptions is fuelled by the rash of recent proposed legislation, issues such as cross-border permit charges, perceived failures to manage parastatals, and the continual realities of bribery and corruption.

The current processes of limiting consultation and coordination to departments, provinces, parastatals, agencies and quasi-official structures insulates the entire process from the commercial and industrial sectors which are the recipients and payers for all the results of the governmental decision making and fosters litigation. Recommendations for a consultative structure are made in the NFLS 2016.

7.4 Training and Skills Development

7.4.1 Technician Training

The NFLS, 2005 pointed out that one of the severe pressures being experienced by industry is the skills shortage and lack of adequately trained and competent personnel in a wide range of disciplines. *“The Transport Education and Training Authority (TETA), through the Sector Education and Training Authority (SETA), provides scope for enhancing and fast tracking skills development. It is proposed that a skills enhancement programme be set in place as part of the strategy implementation process.”*³⁶

The national technical training structures are inadequate to ensure supply of competent technicians in the automotive trades. The failure to connect technical and academic training with industrial practice means that growing skills and experience shortages are experienced throughout the industry. NFLS, 2005 said; *“The fact that the current skills base falls short of an effective response to the demands of global logistics needs to be addressed. To this end, government must engage both the private sector and the Transport Education and Training Authority (TETA) to identify challenges that are critical and short of skills, and devise mechanisms to develop the necessary skills base to respond to the challenges....this suggests that we may face a situation in which our ability to deliver transport services at current technology levels, excluding future advances in technology, could be reduced in the future*³⁷.

The Department of Transport document “Careers in Transportation” quotes the TETA identification of critical and scarce skills in the transport sector which includes automotive electricians and mechanics as well as transport managers, but nothing positive has been planned to remedy the situation.

The following statement in the TETA Sectoral Skills Plan for 2015 ³⁸ confirms that the situation is still in urgent need of attention; *“Road transport, according to Stats SA (2011), makes up 62% of the total (transport) sector. TETA therefore should focus considerably on improving skills in this sector.....High skills occupations (Managers/Professionals/Technicians) constitute 26.1%; intermediate skills (Clerks/Sales and Service/Crafts and Trades) make up 20.6% and low level skills; (Plant and Machinery/Elementary) comprise 53.3%. A high percentage of people are in the low skills category (53%).....There is an opportunity to move people with low level skills into the intermediate category. Likewise, there are opportunities for those with intermediate skills to move into the high skills category with meaningful education and training interventions.*

³⁶NFLS 2005 – p 42

³⁷ NFLS 2005 – p6

³⁸TETA Sector Skills Plan Update: 2015 p 82

TETA should focus on FET qualifications since a large number of workers (308 035 and 106 347 need to access education and training in this band. This effectively makes up 66% of the workforce.

A strong feature of the transport sector is that Whites dominate the upper end of the occupational spectrum, whilst Blacks (Indians, Coloureds and Africans are located at intermediate and lower levels) the mandatory grant system is not being effectively utilised by firms in the transport sector. The very low penetration rate (the total number of workers by the number actually trained per occupational level) means that training interventions do not reach scale in the transport industry and are unlikely to have a meaningful impact of improving the skills base of the industry. In short, more people need to receive training in the industry than is currently the case..... There is a strong demand for engineering-type occupations in the sector.

The report also notes that 32% of employees have lower education than Grade 12 and 38% have Grade 12. In view of the known deficiencies in the current education system it is likely that a large proportion of employees without adequate mathematical and literacy skills are not promotable into technical, clerical and managerial positions and this will continue to skew the racial proportions and aggravate the difficulty in rectifying the skills deficiencies.

7.4.2 Supervisory and Management Training

Management training for supervisors and managers in road transport is ineffective as it tends to be offered by Universities and is therefore more academic than functional and although some training courses are still available they are not designed for the practical training of supervisory and managerial staff in the road freight sector. There is a very extensive need for industrial training by practising experts and experienced managers who can impart the realistic knowledge required for operational management of road transport.

The SETA system locked into the National Qualifications Framework creates a complex process for registration of training courses which effectively isolates the NQF structures from practical industrial training needs for hands-on management and technical positions. This means that the National Skills Development Plans have more academic input than serious intentions to rectify the operational skills deficiencies.

7.4.3 Vehicle Examiners Training

The training of vehicle examiners is currently focused on training and registration of examiners employed by Roadworthiness Testing Stations (RWTC). As noted elsewhere in this report there are problems with the RWTC system and control of the RWTCs in all provinces. There is urgent need to improve the effectiveness of road side inspections to achieve control of commercial vehicle condition which will require courses and facilities for training of Traffic Officials to be designated as Vehicle Inspectors. The officials should receive high grade training in fault detection and be fully cognisant of the design features of modern road freight and passenger vehicles. These include ABS braking, load sensing, retarders of various types, on-board electronics and many other sophisticated technical and safety systems. The role of the Road Side Inspectors is described in the section on vehicle condition.

7.4.4 Driver Licence Examiner Training

There is need for training of Driver Licence Examiners in the techniques and practicalities of driving large freight and passenger vehicles in order to equip them to test aspirant licence and PrDP candidates on fully loaded maximum mass vehicle combinations. The present situation where drivers are tested on small vehicles and then issued with licences for maximum mass combinations and coaches must be stopped, as it is an obvious road safety hazard to permit untrained drivers to gain practical experience alone on the public roads.

It is essential that the upgrading of Driving Schools is accompanied by measures to improve the knowledge and skills of the examiners.

7.4.5 Road Freight Driver Training and Licensing

There is widespread concern about the ineffectiveness of the driver training systems and institutions in the country, which are failing to supply adequate numbers of trained drivers of mature age (25-40) who are the typical candidates for employment as Code EC drivers. This situation is being aggravated by the high level of mortality among younger and middle aged drivers, thereby aggravating the skills and experience shortage. Shortfalls are currently made up by the significant numbers of drivers from neighbouring countries who are employed in the South African industry, but they typically have the same training deficiencies as their South African counterparts.

Driver training, for heavy goods vehicle and public service vehicle drivers, is generally substandard in South Africa (and throughout the ESA region). Most young men (or women) with aspirations to become drivers of commercial vehicles start their learning through informal coaching with light vehicles. When they are able to accumulate some funds they book a minimum possible period of training at a “driving school”.

Heavy Goods Vehicle driver training is generally provided by local “driving schools” using unloaded 2-4 ton rigid trucks; or sometimes 3-4-ton truck tractors with small semitrailers to meet the requirements for an articulated vehicle licence. The training provided is totally inadequate to equip the trainees for the task of driving modern heavy goods and passenger vehicles.

From previous research it is very clear that there is a need for improved higher quality driver training to be established throughout ESA region, as proposed in several papers, including the excellent report by BICO in Tanzania.³⁹ The main problems with current training systems identified by BICO are as follows;

- a) *“Short periods on driver training courses and most of the course duration is spent teaching basic vehicle handling skills;*
- b) *Training mostly geared towards passing the driving test, rather than teaching the student to become safe and competent drivers – this is for countries where driver training establishments are privately owned;*
- c) *Defensive driving training and hazard perception skills, as an accident prevention strategy is not taught adequately;*
- d) *Most driving courses train basic vehicle handling skills and traffic codes and do not train new drivers on environmental factors that affect driving, complex perceptual skills to avoid risky driving situations, driver impairments, how to handle emergency situations, personal readiness and self-awareness;*
- e) *In most driver training courses training instructors do not ensure that learners not only learn the rules, but also understand the reasons behind the rules;*
- f) *Good quality training of instructors is not emphasized;*
- g) *Quality control of instructors and driving schools is not adequate”*

The same problems are experienced in South Africa where local research⁴⁰ and experience reveals the following problems that need resolution if an effective driver training regime is to be established throughout the region:

³⁹ Report EATTF Ann. 8 – BICO: University of Tanzania

⁴⁰ Nkomonde T, - “Passing the Test”: a critical evaluation of formal driver training in South Africa – UKZN 2010

- a) Inadequate training facilities, course content and vehicles
- b) Lack of control of driver training “schools”
- c) Lack of qualification and certification of driver trainers
- d) Widespread reservations regarding the quality of driver testing
- e) Avenues for illegal acquisition of licences
- f) Collusion by testing officials
- g) Ineffective control systems to ensure the quality of commercial drivers.
- h) The need for higher age limits for large HGV and PSV drivers
- i) Lack of probationary periods between advances to more complex driving tasks
- j) Lack of mandatory step-up training courses to equip drivers for more challenging duties and vehicle configurations
- k) Lack of accessible assistance and funding for aspirant driver trainees



All of the foregoing factors create the situation where the main uncontrolled learning experiences for commercial drivers take place on the public roads. The reasons for this situation are many but the most significant is the fact that training is provided by private sector driving schools and paid for by trainees. In many areas, teaching people to drive is regarded as simple way to earn a living and by the taxi industry as a source of off-peak revenue. Some past attempts at introducing improved controls have resulted in violent resistance from the cartels and “associations” that have claimed this turf. This leads to the situation where low cost, low skilled, unprofessional and inadequate training is being provided to people with limited means, many of whom do not know better, and in any case are unable to pay for better quality training and just want to get a licence to drive.

The costs of professional HGV driver training are very high, with Heavy Goods vehicles and Buses costing about R1.5 million each (and R9.00 to R12.00 per kilometre to run), and premises and facilities adding a possible R1.0 million before any training is performed. In order for a training school to make a return on this type of investment, the fees for professional training courses would be beyond the reach of a vast proportion of the population. An experiment conducted in KZN showed that acquisition of an EC (Code14) licence in seven weeks cost R12,500 and provided the owner with a legal licence but total

incompetence to drive a commercial (or even a light) vehicle. The system creates the temptation to short-cut the process and to “buy” a licence through illicit channels. There is need for government via TETA to establish new means of funding driver training and offering support to driver applicants as described in later sections of this report.

Trainers

Throughout the country there is minimal professional training for driver trainers and the current system presumes that an experienced driver who can complete a brief question and answer session is competent to train would-be driver licence applicants. There is no clearly defined route for trainers to achieve competence, qualification, experience and to receive professional training. Failure to train the trainers in professional driving is one of the fundamental reasons for the poor standards that prevail throughout the region.

Training Course Content

There is no control of training course content at driving schools in South Africa. In most cases the providers of the driver training are not really competent to develop such course material and as it is not commercially available, the result is that drivers are not taught the basics of legislation, vehicle management, defensive driving, load dynamics and securement and road safety.

The current initiative in KZN to register all driving schools⁴¹ as proposed in the 22nd Amendment to the NRTA (Reg.114), is a very positive first step in the process to improve the quality of driver training, but there is need for very extensive involvement by the national and provincial authorities if this is to achieve improvement in the quality of training in foreseeable future.

The main issue regarding complex institutionalised training providers is that the courses are firstly not available to aspirant driver trainees and secondly, they are beyond the financial capacity of entry level aspirant drivers. This means that the system does not address the issue of improving driver competence outside of the large transport fleets (which often have their own in-house training facilities). For small and own account operators the system is also too complicated and expensive. From a national perspective, the net result is that driver incompetence is major contributory factor to road accidents.

There is urgent need to address the issue of driver competence, but it is important to avoid perpetuating two streams of driver training, with one stream being professional and effective but unavailable and too expensive for most of the aspirant trainees and the other being the current backyard hit or miss learning-by-doing. Economics will continue to dictate that the cheaper route will attract the most trainees, so the challenge is to develop subsidised systems that are sustainable. When viewed against the reported costs of accidents and road fatalities, running to billions of Rands each year, the money spent to solve the problem will be very cost effective.

Testing and Licensing

Testing and licensing of drivers is done by traffic authorities, and the focus of the test is on ability to answer a limited number of questions about road traffic codes and then to perform a limited number of manoeuvres in an off-road place, before a brief road test. The performance of the licence applicant is noted by the examiner and generally speaking the system records faults, errors of judgement and inability to perform specific actions and these are deducted from a theoretical 100% score to decide on a pass or fail mark.

⁴¹ “Regulation of Driving Schools Interim Agreement” KZN:DOT

The process is highly subjective, and anecdotal (and experimental) evidence suggests that the testing of drivers is fraught with applicant-to-examiner corruption in many parts of the region. In South Africa, there have been numbers of fraudulent driver licences issued by traffic officials and these have found their way into the National Transport Information System (eNATIS) so that it is very difficult to identify genuine and fraudulent licences.

The devolution of authority to test drivers, to regional or municipal authorities aggravates the problems of control and introduces the need for more complicated analysis systems. There have been attempts at monitoring the test procedures with analytical control systems but there are some doubts regarding the effectiveness of in-cab video records, taped conversations, use of laptop scoring programmes, etc. to monitor driver testing, due to the need for additional independent staff to handle the analyses and evaluations. This is critical if the measures are to achieve control of examiner behaviour.

A further major problem is the testing procedures. Most testing of learners is done by driver licence examiners most of whom are not competent to drive fully laden modern heavy commercial vehicles. The driving tests are usually performed with the smallest possible, unladen vehicles, owned by the driving schools, in order to make it easier to pass the test.

A further problem with the testing and licensing regime is that there are large numbers “foreign” drivers operating throughout the region. A survey of transport companies in Durban revealed approximately 30% of foreign drivers holding licences issued in their home countries. The same survey indicated that less than two out of ten driver applicants with completed South African licence documents were employable by transport companies as competent.

Licensing Criteria

It is an unfortunate feature of the driver development environment that applicants for driver licences are not selected, but cover a wide range of personalities and come from all sorts of backgrounds; many trainees are not ideal driver material. This is unavoidable, but there are some significant criteria that can be used to improve the performance of commercial drivers of trucks and buses. These criteria should form part of the regulatory framework by defining the conditions required for licensing of professional drivers.

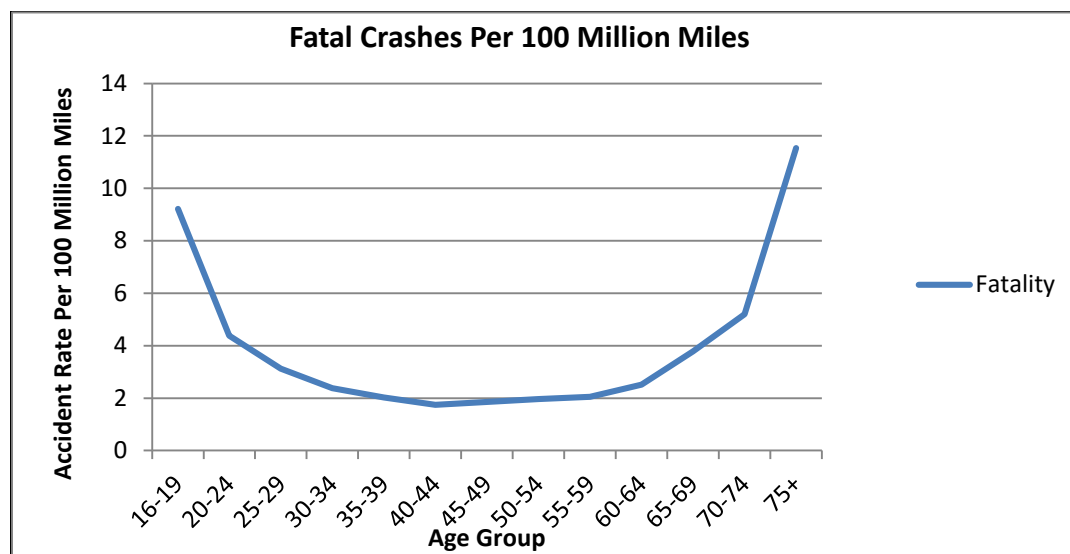
Age

One of the primary criteria to be considered in any discussion of training and licensing of drivers is the question of age of trainees and applicants. Younger persons (of both sexes), tend to have higher accident experience than older drivers. The reasons for this situation are a complex interaction of youth, energy, inexperience, and the generally more adventurous risk taking propensities of young men and women between the ages of 18 and 24.

As shown in studies overseas, the actuarial risk of employing young drivers is considerably higher than for older drivers. Studies have shown that drivers between age of 18 and 22 are likely to have 3-4 times higher accident risk than 30 and 40-year-old drivers, as shown in Figure 7.2 below.

The Michigan University Study of 48,000 truck accidents showed an average of 3.03 fatal incidents per 100 million vehicle-miles of travel. The youngest age group, drivers 16-19, had a rate of 9.21. The rate declined with each older age group to a low of 1.75 for the 40-44 groups. The rate then rose with each age group, reaching a high of 11.53 for drivers of 75 and older. This trend is well known and endorsed by actuarial statistics in all countries.

Figure 7.2: Analysis of Fatal Truck Driver Crashes by Age Group (Michigan - 1990)⁴²



Experience

It is also essential for the driver training and mentoring process to provide opportunity for controlled experience both on the road and in a variety of real work situations, before allowing trainee drivers to operate alone on public roads. This is necessary in order to familiarise and acclimatise trainee drivers with the type of hazards that need to be identified in the course of defensive driving. This is particularly important in South Africa as many young drivers have not had the advantage of prolonged car travel with parents and have had minimal exposure to examples of careful driving, but are influenced by the dare devil advertisements for automobiles.

Personal Habits

It is important that driver training courses promote and encourage good personal habits amongst drivers of heavy commercial vehicles. A disciplined approach to adequate sleep, selective involvement in off-duty activities, avoidance of alcohol and drugs, and disciplined driving and resting behaviour are all the characteristics of steady professional drivers. The discipline does not come easily to younger more energetic learners, without controlled introduction to sober work practises. As proven overseas there is need to introduce probationary periods of driving under supervision, into the overall driver development process with phased progression to driving increasingly large and complex vehicle combinations.

Fatigue

One of the major causes of accidents by heavy commercial vehicles is driver fatigue. This is avoidable, but requires a disciplined approach and the support of management in order to ensure that drivers do not continue to drive beyond their physical capability. The incidence of fatigue is a problem for younger drivers, due to their relatively more energetic lifestyle and propensity for seeking extramural activities when off duty. It is necessary for drivers to learn that personal discipline is an essential part of their job as professional drivers.

⁴²The University of Michigan, Kenneth L. Campbell, Transportation Research Institute, Ann Arbor, Michigan, U.S.A. Fatal Accident Involvement Rates by Driver Age for Large Trucks, (Received 27 July 1989; in revised form 5 September 1990)

It should be noted that Driving Hours Regulations for long-distance drivers have been discussed in the region for some time, and new legislation is mooted for all drivers but is likely to need further development, there are no finalised plans to address this important aspect of road safety regulation. This issue should become part of the national and regional transport quality management process.

Operational Quality

It is important for driver trainees to be taught the parameters that indicate true operational quality in order for them to be equipped to resist pressures to induce them to over-drive their capabilities, drive at increased speed, take chances with overloading and other regulations, and to neglect vehicle condition and evidence of imminent mechanical problems. A certain maturity is required to achieve the confidence necessary for drivers to resist temptations to satisfy performance demands by increasing risks. In many transport operations in the region, drivers are paid for output performance (loads, tons, trips) rather than for time operated, and many transport companies apply pressure to achieve performances which are beyond the capability of the equipment or the drivers.

Driving Training and Testing must be Technically Relevant

Commercial drivers must be trained on fully loaded typical vehicles in current usage for transport of passengers and freight. It is unrealistic to expect trainees that have only driven 2 ton rigids to be capable of driving 56 ton articulated combinations, or for taxi drivers to handle 60 seater coaches.

It is also important that the criteria used for successful completion of driver tests, are relevant to the kind of vehicles to be driven. The tests must also be uniform, objective, and free from potential for collusion or favouritism. The criteria for issue of drivers licences must also correspond with the categories of licence that are to be issued and training course material must necessarily correspond to the nature of the vehicles and operations to be performed by the newly licensed driver. All of these conditions require input from the private sector suppliers of transport services as it is patently unrealistic to expect officials, remote from the industry to be competent to appreciate the complexity of operating modern freight vehicles.

Recommendations to Improve the Training of Commercial Drivers Training Process

In order to make an impact on the identified problems with the quality of drivers of heavy goods vehicles and buses in the region, it is necessary to adopt some basic principles for the development of effective training systems. These basic training requirements can be conceptualised as three separate steps, each of which is important to the achievement of professional driving standards. The steps can be described as follows.

- a) Learning the rules of the road and the regulations regarding use of vehicles on public roads (e.g. the South African K53 test manual).
- b) Adequate training in handling the typical goods or passenger vehicle configuration that will actually be driven on the road. This implies training by fully competent and experienced trainers, with modern fully loaded vehicles, in a controlled environment, as well as on-road experience.
- c) Essential classroom training in the dynamics of heavy goods vehicles and buses, load securement, weight distribution, passenger relations, commercial vehicles regulations, safety, breakdown and accident procedures, impacts of speed and gradients on braking distances, fuel conservation, environmental considerations, and the realities of actually working with vehicles in a commercial environment.

All three of these aspects of the driver's profession must be trained by instructors who have themselves been adequately trained and accredited as professional trainers. The

creation of an institutional system for the production of trained professional drivers will require a very significant effort on the part of the authorities. The proposals for institutional restructuring are discussed in the section on implementation of the overall quality control system, later in this project report.

In order to achieve a phased step by step approach to developing professional drivers, it is recommended that the driver licence and the professional driving permit be regarded as two separate qualifications. For the private motorist, step a) learning the rules of the road, and demonstrating ability drive a light vehicle can be regarded as adequate training for light vehicle drivers (as long as the instructor is competent to explain the rationale for the aspects to be learned).

For the professional driver, it is recommended that the training described as (b) and (c) above, are applied as conditions for obtaining the Professional Driving Permit. The separation of these categories will reduce the numbers of people to be trained, by limiting them to professional drivers, and at the same time will focus the efforts on the critical need for more professionalism in the handling of large commercial vehicles.

It is to be expected that there will initially be resistance to requiring increased qualification for professional drivers, but the motivation for improving the standard can be explained and justified by increased efficiency and professionalism which should lead to better working conditions and remuneration for really professional drivers.

a) Training for Drivers of Trucks and Buses

The current inadequacy of commercial driver training is one of the most critical issues facing the region in the promotion of the quality of road transport operations. In order to equip drivers to handle modern commercial vehicles (trucks and buses), it is essential that training is given on vehicles that are typical of the vehicle configurations that are used in the workplace.

It is unsatisfactory for drivers to be trained on 2-3 ton vehicles with four speed synchromesh gear box without load, and then to be considered qualified to drive loaded 56-ton articulated interlink combinations or 60-seater passenger buses. Drivers trained on light vehicles have no experience of issues such as reaction time, braking time and overall stopping distances for larger combinations (shown below).

Stopping Distances for 56 ton Articulated Combinations

	Speed	Time	Metres of Travel	Metres to Stop
Reaction Time	60 kms/hr	2.5 secs	42.0	
	100 kms/hr	2.5 secs	70.0	
Braking Time	35 kms/hr	4.4 m/sec ²	16.0	32.0 metres
	60 kms/hr	4.4 m/sec ²	31.4	58.0 metres
	100 kms/hr	4.4 m/sec ²	87.6	157.0 metres

In order to improve the quality of training there is an urgent need for creation of professional institutional capacity and in this respect it will be invaluable to obtain input from professional training institutions and manufacturers that currently provide training for commercial transport undertakings. A further source of expertise in training drivers to handle vehicles is the vehicle dealers, many of which have driver trainers on their staff for the specific purpose of training drivers in the most effective use of their specific vehicle models.

There will be a need to develop the curricula, training material, manuals and course structures and schedules for the training of Professional drivers. These and the institutional

issues of driver training and licensing are discussed and possible solutions are suggested in the chapter on Implementation.

In addition to the basic rules of the road and the training in the handling of vehicles to obtain specific driver's licences as described in a) and b) above, there is a need for professional drivers to be given basic training in the issues that are critical to safety, environmental protection, relations with other road users, load securement and weight distribution and the handling of emergencies, breakdowns and other issues relevant to the operation of commercial goods vehicles. For passenger vehicles there are also specific issues to be covered apart from the driving task.

An outline of such a typical basic course is shown below for truck drivers and bus drivers that should be a necessary requirement to obtain the PrDP.

Table 7.2: Basic Goods Vehicle Course Content for PrDP

<p>Being Professional</p> <ul style="list-style-type: none"> • Habits • Value of professionalism • Difference between "pros" and "amateurs" <p>Dynamics</p> <ul style="list-style-type: none"> • Acceleration • Deceleration • Lateral forces • Weights and specific gravity • Energy-heat-fire Hazard <p>Safety and Defensive Driving</p> <ul style="list-style-type: none"> • Reaction time • Stopping distances • Looking ahead • Following distances • Mirrors – other traffic • Relative speeds of other traffic • Buses, motor cycles, cars, animals and pedestrians • Awareness – Analyse – Action <p>Load Securement</p> <ul style="list-style-type: none"> • Know your load • Load weight and distribution • Liquids, dry commodities • Load protection, weather implications • Four way securing against all forces • Loose loads, e.g. animals, mixed goods <p>Accident Procedures</p> <ul style="list-style-type: none"> • Securing the site – warning triangles Reporting procedures – ID, place, description of scene • Attend to injuries – move to safety • First aid procedures • Notify EMRS – police – base • Fire Extinguishers 	<p>Economy Driving</p> <ul style="list-style-type: none"> • Engine speed and road speeds • Power/torque and gearing • Optimum or Green Band Revs. • Speed and fuel consumption • Speed and travel times <p>Breakdowns</p> <ul style="list-style-type: none"> • Reporting • Ensuring safety • Move to better place if possible • Triangles and traffic control <p>Security</p> <ul style="list-style-type: none"> • No lifts - No passengers • Beware of stopping in unsafe places • Plan ahead – where to stop when necessary • Travel with locked doors • Remember load security when stationary <p>Regulations</p> <ul style="list-style-type: none"> • Speed (80 maximum) • Speed for conditions • Stopping – police? – other reasons • Legal weight • Legal dimensions • Licence and PRDP • Business details and load information <p>Documentation</p> <ul style="list-style-type: none"> • Load details • Origin and destination • Any Hazchem • Abnormal loads • Special – perishables (temperature control) – weather • Live loads – animals and birds
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Table 7.3: Basic Bus Driver Course Content for PrDP

<p>Being Professional</p> <ul style="list-style-type: none"> • Habits • Value of professionalism • Difference between “pros” and “amateurs” <p>Dynamics</p> <ul style="list-style-type: none"> • Acceleration • Deceleration • Lateral forces • Energy-heat-fire Hazard <p>Safety and Defensive Driving</p> <ul style="list-style-type: none"> • Reaction time • Stopping distances • Retarders • Looking ahead • Following distances • Mirrors – other traffic • Relative speeds of other traffic • motor cycles, cars, animals and pedestrians • Awareness – Analyse – Action <p>Passengers</p> <ul style="list-style-type: none"> • Courtesy and Patience • Seated and standing passengers • Passenger Distractions • Fare collection • Drop off- pick up points • Safe stopping • Luggage handling <p>Accident Procedures</p> <ul style="list-style-type: none"> • Securing the site – warning triangles Reporting procedures – ID, place, description of scene • Attend to injuries – move to safety • First aid procedures • Notify EMRS – police – base • Fire Extinguishers 	<p>Economy Driving</p> <ul style="list-style-type: none"> • Engine speed and road speeds • Power/torque and gearing • Optimum or Green Band Revs. • Speed and fuel consumption • Speed and travel times <p>Breakdowns</p> <ul style="list-style-type: none"> • Reporting • Ensuring safety • Move to better place if possible • Triangles and traffic control <p>Security</p> <ul style="list-style-type: none"> • Beware of stopping in unsafe places • Plan ahead – where to stop when necessary • Remember baggage security when stationery <p>Regulations</p> <ul style="list-style-type: none"> • Speed – limits • Speed for conditions • Stopping – police? – other reasons • Seating capacity • Legal dimensions • Licence and PRDP • Legal liability <p>Documentation</p> <ul style="list-style-type: none"> • Passenger Lists • Authorisations • COR and licence • Schedules and routes • Problem trip reports
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Course material

The course material required for the three categories of training course described in the previous section can be developed from the existing material that has already been produced by professional trainers in other countries, adapted to South African legislation.

In South Africa the K53 manual describes the various activities that need to be taught for light vehicle drivers and if the instructor is competent to explain the rationale for each aspect, and succeeds in transmitting this to the learner, the examination for the driver licence can be regarded as an adequate test of capacity to drive on a public road, for the private motorist.

Training Institutions

The quality of training institutions involved in the training of drivers of motor vehicles is one of the major problems throughout the country. It is essential for authorities to create a suitable institutional structure and control mechanism to ensure that driving schools are in fact properly equipped and staffed with adequately trained instructors as well as having the facilities to provide the theoretical training required to ensure that drivers are competent.

Trainers

As noted in the foregoing sections, the quality of trainers of drivers is a major problem throughout the region. In order to overcome the problem, it will be essential for authorities to introduce revised institutional structures as well as regulatory controls in order to effectively eliminate driver trainers who are not properly trained and duly

accredited by registered training institutions. There will be a need for gradual introduction of qualifications for instructors and there will no doubt be severe resistance in many areas.

The institutional approach appears to offer the best hope for improving the quality of driver training by insisting that trainers attend an Official Transport Academy staffed by professionals who can ensure that the training quality is sufficient to guarantee the competence of Certified Driver Trainers. It may be necessary, initially, to introduce the concept of “advanced driver training” requirements at the same time as the introduction of the Professional Driving Permit as this would relieve some of the antagonism that will result from termination of driving school operations as a “home industry”.

Driving Licences

Licence categories are aligned with the SADC standard licence categories, which are as follows;

A and A1	-	(≤ 125 cc)-motor cycles
B	-	Light Motor Vehicles (GVM ≤ 3500 kg) with a Trailer ≤ 750kg
EB	-	Light Motor Vehicles (GVM ≤ 3500 kg) with a Caravan
C1	-	Heavy Motor Vehicles (GVM ≤ 15000kg)
EC1	-	Heavy Motor Vehicles (GVM ≤ 15000kg) with a Trailer
C	-	Heavy Motor Vehicles (GVM > 16000 kg)
EC	-	Heavy Motor Vehicles with trailer (GVM > 16000 kg)

Driver Licensing Criteria

It is recommended that the age at which different goods vehicle licence categories can be obtained should be standardised as follows.

Driver Licence Age: Goods Vehicles - (Currently 18 years: NRTA Sec 15. (a))

Recommended:

Minimum age 18 years:

A and A1	–	(≤ 125 cc)-motor cycles
B	–	Light Motor Vehicles (GVM ≤ 3500 kg) with a Trailer ≤ 750kg
EB	–	Light Motor Vehicles (GVM ≤ 3500 kg) with a Caravan

Minimum age 20 years

C1	–	Heavy Motor Vehicles (GVM ≤ 15000kg)
EC1	–	Heavy Motor Vehicles (GVM ≤ 15000kg) with a Trailer
C	–	Heavy Motor Vehicles (GVM > 16000 kg) Goods

Minimum age 22 years

EC	–	Heavy Motor Vehicles with trailer (GVM > 16000 kg)
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Testing and Licensing

There is need to review the testing of professional driver applicants to introduce some professional knowledge of the handling of commercial vehicles. The training of examiners should be included in the development of the necessary training academies to produce competent trainers.

Periodic retest and renewals

There is some consensus that it is necessary to retest drivers periodically and to require eye tests, and medical examinations to ensure that their eyesight remains adequate with increasing age. All of these provisions should be built into the professional driving permit. The standards may be different to the measures to control the private motoring population.

Future Driver Training Developments

There are published intentions to change the regulation of driving schools (Reg. 114 g-q) and to introduce probationary licences (Reg. 107 (a-c) as well as regulations for driving instructors (Reg. 114 a-f) and references to a Driver Licence Testing Centre Manual. The proposed measures indicate that there is awareness of the unsatisfactory state of driver training, but do not appear to indicate a holistic approach or clarity of direction and focus on the broader issues described in this report.

There is urgent need and scope for development of driver training centres to produce competent trainers. The need for standardising the training curricula and course structures is also urgent. The main issues to be resolved are:

- a) The creation, funding and equipping of training centres staffed by trained Professional Instructors of the Driver Trainers that will be employed by driving schools. It is essential that private sector professionalism is engaged to ensure that training is practical, professional, effective and relevant to the road transport industry.
- b) Material, videos, demonstration models and examination and testing programmes. There will be a need for producing material in several different languages. The material can be distributed to training centres established by all authorities in charge of driver training.
- c) Subsidised avenues for aspirant new drivers to be properly trained before being permitted to drive on public roads. This must include PrDP applicants.
- d) The harmonisation of professional training of currently licensed commercial drivers who should be holders of Professional Driver permits (PrDP).

The upgrading of the “Professional Driver Permit” concept, as a separate qualification from the driving licence, introduction of phased age criteria for licence categories and improved training of driver trainers and examiners, will all improve the quality of commercial vehicle drivers. The same concepts should be promoted for training of light passenger vehicle (taxi) drivers.

It will be essential for an independent body under the control of the DOT, such as the RTMC to promote the development and deployment of the professional capacity to create effective training, and to monitor the efficiency and effectiveness of the institutional structures that are created in all provinces. This can be most effectively performed by a national committee involving provinces and TETA, with a view to containing costs and improving efficiency by harmonisation of standards throughout the system.

7.4.6 Professional Driver Permit (PrDP)

The Professional Driving Permit was introduced as part of the RTQS in 1989 in order to provide a means to improve the competence of drivers employed by road transport operators in the passenger and freight sectors. This is necessary as there are further requirements that are important in the accreditation of professional drivers. In addition to training, licensing and testing to ensure competence to drive a vehicle, these criteria relate to age, health, personal habits and sobriety, fitness and health (requiring a medical examination), police clearance, and evaluation of work history and accident records.

The issuance of Professional Driving Permits (PrDP) was also intended to provide the opportunity to include a requirement for professional training in the operation of Heavy

Goods and Passenger transport. This requirement was dropped from the terms of the PrDP and was never applied. The result is that the PrDP has been a requirement for professional drivers for approximately twenty-five years, but due to failure to include professional training as part of the requirement for the PrDP, it is ineffective in the control of driver quality.

Periodic Retests and Licence Renewals

In many developed countries, licence holders are required to undergo periodic retests and licence renewals in order to check deteriorating health, eye sight, to provide an opportunity for drivers to be retrained on new regulations and to ensure that they have maintained their skills and abilities.

There are no current provisions for these retests. The PrDP in South Africa is subject to routine renewal (every two years), but just as an administrative procedure; a medical examination (or declaration) is required and the submission of the PrDP for renewal can take up to three months during which time the holders continue to operate with only a receipt as evidence of competence. The process is subject to manipulation and is a reportedly a common source of conflict with insurers when drivers are involved in accidents.

The professional driving permit for all categories should only be issued subject to specific conditions, age limitations for various vehicle classes and proof of completion of advanced driving training courses to be developed for this purpose. The current situation is that applicants for goods transport must be 18 years of age, irrespective of driver licence category; applicants for PrDP (P - for passenger transport) must be 21 years of age; and for PrDP (D- dangerous goods) applicants must be 25. The PrDP categories do not relate to the vehicle configurations so that PrDP categories effectively rate a 5-ton load of diesel higher than a 80 seater bus load of passengers and do not require experience or professional training for drivers of maximum GCM articulated combinations.

Interventions and actions required

Revision of the terms of the PrDP is required to improve the professionalism of commercial drivers in South Africa (and throughout the ESA region).

The original RTQS long term intended regulations did require a bi-annual written test as well as a practical test. The retesting is an essential element as drivers are currently labelled as professional after a medical and previous conviction check. There is no additional training except for dangerous goods drivers and can hardly be seen as professional driving criteria.

The main current problem is there are no training centres established with certified competent professional trainers and very few properly equipped training centres. There is no "approved" training curriculum and testing for the accreditation of PrDP holders as professionally competent. This requires urgent national strategic development to overcome the institutional and financial blockages caused by current structures.

A further problem that will need to be addressed is that Driving Licence Testing Centres do not have sufficient capacity to handle the demand even for learner and driving licences. As the same officials would be required to execute the PrDP tests it has never been introduced. Reg. 107 of the NRTA should be amplified to provide for more detailed testing of HGV driver and PrDP applicants. It must be noted that about 43% of PrDPs have expired and not been renewed.

There is need for coordination and extensive development of professional training for the road freight sector. DOT and the industry consultation is needed.

7.5 Regional Coordination

South Africa is a signatory to a number of bilateral agreements with neighbouring states in the SADC community. Recent decisions by the SADC to endorse the recommendations of a study completed in 2012⁴³, are scheduled to result in recommendations to all Member States to repeal the bilateral agreements and transit permit arrangements, and to ratify a Multilateral Cross Border Road Transport Agreement (MCBRTA), that is proposed for the entire Tripartite region, embracing the 22 mainland States in SADC, COMESA and EAC⁴⁴.

The intention of the SADC-Tripartite alliance is to introduce harmonised quality based regulations for control of commercial freight and passenger vehicle movements across borders, to be applied by all Member States across the entire region. The decisions in this regard were taken at a meeting held in Johannesburg on the 19th August 2015, discussed and agreed at a meeting in Livingstone on 13th November 2015 and now await ratification of a Multilateral Cross-border Transport Agreement (MCBRTA) by the Transport Ministers throughout the region.

In order to achieve harmonisation with the SADC-Tripartite initiative, it will be necessary for the Department of Transport to engage and to evaluate the implications for the South African road transport sector. There may be some requirements for institutional change, apart from the obvious changes to CBRTA, but these will become apparent as the harmonisation process takes place.

It may be necessary to introduce some small changes to the National Road Traffic Act in order to accommodate the harmonisation envisaged by the SADC-Tripartite initiative. This is likely to be minimal as there appears to be widespread acceptance of the SADC standards that have been the subject of long standing negotiations between Member States and include many South African national standards. It will be necessary for DoT to monitor the harmonisation process and to coordinate the South African response.

The Department of Transport does not have specific authority over border procedures and is not responsible for the efficiency of border post management. However, the interests of road freight and passenger transport are such that the Department is necessarily involved in any measures to improve the efficiency of cross-border movements.

The fact is that about 14 government departments are involved in the border post management operations and that these are coordinated at present by BCOCC and may in future be managed by the Border Management Agency (BMA). This means that DoT can support and advise, but not make specific changes. The current initiative to create a One-Stop-Border Post between South Africa and Zimbabwe at Beit Bridge will offer opportunities for rationalisation.

There is still a measure of inefficiency at the South African borders despite the best efforts of the many agencies involved. It is therefore recommended that the Department of Transport commissions a logistics based evaluation of border post procedures and activities with a view to isolating the primary causes of delay (many of which are not due to the actions of the authorities) in the interest of longer term redevelopment of the border posts and improvement of transport efficiency.

⁴³SADC – Tripartite Harmonisation of Road Transport Regulations: NP&A - TMSA – Gaborone 2012

⁴⁴Tripartite Workshop on Harmonisation of Inter-state Road Transport Regulatory Systems: 17-19th August 2015: Birchwood - Johannesburg

7.6 Lack of Road Freight Information

7.6.1 Road Freight Information Systems

One of the problems facing the Department of Transport, in the management of the road freight transport industries is the difficulty of obtaining current factual and relevant information.

NFLS 2005 made the following statements regarding the need for freight logistics information, *“The lack of detailed, credible information on freight traffic and its patterns is a serious challenge to planning authorities and infrastructure providers, as well as an impediment to the optimal deployment of tactical initiatives.....Currently information is scattered across the transport sector rendering it difficult to determine traffic flows as a result of weak technology integration. This creates problems for industry role players to determine how the sector is performing and especially to determine how fast or slow the sector is growing. There is a dire need to enhance technology to ensure that real time information is systematically captured.”*⁴⁵

When the recommendations of this project regarding operator registration and the use of technology to control overloading, speed and the activities of operators are implemented, it will be possible to collect real time information. This will permit recording of road freight transport data on volumes, flows, origins and destinations as well as the activities of specific operators. The establishment of road surveillance equipment will serve the purpose of improving road safety and accumulation of real time information on the activities of operators as well as enhancing the effectiveness of the enforcement agencies.

7.6.2 Accident Reporting and Statistics

Data is the cornerstone of all road safety activity. It is essential for the diagnosis of the road crash problem, and for monitoring road safety efforts. It is important to be able to classify categories of road users involved in crashes, to be able to strategically target behaviour patterns that need changing. Essential components of a data system are standardised report forms, as well as means of storing and analysing the data. This information is also useful in providing data to prove a sound business case for investment.⁴⁶

South Africa has one of the worst accident experience levels in the world, with approximately 13,802 freight or accidents per annum⁴⁷. South Africa is ranked 25th out of 181 countries in terms of the frequency of accidents per 100,000 of population. The rate of 27.5 deaths per 100,000 of population is considerably higher than UK (3.59) and Australia (5.7) and ranks with some of the least developed countries in the region⁴⁸ as shown in Table 7.4 below.

⁴⁵NFLS 2005 p 29

⁴⁶ The Asiphephe Road Safety Programme Measured Against Issues for Developing Countries as Identified by Global Road Safety Partnerships – Watson W: KZN DoT 1999

⁴⁷ Road Traffic Management Corporation – March 2011

⁴⁸ Wikipedia World Traffic Accident Data

Table 7.4: Road Fatalities by Country per 100,000 Population⁴⁹

Rank	Country	Rate
1	Namibia	53.4
2	Swaziland	48.2
3	Malawi	45.4
9	Sudan	39.2
10	Mozambique	38.2
11	Zambia	37.9
12	Ethiopia	37.8
13	Lesotho	37.4
16	Angola	36.2
19	Uganda	34.7
34	Tanzania	29.6
35	Burundi	29.5
39	Dem. Rep of Congo	28.6
40	Kenya	28.2
72	South Africa	27.5*
42	Botswana	26.6
49	Rwanda	24.2
74	Zimbabwe	19.3

Source: WHO 2011 : * RTMC Report 31 March 2011

The frequency of freight vehicle accidents within that total is also reportedly unacceptably high although the statistics is not readily available.

On the N3 Corridor between Johannesburg and Durban, there were 524 heavy vehicle accidents in 2012, and 409 (78%) of the accidents were diagnosed as human error. The human factor would have included issues of competence, fatigue, bad judgement and the influence of alcohol and drugs.

Despite advanced road traffic regulations and a comprehensive National Road Traffic Act, the situation with regard to accident prevention in South Africa has a lamentable history of inaction and ineffective attempts at introducing legislative measures that have made no significant impact on the situation. The failure to address the basic causes of crashes, driver training, fatigue, vehicle condition, lack of effective enforcement of speed and dangerous driving mean that the situation is unlikely to improve.

The overall management of road traffic in South Africa is vested in the National Department of Transport which has derogated authority to the Road Traffic Management Corporation (RTMC), which has in its 10 years of existence made no significant changes or impact to the issues of road traffic accidents. The fundamental problem is that no attempts had been made to return to the basic causes of accidents therefore various attempts at introducing regulatory controls and new systems such as the Administrative Adjudication of Road Traffic Offences (AARTO) are likely to continue to disappoint.

In addition, from the research performed in this project, it is clear that the reporting of road traffic accidents is totally unsatisfactory at all levels within South Africa. At the national level, the lack of effective mechanisms for collection, recording and analysis of road accident data, is very apparent. At the provincial levels, some accident data is collected but due to the delays, backlogs, and lack of processing staff and facilities, the information cannot be regarded as comprehensive, complete or accurate.

A large part of the problem goes around the methods of accident recording. Most accidents are attended by SAPS as first responders and data collection at the scene of accidents is theoretically performed using the ARF form designed by the Human Research Sciences

⁴⁹World Health Organisation - <http://www.worldlifeexpectancy.com/cause-of-death/road-traffic-accidents/by-country/2011> and RSA RTMC Traffic Report 31-3-2013.

Council (HSRC) and CSIR. The form is very comprehensive and detailed but requires the on-site responder to attempt to fill in 200 different questions in order to complete the form. Analysis of a sample of completed forms indicate that on average, approximately 30% of the questions are answered with a result that the analysis of the data collected, is necessarily skewed and incomplete. There is need for concerted evaluation of the current system as it is patently impossible for enforcement officers to complete complicated questionnaires at the scene of accidents, whilst performing the necessary control functions to ensure the safety of the crash site.

In addition to the problems of onsite collection of accident data, there is the practical need to collect data from SAPS stations which are located in all areas of South Africa, whereas accident data processing is centralised in major cities, and the systems for data transmission are inadequate.

The net effect of the foregoing is that at a national level, data is incomplete and inaccurate, at the provincial level, there are severe problems with backlogs and incomplete data whereas, in some major municipalities (notably eThekweni) accident recording analysis and reporting is excellent and in others is very poor. It is however a feature of the current situation, that inadequate attention is paid to the monitoring and reporting of traffic accidents, violations and crashes and the implications are that there is inadequate information for decision making and a masking of the seriousness of the current situation. The Road Safety Strategy Report⁵⁰ published by RTMC shows a declining accident rate, but this is contradicted by the sporadic data releases by various departments, usually at holiday periods.

At current levels of accuracy and efficiency of the accident reporting system, it is highly unlikely that any statistics quoted by authorities can be given credibility or reliance as decision making tools. This situation requires urgent coordinated effective action by DOT in order to ensure that the monitoring and reporting systems are restored to efficiency.

7.7 Promotion of BEE

As there are approximately 500,000 commercial vehicles it can be assumed that employment in road freight transport amounts to more than 700,000 without including the many people engaged in the logistics activities that are complementary to the sector. In addition to the 75% of drivers working for industrial firms there is an estimated 175,000 drivers working for transport companies with an unknown number working as one-man truckers (owner-drivers). There is also increasing scope for aspirant supervisors and managers with experience and initiative.

The road freight sector has committed to recruit new black people into the industry and increase the skills of new and existing employees, and to create opportunities for BEE.⁵¹ The Department of Transport must evaluate options for supporting training and skills development to optimise the potential for creation of new black entrepreneurs (and the development of existing ones) who can participate in economic opportunities throughout the industry value chain

7.8 Cross Cutting Issues

7.8.1 Driving Hours

The 22nd Amendment to the NRTA (2014) spells out the processes, procedures and application of the revised driving hours' legislation. This requires the operator to supply drivers with logbooks (Reg. 272 (c)). Maximum driving hours are set at 5 hours (or 400 kms)

⁵⁰ National Road Safety Strategy – 6th Draft - RTMC 2016

⁵¹ Road Freight Sub-Sector Code for BBBEE – Gazette No.32511: 21 Aug. 2009 p4

for a single driver who then must rest for 15 minutes, out of the vehicle (Reg. 115 910(a), (c), and (f). The logbooks are to be retained for inspection for 3 years.

The maximum driving time permitted in 24 hours is 15 hours with mandatory rest period of 9 hours. For 2 drivers the maximum driving time when they drive interchangeably is 30 hours. The fact that transgressors will be referred to a bargaining council, may prove to be problematic as it will introduce another scene for litigation and delays.

The fact that it applies to all goods vehicles over 3500 kgs (and buses) is also likely to be difficult to enforce as that makes about 500,000 vehicles liable to comply, including city distribution vehicles, rural and farming vehicles and owner operators.

It is likely to become necessary to amend the legislation to redefine the vehicles that are liable, either by distance travelled (e.g. trips over 300 kms require logbooks), or by area or route e.g. National routes where longest distance driving and driver fatigue takes place.

Whilst it is recognised that the objectives are laudable and that action is required, it is recommended that the process is discussed further with the freight transport industry and relevant authorities to achieve an initial focus on the most relevant areas.

Limiting to corridors and not urban movements

7.8.2 Truckstops

The efficiency and safety of road freight operations requires that when not actually moving, freight vehicles can be safely parked so as not to obstruct traffic or encroach on property. There are problems on most of the trucking routes in South Africa with very limited space for parking of heavy vehicles. This will be even more problematic if attempts are made to enforce driving hours legislation as the shortage of safe parking will force drivers to park illegally on the side of the road or continue to drive for illegally extended periods. It will be patently unreasonable for authorities to enforce stopping in illegal spaces or prosecuting drivers who are legally forced to stop.

The needs for parking spaces are not all identical; for drivers to be able to drive off the road, stop for short periods to rest, find ablution facilities, buy food and then proceed, requires "truck stops" with all appropriate facilities as conveniently located as possible. The most prevalent "truckstops" in South Africa are provided by filling stations which have limited space behind their shops and restaurant facilities. Truck drivers are not generally very welcome in the sections for the convenience of the motoring public.

In all industrial areas, ports environs and adjacent to bulk handling points, there is a need for "staging areas" in which vehicles can be parked whilst waiting to load or unload without blocking roadways. As these delays can take several hours and the vehicles are "queuing" to be handled in sequence, the parking areas required, are often extensive and if not provided by the businesses invariably lead to long lines of trucks parking along streets or roads.

A further type of facility required by drivers of long distance heavy goods vehicles is overnight resting and ablution facilities in safe areas where the truck and load can be parked under security so that the driver can sleep in or out of the vehicles for several hours. The truck parks that provide these facilities usually also offer recreation, TV lounge, restaurant and full ablution facilities with showers and change rooms, toilets, ATMs, phones, power points and sometimes medical and personal care facilities.

All three of the abovementioned "parking facilities" have a role to play in the safe and efficient movement of freight, and there is generally a need for assistance and motivation by authorities to make any of them sufficiently viable as commercial undertakings. The returns

from fuel sales are often minimal as the freight industry uses bulk facilities to fuel trucks at base and destination rather than at retail filling stations.

There is a need for an in-depth study of the need for parking and stopping facilities on major routes and around industrial areas in order to identify ways and means to improve the unsatisfactory current situation with facilities for HGV drivers. In many areas the concentration of drivers and crews in unregulated stopping places is leading to unsafe driving due to sales of alcohol, prostitutes, drugs, and lack of security, fuel thefts and all night disturbances by vendors, women and criminals.

7.8.3 Road Funding Mechanisms

The road freight transport system (and by implication, the whole of South African industry, as the users) is totally dependent on the availability of road space and roads of suitable condition for transport of freight. The issue of road condition and costs of maintenance is in need of review. As noted in NFLS, 2005; *“road freight movement places a serious fiscal burden on government particular where heavy vehicle overloading is concerned. They heavy vehicle operators are not paying the corresponding cost of damaging the road network; hence prices appear cheaper than is the case. Secondly, the impact of heavy vehicle accidents on both fiscus and communities has not been accounted for in the costs of road freight transport. Lastly, the environmental impact of road based freight transport through emissions and cargo spillages is often not incorporated”*

This situation is unchanged in 2015 and is a major cause for concern regarding the sustainability of the road freight system. There is urgent need for analytical studies to establish to what extent road freight operators (and the user industries) do, or do not contribute adequately to the wear, damage and externalities that they cause. The continual debate, allegations and counter-allegations are not conducive to resolution and implementation of solutions. The continual allegations of the impacts of overloading are not based on fact or reality but are repeated at all levels of public and private debate.

Several studies have been done at various times to attempt to establish the actual road usage cost of different categories of vehicles, but these have not been effectively employed in determining the share of road costs that should be allocated to the operation of road freight vehicles. It has been suggested that if all the road maintenance costs were calculated and recovered from road freight operators, the cost of road freight transport would rise significantly but the industrial users of freight transport point out that the R55 billion p.a. in fuel levies was intended to finance road maintenance and pay for externalities. As with all forms of transport, the overall costs of operations have eventually to be paid by the customer or user of the transport, so that any discussion on road cost recovery from transport operators, effectively equates to the proportional inflation of freight transport costs that will be experienced by user industries and have impact on company taxes and GDP. The detailed calculation of the overall road budget requirements has been done and the facts are available in models that have been discussed at Treasury level so that it should be possible to plan for strategic action by all agencies.

The debate has in the past, to a large extent been academic, but the reality is that failure to provide sufficient funds for roads is having seriously negative impacts on the cost and efficiency of road freight operations due to the fact that operating costs rise rapidly when road conditions deteriorate. On the other hand, further charges for road usage from all operators of road freight transport may have an excessively inflationary effect on the prices of goods and would cripple some industry's export potential.

The issue of equitable road pricing is critical and has severe implications for the economy in the absence of significant alternative transport options. It is crucial that the current process of preparing a “Roads Policy” green paper is aligned with road freight transport policy to

ensure that operational and economic issues are considered. As the economics of road usage are closely connected to vehicle loading and other operational aspects there is need to engage CSIR and SANRAL which have the necessary data and technical capacity to produce a definitive analysis to provide an agreed basis for policy formulation.

7.8.4 Role and Application of PPP

In the restructuring of the road freight sector to achieve efficiency of the regulatory processes there is need to examine the potential for using Public-Private Sector-Partnerships (PPP) in the operation of the systems that should be developed to provide effective services to the authorities. There is extensive potential for PPP operation of road freight monitoring systems, overloading control, accident data collection, analysis, and reporting, traffic management systems, incident and emergency centres, EMRS, Vehicle inspections, and a range of other activities that currently take up the time of trained traffic and enforcement officials.

It is essential that the initiation of such functions are controlled within a framework to be monitored by the regulatory division of the DOT to ensure that there are no opportunities for collaborative contracts designed to benefit individuals or officials by over pricing or lack of definition and monitoring of deliverables.

7.8.5 Externalities

The externalities associated with the rapid increases in the road freight operations in South Africa are a growing cause for concern, with environmental, congestion and safety concerns being the major issues.

Environmental Pollution

The freight transport industry in South Africa uses approximately 360,000 heavy vehicles (3.5%) and a further 350,000 light commercials (3.5%) out of the total vehicle populations of 10.2 million powered vehicles. Road transport is the source of 13% of GHG with the freight transport sector contributing to production of CO₂, NO₃ and other tailpipe emissions.

In the urban areas there is air pollution, noise and spillage onto roads that contributes to the pollution of water sources and overall degradation of these areas. In mitigating the effects of commercial transport there is a significant move to more efficient HGV engines with reduced emission levels (mainly due to international technology development). The recent growth of the commercial road freight sector has been subdued in line with current industrial output (about 3% p.a.) but will increase with further industrial expansion. Amongst the Nationally Appropriate Mitigation Actions (NAMAs) proposed to the UNFCCC⁵² the potential for switch from road to rail may initially be limited but would over the longer term with the recommended institutional changes in NFLS could become positive in terms of pollution.

Congestion

In the main cities there is considerable congestion, due mainly to the limited amount of safe, high quality, efficiently scheduled public transport. The situation is aggravated in many areas by the presence of very large vehicles in conflict with light passenger vehicles for road space, although HGVs typically make up less than 7% of the traffic flows. There are rising truck accident rates in the cities and on the main national corridors, which are caused partly by the competition for road space (with 10 – 35% HGVs on corridors) and partly by inadequate control of light vehicle speed and driving habits.

⁵² Green Transport Strategy – Department of Transport 2016 Ch2.1

Trucking Intrusions

There is anti-social behaviour of drivers and load handling staff in industrial and residential areas, with whole trucking undertakings being based, parked and managed from residential properties. The control of such violations rests with municipal and provincial authorities but is complicated by the lack of off-road facilities for truckers and the lack of an effective operator regulation system.

Road Accidents

The current national levels of road accidents involving freight vehicles is not known as national accident statistics are not currently available. The overall accident experience in South Africa is deteriorating, but in the absence of effective data capture and analysis the extent is unknown. The last official data was released in 2011 from RTMC and material from the Medical Research Council (MRC) in 2015 from research in mortuaries indicated that in 2009 more than 33% of non-natural deaths were made up from road fatalities. 80% of those deaths were male. The total number of un-natural deaths recorded in 2009 for the whole of South Africa was 52 493, of this transport related deaths for the country made up 17 742.⁵³

There are also variances in the data released with KZN Provincial deaths for 2009 recorded as 2629 by the RTMC, and 2855 by the province, making up around 18% of the national fatalities. This indicates a total national fatality of road users at 14 817, and obvious under reporting of 16%. With the deterioration of the statistics since 2011 it can be presumed that under reporting is still rife, and that provincial figures are as inaccurate as the national statistics. The accident data from the N3 in 2014 indicate that accidents involving heavy goods vehicles amounted to about 50% of all accidents on that route, although the proportion of HGVs was about 34.7 % of total vehicles.

8. IMPLEMENTATION, MONITORING AND EVALUATION

As noted in the introductory sections of this report there are very significant defects in the existing regulatory framework for road freight (and passenger) transport in South Africa. The current systems and structures are hampering the enforcement of quality standards and there are many aspects of the situation that are unsatisfactory, even at the current low levels of industrial activity and GDP growth.

If South Africa is to raise industrial output, global competitiveness, employment and effective use of the country's resources the road freight transport sector will become a limiting factor to efficiency and cost-effectiveness due to several negative internal and external factors such as technical and managerial skills deficiencies, HGV driver incompetence, excessive externalities (crashes, pollution, congestion) and widespread non-compliance with quality standards. At the same time the road infrastructure is deteriorating and funding levels are currently unsustainable thereby adding to future costs and inefficiency.

The issues and interventions that are identified in this Road Freight Strategy cover a wide spectrum and involve numbers of different institutions, organisations and eventually all the participants in the road freight sector. The DOT will require professional capacity in coordinating the necessary implementation actions to ensure that there is a well-planned series of processes in order to achieve the desired end-state objectives.

Implementation Mechanisms

As some of the intervention processes must necessarily be sequential and others totally discrete involving many different entities there will be need for an integrated plan and

⁵³ The Injury Mortality Survey: A national study of injury mortality levels and causes in South Africa in 2009. Richard Matzopoulos et al. MRC April 2013.

timetable with identifiable milestones and a system for monitoring and reporting the progress of the changes and developments. The mechanisms will be different depending on the inter agency / department relationships. The implementation plans for the issues and actions described in the strategic interventions section of this report are described below.

8.1 Operator Registration

Create the Road Transport Authority and the Operator Registration system as described in Section 7.1 (Page 33). This will require amendments to the NRTA and other legislation. DOT will appoint a task team to drive the process and to ensure coordination with CBRTA, and the SADC TRIPS system.

8.2 Law Enforcement

Implementation of AARTO and improvement to coordination with all provinces in the revision of overloading control strategies will be an on-going process requiring a high level of interaction between tiers of government. The necessary actions are described in Section 7.2.2 (Page 39). Revision of the national strategy for overloading control will include changes to Legal Axle Massload (LAM), promotion of High-Speed-Weigh-in-Motion and Number Plate Recognition technology with integrated data bases to augment and eventually replace the current weighbridge system. There will be need for changes to the legislation to permit use of HSWIM and camera integrated with AARTO as evidence for prosecution of speed and overloading offences.

The introduction of electronic data capture and processing, integrated with the Operator Register, will provide a means to curtail current collusive practices. (Section 7.2.3) (Page 40).

8.3 Integrated Planning

In order to create the necessary structures to address the issue of integrated planning of road freight facilities, routes, and logistics areas the DOT will need to plan and create forums. The structures must provide for improved coordination with various agencies, provinces, Treasury, parastatals, and other departments as well as the private sector industries and suppliers of road freight transport. (Section 7.2) (Page 48)

8.4 Road – Rail Coordination

Strategic actions will be dependent on the implementation of the recommendations of National Freight Logistics Strategy (NFLS) 2016, as the creation of railway capacity must precede any plans to shift cargo and the decisions will be made by the private sector producers, importers and exporters of goods. The process of changing the institutional and regulatory framework is described in the National Freight Logistics Strategy.

8.5 Training and Skills Development

Improvement in the training of drivers, technicians and managerial staff will be dependent on development of a strategy to create training institutions and the funding of suitably professional training course in collaboration with industry, TETA and provinces. There will be the need for and provision for training bursaries for aspirant trainees to kick-start the process. The process will review driver age limits, training and the terms of the PrDP. DOT will create a professional task team to undertake a project to define the processes and achieve coordination of the effort. (Section 7.4) (Page 50)

8.6 Regional Coordination

The Department of Transport will need to coordinate the responses to the current SADC liberalisation and harmonisation initiatives in road transport. The DOT Regional Corridors and freight departments will drive the process which will also involve Foreign Affairs, Border Management Agency (BMA) and CBRTA. (Section 7.5) (Page 65)

8.7 Lack of Road Freight Information

Department of Transport will need to review the arrangements for collection and reporting of national accident statistics in order to permit planning and monitoring of road safety measures, in terms of international agreements. DOT will commission a study on the available data and the necessary planning to create a framework for future statistical reporting. (Section 7.6) (Page 66)

8.8 Promotion of BEE

The Road Freight BEE Charter has been accepted by the road freight sector to create opportunities for BEE.⁵⁴ The Department of Transport must evaluate options for supporting training and skills development to optimise the potential for creation of new black entrepreneurs (and the development of existing ones) who can participate in economic opportunities throughout the industry value chain. (Section 7.7) (Page 68)

8.8.1 Driving Hours and Truckstops

There is need to re-evaluate the terms of the current NRTA amendment regarding driving hours to focus the legislation on long-haul trucking. Implementation will be complicated by the lack of truck parking facilities on main routes and in industrial areas. DOT will commission research to resolve the long-outstanding issue. (Pages 68-70)

8.8.2 Road Funding Mechanisms

The issue of equitable road pricing is critical and has severe implications for the economy in the absence of significant alternative transport options. It is crucial that the current process of preparing a "Roads Policy" green paper is aligned with road freight transport policy to ensure that operational and economic issues are considered. As the economics of road usage are closely connected to vehicle loading and other operational aspects there is need for DOT to engage with SANRAL which has the necessary data and technical capacity to produce a definitive analysis to provide an agreed basis for policy formulation. (Page 78)

8.9 National Road Freight Policy Interventions

For convenience it is relevant to aggregate the implementation of the interventions by primary institutional structures that will be required to contribute to the recommended changes. These may be identified as National Freight Policy Interventions which are primarily the function of the DOT and involve changes to national legislation and institutional structures.

Operator Registration
Legal Axle Massload
Professional Driver Permit (PrDP)
Vehicle Condition
Driving Hours
Administrative Adjudication of Road Traffic Offences (AARTO)
Consignor/consignees regulations
Cross-border harmonisation
Road Funding Mechanisms
Accident Reporting and Statistics
Externalities

⁵⁴ Road Freight Sub-Sector Code for BBBEE – Gazette No.32511: 21 Aug. 2009

8.10 National Provincial Interventions

The second group is the **National Provincial Interventions** which include several activities that are performed or managed by provinces (and in some cases agencies) and will therefore require consensus in order to provide for coordinated nationally standard systems to be implemented by the provinces and agencies.

Transport of Dangerous Goods
Overloading Control
Transport of Abnormal Loads
Road Transport Management System (RTMS)
PBS Vehicles
Speed Control
Freight Route Planning
Truckstops
Enforcement Issues

8.11 National Multidisciplinary Interventions

The second group is the **National Provincial Interventions** which include several activities that are performed or managed by provinces (and in some cases agencies) and will therefore require consensus in order to provide for coordinated nationally standard systems to be implemented by the provinces and agencies.

Road Freight Driver Training and Licensing
Skills Development in Road Freight Sector
Intra-governmental Coordination
Industry Liaison
Role and application of PPP
Road Freight Information Systems
Freight Route Planning
Road –Rail coordination

8.12 Implementation Tables

Implementation planning for the abovementioned issues should follow a planned sequence of short-term (1-3 years); medium-term (3-5 years) and long term (5-10 years) intervention strategies as shown in following the tables.

8.12.1 National Freight Policy Interventions

Strategic Interventions	Implementation	Years			Monitoring
		1-3	3-5	5-10	
Operator Registration	Establishment of Road Transport Authority (RTA) and the Road Transport Operator registration process and IT system	✓	✓	✓	Monitoring of operator quality by means of the IT system (develop and integrate the SADC TRIPS system for national use)
Legal Axle Massload	Research and revise NRTA	✓			Promote – develop HSWIM and change legislation to make its use legal for
Professional Driver Permit (PrDP)	Revise terms – prepare plans for effective training institutions	✓	✓		Once training is available change regulations and introduce stepped competency requirements by vehicle category.
Vehicle Condition	Revise the RWTC system – to make workshops responsible for vehicles to be tested - reintroduce official test centres	✓	✓		Introduce real-time IT systems to Monitor RWTCs and road side inspections
Driving Hours	Revise regulations to limit to long distance operators	✓			Logbooks linked to Operator register
Administrative Adjudication of Road Traffic Offences (AARTO)	Resolve revenue issues - simplify offence categories – pilot and study complications and RTIA processes	✓			Create separate IT system linked to eNATIS
Consignor/consignees regulations	Revise terms and coordinate with industry	✓	✓		Monitor implementation via weighbridges and AARTO
Cross-border harmonisation	Examine implications for RSA and engage in process of developing the IT system to make it usable by the proposed Road Transport Authority for all RSA freight (and passenger) commercial operators.	✓	✓	✓	IT system to be linked to AARTO – eNatis- Overload - speed – RWTC- road inspections-driver records-databases – and regional operator database
Road Funding Mechanisms	Engage consultant panel to examine all options and agree national strategy	✓	✓		DOT to coordinate deliberations
Accident Reporting and Statistics	Engage independent consultant to report on status quo and recommend re-establishment of an effective system of capturing, recording, analysing and reporting national crash/accident information at all levels	✓			Create monitoring system to report on crash data from all agencies.
Externalities	Engage consultant to report on current situation and recommend strategies to address all issues	✓	✓	✓	DoT to coordinate remediation plans

8.12.2 National Freight Policy Interventions

Strategic Interventions	Implementation	Years			Monitoring
		1-3	3-5	5-10	
Transport of Dangerous Goods	Develop monitoring and reporting system tied to Operator Registration system once that is online	✓	✓		Create Monitoring system based on Operator registration information and make available to Control Centres in all provinces and Metros.
Overloading Control	Re-examine current overload strategies-resources-and usage and effectiveness: develop effective systems using HSWIM & changed LAM legislation linked to the Road Transport Authority register of operators.	✓	✓	✓	Develop and extend the real-time monitoring systems from HSWIM and camera installations linked to operator registration.
Transport of Abnormal Loads	Promote the development of secure automated permit issue and transfer systems to reduce delays and facilitate transfers between issuing provinces.	✓	✓		Develop the IT system to link to SADC TRIPS and other databases – DOT to develop a central reporting system.
Road Transport Management System (RTMS)	Re-examine official position-underlying legalities and future perspective relative to RTA and Operator Registration	✓			DOT to engage consultant to review and report on legal and effectual issues in relation to revised official operator registration system.
PBS Vehicles	Re-examine present Abnormal permit processes-future implications and relationship to NRTA standards	✓			Revise system and introduce reporting and monitoring of Abnormal permit issues.
Speed Control	Develop and integrate camera speed control–all vehicles–amend legislation to enable effective AARTO implementation	✓			DOT to establish monitoring and reporting agency (RTMC/ RTIA / Other ?)
Freight Route Planning	DOT to establish consultant panel of freight logistics operational experts and affected authorities to examine all major road freight restrictions, obstructions and potentials for forward planning in RSA.	✓	✓	✓	DOT to coordinate the study and evaluate the reports to integrate into national infrastructure strategies.
Truckstops	DOT to engage freight logistics consultant to report on status quo and potential for resolving the issues around the parking of freight HGVs on corridors, and in industrial and residential areas.	✓	✓	✓	DOT to coordinate discussion and reporting with provinces, SANRAL, driver unions and municipalities
Enforcement Issues	There are serious deficiencies in the enforcement systems that partly due to priorities in the implementation of prosecutions but also include corruption and the need to improve control of the various enforcement systems to prevent the current non-compliance with legislated standards of operation.	✓	✓	✓	Monitoring will be dependent on specific enforcement measures and agencies

8.12.3 National Multidisciplinary Interventions

Strategic Interventions	Implementation	Years			Monitoring
		1-3	3-5	5-10	
Road Freight Driver Training and Licensing	Development of effective HGV driver training is an urgent necessity- the process must include creation of professional training colleges to train trainers of HGV drivers-registration of all private sector training schools-mandatory use of official curricula and accreditation procedures- coupled to revised examination standards and procedures.	✓	✓	✓	DOT to engage professional freight and logistics consultant to define the system and achieve consensus with provinces and private sector training schools. DOT to monitor process and engage with TETA to coordinate the streams of driver training and to negotiate the funding processes.
Skills Development in Road Freight Sector	DOT to engage freight training and HR consultant to review the status quo including the TETA current involvement and to make recommendations to address the skills deficiencies at all levels in the road freight and logistics industries	✓	✓	✓	DOT to coordinate and monitor the planning and implementation processes.
Intergovernmental Coordination	DOT to perform evaluation exercise to examine all the issues that are currently controlled by different governmental agencies, provinces, departments, parastatals and private sector organisations and to develop effective structured coordination systems	✓	✓	✓	DOT to establish road freight logistics monitoring capacity
Industry Liaison	The liaison and coordination between DOT and the road freight industry is not effective due to lack of communication channels and the exclusion of industry from current decision making processes in government.	✓	✓	✓	DOT to employ a freight consultant to establish regular liaison meetings with panels of specific interest groups in road freight transport e.g. port users; manufacturers; agriculture, FMCG retailers, etc. to monitor the impacts of current policies and proposed changes.
Role and application of PPP	There are many functions currently performed by government officials that could be more efficiently performed as PPP contracts thereby introducing improved technology, reduced dependence on state funding and reducing the HR responsibilities of state departments.	✓	✓	✓	Dot should engage in an exercise to analyse the potential for improving efficiency, reducing costs and introducing improved technology for the future regulation of the road freight logistics sector.
Road Freight Information Systems	DOT must commission freight logistics industry consultants to define the information needs of the department including purpose and outline content and then describe where information is available and which means of information collection will become possible with the changes recommended in this study.	✓	✓	✓	Monitoring of road freight in real time is becoming possible as a spin off from speed and overloading enforcement and a holistic, integrated system can provide significant improvements for the future.
Freight Route Planning	DOT needs to establish a competent professional panel of experts who can evaluate the potential for resolving the current obstacles to integrated freight route development planning as well as recommending the necessary measures to unblock institutional, technical and funding issues,	✓	✓	✓	DOT to monitor this process by means of regular progress reports on issues and resolutions.
Road –Rail coordination	The role off road freight in any move from road to rail will be largely supportive as most rail freight requires short haul road services to railheads, load points and sidings.	✓	✓	✓	It would be useful for DOT to obtain current data on railway movements by commodity in order to pride a baseline for future evaluation of the implementation of the National Freight Logistics Strategy.

8.13 Monitoring

In order to provide the baseline against which to evaluate the effects of the changes it will be useful to compile a set of indicators based on the status quo for all identifiable parameters. There are unfortunately such extensive information deficiencies that the baseline is likely to be incomplete, but will still provide some measures against which to judge future performance.

The measures and monitoring systems for each intervention will be dependent on the availability of feedback from the many agencies that will be involved in the process.