transport
Department:
Transport
REPUBLIC OF SOUTH AFRICA

2015 REVIEW OF THE NATIONAL FREIGHT LOGISTICS STRATEGY (NFLS) 2005

Presentation to Agbiz
12th August 2015

Delca Systems

PROBLEM STATEMENT 2005

In the executive summary of the NFLS document (2005), the overarching deficiencies in the freight logistics systems were identified as follows:

- *the freight system's inability to fulfil the demand for cargo movements at prices, levels of service, quality of service and acceptable levels of reliability in a manner that supports the National Development Strategies.*
- *This failure stems from* an inappropriate institutional and regulatory structure *that does not punish inefficiency and reward efficiency.*
- *It is structural and incapable of appropriately allocating external costs and raising efficiency. Although elements of the system, such as the national road network, are of a high standard and even surpass those found in some developed economies,*
- *it is the system level performance and state of infrastructure that needs attention.*
- *Improvement can only be achieved by an integrated system-level approach.*
- *This strategy signals a shift toward demand-driven delivery of freight logistics services rather than a supply approach".*

OBJECTIVES OF THE FREIGHT TRANSPORT SYSTEMS

- Meet demands of industry and Economy
- Optimised total cost-effectiveness
- Obviate cost distortions and optimise competition
- Reduce negative externalities, safety, pollution, congestion and infrastructure damage.
- Promote national global industrial competitiveness
- Attract international investment
- Actively build skills and capacity at all levels
- Optimise use of resources – land, facilities, and infrastructure
- Develop sustainable systems and operations

OBJECTIVES OF THE REVIEW OF NFLS 2005

- Identify the issues isolated in 2005
- Examine the current situation
- List and add new and unresolved issues
- Examine and select strategic actions
- Note sequences and interactions
- Describe implementation plans

STRATEGIC ISSUES

- **Institutional issues**
- **Regulatory issues**
- **Operational issues**
- **Environmental and safety issues**
- **Funding issues**
- **Training and skills, development issues**

CURRENT ISSUES IN FREIGHT TRANSPORT

- Road transport quality – operators and operations
- Lack of general rail freight capacity
- Need for rail investment and competition
- Need for integration of ports, cities and industry
- Need for improved communication with private sector
- Need to restructure freight transport authorities
- Need for system integration between authorities
- Need for skills and capacity building institutions
- Need for competent change management
- Need for executive commitment to change
- Need increased managerial accountability for results
- Need to combat corruption and collusion

INTERNATIONAL BEST PRACTICE

BROAD APPROACH TO ANALYSING FREIGHT TRANSPORT STRATEGIC OPPORTUNITIES

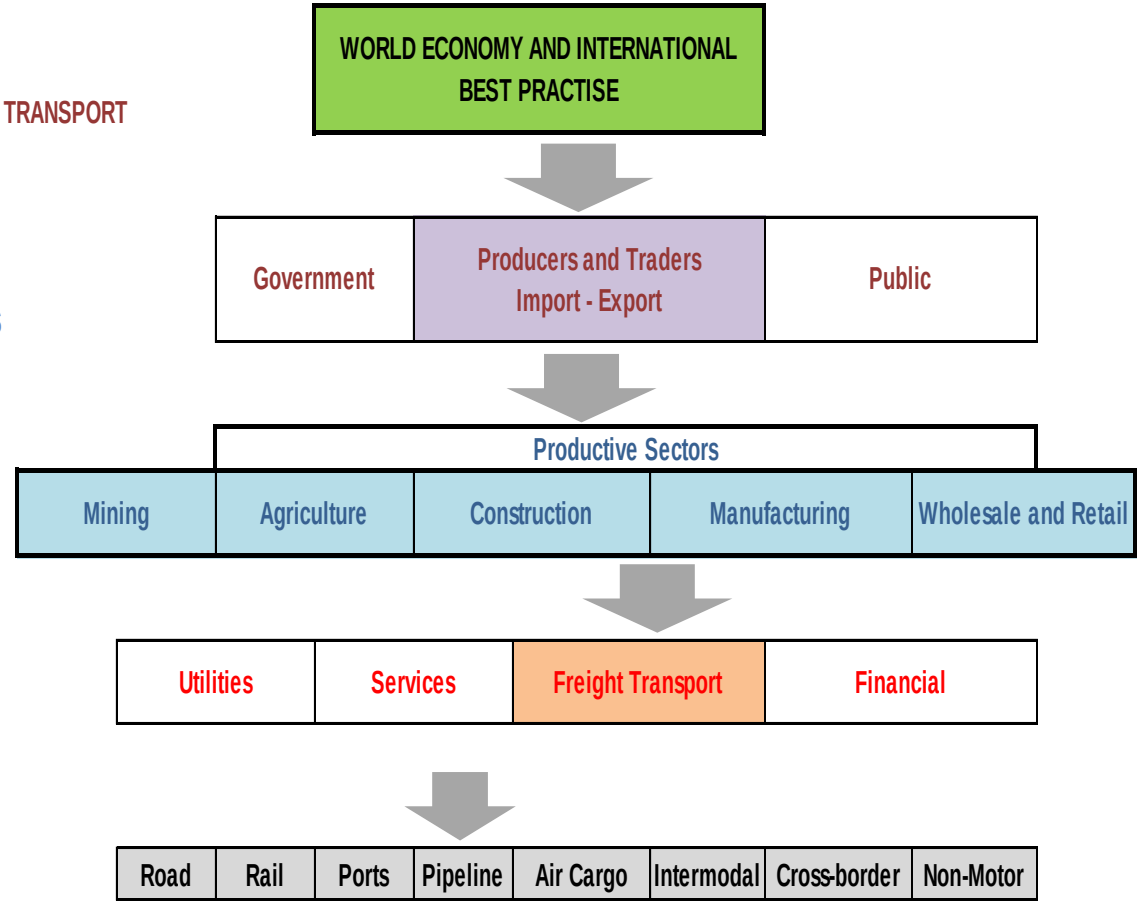
WHERE IS BEST IN WORLD
WHAT NFLS STANDARDS CAN BE ACHIEVED
WHAT SHOULD "SA Ltd" EXPECT FROM FREIGHT TRANSPORT

NFLS FOCUS ON FREIGHT DEMAND FROM
INDUSTRIAL USERS AND PAYERS
USER STAKEHOLDER NEEDS AND REQUIREMENTS

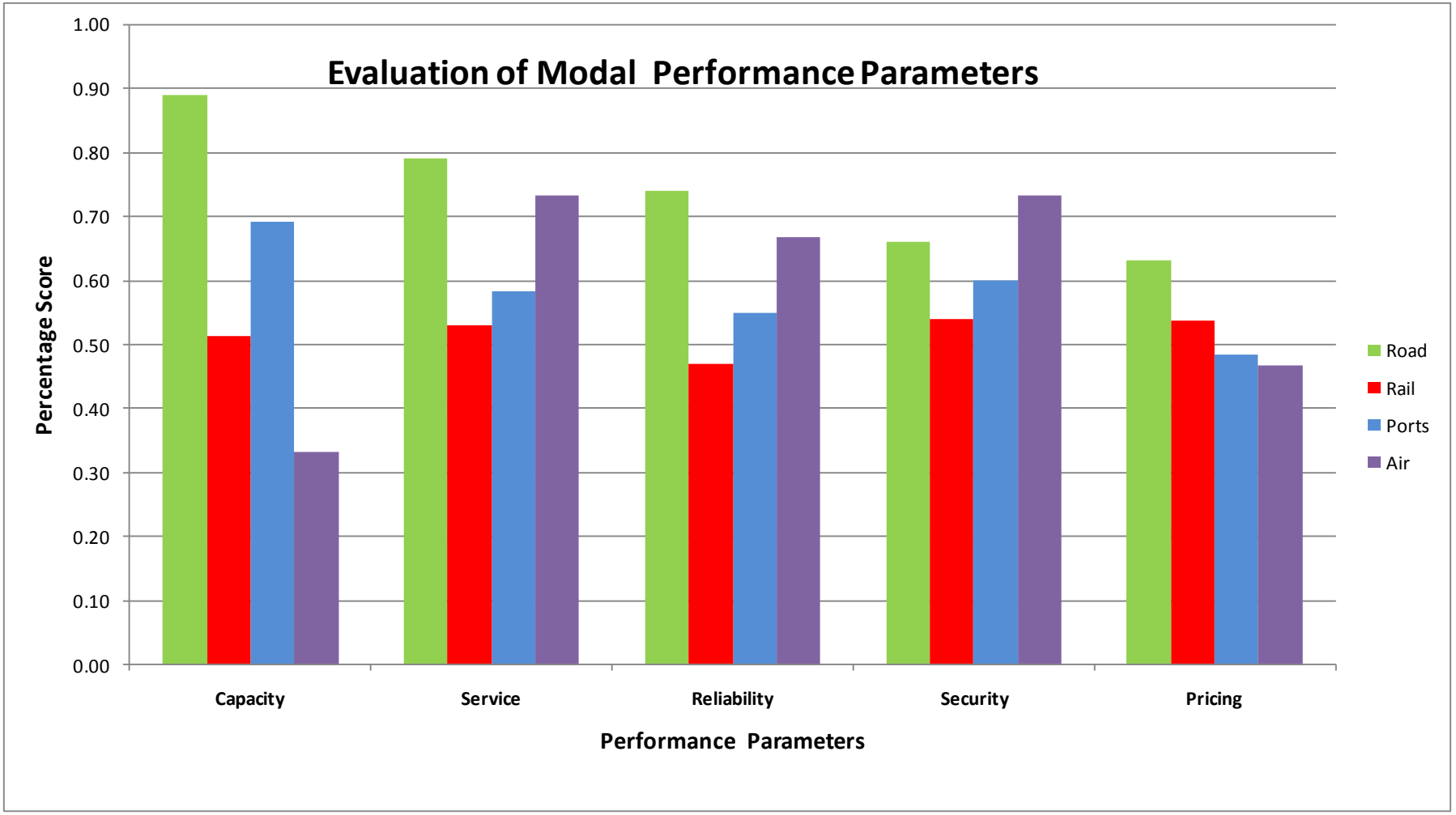
FREIGHT TRANSPORT IS AN ELEMENT OF
PRODUCTION ; IT IS PRIMARILY DRIVEN
BY DEMAND : NFLS MUST BE COST- EFFECTIVE

FREIGHT TRANSPORT IS AN ESSENTIAL
PART OF THE ECONOMIC ACTIVITIES
IMPACTS OF NFLS MUST CHANGE "SA Ltd"

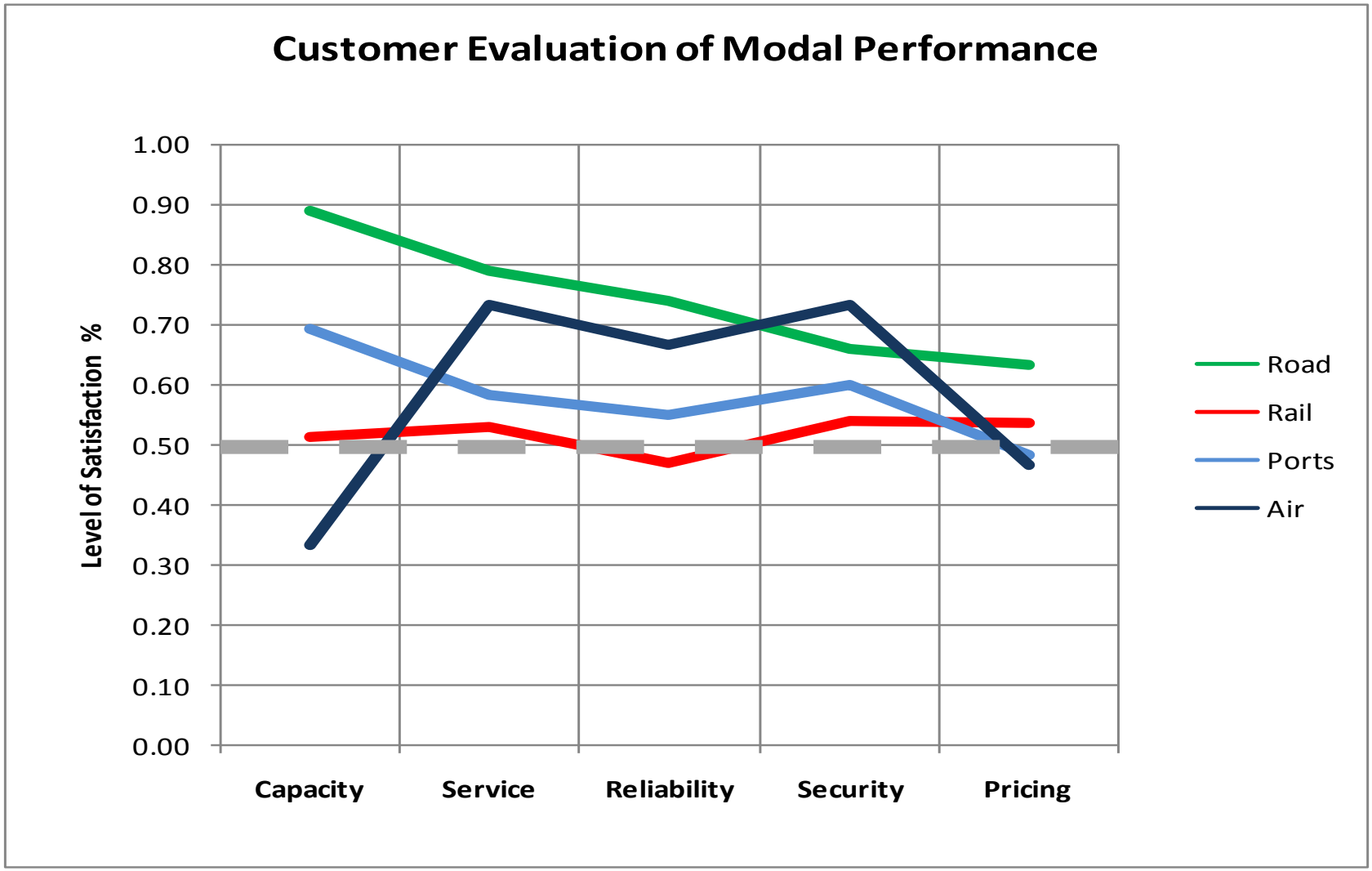
ALL FREIGHT TRANSPORT MODAL ACTIVITIES
SUPPLY SPECIFIC SERVICE DEMANDS
NFLS MUST IDENTIFY STRATEGIC NEEDS

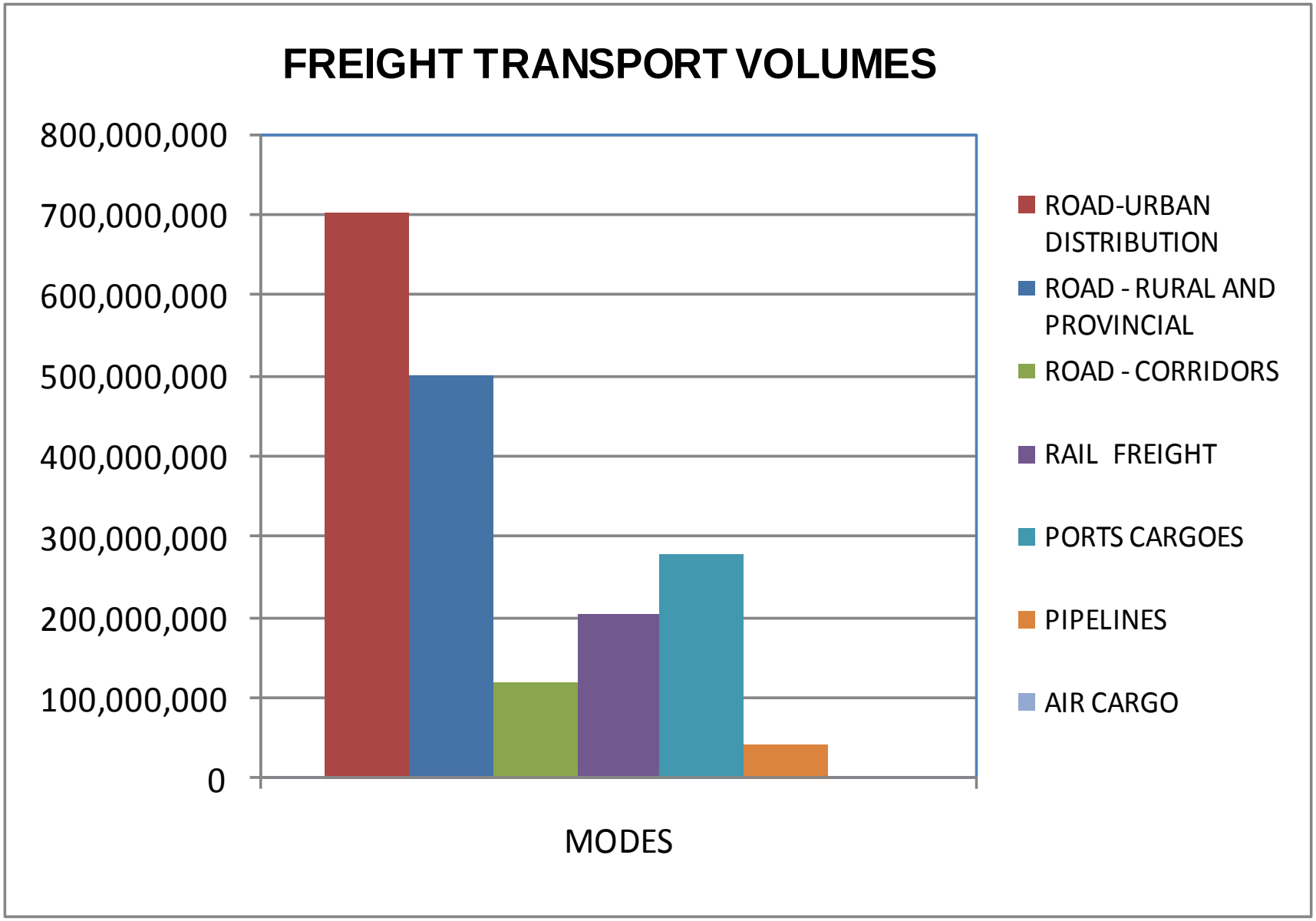


USER PERSPECTIVES OF MODAL PERFORMANCE PARAMETERS



USER RANKING OF THE MODES BY PERFORMANCE PARAMETER




FREIGHT TRANSPORT VOLUMES
800,000,000
700,000,000
600,000,000
500,000,000
400,000,000
300,000,000
200,000,000
100,000,000
0
MODES
ROAD-URBAN DISTRIBUTION
ROAD - RURAL AND PROVINCIAL
ROAD - CORRIDORS
RAIL FREIGHT
PORTS CARGOES
PIPELINES
AIR CARGO

CHALLENGES FACING ROAD FREIGHT TRANSPORT

RSA ROAD FREIGHT ISSUES

Economics

- Totally demand driven - Demand drives growth – but also lowers quality
- Operations: (30% Hire – 70% Own Account)
- Proportion owner-driver / truckers - proportion of “tied” truckers
- Total freight cost = Operations costs + public costs - roads/enforcement - emergency services and other

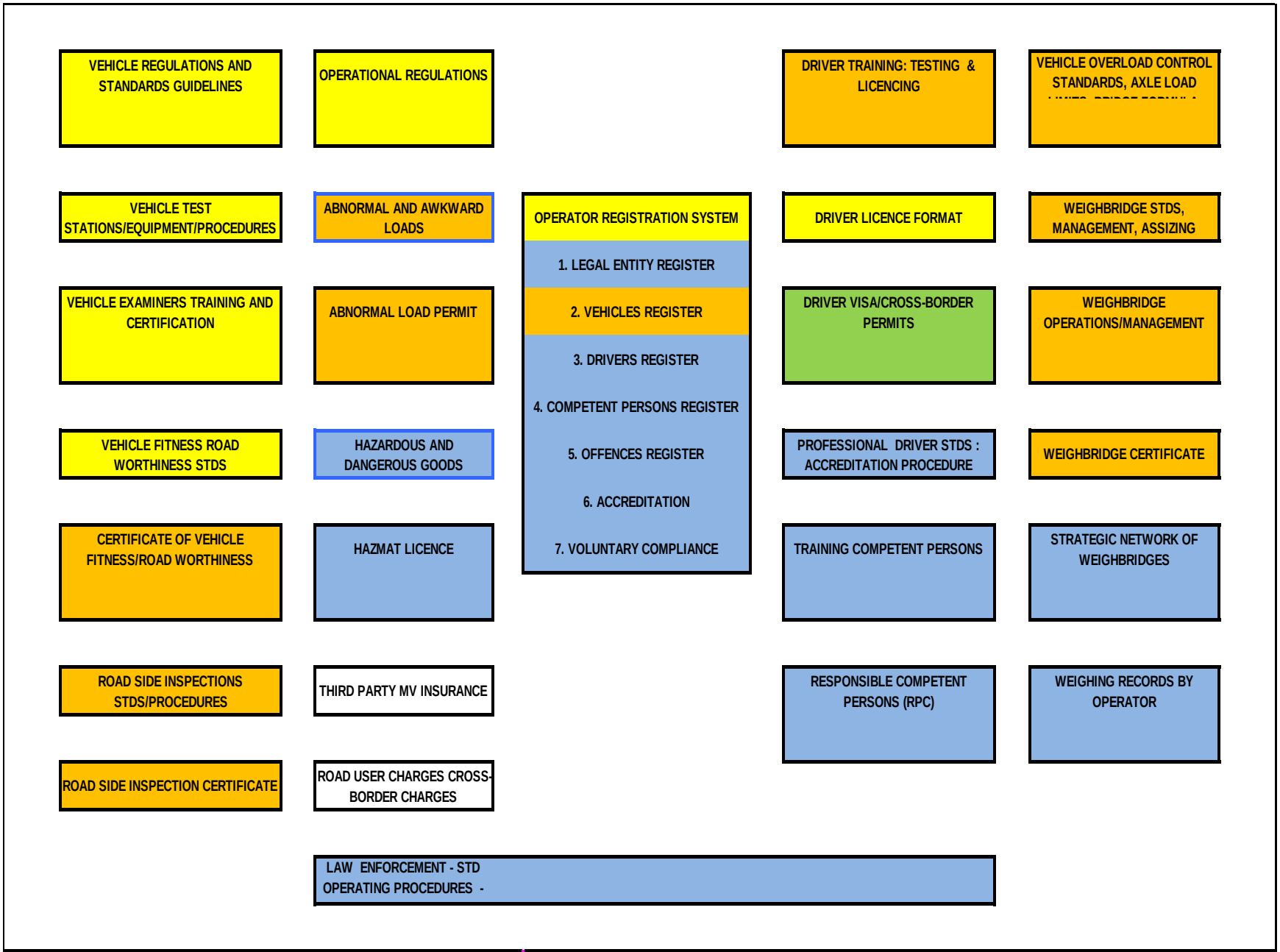
Quality

- No entry qualification to industry - No operator licence
- No operator register and records
- No Responsible Competent Persons
- Skills deficiencies – Drivers, mechanics, enforcement, management
- 65% of vehicles unroadworthy
- Overloading
- Environmental
- Enforcement
- Decriminalisation
- PPP monitoring agencies
- RTMS

Externalities

- Road user cost recovery - costs accrue to industry [not transporters]
- Road usage – payments systems
- Accidents - safety, monitoring, investigation

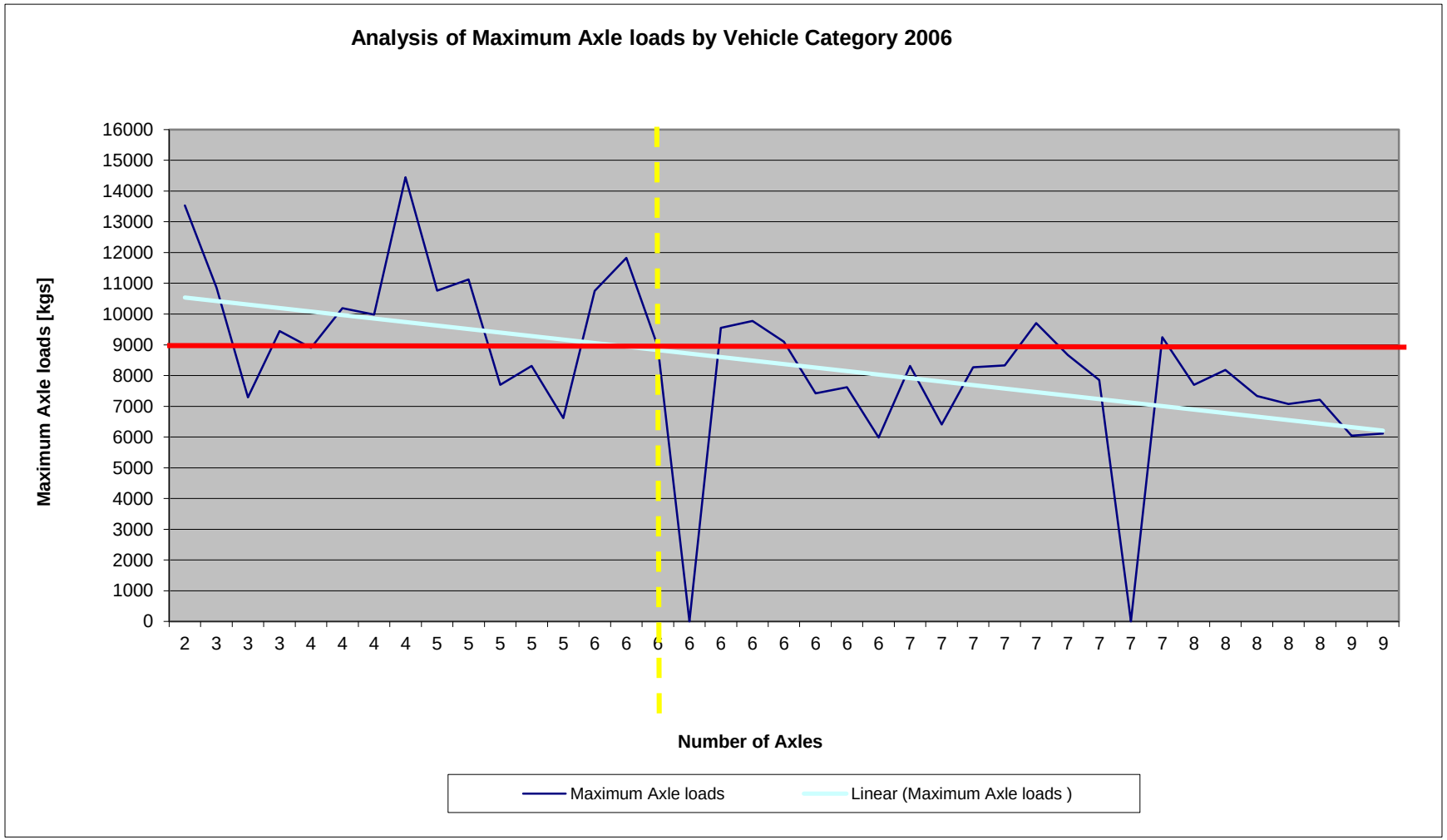
ROAD TRANSPORT REGULATORY FRAMEWORK



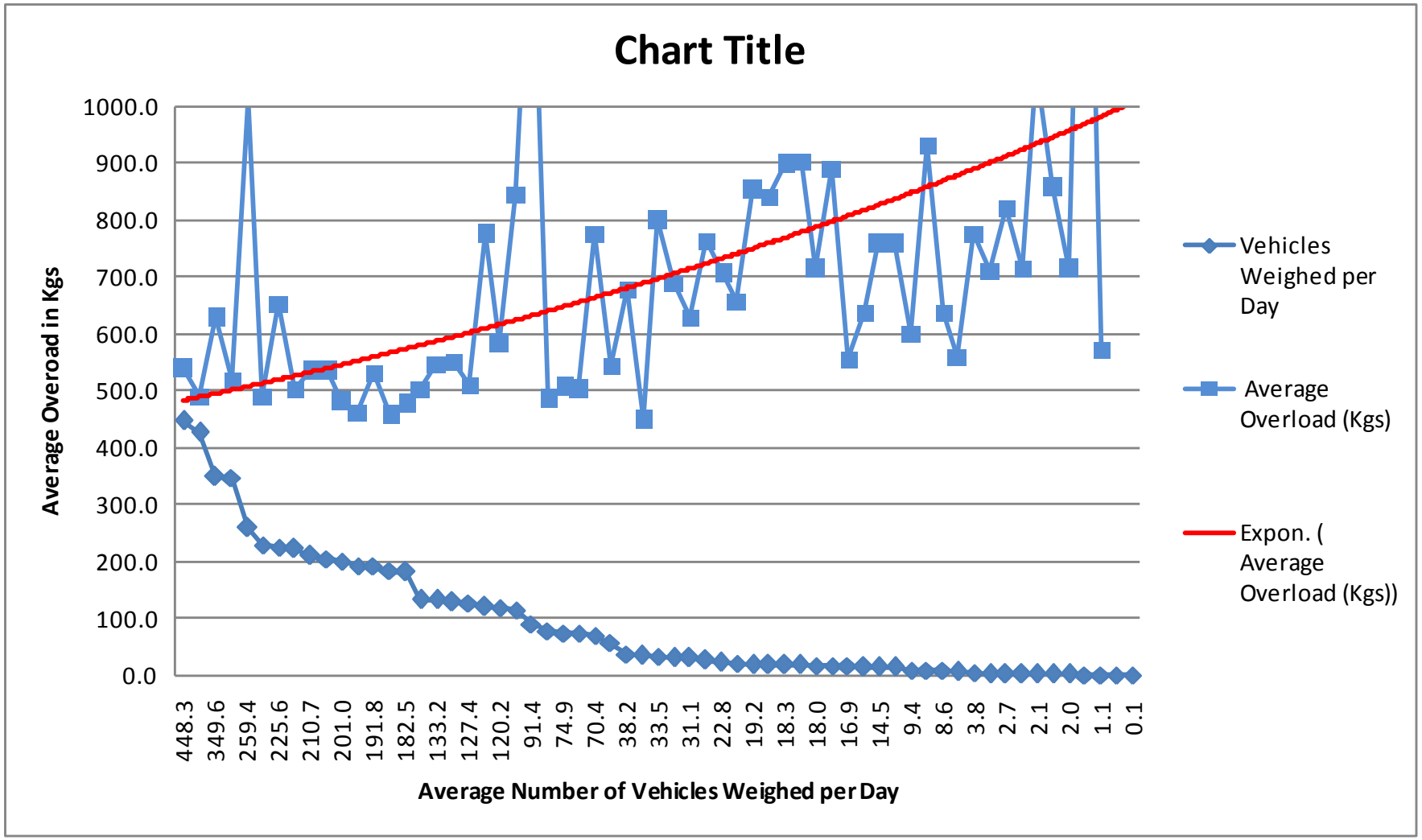
ROAD FREIGHT OPERATIONAL PERFORMANCE PROBLEMS

❖ Operator Registration	- Ineffective and uncontrolled
❖ Competent Persons	- Need for Registration
❖ Professional Driver Permit and accidents	- Need to include training and competence Safety - Deficient monitoring systems
❖ Emergency Response Systems	- Inadequate and inefficient
❖ Driver Licensing	- Testing inadequate and some corruption
❖ Age Limits	- Redefine ages for HGV / PSV drivers
❖ Driver Training	- Inadequate for modern HGV drivers
❖ Driving Hours	- proposals need refinement
❖ Vehicle Condition	- Need for effective roadside inspection
❖ Annual Inspection System	- Need for review and overhaul
❖ Overloading Control	- Need for efficient national control
❖ Road Usage Funding	- Need for objective research and analysis
❖ Externalities	- Need for research and policy directions
❖ Transport of DG	- Need for operational system design
❖ Abnormal Loads	- Need for rationalisation of national system
❖ Policing and Enforcement	- Retraining and definition of role of officials
❖ Liaison with DOT	- Need for industry consultative structures
❖ Management Training	- DOT to develop effective training
❖ Skills Deficiencies	- Need for DOT/TETA/Industry research and planning of effective training

AVERAGE MAXIMUM OVERLOAD FOR 140,000 WEIGHINGS IN KZN (2012)



Correlation between Frequency of Weighing Activity and Average Overloads for 200,000 loads in all Provinces



Indicative Total Annual Volumes of Land Freight in South Africa by Freight Characteristics and Current Modal Usage (2014)

Commodity Characteristics	Commodities	Annual Volumes (mill tons p.a)	Typical origins	Typical destinations	Modal Choice %		Primary reason for modal choice	Rail	Road
					Rail	Road		mtpa	mtpa
Bulk - Coallink	export coal	78	Mines	Ports	100	0	Full rail facilities	78	0
Bulk - Orex	export iron ore	61	Mines	Ports	100	0	Full rail facilities	61	0
Bulk - GFB	local coal	20	Mines	Powerstations	60	40	Some rail facilities	12	8
	local iron ore	12	Mines	Foundries	100	0	Some rail facilities	12	0
	local coal	3	Mines	Factories	50	50	Few rail facilities	1.5	1.5
	other minerals	13	Mines	Foundries/ports	60	40	Some rail facilities	7.8	5.2
	other minerals	4	Quarries	Smelters	60	40	Some rail facilities	2.4	1.6
	other minerals	3	Smelters	Ports	80	20	Some rail facilities	2.4	0.6
	Clinker	4	Quarries	Factories	80	20	Some rail facilities	3.2	0.8
	fuel/chemicals	1	Plants	Ports	60	40	Some rail facilities	0.6	0.4
	fuel/chemicals	1	Plants	Factories/retailers	0	100	Some rail facilities	0	1
	steel	2.5	Foundries	Ports	50	50	Some rail facilities	1.25	1.25
	timber	10	Forest	mills /ports	30	70	Some rail facilities	3	7
	Other	10	Port/plants	ports/plants	80	20	Some rail facilities	8	2
TOTAL BULK		222.5	Million tons p.a.					193.15	29.35
	steel	1	Foundries	Wholesaler	1	100	No rail facilities	0.01	1
Break bulk	cars	1	Ports/Plants	Ports/ Plants	40	60	Few rail facilities	0.4	0.6
	cars	1	Ports/Plants	Retailers	20	80	No rail facilities	0.2	0.8
	containers	6	Ports/Terminals	Plants/terminals	30	70	Few rail facilities	1.8	4.2
	containers	8	Ports/Terminals	Factories	10	90	No rail facilities	0.8	7.2
	chemicals	20	Factories	Users	0	100	No rail facilities	0	20
	fuel	30	Plant	Retailers	0	100	No rail facilities	0	30
Mixed	agric prods	140	Farms,silos	Farms / Mills	10	90	No rail facilities	14	126
	industrial goods	600	Ports/factories	User industries	0	100	No rail facilities	0	600
	FMCG	500	Processors	Wholesale/retail	0	100	No rail facilities	0	500
	beverages	120	Plants	Wholesale/retail	0	100	No rail facilities	0	120
	packaging	80	Plants	factories/processors	0	100	No rail facilities	0	80
Casual	Construction	20	Suppiers	Sites	0	100	No rail facilities	0	20
	Building	20	Suppiers	Sites	0	100	No rail facilities	0	20
	Retail	20	distribution	stores	0	100	No rail facilities	0	20
TOTAL BREAK BULK		1567	Million tons p.a.					17.21	1549.8
TOTAL LAND FREIGHT		1789.5	Million tons p.a.					210.36	1579.15

INDICATIVE ANNUAL TONS OF TOTAL SOUTH AFRICA N LAND FREIGHT TRANSPORT BY COMMODITY GROUPINGS AND CURRENT MODAL USAGE

A shown in the table below the railways transports most of the bulk commodities (about 193 million tons) with lesser amounts being moved by road in smaller consignment sizes and quantities and to destinations without rail services.

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INDICATIVE ANNUAL TONS OF TOTAL SOUTH AFRICAN LAND FREIGHT TRANSPORT BY COMMODITY GROUPINGS AND CURRENT MODAL USAGE

The market for breakbulk and mixed commodities unsuitable for rail includes most industrial and consumer goods.

As shown below railways transport a small amount of breakbulk bringing the rail total to about 210 million tons and total road to about 1500 million tons p.a.

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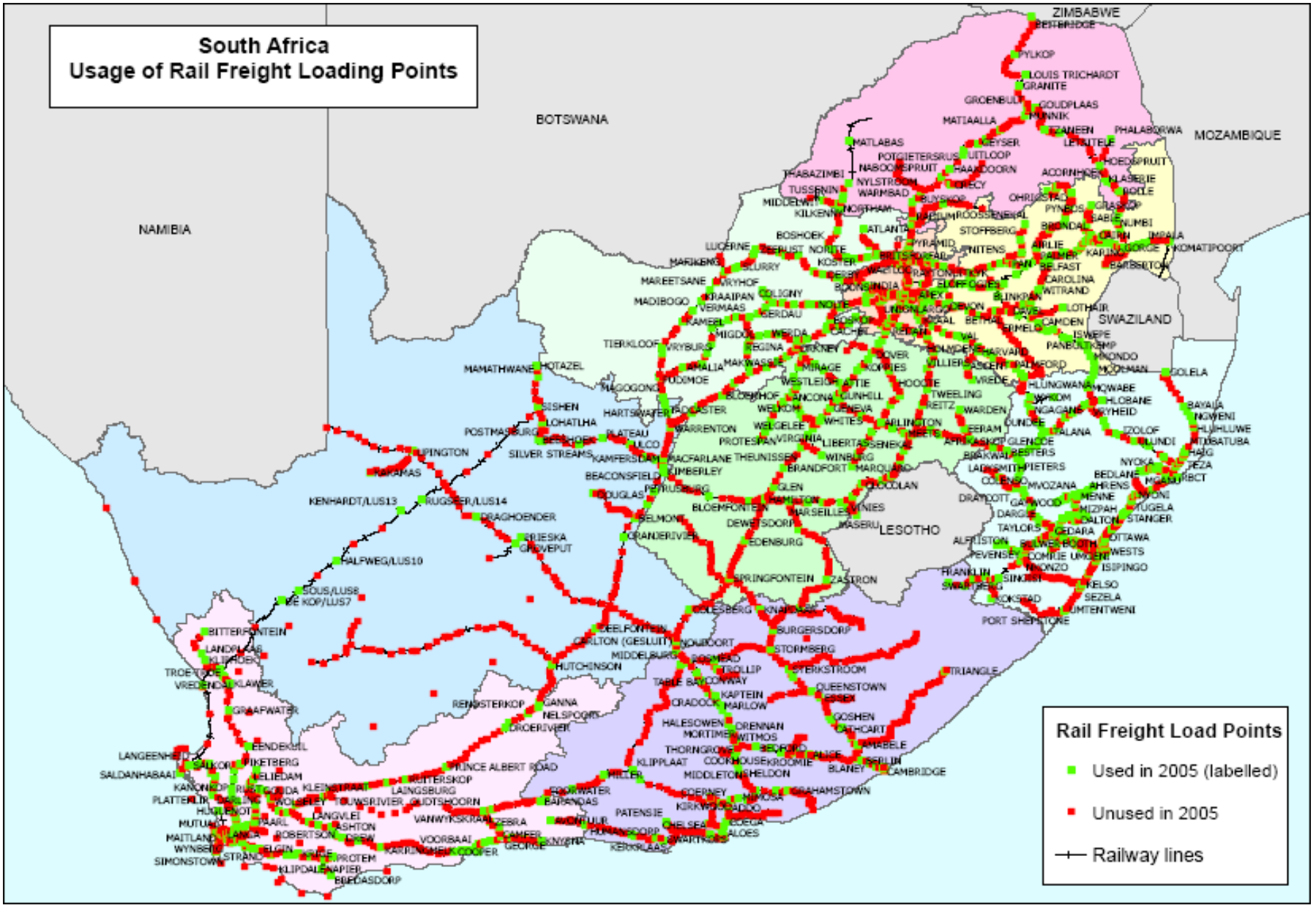
BULK COMMODITIES TRANSFERABLE TO RAIL

Subject to Current Operational Restrictions:
Minimum batch size : 10 - 20 wagons (400-800 tons)
Wagon orders week in advance
Suitable load-unload and storage facilities

Commodity	Origin	Destination	Estimated Annual Tons	Current restrictions
Coal	Mines	Eskom Powerstations	30,000,000	No rail facilities
Coal	Mines	Port of Durban	800,000	Consignment sizes
Coal	Mines	Industries	4,000,000	Consignment sizes and rail facilities
Manganese	Hotazel	Port of Durban	1,000,000	Rolling stock capacity
Magnetite	Phalaborwa	Matola , Mozambique	1,500,000	Rolling stock and line capacity
Ferrochrome	Smelters	Ports	300,000	Variable consignments
Other Minerals	Mines	Ports and Mills	300,000	Variable consignments
Maize	Silos	Mills	200,000	Variable consignments
Wheat	Ports	Mills	900,000	Variable consignments and destinations
Fertiliser	Ports	Distributors	750,000	variable batch sizes
Containers	Ports	Inland terminals	600,000	Rolling stock capacity
Timber	Branchlines	Ports and Mills	2,000,000	Rolling stock
			42,350,000	

REDUCTION IN GENERAL RAIL FREIGHT ACCESSIBILITY : 1980 - 2015



SUMMARY OF RAIL FREIGHT ISSUES - 2015

Need for Investment

The current ownership and monopoly structure of the railway system is inefficient and precludes attraction of investment in infrastructure with resultant deficiencies in safety and efficiency, as well as a continuing loss of traffic.

Rail Constraints Affect Industry Investments

It is likely that the effects of current monopoly pricing strategies are a deterrent to investment in some rail-captive industrial sectors and detract from the competitiveness of others.

Monopoly insulates Operations

The business model of Transnet SOC confers insulation from the authority of the shareholder and lacks transparency, whilst inefficiency results in loss of traffic and inability to serve South African industry. This problem is particularly obvious in the General Freight Business.

Marketing Hampered by Operating Deficiencies

The performance of the Marketing Department within TFR is frustrated by the inability to market an effective service and to compensate for repeated failure to provide customer satisfaction.

Unsatisfactory Service Levels

Although it is currently constrained by internal policy decisions to transport of bulk commodities the performance of the Operating department is unsatisfactory, partly due to lack of authority and a business model that places decision making in a central entity, remote from customer contacts.

SUMMARY OF RAIL FREIGHT ISSUES – 2015 (Cont'd)

Funding has Impact on Capacity

The fact that government as shareholder has limited funding for infrastructure means that major track construction work is delayed or simply not performed; this in turn has a major effect on capacity to meet customer demand and has negative impacts on the stated policy of promoting increased rail transport.

Examples of deferred build and maintenance are; the Overvaal single tunnel on the coal line and lack of sufficient passing loops of the right length on both the Iron Ore line and the Sishen to Port Elizabeth line, which have constrained the capacity of the railway and promoted road haulage of bulk commodities.

Costing Model Deters Users

The branch lines are financially assessed as individual units, rather than as part of the whole, with no credit for generating mainline tonnage and no plans to reintegrate them into the network. This has led to gross under investment, poor maintenance and rolling stock shortages.

Rail Safety Regulation Inadequate

The Rail Safety Regulator is ineffective as it lacks the technical capacity and the authority to enforce its own findings and decisions. Rail safety is compromised by having two government-owned vertically integrated train operators running on each other's tracks without a super-ordinate system manager and regulator to enforce operational safety standards.

PROBLEM STATEMENT: PORTS AND MARITIME

Inefficiencies

"*NPA is a division of Transnet that provides landlord functions to SAPO and other private operators. Although there are many private sector port operators, the only discernible competition is in break bulk cargo. Most other private operators are in separate markets and do not compete with each other or with SAPO. The lack of competition in port operations has exacerbated the levels of inefficiency and ensured that the levels of port performance are way behind those of ports in comparable jurisdictions".*

High Port Costs

"The effects of this inappropriate market structure are to saddle the country with the costs of that inefficiency in lost *jobs in the cargo producing sectors, as well as periodic congestion of the terminals with the resultant levying of congestion charges on cargo owners by shipping lines, to the value of up to $100 per container."*

Poor Logistics Facilities

"The infrastructure challenges facing the port system are mainly the result of poor port planning at the design stage in the past, inappropriate land utilisation practices and a failure to invest in infrastructure over the last twenty years. An added complication is the failure to provide appropriate inter-modal facilities that would facilitate seamless movement of cargo across modes at the port land interfaces."

Lack of integrated planning

The NFLS 2005 also noted that ;" *interactive relationships between the ports, cities and the transport services require urgent redefinition in order to provide a framework for effective planning of infrastructure and delivery of integrated logistics services".*

The situation reported in 2005 is unchanged in 2015

PROBLEM STATEMENT: PORTS AND MARITIME (Cont'd)

NFLS 2005 Implementation Challenges - in 2015

- Lack of coordinated planning
- Limited authority of Port Regulator
- Limited private sector logistics industry participation
- Inadequate liaison with host cities
- No holistic approach for equitable port infrastructure investment
- Inadequate competence or holistic port logistics planning

THANK YOU!