



Vehicle Standards & Systems Summit towards Safe Roads in South Africa 2016

Background and introduction to self-regulation



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CONTENTS

- Background and problem statement
- The concept of self-regulation
- The Road Transport Management System

Road Transport Efficiency

- High standard of infrastructure (capacity, road surface, road markings, road signs, stopping facilities, road reserve)
- Minimum incidents/crashes including breakdowns
- Compliance with traffic regulations
- Safety & security (effective law enforcement)
- Efficient emergency response
- Seamless cross-border transit

Key Elements in Road Freight Transport

- Road infrastructure: roads, bridges, roadside furniture, signs, road markings, eToll gantries 😊
- Vehicles: design, maintenance & operation
- Drivers: skill, health, fatigue

Key Elements in Road Freight Transport

- Road infrastructure: roads, bridges, roadside furniture, signs, road markings, eToll gantries 😊
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- **Drivers: skill, health, fatigue**

Reality Check



Reality Check



Reality Check



Reality Check



Excess heavy vehicle maintenance and repair costs

Road condition	Average maintenance and repair cost (R/km)	Average percentage increase in the truck maintenance and repair cost	Average percentage increase in company logistics cost
Good	R 0.96	-	-
Fair	R 1.24	30%	2.6%
Bad	R 2.11	121%	10.4%

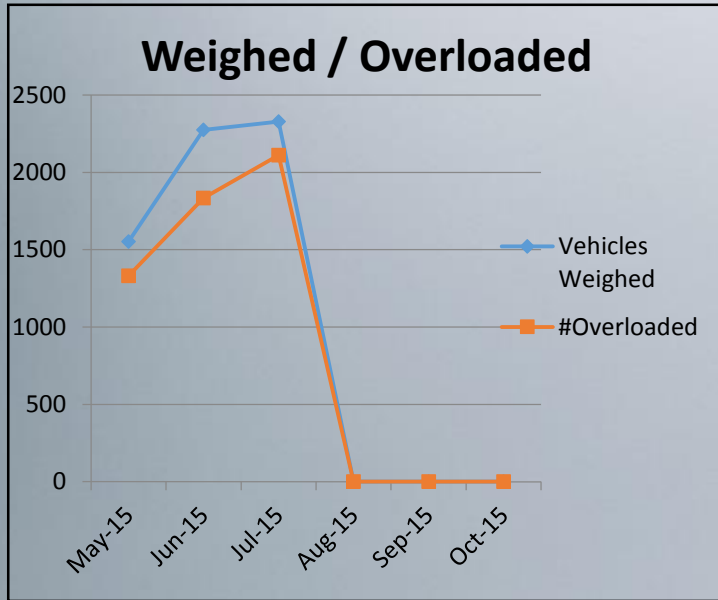
North West Province, South Africa, 5 Nov 2004, 23h00



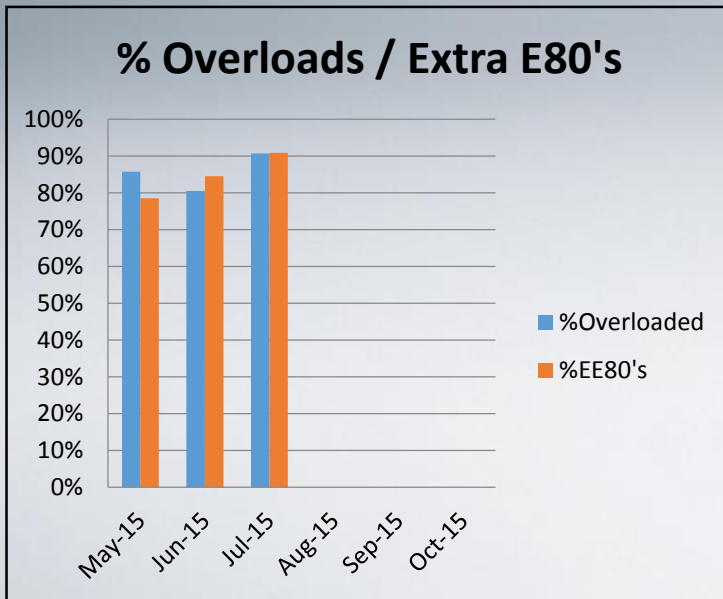
Six trucks carrying cobalt concentrate from DRC to Johannesburg (3 500 km). Overloads ranged from 30 780kg to 37 640kg (65%)



Overloading in Mozambique



	Max Axle O/L (t)	%	Max GVM O/L (t)	%
May-15	19.80	220%	44.92	134%
Jun-15	20.76	231%	44.96	130%
Jul-15	25.12	279%	52.91	125%
Aug-15				





Congo truck with a record overload of 115 tonnes held

BY NATION REPORTER

A trailer with a record weight of 171.3 tonnes was on Sunday night intercepted in Westlands, Nairobi.

The trailer was on its way to the Democratic Republic of Congo.

Kenya National Highways Authority Axle Load Control Manager Muita Ngatia said it was supposed to have a maximum gross weight of 54 tonnes, meaning it was overloaded by 115.3 tonnes.

54

The maximum gross weight of a seven-axle lorry. The one intercepted on Sunday was 171.3 tonnes

"These are almost four trucks in one," he said.

He said the trailer, which was carrying construction materials, plastic basins and other items has passed Mlolongo weighbridge with the required load.

After passing the weighbridge, it was driven to a nearby parking yard for more goods.

"Our officers and the police got the information and tracked it down to Westlands where we ordered it to return to Mlolongo," Mr Ngatia said.



SALATON NJAU | NATION

The Congolese registered truck intercepted by police and KenHHA officials on Sunday. It was overloaded by 115.3 tonnes.

He said anybody involved in the deal would be taken to court.

Mr Ngatia said many truck drivers were avoiding major weighbridges by using other routes.

which had also evaded the weigh bridge was intercepted at City Cabanas. It had exceeded the required weight by about 14 tonnes.

"The legal maximum pavement damage factor for the

Freeze G.V.W 115,300

KeNHA/MTCE/ALCF2		Kenya National Highways Authority <i>Quality Highways, Better Connections</i>	ORIGINAL
<small>Ministry of Roads and Infrastructure</small>		<small>Bluehills Towers, Hospital Road, Upper Hill P.O. Box 49712 - 00100 Nairobi Tel: 020-801542 Email: info@kenha.co.ke / info@kenha.co.ke Website: www.kenha.co.ke</small>	
Date: <i>23/02/15</i>		No. JJA 61819	
WEIGHBRIDGE TICKET			
VEHICLE REG. NO.	TYPE: <i>Benz</i>	OWNER: <i>KANGALE WINDA</i>	ADDRESS: <i>Congo 844 BUTEMBO</i>
TYPE OF CARGO	FROM	TO	TAKE
CONFIGURATION	A1	A2	A3
<i>TR</i>	<i>14280</i>	<i>48920</i>	<i>60,000</i>
			<i>48000</i>
<small>I certify that the vehicle whose particulars are entered above has been weighed and the readings are as shown</small>			
Date: <i>22/02/15</i>	OFFICIAL STAMP		
<small>(if overloaded)</small>	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 23 FEB 2015 <small>MANAGER - KITHI RIVER WEIGHBRIDGES SECTION</small> <small>SUB-MANAGER</small> <i>Mogandi</i> <small>Name of operator in full</small> </div>		





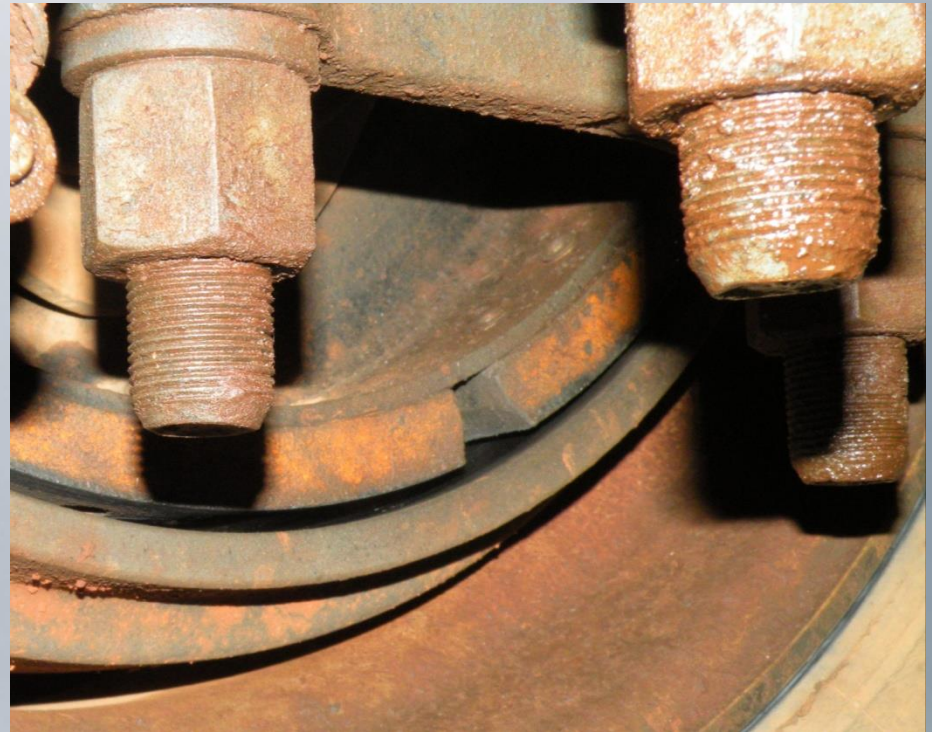
Brake & Tyre Watch Results

Location	Inspected	Discontinued	%
City Deep	24	21	88%
Middelburg	35	24	69%
Centurion	41	17	42%
Midway KZN	26	10	38%
Kroonstad	8	7	92%
Brackenfell, W. Cape	25	25	100%
Pietermaritzburg	12	11	92%
Port Elizabeth	15	6	40%
Rustenburg	7	5	72%
Polokwane	11	10	91%
Midway KZN	24	20	83%
Bloemfontein	24	20	83%
Nelspruit/Komati	13	12	92%
TOTAL (33 events)	679	463	68%

**33
B&TW
events
from
Feb.
2006
to date**



Brake & Tyre Watch









A *FootWatch* Initiative



Brake & Tyre Watch

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Six people killed in major truck crash

Fatal Free State crash forces closure of N3

71 dead in Ghana bus, truck collision

Looters milk crashed dairy trucks

Company Profiles



Imperial
IMPERIAL is a diversified industrial services and retail group with activities spanning logistics; car rental; [...]

Company News

Belvedere school implement driver behaviour monitoring on their bus fleet

Belvedere school caters for learners with mild to moderate mental disabilities in Benoni, Johannesburg. The majority [...]

Tweets

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22h

Region faces #transport bottlenecks in grain movement bizcommunity.com/Article/196/38...



19 Feb

#Kenya eyes #crude exports in 2017 via trucks and railway feedcat.net/ct/?fid=901921...



19 Feb

Norwegian fund buys Sh1bn stake in Kenyan #freight firm businessdailyafrica.com/Norwegian-fund...

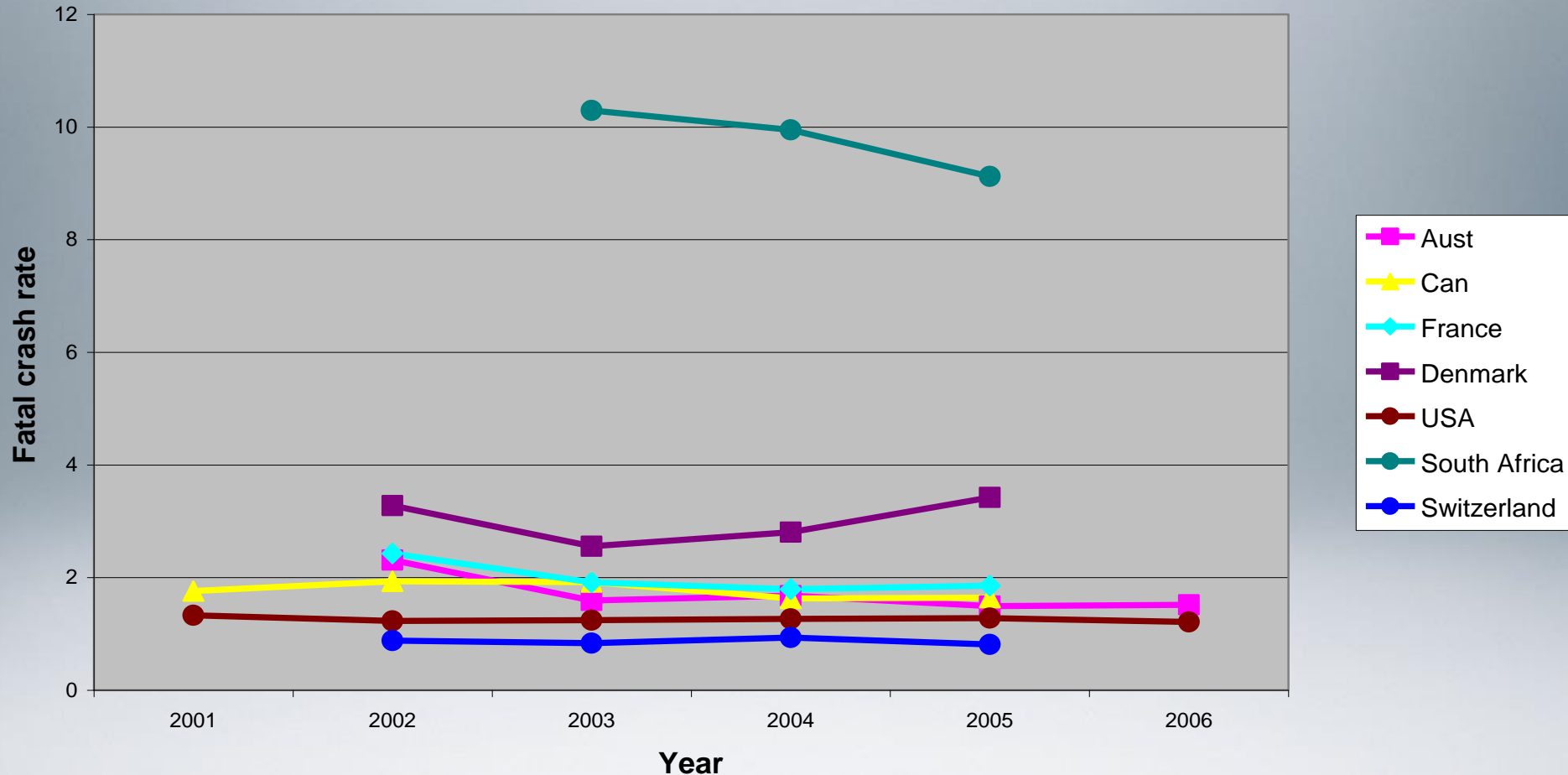
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Heavy Vehicle Fatal Crash Rates



Fatal truck crash per 100 million vehicle kilometres travelled

Source: OECD report, Moving Freight with Better Trucks, 2010

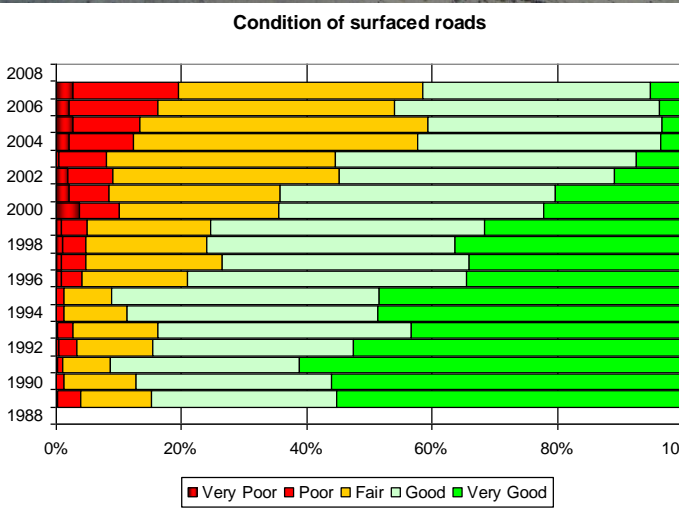
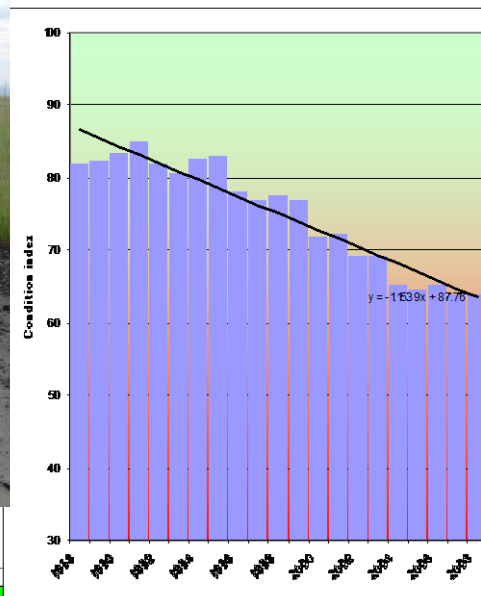
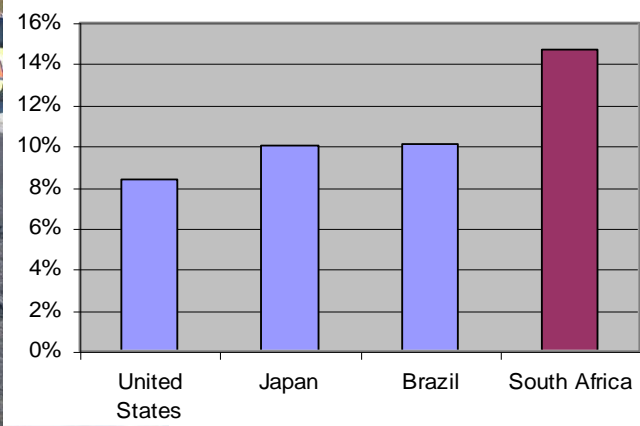




Road Freight Challenges

The Reality: A Culture of Non-compliance

- Inputs
 - Overloading
 - Poor vehicle fitness (servicing & maintenance)
 - Poor driver fitness (fatigue, health, training)
 - Reckless driver behaviour
 - Border post delays
 - Bribery & corruption – impact on compliant and non-compliant operators
 - Inadequate periodic maintenance (roads)
- Outputs
 - Poor road safety
 - High cost of road transport/logistics
 - Deterioration of infrastructure
 - High levels of emissions



Road Safety

Infrastructure Protection

Fair Competition between modes & operators

OVERLOAD CONTROL

National Overload Control Strategy

Implemented by National, Provincial and Local Authorities

Infrastructure & Equipment

- Main routes (major facilities)
- Alternative routes (minor facilities/screening)
- Monitoring (HS-WIM)
- Alternative weighing equipment
- Private weighbridges

Self-regulation

- Road Transport Management System (RTMS)
- Performance-Based Standards (PBS)

Legislation

- Consignors/Consignees
- 5% Tolerance
- User charges
- Habitual Overloaders
- Public Prosecutors
- Alternative weighing equipment
- AARTO

Information sharing & Public Awareness

- Overload website
- Overload information booklet

Operations

- Human Resources
- PPP
- Training
- Guideline document for law enforcement

Co-operation

- Provinces
- Local authorities
- Department of Justice
- Private sector

i
information
bulletin

vic roads

National Heavy Vehicle Accreditation Scheme

April 2000



ISBN 978-0-626-19331-7

ARP 067-1:2007

Edition 1

STANDARDS SOUTH AFRICA

Recommended practice

Road transport management systems

Part 1: Operator requirements — Goods

This document does not have the status of a South African National Standard.

Published by Standards South Africa
1 dr lategan road groenkloof ☒ private bag x191 pretoria 0001
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SouthAfrica
(a division of SABS)

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SOUTH AFRICAN NATIONAL STANDARD

Road transport management systems

Part 1: Operator requirements — Goods

The Road Transport Management System

- RTMS is an **industry-led**, **government-supported**, **voluntary**, self-regulation scheme that encourages **consignees, consignors and road transport operators** to implement a **management systems standard** with outcomes that contribute to **preserving road infrastructure, improving road safety and increasing productivity**.
- Key focus areas are:
 - load optimisation (minimise over- and under-loading)
 - driver wellness
 - vehicle maintenance
 - productivity

Initiatives in Other Countries

DRAFT RTMS STANDARD 2013

Edition 1

Road Transport Management System (RTMS)



Published as a joint project of the Tripartite of
COMESA, EAC and SADC

- Draft Tripartite RTMS standard published in Nov 2013

Initiatives in Other Countries

- RTMS workshop in Windhoek, Nov 2014
- RTMS workshop in Gaborone, Feb 2015
- RTMS presentation at Transport & Logistics Forum, Harare, Nov 2015
- Delegation of transport operators from Uganda to SA, Jan 2016

INTERNATIONAL
STANDARD

ISO
39001

First edition
2012-10-01

Road traffic safety (RTS) management
systems — Requirements with guidance
for use

*Systèmes de management de la sécurité routière — Exigences et
recommandations de bonnes pratiques*



Reference number
ISO 39001:2012(E)

© ISO 2012

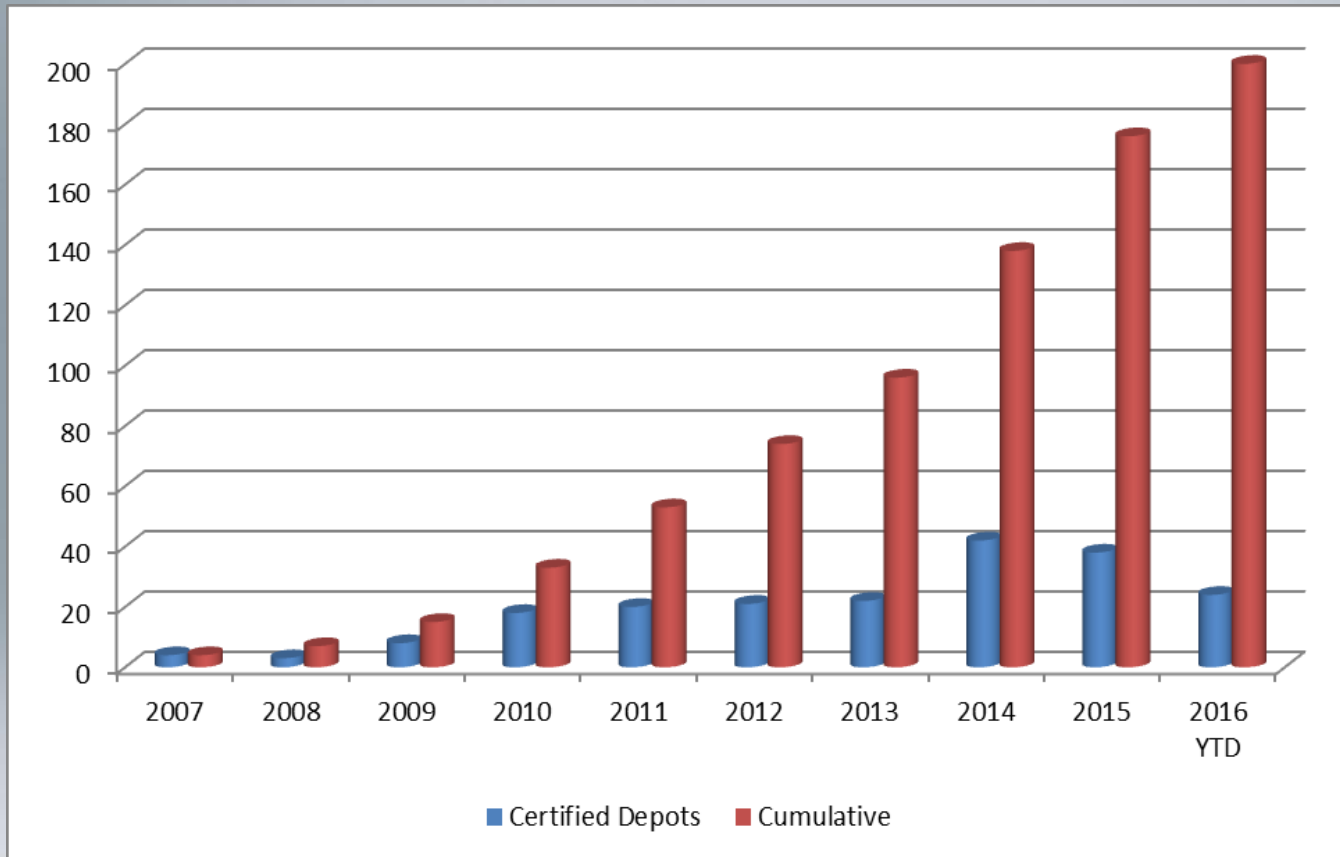
The RTMS standards are aligned with the ISO 39001: Road Traffic Safety management systems standard, released in October 2012

Relationship between ISO 39001 and SANS 1395 (RTMS)

Organisation	Road Traffic Safety	Road Infrastructure Protection	Productivity
Road Authorities	Yellow	Grey	Grey
Road Construction Companies			
Schools			
Consignors	Blue	Green	Green
Transport Operators			
Consignees	Yellow	White	White
Law Enforcement Agencies			
Car rental companies			
Emergency Services			



Growth of the RTMS in SA



200 fleets representing almost 10 000 trucks & buses (In 2007 there were 74 certified vehicles)

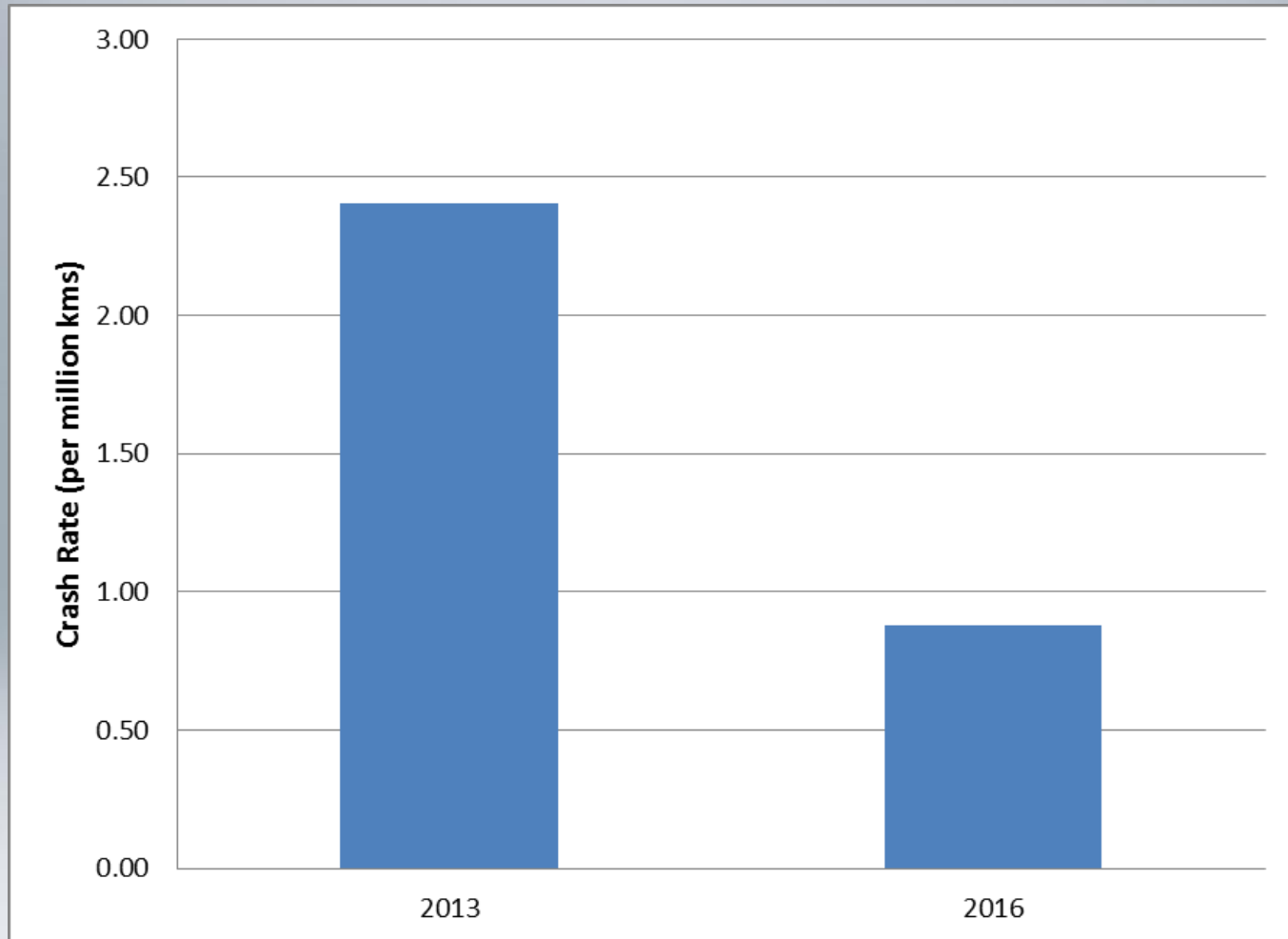
Four bus operators:

- Buscor 420 buses
- Intercape 160 coaches
- GABS 1100 buses
- Intestate 237 buses (Bloem)

24 abnormal load operators:

- 258 vehicles
- Plant hire, construction, engineering, mobile cranes
- 2 commercial A/L operators (108 vehicles)

Crash rate of RTMS-certified fleets



2013/1: 24.1 million kms

2016/1: 94.2 million kms

Estimated savings per annum: R 114.9 million

DECADE OF ACTION FOR ROAD SAFETY 2011 - 2020

transport
Department of Transport
REPUBLIC OF SOUTH AFRICA

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TRANSPORT INFRASTRUCTURE
Committed to improving transport infrastructure and transport services



- ...s are:
- ...tection
- ...666
- ...aintenance
- ...port Efficiency
- ...ad Securement
- ...oad Optimisation





TO OF SEI



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HDX-438 MP

LEK259



D1

MAN



KAB401

2237

DSY-417 MP

C1



buscor
PROVIDED

THIS PLAQUE WAS UNVEILED BY:
THE HONOURABLE MS D PETERS
MINISTER OF TRANSPORT
15 OCTOBER 2014

TO MARK THE LAUNCH OF THE BUSCOR BI-ARTICULATED BUSTRAIN
WHICH IS THE 1ST OF ITS KIND IN THE WORLD.
THE MAN BI-ARTICULATED BUSTRAIN IS BUILT ON A FRONT ENGINE
AND WILL OPERATE ON ALL CLASSES OF THE ROAD.
THIS CONCEPT WAS DESIGNED BY
BUSCOR'S RESEARCH AND DEVELOPMENT DEPARTMENT
AND WAS BUILT BY
MAN BUS & TRUCK SA.



RTMS
Certified Company
F6922

MAN

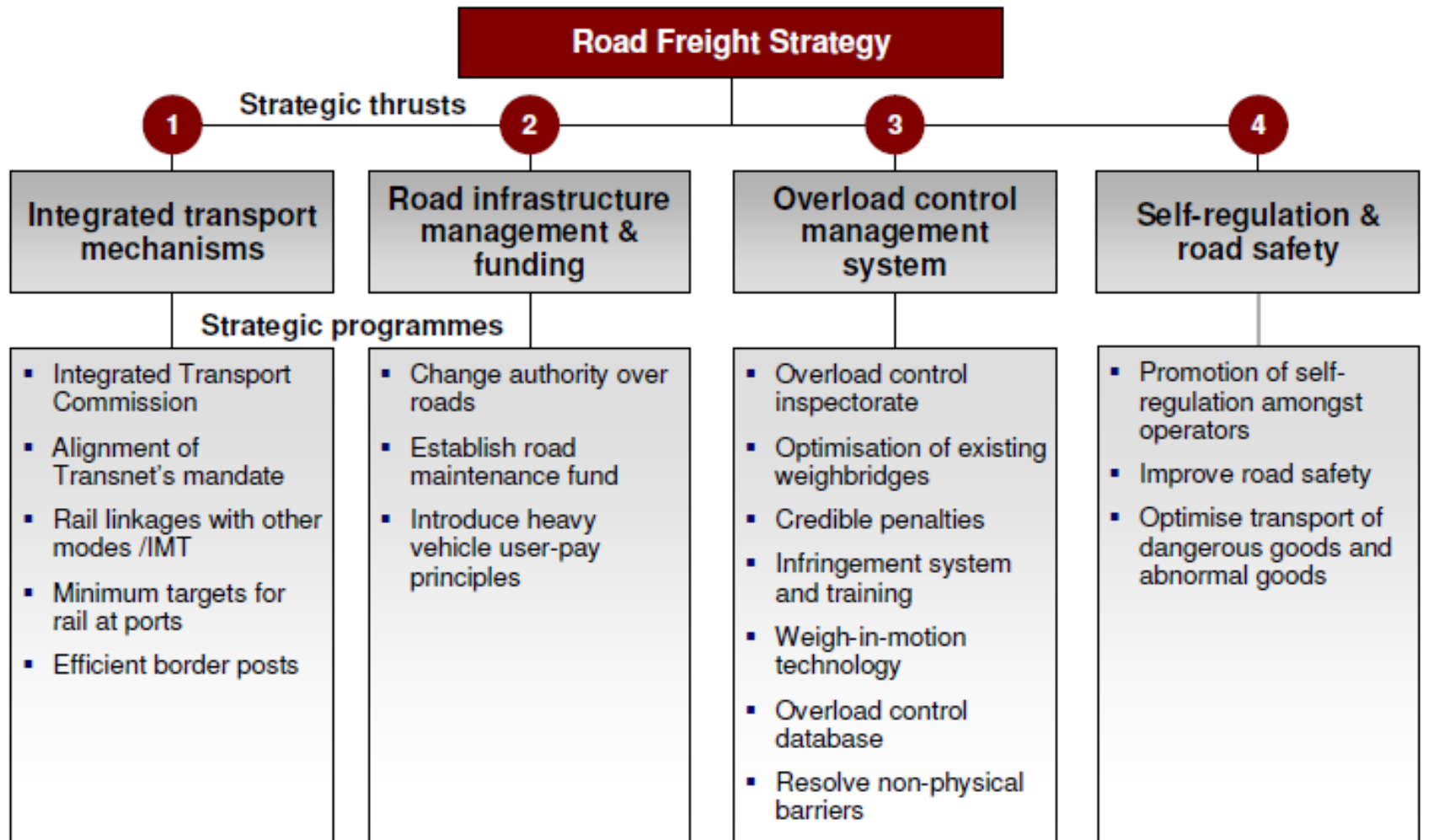
articulated Bus
October 2014

HLT 3





Strategic thrusts & programmes



National Land Transport Strategic Framework

Final Draft – March 2015

"Transport, the Heartbeat of Economic Growth and Social Development"



transport

Department:
Transport
REPUBLIC OF SOUTH AFRICA

5.7 Freight transport

Vision

Provide safe, reliable, effective, efficient and fully integrated transport operations and infrastructure which will best meet the needs of freight customers at improving levels of service and cost in a fashion which supports government strategies for economic and social development whilst being environmentally and economically sustainable (National Freight Logistics Strategy 2006).

Objective

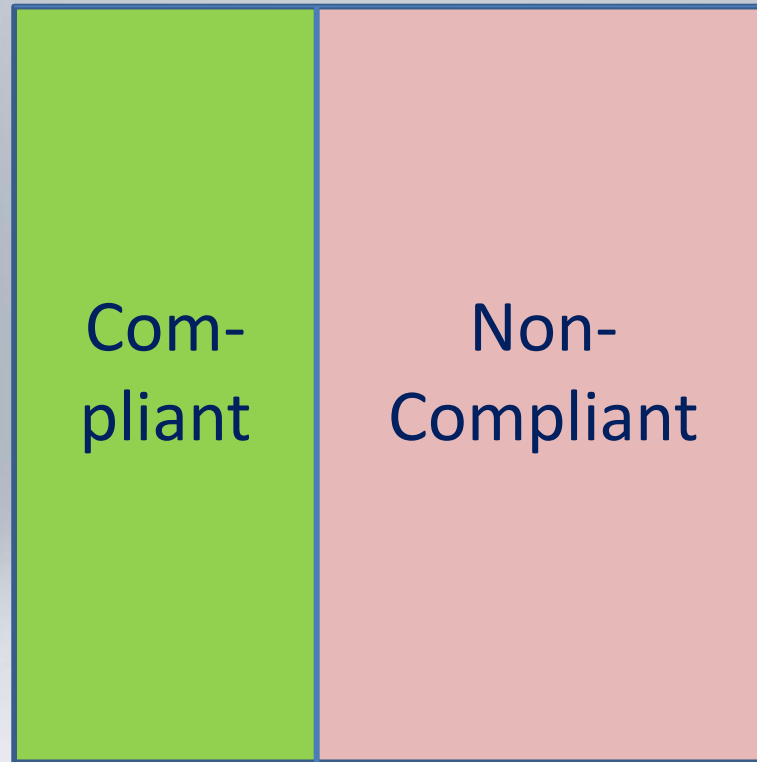
Freight movement has a significant impact on the national transport network and results in high transport cost in the logistics value chain. This constrains Southern Africa from being competitive in a global market and attracting sufficient international investment in supporting economic growth in the region. The primary objective is to reduce the cost of freight logistics and influence market forces to transform industry practice and behaviour, while maintaining profitable operations.

Another objective in terms of freight transport is to address the competition between the main land modes, road, rail, and pipeline and address the modal imbalance by facilitating the potential mode shift between modes, basically to address road congestion, road safety, and logistics cost.

Key Performance Areas

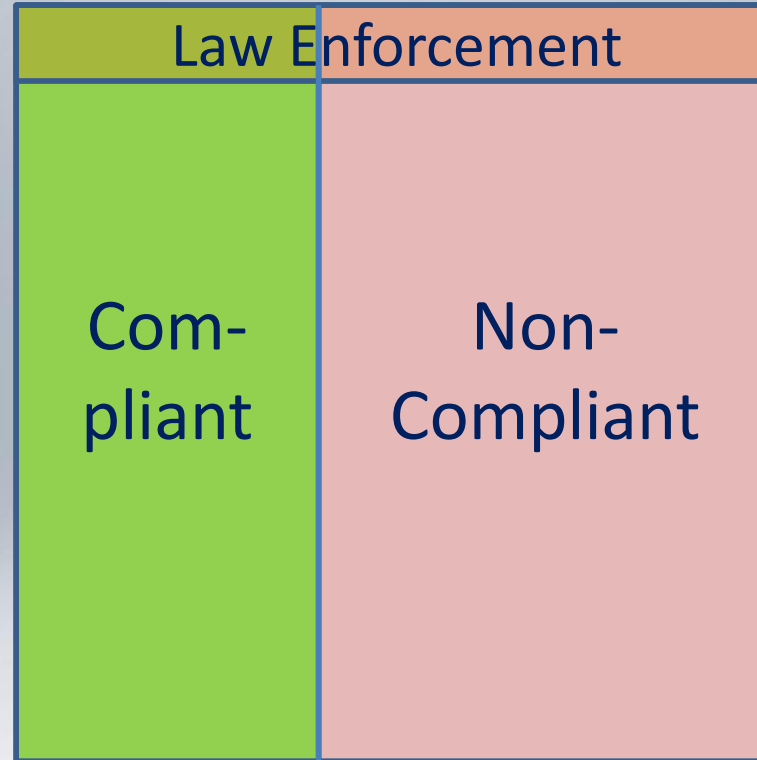
- Increased investment in freight transport infrastructure
- Promote a 24-hour economy as a mechanism to reduce cost and provide more robustness in delivery schedules
- Improve heavy goods vehicle safety performance; roadworthiness; and self-regulation (RTMS certification and compliance)
- Reduction in overloading by enforcing limits on axle limits and gross vehicle mass
- Reduction in overloading by maintaining consistency in overload control limits between SADC, national, provincial and municipal authorities
- Provision of alternative routes for the transport of hazardous materials
- Reduction in the cost of freight logistics
- Optimise road: rail: pipeline freight balance
- Separation of freight and commuter rail infrastructure to improve efficiencies in both sectors
- National (and SADC) strategic plan for freight hubs, terminals, logistics parks, and ports

Effect of RTMS on compliance



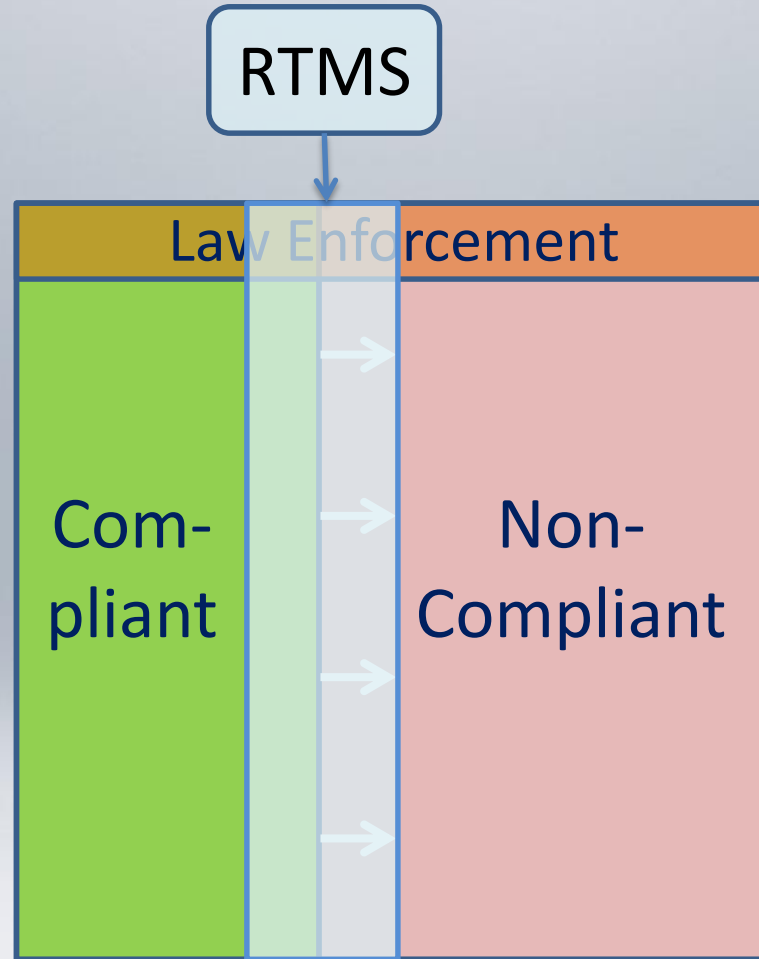
Heavy vehicles > 25 tons
(approx. 150 - 200 000)

Effect of RTMS on compliance



Heavy vehicles > 25 tons
(approx. 150 - 200 000)

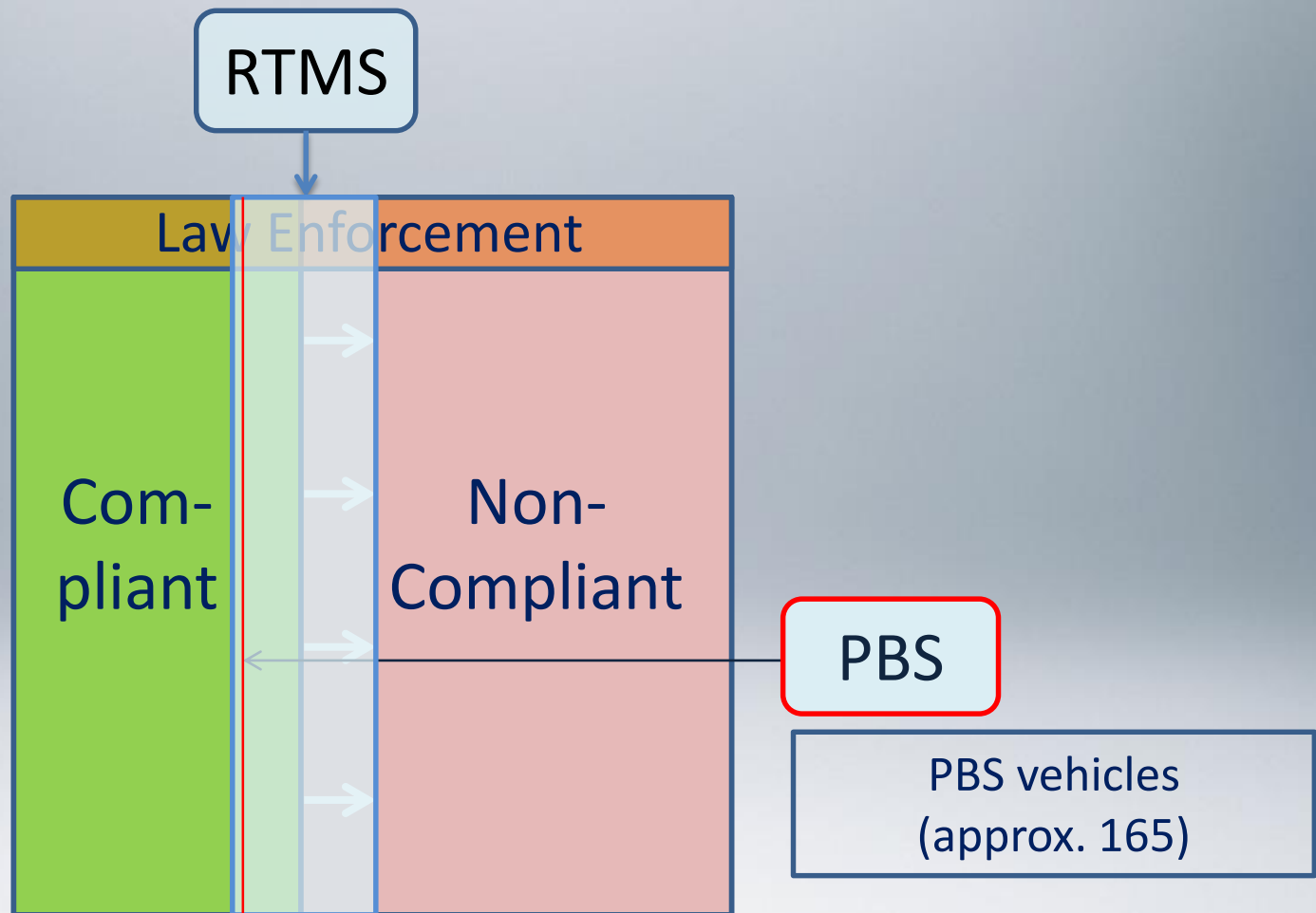
Effect of RTMS on compliance



Heavy vehicles > 25 tons
(approx. 150 - 200 000)

RTMS-certified vehicles
(approx. 10 000)

Effect of RTMS on compliance



Heavy vehicles > 25 tons
(approx. 150 - 200 000)

RTMS-certified vehicles
(approx. 10 000)

A *FleetWatch* Publication

RTMS

Road Transport Management System



**Voluntary Self-Regulation Programme
FOR THE TRUCKING INDUSTRY**



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Road Transport Management System
RTMS
Driver Wellness + Safety + Loading + Productivity



RTMS Certification Requirements



Vehicle Standards & Systems Summit
towards Safe Roads in South Africa

CSIR Convention Centre

26-27 September 2016

Oliver Naidoo





RTMS



WHAT IS RTMS?

RTMS (Road Transport Management System) is a standard to improve performance of Transporters

WHAT ARE THE OBJECTIVES?

- Prevent Overloading
- Improve efficiency
- Minimise Accidents
- Proactive Vehicle Maintenance
- Promote Legal Compliance
- Enhance Driver Wellness
- Eliminate unsafe practices
- Promote Skills Development
- Monitoring of Performance
- Continual Improvement



SANS 1395-1:2014

- 3.2.1 Sites
- 3.2.2 Fleet Inventory / Mass Assessment & Verification
- 3.2.3 Road Safety
- 3.2.4 Maintenance of Roadworthy Vehicles
- 3.2.5 Vehicle & Load Safety
- 3.2.6 Driver Health & Wellness
- 3.2.7 Support
- 3.2.8 Competency, Training & Awareness
- 3.2.9 Documents & Records
- 3.2.10 Continual Improvement – Efficiency & Road Safety
- 3.2.11 Internal Audit
- 3.2.12 Management Review
- 3.2.13 Continual Improvement – Efficiency & Road Safety

RTMS Criteria

(SANS 1395-1:2014)

<p>Loading Control</p> <ul style="list-style-type: none"> - Fleet Inventory - Control of loading - Prevent Overloads - Optimise Payload 	<p>Safety/ Compliance</p> <p>Vehicle Maintenance Basic Roadworthiness</p> <p>Minimising breakdowns</p> <p>Speed Management</p> <p>Accident Analysis</p> <p>Traffic violations</p> <p>Risk Management</p>	<p>Driver Wellness</p> <p>Medical Fitness</p> <p>Chronic illness Management</p> <p>Fatigue Management (Shift / Driving hours)</p> <p>Wellness Initiatives (Nutrition etc.)</p>	<p>Support</p> <p>Providing skills development to ensure drivers obtain and retain competency to be safe, compliant and a minimal risk on public roads</p>
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Procedures, Policies, Documents + Records + Monitoring + Corrective Actions + Internal Audit + Management Review

Nature of RTMS Audits



Process

- ✓ Is there a process (policy/procedure) in place?
- ✓ Are all the required criteria addressed in this process?



Consistent Implementation

- ✓ What records are available to verify consistent implementation?
- ✓ Are non-conformances/violations detected?
- ✓ What actions are taken to minimise habitual recurrence

SANS 1395 only prescribes REQUIREMENTS – It does not prescribe any specific mechanism (software/technology/system). The operator to determine the most appropriate mechanism taking into the company operating environment. NOT a “one-size-fits-all” approach.

Fleet Inventory

FLEET NUMBER	LAST RECORDED KMs	LAST SERVICE KMs	LAST SERVICE DATE	KMs TO NEXT SERVICE	NEXT SERVICE KMs	SERVICE INTERVAL	COF HORSE	DAYS TO NEXT COF	COF TRAILER	DAYS TO NEXT COF
56	671140	650000	06 July 2016	3860	675000	25000	31 August 2017	353	31 August 2017	353
78	567404	550000	29 June 2016	7596	575000	25000	30 September 2016	18	30 September 2016	18
88	631181	625000	30 August 2016	18819	650000	25000	31 December 2016	110	31 December 2016	110
89	578885	575000	31 August 2016	21115	600000	25000	31 December 2016	110	31 December 2016	110

FLEET NUMBER	KZN ABNORMAL PERMIT	DAYS LEFT ON PERMIT	MP ABNORMAL PERMIT	DAYS LEFT ON PERMIT	FS ABNORMAL PERMIT	DAYS LEFT ON PERMIT	GP ABNORMAL PERMIT	DAYS LEFT ON PERMIT	NW ABNORMAL PERMIT	DAYS LEFT ON PERMIT	NC ABNORMAL PERMIT
56	01 June 2017	262	28 February 2017	169	15 November 2016	64	23 November 2016	72	15 May 2017	245	24 January 2017
78	01 June 2017	262	28 February 2017	169	15 November 2016	64	23 November 2016	72	15 May 2017	245	24 January 2017
88	01 June 2017	262	28 February 2017	169	15 November 2016	64	23 November 2016	72	15 May 2017	245	24 January 2017

Mass Assessment

02 April 2014

Weight Slip

Keaton energy/Leeuw Mining
 Reg no. Vaaikrantz siding
 Vaa no. PO Box 2258
 Vryheid 3100

(T) 094 967 1762 (F) (G) (E) Transaction No 26780

Reg/Serial No FPD148MP
 Date Time In 2014/04/02 07:46:04 AM
 Date Time Out 2014/04/02 08:24:04 AM

Client GLENCOR LION
 Haulier NBC
 Destination STEELPOORT
 Product GD LA
 Delivery no. 4700028249

Order no. COMMENTS

First Mass 1800 Kg
 Second Mass 55400 Kg
 Net Mass 33800 Kg

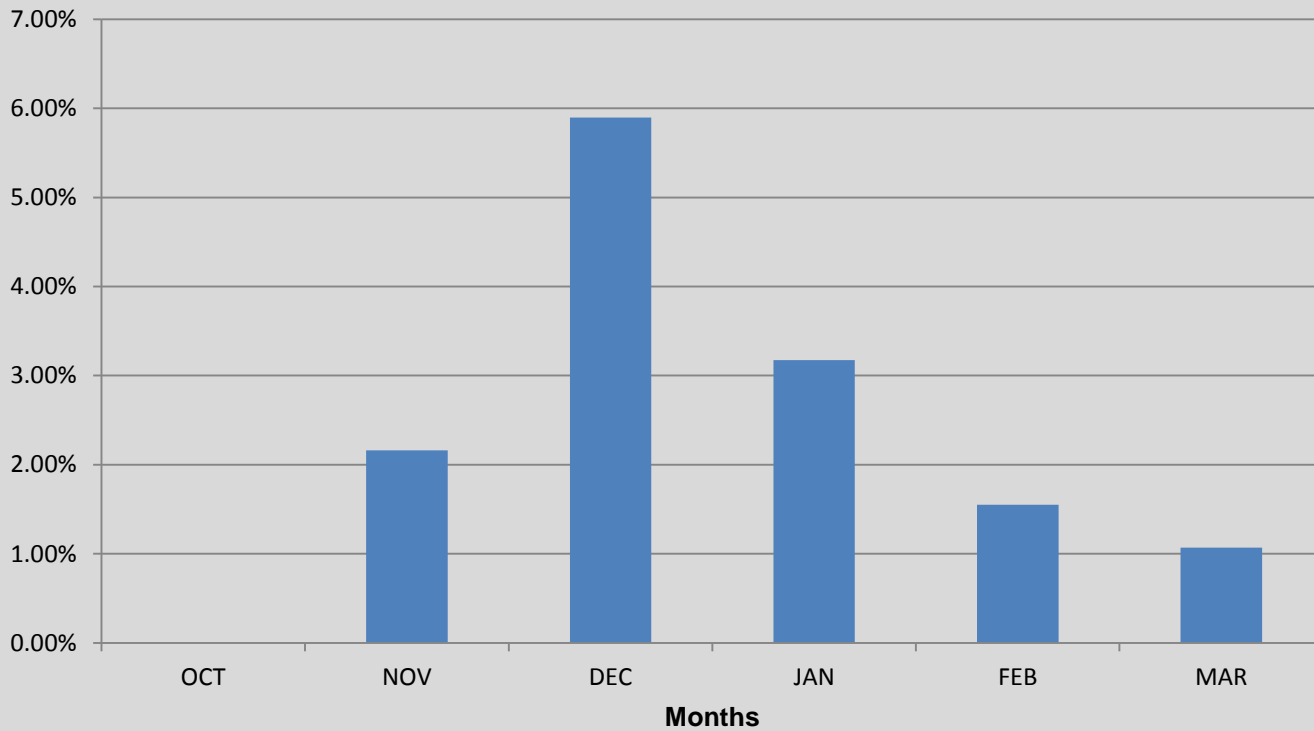
Weightbridge Clerk: vusi
 Drivers Signature

Mti Duff

Date	Truck Reg	Ticket	Quantity	Supplier	Haulier
20140402	DMW311MP	141564	34.10	26720	1006571
20140402	FPD148MP	141579	33.26	26780	1015010
20140402	FPD141MP	141592	34.52	26798	998140
20140402	FMD217MP	141593	36.78	26781	1003502
20140402	FNM814MP	317035	33.76	26807	976977
			172.42		
20140403	CXK768L	141616	33.60	26841	964931
20140403	FXL025MP	141622	35.50	26844	991471
20140403	FGP627MP	141624	32.24	26876	956449
20140403	FDX456MP	141626	35.96	26868	335236
20140403	FZF338MP	141642	35.30	26821	982227
20140403	FXL036MP	141653	33.66	26933	765119
20140403	FMV176MP	141659	34.16	26947	891574
20140403	FXL039MP	141661	36.00	26960	972594
20140403	FNG494MP	141671	32.78	26951	1004107
20140403	HCV192MP	317207	36.96	26970	991771
			346.16		
20140404	HGC156MP	141689	35.76	26961	878549
20140404	FNN583MP	141698	33.76	27013	1048419
20140404	FXL036MP	141702	35.54	26999	1008409
20140404	FSP371MP	141703	35.68	27001	983889
20140404	FMV176MP	141714	34.86	27015	1004203
20140404	FXJ742MP	141715	33.70	27042	981679
20140404	DRY435MP	141716	31.56	26979	970518
20140404	FXL036MP	141722	34.38	27047	971937
20140404	HPL158MP	317281	36.30	26980	1040166
20140404	HGV820MP	317297	34.88	27009	1012357
20140404	HGC692MP	317305	35.44	27014	1003059
20140404	HGB789MP	317308	36.06	27004	992989
20140404	FJF314MP	317316	32.10	27019	1003420
20140404	HGC683MP	317319	36.38	27054	981623
20140404	FNG494MP	317320	35.34	27052	458399
20140404	FNN583MP	317321	35.76	27041	985540



Overloading Frequency (%)



Mass Assessment



①

Private Plus Three
 NAME: FN 827
 REG: TSU20 B/KAB
 MAKE: TSU20 B/KAB
 OTHER: CA 104 829

MAN MODE US.1 TEST 0049
 DATE 29-10-2009 13:39

FACT 4537 4265

TYPE	L	PAD1	PAD2	TOTAL
AX 01	0.56	0.58		1.14T
AX 02	0.74	0.78		1.52T
TOTAL	1.30	1.36		2.66T

GROUP 01 02 03 04
 1.14 1.52

REP M 2.0km/h GUM 2.66T

GVM 2900
 CAP-1500
 CAP-10AC

NAME: FN 827
 REG: TSU20 B/KAB
 MAKE: TSU20 B/KAB
 OTHER:

MAN MODE US.1 TEST 0050
 DATE 29-10-2009 13:40

FACT 4537 4265

TYPE	L	PAD1	PAD2	TOTAL
AX 01	0.58	0.58		1.16T
AX 02	0.74	0.78		1.52T
TOTAL	1.32	1.36		2.68T

GROUP 01 02 03 04
 1.16 1.52

REP M 2.13km/h GUM 2.68T

295/2R 16C

② FN 827

NAME: FN 827
 REG: TSU20 B/KAB
 MAKE: TSU20 B/KAB
 OTHER:

MAN MODE US.1 TEST 0051
 DATE 29-10-2009 13:42

FACT 4537 4265

TYPE	L	PAD1	PAD2	TOTAL
AX 01	0.62	0.68		1.30T
AX 02	0.82	0.92		1.74T
TOTAL	1.44	1.60		3.04T

GROUP 01 02 03 04
 1.30 1.74

REP M 2.4km/h GUM 3.04T

GVM 2900
 DRIVER + 3

NAME: FN 827
 REG: TSU20 B/KAB
 MAKE: TSU20 B/KAB
 OTHER:

MAN MODE US.1 TEST 0052
 DATE 29-10-2009 13:43

FACT 4537 4265

TYPE	L	PAD1	PAD2	TOTAL
AX 01	0.62	0.68		1.30T
AX 02	0.82	0.92		1.74T
TOTAL	1.44	1.60		3.04T

GROUP 01 02 03 04
 1.30 1.74

REP M 2.7km/h GUM 3.04T

② FN 827

NAME: FN 827
 REG: TSU20 B/KAB
 MAKE: TSU20 B/KAB
 OTHER:

MAN MODE US.1 TEST 0053
 DATE 29-10-2009 13:48

FACT 4537 4265

TYPE	L	PAD1	PAD2	TOTAL
AX 01	0.62	0.68		1.30T
AX 02	0.80	0.88		1.68T
TOTAL	1.42	1.56		2.98T

GROUP 01 02 03 04
 1.30 1.68

REP M 2.3km/h GUM 2.98T

JAK LEGS
 GVM 2900

NAME: FN 827
 REG: TSU20 B/KAB
 MAKE: TSU20 B/KAB
 OTHER:

MAN MODE US.1 TEST 0054
 DATE 29-10-2009 13:49

FACT 4537 4265

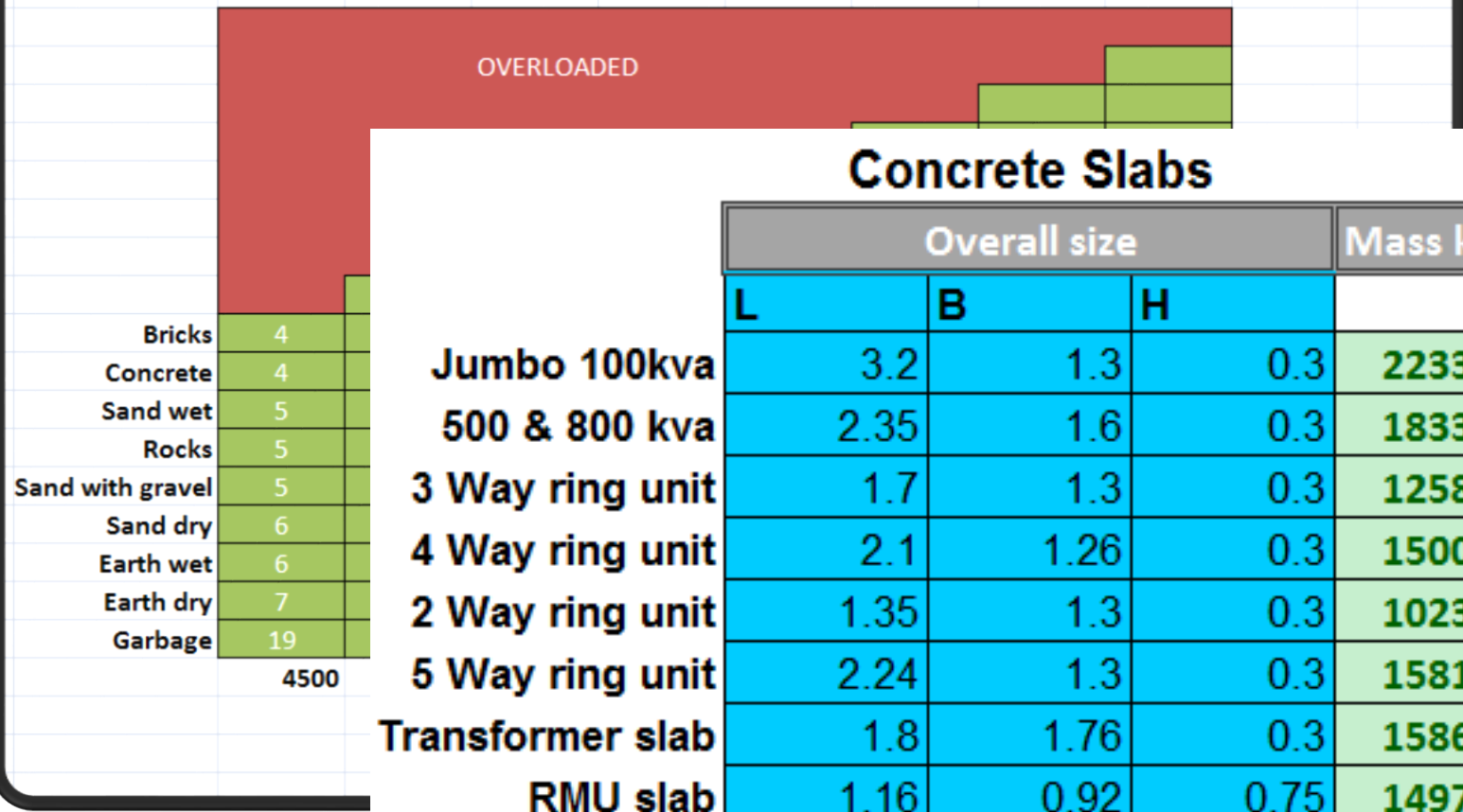
TYPE	L	PAD1	PAD2	TOTAL
AX 01	0.62	0.68		1.30T
AX 02	0.78	0.88		1.66T
TOTAL	1.40	1.56		2.96T

GROUP 01 02 03 04
 1.30 1.66

REP M 2.6km/h GUM 2.96T

Mass Assessment

LOADING CHART



Concrete Slabs

	Overall size			Mass kg
	L	B	H	
Jumbo 100kva	3.2	1.3	0.3	2233
500 & 800 kva	2.35	1.6	0.3	1833
3 Way ring unit	1.7	1.3	0.3	1258
4 Way ring unit	2.1	1.26	0.3	1500
2 Way ring unit	1.35	1.3	0.3	1023
5 Way ring unit	2.24	1.3	0.3	1581
Transformer slab	1.8	1.76	0.3	1586
RMU slab	1.16	0.92	0.75	1497
Meterbox slab	1.36	1.36	0.3	1163

Mass Assessment



Road Safety : Speed Regulations



Compliance to Speed Regulations

StartDateTime	FleetNo	Duration	Value	RegNo	Driver	ManifestNo	
2014-08-12 09:19:31	PH62	00:15:26	89	ND492381	Bhekinkosi Henry Mntungwa	25074	One on One Counselling
2014-08-13 11:08:34	PH35	00:04:46	95	ND665263	David Njabulo Zuma	24159	Written Warning
2014-08-13 11:08:34	PH35	00:04:46	95	ND665263	Jacob Mangoro	24644	Written Warning
2014-08-13 11:08:34	PH35	00:04:46	95	ND665263	Nkosinathi Sydney Mncube	24987	Written Warning
2014-08-14 05:56:07	PH23	00:17:26	109	ND577949	Herbert Phungula	25326	Final Written Warning
2014-08-14 06:17:22	PH23	00:26:58	109	ND577949	Herbert Phungula	25326	Final Written Warning
2014-08-14 06:48:50	PH23	00:11:37	104	ND577949	Herbert Phungula	25326	Final Written Warning
2014-08-14 07:14:37	PH23	00:04:55	97	ND577949	Herbert Phungula	25326	Written Warning
2014-08-14 07:26:28	PH23	00:20:07	90	ND577949	Herbert Phungula	25326	One on One Counselling
2014-08-14 07:51:12	PH23	00:14:38	90	ND577949	Herbert Phungula	25326	One on One Counselling
2014-08-14 08:15:11	PH23	00:03:40	91	ND577949	Herbert Phungula	25326	One on One Counselling
2014-08-14 08:21:56	PH23	00:07:38	90	ND577949	Herbert Phungula	25326	One on One Counselling
2014-08-18 06:34:20	PH35	00:03:01	86	ND665263	David Njabulo Zuma	24655	One on One Counselling

Monitoring & Detection of Speed Violations

Corrective Actions in order to minimise habitual recurrence

Accident Investigation & Analysis (3.2.3)



Accident Investigation & Analysis (3.2.3)

1. Root Causes: (select from the following criteria to identify applicable causes relating to the accident)

2.1 Light conditions: (mark ONE only)

1.	Daylight		4.	Night unlit	
2.	Night lit		5.	Other (specify)	X
3.	Street lights		DAWN		

2.2 Weather conditions & visibility: (mark ONE only)

1.	Clear		4.	Mist/Fog		7.	Fire/Smoke	
2.	Overcast	X	5.	Hail/Snow		8.	Severe Wind	
3.	Rain		6.	Dust		9.	Unknown	

2.3 Road surface type: (mark ONE only)

1.	Concrete		4.	Dirt	
2.	Tarmac	X	5.	Other (specify)	
3.	Gravel				

2.4 Road surface: (mark ONE only)

1.	Dry	X	4.	Snow		7.	Gravel	
2.	Wet		5.	Water		8.	Sand	
3.	ice		6.	Slippery		9.	Other (specify)	

1.5 Quality of road surface: (mark ONE only)

1.	Good	X	5.	Corrugated	
2.	Bumpy		6.	Other (specify)	
3.	Pothole/s		N/A		
4.	Cracks				

1.6 a. Road marking visibility: (mark ONE only)

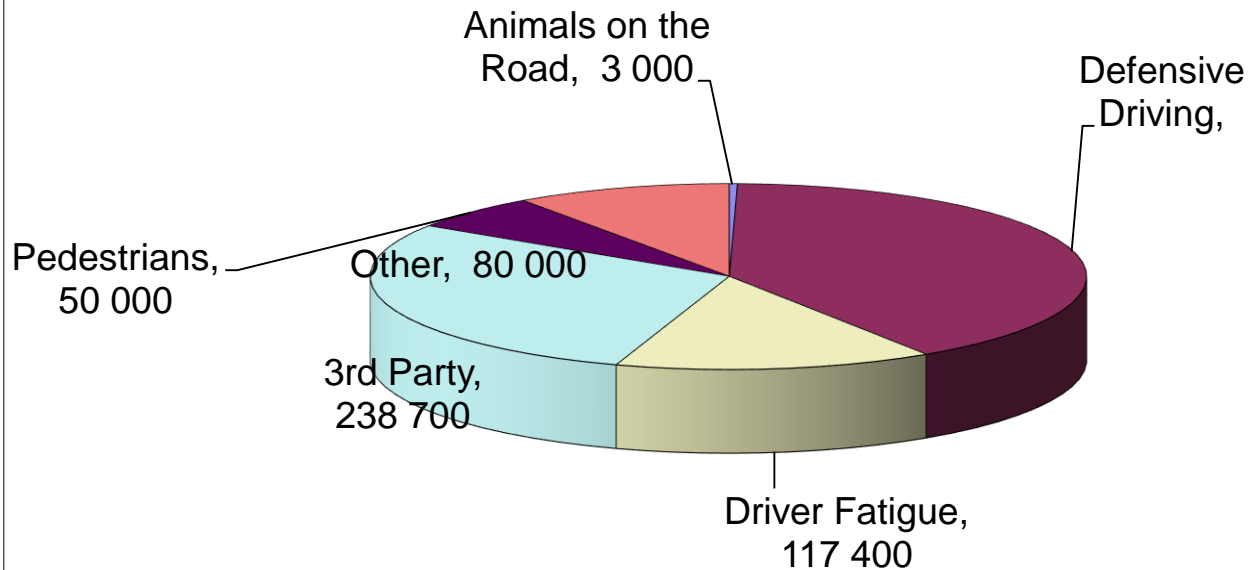
1.	Unknown		2.	Good	X	3.	Poor	
b. road signs clearly visible								
1.	Yes?	X	2.	No?		3.	N/A	

2. Symptoms or Immediate Causes: (select one or more as is applicable)

1.	Operating at Unsafe Speeds		16.	Entering Traffic Flow	
2.	Reckless or Inconsiderate Driving		17.	Merging	
3.	Intoxication by Alcohol/Drugs		18.	Diverging	
4.	Head/ Rear End Collision		19.	Overtaking – pass to Right	
5.	Head On Collision		20.	Overtaking – pass to Left	
6.	Side Swipe – opposite directions		21.	Travelling Straight	X
7.	Side Swipe – same direction		22.	Sudden Stop	
8.	Crossing Driver's path		23.	Sudden Start	
9.	Single Vehicle Left Road	X	24.	Busy Parking	
10.	Single Vehicle overturned	X	25.	Changing Lane	
11.	Accident with animal(specify)		26.	Swerving	
12.	Accident with Fixed Object		27.	Slowing Down	
13.	Turning Right		28.	Avoiding Object	
14.	Turning Left		29.	Stationary/Parked	
15.	U-Turn		30.	Driver Fatigue	

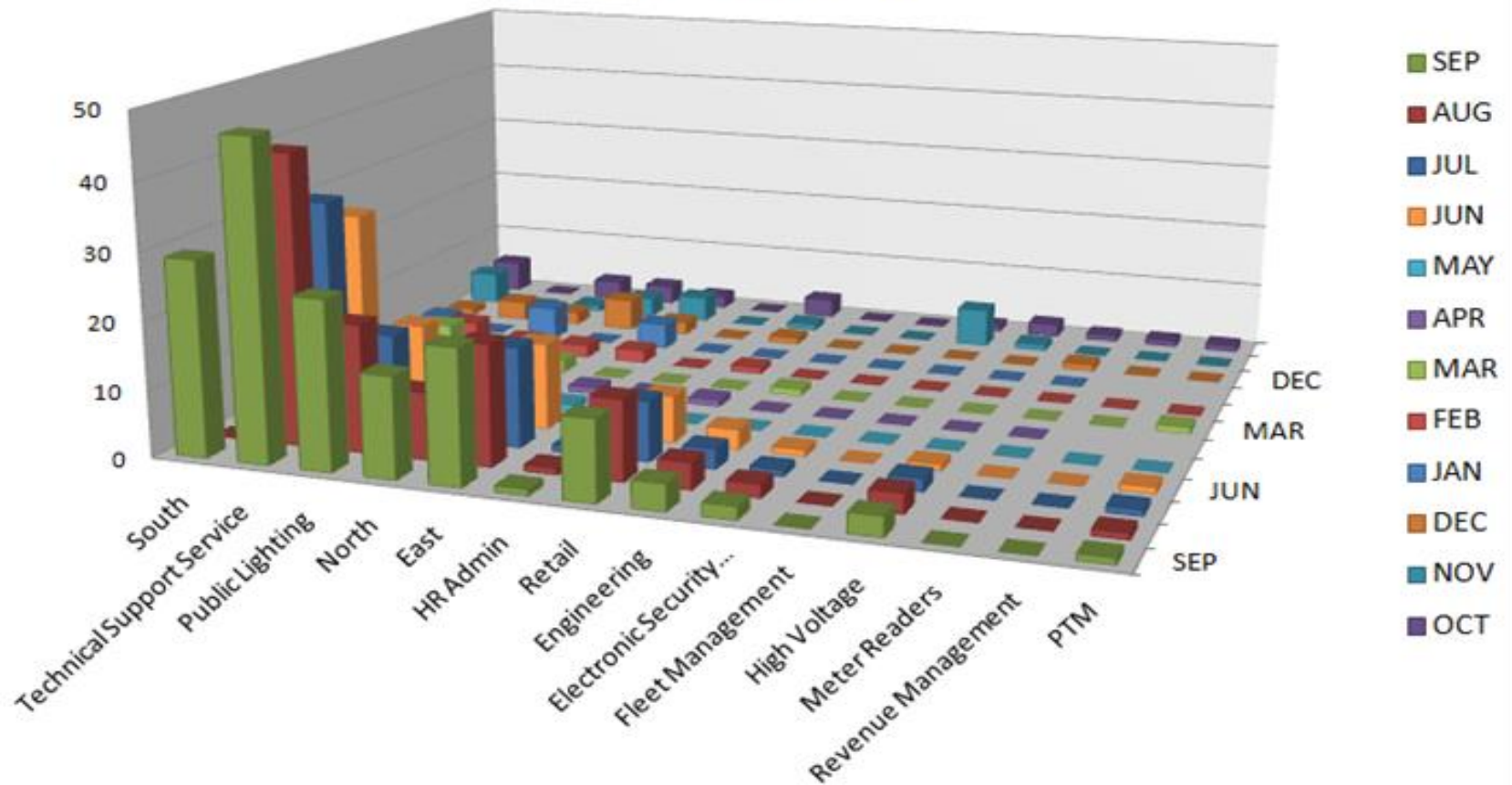
Accident Investigation & Analysis

Root cause analysis / costs - summary of incidents 2011



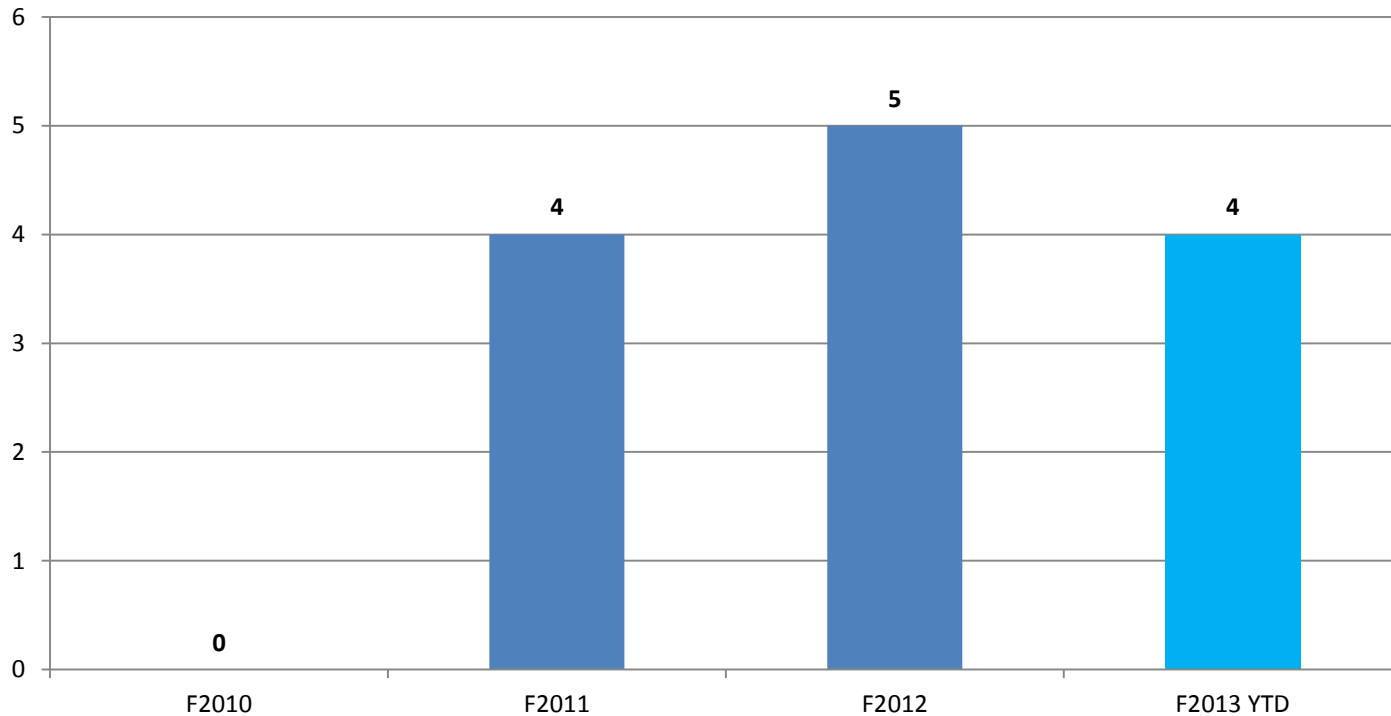
Accident History

Accidents - History per area
(Oct 2009 - Sep 2010)



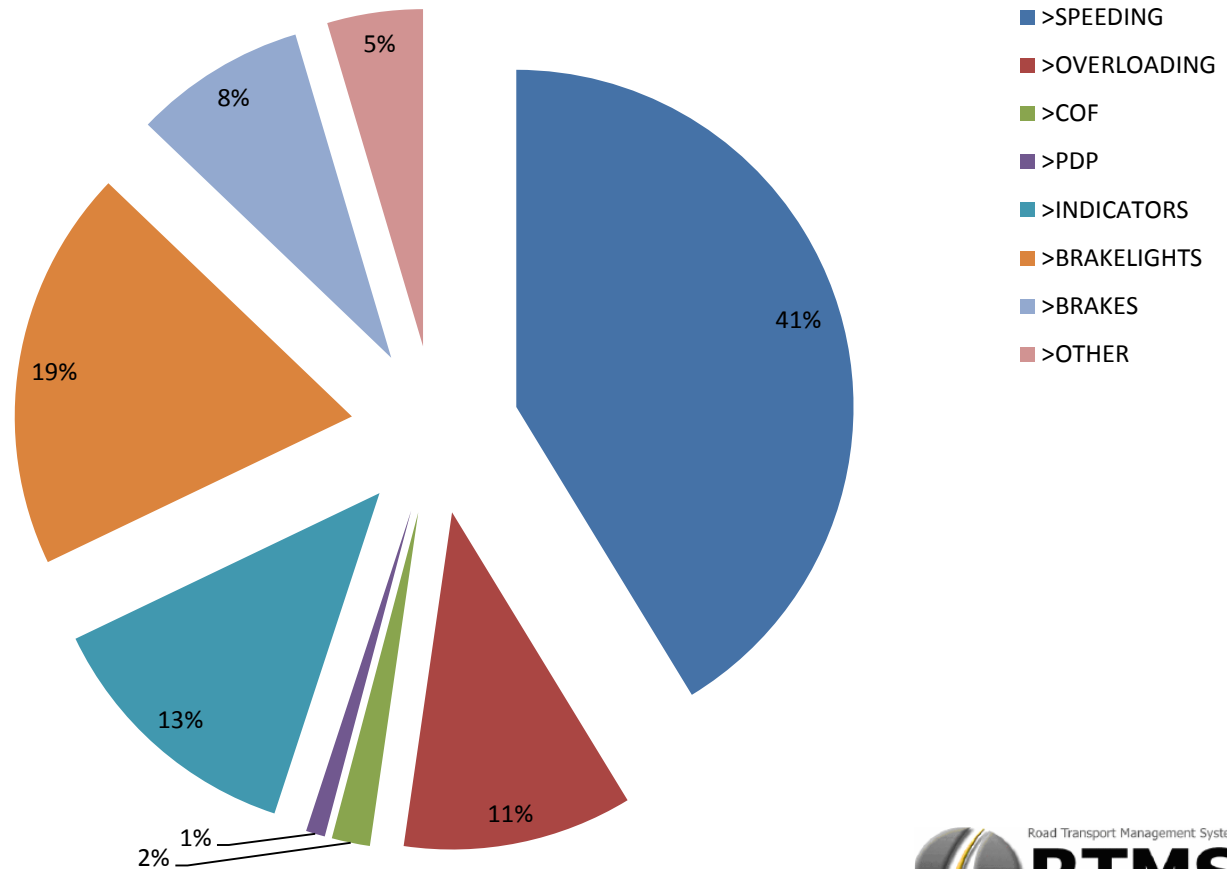
Accident Investigation & Analysis

Major - Accidents

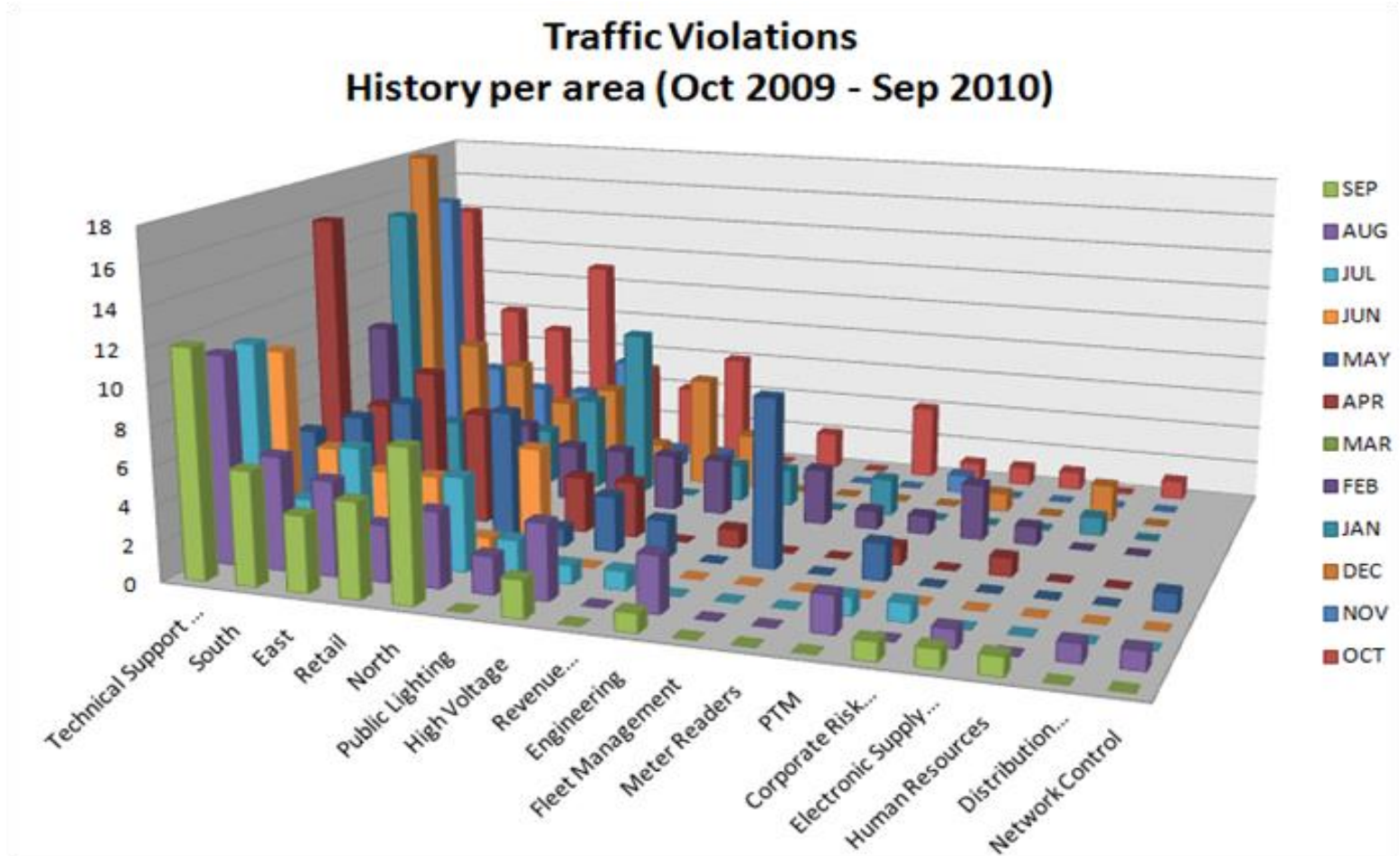


Traffic Infringements/Violations

Traffic Fine Analysis



Traffic Infringements/Violations



Vehicle Maintenance



Vehicle Maintenance

Reg No	Flt No	Rental Code	Rental Description	Description	Cost Centre	Last Service			Odometer		Service Interval	Next Service	Next service type	Km to next service	Status	Load Test	
						Last service date	Last service type	Odometer @ last service	Date	Current Odo reading						Date of Last Load Test	Date of Next Load Test
DA1294																	
CA4721																	
CA5327																	
CA7321																	
DA8866																	
DA7995																	
DA2018																	
DA8817																	
DA8483																	Over
DA7995																	
DA5598																	
DA1518																	
DA9066																	
DA2737																	
DA8483																	
DA2712																	
DA8483																	
DA2713																	
DA7999																	
DA1077																	
CA1154																	
CY6131																	
CA1391																	
DA9187																	
CY3221																	
CA3573																	
DA5725																	
DA1181																	
DA5609																	
DA7190																	
DA7573																	
DA7572																	
DA5784																	
DA7288																	
DA8528																	
DA7288																	
DA2052																	
CA2690																	
DA2053																	
CA5216																	
CY2708																	
DA6667																	
CY7701																	
DA9066																	

Vehicle Maintenance

FLEET NUMBER	LAST RECORDED KMs	LAST SERVICE KMs	LAST SERVICE DATE	KMs TO NEXT SERVICE	NEXT SERVICE KMs	SERVICE INTERVAL
56	671140	650000	06 July 2016	3860	675000	25000
78	567404	550000	29 June 2016	7596	575000	25000
88	631181	625000	30 August 2016	18819	650000	25000
89	578885	575000	31 August 2016	21115	600000	25000
90	602264	600000	07 September 2016	22736	625000	25000
92	574253	575000	01 September 2016	25747	600000	25000

Vehicle Maintenance

FLEET NUMBER: 444007

NAME: Barloworld Transport Solutions

DELIVERY DATE:

ENGINE NUMBER: 51535L7103546

SERVICE KM BOOKED	SERVICE DATE	SERVICE KM DONE	JOB CARD NUMBER	SERVICE COST	TYPE OF SERVICE
30,000	07/3/14	58502	7848	8,689.67	
60,000	05/5/2014	52502	7848	8,689.67	
90,000	25/4/14	54460	8708	-	
120,000	17/10/14	119918		8769.55	
150,000	31/12/14	149195		9234.53	
180,000					
210,000					
240,000					
270,000					
300,000					

ment System

IS

Driver Wellness • Safety • Loading • Productivity

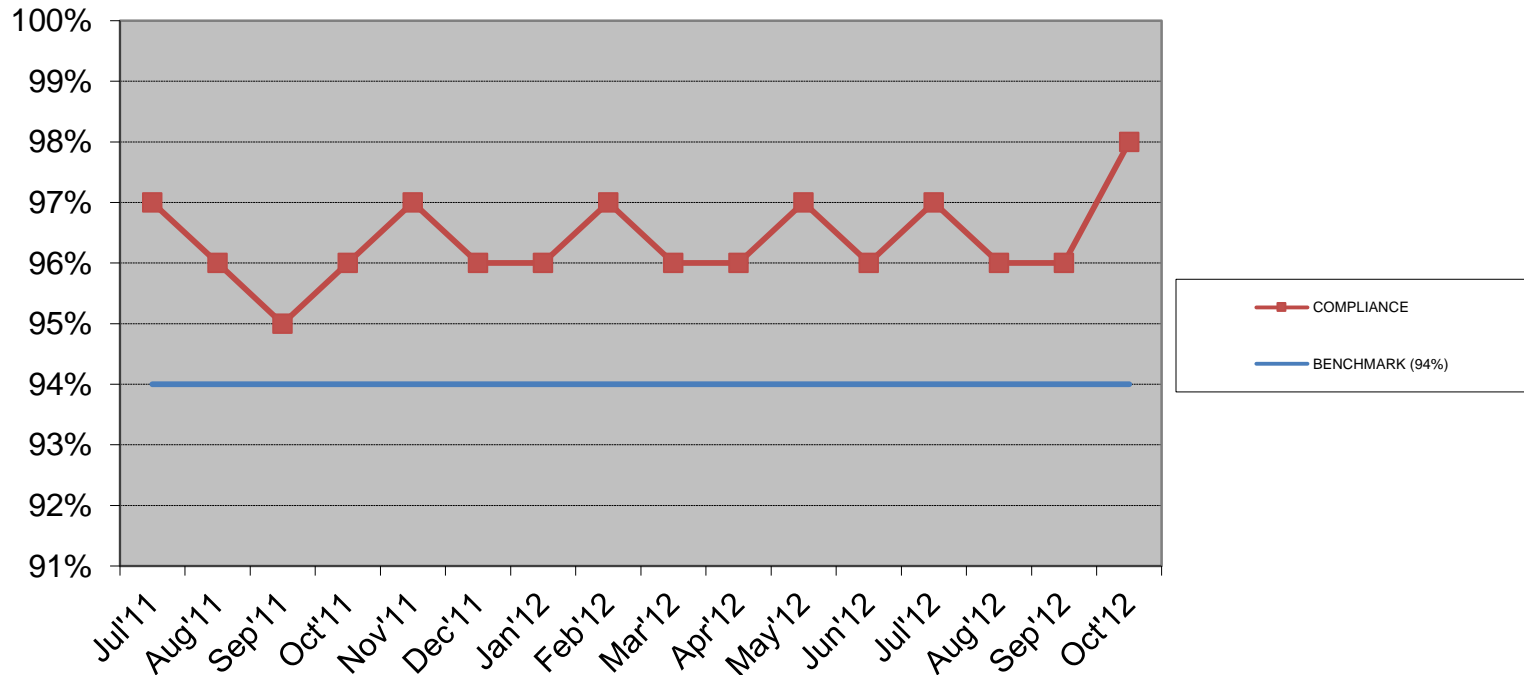
Vehicle Maintenance

JOB CARD				
Fleet No	1015	Date	13-07-2010	
Kilometers	Reg No CA334661	Rental Code	FLT-60DA	
Make	ISUZU NPR300	Model	2001	Cost Centre 80020091
Notification	900419511	Work Order	80468462	Equip No 700003593
Defects: ADJUST DRIVERS SEAT				
<p>"WORK SAFELY & USE APPROPRIATE SAFETY GEAR AT ALL TIMES" "OBTAIN A PERMIT (IF REQUIRED)"</p>				
1	Change battery			
2	Repair drivers seat			
3				
4				
5				
6				
7				
8				
9				
10				
<p>"Check odometer reading and complete with all necessary information!"</p>				
Artisan	A.F.O.N	Signature	[Signature]	Date 14/07/2010
Supervisor	Therese	Signature	[Signature]	Date 14/07/2010
Suprintendant	B. Sessel	Signature	[Signature]	Date 14.07.2010

VAN / SEDAN or SMALL BUS MECHANIC SERVICE SCHEDULE					
REGISTRATION NUMBER : CA155283					
KILO'S / HOURS 35320KM		Date 05/10/2010			
SAP EQUIPMENT NR: 700160099					
MAKE: TOYOTA VENTURE BA 110		YEAR MODEL: 1998			
FLEET: 110					
TIME ALLOWED FOR SERVICES: A SERVICE = 2 HOURS B SERVICE = 4 HOURS C SERVICE = 6 HOURS					
ITEM	SERVICE	PERIOD			Tick
		A	B	C	
ENGINE	Oil change	*	*	*	✓
	Oil Filter replace	*	*	*	✓
	Fuel Filters replace	*	*	*	✓
	Fuel tank strainer check and clean			*	
	Fuel tank inside clean (only if sludge is formed or algi start to grow)			*	
	Injector nozzle spray pattern and condition test			*	
	Injection timing check			*	
	Lift pump strainer clean			*	
	Engine idling speed check	*	*	*	✓
	Engine oil and fuel leaks	*	*	*	✓
	Engine exhaust brake valve working		*	*	N/A
	Air filter replace		*	*	✓
	Radiator tank cap check & pressure test cooling system A,B,&C services	*	*	*	✓
	Radiator coolant (Anti - freeze solution check - replace after one year)		*	*	✓
	Radiator fan blades check for cracks or slippage	*	*	*	✓
	Fan belt condition (check for cracks)	*	*	*	✓
	Exhaust pipe and mountings	*	*	*	✓
	Exhaust manifold bolts and nuts torque		*	*	✓
	Starter check		*	*	✓
	Alternator check		*	*	✓
Alternator test for charging		*	*	✓	
Noises and misfire's in engine		*	*	✓	
Sparkplugs replace	*	*	*	✓	
Ignition timing check	*	*	*	✓	
Replace points & condenser at A , B & C services	*	*	*	N/A	
Cam belt replace →NB (on CVH - Engines on 30000 km)		*	*	✓	
Valve clearance adjust		*	*	✓	
BATTERY	Electrolyte level top up if necessary	*	*	*	✓
	Unload test battery to check ampere hour rating		*	*	✓
	Clean battery also underneath and between two batteries	*	*	*	✓
	Fasten batteries with hold down clamps	*	*	*	✓
TURBOCHARGER	Terminals replace if necessary	*	*	*	✓
	Air duct (gang of kanaal) connections and gaskets		*	*	N/A
	Turbocharger swap at 20000 km (with or without problems)		*	*	✓
CLUTCH	Air sealing gaskets and O-rings replace		*	*	✓
	Adjust free play	*	*	*	✓
	Oil leaks at master or slave cylinder repair	*	*	*	✓
	Hydraulic pipes for cracks		*	*	✓
	Pedal squeak check oil if necessary	*	*	*	✓
AUTOMATIC GEARBOX	Test for slippage or shudder	*	*	*	✓
	Automatic gearbox fluid change only on C service DEXRON (IIE Iuzra)		*	*	✓
	Automatic gearbox link bushes wear		*	*	✓
	Automatic gearbox neutral switch check		*	*	✓
Automatic gearbox oil filter elements only on C service					
Workshop manager	Notification nr : 900445673	Eddie			
Sign : [Signature]	Works order of : 810071245	Date: 05/10/2010			
	Sign : [Signature]	Date: 07/10/2010			

Vehicle Maintenance

Proactive Maintenance Compliance
Jul 2010 to date



Vehicle & Load Safety(3.2.5)

12. Foot Brake

28. V Belt

INTERCAPE MAINLINER (PTY) LTD - PRE TRIP INSPECTION LIST (BRIEFING & DE-BRIEFING) PAGE 1 PAGE 2

ITEMS TO BE CHECKED / TESTED	BRIEFING CORRECT / DEFECT	DE-BRIEFING CORRECT / DEFECT	ITEMS TO BE CHECKED / TESTED	BRIEFING CORRECT / DEFECT	DE-BRIEFING CORRECT / DEFECT
PERMITS & PDP EXPIRY DATE	1.15.04	29.1.15	ADDITIONAL EQUIPMENT & DOCUMENTS		
CELL PHONE			UNDER AGE RIDS DESTINATION TAGS		
HANDS FREE KIT			MOZAMBIQUE BUS INSURANCE		
TRACK ID KEY (TAG)			MOZAMBIQUE TRAILER INSURANCE		
TOOLBOX			DESTINATION BOARDS		
ORCH			HAPPY REPORT		
CROSS BORDER MONEY			EXCESS LUGGAGE BOOK NUMBER		
PASSPORT			HAPPY REPORT		
PERMITS & PDP EXPIRY DATE	18.10.2014		EXCESS LUGGAGE BOOK NUMBER		
CELL PHONE			TOILET & ACCESSORIES		
HANDS FREE KIT			CHECK CLEANLINESS & SMELL OF TOILET		
TRACK ID KEY (TAG)			CHECK CHEMICALS & APPLICATION		
TOOLBOX			TOILET & BASIN WATER FULL		
ORCH			CHECK OPERATION OF TOILET & BASIN		
CROSS BORDER MONEY			CHECK TOILET PAPER STOCK		
PASSPORT			CHECK SOAP & TOILET CHEMICALS STOCK		
TOILET TROMMEL			VERY IMPORTANT ITEMS - SPECIALITY F.E.		
CHECK TROMMEL SEAL & RECORD SEAL NO			BLUE TOILET CHEMICAL SACHETS		

OPERATOR # 1: Johannes
OPERATOR # 2: Humberto
BRIEFING CLERK: [Signature]

OPERATOR # 1: Johannes
OPERATOR # 2: Johannes
BRIEFING CLERK: [Signature]



Deck



Wheels



Fire Extinguisher



Machine Condition

Shift :

- Clean
- Dirty
- Damaged

Shift :

- Clean
- Dirty
- Damaged



Critical - if found sub standard, vehicle may not be operated!

Driver Wellness (3.2.6)

- **Medical Fitness**
 - Annual medical fitness certificates
 - Identification of chronic conditions (e.g diabetes, hypertension, defective vision)
- **Fatigue Management**
 - Shift schedule/Driver Roster – Rest Day Allocation
 - Monitoring of driving hours – Long Haul
 - Fatigue evaluation

Alcohol Screening (3.2.6)



ND ALCOHOL BLITZ



Driver Competence (3.2.8)



Management System



Driver Wellness • Safety • Loading • Productivity

Driver Competence (3.2.8)

- **Driver PDP for class of vehicle**
- **Planned training interventions (training plan)**
- **Verification Records to be available (certificates, registers)**
- **Does not need to be formal, classroom based in all cases**
- **Training to assert positive driver behaviour – safe drivers**



Document & Records (3.2.9)

- **RTMS Processes (Policies/Procedures/Work Instructions etc.)**
- **Supporting docs (Records, Checklists, Tracking Reports etc.)**
- **Detection of Non-Conformances + Corrective Actions**



Management Functions

3.2.10 Performance Assessment (statistics)

- Overloading %
- Crashes
- Fatalities
- Speeding non-compliance etc.

3.2.11 Internal Audit

3.2.12 Management Review

3.2.13 Continual Improvement – Efficiency & Road Safety

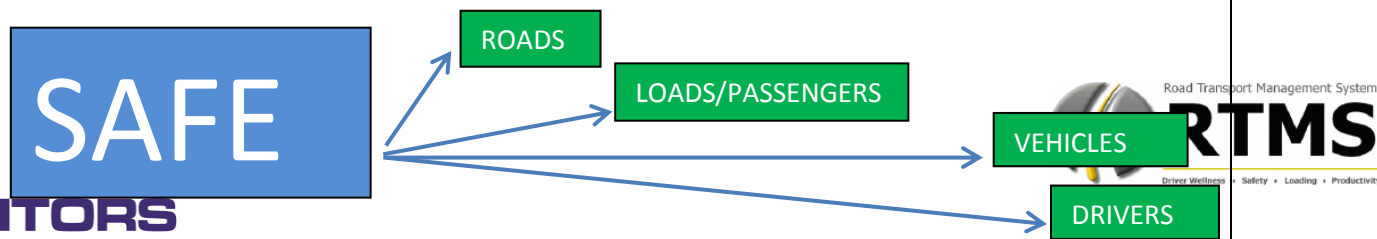
- **Goal of continual improvement so that objectives are achieved**

- ✓ Preserve road infrastructure
- ✓ Improve road safety
- ✓ Prioritise vehicle roadworthiness
- ✓ Ensure responsible driving behaviour
- ✓ Promote driver health and wellness
- ✓ Minimise crashes – reduce fatality/injury rate

RTMS STANDARD SANS 1395-1– MAJOR CRITERIA

LOADING CONTROL	SAFETY & COMPLIANCE	DRIVER WELLNESS	TRAINING & DEVELOPMENT
<ul style="list-style-type: none"> ✓ Payload Optimisation with minimisation of overloading ✓ Compliance with dimensional limits ✓ Safe Loading to prevent incidents ✓ Compliance with legal loading limits and/or applicable permit 	<ul style="list-style-type: none"> ✓ Daily Roadworthy verification ✓ Preventive Maintenance Process ✓ Tyre Management ✓ Prevent habitual speed exceedances ✓ Prevent excessive driving hours ✓ React to Accidents/Incident ✓ Monitor Traffic Offences ✓ Route Risk Analysis ✓ Active Promotion of Road Safety 	<ul style="list-style-type: none"> ✓ Medical Fitness verification ✓ Management of Chronic Conditions ✓ Driver Resting Period monitoring ✓ Driving Hours Monitoring ✓ Risk Awareness 	<ul style="list-style-type: none"> ✓ Annual Training Plan ✓ Focus on defensive driving, legal loading, fatigue management, with emphasis on the promotion of safe driving behaviour ✓ Mentoring, monitoring, counselling, awareness and education ✓ Training Records

EFFECTIVE IMPLEMENTATION REQUIRES DEFINED PROCESSES/PROCEDURES, WITH HISTORICAL RECORD OF CONSISTENT COMPLIANCE





- HOME
- WHAT IS RTMS?
- SUCCESS STORIES
- RTMS STANDARDS
- NEED CERTIFICATION?
- WORKSHOPS
- CONTACT

RTMS Workshop...



Vereeniging Workshop
Tuesday, 18 June 2013
Time : 08h00 - 13h00
Venue : ...

[Read more](#)

Information Pack



Request the RTMS Info Pack..

[Read more](#)

RTMS Standards



View RTMS Standards...

[Read more](#)

Certified Companies



List of ...

[Read more](#)

- + My Company Information
- + SUBMIT Quarterly Report
- + Download Tools

[View](#) [Edit](#)

RTMS Basics...

In order to become RTMS accredited a company must demonstrate that it has adequately implemented all the requirements of the RTMS national draft standard. RTMS compliance does not involve "rocket science", rather it requires that a company demonstrate that it manages its transport operations with due consideration to road safety, compliance and operational risks. The RTMS processes are developed so that procedures are compiled and consistently implemented to minimize the risks identified. The



Road Transport Management System

RTMS

Driver Wellness • Safety • Loading • Productivity

Thank you

oliver@jcauditors.com





Vehicle Standards & Systems Summit towards Safe Roads in South Africa 2016

RTMS Case Studies



Dr Paul Nordengen – CSIR

pnordengen@csir.co.za



Case Study 1: City of Cape Town



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Government Fleet Case Study Electricity Fleet Management and Maintenance Services

Willem Janse Van Rensburg

July 2016

Making progress possible. **Together.**

RTMS Accreditation

Overview 2005 - 2016



CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

Overview 2005 - 2016

Fleet management was generally viewed as a **fleet maintenance service**, which led to the various activities being dealt with on a decentralised somewhat fragmented basis.

During the financial year 05 / 06 the **organisational structure** of fleet services was reviewed and consequently aligned with a proposed business model which provided functionally aligned vehicles to the operations in terms of an internal price recovery agreement.

Fleet Statistics

The Electricity Services fleet comprised a **fleet of 900 vehicles** ranging from off road utility vehicles, sedans, Idv's and panel vans to light, medium and heavy trucks as well as a variety of truck mounted aerial platforms

The fleet stock replacement cycle at the time was 33 years which was far above the industry norms for vehicle replacement. Current average Fleet stock replacement cycle 8.5 years

Functional alignment - 40% > 95%

Fleet availability – 65% > 92.7%



Committed to service excellence and protection of the environment

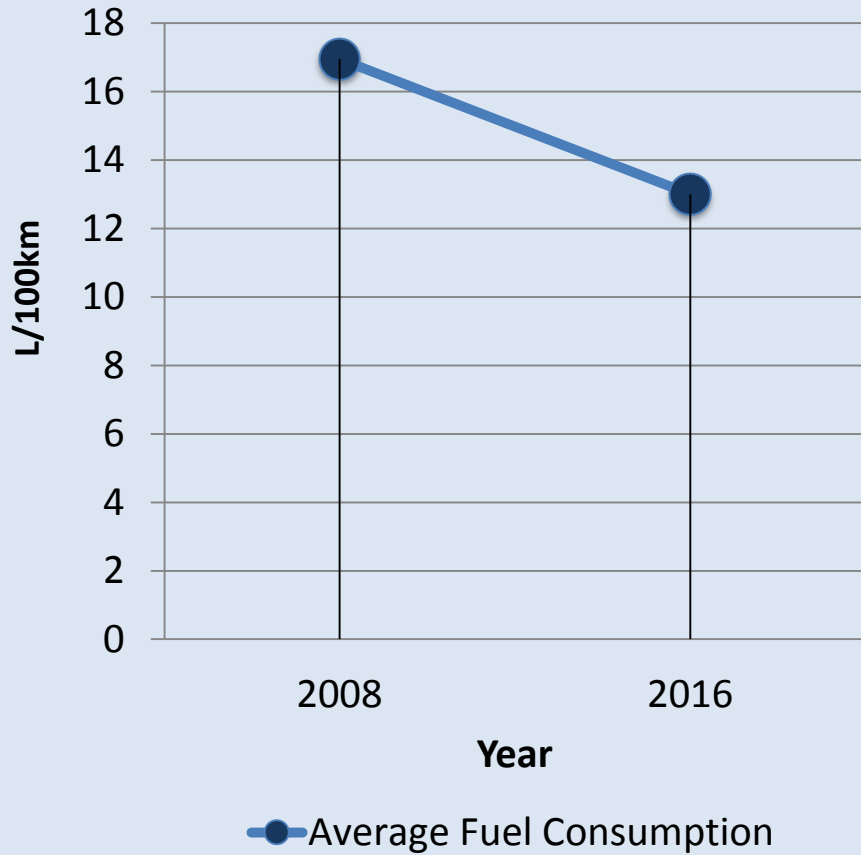
Strategy and Culture

Electricity Fleet Overview 2005-2016

	Historical (2005)	Current (2016)	
Stock Replacement Cycle	33 Years -> Above Industry Standards	8-15 Years -> Based on asset type and condition assessment	Whole life cycle costing model implemented
Functional alignment	40% -> High misalignment between vehicle specifications and operational requirements	85% -> Vehicles purchased as per specific operational needs	Implementation of EAM Right-sizing of fleet vehicles
Fleet Availability	65% -> Work Orders open for months	92% -> Work Orders closed within 14 days	Daily management system implemented
Service Schedule Attainment	47% -> Vehicles not maintained on time	98% -> Vehicles serviced as per monthly plan -> 100% Statutory compliance	Contractor KPI's instituted Effective Communication

Benefits: Efficiency Improvements

Average Fuel Consumption



Fuel Consumption Improved from 17l/100km to 13l/100km



Carbon footprint improved by 24%



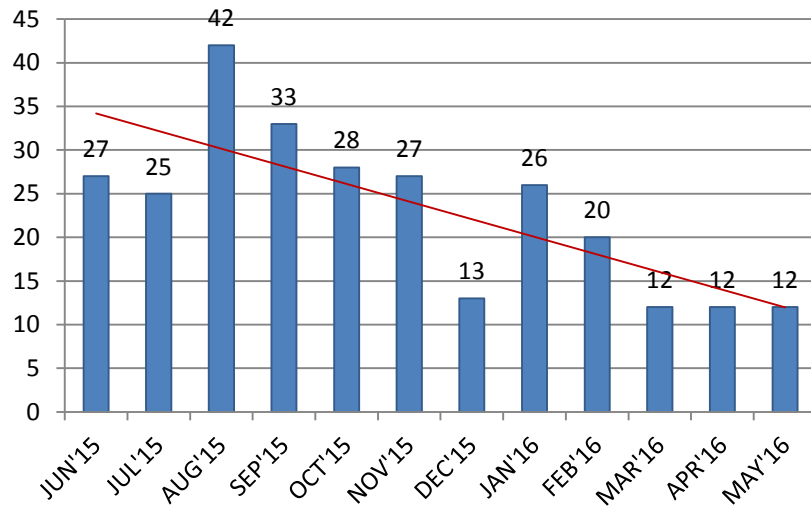
Cost savings on fuel =R5.7 Million



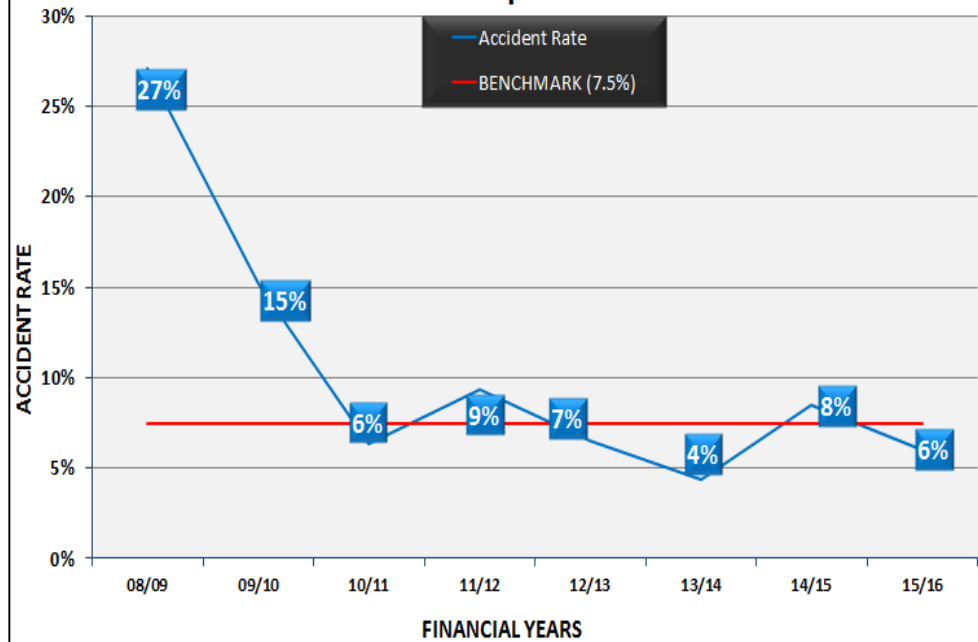
Cost savings on repairs and maintenance =R4.2 Million (2016FY)

Benefits: Reduction in Traffic Violations and Accidents

Total Traffic Violations: Electricity Global Statistics



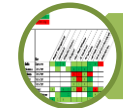
Fleet Incident Rate per Million Kilometres



Traffic violations measured and monitored monthly



Monthly reporting to management



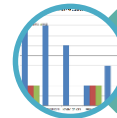
Driver training according to requirements



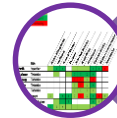
CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD



Accidents and incidents measured and monitored monthly



Monthly reporting to management



Driver training according to requirements

KPI Improvements

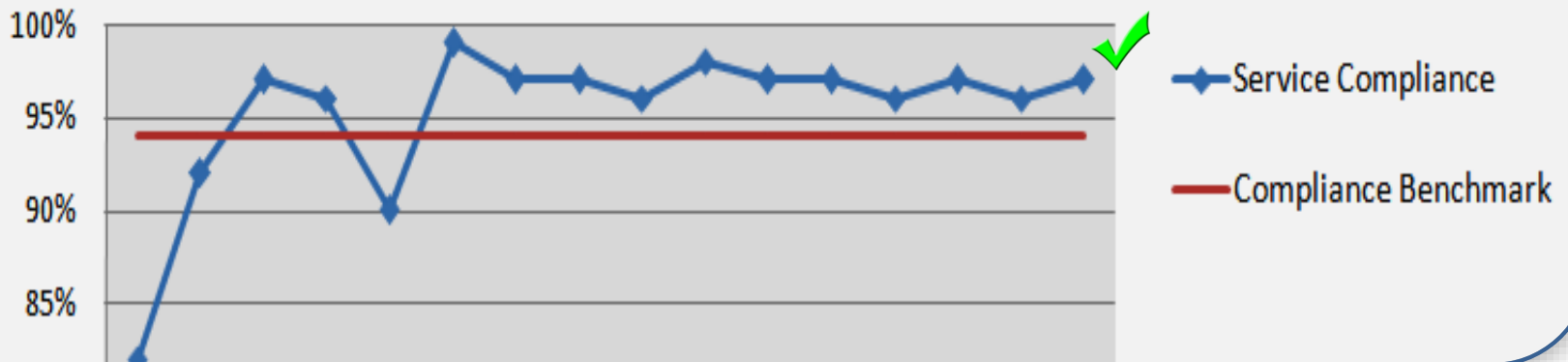
Maintenance compliance



CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

Proactive Maintenance Compliance

Feb 2008 - Oct 2012



Case Study 2: Dawn Logistics



◆ Fleet manager of Dawn Logistics, Danielle Diederiks and MD Graeme Johnston proudly hold their RTMS certificate presented by members of the RTMS Steering Committee. From left: Kathy Bell, Adrian van Tonder, Paul Nordengen and Oliver Nelsoo.



▲ The lady who drove the process, fleet manager Danielle Diederiks.



◆ It was a proud day for managers from around the country when they received their individual depot RTMS Accreditation certificates from the RTMS Steering Committee members.



▲ Dawn Logistics' National Driver of the Year, Thamsenqa Sibya (centre) was also honoured along with Assistants of the Year: Sello Seruano (left) and Lobheng Mole.

Embracing the RTMS challenge

If ever you're looking for an example of the vast improvements that can accrue in all areas of a transport company's operations via the implementation of the Road Transport Management System (RTMS), look no further than Dawn Logistics writes Patrick O'Leary.

POSITIVE RESULTS AND OUTCOME AFTER IMPLEMENTING RTMS

Weighbridges or weigh mats at all depots:

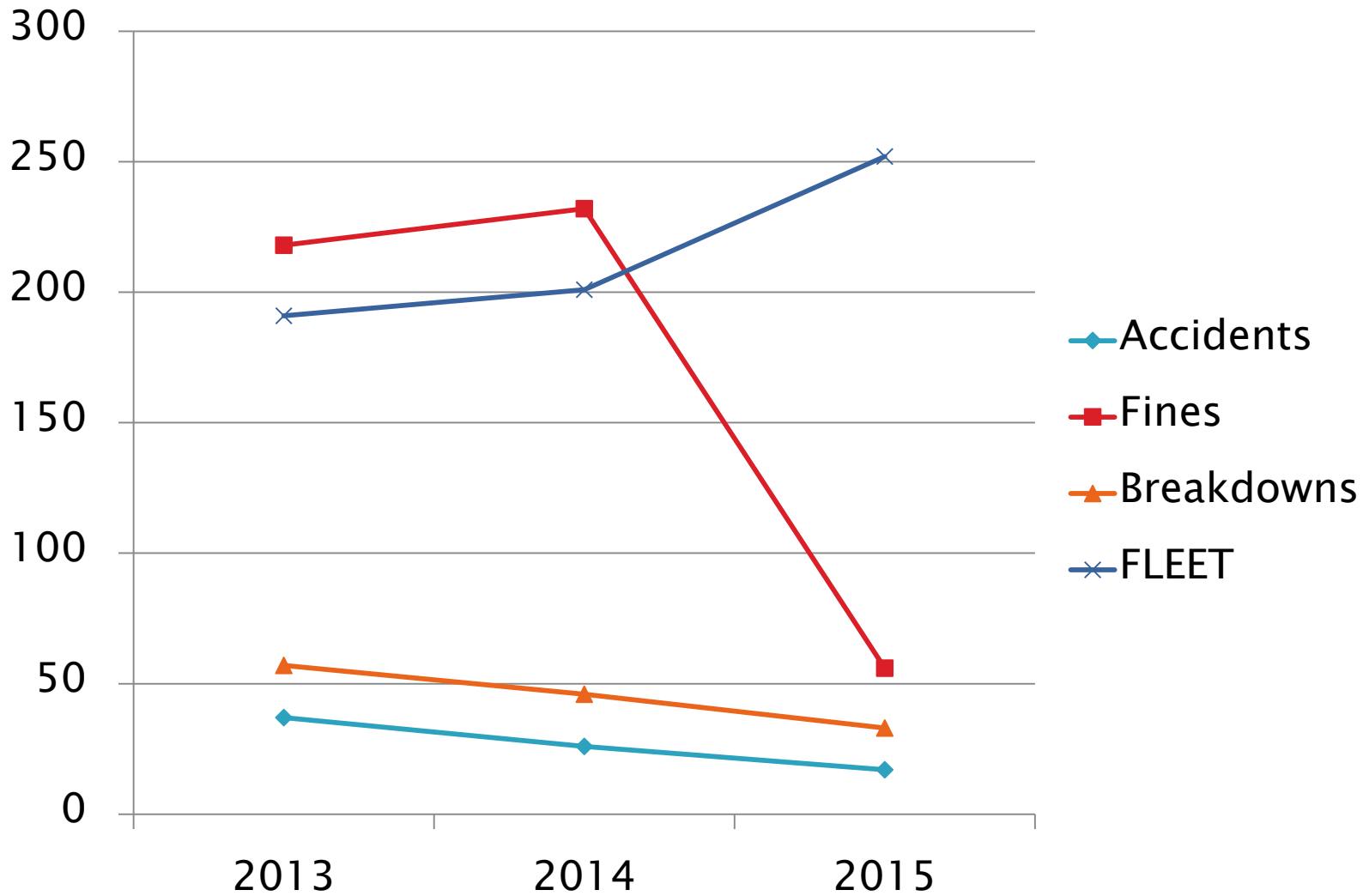
All trucks are weighed before exiting and any defaults are fixed before trucks leave the yard

- 2013 and before = unknown
- 2014 = 3
- 2015 = 0

Risk of breakdowns / crashes / fines:

Strict daily routine inspections and regular tyre surveys, maintenance checks have improved our downtime, and any issues are repaired before trucks leave.

YEAR	FINES	CRASHES	DRIVER ERROR	BREAKDOWNS
2013	218	37	19	57
2014	232	26	11	46
2015	56	17	5	33



Fuel consumption:

Consistent improvement. Fuel monitored on a daily basis and we are running above industry average.

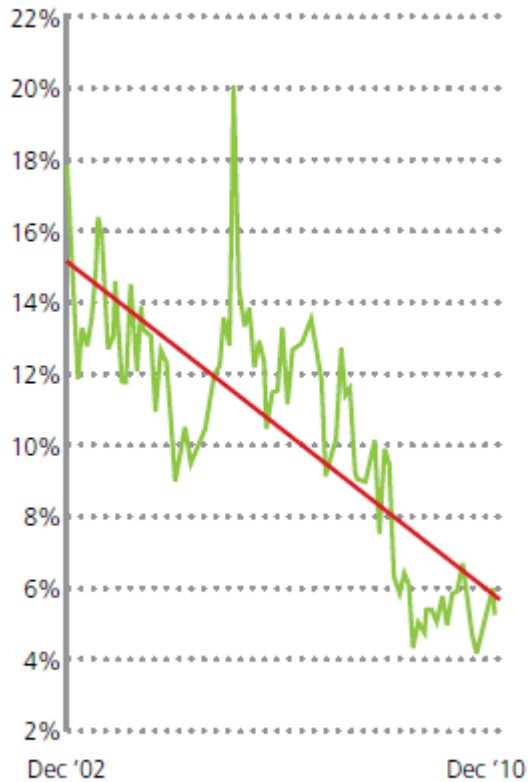
Since implementation, fuel consumption has improved by 20%

Primarily as a result of improved driver behaviour – defensive and economical driving, reduction in harsh braking and speeding.

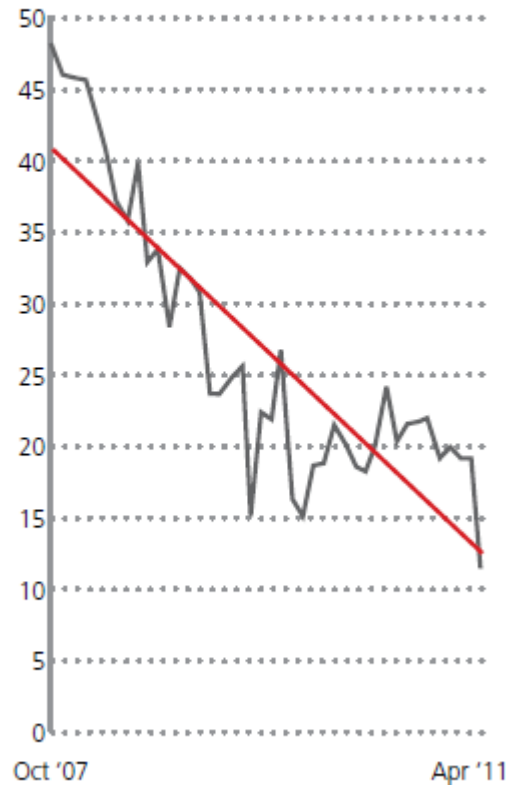


Reduction in overloading & speeding

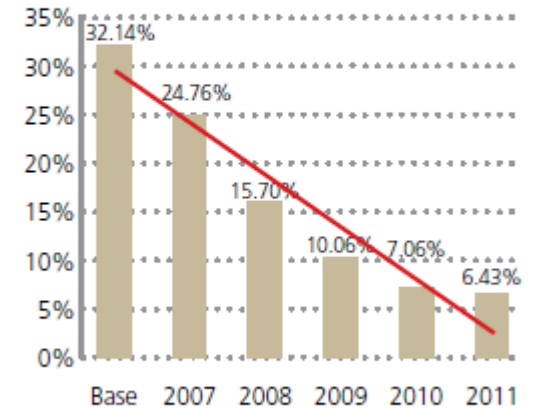
OVERLOADING OVER TOLERANCE SINCE NOVEMBER 2002



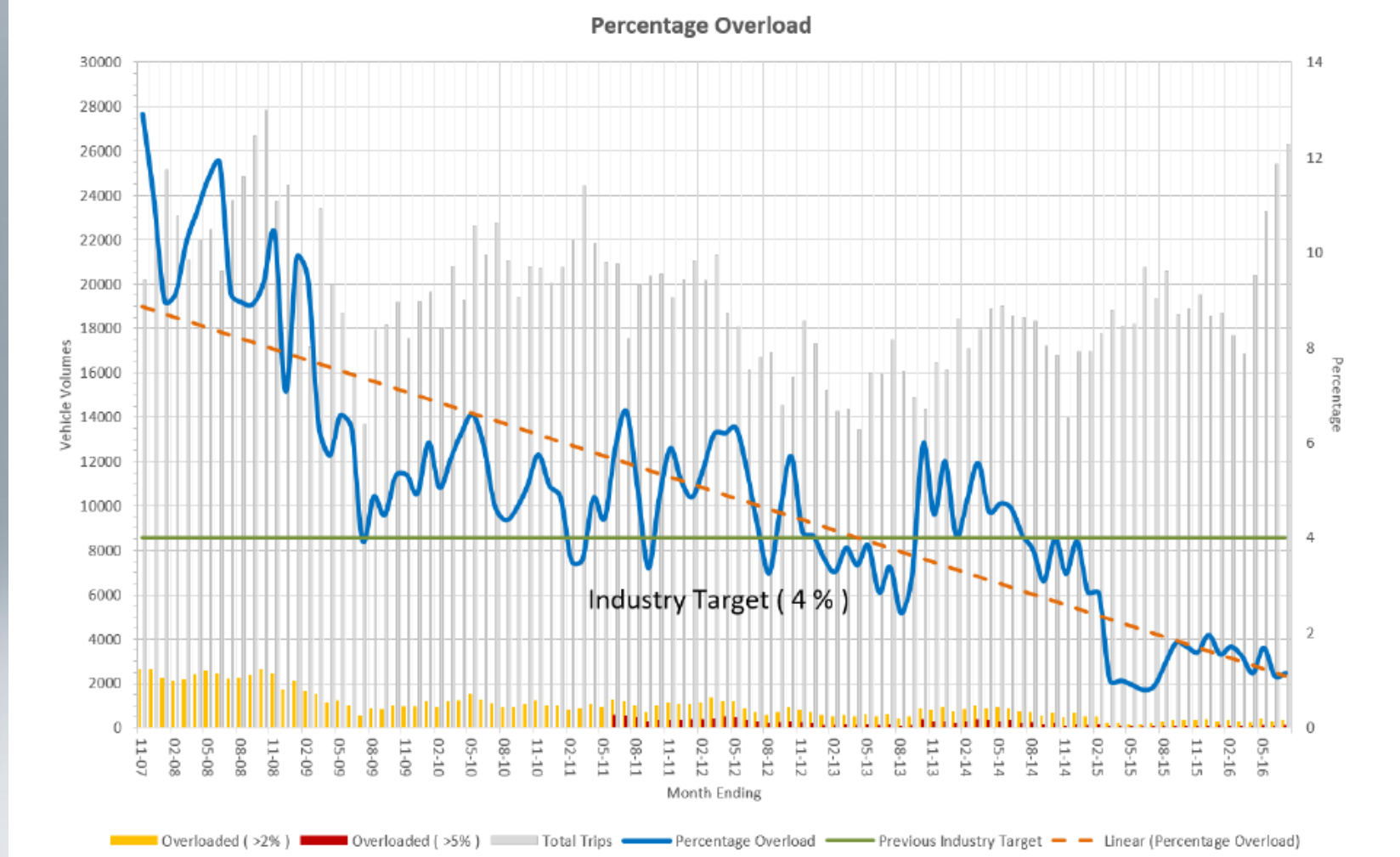
NUMBER OF SPEEDING INCIDENTS



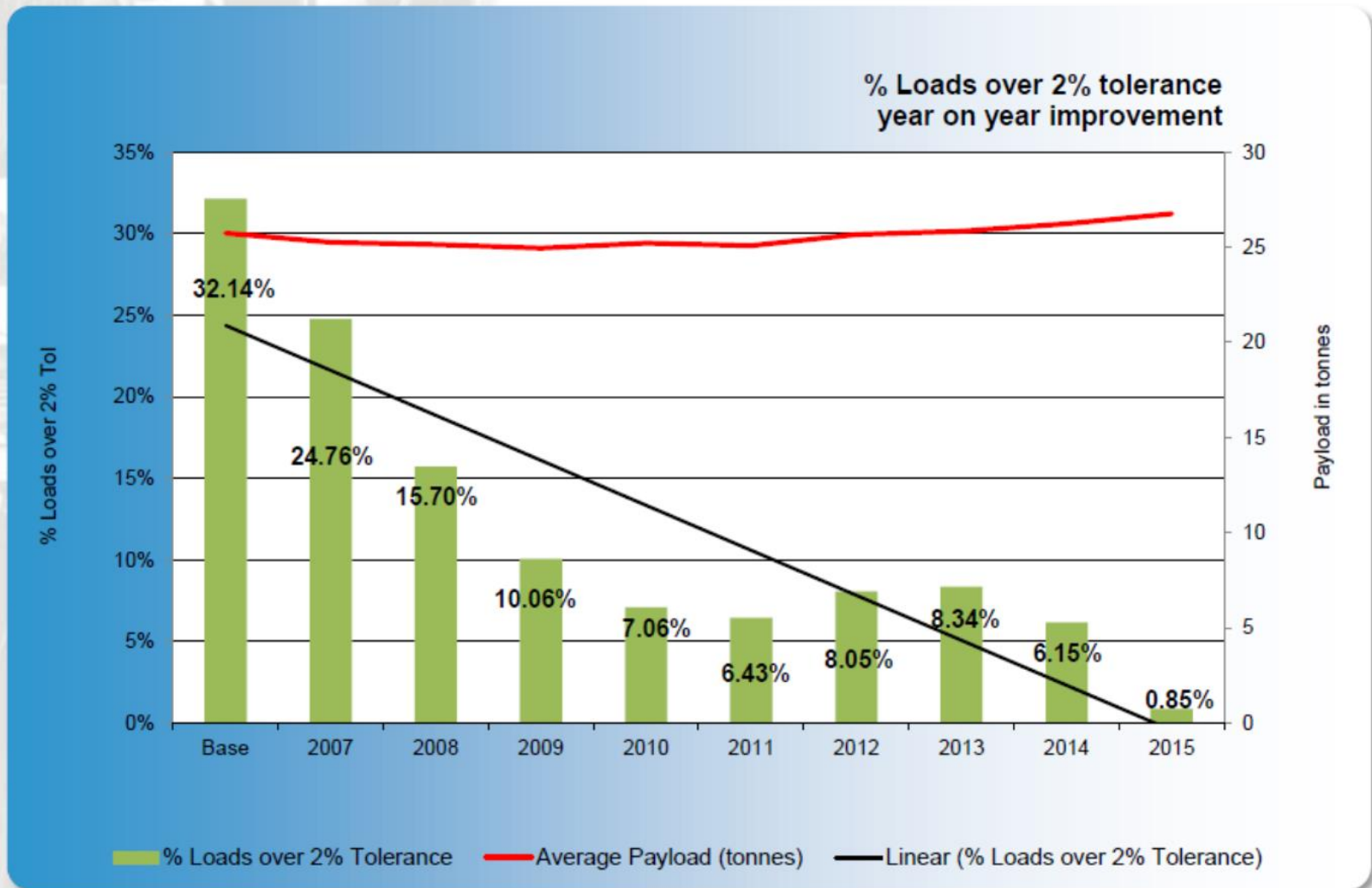
% LOADS OVER 2% TOLERANCE YEAR ON YEAR IMPROVEMENT – RTMS MILLS



RTMS: Overloading trend in forestry



RTMS: Overloading trend in sugar



RTMS benefits: Crash reductions

- Barloworld Logistics: 66% reduction in the number of crashes in 2012 (owner driver fleet);
- Vehicle Delivery Services: 42% reduction in serious crashes from 2011 to 2012;
- Timber Logistics Services: 50% reduction in crashes and incidents from 2009 to 2012;
- The City of Cape Town, Electricity Support Services: 44% reduction in the number of crashes;
- Unitrans Amatikulu: cost of crashes reduced from 5.0% of revenue to 1.3% of revenue (reduction in the frequency and severity of crashes)



Achieved Benefits - Crashes

Reduced accident and incidents over R30 000 damage (July to June):

- 2006 / 2007 – 20 accidents, 6 serious
 - » Accident damage – 67 cpk or 5% of revenue
- 2007 / 2008 – 9 accidents, 5 serious
 - » Accident damage - 76 cpk or 5% of revenue
- 2008 / 2009 – 3 accidents, 1 serious
 - » Accident damage – 103 cpk or 6% of revenue
- 2009 / 2010 – 4 accidents, 1 due to driver falling asleep.
 - » Accident damage – 40 cpk or 2.0% of revenue
- 2010 / 2011 – 3 accidents, 2 due to driver negligence.
 - » Accident damage - 27 cpk, or 1.3% of revenue
- 2011 / 2012 – 5 accidents, 2 due to driver negligence.
 - » Accident damage - 29 cpk or 1.3 % of revenue

THE SPIRIT OF CAN DO



RTMS qualitative benefits

- Reduced turnover of drivers due to HIV-related issues;
- Improved standard of living of drivers;
- Improvement in driver wellness, resulting in a consequent decrease in absenteeism;
- Reduction in breakdowns and drivers reporting breakdowns;
- Improved fleet utilisation (reduced downtime);
- Improved driver behaviour;
- More control and confidence in the company;
- Reassurance that drivers are medically fit to drive a heavy vehicle; and
- Improved motivation of employees

A *FleetWatch* Publication

RTMS

Road Transport Management System



**Voluntary Self-Regulation Programme
FOR THE TRUCKING INDUSTRY**



CSIR
our future through science

Vehicle Standards & Systems Summit towards Safe Roads in South Africa

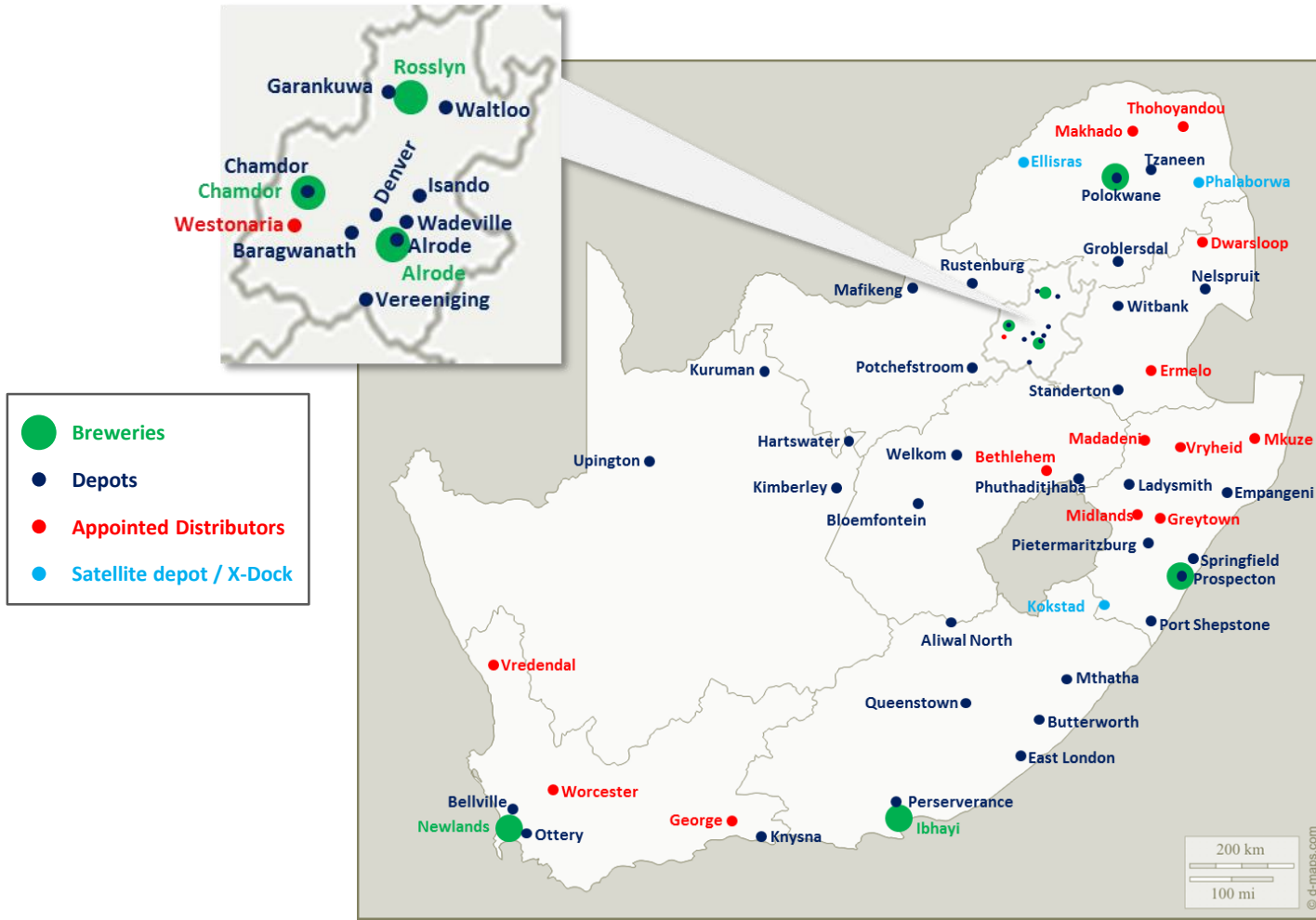
RTMS from a consignor/consignee
perspective



Author/s: Rob Noble

Date / version:

Our distribution footprint spans across 1,2 million square km and consists of 39 SD Depots, 7 Breweries and 14 appointed distributors



The SAB distribution operation can be split up into the Primary and Secondary Distribution operations

Primary Distribution

Transportation of beer from Breweries to SAB Depots



External Fleets:
3rd Party Contractors

+ - 190 Vehicles

Secondary Distribution

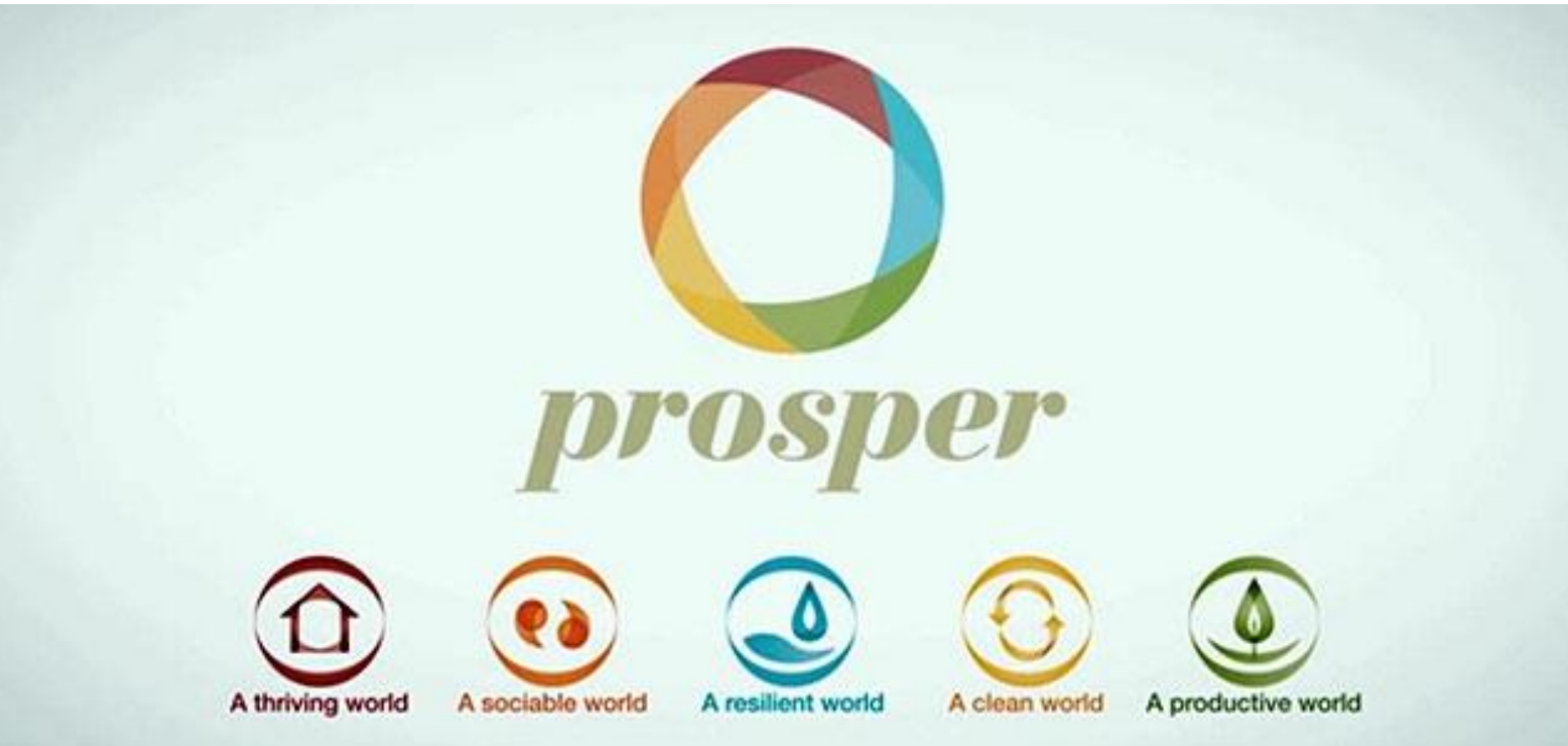
Transportation of beer from SAB Depots to Customers



Internal SAB Fleets:
Owner Drivers and SAB Drivers

+ - 400 Vehicles

Why has SAB embraced RTMS?



Why has SAB Ltd decided to support the implementation of RTMS across our business ?

Take accountability for impact of our transport operations

- SAB operated fleets
- 3rd Party Contractors

RTMS brings external, independent credibility to our existing internal safety and governance controls

RTMS gives us a level of comfort around the operations of our 3rd Party transport partners

RTMS brings numerous safety and productivity benefits to our business and the businesses of our 3rd party contractors

Lead the initiative to drastically improve the standard of self-regulation and introduce a minimum set of standards for safety in the transport industry

RTMS accreditation has become a requirement for all 3rd party transport contractors as well as SA operated sites within SAB Ltd.



Accountability for activities



Awareness and management of vehicle maintenance



Awareness and management of violations



Driver health and wellness



Management capability & insight to business operations



Improved productivity

RTMS allows SAB to standardise operations across all contractors and brings a level of confidence that road safety is being managed proactively

SAB Ltd. has many self regulation systems and programs, to manage our internal SAB fleet that are directed at improving road safety and ensuring compliance with the National Road Traffic Act

	Compliance with NRTA	Vehicle Maintenance	Prevention of overloading	Road Safety Awareness	Driver Health and Wellness
IT Systems	✓	✓	✓		
SAB Internal Audits	✓	✓	✓	✓	✓
Driver Training and Development	✓	✓	✓	✓	✓
Wellness Programs					✓
Road Safety Awareness Programs	✓	✓	✓	✓	✓
RTMS	✓	✓	✓	✓	✓

RTMS is the South African industry standard for self regulation in road transport and brings external creditability to SAB's existing internal controls

Shipment tracking



- Once the STP is selected the Map will refresh:
- - Customer Plot (truck stop <100m)
 - - Customer Plot (truck stop >100m)
 - - Depot Plot
 - - Truck
 - ✕ - Truck Stop (ignition switched off > 5 min)

Land
RESUME
PAUSE
STOP

Shipment Animation
Stop Locations

00:00:00 RECORDING
hybrid mobile roadmap satellite terrain







2016-06-24 07:03:08 - 34949

Shipment Number
9450173
Actual Distance
122
Plan Distance
104
Actual Time
791
Plan Time
626
Vehicle GPS Plots
219
Playback Speed
▲ 500 - 2000 - 3500 - 5000 ▼
Vehicle Zoom
STP Zoom

2016-06-24 07:03:08 - 34949

Vehicle Zoom
STP Zoom

When comparing the safety performance RTMS fleets to non-RTMS fleets, a substantial decrease in vehicle overloading incidents, over speeding incidents and accidents as well as an increase fleet maintenance compliance and driver health and fatigue management can be seen

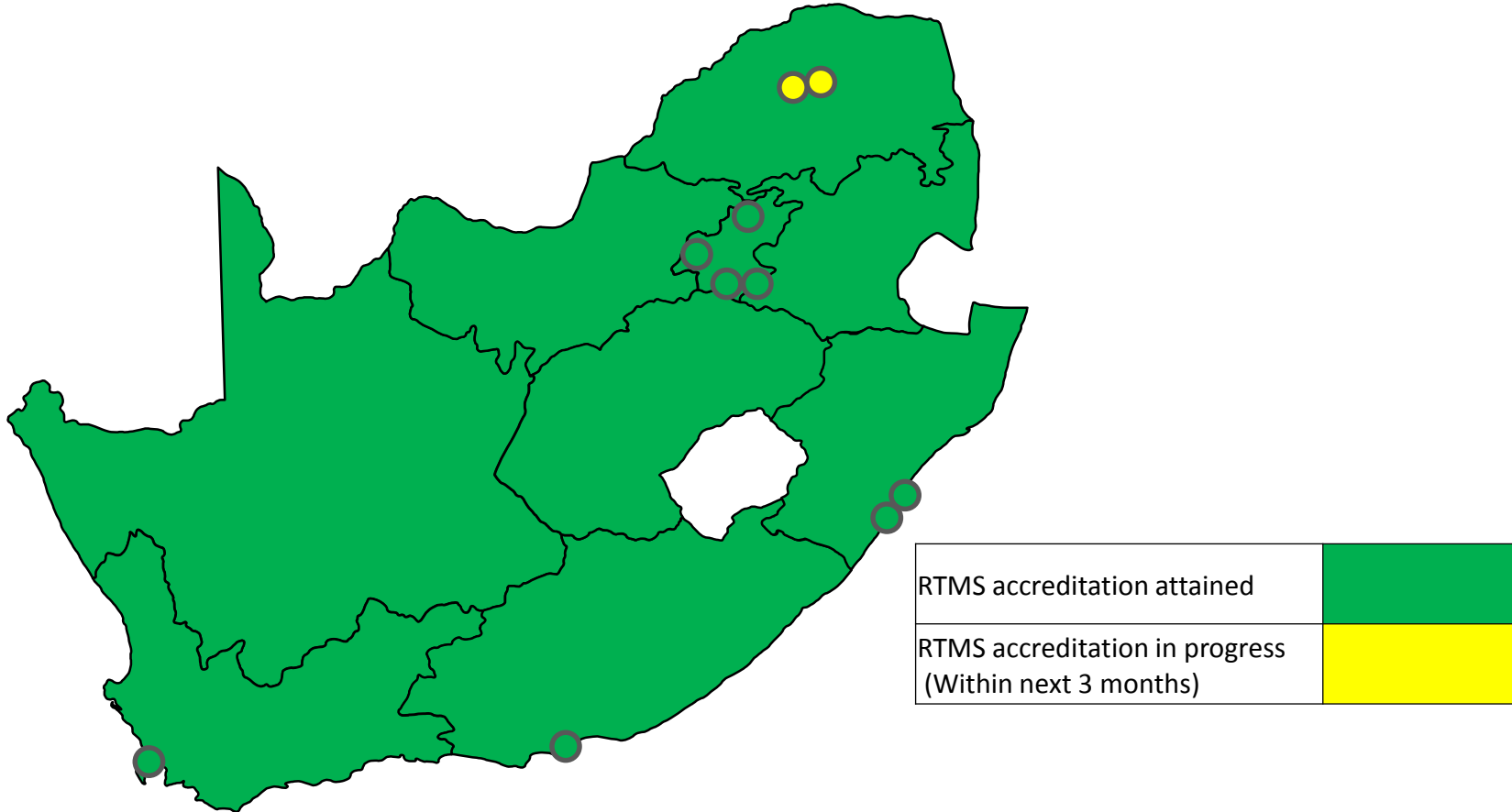
	Pre-RTMS	Post-RTMS
Average Overloading	23%	 2.5%
Vehicle Maintenance Compliance	62%	 96%
Compliance with Speed limits	63%	 97%
Fatigue Management	54%	 95%
Medical Fitness	23%	 93%
Driver Training	24%	 92%

*RTMS information supplied by RTMS National Committee

The significant safety benefits arise from the improved design of the PBS combination in conjunction with self regulation systems required to operate PBS fleets (RTMS)

Currently 8 of the 10 3rd Party operated fleets have been RTMS accredited

Map of RTMS Accreditation achieved across 3rd Party Contractors



All 39 SAB operated fleets have been RTMS accredited

SAB's view of the role RTMS in South Africa

RTMS provides a set of standards to guide transport operators to ensure they are operating a safe and productive heavy vehicle fleet

RTMS emphasises self-regulation and ensures companies take accountability for the impact of their operations

By encouraging RTMS and self-regulation to become the industry norm, the level of safety and capability of the entire transport industry will be raised