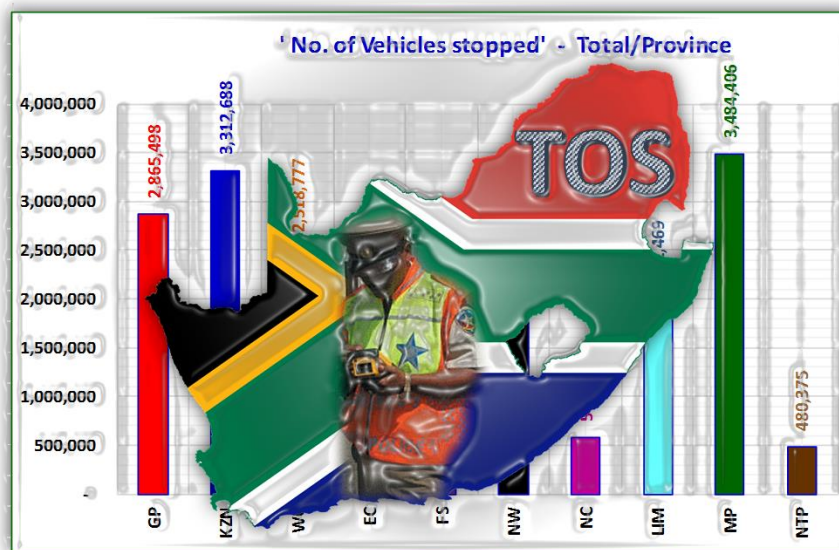




**Road Traffic**  
Management Corporation



## TOS - Traffic Offence Survey



**March 2015**

Compiled by:  
RTMC: Research and Development Unit

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## EXECUTIVE SUMMARY

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The Research and Development Unit of the Road Traffic Management Corporation (RTMC) identified the need to execute an atypical Traffic Offence Survey (TOS) project in 2014/15 based on traffic infringement data collected over a period of 22 months from the nine (9) provinces and the National Traffic Police (NTP). The principles of the project and a conventional annual TOS is very similar in that traffic offence data is collected and analysed however, the outcomes however differ in that this project outcomes are percentage orientated whereas the outcomes of a conventional TOS is based on indices where activities are weighted before evaluations are made and compared on an annual basis.

This TOS will complement the intended annual TOS by analysing traffic offences in a broader context under normal traffic law enforcement conditions. The outcomes of the study will provide amongst others a baseline to compare data of future TOS's as well provide input towards establishing a national database of traffic law enforcement offences across all levels of authority.

The RTMC Research and Development Unit established an Excel System to analyse data reported on. The system will be used to analyse and report on data collected from provinces and the NTP and from 2015/16 include analysis on data from Metro's and Local Municipalities on a continuous basis. The unit in conjunction with the Law Enforcement Branch of the RTMC is in the process of establishing a reliable input system for all law enforcement authorities to be able to report to the RTMC on activities on a monthly basis.

A micro-level analysis could not be executed on the project data due to the unreliability of micro-level data received, however good correlation was found on a macro level analysis where outputs were compared to AARTO 2013 offence statistics. In addition, a comparison level between offences recorded over the 22 month period versus percentage fuel sales per province (to emulate vehicles per province) versus the number of traffic law enforcement officials in provinces showed good correlation with very low percentage variance.

From the data analysed, speeding as the major contributor of road fatalities are also the offence with the highest infringement proportion reported on. It appears that even though speed law enforcement is being done aggressively, drivers are still speeding and it does not appear as if the number of speeding offences are decreasing.

With pedestrian fatalities as the second highest contributor to road fatalities, jaywalking arrests was amongst the lowest offence proportions recorded. Arresting and prosecuting for jaywalking poses unique challenges and as long as there is spatial segregation with communities established along major roads, it is not anticipated that pedestrian fatalities would decrease drastically with jaywalking arrests. Planning, engineering and education efforts will most probably be the only real actions to ensure a decrease in pedestrian road fatalities.

Even though all the analysed proportions of infringements contributing to road related deaths are important it is believed that by focussing on the two main contributors to road related deaths i.e. speeding and jaywalking the highest impact can be made to ensure a decrease in the number of road related fatalities on South African Roads.

Analysing law enforcement activities on a continuous basis from a national perspective should be a priority of the RTMC to compliment independent annual TOS's. Reliable monthly reporting on law enforcement activities by all spheres of government is crucial for the RTMC to be in a position to effectively lead the way towards safer roads in South Africa from a national perspective.

The following Way Forward is proposed:

- That a continuous law enforcement activity reporting model for all traffic law enforcement authorities is implemented by the RTMC, endorsed by the NDoT to ensure that reliable reporting standards are met.
- The Research and Development Unit in conjunction with the RTMC Law Enforcement Branch establish the reporting and analysis model.
- The Research and Development Unit import monthly infringement data as per the modal and publish quarterly internal traffic offence survey reports on both a macro and micro level through the database system that was developed and discussed in section 3 of this document.
- That the output from the internal national traffic offence database form the basis of annual outsourced traffic offence surveys.
- That the output from both traffic offence survey models are used by all RTMC units as an alternative to other methods as a planning tool towards safer roads in South Africa.

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## 1. INTRODUCTION

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The international best practice to establish traffic offence rates of a country or in general, to establish the compliance of the public to traffic rules and regulations is to conduct a Road Traffic Offence Survey (TOS) on an annual basis. To this effect, TOS's have been conducted in South Africa by independent service providers since 1975 through the National Department of Transport (NDoT) and the Road Traffic Management Corporation (RTMC).

The latest independent annual TOS was conducted in 2010. The survey methodology however changed over the years in terms of the purpose of the survey, sampling methods and the determination of survey locations, as well as the offence types monitored. The need for the development of a new methodology for conducting road traffic offence surveys was identified and to this effect the RTMC appointed the Engineering Division of the Stellenbosch University to develop a methodology for conducting annual road traffic offence surveys, taking into account existing local and international solutions. The emergence of new and affordable technologies such as ANPR (automatic number-plate recognition) and speed over distance cameras etc. were also explored in terms of the potential value that each could bring to the process. An annual TOS in line with the new developed methodology will be executed by an independent service provider during the 2015/16 financial year.

In the interim, the Research and Development Unit of the RTMC identified the need to execute an atypical TOS project in 2014/15 based on data collected over a period of time from the nine (9) provinces and the National Traffic Police (NTP) under normal traffic law enforcement operations ahead of the annual TOS to be executed in 2015/16. The principles of the project and a conventional TOS is the same in that traffic offence data is collected and analysed. The outcomes however differ in that the project outcomes are percentage orientated whereas the outcomes of a conventional TOS is based on indices where activities are weighted before evaluations are made.

This TOS will complement the intended annual TOS by analysing traffic offences in a broader context under normal traffic law enforcement conditions. The outcomes of the study will provide amongst others a baseline to compare data of future TOS's as well provide input

towards establishing a national database of traffic law enforcement offences across all levels of authority.

The TOS study absorbed data collected on law enforcement activities under six (6) Item Groups and fifty (50) Action and Offence Activities reported by all provincial and the NTP over a 22 month period from April 2013 to January 2015.

## **1.1 Objectives and Outcomes of the Project**

The aim of the study project is to

- establish trends of road user compliance to road traffic rules and regulations,
- establish a baseline to compare data of future offence surveys,
- provide input towards establishing a national database of traffic law enforcement offences on all authority levels,

Other than a conventional traffic offence survey, the project will provide outputs in comparing different offence types with one another, analyse the reliability of reporting by traffic law enforcement authorities and propose the way forward for continuous reporting, collecting and evaluation of law enforcement activity data in South Africa from national perspective. In addition, the way forward will propose a tool to compare the effectiveness of traffic law enforcement over all spheres of government.

## **1.2 Methodology Followed**

The methodology followed was to collect and analyse traffic law enforcement data collected over period of 22 months from April 2013 until January 2015 from the nine (9) provinces and the NTP.

An Excel database system was established and data analysed in accordance with statistical methods which ultimately projected outputs to analyse traffic offences on an item group and activity level.

The outcome of the project is not to compare provincial outcomes with one another but, will focus on macro level percentage outcomes in analysing and comparing offence activities and activity item groups.

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## 2. DATA ANALYSIS

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### 2.1 Data

The data utilised for analysis is based on summarised infringement reports submitted to the RTMC by the nine (9) provinces and NTP from April 2013 to January 2015 which was reported on a form capturing fifty (50) key traffic law enforcement performance activities. An example of a monthly report form is attached at Annexure A.

A total number of 35,054,170 items were reported over the 22 months project study period.

The data was analysed in a matrix under six (6) Item Groups and fifty (50) Action/Offence Activities (tabulated under paragraph 2.2 below).

### 2.2 Data Reliability

The data collected was captured and analysed by the RTMC's Research and Development team. Different levels of reliability was found for each of the matrix levels. The micro data received was not in accordance with acceptable levels of reliability in accordance with statistical analysis prescripts to analyse the data on a micro level. The criteria was however met to analyse the data on a macro level.

The reporting format (Annexure A) established by the RTMC in 2013 included, in addition to Item/Groups and Offence Activities, a breakdown per month of each activity for different types of vehicles. Unfortunately some provinces opted to alter the reporting format which resulted in the data on activities/offences per vehicle class not reliable; however, totals per month were provided for each of the 50 activities which could be analysed with relative reliability.

Over the 22 month study period an average of 19 months of data were available for analysis with some months not reported on. This effects an 85.6% reliability of available data which is

acceptable for macro level analysis. The reliability of the actual data reported on is however dependant on the accuracy of the reporting by provinces and the NTP.

One of the objectives of this project is to propose the way forward for continuous reporting, collecting and evaluation of law enforcement activities in South Africa from a national perspective. The shortcomings and challenges identified during this project will pave the way forward to establish a reliable national databank on traffic law enforcement activities over all spheres of government. In addition, this will deliver a tool to compare the effectiveness of traffic law enforcement over all spheres of government. A summary of data recorded and analysed per Item Group per Activity is tabulated below:

Item Groups	No./Group	Total No.	Activities	Total Recorded	Average Per Month	Data Available (Ave Months)	% of Months Available Data
1 Actions Completed	1	1	No. of K78 Roadblocks held	17,567	1,023	17	78.0%
	2	2	No. of Vehicles stopped	19,635,135	1,034,199	19	86.3%
	3	3	No. of Drivers tested for alcohol	3,841,448	212,588	18	82.1%
	4	4	No of Vehicles Weighed	3,297,525	164,380	20	91.2%
	5	5	No of Government vehicles stopped	244,761	12,550	20	88.7%
	<b>Subtotal:</b>				<b>27,036,436</b>	<b>1,424,740</b>	<b>19</b>
2 Driving Document	1	6	Driving licence (none)	252,453	13,854	18	82.8%
	2	7	Driving licence (Fail to carry)	289,708	15,237	19	86.4%
	3	8	PRDP (None)	297,245	14,443	21	93.6%
	4	9	PRDP (fail to carry)	50,109	2,829	18	80.5%
	5	10	Dangerous Goods Vehicles	11,679	683	17	77.7%
	6	11	Public Passenger Transport Permit Condition	118,975	5,836	20	92.7%
	<b>Subtotal:</b>				<b>1,020,169</b>	<b>52,882</b>	<b>19</b>
3 Moving Offences	1	12	Inconsiderate Driving	12,447	641	19	88.3%
	2	13	Overtaking in Face/Barrier line	66,549	3,304	20	91.6%
	3	14	Road Sign/Marking -Traffic Signal Violation	454,462	23,024	20	89.7%
	4	15	Stopping on freeway	20,125	1,092	18	83.8%
	5	16	Speed-Manual (Hand Held Camera)	867,083	45,708	19	86.2%
	6	17	Speed- Camera (Fixed Camera)	1,921,243	102,980	19	84.8%
	7	18	Seat belt (driver)	328,258	18,832	17	79.2%
	8	19	Seat belt (Passenger)	1,150,806	60,641	19	86.3%



Item Groups	No./Group	Total No.	Activities	Total Recorded	Average Per Month	Data Available (Ave Months)	% of Months Available Data
	9	20	Seat belt (Rear)	25,389	1,373	18	84.1%
	10	21	Unlicensed Vehicles	275,139	14,528	19	86.1%
	11	22	Fail to display Licence Disc	148,765	8,698	17	77.7%
	12	23	Fail to display Operator Card	41,004	2,445	17	76.2%
	13	24	Overloading (goods)	86,389	4,555	19	86.2%
	14	25	Overloading (passengers)	91,775	4,991	18	83.6%
	15	26	Held Cell phone in Hand Whilst driving	76,486	3,920	20	88.7%
	16	27	Other Moving Offences	221,949	11,713	19	86.1%
	<b>Subtotal:</b>				<b>5,787,869</b>	<b>308,444</b>	<b>19</b>
<b>4 Vehicle Defects</b>	1	28	Steering	5,025	236	21	96.7%
	2	29	Windscreen Wipers	18,995	965	20	89.4%
	3	30	Brakes (Service)	26,761	1,365	20	89.1%
	4	31	Brakes (Parking)	61,750	3,103	20	90.5%
	5	32	Tyres	184,694	10,942	17	76.7%
	6	33	Front Lamps/Head lamps	89,535	4,620	19	88.1%
	7	34	Rear lamps/Stop lamps	104,926	5,397	19	88.4%
	8	35	Direction indicators	35,639	1,791	20	90.5%
	9	36	Number plate	84,355	4,421	19	86.7%
	10	37	Side and Rear Retro Reflective Markings	55,787	2,595	22	97.7%
	11	38	Other Defects	305,015	16,042	19	86.4%
	<b>Subtotal:</b>				<b>972,482</b>	<b>51,477</b>	<b>20</b>
<b>5 Road Worthy</b>	1	39	Vehicles discontinued	73,681	3,723	20	89.9%
	2	40	Vehicles impounded	26,543	1,381	19	87.3%
	<b>Subtotal:</b>				<b>100,224</b>	<b>5,105</b>	<b>20</b>
<b>6 Arrests</b>	1	41	Drunken Driving	44,113	2,742	16	73.1%
	2	42	No driving licence	1,729	89	19	88.4%
	3	43	Speed	16,144	1,064	15	69.0%
	4	44	Overload Goods	4,646	305	15	69.1%
	5	45	Inco, Rec & Neg.	1,547	80	19	88.0%
	6	46	Permits /Operating Permits	8,386	444	19	85.8%
	7	47	Warrants Executed	48,541	2,827	17	78.0%
	8	48	False Documentation	917	50	18	82.5%
	9	49	Other Arrests	5,625	294	19	86.9%
	10	50	Pedestrians Arrested	5,342	301	18	80.7%
<b>Subtotal:</b>				<b>136,990</b>	<b>8,196</b>	<b>18</b>	<b>80.2%</b>
<b>Grand Total:</b>				<b>35,054,170</b>	<b>1,850,844</b>	<b>19</b>	<b>85.6%</b>

### 3. DATABASE

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Amongst others, the project aim was to establish a user friendly system to enable the analysis of law enforcement activities reported on a monthly bases.

The monthly data reports was, and can henceforth be imported with relative ease into an established Excel “TOS Data” sheet which is hyperlinked to six (6) outcome based sheets where a user can choose different activities to be analysed which are presented in matrices and interactive graphs.

To ensure the integrity of the system, inputs can only be made in the “TOS Data” sheet as per reports received by different authorities. All other sheets only have selection options to select what data need to be analysed with user friendly interfaces.

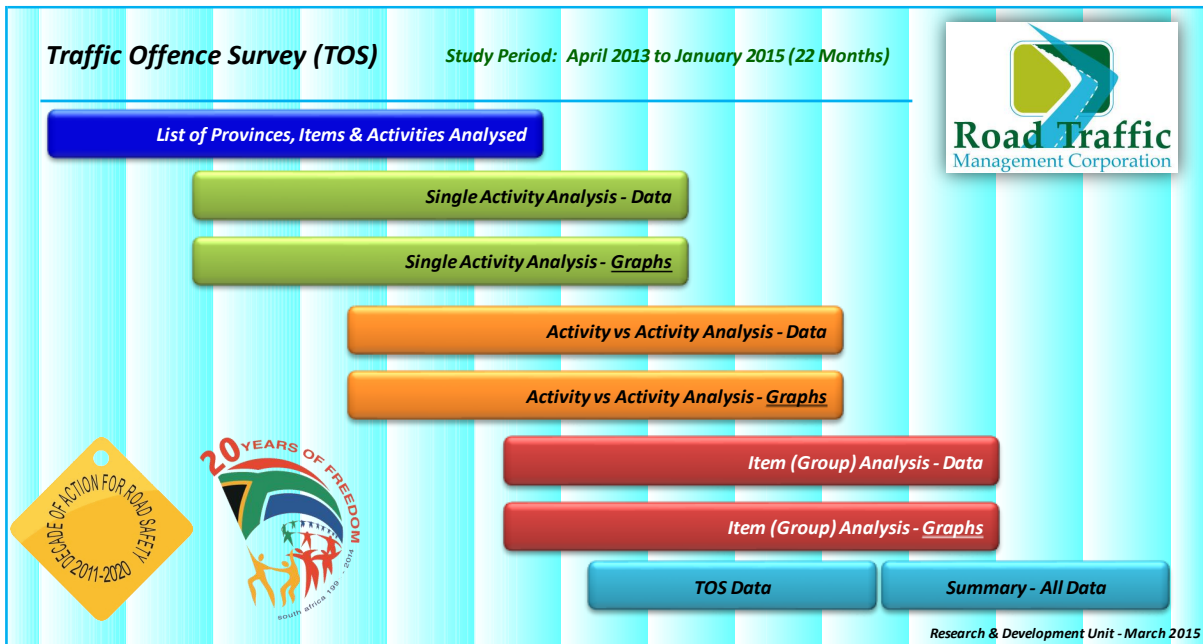
An input format is being developed which will be password protected for authorities not to make alterations which will in turn ensure that in future such analysis can be done on a micro level which will include amongst others, a breakdown per vehicle classification, time of day, day of the week etc. The Research and Development team of the RTMC is in the process of establishing a concept system which will be submitted for approval to the RTMC Executive after work-shopping the concept with all provinces, metros and the NTP.

#### 3.1 Database System Established

A Microsoft Excel database system was established to analyse the data with a “Main” Input sheet which directs the users via hyperlinks to eight (8) different outcome based analysis sheets viz.:

- List of Provinces, Items & Activities Analysed
- Single Activity Analysis – Data
- Single Activity Analysis – Graphs
- Activity vs Activity Analysis – Data
- Activity vs Activity Analysis – Graphs
- Item (Offence Group) Analysis – Data
- Item (Offence Group) Analysis – Graphs
- TOS Data
- Summary of All Data

The following screenshot illustrates the “Main” sheet from where analyses can be conducted:



**Traffic Offence Survey (TOS)** Study Period: April 2013 to January 2015 (22 Months)

List of Provinces, Items & Activities Analysed

Single Activity Analysis - Data

Single Activity Analysis - Graphs

Activity vs Activity Analysis - Data

Activity vs Activity Analysis - Graphs

Item (Group) Analysis - Data

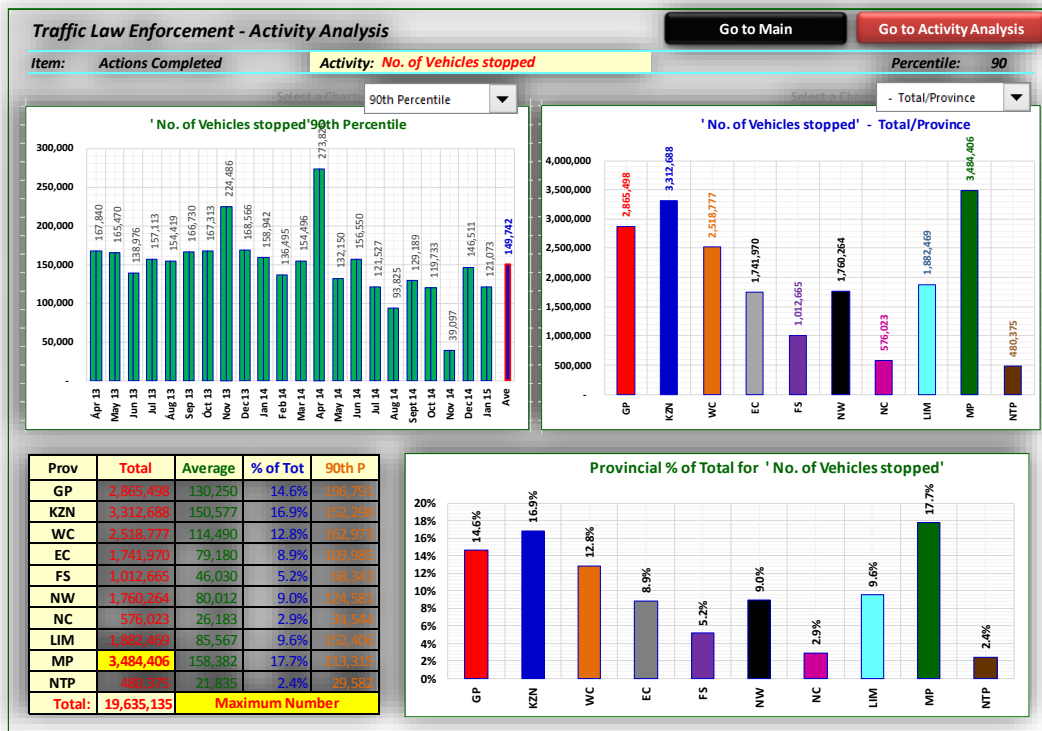
Item (Group) Analysis - Graphs

TOS Data Summary - All Data

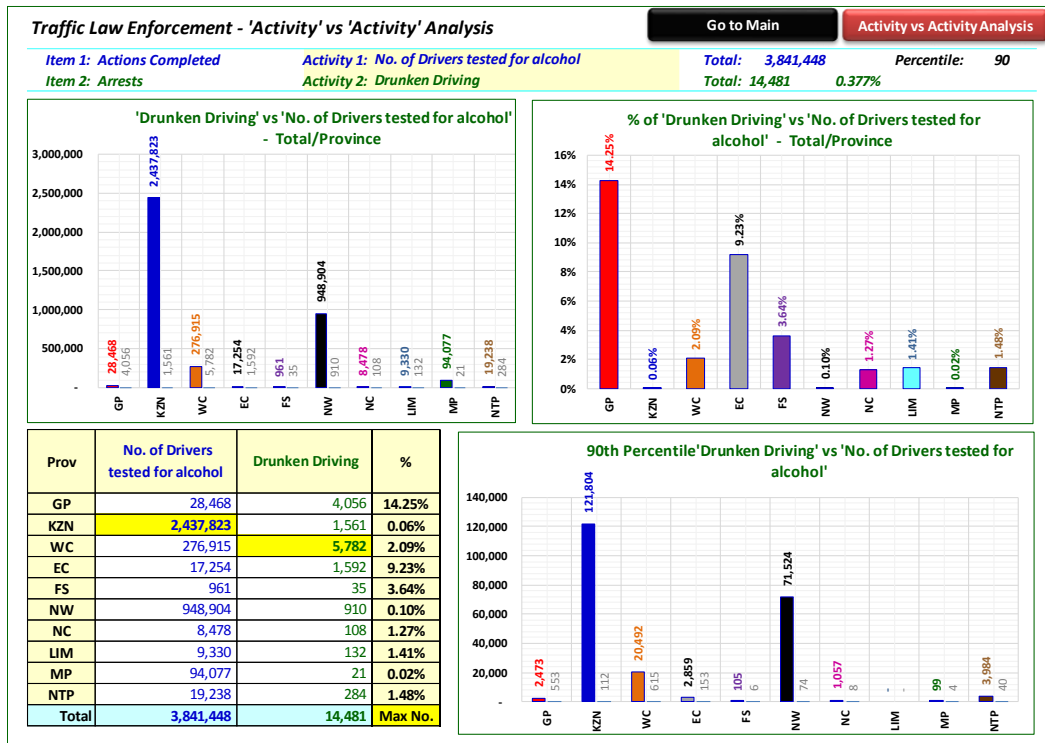
Research & Development Unit - March 2015

“Main” sheet

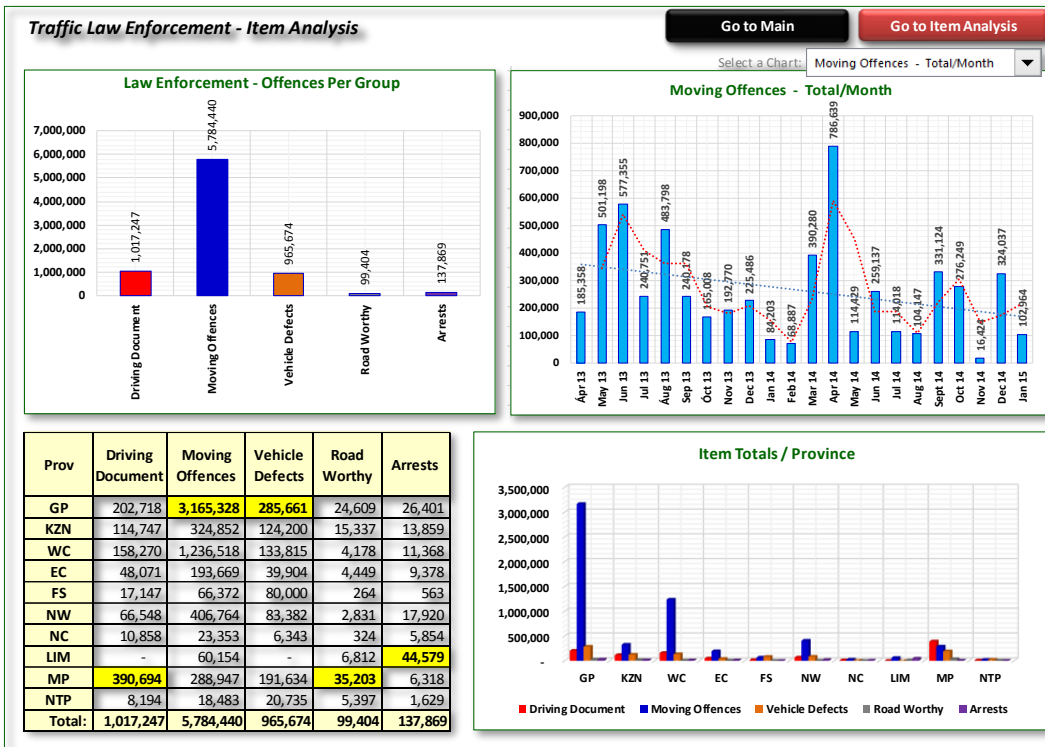
Screenshots of the three (3) major output sheets are illustrated below (A4 size example screenshots of all sheets of the System are attached at Annexures B to J:



Single Activity Analyses – Graphs



Activity vs Activity Analyses – Graphs



Item Analyses - Graphs

## 3.2 Challenges

The data input was captured from monthly input forms developed by the RTMC in 2013.

The major challenge encountered during the establishment of a database to analyse the data were that some provinces altered the format of the monthly reporting forms and some monthly reports were not submitted to the RTMC's Information Unit which inhibited analysis on a micro level.

The data was captured from the forms through a tedious hand capturing process. An example of a monthly report form is attached at Annexure A.

## 4. ANALYSIS OF DATA

Note: All data quantified in this section are as recorded and reported by the nine (9) Provinces and the NTP over the study period of 22 months (April 2013 – January 2015); unless otherwise stipulated.

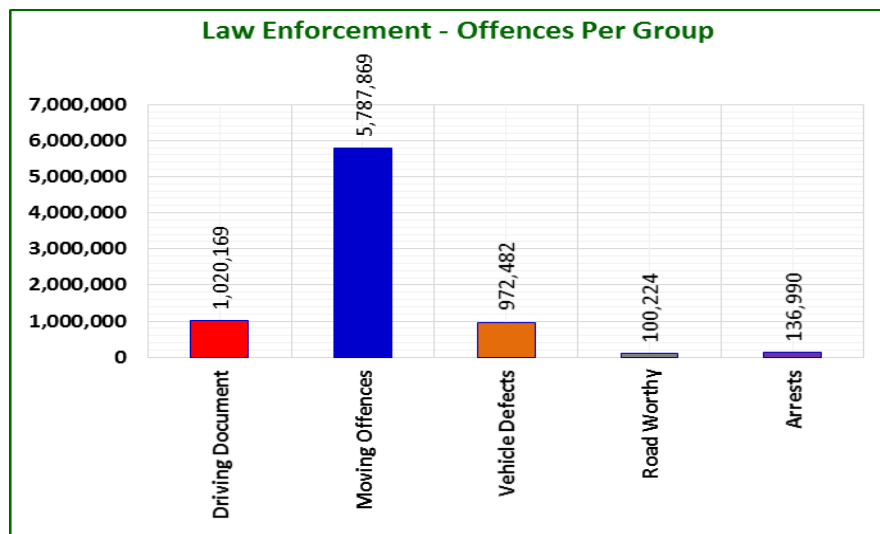
### 4.1 Item Group Analysis

A total of 27,036,436 law enforcement actions were recorded at an average of 1,424,740 actions per month as tabulated below:

Item Group	Activities	Total	Average Per Month
Actions Completed	No. of K78 Roadblocks held	17,567	1,023
	No. of Vehicles stopped	19,635,135	1,034,199
	No. of Drivers tested for alcohol	3,841,448	212,588
	No of Vehicles Weighed	3,297,525	164,380
	No of Government vehicles stopped	244,761	12,550
	<b>Total:</b>	<b>27,036,436</b>	<b>1,424,740</b>

This part of the Item Group analysis will form the baseline from which pertinent offence activities will be analysed later in the document.

The total data recorded per Item Group for offences are illustrated on the graph below:



**Total Law Enforcement Offences recorded per Item Group**

The above graph illustrates that the Moving Offences recorded far exceeds other offence groups. A linear evaluation on the amount of offences per group can however not be done due to a different number of activities recorded per group

It would however be acceptable to calculate a representing factor for each Item Group to calculate the relative percentage that each group represents from the total offences recorded. The following table summarises relative percentages that each group represents of the total offences recorded:

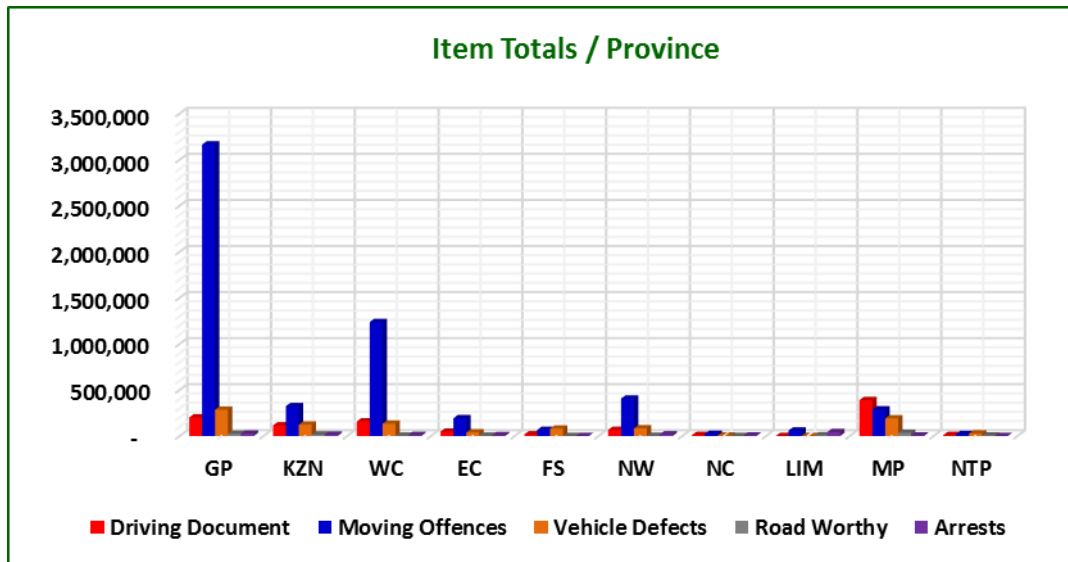
Item/Offence Group	Total Number of Offences Recorded	% of Total	No. of Activities per Group	Factor Calculated	Relative % of Total
Driving Document	1,020,169	12.7%	6	2.121	24.9%
Moving Offences	5,787,869	72.2%	16	4.512	52.9%
Vehicle Defects	972,482	12.1%	11	1.103	12.9%
Road Worthiness	100,224	1.3%	2	0.625	7.3%
Arrests	136,990	1.7%	10	0.171	2.0%
<b>Total</b>	<b>8,017,734</b>	<b>100.0%</b>	<b>45</b>	<b>8.531</b>	<b>100.0%</b>

From the above, moving offences tended to in fact be the most offences recorded at 52.9% of all offences with arrests made the least recorded activity at 2.0% of the total.

The total data recorded per Item Group for offences are tabulated below:

Prov/Auth	Driving Document	Moving Offences	Vehicle Defects	Road Worthy	Arrests	Total	% of Total
GP	202,718	3,165,328	285,661	24,609	26,401	3,704,717	46.2%
KZN	114,747	324,852	124,200	15,337	13,859	592,995	7.4%
WC	158,270	1,236,518	133,815	4,178	11,368	1,544,149	19.3%
EC	48,071	193,669	39,904	4,449	9,378	295,471	3.7%
FS	17,147	66,372	80,000	264	563	164,346	2.0%
NW	66,548	406,764	83,382	2,831	17,920	577,445	7.2%
NC	10,858	23,353	6,343	324	5,854	46,732	0.6%
LIM	-	60,154	-	6,812	44,579	111,545	1.4%
MP	390,694	288,947	191,634	35,203	6,318	912,796	11.4%
NTP	11,116	21,912	27,543	6,217	750	67,538	0.8%
<b>Total:</b>	<b>1,020,169</b>	<b>5,787,869</b>	<b>972,482</b>	<b>100,224</b>	<b>136,990</b>	<b>8,017,734</b>	<b>Max No.</b>
<b>% of Tot.</b>	12.7%	72.2%	12.1%	1.3%	1.7%	100.0%	

From the above table, the data show that the province which recorded the most offences during the study period was Gauteng with a total of 3,704,717 offences or 46.2% of all offences with the Northern Cape recording the least amount of offences i.e. 46,732 or 0.6% of total offences; the latter illustrated per province in the graph below:



***Total Law Enforcement Offences recorded per Item Group***

It need to be highlighted that the product of the breakdown on law enforcement offences recorded per item group per province should be interpreted with caution as various factors could have influenced the results which should be taken into account such as:

- Poor recording and/or reporting by provinces or the NTP
- Traffic Law enforcement workforce in each authority.
- Effort by provincial law enforcement.
- Traffic volumes in each judiciary.

Even though the analysis outcome indicates no real correlation between offences per item group per province, if compared to the percentage law enforcement officers per province and the “estimated vehicles” per province a definite correlation is evident.

It is difficult to estimate the actual vehicles per province in that many vehicles are registered in one province but are used in another province or travel mostly in other provinces. This anomaly was overcome by using the actual fuel sales per province which should with relative reliability indicate the vehicle population in each province.

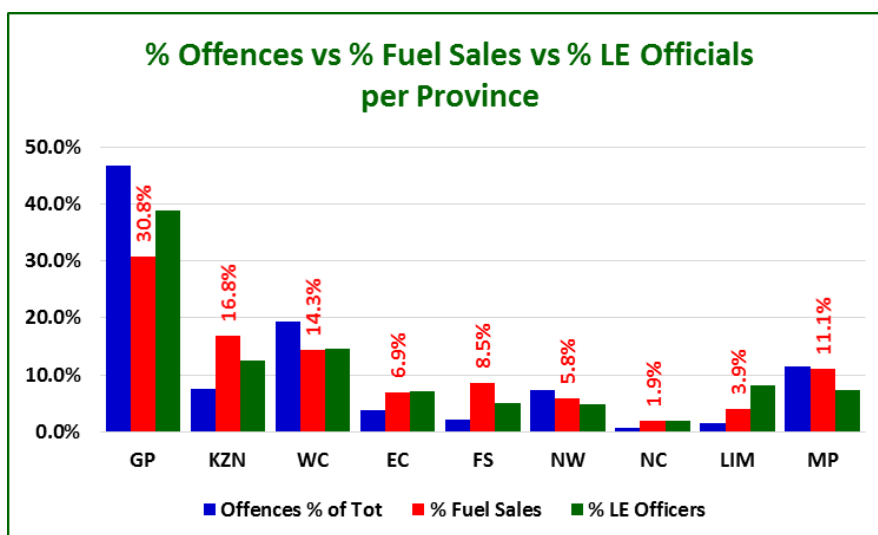


The comparison between offences recorded over the 22 month period versus percentage fuel sales per province versus traffic law enforcement officials in provinces show a definite correlation. For the purposes of this analysis the NTP data was omitted due to a lack of spatial data on where offences were actually recorded however, as the NTP data is only 0.8% of the data population, the omission thereof is acceptable on a macro level analysis.

The correlation between the above comparisons is verified by the practically insignificant calculated percentage variance between each of the three parameters for each province; tabulated below:

Province	Offences % of Total Apr13 – Jan15	% Fuel Sales 2014	% Law Enforcement Officers 2014	% Variance
GP	46.6%	30.8%	38.8%	0.6%
KZN	7.5%	16.8%	12.6%	0.2%
WC	19.4%	14.3%	14.5%	0.1%
EC	3.7%	6.9%	7.1%	0.0%
FS	2.1%	8.5%	5.0%	0.1%
NW	7.3%	5.8%	4.7%	0.0%
NC	0.6%	1.9%	2.0%	0.0%
LIM	1.4%	3.9%	8.1%	0.1%
MP	11.5%	11.1%	7.3%	0.1%

The following graph illustrates the comparison:



It should be kept in mind that offences recorded in the eight (8) metros and local municipalities did not form part of the study data however, as stated, a definite correlation can be seen if the three parameters are compared. Future such studies will most definitely take into account offences recorded over all spheres of government which could be a tool to indicate a shortfall or surplus in law enforcement officials in South Africa and among the different law enforcement authorities.

In addition, the data was compared with the 2013 AARTO offences recorded, which showed relative good correlation except for speeding which has a calculated variance of 12.264%. The reason for the latter might be under-reporting, or the focus of law enforcement activities shifting or most probably due the non-inclusion of the offence data from the eight (8) metros and local municipalities.

Even though the variance for speeding is 12.264%, speeding is still by far the most recorded infringement with a total of 34.98% of all recorded offences.

The table below illustrates the comparison of the data with the 2013 AARTO data:

Activity / Infringements	% AARTO 2013	% TOS 2014/15	% Variance
Registration & Licencing	1.89%	1.86%	0.000%
Number plates	0.07%	1.05%	0.005%
Driver Licences	0.76%	6.78%	0.181%
PrDP	0.38%	4.33%	0.078%
Roadworthiness	0.87%	1.25%	0.001%
Brakes	0.16%	1.10%	0.004%
Lights	0.60%	2.43%	0.017%
Steering	0.00%	0.06%	0.000%
Tyres	0.49%	2.30%	0.017%
Seatbelts	1.74%	4.09%	0.028%
Overloading	0.20%	0.06%	0.000%
Dangerous Goods	0.10%	0.15%	0.000%
Road Signs, Markings & Signals	3.93%	6.75%	0.040%
Driving Signals	3.07%	0.44%	0.034%
Drunken Driving	0.05%	0.55%	0.001%
Speeding	84.51%	34.98%	<b>12.264%</b>

#### 4.1.1 Driving Document Offences

The driving documents offences grouping consists of six (6) offence activities tabulated below:

Offences Item Groups	Number	Activities	Group Offences	% of Total Offences
2 Driving Document	1	Driving licence (none)	252,453	3.1%
	2	Driving licence (Fail to carry)	289,708	3.6%
	3	PRDP (None)	297,245	3.7%
	4	PRDP (fail to carry)	50,109	0.6%
	5	Dangerous Goods Vehicles	11,679	0.1%
	6	Public Passenger Transport Permit Condition	118,975	1.5%
	<b>Sub-Total</b>			<b>1,020,169</b>

A very alarming finding is that 3.6% of all offences recorded were drivers without driving licences and 3.7% drivers of public carrier vehicles not having Professional Driving Permits (PrDP). These percentages are unacceptably high and is a need for serious concern towards road safety as a whole.

#### 4.1.2 Moving Offences

The moving offences grouping consists of sixteen (16) offence activities tabulated below:

Offences Item Groups	Number	Activities	Group Offences	% of Total Offences
3 Moving Offences	1	Inconsiderate Driving	12,447	0.2%
	2	Overtaking in Face/Barrier line	66,549	0.8%
	3	Road Sign/Marking -Traffic Signal Violation	454,462	5.7%
	4	Stopping on freeway	20,125	0.3%
	5	Speed-Manual (Hand Held Camera)	867,083	10.8%
	6	Speed- Camera (Fixed Camera)	1,921,243	24.0%
	7	Seat belt (driver)	328,258	4.1%
	8	Seat belt (Passenger)	1,150,806	14.4%
	9	Seat belt (Rear)	25,389	0.3%
	10	Unlicensed Vehicles	275,139	3.4%

Offences Item Groups	Number	Activities	Group Offences	% of Total Offences
	11	Fail to display Licence Disc	148,765	1.9%
	12	Fail to display Operator Card	41,004	0.5%
	13	Overloading (goods)	86,389	1.1%
	14	Overloading (passengers)	91,775	1.1%
	15	Held Cell phone in Hand Whilst driving	76,486	1.0%
	16	Other Moving Offences	221,949	2.8%
		<b>Sub-Total</b>	<b>5,787,869</b>	<b>72.2%</b>

Most critical of the findings are that speeding contributes to 34.8% (10.8% + 24.0%) of all offences recorded over the study period. The effect of the high percentage recorded for speeding in combination with other human and vehicle defect factors on crashes and especially the effect that speeding has on the severity of crashes, is detrimental and is a serious cause for concern.

The second highest contributor from this grouping to the total offences recorded is seatbelt offences. With a total of 14.4% passenger seatbelt offences recorded and a further 4.1% for drivers not wearing seatbelts, this parameter contributes to a large degree of serious and fatal injuries during crashes and is a serious cause for concern.

Other unacceptable high offence rates which are alarming is drivers ignoring road signage, traffic signals and road markings which contributes to 5.7% of all recorded offences; as well as unlicensed vehicles at 3.4%.

#### 4.1.3 Vehicle Defects

The Vehicle Defects grouping consists of eleven (11) offence activities tabulated below:

Offences Item Groups	Number	Activities	Group Offences	% of Total Offences
4 Vehicle Defects	1	Steering	5,025	0.1%
	2	Windscreen Wipers	18,995	0.2%
	3	Brakes (Service)	26,761	0.3%
	4	Brakes (Parking)	61,750	0.8%
	5	Tyres	184,694	2.3%
	6	Front Lamps/Head lamps	89,535	1.1%
	7	Rear lamps/Stop lamps	104,926	1.3%
	8	Direction indicators	35,639	0.4%
	9	Number plate	84,355	1.1%
	10	Side and Rear Retro Reflective Markings	55,787	0.7%
	11	Other Defects	305,015	3.8%
<b>Sub-Total</b>			<b>972,482</b>	<b>12.1%</b>

The most critical offence activity in this grouping is tyre offences at 2.3% of the total offences recorded. Even though other offence types recorded in this grouping contributes only small percentages towards all offences recorded, the seriousness of these parameters as contributor towards road crashes cannot be ignored.

#### 4.1.4 Road Worthiness Offences

The Road Worthiness Offences grouping consists of two (2) offence activities tabulated below:

Offences Item Groups	Number	Activities	Group Offences	% of Total Offences
5 Road Worthy	1	Vehicles discontinued	73,681	0.9%
	2	Vehicles impounded	26,543	0.3%
<b>Sub-Total</b>			<b>100,224</b>	<b>1.3%</b>

Even though the offence types recorded in this grouping contributes only small percentages towards all offences recorded, the seriousness of these parameters as contributor towards road crashes cannot be ignored.

#### 4.1.5 Arrests

The Arrests grouping consists of two (10) offence parameters tabulated below:

Offences Item Groups	Number	Activities	Group Offences	% of Total Offences
6 Arrests	1	Drunken Driving	44,113	0.6%
	2	No driving licence	1,729	0.0%
	3	Speed	16,144	0.2%
	4	Overload Goods	4,646	0.1%
	5	Inco, Rec & Neg.	1,547	0.0%
	6	Permits /Operating Permits	8,386	0.1%
	7	Warrants Executed	48,541	0.6%
	8	False Documentation	917	0.0%
	9	Other Arrests	5,625	0.1%
	10	Pedestrians Arrested	5,342	0.1%
<b>Sub-Total</b>			<b>136,990</b>	<b>1.7%</b>

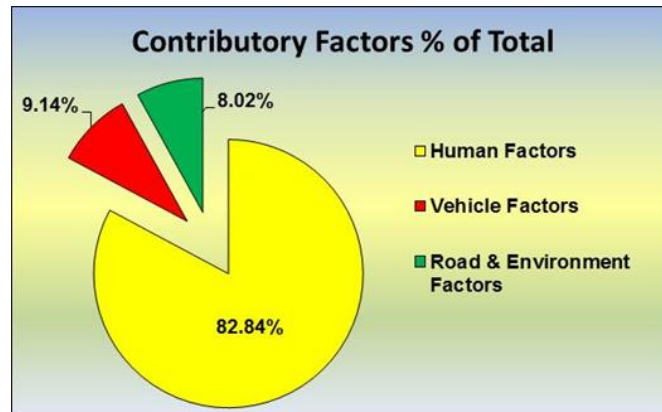
The significance of the 10 offence parameters are most critical towards ensuring safer roads in South Africa. The data records show that arrests made are only a small percentage of the total data set.

It need to be highlighted that the analysis breakdown on arrests recorded should be interpreted with caution as poor recording and/or reporting by provinces or the NTP could be the reason for the low percentages.

In addition, the arrest parameters will be much higher when metro and local municipality data is taken into account in future.

## 4.2 Most Significant Factors contributing to Fatalities on Roads

RTMC statistics showed that 95% of road traffic crashes occur as a direct result of one or more traffic offences. The main contributory factors to fatal road crashes, as submitted over a number of years by the SAPS to the RTMC on fatal accident report forms and categorised as human, vehicle and road environment are illustrated in the following graph:



According to the statistics, Human Factors are the most significant fatal crashes contributory parameter to fatal road crashes at 82.84%; Vehicle and Road environment factors contribute to 17.16% with 9.14% and 8.02% respectively.

When broken down further, the statistics show that the most significant factors that contribute to fatalities in South African Roads are Speed and Pedestrian Jaywalking which contribute to a total of 56.44% of all road related fatalities. The following table quantifies the proportions:

Major Contributory Factors to Fatal Road Crashes		% of Tot
<b>Human Factors</b>	<b>Group %</b>	<b>82.84%</b>
Speed too high for Circumstances	36.40%	30.15%
Pedestrian: Jay Walking	31.74%	26.29%
Overtake when unlawful / unsafe	7.33%	6.07%
Turn in front of oncoming traffic	3.23%	2.68%
Disregard: red traffic light / stop sign / yield sign	3.12%	2.58%
<b>Vehicle Factors</b>	<b>Group %</b>	<b>9.14%</b>
Tyres: Burst prior to Crash	36.30%	3.32%
Brakes: Faulty	25.04%	2.29%
Steering Faulty	24.15%	2.21%
Vehicle Lights: Faulty, not on etc.	2.07%	0.19%
<b>Road Environment Factors</b>	<b>Group %</b>	<b>8.02%</b>
Sharp Bend	27.99%	2.24%
Poor condition of road surface	20.40%	1.64%
Poor visibility (rain, mist, etc.)	15.01%	1.20%

From the TOS analysis in section 4.1 above, speed was recorded as the largest contributor to offences recorded over the study period. The alarming fact is that even though speeding infringements are the highest, speeding is still the highest contributing factor to fatalities in road crashes. It appears that even though speed law enforcement is being done aggressively, drivers are still speeding and it does not appear as if the number of speeding offences are decreasing.

Even though jaywalking fatalities is the second largest contributor to recorded road deaths, the number of pedestrians arrested for jaywalking over the 22 month study period is among the lowest of the arrests reported at 5,342 or 0.067%. Arresting and prosecuting jaywalking pedestrians poses unique challenges and as long as there is spatial segregation with communities established along major roads, it is not anticipated that pedestrian fatalities would decrease drastically with jaywalking arrests. Planning, engineering and education efforts will most probably be the only real actions to ensure a decrease in pedestrian road fatalities.

Even though all the tabulated parameters contributing to road related deaths are important it is believed that by focussing on the two main contributors to road related deaths i.e. speeding and jaywalking the highest impact can be made to ensure that the number of road related fatalities are decreased.



## 5. PROPOSED WAY FORWARD

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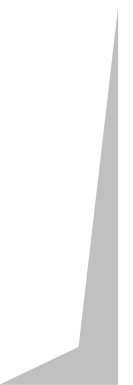
Analysing law enforcement activities on a continuous basis from a national perspective should be a priority of the RTMC to compliment independent annual TOS's. Reliable monthly reporting on law enforcement activities by all spheres of government is crucial for the RTMC to be in a position to effectively lead the way towards safer roads in South Africa from a national perspective.

The following Way Forward is proposed:

- That a continuous law enforcement activity reporting model for all traffic law enforcement authorities is implemented by the RTMC, endorsed by the NDoT to ensure that reliable reporting standards are met.
- The Research and Development Unit in conjunction with the RTMC Law Enforcement Branch establish the reporting and analysis model.
- The Research and Development Unit import monthly infringement data as per the modal and publish quarterly internal traffic offence survey reports on both a macro and micro level through the database system that was developed and discussed in section 3 of this document.
- That the output from the internal national traffic offence database form the basis of annual outsourced traffic offence surveys.
- That the output from both traffic offence survey models are used by all RTMC units as an alternative to other methods as a planning tool towards safer roads in South Africa.



## **ANNEXURES**





## Input – Example of Monthly Reporting Form

ROAD TRAFFIC MANAGEMENT CORPORATION									
Traffic Offence Report		DATE		2013/01/01 TO 2013/01/31					
		H.M.V.'s	BUSSES	MINIBUS TAXIS	MINIBUSES M.P.V.'s S.U.V.'s	L.D.V.'s	MOTOR CYCLES	SEDANS	TOTAL
No of k78 Roadblocks Held								6	6
No. of Vehicles Stopped		9,745	9,562	25,069	23,170	20,777	136	80,080	168,539
No. of Drivers Tested for Alcohol		40	36	500	10	200		1,000	1,786
No. of Vehicles Weighed		16,307	284	278	233	175			17,277
<b>DRIVING DOCUMENT CHARGES (WRITTEN NOTICE CHARGES ONLY)</b>									
Driving Licence	NONE	509	434	489	481	531	22	719	3,185
Driving Licence	FAIL to CARRY	20	81	126	186	127	2	205	747
PrDP	NONE	221	202	285	256	7		18	989
PrDP	FAIL to CARRY	12	11	109	128	19		27	306
Dangerous Goods Vehicles		2							2
Public Passanger Transport Permit condition		9		195	50				254
<b>MOVING OFFENCE CHARGES (WRITTEN NOTICE CHARGES ONLY)</b>									
Inconsiderate Driving		2	42	55	41	89	2	43	274
Overtaking in Face / Barrier line		6	1	36	61	82		119	305
Road Sign / Marking - Traffic Signal Violations		2,222	2,219	2,299	2,300	2,302		2,540	13,882
Stopping on Freeway		71	42	81	85	188		346	813
Speed - Manual (Hand held camera)		371	2	98		239	29	2,103	2,842
Speed - Camera (Fixed Camera)								22,450	22,450
Seat Belt	Drivers	796	737	945	835	878		1,397	5,588
Seat Belt	Front Seat Passengers			2		1		11	14
Seat Belt	Rear Seat Passengers			3		2			5
Unlicensed Vehicles		855	707	685	653	744	17	1,010	4,671
Fail to Display Licence Disc		55	54	162	132	95	5	200	703
Overloading	GOODS	57		50	63	57		491	718
Overloading	PASSENGERS	114		185	134			128	561
Held Cell phone in Hand Whilst Driving		46	47	65	52	53		117	380
Other Moving Offences		252	236	250	367	257	5	505	1,872
<b>VEHICLE DEFECT CHARGES (WRITTEN NOTICE CHARGES)</b>									
Steering		1		19	14	18		11	63
Windscreen Wipers		13	8	87	59	50		103	320
Brakes	SERVICE	4	2	47	42	34		41	170
Brakes	PARKING	7	19	97	71	47		50	291
Tyres		284	185	312	255	369	4	548	1,957
Front Lamps / Headlamps		264	258	346	307	272	1	387	1,835
Rear Lamps / Stop Lamps		48	12	68	49	69	3	144	393
Direction Indicators		17	10	40	32	51		101	251
Number Plate		160	149	189	184	195	16	307	1,200
Side and Rear Retro Reflective Markings		7	2	7				28	44
Other Defects		374	274	374	343	359	2	739	2,465
<b>TOTAL WRITTEN NOTICE CHARGE</b>		<b>32,891</b>	<b>15,616</b>	<b>33,553</b>	<b>30,593</b>	<b>28,287</b>	<b>244</b>	<b>8,547</b>	<b>257,152</b>
Vehicles Discontinued		3	3	311	105	15		152	589
Vehicles Impounded				209					209
Arrests	Drunken Driving			27	2			115	144
	No Driving Licence							13	13
	Speed							52	52
	Overload Goods	10	4					4	18
	Inco,Rec. & Neg.				2			114	116
	Permits / Operating Permits			13					13
	Warrants Executed							213	
	False Documentation							1	1
Other Arrests				1	1			105	105
<b>Total Arrests</b>		<b>13</b>	<b>7</b>	<b>561</b>	<b>110</b>	<b>15</b>		<b>769</b>	<b>1,475</b>
Pedestrians Arrested								51	51
<b>Grand Total (Charges+Suspensions+Arrests)</b>		<b>32,917</b>	<b>15,630</b>	<b>34,675</b>	<b>30,813</b>	<b>28,317</b>	<b>244</b>	<b>10,136</b>	<b>259,938</b>

**Traffic Offence Study (TOS)**

*Study Period: April 2013 to January 2015 (22 Months)*



**List of Provinces, Items & Activities Analysed**

- Single Activity Analysis - Data
- Single Activity Analysis - Graphs
- Activity vs Activity Analysis - Data
- Activity vs Activity Analysis - Graphs
- Item (Offence Group) Analysis - Data
- Item (Offence Group) Analysis - Graphs
- TOS Data

Research & Development Unit - March 2015

**List of Provinces, Items & Activities Analysed**

**Traffic Offence Study (TOS) - Provinces / Items & Activities**

**Go to Main**

<b>Province:</b>	<b>1</b>	<b>Gauteng</b>
	<b>2</b>	<b>Kwazulu Natal</b>
	<b>3</b>	<b>Western Cape</b>
	<b>4</b>	<b>Eastern Cape</b>
	<b>5</b>	<b>Free State</b>
	<b>6</b>	<b>North West</b>
	<b>7</b>	<b>Northern Cape</b>
	<b>8</b>	<b>Limpopo</b>
	<b>9</b>	<b>Mpumalanga</b>
<b>National:</b>	<b>10</b>	<b>NTP's</b>

<b>Items:</b>	<b>1</b>	<b>Actions Completed</b>
	<b>2</b>	<b>Driving Document</b>
	<b>3</b>	<b>Moving Offences</b>
	<b>4</b>	<b>Vehicle Defects</b>
	<b>5</b>	<b>Road Worthy</b>
	<b>6</b>	<b>Arrests</b>

<b>Activities:</b>	<b>1</b>	No. of K78 Roadblocks held
	<b>2</b>	No. of Vehicles stopped
	<b>3</b>	No. of Drivers tested for alcohol
	<b>4</b>	No of Vehicles Weighed
	<b>5</b>	No of Government vehicles stopped
	<b>6</b>	Driving licence (none)
	<b>7</b>	Driving licence (Fail to carry)
	<b>8</b>	PRDP (None)
	<b>9</b>	PRDP (fail to carry)
	<b>10</b>	Dangerous Goods Vehicles
	<b>11</b>	Public Passenger Transport Permit Condition
	<b>12</b>	Inconsiderate Driving
	<b>13</b>	Overtaking in Face/Barrier line
	<b>14</b>	Road Sign/Marking -Traffic Signal Violation
	<b>15</b>	Stopping on freeway
	<b>16</b>	Speed-Manual (Hand Held Camera)
	<b>17</b>	Speed- Camera (Fixed Camera)
	<b>18</b>	Seat belt (driver)
	<b>19</b>	Seat belt (Passenger)
	<b>20</b>	Seat belt (Rear)
	<b>21</b>	Unlicensed Vehicles
	<b>22</b>	Fail to display Licence Disc
	<b>23</b>	Fail to display Operator Card
	<b>24</b>	Overloading (goods)
	<b>25</b>	Overloading (passengers)
	<b>26</b>	Held Cell phone in Hand Whilst driving
	<b>27</b>	Other Moving Offences
	<b>28</b>	Steering
	<b>29</b>	Windscreen Wipers
	<b>30</b>	Brakes (Service)
	<b>31</b>	Brakes (Parking)
	<b>32</b>	Tyres
	<b>33</b>	Front Lamps/Head lamps
	<b>34</b>	Rear lamps/Stop lamps
	<b>35</b>	Direction indicators
	<b>36</b>	Number plate
	<b>37</b>	Side and Rear Retro Reflective Markings
	<b>38</b>	Other Defects
	<b>39</b>	Vehicles discontinued
	<b>40</b>	Vehicles impounded
	<b>41</b>	Drunken Driving
	<b>42</b>	No driving licence
	<b>43</b>	Speed
	<b>44</b>	Overload Goods
	<b>45</b>	Inco, Rec & Neg
	<b>46</b>	Permits /Operating Permits
	<b>47</b>	Warrants Executed
	<b>48</b>	False Documentation
	<b>49</b>	Other Arrests
	<b>50</b>	Pedestrians Arrested

Single Activity Analysis – Data

Traffic Law Enforcement - Item Analysis

Activity:	No. of Vehicles stopped			Ave / Mnth: 891,683																							
	90th P	Average	% of Tot	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14	Jun 14	Jul 14	Aug 14	Sept 14	Oct 14	Nov 14	Dec 14	Jan 15		
GP	196,791	330,250	14.6%	2,865,698	197,814	131,134	105,619	129,950	-	138,947	335,795	93,641	48,504	61,521	133,812	152,707	121,727	151,020	172,475	160,791	187,585	136,130	-	-	133,959	64,451	
KZN	152,298	150,577	12.9%	3,312,688	145,381	127,272	124,519	116,142	97,739	113,209	109,550	148,474	152,723	128,657	99,669	1,363,896	-	104,947	91,594	-	104,947	91,594	-	-	-	161,756	118,426
WC	162,973	114,490	12.8%	2,518,777	163,387	159,247	131,224	156,698	147,194	163,451	134,479	127,874	100,312	121,130	121,130	152,707	-	-	-	-	-	119,101	117,467	129,795	131,424	144,892	
EC	109,985	79,180	8.9%	1,741,970	100,690	77,651	84,790	139,806	139,806	96,066	92,896	110,398	75,427	67,337	65,456	78,332	76,360	60,577	74,865	83,673	62,335	79,188	79,188	-	-	99,104	-
FS	68,343	46,030	5.2%	1,012,665	53,976	45,602	51,996	56,394	49,769	44,313	65,473	84,172	68,509	13,534	13,534	111,165	66,848	14,022	73,520	61,688	-	35,045	35,045	27,351	55,507	1,669	
NW	124,581	80,012	9.0%	1,760,264	100,813	92,165	125,500	116,309	105,457	105,673	92,871	129,845	107,616	74,279	78,451	111,165	13,410	90,653	-	-	91,427	83,155	-	-	98,164	30,372	
LIM	34,544	26,183	2.9%	576,023	36,683	23,244	33,352	34,245	27,195	35,096	28,490	26,648	28,336	32,875	27,648	33,791	-	29,372	-	-	26,711	29,019	29,019	-	-	31,570	28,152
MIP	152,406	85,567	9.6%	1,882,469	128,543	137,570	146,241	97,428	164,143	164,143	136,352	164,108	152,894	125,913	148,014	147,014	-	-	-	-	122,701	88,171	-	-	-	-	97,849
NTP	27,516	21,012	2.4%	462,261	22,624	18,783	24,058	21,513	21,006	20,921	14,909	13,067	18,422	14,857	13,000	82,024	225,952	206,324	115,866	86,384	100,252	117,911	29,019	29,019	144,817	27,900	
<b>Total:</b>	<b>19,617,024</b>	<b>1,086,433</b>	<b>2.4%</b>	<b>1,113,228</b>	<b>959,768</b>	<b>1,006,185</b>	<b>1,023,411</b>	<b>800,665</b>	<b>945,727</b>	<b>1,273,329</b>	<b>1,113,524</b>	<b>993,674</b>	<b>826,320</b>	<b>957,767</b>	<b>2,135,046</b>	<b>493,810</b>	<b>493,810</b>	<b>817,721</b>	<b>436,726</b>	<b>419,247</b>	<b>867,396</b>	<b>790,867</b>	<b>186,165</b>	<b>186,165</b>	<b>884,201</b>	<b>485,811</b>	
<b>Average:</b>	<b>1,961,702</b>	<b>108,643</b>	<b>5.5%</b>	<b>108,643</b>	<b>111,323</b>	<b>95,977</b>	<b>100,619</b>	<b>102,341</b>	<b>80,067</b>	<b>127,333</b>	<b>111,352</b>	<b>99,367</b>	<b>82,632</b>	<b>95,777</b>	<b>213,505</b>	<b>49,381</b>	<b>49,381</b>	<b>81,772</b>	<b>43,673</b>	<b>41,925</b>	<b>86,740</b>	<b>79,087</b>	<b>18,617</b>	<b>18,617</b>	<b>88,420</b>	<b>48,581</b>	
<b>% of Total:</b>	<b>100.0%</b>	<b>5.5%</b>	<b>5.3%</b>	<b>5.1%</b>	<b>4.9%</b>	<b>5.1%</b>	<b>5.2%</b>	<b>4.1%</b>	<b>4.8%</b>	<b>6.5%</b>	<b>5.7%</b>	<b>5.1%</b>	<b>4.2%</b>	<b>4.9%</b>	<b>10.9%</b>	<b>2.5%</b>	<b>4.2%</b>	<b>2.2%</b>	<b>2.1%</b>	<b>4.4%</b>	<b>4.0%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>4.5%</b>	<b>2.5%</b>		
<b>85 th</b>	<b>Percentile:</b>	<b>3,329,860</b>	<b>154,527</b>	<b>135,349</b>	<b>153,038</b>	<b>141,159</b>	<b>155,175</b>	<b>155,324</b>	<b>202,583</b>	<b>158,636</b>	<b>152,834</b>	<b>127,697</b>	<b>143,043</b>	<b>145,043</b>	<b>13,000</b>	<b>152,707</b>	<b>105,849</b>	<b>155,284</b>	<b>104,516</b>	<b>85,435</b>	<b>121,441</b>	<b>117,756</b>	<b>28,435</b>	<b>28,435</b>	<b>141,017</b>	<b>111,224</b>	
	<b>Minimum Value:</b>	<b>462,261</b>	<b>21,797</b>	<b>22,624</b>	<b>18,783</b>	<b>24,058</b>	<b>21,513</b>	<b>21,006</b>	<b>20,921</b>	<b>14,909</b>	<b>13,067</b>	<b>18,422</b>	<b>13,534</b>	<b>13,000</b>	<b>82,024</b>	<b>225,952</b>	<b>206,324</b>	<b>115,866</b>	<b>86,384</b>	<b>100,252</b>	<b>117,911</b>	<b>29,019</b>	<b>29,019</b>	<b>144,817</b>	<b>27,900</b>		
	<b>Maximum Value:</b>	<b>3,484,406</b>	<b>207,916</b>	<b>197,814</b>	<b>151,634</b>	<b>160,851</b>	<b>219,446</b>	<b>196,242</b>	<b>195,841</b>	<b>355,795</b>	<b>208,692</b>	<b>213,569</b>	<b>207,035</b>	<b>212,830</b>	<b>1,363,896</b>	<b>225,952</b>	<b>206,324</b>	<b>172,475</b>	<b>172,475</b>	<b>160,791</b>	<b>187,585</b>	<b>136,130</b>	<b>129,795</b>	<b>129,795</b>	<b>161,756</b>	<b>144,892</b>	
	<b>Standard Deviation:</b>	<b>1,029,025</b>	<b>48,123</b>	<b>51,089</b>	<b>53,480</b>	<b>55,651</b>	<b>66,407</b>	<b>72,180</b>	<b>66,719</b>	<b>70,612</b>	<b>69,420</b>	<b>69,806</b>	<b>70,642</b>	<b>70,642</b>	<b>53,493</b>	<b>83,251</b>	<b>77,226</b>	<b>49,091</b>	<b>49,091</b>	<b>39,664</b>	<b>40,822</b>	<b>38,148</b>	<b>13,761</b>	<b>13,761</b>	<b>50,732</b>	<b>35,879</b>	

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Months: 22

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Single Activity Analysis – Graphs

Traffic Law Enforcement - Activity Analysis

Go to Activity Analysis

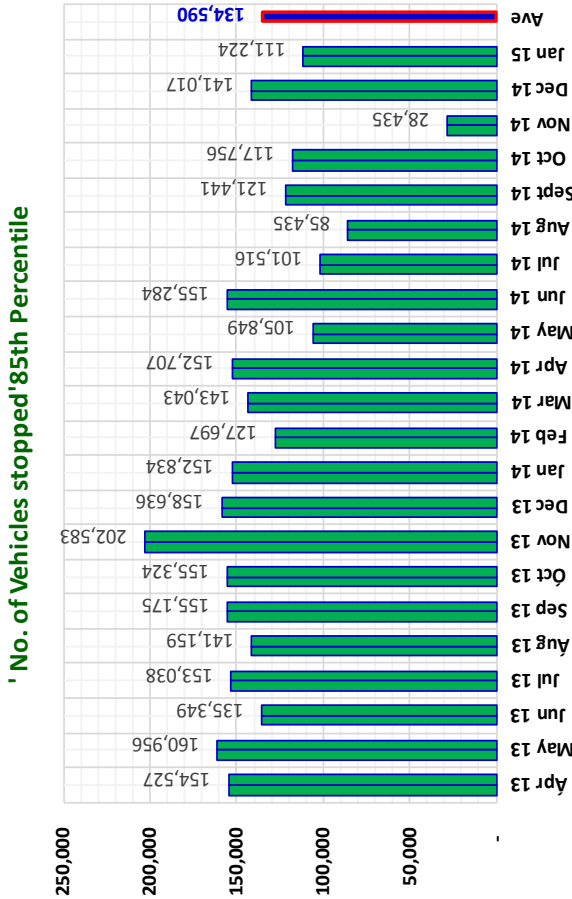
Go to Main

Item: Actions Completed

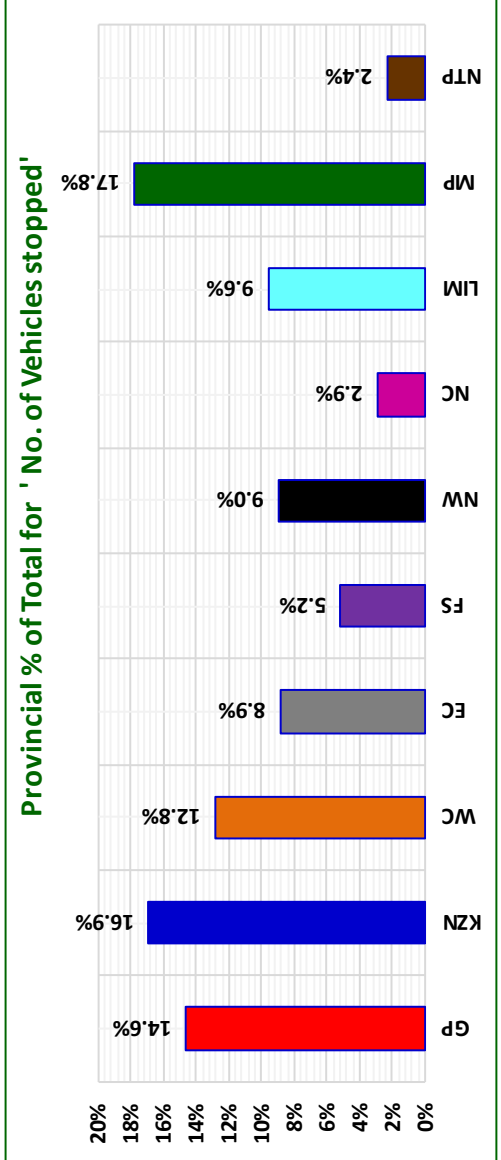
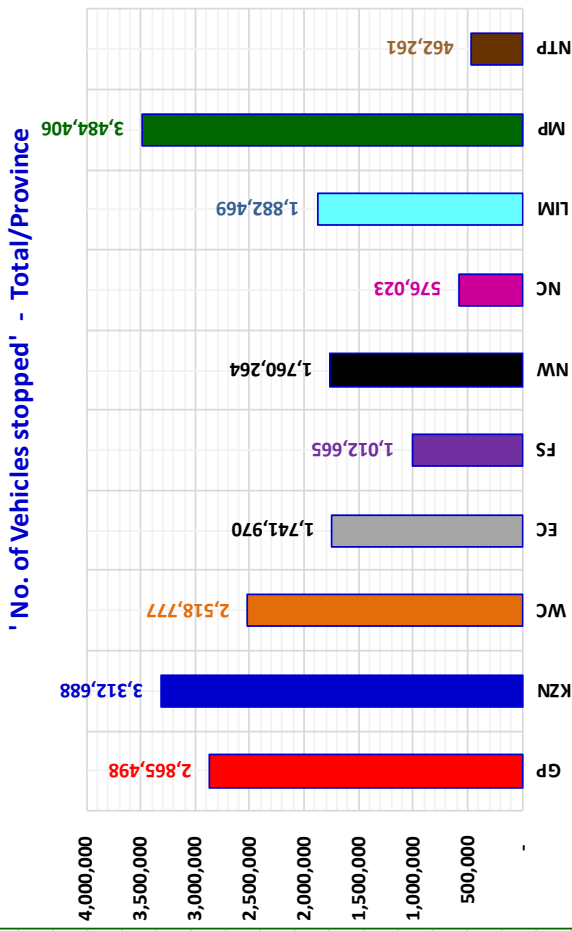
Activity: No. of Vehicles stopped

Percentile: 85

Select a Chart: 85th Percentile



Select a Chart: - Total/Province



Prov	Total	Average	% of Tot	85th P
GP	2,865,498	130,250	14.6%	196,791
KZN	3,312,688	150,577	16.9%	152,298
WC	2,518,777	114,490	12.8%	162,973
EC	1,741,970	79,180	8.9%	109,985
FS	1,012,665	46,030	5.2%	68,343
NW	1,760,264	80,012	9.0%	124,581
NC	576,023	26,183	2.9%	34,544
LIM	1,882,469	85,567	9.6%	152,406
MP	3,484,406	158,382	17.8%	213,315
NTP	462,261	21,012	2.4%	27,516
<b>Total:</b>	<b>19,617,021</b>	<b>Maximum Number</b>		

Activity vs Activity Analysis – Data

Traffic Law Enforcement - 'Activity' vs 'Activity' Analysis

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Activity 1 No. of Vehicles stopped  
Activity 2: Drunken Driving

Analysis of 'Drunken Driving' vs 'No. of Vehicles stopped'

Prov	Item	Average	Total	Apr'13	May'13	Jun'13	Jul'13	Aug'13	Sep'13	Oct'13	Nov'13	Dec'13	Jan'14	Feb'14	Mar'14	Apr'14	May'14	Jun'14	Jul'14	Aug'14	Sep'14	Oct'14	Nov'14	Dec'14	Jan'15		
GP	1	130,250	2,865,498	207,916	197,814	131,134	105,619	129,950	-	138,947	335,795	93,641	48,504	61,521	133,812	152,707	121,727	151,020	172,475	160,791	187,585	136,130	-	-	133,959	64,451	
	2	483	9,755	147	557	519	279	361	-	426	423	167	63	138	434	486	699	260	811	2,450	200	597	-	-	575	163	
KZN	1	150,577	3,312,688	102,413	145,381	127,722	124,219	116,142	97,739	11,207	109,550	148,474	152,723	128,657	99,669	1,363,896	-	108,173	-	-	104,947	91,594	117,467	129,795	-	161,756	118,426
	2	73	1,603	42	36	48	45	19	55	46	62	114	59	31	26	583	-	35	-	-	30	49	26	-	-	226	97
WC	1	114,490	2,518,777	163,387	159,247	131,224	156,698	147,194	163,451	133,520	184,875	134,479	127,874	100,312	121,130	152,707	-	60,577	74,865	83,673	62,335	79,188	117,467	129,795	131,424	144,882	
	2	285	6,268	458	733	321	341	623	955	94	538	473	109	112	127	486	-	110	80	156	134	247	136	-	-	183	198
EC	1	79,180	1,741,970	110,748	106,271	100,690	77,651	84,790	139,806	96,066	92,896	110,398	75,427	67,337	65,456	78,332	76,360	60,577	74,865	83,673	62,335	79,188	117,467	129,795	131,424	144,882	
	2	81	1,774	138	96	139	69	83	116	154	159	146	146	31	10	11	22	110	80	156	105	11	-	-	-	99,104	
FS	1	46,030	1,012,665	57,795	53,976	45,602	51,996	56,394	49,769	44,313	65,473	84,172	68,509	13,534	57,757	13,410	66,848	14,022	73,520	61,688	14,315	35,045	27,351	55,507	1,669		
	2	5	106	6	4	4	1	1	1	8	7	10	-	8	7	3	6	-	17	-	-	11	-	3	-	10	
NW	1	80,012	1,760,264	126,349	100,813	92,165	125,500	116,309	105,457	105,673	92,871	129,845	107,616	74,279	78,451	111,165	-	90,653	-	-	-	91,427	83,155	-	98,164	30,372	
	2	41	910	37	23	15	58	73	84	35	56	143	55	32	31	74	-	17	-	-	-	52	37	-	45	43	
NC	1	26,183	576,023	34,577	36,683	23,244	33,352	34,245	27,195	35,096	28,490	26,648	28,336	32,875	27,648	33,791	-	29,372	-	26,711	29,019	29,019	-	-	31,570	28,152	
	2	9	193	-	2	3	-	-	9	2	45	21	-	1	2	10	-	-	-	8	-	8	-	-	-	74	
LIM	1	85,567	1,882,469	123,377	128,543	137,570	146,241	97,428	-	164,143	136,352	164,108	152,894	125,913	148,014	147,014	-	-	-	-	-	122,701	88,171	-	-	-	
	2	1,037	22,815	18	71	22,233	9	8	-	22	11	127	43	43	58	40	-	-	-	-	132	-	-	-	-	-	
MIP	1	158,382	3,484,406	138,074	161,876	151,634	160,851	219,446	196,242	195,841	212,118	208,692	213,369	207,035	212,830	82,024	225,952	206,324	115,866	86,384	100,252	117,911	29,019	29,019	144,817	97,849	
	2	3	71	-	-	-	-	-	-	-	-	-	-	2	1	10	9	9	4	4	1	1	17	8	8	1	
NTP	1	21,012	462,261	21,797	22,624	18,783	24,058	21,513	21,006	20,921	14,909	13,067	18,422	14,857	13,000	-	2,923	157,580	-	-	35,714	13,187	-	-	27,900		
	2	25	555	15	8	12	1	24	33	7	55	43	3	47	164	-	-	57	-	-	5	17	-	-	64		
Total	1	19,617,021	1,086,433	1,113,228	959,768	1,023,411	1,006,185	1,023,411	800,665	945,727	1,273,329	1,113,524	993,674	826,320	957,767	2,135,046	493,810	817,721	436,726	419,247	867,396	790,867	186,165	186,165	884,201	485,811	
	2	44,050	861	1,530	23,294	1,192	802	1,192	1,253	794	1,356	1,246	363	423	860	1,811	736	488	912	2,615	678	983	147	147	1,704	502	
Average	1	108,643	111,323	95,977	100,619	102,341	80,067	94,573	113,352	99,367	82,632	95,777	213,505	49,381	81,772	43,673	41,925	86,740	79,087	18,617	88,420	48,581	-	-	88,420	48,581	
	2	86	153	2,329	80	119	125	79	136	125	136	125	36	42	86	181	74	49	91	262	68	98	15	120	120	50	



Activity vs Activity Analysis – Graphs

Traffic Law Enforcement - 'Activity' vs 'Activity' Analysis

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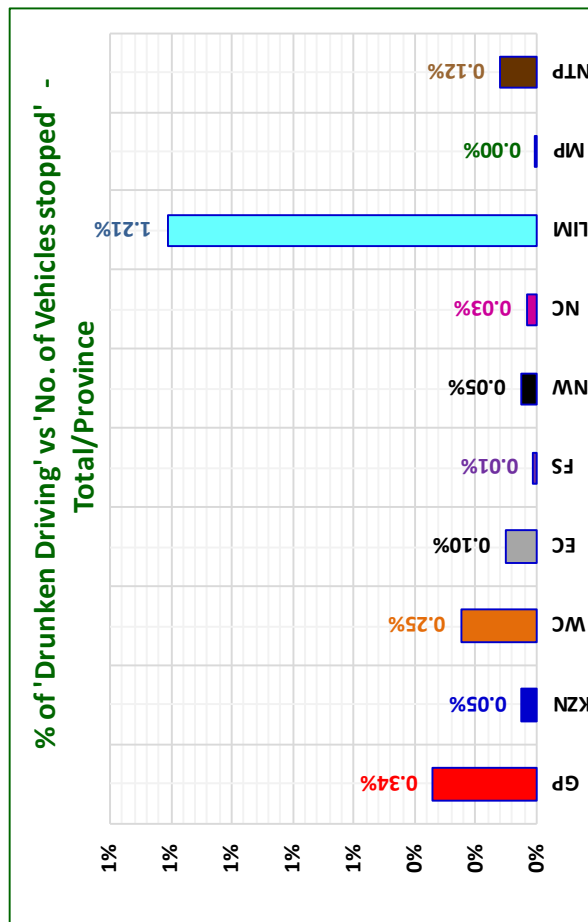
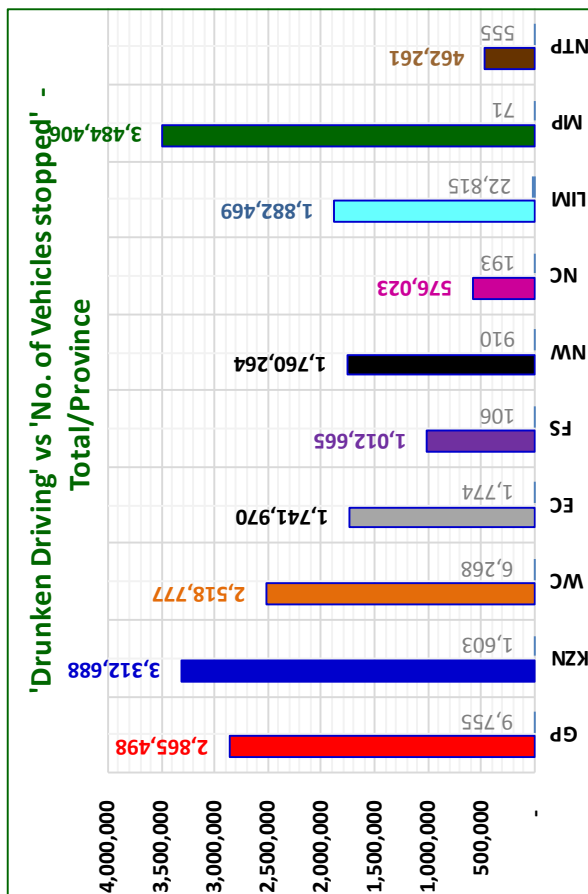
Activity vs Activity Analysis

Item 1: Actions Completed  
Item 2: Arrests

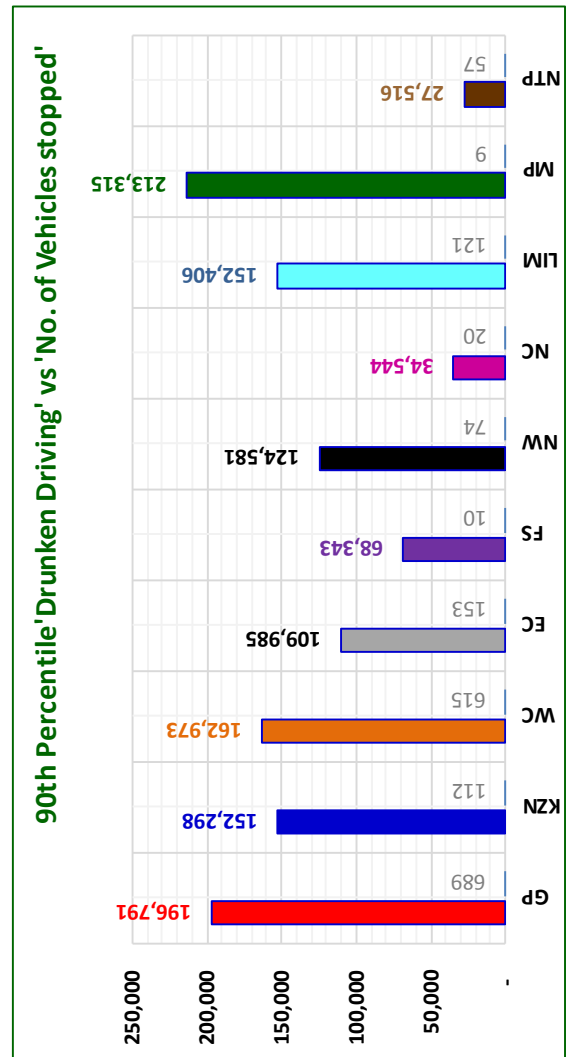
Activity 1: No. of Vehicles stopped  
Activity 2: Drunken Driving

Total: 19,617,021  
Total: 44,050

Percentile: 90  
0.225%



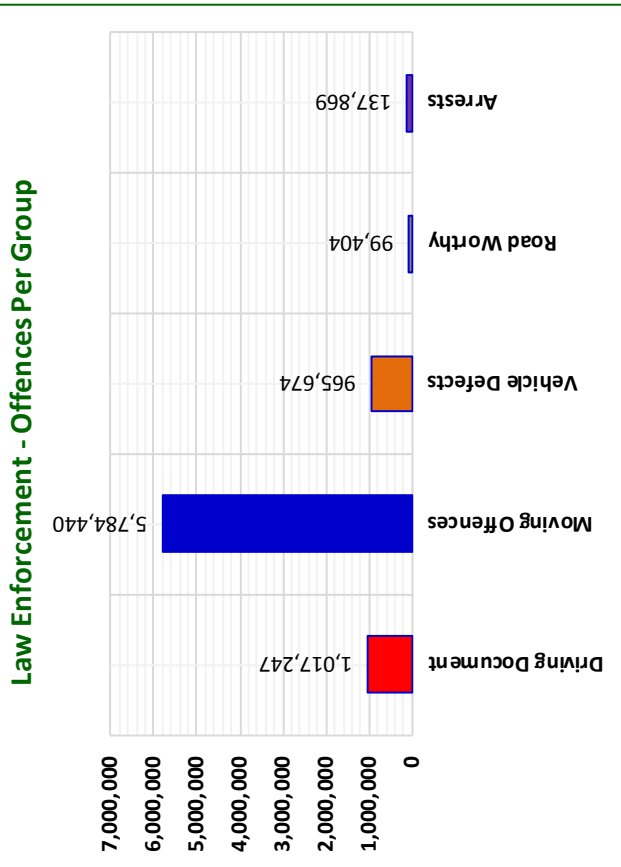
Prov	No. of Vehicles stopped	Drunken Driving	%	Max No.
GP	2,865,498	9,755	0.34%	44,050
KZN	3,312,688	1,603	0.05%	
WC	2,518,777	6,268	0.25%	
EC	1,741,970	1,774	0.10%	
FS	1,012,665	106	0.01%	
NW	1,760,264	910	0.05%	
NC	576,023	193	0.03%	
LIM	1,882,469	22,815	1.21%	
MP	3,484,406	71	0.00%	
NTP	462,261	555	0.12%	
Total	19,617,021	44,050		





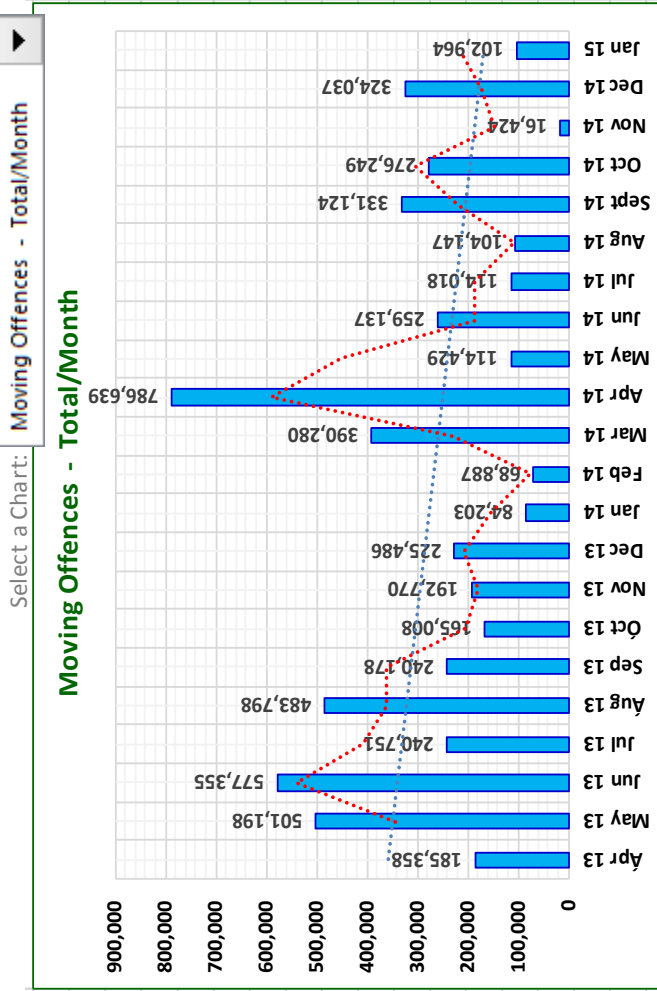
Item (Offence Group) Analysis – Graphs

Traffic Law Enforcement - Item Analysis



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Go to Item Analysis



Prov	Driving Document	Moving Offences	Vehicle Defects	Road Worthy	Arrests
GP	202,718	3,165,328	285,661	24,609	26,401
KZN	114,747	324,852	124,200	15,337	13,859
WC	158,270	1,236,518	133,815	4,178	11,368
EC	48,071	193,669	39,904	4,449	9,378
FS	17,147	66,372	80,000	264	563
NW	66,548	406,764	83,382	2,831	17,920
NC	10,858	23,353	6,343	324	5,854
LIM	-	60,154	-	6,812	44,579
MP	390,694	288,947	191,634	35,203	6,318
NTP	8,194	18,483	20,735	5,397	1,629
<b>Total:</b>	<b>1,017,247</b>	<b>5,784,440</b>	<b>965,674</b>	<b>99,404</b>	<b>137,869</b>

