



KEY FACTORS IMPACTING ROAD SAFETY IN SOUTH AFRICA

AND INSIGHTS FROM **DISCOVERY INSURE**



EXECUTIVE SUMMARY

Key insights

- 01** | Road accidents have a devastating impact on South Africa, causing loss of lives and economic losses. The fatality rate in the country is one of the highest in the world, at 22.2 per 100,000 people. What is more concerning is that young people aged from 18 to 30 years are the most impacted by road fatalities.
- 02** | Analysis of driving data shows that the main causes of road fatalities are human factors like driver behaviour and pedestrian actions, vehicle factors and environmental factors like road conditions.
- 03** | To tackle the problem of road safety, we need to focus on creating safer drivers, safer roads and safer pedestrians.
- 04** | We have seen that the nature of risk is influenced by five behaviours that lead to the three key causes of accidents, which make up over 60% of all motor fatalities.
- 05** | Cellphone use has the biggest impact on the likelihood of claims. Just 20 seconds of cellphone use per trip increases accident risk by over 60%.
- 06** | Night-time driving is more dangerous than daytime driving, with night-time accidents being 9 times more severe than daytime accidents.
- 07** | We see that there has been a shift in driving behaviour when comparing 2021 and 2023 data, with a reduction in accidents happening at night (which is encouraging as night-time accidents are generally more severe) and an increase in distracted driving accidents which are up by 2.6 times.
- 08** | Vitality Drive helps to create safer drivers. We have seen that drivers on the programme reduce their accident risk by 15% within the first month of joining. In addition, these drivers have a 34% lower fatality rate compared to other drivers.
- 09** | Road quality also affects accident risk. According to the Road Traffic Management Corporation (RTMC), 22.2% of motor fatalities caused by environmental factors are due to poor road conditions or poor lighting on the road. Combining these insights with our driving data, we can see that provinces with the worst driving behaviour have the highest number of fatalities and that road conditions also play a role.
- 10** | We have also seen that most accidents happen on the same roads or intersections (1% of locations is where 27% of accidents happen) and that most drivers respond to road signs. Therefore, targeted interventions at certain locations should help to create safer roads.
- 11** | Pothole Patrol was launched in May 2021 to fix potholes in Johannesburg, and thereby create safer roads. Since inception, Pothole Patrol has fixed over 220,000 potholes resulting in estimated savings of over R33 million to Discovery Insure and much more value added to all drivers in Johannesburg.
- 12** | Safe Journey to School was launched in 2014 to create safer pedestrians by providing safer scholar transport. The programme has been successful as its drivers achieved a 100% safe driving record in 2023 and there have been zero deaths since inception.
- 13** | Seeing the positive impact of our programmes, we aim to expand Pothole Patrol and Safe Journey to School to the rest of the country so that more people benefit, and we can help to create safer drivers, safer roads and safer pedestrians in South Africa.

Road accidents

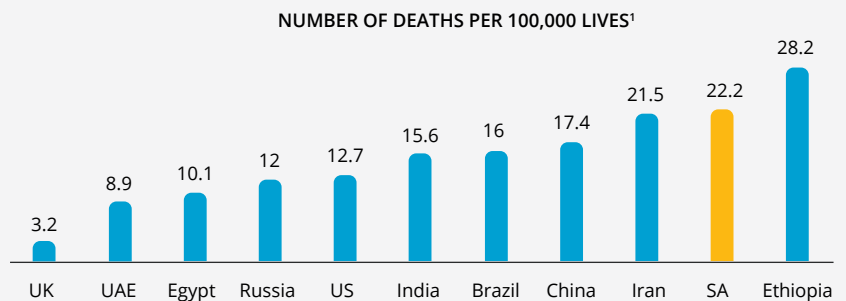
have a devastating impact on South Africa, causing loss of lives and economic losses



The cost of South Africa's high road fatality rate

South Africa has one of the highest road fatality rates in the world at 22.2 per 100,000 lives¹.

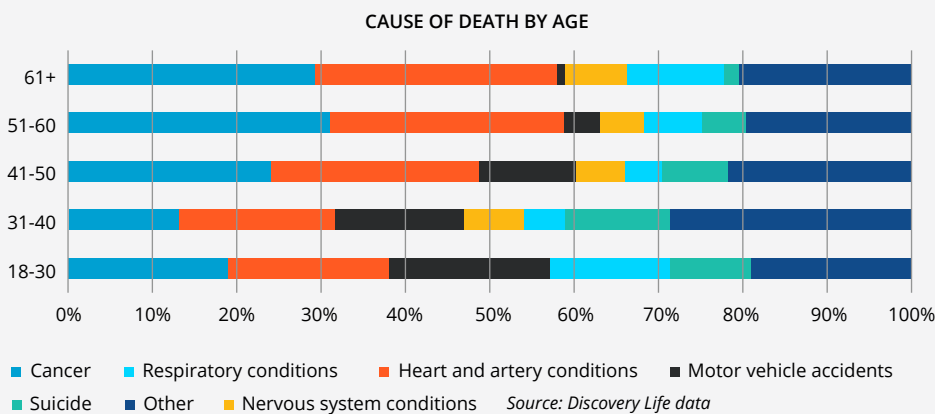
Road accidents also cost South Africa economically. According to the Road Traffic Management Corporation (RTMC), road accidents cost the country's economy around R200bn in 2022².



Road accidents cost the country's economy 3.29% of GDP in 2022²

Road accidents are the biggest cause of unnatural deaths and young people are the most impacted

Discovery is able to leverage data assets across the various businesses in the Group to gather insights into road accidents in the country. Using data from Discovery Life, we have seen that the largest component of unnatural deaths is road accidents, causing 30% of unnatural deaths. The data also shows that young people aged from 18 to 30 years are the most impacted by motor vehicle fatalities.



This highlights the huge impact road accidents have on the loss of lives, especially for young people, as well as the significant economic losses it causes. This is a serious issue for the country; therefore, interventions are required to improve road safety in South Africa.

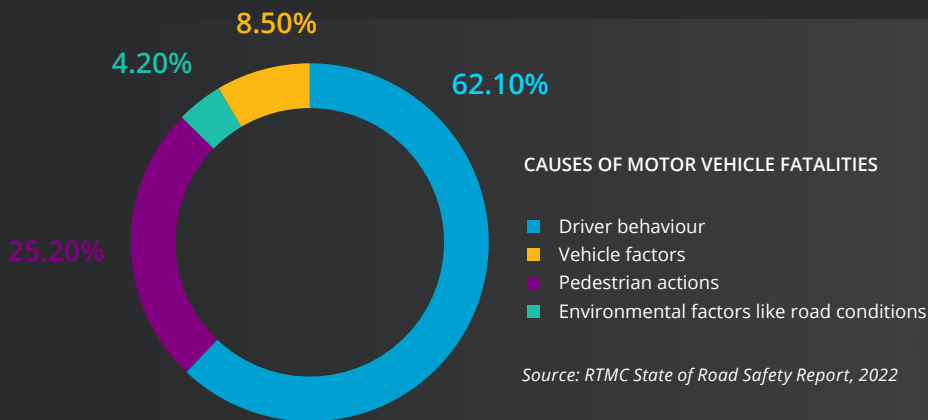
¹ <https://worldpopulationreview.com/country-rankings/road-deaths-by-country>

² RTMC State of Road Safety Report, 2022


Understanding the causes of road accidents in South Africa and interventions to address this problem

To effectively reduce road fatalities, we need to understand the causes of road accidents in the country so that we can design interventions that focus on mitigating these causes.

Results from analyses done by the Road Traffic Management Corporation (RTMC) show that the main causes of road fatalities are human factors like driver behaviour and pedestrian actions, vehicle factors and environmental factors like road conditions.



Source: RTMC State of Road Safety Report, 2022

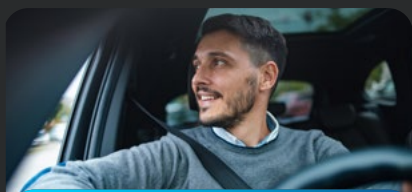


Solution

- ✓ Safer drivers
- ✓ Safer roads
- ✓ Safer pedestrians

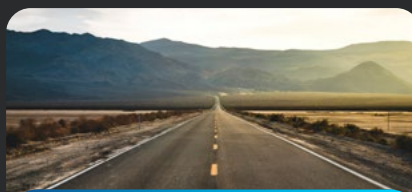
Approach to address high road accidents and fatalities in the country

A multifaceted approach is required to tackle the problem of road safety. This can include measures that focus on creating safer drivers, safer roads and safer pedestrians.



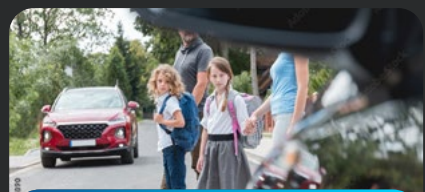
Safer drivers

Improving driving behaviour is key, as shown through the Vitality Drive programme. The programme helps to create safer drivers by measuring and rewarding good driving behaviour. We have seen from the results of the programme that those who drive well have a lower accident rate and lower fatality rate.



Safer roads

Pothole Patrol is a shared-value initiative that focuses on fixing potholes in the Johannesburg area. We see that the initiative has been successful at creating safer roads as it has fixed over 220,000 potholes, thereby reducing vehicle accident risk and pothole-related claims costs.



Safer pedestrians

Through Safe Journey to School, we improve pedestrian safety by reducing the number of child pedestrians and providing safer scholar transport. This programme has been successful at creating safer pedestrians as there have been zero fatalities since its launch.

Creating safer drivers

Understanding behaviours that are the biggest contributors to road accidents



Through the Vitality Drive programme, we are uniquely positioned to leverage big data and gather insights that we can use to help drivers improve.

Our state-of-the-art telematics technology enables us to collect driving data and have access to:



Over 19 billion km
of driving data



Over 500,000
trips per day

This vast amount of data enables us to get an in-depth understanding of what factors influence accident risk. We have seen that the nature of risk is influenced by five behaviours that lead to the three key causes of accidents, which make up over 60% of all motor fatalities.



5 Driving behaviours

- Drinking and driving
- Cellphone use while driving
- Excessive speeding
- Aggressive driving
- Lack of vehicle care



3 Main causes of accidents

- Distracted driving
- Loss of vehicle control
- Reduction in vehicle safety

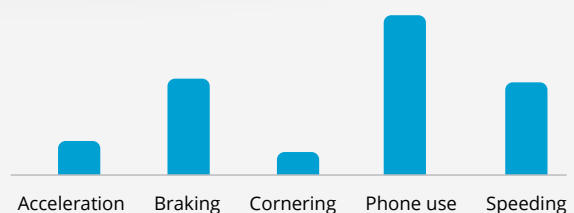


60%
of fatal accidents

Impact of driving behaviour on claims experience

We are also able to use our big data to perform advanced analytics to get insights into risky driving behaviours, and the impact different driving events have on claims experience. Our data shows that cellphone use has the biggest impact on the likelihood of a claim, as those who claim are most likely to have used their cellphone while driving on the day of the accident.

IMPACT OF DIFFERENT DRIVING EVENTS ON CLAIMS EXPERIENCE



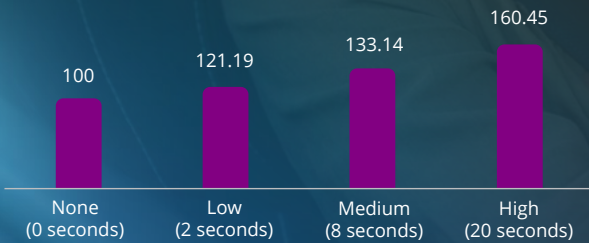
Source: Discovery Insure data

Clients are 52% more likely to have used their phone than exceed the speed limit on the day of the accident

Cellphone use is more dangerous than people think

Our driving data shows that even a few seconds spent on the phone has a significant impact on accident risk. Only 20 seconds of cellphone use per trip increases accident risk by over 60%.

RELATIVE LOSS RATIO BY CELLPHONE USE PER TRIP



Source: Discovery Insure data



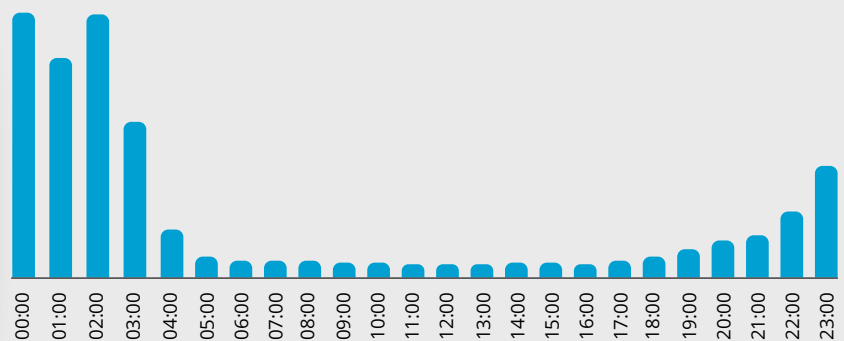
20 seconds of cellphone use per trip increases accident risk by over 60%

Driving at night significantly increases the risk that an accident is fatal

Driving at night is riskier because of reduced visibility and other factors, like the prevalence of drinking and driving during late night hours. Analysis into night-time driving shows that night-time accidents are more severe than daytime accidents.

Night-time accidents (between 22:00 and 04:00) are

9X more severe than daytime accidents



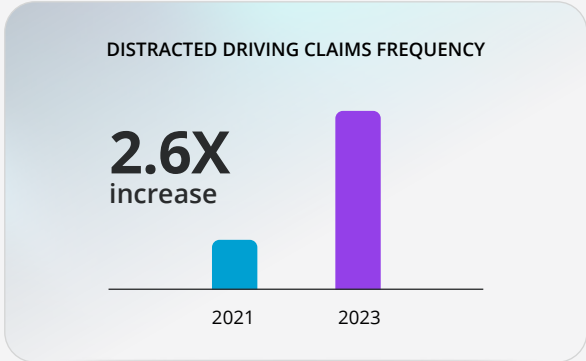
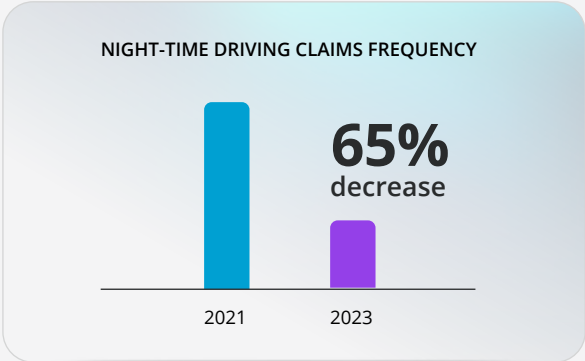
Source: Discovery Insure data

HOUR OF THE DAY

There has been a shift in behaviour with a reduction in night-time accidents and an increase in distracted driving accidents

Over the years, we have noted a shift in driving behaviour. The number of accidents happening at night has reduced, while the prevalence of distracted driving accidents has increased.

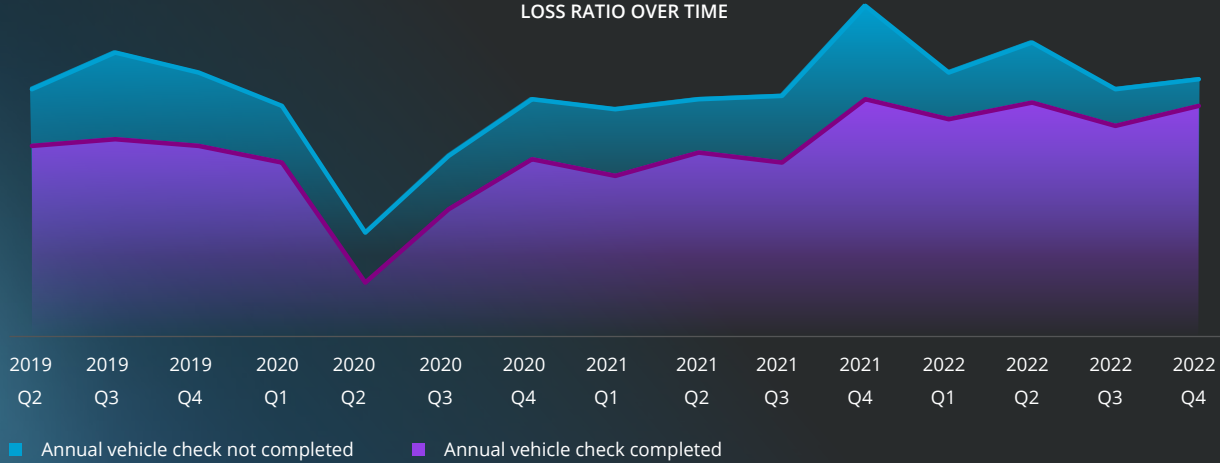
Given the high risk of fatal accidents during the night, it is encouraging to see that drivers on the programme have improved their night-time accident risk. On the other hand, it is worrying to see the increasing trend in distracted driving incidents, as we have demonstrated that cellphone use, even for a few seconds, increases accident risk significantly.



Source: Discovery Insure data

Vehicle care improves its safety

Non-roadworthy vehicles are significantly more likely to be involved in accidents due to the increased risk of malfunction or failure of components of the vehicle. Discovery Insure’s data shows that making sure that a vehicle is in good condition has a positive impact on claims experience, as we have seen that clients who take their vehicle for an annual check to ensure that everything is in working order have a lower loss ratio than those who do not complete the annual vehicle check.



Source: Discovery Insure data

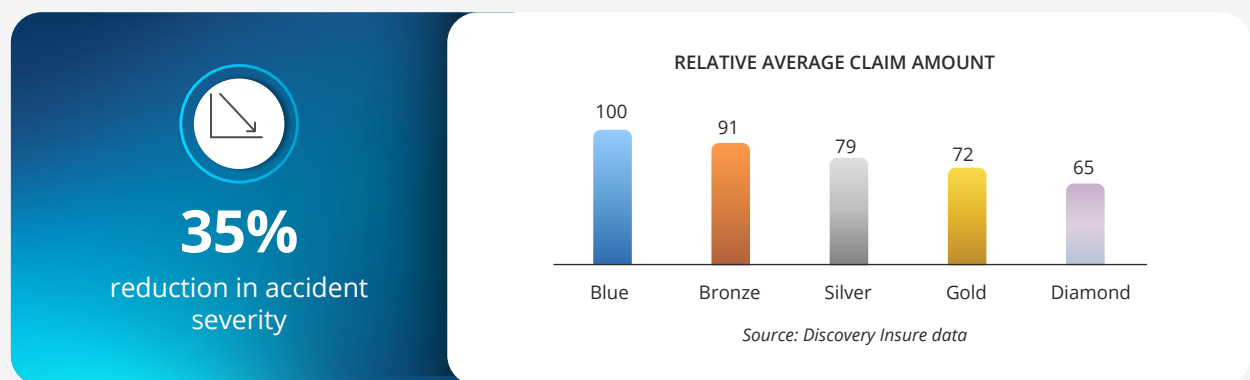
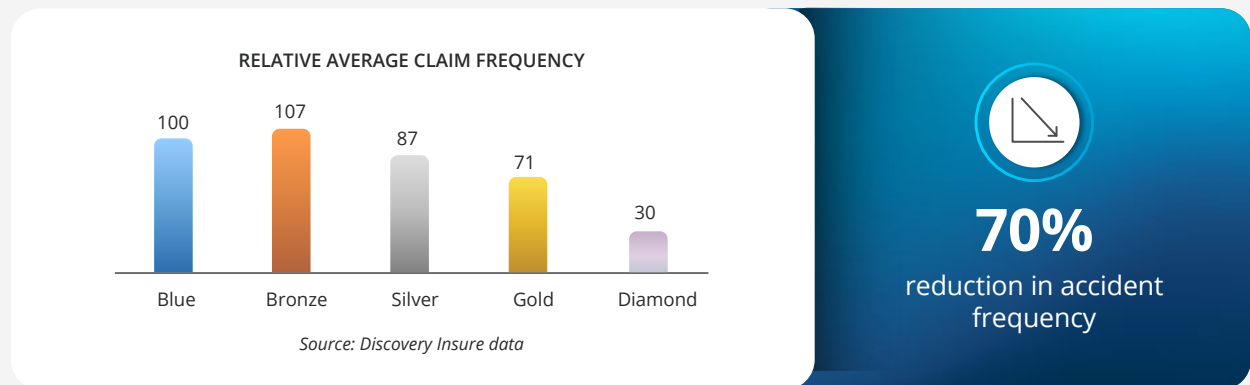
Vitality Drive

helps to create safer drivers



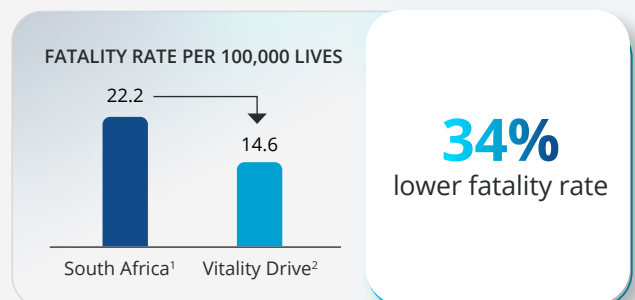
By making it easy for clients to understand the Vitality Drive programme, they are able to identify driving behaviours that will enable them to earn maximum driving points and, therefore, the best Vitality Drive status and maximum rewards. So, the programme is effective at encouraging safer driving and reducing accident risk. **Drivers on the programme reduce their accident risk by 15% within the first month of joining.**

The programme also shows positive results over the long term, where drivers who consistently engage with the programme and drive well have a lower frequency of accidents and a lower severity of claims if an accident occurs.



Notably, drivers on the programme have a 34% lower fatality rate than other drivers on South African roads. This is comparable to road fatality rates in developed countries.

For more information about the programme, read our [Vitality Drive white paper](#)



¹ <https://worldpopulationreview.com/country-rankings/road-deaths-by-country>

² Discovery Insure Data

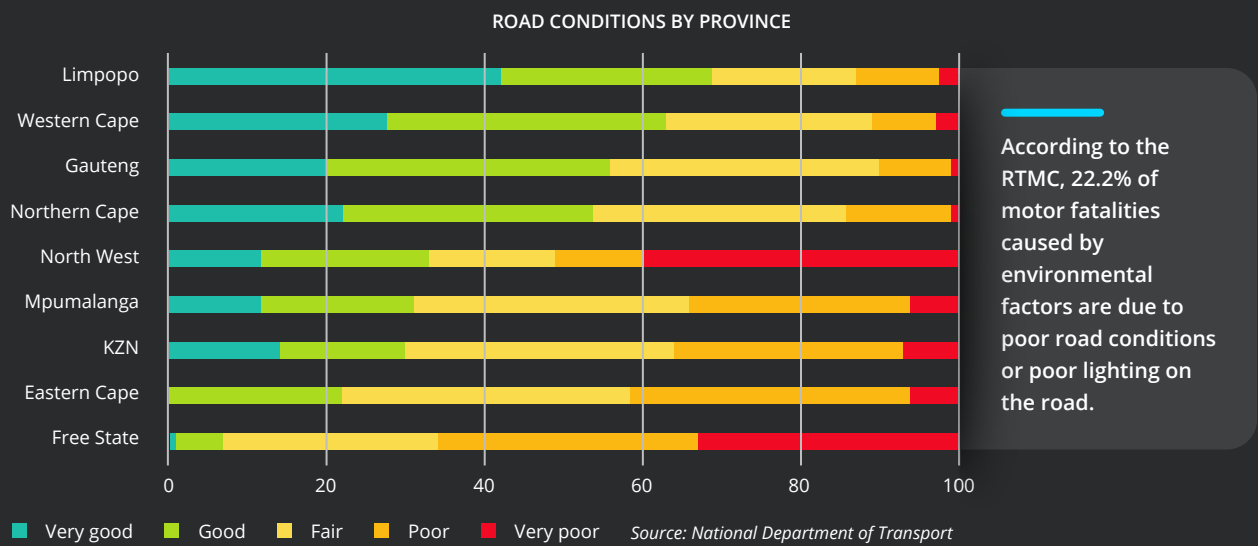
Creating safer roads

Key interventions on the road lead to improved outcomes

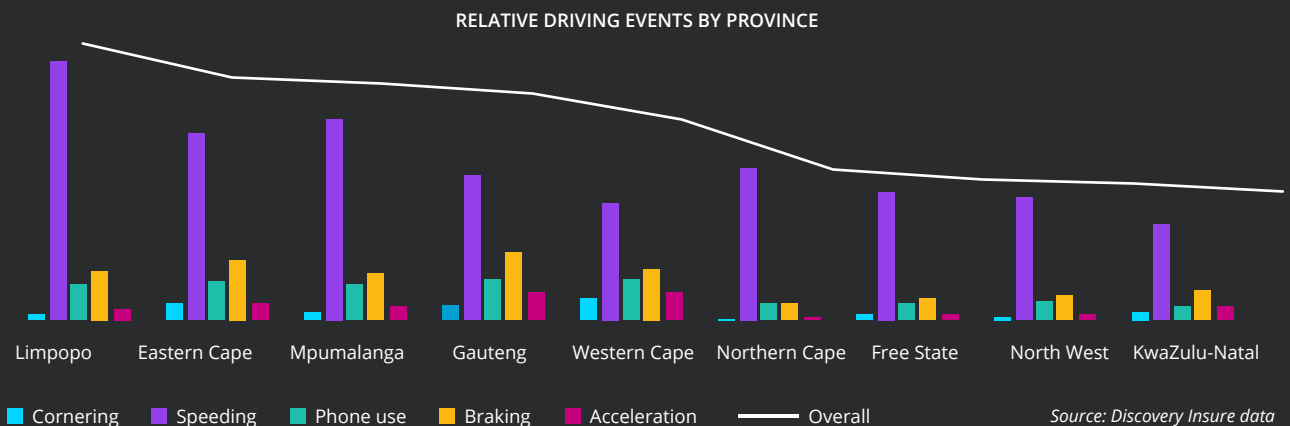


Impact of road quality on fatality rates

The South African road network is an integral part of our country's ecosystem and economy. The country faces the challenge of an ageing road infrastructure with road defects such as potholes becoming more and more widespread, which threatens the safety of South African road users.



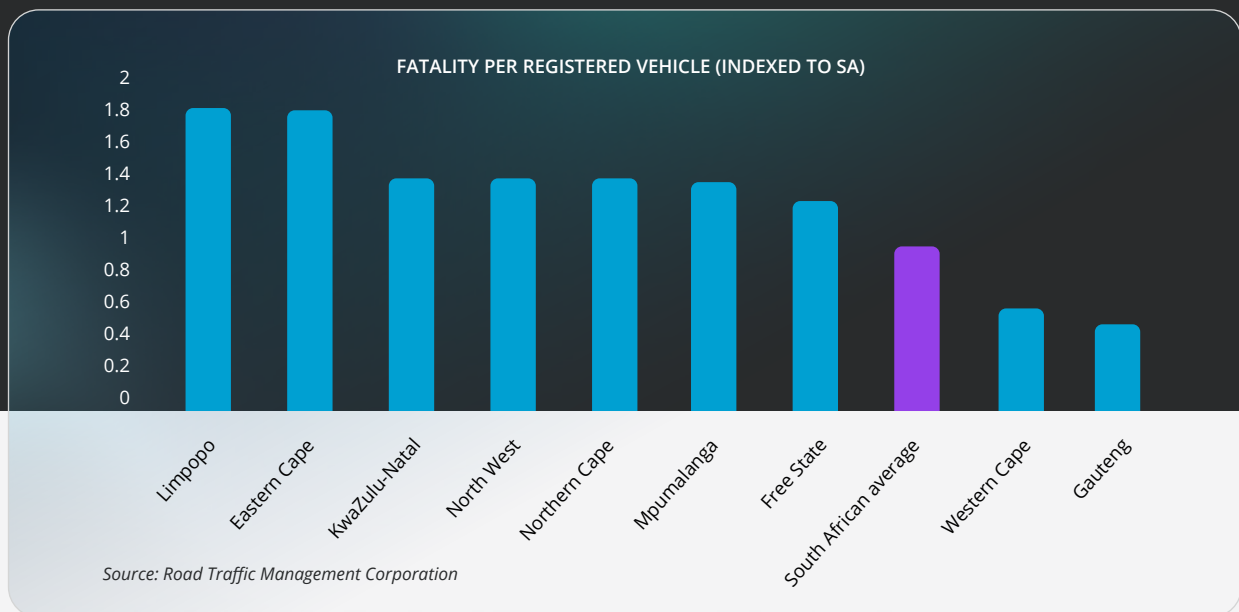
Using Vitality Drive data, we can analyse driving behaviour in different provinces to investigate the impact of driving behaviour versus road infrastructure on road fatalities in the different provinces.



Driving behaviour has a bigger impact on road fatalities than road conditions

Combining insights from road quality and driving behaviour with the below view of fatalities per province, we can see that provinces with the worst driving behaviour have the highest fatalities, even though road conditions also play a role in fatalities.

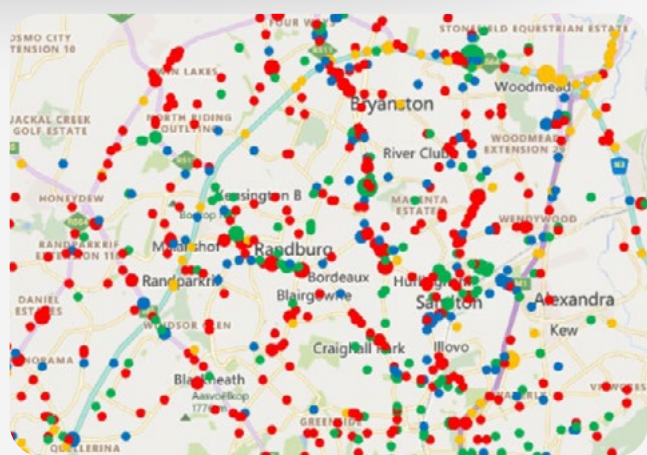
For example, Limpopo has the worst driving behaviour and one of the best roads in the country. However, Limpopo has a high road fatality rate, which demonstrates that driving behaviour has a bigger impact on road fatalities. We can also see that the Eastern Cape has poor driving behaviour and poor roads, which has led to the high fatalities in the province. When looking at the Western Cape, we can see that drivers in the province drive well and the province has good road infrastructure. Both of these factors have a positive impact that translates to the Western Cape having lower road fatalities.



However, key interventions to make roads safer can reduce accidents

Using our driving data, we can identify locations where a high proportion of accidents occur. We see that accidents usually occur at the same location.

Therefore, we can have **targeted interventions at these locations** to address the risky behaviours typically displayed by drivers at these locations, thereby contributing to the creation of safer roads.



■ Aggressive driving
 ■ Cellphone use
 ■ Tailgating
 ■ Speeding

Source: Discovery Insure data

1%

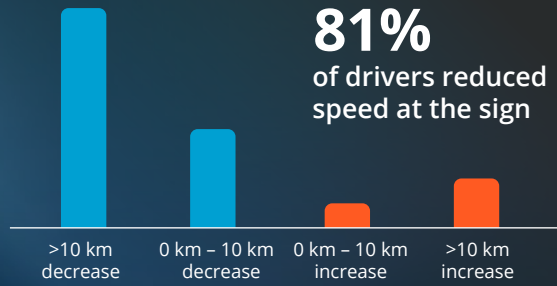
of locations is where

27%

of accidents occur

We also see that road signage is effective at improving driver behaviour

Poor road signage and low visibility can also lead to increased accident risk. Our data shows that having clear road signage is effective at influencing drivers to adopt safer actions. For example, we have seen from our data that most drivers reduce their speed when they see a speed warning sign.



Source: Discovery Insure data



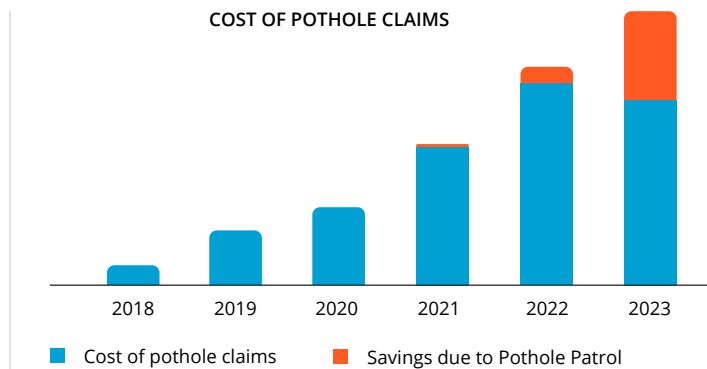
Pothole Patrol is helping to create safer roads

Pothole Patrol is a shared-value initiative between Discovery Insure, Avis, and the Johannesburg Road Agency. It aims to address the problem of potholes in Johannesburg with the vision of making roads safer for all Johannesburg road users.

Since inception, Pothole Patrol has fixed over 220,000 potholes

Since the launch of Pothole Patrol in 2021, there have been decreases in pothole claims with respect to the projected costs of pothole claims without any intervention.

Fixing potholes and improving road conditions has resulted in estimated savings of **over R33 million** to Discovery Insure and much more value added to all drivers of Johannesburg.



Source: Discovery Insure data

Creating safer pedestrians

Initiatives focused on pedestrians help to create a safer environment for them



Pedestrians have the highest fatalities on our roads

Road fatalities involving pedestrians are very high. It is worrying to note that 43% of all road fatalities in South Africa in 2022 were pedestrians¹. Some of the reasons for this are the lack of pedestrian infrastructure like pavements, pedestrian crossings, barriers and streetlights.

¹ RTMC State of Road Safety Report, 2022

CASE STUDY

Safe Journey to School is creating safer pedestrians

Safe Journey to School, a programme by Discovery and Afrika Tikkun, focuses on pedestrian safety by reducing the number of child pedestrians. The scholar transport initiative was launched to keep children safe on the road by enrolling transporters on Vitality Drive to help them drive well.

The programme impacts thousands of transporters and children in the Western Cape area and has been successful at creating safer pedestrians.



Number of children taken to and from school
Over
18,000



Number of transporters
1,000



0%
Fatalities to date

Drivers who are part of the initiative have shown good driving practices, achieving a 100% safe driving record in 2023. It is worth noting that there have been no deaths since the start of the initiative.

Within 12 to 24 months of a driver joining the programme, there has been:

82%

Reduction in harsh acceleration

63%

Reduction in harsh braking

81%

Reduction in harsh cornering

Source: Discovery Insure data

The road ahead



The challenge of high road fatalities in South Africa is a complex one. As demonstrated, there are various factors that influence accident risk, including human factors, vehicle factors as well as environmental factors.

So, we need to have a multifaceted approach to address this by contributing to creating safer drivers, safer roads and safer pedestrians. We can help create safer drivers through Vitality Drive. Pothole Patrol helps to create safer roads and Safe Journey to School creates safer pedestrians.

Expanding Pothole Patrol and Safe Journey to School across the country

Pothole Patrol currently operates in the Johannesburg area and Safe Journey to School in the Western Cape area. We aim to extend the positive impact of these initiatives by expanding them to the rest of the country. We believe that extending these initiatives will help to create safer drivers, safer roads and safer pedestrians in South Africa.

