Session 1.2 Road Safety Context

Conducting Road Safety Audits & Appraisals

Presented by: RTS & AGTT

January 2022

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Notes on Crash Statistics

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Keep in mind when look at collision statistics

- Countries with comparable levels of economic development should be preferably compared
- In Africa, countries with diligent record keeping appear to fare worst.
- The method of fatality reporting may have an influence.
- The annual growth in vehicle population plays a role
- The composition of the vehicle population plays a role
- The composition of the commuter population plays a role (age, preference, etc.)
- Statistical significance plays a role over longer periods

NOTES ON CRASH STATISTICS

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GLOBAL AND REGIONAL STATISTICS

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Leading Causes of Mortality - Global

RANK	LEADING CAUSE 2004	%		RANK	LEADING CAUSE 2030	%
1	Ischemic heart disease	12.2		1	Ischemic heart disease	12.2
2	Cerebrovascular disease	9.7		2	Cerebrovascular disease	9.7
3	Lower respiratory infections	7.0		3	Chronic obstructive pulmonary disease	7.0
4	Chronic obstructive pulmonary disease	5.1		4	Lower respiratory infections	5.1
5	Diarrhoeal diseases	3.6		5	Road traffic injuries	3.6
6	HIV/AIDS	3.5		6	Trachea, bronchus, lung cancers	3.5
7	Tuberculosis	2.5		7	Diabetes mellitus	2.5
8	Trachea, bronchus, lung cancers	2.3		8	Hypertensive heart disease	2.3
9	Road traffic injuries	2.2		9	Stomach cancer	2.2
10	Prematurity and low birth weight	2.0		10	HIV/AIDS	2.0
11	Neonatal infections	1.9		11	Nephritis and nephrosis	1.9
12	Diabetes mellitus	1.9		12	Self-inflicted injuries	1.9
13	Malaria	1.7		13	Liver cancer	1.7
14	Hypertensive heart disease	1.7		14	Colon and rectum cancer	1.7
15	Birth asphyxia and birth trauma	1.5		15	Oesophagus cancer	1.7
16	Self-inflicted injuries	1.4		16	Violence	1.4
17	Stomach cancer	1.4		17	Alzheimer and other dementias	1.4
18	Cirrhosis of the liver	1.3		18	Cirrhosis of the liver	1.3
19	Nephritis and nephrosis	1.3		19	Breast cancer	1.3
20	Colon and rectum cancers	1.1		20	Tuberculosis	1.1

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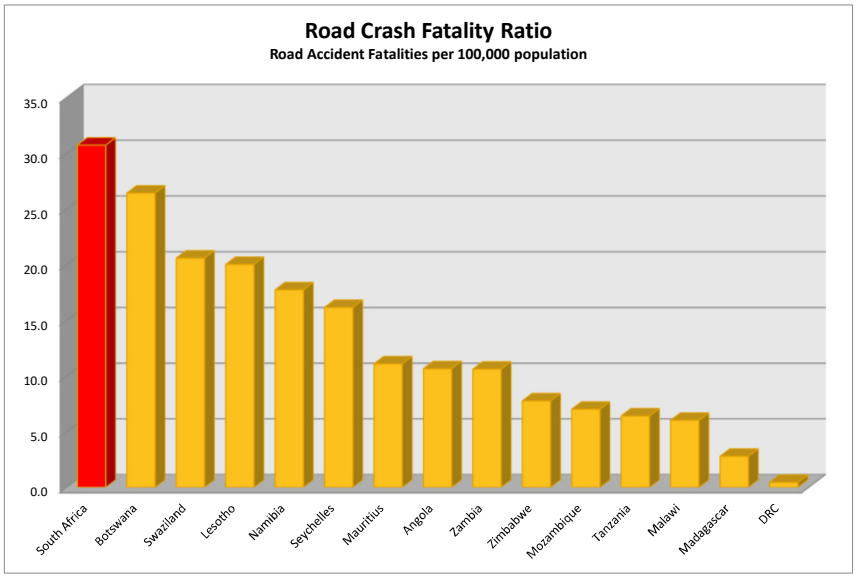
Road Accident Fatality Ratio



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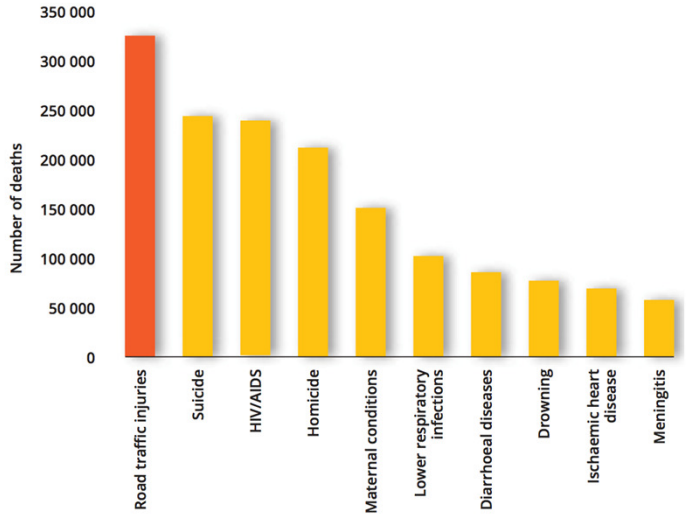
World Health Organisation – Global Statistics

Top ten causes of death among people aged 15–29 years 2012



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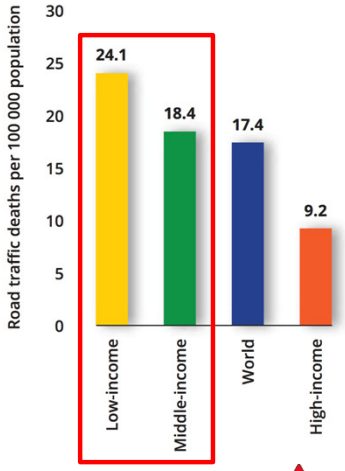
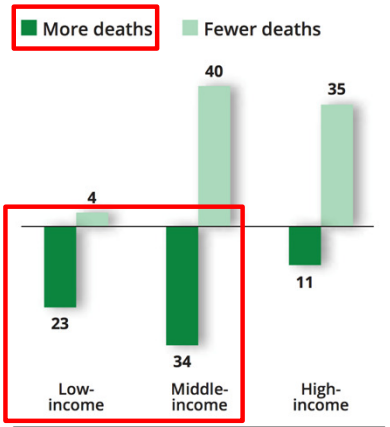
Road traffic deaths per 100 000 population, by country income status[a]



Countries showing changes in the number of road traffic deaths, 2010–2013, by country income status[a]



World Health Organisation

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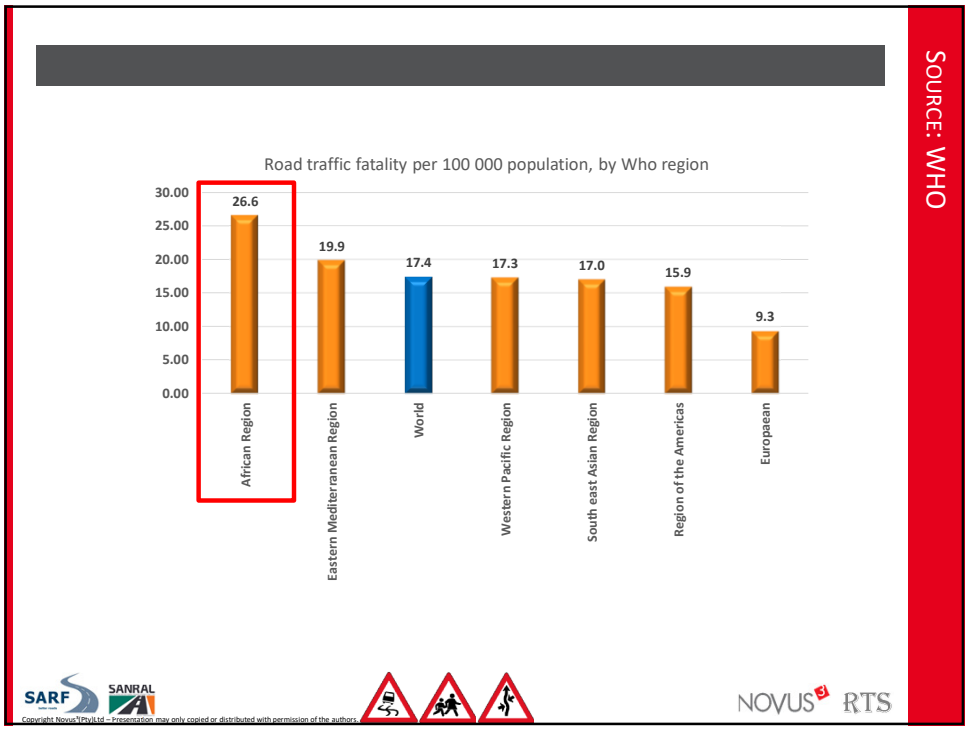
Road traffic fatality per 100 000 population, by Who region
30.00
25.00
20.00
15.00
10.00
5.00
0.00
26.6
19.9
17.4
17.3
17.0
15.9
9.3
African Region
Eastern Mediterranean Region
World
Western Pacific Region
South east Asian Region
Region of the Americas
Europaean
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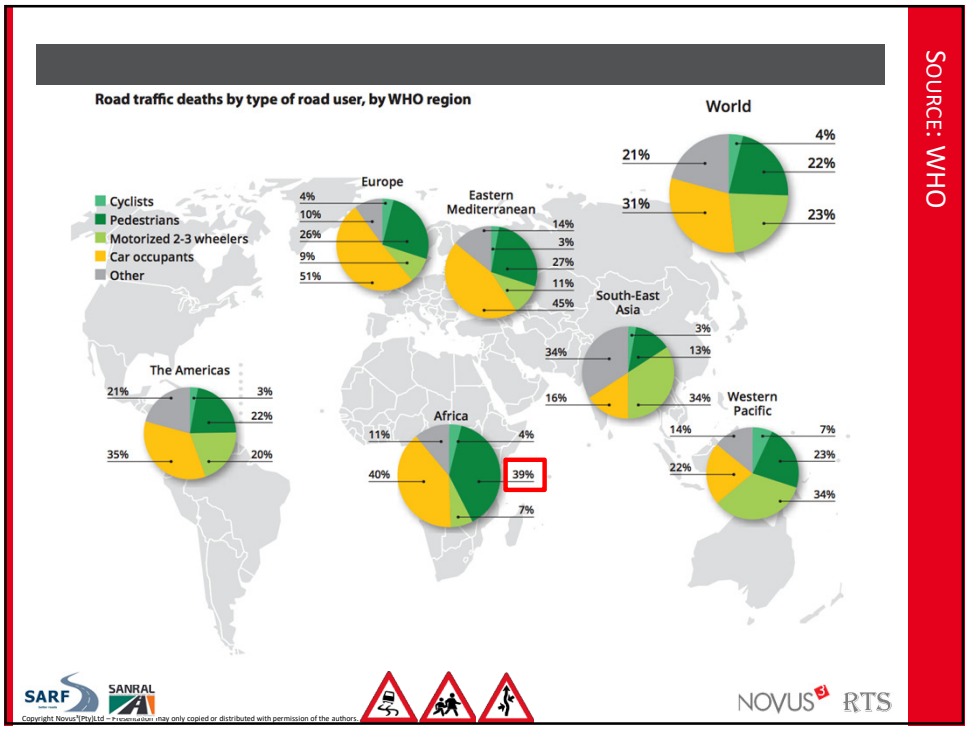
Road traffic deaths by type of road user, by WHO region
Cyclists
Pedestrians
Motorized 2-3 wheelers
Car occupants
Other
World
21%
4%
22%
31%
23%
Europe
4%
10%
26%
9%
51%
Eastern Mediterranean
14%
3%
27%
11%
45%
South-East Asia
3%
34%
13%
16%
34%
The Americas
21%
3%
22%
35%
20%
Africa
11%
4%
40%
39%
7%
Western Pacific
14%
7%
23%
22%
34%
SOURCE: WHO
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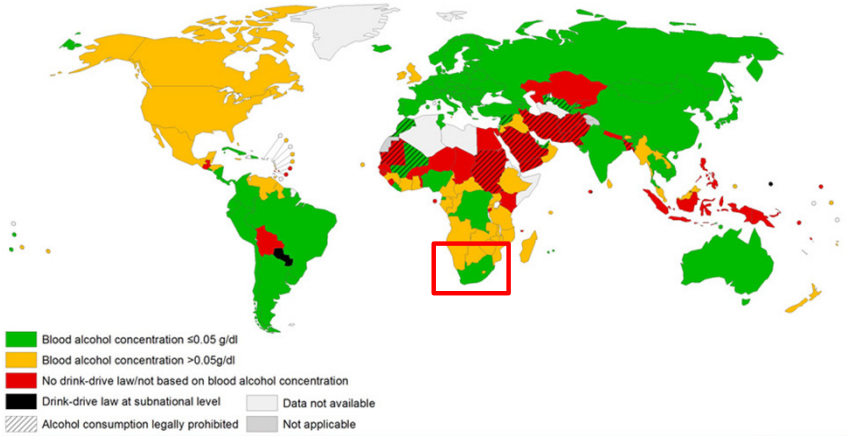
Drink/Driving Laws by Country

Our legislation on drinking and driving aligns well…



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Non Fatal Injuries – Top 20

The 20 leading non-fatal injuries sustained[a] as a result of road traffic collisions, world, 2002

Type of injury sustained	Rate per 100 000 population	Proportion of all traffic injuries
Intracranial injury[b] (short-term[c])	85.3	24.6
Open wound	35.6	10.3
Fractured patella, tibia or fibula	26.9	7.8
Fractured femur (short-term[c])	26.1	7.5
Internal injuries	21.9	6.3
Fractured ulna or radius	19.2	5.5
Fractured clavicle, scapula or humerus	16.7	4.8
Fractured facial bones	11.4	3.3
Fractured rib or sternum	11.1	3.2
Fractured ankle	10.8	3.1
Fractured vertebral column	9.4	2.7
Fractured pelvis	8.8	2.6
Sprains	8.3	2.4
Fractured skull (short-term[c])	7.9	2.3
Fractured foot bones	7.2	2.1
Fractured hand bones	6.8	2.0
Spinal cord injury (long-term[d])	4.9	1.4
Fractured femur (long-term[d])	4.3	1.3
Intracranial injury[b] (long-term[d])	4.3	1.2
Other dislocation	3.4	1.0

[a] Requiring admission to a health facility.
[b] Traumatic brain injury.
[c] Short-term = lasts only a matter of weeks.
[d] Long-term = lasts until death, with some complications resulting in reduced life expectancy.
Source: WHO Global Burden of Disease project, 2002, Version 1.

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South African Figures

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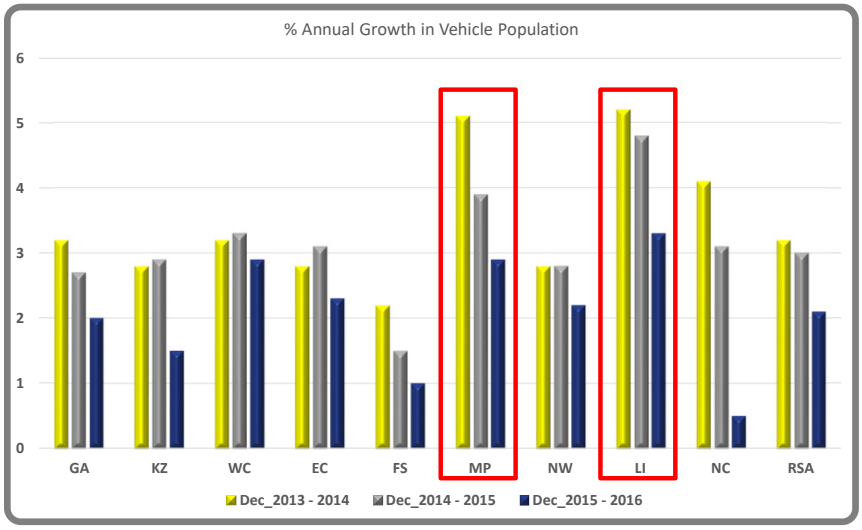
% Annual Growth in Vehicle Population: South Africa per Province



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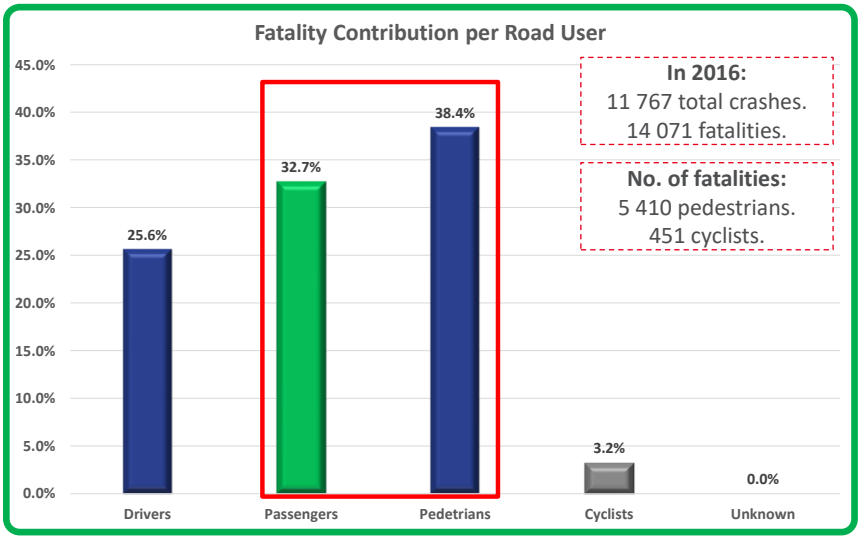
Fatality Contribution per Road User



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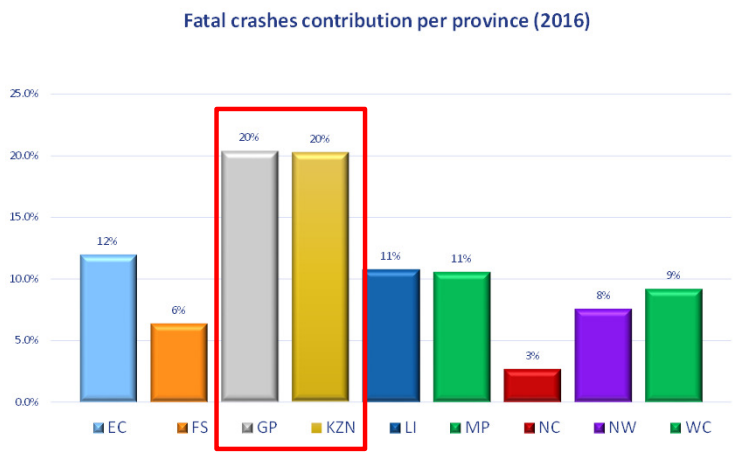
Fatal crashes contribution per province (2016)



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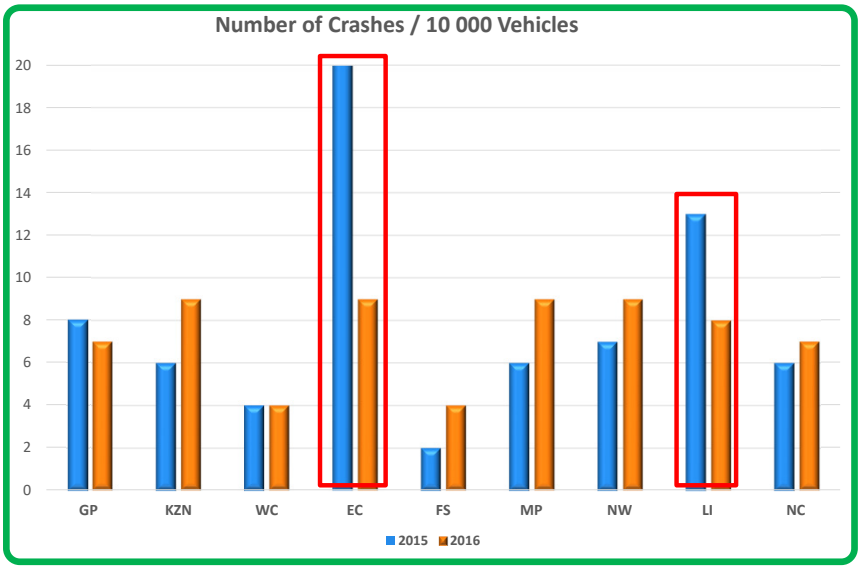
Number of Crashes / 10 000 Vehicles



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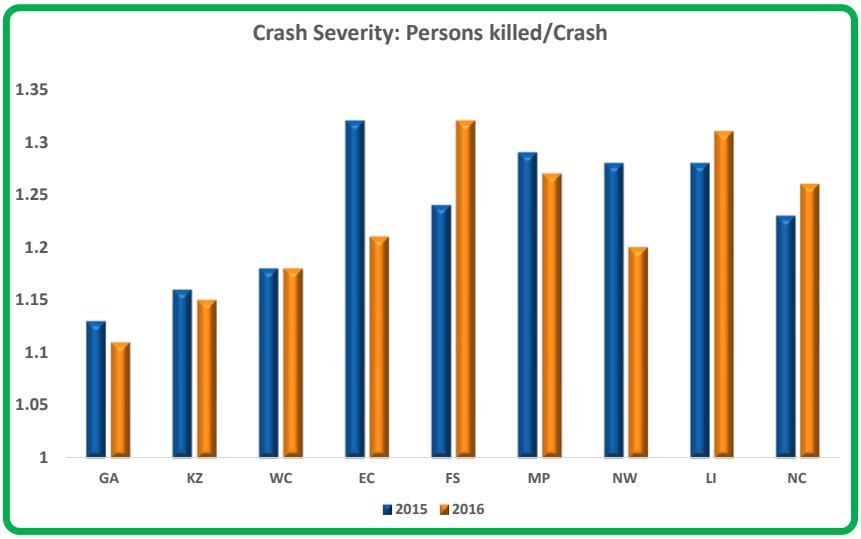
Crash Severity: Persons killed/Crash



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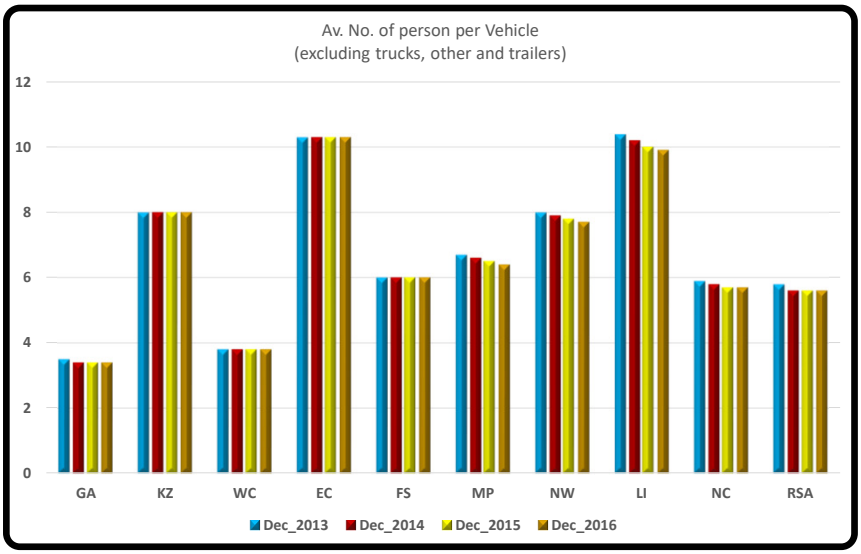
Average Number of Person per Vehicle: South Africa per Province



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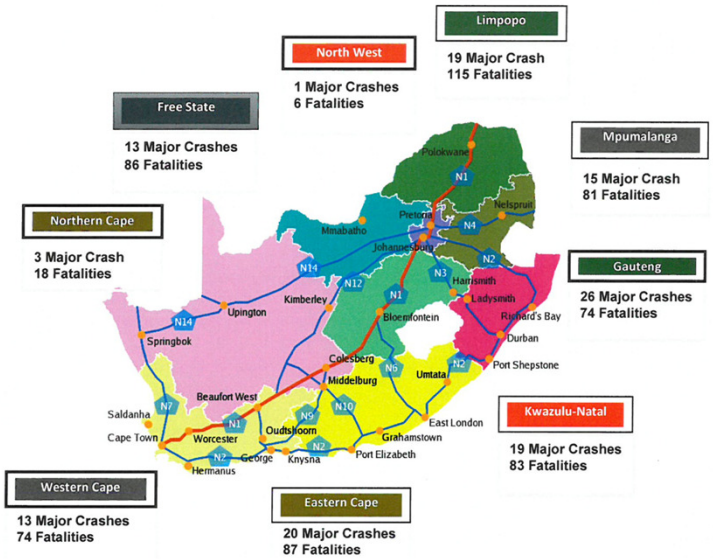
Geographical Spread of Major Crashes: 2016



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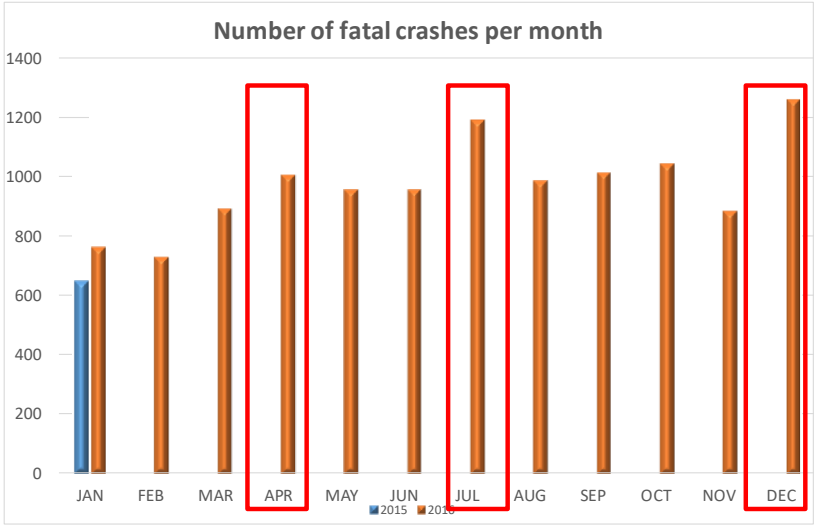
Number of fatal crashes per month



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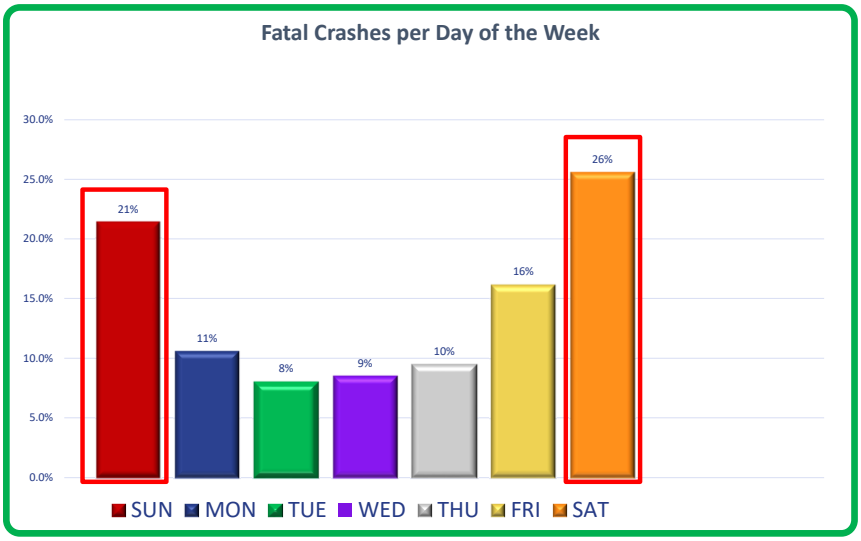
Fatal Crashes per Day of the Week



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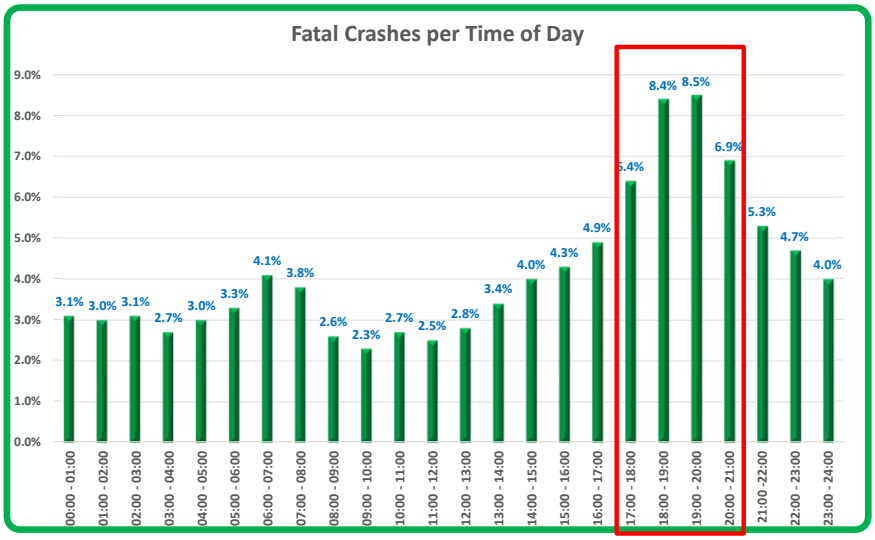
Fatal Crashes per Time of Day



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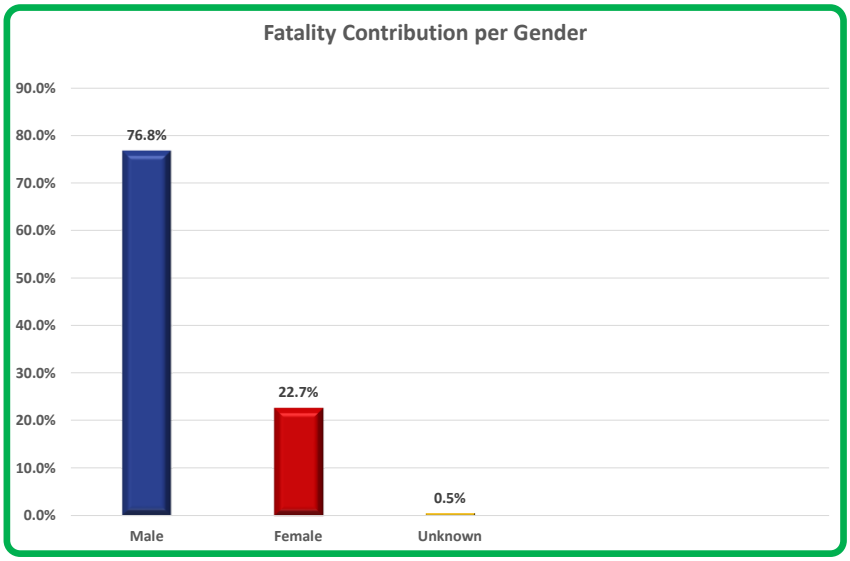
Fatality Contribution per Gender



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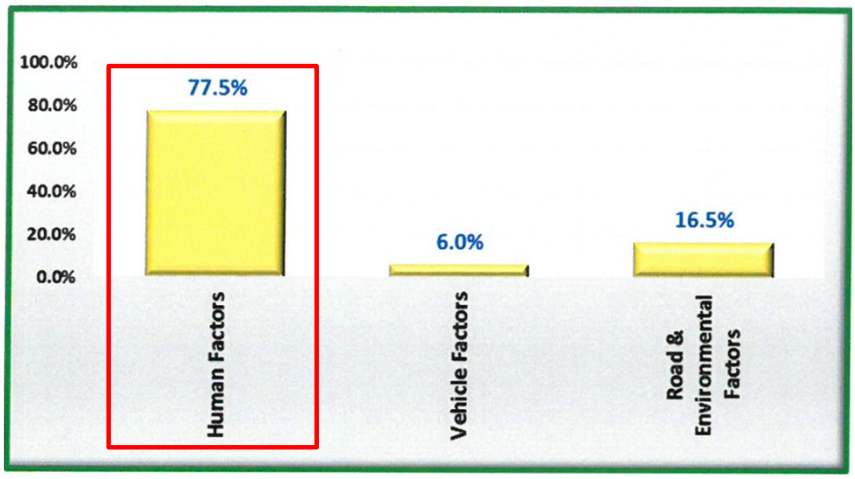
Percentage Contributing Factors (All Crashes)



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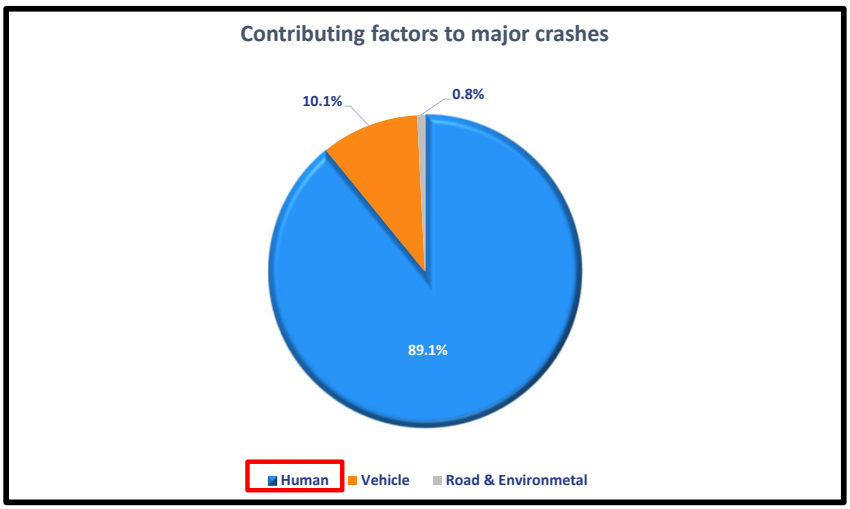
Percentage Contributing Factors (Major Crashes)



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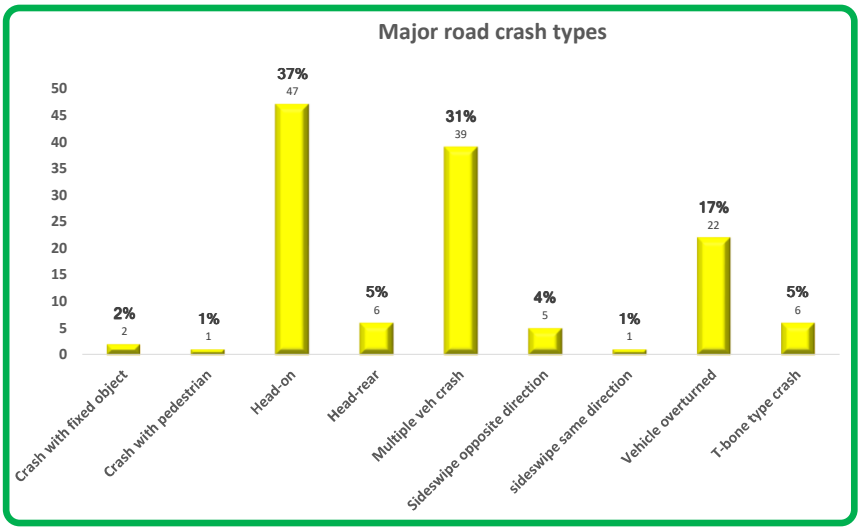
Major road crash types



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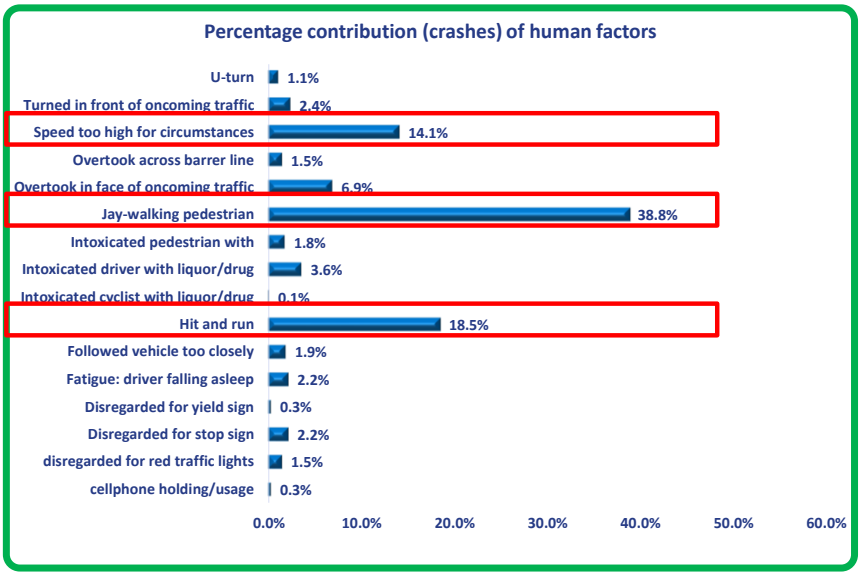
Percentage contribution (crashes) of human factors



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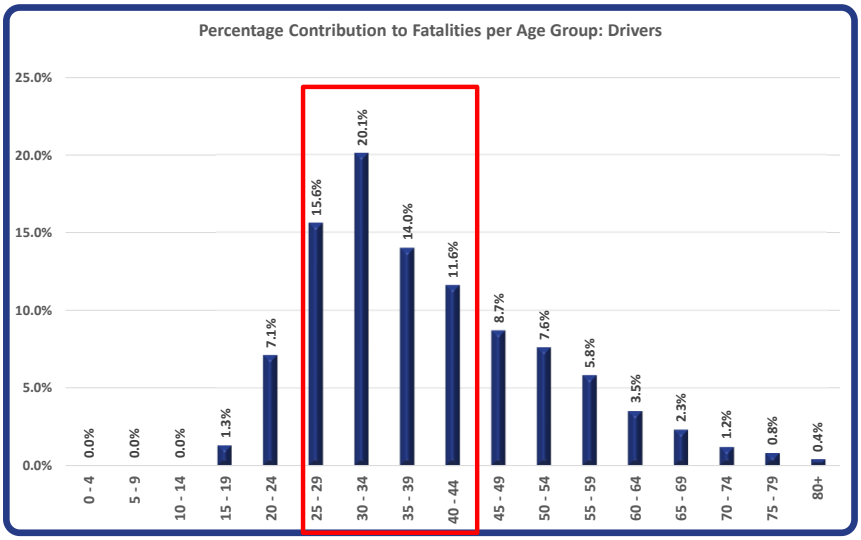
Percentage Contribution to Fatalities per Age Group: Drivers



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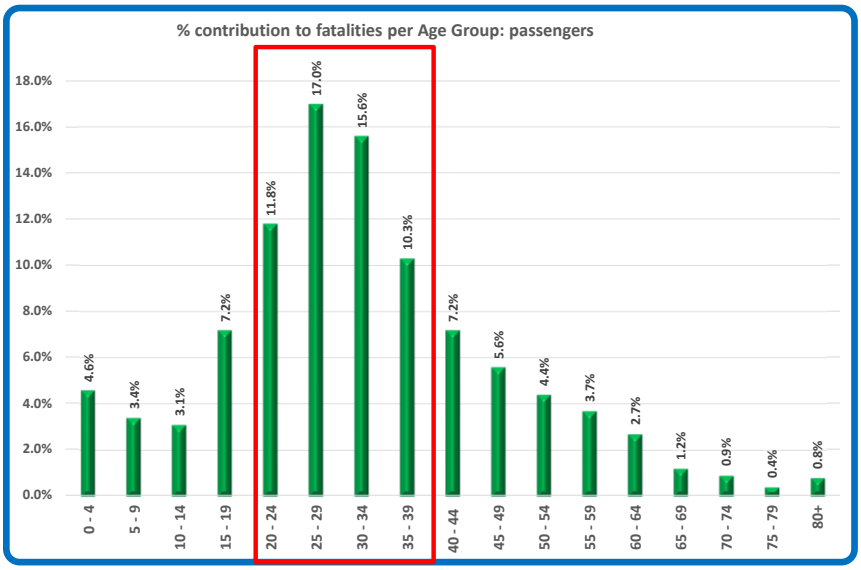
Percentage Contribution to Fatalities per Age Group: Passengers



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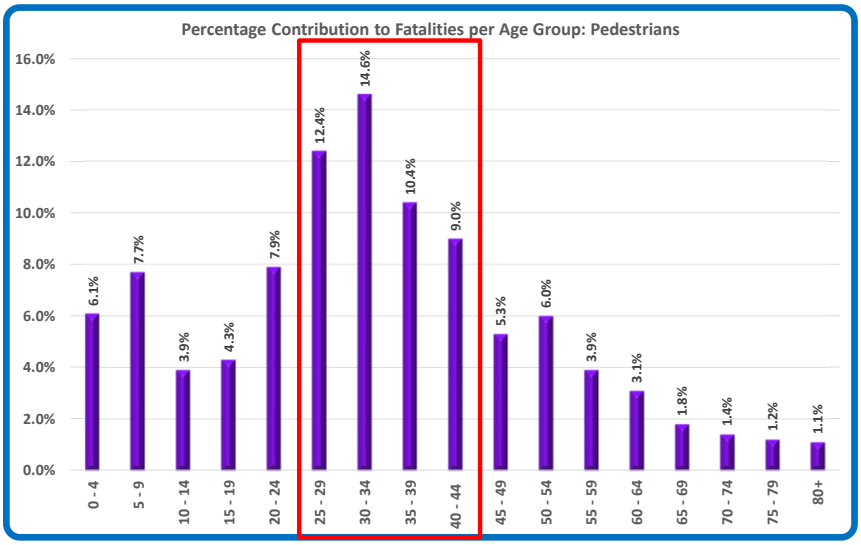
Percentage Contribution to Fatalities per Age Group: Pedestrians



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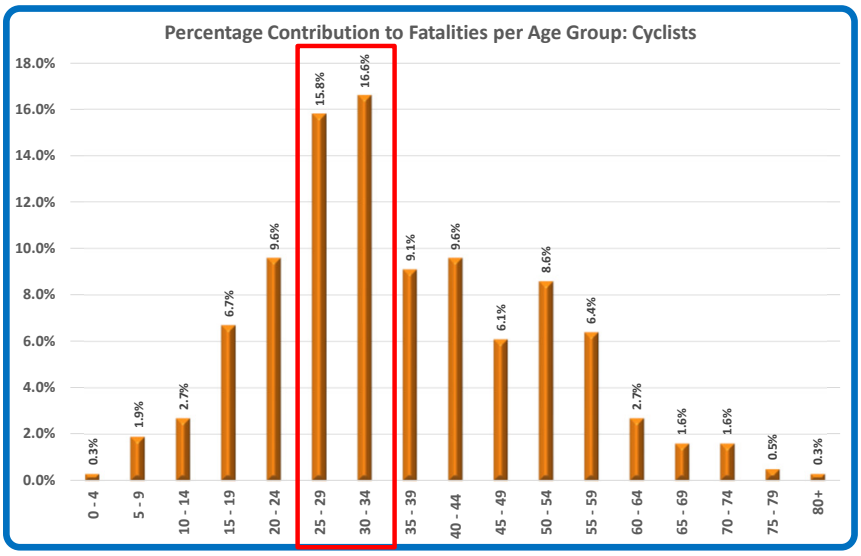
Percentage Contribution to Fatalities per Age Group: Cyclists



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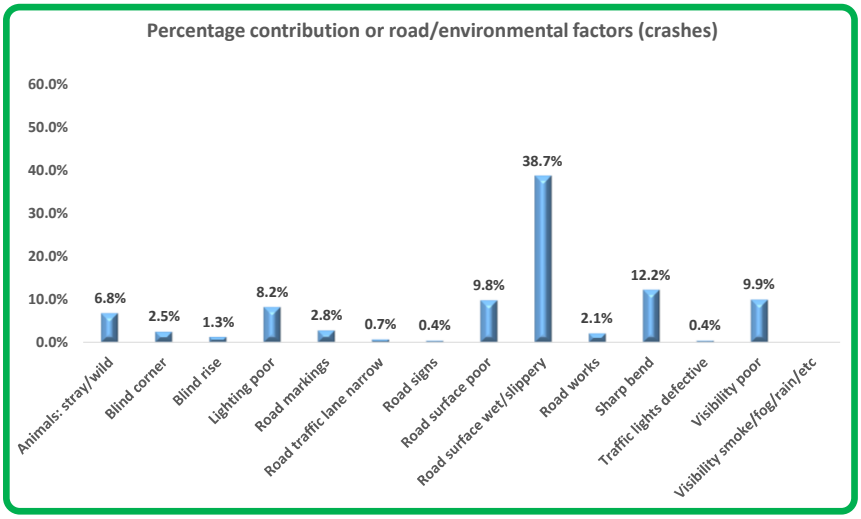
Percentage contribution or road/environmental factors (crashes)



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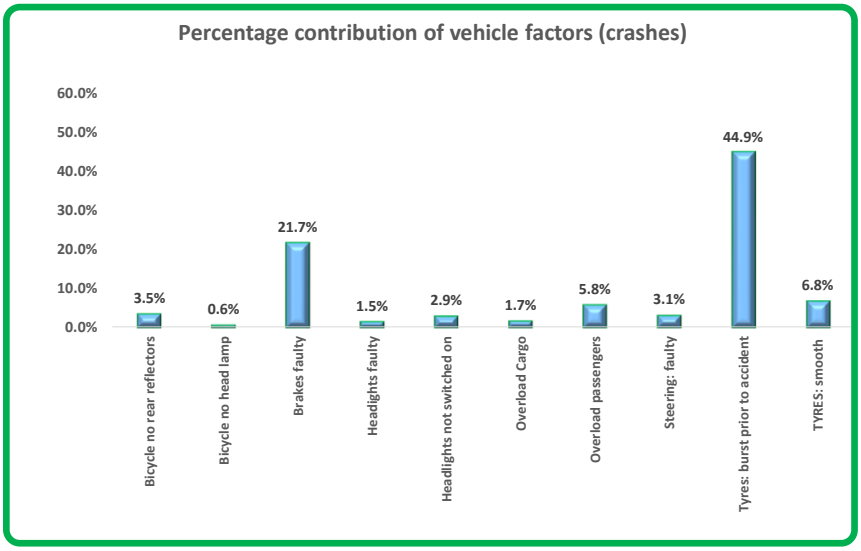
Percentage contribution of vehicle factors (crashes)



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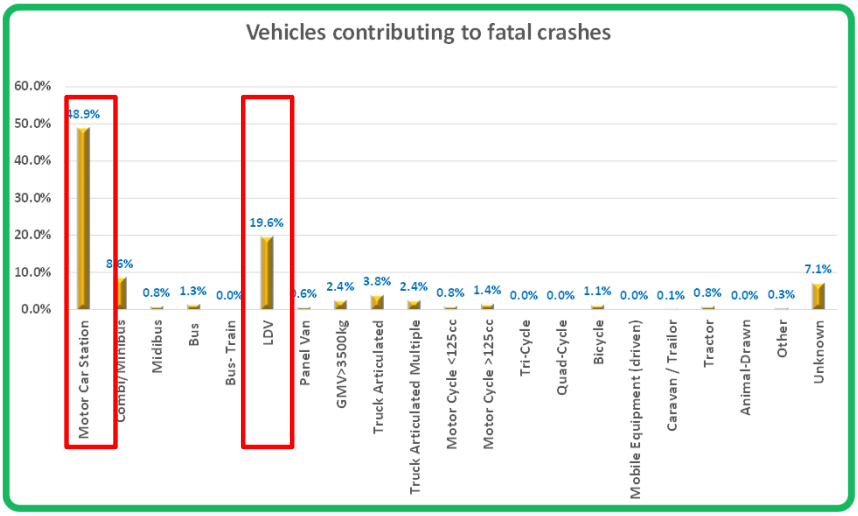
Vehicles contributing to fatal crashes



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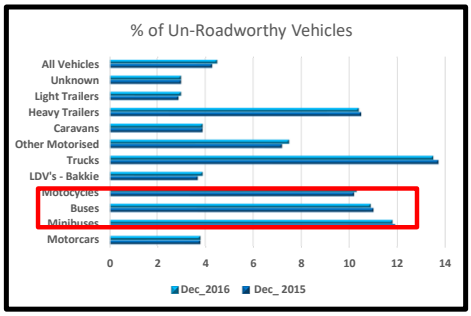
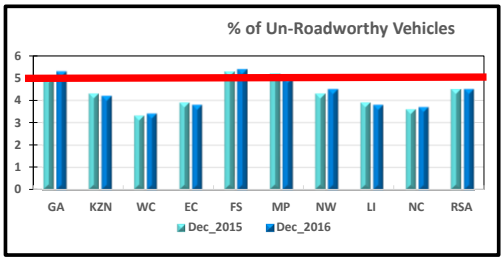
Percentage of Un-Roadworthy vehicles: South Africa





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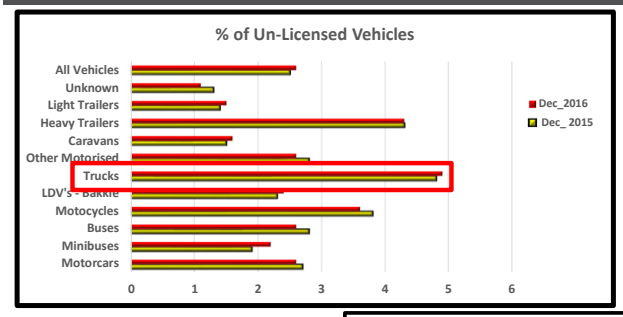
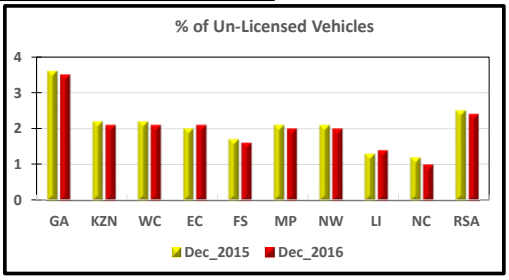
Percentage of Un-Licensed Vehicles: South Africa





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Total Cost of Road Traffic Crashes

Cost Category	Total Cost of RTCs (R million)					
	Fatal	Major	Minor	Damage only	Total	%
Human Casualty Costs	58 332	24 794	14 546	1 358	99 030	69.3
Vehicle Repair Costs	218	809	2 902	17 395	21 326	14.9
Incident Costs	2 018	5 113	2 740	12 723	22 595	15.8
Total Cost	***60 569***	***30 716***	***20 189***	***31 477***	***142 951***	

SOURCE: CSIR

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Unit Costs

SOURCE: CSIR

Unit Cost per RTC (Rand)				
Fatal	Major	Minor	Damage only	Any severity
5 435 261	765 664	152 244	48 533	171 727

Unit Cost per RTI (Rand)			
Death	Serious	Slight	No injury
3 916 187	423 858	71 352	1 085

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