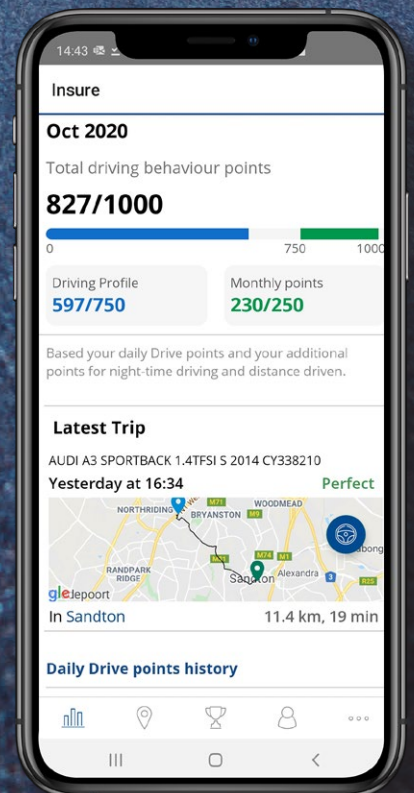


# The journey of creating a nation of great drivers.

A VITALITY DRIVE WHITE PAPER

June 2021





# Executive summary

Since its launch in 2011, Discovery Insure has shown incredible success in applying a behavioural-based insurance model to the motor insurance industry.

This is done through Shared-value Insurance, a globally-recognised and award-winning principle. Shared-value Insurance means that all stakeholders (clients, the insurer and society as a whole) benefit as the system improves.

Shared-value in the short-term insurance industry is enabled by Vitality Drive, an incentive-based driver behaviour programme that rewards clients for driving well. Vitality Drive is based on four key concepts: points structure, rewards and incentives for good driving, behavioural concepts and state-of-the-art technology.

This paper explores how the model works through Vitality Drive and how it provides significant benefits to various stakeholders including clients, the insurer and society.

## KEY FINDINGS OF THE PAPER:

### FOR THE CLIENT

- Fuel cash back has been a powerful incentive for the improvement of driver behaviour and, to date, we have paid out over R1 billion to our clients.
- Weekly Vitality Active Rewards are an effective rewards mechanism. Clients who achieve their Active Rewards drive goal every week, improve their driving behaviour 15 times more than drivers that only achieve their goal once in a month.
- By improving their driving behaviour, clients have a 24% reduction in their motor accident frequency.
- Driving behaviour is the most important predictor of risk. By allowing for how someone drives in the pricing model, we are able to price more effectively and charge clients a premium that is truly reflective of their risk. The better clients drive and the more they engage in the Vitality Drive programme, the lower their vehicle insurance premium.

### FOR THE INSURER

- Over time, we are able to retain the good drivers. The effects of incentives for good driving behaviour and the principle of positive selection increases the proportion of good drivers insured by Discovery Insure over time. In the first six years, we saw a 32% increase in good drivers on our book.
- Better drivers have fewer and less severe accidents which leads to claims savings and improved loss ratios for us as an insurer.
  - These savings are used to fund further incentives and rewards for our clients.

### FOR SOCIETY

- If all South Africans were on Gold or Diamond Vitality Drive status, we could achieve a reduction of up to 90% in the number and cost of road accidents.
- Over the years, we have launched various initiatives to help society as a whole. This has allowed us to extend our Vitality Drive programme to benefit more than just our retail clients. Avis SafeDrive takes rewards for driving well to the rental car industry. Our partnership with ChildSafe keeps children safe on the roads on their way to and from school and our partnership with Community Active Protection (CAP) security helps to reduce crime in Gauteng.

# The roots of **Discovery Insure**

*Since the early 1990s, Discovery has provided a client-centric approach that aims to disrupt the markets in which we operate by creating products that fully engage our clients, bring about positive change in their behaviour and offer real value. It stands to reason then, that our core purpose is to **make people healthier and to enhance and protect their lives.***

Through the Vitality wellness programme, we realised that there are four behaviours (physical inactivity, poor diet, smoking and excessive alcohol intake) that lead to four chronic diseases that are brought on by lifestyle habits (cardiovascular disease, diabetes, chronic lung disease and various cancers). These contribute to an estimated 70% of the deaths among the economically active South Africans. Over the years, we have seen encouraging results where, motivated through incentives and rewards, members have significantly improved their health. This has all been through the application of our Shared-value Insurance model that states that all stakeholders, such as clients, the insurer and society as a whole, benefit as the system improves.

Vitality is a global leader in behavioral-based insurance that incentivises healthy living for the benefit of all stakeholders. By rewarding healthy behaviour, clients become healthier and insurers experience fewer claims, improved lapse rates and increased profits. These profits in turn fund further incentives to encourage ongoing healthy behaviour. The result is a cycle which shares benefits between the insurer through increased profits, the clients through better health and rewards, and society through reduced healthcare costs and burden on the economy.

The Vitality shared-value model has seen great success. It now reaches over 20 million people in 25 countries across the world through partnerships with many of the world's largest insurers, including AIA across Asia Pacific, Ping An in China, Sumitomo in Japan, Generali in Europe, John Hancock in the US, and Manulife in Canada.



## DISCOVERY INSURE'S VISION

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*Discovery Insure protects people and their possessions, offering them the most comprehensive and innovative insurance at the lowest long-term cost. We use powerful incentives and telematics technology to reduce risk, improve driving behaviour and offer advanced safety features, thereby creating safer roads for all.*



In March 2011, the UN General Assembly officially proclaimed the Decade of Action for Road Safety with the aim to reduce the number of deaths on the road each year by 1.3 million. At the time, road accidents killed more people around the world than malaria and were the leading cause of death for young people ages 5 to 29.<sup>1</sup>

At the time, South Africa had:



the third highest road deaths per annum with **33.2 road deaths per 100 000**.<sup>2</sup>



over **10 000 fatal crashes** with over 13 000 fatalities for the year ending 31 March 2011.<sup>3</sup>



over **400 000 unroadworthy vehicles** on the road.<sup>3</sup>

In addition, the South African road network is approximately 750 000 km in length which is the **10th longest network in the world** and represents one of the largest public infrastructure investments. This is especially important in South Africa where less than half the roads are paved and tarred and the country relies heavily on road transport for the movement of goods and people.

These statistics paint a clear picture of South African roads and the importance of road safety for all. Having garnered well over a decade's experience in incentive-based, behavior-change led insurance, we saw an opportunity to disrupt the market by applying shared value to the short-term insurance industry. In 2011, Discovery Insure, the first telematics-based vehicle insurer, was launched with a very simple but important core purpose:

**to create a nation of great drivers.**

<sup>1</sup> <https://www.who.int/news-room/fact-sheets/detail/road-traffic-injuries>

<sup>2</sup> <https://www.theguardian.com/global-development/poverty-matters/2011/may/11/most-dangerous-roads#data>

<sup>3</sup> <https://www.arrivealive.co.za/documents/March%202011%20Road%20Traffic%20Report.pdf>





We have seen that there are **three trends** that underpin the ever-increasing relevance of our Shared-value Insurance model. These three trends are behavioural nature of risk, a technology-enabled world and the requirement of companies to be socially responsible in their activities.

## 01 THE NATURE OF RISK IS BEHAVIOURAL

The nature of risk being behavioural is a key insight to the Shared-Value model as it demonstrates that if we can influence and improve human behaviour, we can reduce the risks that people face. This will not only benefit clients, but also us as an insurer and society as a whole.

**Driver behaviour, how a person drives their car, is the main cause of accidents and motor vehicle fatalities,** irrespective of the safety of their car and the effect of the environment. 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 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

No matter how safe the car is or how good the weather, road conditions, traffic signs and regulations are, if the driver makes a significant error, an accident will most likely occur. Despite most drivers having had formal driving education, they are still prone to human error and poor judgement and they may display poor driving behaviour, which increases their likelihood of causing an accident.

In addition, through client surveys, we noted an inherent overconfidence bias when assessing one's own driving ability, with over 80% drivers believing their driving is excellent. Our statistics prove otherwise and show that only 33% of drivers are good or excellent drivers. We realised that drivers need a tool or mechanism that would effectively encourage them to improve their driving behaviour and to maintain this improvement over time.





## 02 AN INCREASINGLY TECHNOLOGY-ENABLED WORLD

Vehicle telematics includes collecting driving information and transmitting and processing the information for various purposes. Telematics technology enables drivers to understand how they drive. The evolution of telematics in the areas of driver behaviour and vehicle safety allow insurers to gather rich customer insights and provide better benefits and services to their clients. Telematics-enabled technology has helped us understand the forces that act on a vehicle, such as acceleration, braking and cornering and how the driver's unique driving style affects the vehicle.

In 2011, usage-based insurance (UBI) and the use of telematics was a new trend. Since then, there has been exceptional growth in UBI policies with a **30%** growth in the number of active global UBI policies from 2016 to 2018, with a total of 372 active UBI programmes across 58 countries.<sup>4</sup>

## 03 SOCIAL RESPONSIBILITY

Part of the shared-value model is benefits for society as a whole. Road accident fatalities have a significant impact on the South African economy, with an estimated cost of 3.4% of GDP.

Every year, around the world, approximately **1.35 million** lives are cut short as a result of road accidents and between **20 and 50 million** people suffer from non-fatal injuries, many resulting in disability.

Road accidents and fatalities cause economic losses to individuals, their families and nations as a whole due to the cost of treatment and loss of jobs or income of those affected. It is clear that safe driving should not just be limited to our clients. Therefore, we use intelligent technology to keep others safe on the road, not just our clients.

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<sup>4</sup> Ptolemus UBI Global Studies  
[https://mms.businesswire.com/media/20180726005897/en/669962/5/3454804\\_Infographic\\_thumb.jpg?download=1](https://mms.businesswire.com/media/20180726005897/en/669962/5/3454804_Infographic_thumb.jpg?download=1)



# How to create a nation of great drivers

## SHARED-VALUE IN SHORT-TERM INSURANCE, ENABLED THROUGH VITALITY DRIVE

*At the centre of our shared-value model is **Vitality Drive**, our incentive-based driver behaviour programme that rewards clients for driving well. Vitality Drive uses incentives to encourage better driving behavior, directly reducing the cost of insurance, as better drivers have fewer and less severe accidents. These savings are passed back to the clients through Vitality Drive rewards, as a result creating a self-sustaining cycle, and society benefits as roads become safer.*

Since the launch of Vitality Drive in 2011, we have gained valuable scientific insights about incentivising and rewarding driving behaviour. This has equipped us to identify areas of improvement and constantly enhance our Vitality Drive programme to create the greatest value of our clients.

## The four concepts underlying the Vitality Drive programme

### 01 BEHAVIOURAL ECONOMICS

The Vitality Drive programme is designed around the concepts and science of behavioural economics which demonstrate that people can improve their driving by understanding how they drive, by having the tools to help them improve, and by having the appropriate incentives to drive better. Behavioural economics refers to the psychological, cultural, social and emotional biases that affect our decision-making processes. We use a number of behavioural economic concepts in Vitality Drive such as:

#### Hyperbolic discounting

Hyperbolic discounting is a cognitive bias where people choose a smaller reward *now* over a larger reward in the future.<sup>5</sup> In addition, the preference for a more immediate reward reduces as it moves further away in time. For example, people would prefer R10 now over getting R15 in a week's time. However, when presented with a choice between R10 in one year or R15 in one year and a week, most people will opt for the latter.

#### Goal setting

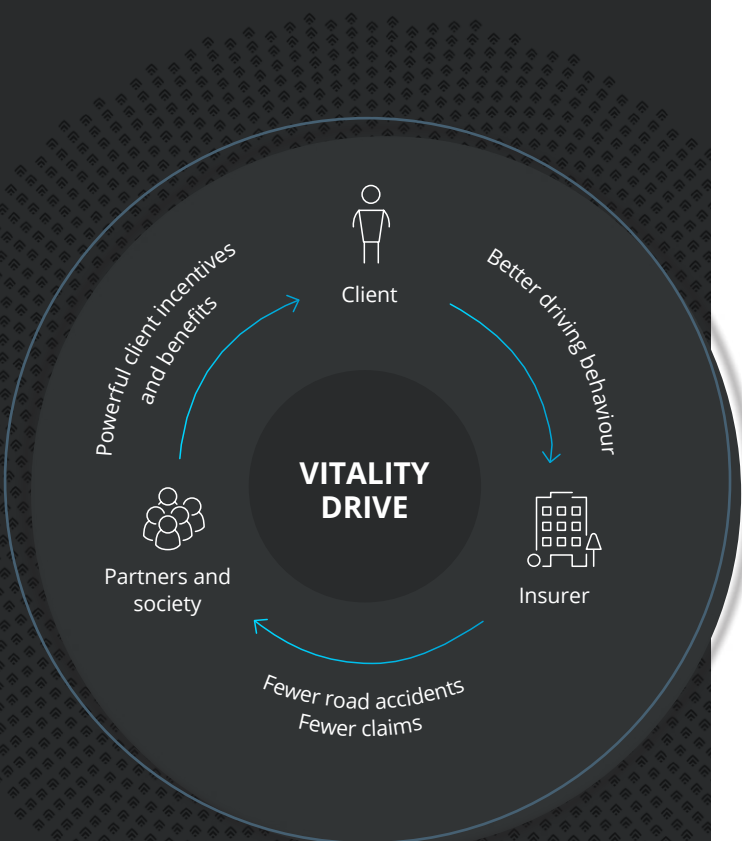
Merely educating clients about living healthily or driving well does not encourage behaviour change, even though people will often recognise the importance of such behaviours. By setting challenging yet attainable goals and providing explicit rewards for achieving the result, people increase their effort to improve the relevant behaviour. This refers to extrinsic motivation where people engage in an activity for rewards rather than for their own sake.

#### Continuous engagement and reinforcement

Studies show that continuous engagement and reinforcement is an effective way to train new behaviours, where good behaviours are rewarded every time they occur.

#### Loss aversion

Loss aversion refers to the tendency to prefer avoiding losses over acquiring an equivalent gain. It is based on the concept that the pain of losing is about twice as powerful as the pleasure of gaining.<sup>6</sup> Loss aversion has been used extensively to motivate people to change their behaviours through penalties rather than rewards.



<sup>5</sup> <http://behaviorlab.org/Papers/Hyperbolic.pdf>

<sup>6</sup> Kahneman Daniel (2011) Thinking, Fast and Slow, New York: Farrar, Straus and Giroux



## 02 POINTS STRUCTURE

Our clients improve their driving through three key metrics: driving behaviour, knowledge and awareness, and vehicle safety. By completing these activities, clients can earn up to 1 600 Vitality Drive points a month.

We allocate more Vitality Drive points towards client's controllable driving behaviours such as acceleration, braking, cornering, driving within the speed limit and cellphone use. This means that as clients drive better,

the more Vitality Drive points they earn. We do this using a scientific, loss-aversion based measurement of driving behaviour.

An experiment done by behavioural economist Dan Ariely showed that **loss aversion is an effective means of motivating participation**. This related to losing points compared to gaining them. We apply this concept through the use of daily Drive points.

EACH DAY, CLIENTS RECEIVE 25 DRIVE POINTS

Clients must drive well to maintain their daily drive points



25



Accelerating smoothly



Braking smoothly



Avoiding speeding



Cornering smoothly



Avoiding cellphone use

Harsh driving events will reduce client's daily Drive points balance, based on the type and severity of the driving event.

At the end of each day, the remaining Drive points contribute to clients weekly and monthly rewards. The better clients drive, the fewer Drive points they lose during the day!

The daily Drive points systems makes the Vitality Drive programme transparent and easy for clients to understand how many points are being deducted for each driving behaviour. This gives clients more control and makes it easier for them to improve their driving behaviour.

VITALITY DRIVE POINTS BREAKDOWN:	
<p><b>Driving behaviour</b> Up to <b>1 100 points</b></p>	<p>Driving Profile (25 daily Drive points x 30 days of driving behaviour) ..... Up to <b>750 points</b></p> <p>Distance points ..... Up to <b>100 points</b></p> <p>Night-time driving points ..... Up to <b>150 points</b></p> <p>Claim-free years ..... Up to <b>100 points</b></p>
<p><b>Knowledge and awareness</b> Up to <b>350 points</b></p>	<p>Online driver assessment ..... <b>50 points</b></p> <p>Driving courses ..... <b>150 points</b></p> <p>EyeGym ..... Up to <b>150 points</b></p>
<p><b>Vehicle safety</b> Up to <b>150 points</b></p>	<p>Passing the Tiger Wheel &amp; Tyre Annual MultiPoint check ..... <b>100 points</b></p> <p>Service history is up to date ..... <b>50 points</b></p>

Monthly Vitality Drive points translate to a Vitality Drive status. The more points clients earn, the higher their Vitality Drive status and the more rewards they get.

Vitality Drive status	Vitality Drive points needed
Blue	0 to 299
Bronze	300 to 599
Silver	600 to 999
Gold	1 000 to 1 600
Diamond	Earn a monthly average of 1 000 or more Vitality Drive points and remain claim free for 12 consecutive months.

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CREATING A NATION OF GREAT DRIVERS

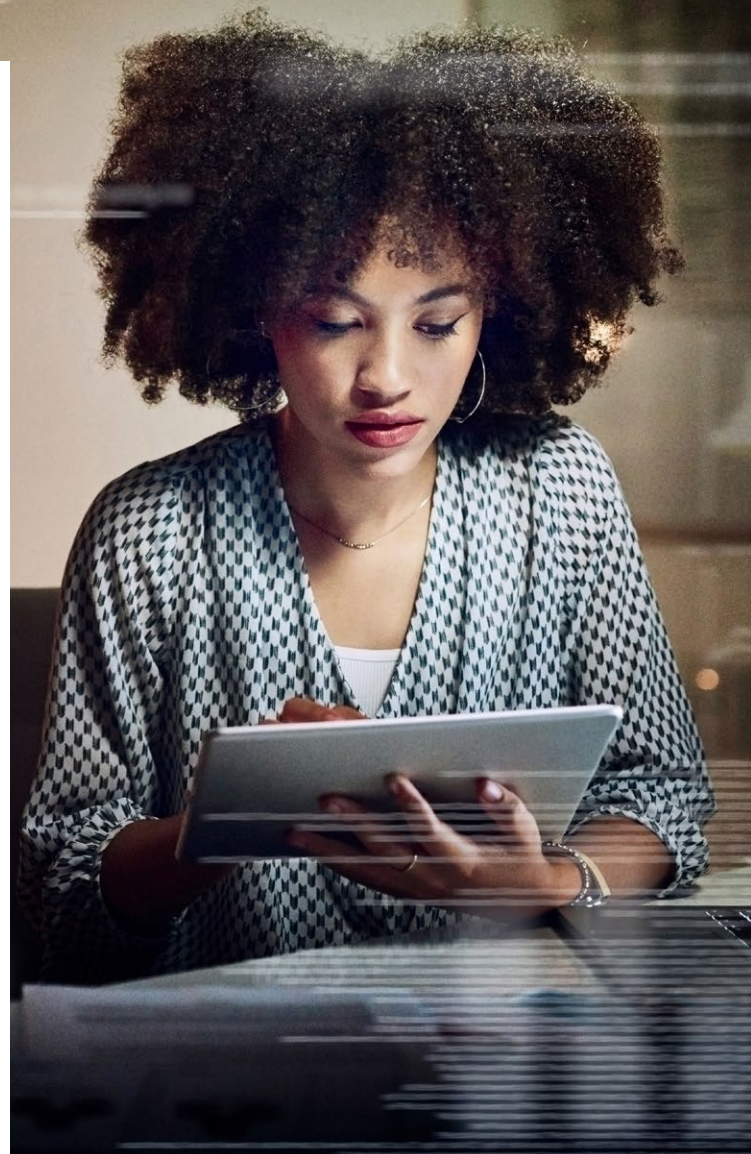
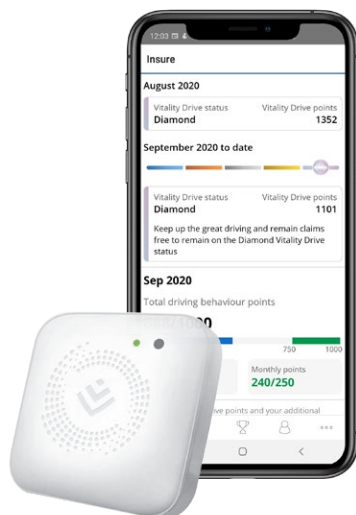
### 03 REWARDS

Vitality Drive uses powerful short- and long-term rewards to encourage sustained engagement and improved driving. Short-term rewards are in the form of weekly Active Rewards where clients can earn rewards such as coffees, smoothies and shopping vouchers for meeting their weekly drive goal as well as up to 50% of fuel spend cash back every month. Driving well also translates to status-based rewards where the higher the client's Vitality Drive status, the greater their discounts on tyres and vehicle maintenance and long-term rewards through lower premiums and even 0% renewal increases for our best drivers.

### 04 STATE-OF-THE-ART TELEMATICS TECHNOLOGY

Vitality Drive uses the latest telematics technology to collect information about our client's driving behaviours. By combining the data from the technology and our insights from behavioural economics, we can apply actuarial algorithms to the driving data to develop a scientific measure of driving behaviour. This is translated to a Vitality Drive status which provides clients with an easy way to understand how well they drive and how they can improve.

Discovery Insure uses smartphone telematics in conjunction with an Internet of Things (IoT) device, which is installed in the client's vehicle, to measure driving behaviour. We have found this to be advantageous compared with using smartphone-only telematics. In addition, our telematics technology allows for safety features such as Impact Alert (which detects a severe impact to the clients vehicle and provides immediate response and medical care, even if we can't get hold of the client).



Our use of telematics has allowed us to collect over **14 billion kms of driving data** which enables Discovery Insure to risk-differentiate, offer targeted benefits, and provide rich rewards and incentives that our clients value.

In addition, we have seen incredible improvement in the driving behaviour of our clients as a result of installing a telematics device. On average, **drivers have a 15% improvement in driving behaviour within the first 30 days**. This speaks to the success of the Vitality Drive model, indicating that behavioural change and improvement starts as soon as clients engage in the programme.



# JOURNEY OF DISCOVERY INSURE TELEMATICS DEVICES

2011

## STANDALONE DQ-TRACK

With the launch of Vitality Drive, we repurposed the already prevalent deep-install, black-box device (which until that point was used only for stolen-vehicle tracking and recovery) for telematics purposes. It enabled us to measure our clients' driving behaviour, and reward them for driving well in addition to providing them with a stolen-vehicle recovery feature.

2013

## INVESTMENT IN CAMBRIDGE MOBILE TELEMATICS (CMT)

In 2012, Discovery Insure started searching for a mobile telematics provider as we were investigating smartphone telematics. By 2013, Discovery Insure finds and invests in CMT, a US-based telematics technology provider that was founded by computer scientists from Massachusetts Institute of Technology (MIT). CMT's mission to make roads and drivers safer around the world aligned with our own core purpose and this led to a natural strategic partnership.

2014

## VITALITY DRIVE SENSOR

In 2014, in partnership with CMT, we launched our award-winning smartphone-enabled telematics device. With the combination of the Vitality Drive Sensor, which is easily installed on the inside of the client's windscreen, and the Discovery Insure app, we are able to give clients immediate, detailed trip feedback that helps them improve their driving.

### Our Vitality Drive Sensor and smartphone app combination provides superior technology and benefits:

- Since the sensor is secured to the vehicle, there is an improved accuracy of driving behaviour data.
- The Vitality Drive Sensor is able to detect elements of a trip without a phone present and logs the trip data for later delivery.
- Detailed, real-time trip feedback shown on a map so clients can immediately see how well they drove during each trip and where they can improve.
- Easy installation that does not interfere with vehicle electronics and allows clients to install the sensor themselves.
- The ability to match the sensor to the vehicle so that it is clear when the sensor is used by the primary driver in the insured vehicle.
- Allows the measurement of cellphone use while driving. Clients are therefore able to earn more Vitality Drive points by not using their cellphone while they drive.
- Cost-effective technology.
- Allows for state-of-the-art safety features like Impact Alert plus an additional safety feature, the vehicle panic button.

### The benefits of the Vitality Drive Sensor over the standalone DQ-Track means that clients:

- Drive better: clients earn on average 11% more Vitality Drive points for their driving.
- Earn more rewards: clients earn 18% more fuel cash back every month.

### Our Vitality Drive Sensor has also been internationally recognised:

- The Most Innovative New Digital Product and Overall EMEA Digital Champion at the 2015 Gartner Financial Services Cool Business Awards in Barcelona in 2015, proof that it is a digital solution that has global relevance.
- 2018 Celent Model Insure Award in the Innovation and Emerging Technologies category.
- Best Commercial IoT solution in the 2019 MTN Business Internet of Things (IoT) Awards.

We have now also enhanced the Vitality Drive Sensor with stolen-vehicle recovery (SVR) technology giving rise to Crowd Search, our new state-of-the-art wireless tracking device that gives clients the best of both devices. This new innovative device gives clients all the benefits of the Vitality Drive Sensor including app functionality, the vehicle panic button as well as the stolen-vehicle recovery that is more effective than our standalone DQ-Track. In the event of a theft, clients contact our call centre to initiate recovery services. The Crowd Search Sensor in the vehicle then connects to our extensive wireless network which allows us to find its location.

2018

## CROWD SEARCH SENSOR: THE BEST OF BOTH WORLDS

# The results: shared-value in action

*The Vitality Drive programme has enabled behavioural change and over the past 9 years, we have achieved exceptional results and seen success for all stakeholders in our shared-value model.*

BENEFITS TO ALL STAKEHOLDERS:

**CLIENT** - INSURER - SOCIETY



## Amazing rewards and value given to our client

### Fuel cash back

Clients can earn up to 50% fuel cash back, up to a maximum of R800 a month, on their qualifying fuel spend. The cash back percentage is based on the client's plan type, whether they have added home insurance to their plan and whether their car is in roadworthy condition.

We have seen that our fuel cash back benefit has been an exceptional incentive for driver improvement and to date, we have provided our clients with exceptional value by paying out over **R1 billion** in fuel cash back.

### Uber

Discovery Insure is committed to keeping our clients safe on the road. Our data shows that drivers are seven times more likely to have an accident while driving late at night when compared to other times during the day. During these times, there is decreased visibility, it is harder to focus and there are more impaired drivers on the road. This is why our clients have access to safe travel options with Uber – they can get up to 25% off Uber trips. Looking at Vitality Drive data over a 12-month period, there is a reduction of 15% in night-time driving after activating the Uber benefit.

Since January 2015, we have paid over **R25 million** in Uber discounts.

### Tyres funded through the Insure Funder Account (IFA)

The Insure Funder Account allows clients to double their monthly fuel cash back. If clients choose this option, for every R1 deposited by the client into the IFA, Discovery Insure will match their contribution by R1. Clients can use their IFA to fund their vehicle excess as well as fund up to 100% of their new tyre purchases from Tiger Wheel & Tyre.

Clients have funded over **R13 million** in tyres using the IFA, since June 2018.

### Bosch car servicing and maintenance discounts

In December 2018, we extended the Vitality Drive discounts to help clients keep their cars in roadworthy condition. Clients can get up to 20% off when they take their vehicle to Bosch for servicing and maintenance based on their Vitality Drive status.



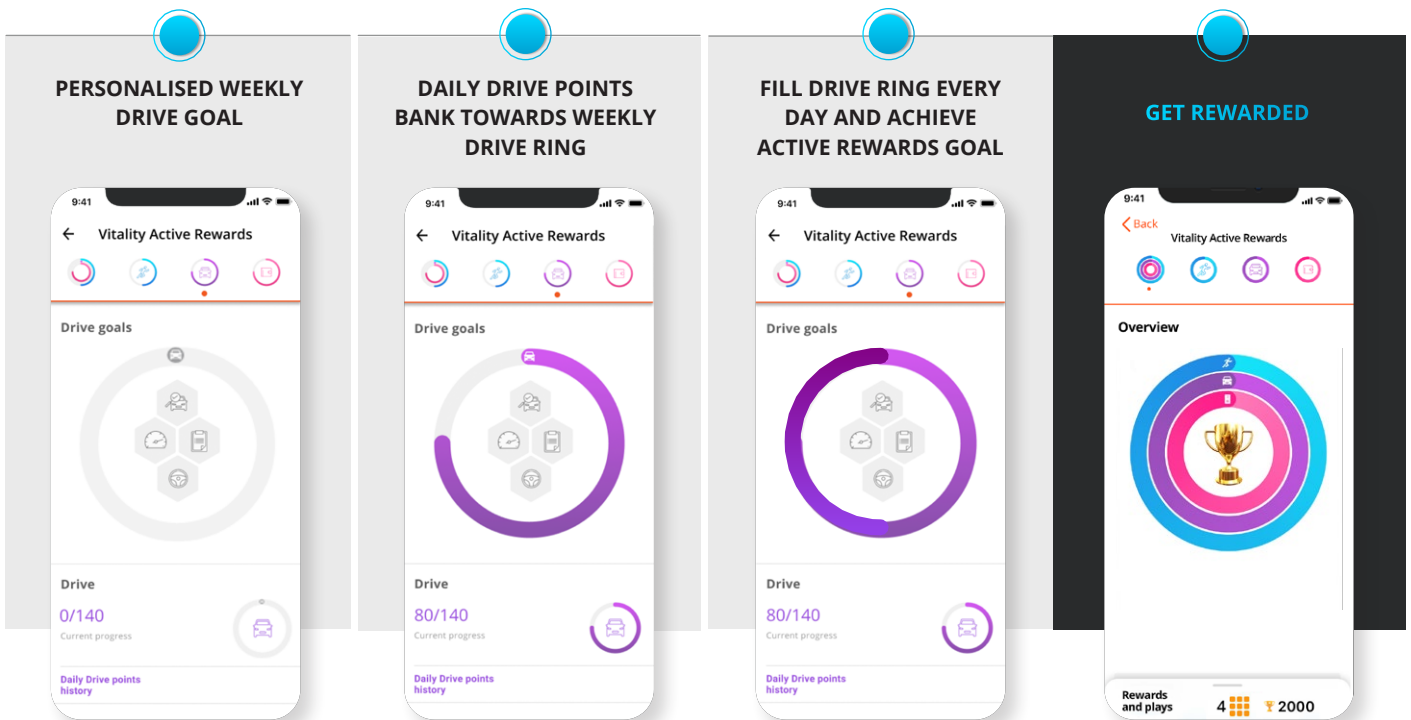


## Active Rewards

In September 2015, Discovery introduced Vitality Active Rewards, a behavioural-change rewards system that uses goal-setting and micro-rewards to create habit formation around physical activity and driving behaviour. By achieving their goal, clients can choose from a range of rewards on the app such as smoothies, coffees, meals, shopping vouchers and more.

We have seen that Active Rewards are an effective rewards mechanism: **Clients who achieve their Active Rewards drive goal every week, improve their driving behaviour 15 times more than drivers that only achieve their drive goal once in a month.**

With the knowledge of the effectiveness of Active Rewards on driving behaviour, we recently enhanced the Active Rewards drive goal to be more personalised and achievable to further improve driving behaviour.



Clients receive weekly personalised Active Rewards drive goals, based on their driving behaviour.

Every day is an opportunity for clients to drive well and fill their drive ring.

Clients close their drive ring to earn their Active Rewards goal

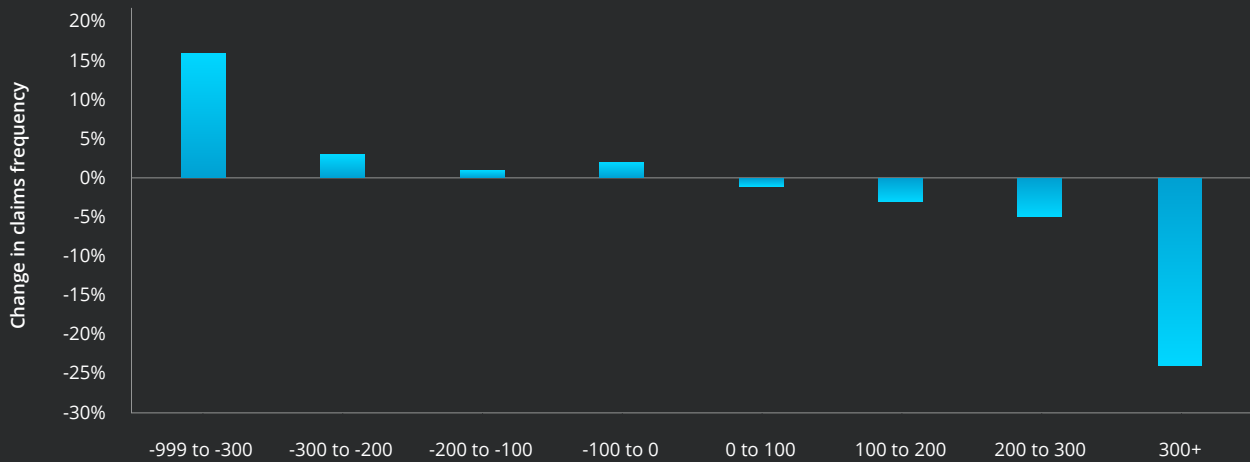
Clients earn a play on the Vitality Active Rewards gameboard where they flip a tile to reveal Discovery Miles. Discovery Miles can be spent on coffees, smoothies, meals and entertainment or save them for higher value rewards like shopping, travel and vouchers.

**To date, clients have achieved over 10 million Active Rewards drive goals**

## Driving behaviour

By combining our telematics data with our claims data, we are able to more accurately predict accident risk. We see that clients who drive better (as indicated by their driving scores) are less likely to get into an accident. Clients who improve their driving behaviour score by more than 300 points in one year, have a **24% reduction in their motor accident frequency**, showcasing the efficacy of the model.

Change in motor accident frequency by driver behaviour change







Driving behaviour is 96% more predictive of risk than claims history. Therefore, by combining driver behaviour data with claims history, we can more accurately predict clients' actual risk profiles and charge more appropriate premiums. This means that the better clients drive, the lower their long-term premium.

## By understanding how people drive, we can charge lower premiums

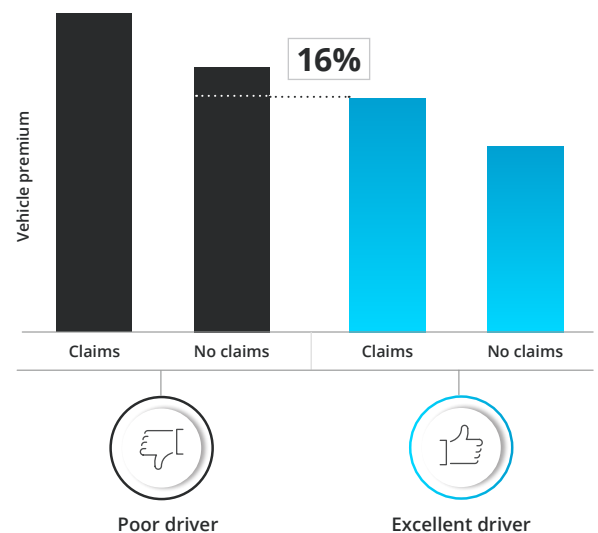
By using our telematics technology and access to large amounts of data, we are able to better price our clients' risk. This leads to more accurate risk-differentiated pricing where clients can improve their premiums in the long-term.

### Driving behaviour is the most important predictor of risk

Traditional insurers use many rating factors at inception of a policy to determine an accurate premium for their clients, reflective of their risk profile. One of the most predictive rating factors used is a client's claims history, which is used to predict clients' future risk. Typically, clients who claim more frequently would have a higher premium than those who do not.

At Discovery Insure, we conducted a three-year study on claims history versus driving behaviour and the effect this has on a client's future claims. Our data shows that better drivers have fewer and less severe claims. We compared driver profiles of poor and excellent drivers to see what would happen to premiums once driving behaviour is accounted for in the premium calculation. From this investigation, we have found that traditional pricing is inadequate. Factors such as age, gender, credit rating and previous claims experience are proxies for risk and what insurers traditionally use to price risk. Once we know how someone drives, this allows for a more accurate pricing of risk, based on actual risk profile, and allows insurers to reduce inherent cross subsidisation. In fact, a **good driver who has claimed before, can pay 16% less than a driver who drives poorly but has not claimed, since driving behaviour is more predictive.**

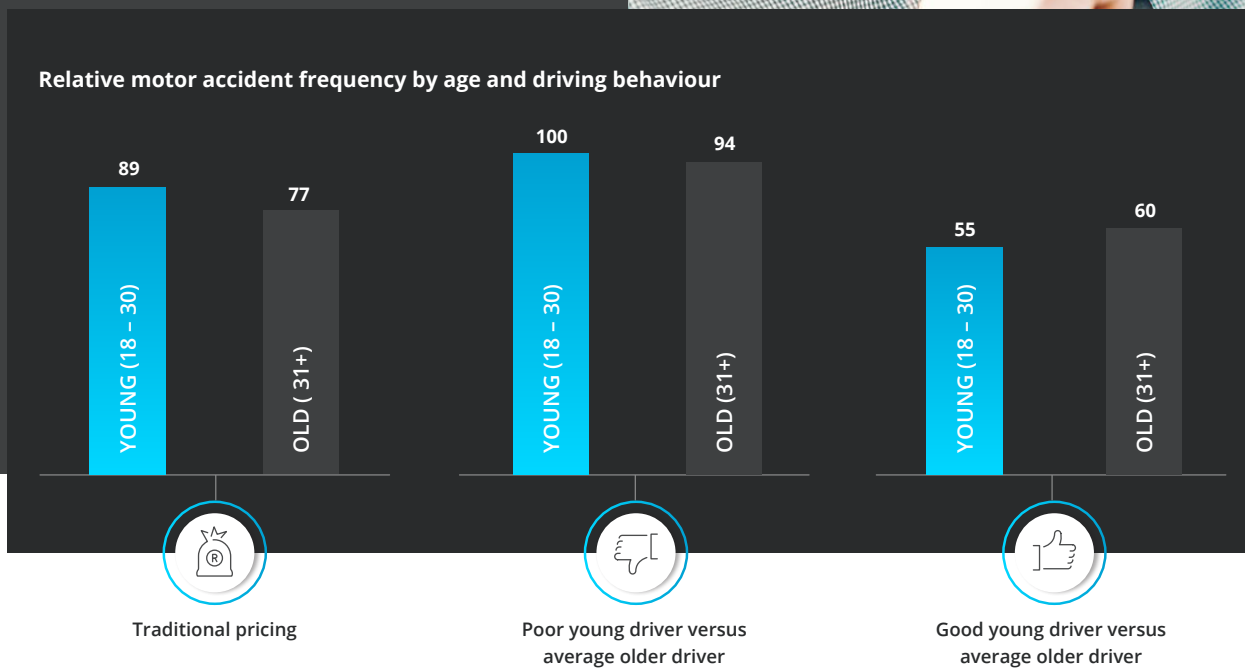
#### Three-year study on claims vs driving score



## INSIGHTS ON AGE

According to traditional insurance models, young adults have a higher accident frequency than older drivers and so insurers cross-subsidise this risk across ages and charge young drivers higher premiums than older drivers.

However, because of the efficiency of the Vitality Drive programme and the incredible results that Discovery Insure has achieved we are in a unique position to differentiate premiums based on a driver's actual risk behaviour. We compared motor accident frequency of young and older drivers to see what would happen to their accident frequency once their driving behaviour is considered:



From the above graph, we see that young people who are good drivers have a lower motor accident frequency than the average older driver considered in traditional pricing models. Therefore, when we include how well a person drives, indicated by the Vitality Drive status, into the pricing model we see that someone in their 20's on Gold Vitality Drive status has a 28.6% lower accident frequency than Bronze drivers in their 50's. This allows us to charge the young, good driver a lower premium than the older average driver to truly reflect their risk.

Through this, we are also able to provide targeted benefits to our clients that reflects their true risk and that meet their specific circumstances.

**Young Adult Benefit (YAB) | Exclusive to drivers younger than 26 and aims to encourage young drivers to drive well.**

By incentivising young adults to drive well, we can help overcome the high occurrence of accidents among young adults on South African roads.

We have seen that drivers on the YAB exhibit **24% better driving behavior** compared to other eligible drivers.

Drivers on this benefit also receive incredible rewards and we have paid out R3.88 million to clients on this benefit between July 2018 and June 2019.

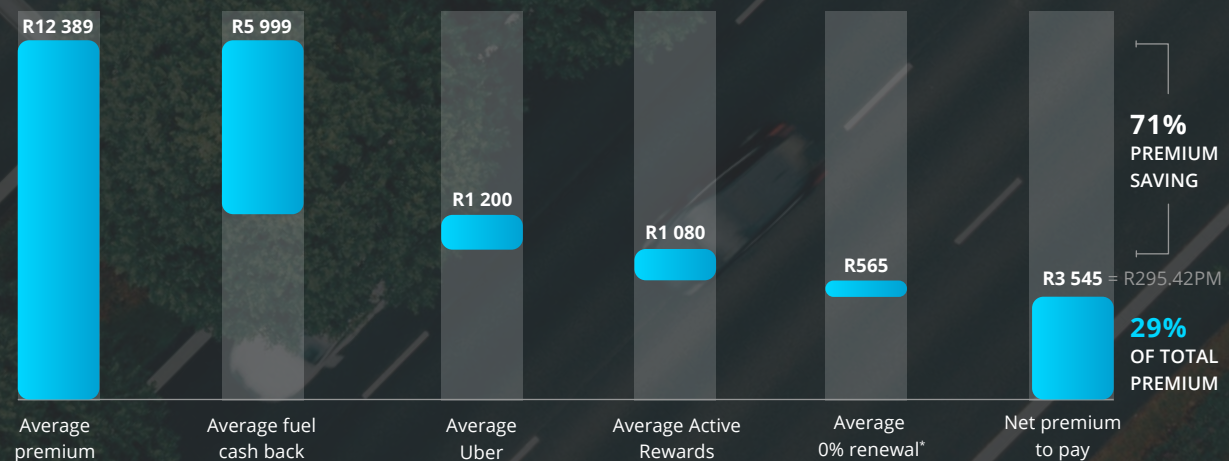




## NET PREMIUM DECREASES WITH INCREASED ENGAGEMENT

Our access to driving behaviour data means that we can better price our clients in the long term as we learn more about how well they drive. The result of this is that the better clients drive and the more they engage with the programme, the more rewards they earn and the lower their long-term premiums which, together, leads to lower net premiums.

Our best drivers earn more rewards in a year which leads to a 71% average premium savings



\*Our best drivers, on Diamond Vitality Drive status, get a guaranteed 0% renewal increase on their comprehensive vehicle premium.



## CLIENT - **INSURER** - SOCIETY

### A unique marketing position leads to positive outcomes

*Traditionally, we see that insurers who offer pay-how-you-drive or pay-as-you-drive insurance often provide clients with premium adjustments or discounts. Premium adjustments alone are not a compelling enough value proposition as they have limited appeal to clients as they face premium uncertainty with punitive increases for poor driving.*



On the other hand, the Discovery Insure offering is centred around two factors: **insurance that rewards clients for driving well and insurance that cares for its clients through valuable, state-of-the-art safety features.**

Discovery Insure and Vitality Drive offer clients a unique value proposition by using explicit rewards and incentives, such as cash back into the drivers account. Rewards are what motivate clients to change their driving behaviour. Rewards programmes are not penal, offer premium certainty and are often more valuable than most premium-adjustment programmes.

Emotionally compelling rewards are effective as they are more likely to be remembered and more likely to influence behaviour change.<sup>7</sup> Our up to 50% fuel cash back is an example of such a reward. Fuel is an emotive expense. Small changes in the fuel price invokes large, negative reactions from consumers. The fuel price has increased by over 15% over the past five years and, with up to R800 in fuel spend back each month, Vitality Drive offers clients the highest cash back on fuel spend.

This unique marketing positioning along with our bespoke technology-enabled insurance product platform means Discovery Insure is now the fastest growing insurer in the short-term insurance industry, earning us the place as the top fifth largest insurer in the South African industry in under 10 years. In addition, over 90% of clients choose the Vitality Drive programme to benefit from the powerful rewards and a lower long-term premium. As a result, prospective clients see the value of insuring with us and we are able to attract better drivers upfront and also retain them.

<sup>7</sup> <https://theirf.org/am-site/media/using-behavioral-economics-insights-in-incentives-rewards-and-recognition-the-neuroscience.pdf>



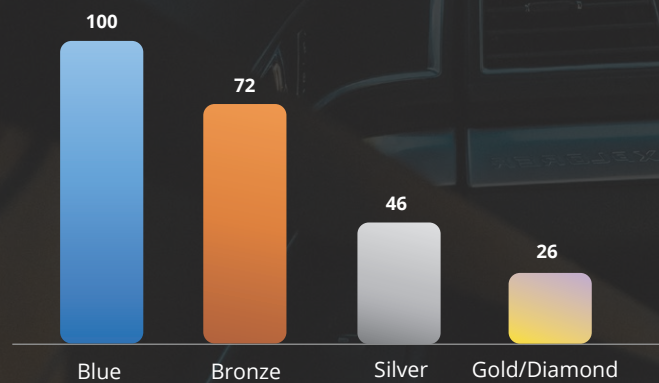
Over time, we're able to retain the good drivers (as these are the ones who are receiving rewards and benefitting from the programme). As a consequence, the positive durational effect on our book is pronounced as the proportion of good drivers increases.

The more engaged drivers are in the programme, the more value they see. We have seen that as the monthly cash back earned increases, the less likely clients are to lapse.

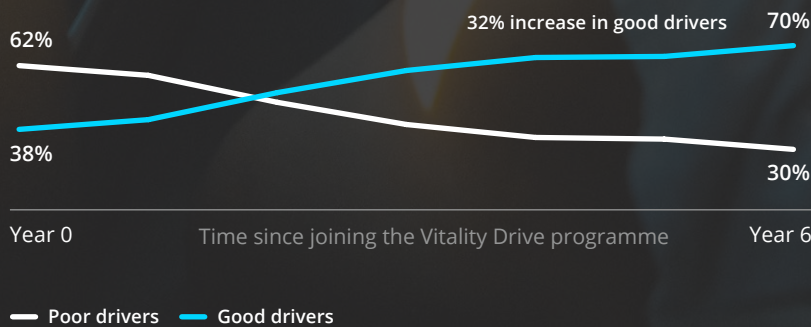
### RELATIVE LAPSE RATE BY AMOUNT OF CASH BACK EARNED



### RELATIVE LAPSE RATE BY VITALITY DRIVE STATUS



### THE PROPORTION OF GOOD DRIVERS INSURED BY DISCOVERY INSURE SHIFTED MATERIALLY OVER THE FIRST 6 YEARS



The effect of incentives for good driving behaviour and the principle of positive selection increases the proportion of good drivers insured by Discovery Insure over time. In turn, this increases savings which are used to provide further incentives to the client.

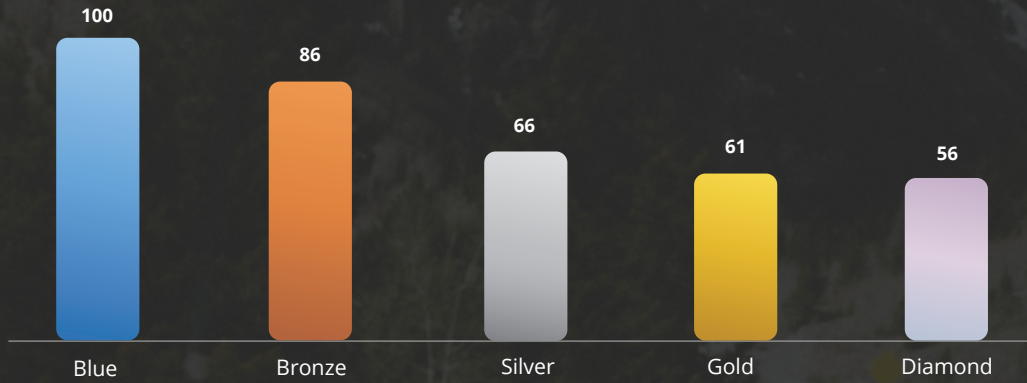


## FEWER AND LESS SEVERE ACCIDENTS

Better drivers have fewer and less severe accidents, which leads to claims savings and improved loss ratios for us as the insurer.

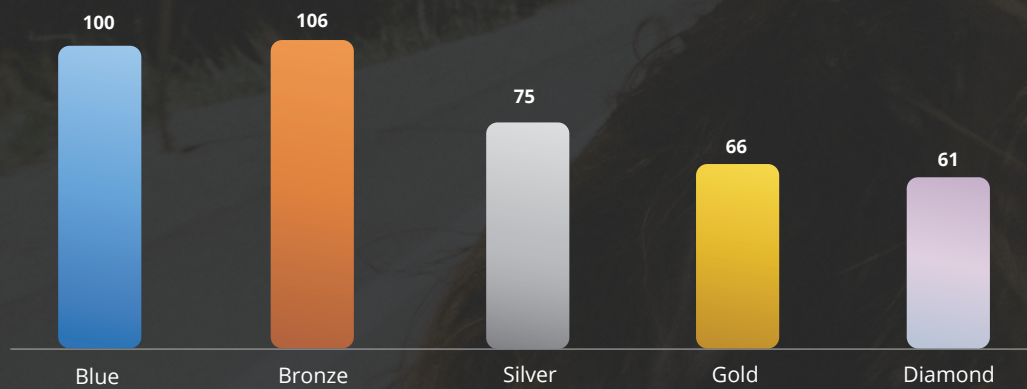
### Better drivers have less severe accidents

Relative average car accident claim by Vitality Drive status



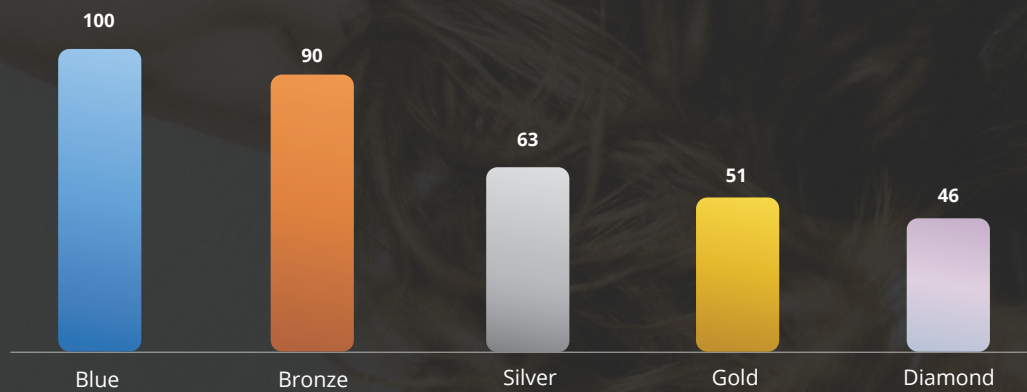
### Better drivers have fewer accidents

Relative number of car accident claims by Vitality Drive status



### Positive impact on loss ratio

Loss ratio by Vitality Drive status





# OPERATIONAL EFFICIENCIES

## CLAIMS ASSESSMENT

Our telematics technology is used holistically across the business and not just for monitoring driver behaviour. The use of telematics and machine learning enables us to reconstruct accidents. This means that claims can be assessed, verified and processed quicker and more efficiently.

Respecting the privacy of our clients and their driving data is a fundamental component on the Vitality Drive programme. We do not use client's telematics data for the purposes of approving claims. We do, however, use the information to verify the time and location of an incident in order to reduce the risk of claims fraud.

Telematics data is also used to generate an automated crash description which is then matched to the client's description of the incident. In addition, the automated crash description provides the severity of the incident, the hit location (where the damage is located on the car) and the speed of the car at the time of the incident.

## 01 Client's claim description

'I was coming from Engen garage in Kempton Park and I was driving to Glen Marie. When we approached the robot, it wasn't working so I stopped to give way to the guy crossing. As I stopped, the person behind me bumped my car. From there, we went to the police to do the report.' Damages: Rear bumper.

## 02 Auto-generated crash description

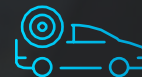
The driver was travelling along Monument Road at 34 km/h at 21:03:35 on 2019/10/23. The driver then began braking prior to the impact. At 21:03:41, a collision occurred at the rear of the vehicle while the vehicle was travelling at 14.0 km/h. The collision event ended at 21:03:43 when the vehicle reached a speed of 9 km/h. The driver did not continue on their trip after the crash event.'



Severity



Hit location



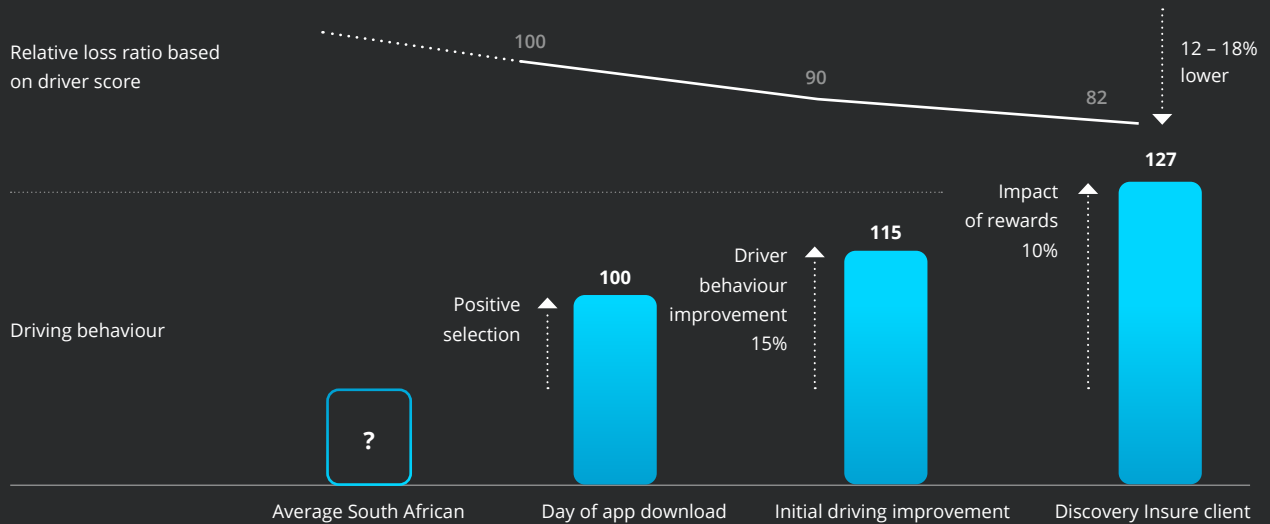
G Force



Speed

# UNIQUE COMPETITIVE ADVANTAGE

The Discovery Insure Driving Challenge allowed all road users in South Africa to prove their driving skills where clients were able to monitor their driving behaviour on the Discovery Insure app, earn prizes and join Discovery Insure. The challenge also provided considerable insights to us as we saw that from the day of downloading the app to joining Discovery Insure, people exhibited significant improvements in their driving behaviour.



## BENEFITS TO ALL STAKEHOLDERS: CLIENT - INSURER - SOCIETY

### THE MORE PEOPLE THAT DRIVE WELL, THE BETTER THE RESULTS

Our shared-value model has resulted in positive driving behaviour change, fewer accidents and safer roads for all. Based on our data analytics and actuarial dynamics, we found that if all South Africans were on Gold or Diamond Vitality Drive status, we could achieve an up to 90% reduction in the number and cost of road accidents. This would save the economy an estimated R120 to R155 billion per annum. In addition, this would result in significant financial and healthcare cost savings and societal benefits.

Over the years, we have launched various initiatives to extend our Vitality Drive programme to benefit more than just our retail clients.

### AVIS SAFEDRIVE

Avis SafeDrive is a partnership between Avis and Discovery Insure, and takes rewards for driving well to the rental car industry. For rental car companies, damage to vehicles is one of the largest expense items, as renters typically do not treat the cars as they would their own. Car rental customers now have access to unique safety features and daily Active Rewards.

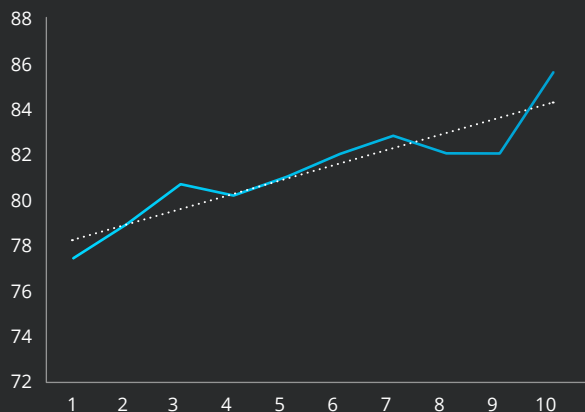
The Avis SafeDrive programme has achieved amazing results with an 8% to 12% driving score improvement within seven days of rental. In addition, the average cost per damage of a standard Avis rental is 3 times that of an Avis SafeDrive vehicle.

Following the success of the Safe Drive programme in South Africa, we launched an international pilot with Avis in the Netherlands in November 2019. This allows Avis rental clients in the Netherlands an opportunity to earn rewards for driving their rental cars well and thereby unlocking daily Active Rewards such as Amazon, iTunes or Starbucks vouchers.

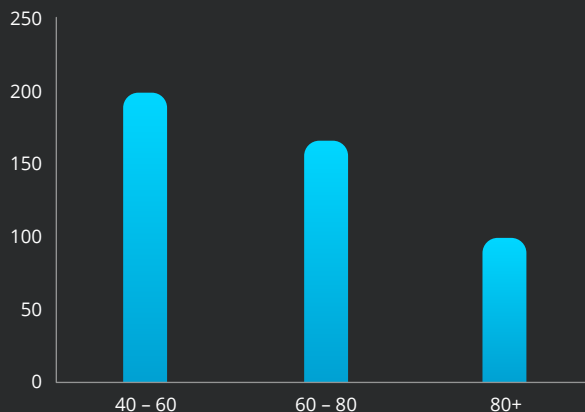


# ACHIEVING OUR CORE PURPOSE WITH AVIS SAFEDRIVE

Average score by day of rental








Relative damage per day by score



## PARTNERSHIP WITH CHILDSAFE

The Discovery Fund's *Safe Travel to School* programme with ChildSafe enables Discovery Insure to extend our award-winning safe-driving technology to help keep children safe on the roads on their way to and from school. The aim of the programme is to encourage responsible driving practices for transport drivers who transport children to and from school every day.

This aim is achieved through:

-  Checking the roadworthiness of the learner transport vehicles
-  Using telematics technology to measure driver behaviour
-  Providing feedback on and rewards to improve driver behaviour
-  Testing drivers' eyes and providing glasses if necessary
-  Training drivers in first aid and defensive driving.

**With over 19 000 children transported every day and 1 000 drivers, we have seen a 14% average driving behaviour improvement and 76% reduction in the average number of harsh events.** This forms part of our commitment to create a nation of great drivers and to support the National Development Plan's road safety objective.

## PARTNERSHIP WITH COMMUNITY ACTIVE PROTECTION (CAP) SECURITY

In 2018, Discovery Insure partnered with a non-profit, community-based security organisation in an attempt to reduce crime in Gauteng. We provided CAP Security with our state-of-the-art telematics technology to enhance their offering and assist in tracking and recovering stolen vehicles. Discovery Insure is also a core sponsor of CAP Security's debriefing team, which will help bolster their crime intelligence capability.



# Looking forward

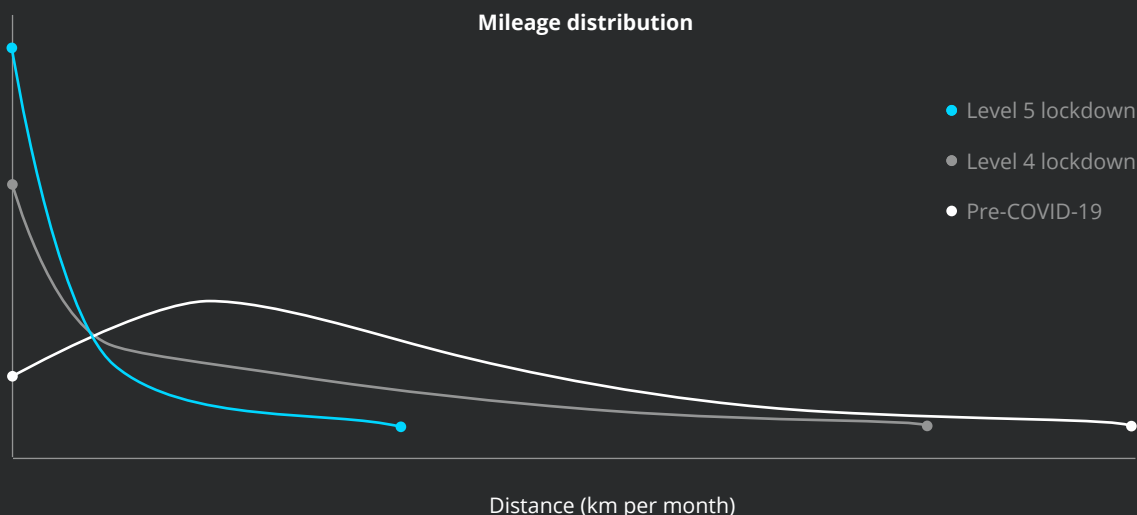
*Discovery Insure is on the forefront of understanding and recognising changes in trends and adapting to them. The Discovery Insure product platform remains relevant in the current landscape to offer valuable solutions that meet the changing needs of our clients.*



## Trends shaping the future of the insurance industry globally

### COVID-19

The COVID-19 pandemic and national lockdowns introduced across the world provided a significant challenge to the short-term insurance industry. Short-term insurers are faced with the opportunity and challenge to meet clients needs in a changing environment due to a pressure on growth as well as the likelihood that clients will remain under pressure in the new future which results in changing client behaviour. At Discovery Insure, thanks to the insights gained from our telematics technology, we saw a significant drop in mileage driven for clients



This gave Discovery Insure the opportunity to create a benefit that was relevant and valuable during a financially-difficult time for our clients. We introduced the Dynamic Distance cash back which rewards clients with up to 25% vehicle premium cash back for driving less during the lockdown. This is one of the most extensive premium relief benefits offered by South African insurers and to date we have paid over R109 million to clients from April to September 2020.



# KEY FOCUS AREAS FOR INDUSTRY TRANSFORMATION AND MEETING CLIENT NEEDS AS A RESULT OF COVID-19

## THE RELEVANCE OF TELEMATICS FOR CAR INSURANCE

The need for price differentiation has made technology and usage-based insurance even more relevant today. Usage-based insurance depends on how much clients drive and how well they drive. Research shows that 45% of clients have shown increased interest in telematics devices because of the belief that kilometres driven will remain low in the foreseeable future.<sup>8</sup>

## GREATER IMPORTANCE OF DATA TO CREATE PRICING DIFFERENTIATION AND PROFITABILITY

The short-term insurance industry is highly competitive with many players in the field. The COVID-19 pandemic has had a devastating effect on the economy resulting in even fiercer competition and differentiation in the market to attract and retain clients. According to a report by McKinsey & Company, pricing innovation is what sets profitable insurers apart and will be a long-term value generator for insurers as they respond to the COVID-19 pandemic.<sup>9</sup>

One of the key factors to competitive pricing is having access to and the ability to analyse large amounts of data. This, along with pricing technology, algorithms and investing in online marketing, means that each new and prospective client becomes a data point. This increases the insurer's database and provides valuable insights that can make pricing models more accurate.

In today's age of ever-evolving technology, such as the use of AI-based and machine-learning pricing tools, insurers have a more accurate insight into data and trends and have the ability to create more dynamic and transparent pricing models. Insurers have the opportunity to significantly improve their pricing strategies that in turn will give them a necessary competitive edge as they face a post COVID-19 market.

<sup>8</sup> <https://www.insurancebusinessmag.com/ca/news/digital-age/covid19-drives-soaring-demand-for-usagebased-insurance-226099.aspx#:~:text=Consumer%20demand%20for%20usage%2Dbased,US%24125.7%20billion%20by%202027.>

<sup>9</sup> The post-COVID-19 pricing imperative for P&C insurers by McKinsey and Company <https://www.mckinsey.com/~media/McKinsey/Industries/Financial%20Services/Our%20Insights/The%20post%20COVID%2019%20pricing%20imperative%20for%20P%20and%20C%20insurers/The-post-COVID-19-pricing-imperative-for-P-and-C-insurers-vf.pdf>

<sup>10</sup> <https://www.financialexpress.com/money/covid-impact-insurers-must-press-the-digital-pedal/1982749/>

## DIGITAL CAPABILITIES

As people adapt to the new norm of living in a world with a pandemic, one of the things that most companies and individuals are likely to adopt is contactless ways of working. Insurers will need to improve their digital communication and create seamless digital claims processes. This involves clearer, more transparent communication, easy-to-navigate online and app services, self-service apps and a truly hassle-free experience for the client so that it is easier for them to engage with the insurer. Customers will look to insurers that offer a journey that is fully digitally enabled: From taking out a policy, premium payments, adding and removing items to cover and claims.<sup>10</sup> Features such as AI-driven chatbots will help respond to customer queries quickly and efficiently. Going digital may also increase tailor-made insurance products, increasing the client value proposition in an industry that traditionally offers standardised products.



# Expansion of Vitality Drive

## SHARED-VALUE IN BUSINESS

Following the success of our offering to the retail market, we launched Discovery Business Insurance (DBI) in May 2018. DBI is a natural extension of Discovery Insure and is committed to creating better businesses by creating and sharing value. The need to venture into the commercial lines space came from understanding the importance of Small, Medium and Micro Enterprises (SMMEs) to the South African economy. **SMMEs contribute 37% of total GDP and 70% of total employment in South Africa.**<sup>11</sup> It is essential to ensure these businesses are adequately covered and to help them manage their risks better. Consequently, these businesses can operate more efficiently and pay lower premiums. This also means that we have a better claims experience and higher margins that we are able to pass back to businesses in the form of rewards through the Vitality Drive for Business programme, which helps boost economic growth, reduce unemployment and create safer roads for all.

The transport sector contributes significantly to GDP with **76% of freight in South Africa being transported by road.**<sup>12</sup> However, the sector faces challenges such as high costs of operation and high fatality rates. The cost of road freight transport in South Africa is over 5% of our GDP. South Africa also experienced 4 times more heavy vehicle fatalities compared to other countries.<sup>13</sup> These numbers show the importance of road safety in the commercial space and Vitality Drive for Business is a driver behaviour change programme designed for businesses. Recognising that both the company as well as the individual driver need to be incentivised to achieve maximum efficacy, we developed a two-tiered approach. **Companies can get up to 30% of their vehicle premiums back every year and drivers can earn weekly Active Rewards for driving well.**

<sup>11</sup> <http://www.seda.org.za/Publications/Publications/SMME%20Quarterly%202019-Q3.pdf>

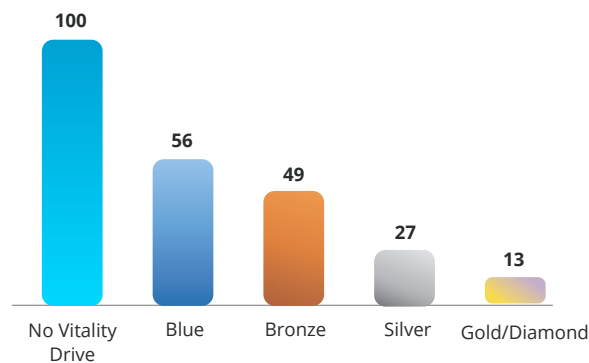
<sup>12</sup> [https://www.transport.gov.za/documents/11623/39906/7\\_FreightTransport2017.pdf/a3f7cb55-8d77-4eea-b665-4c896c95a0d8](https://www.transport.gov.za/documents/11623/39906/7_FreightTransport2017.pdf/a3f7cb55-8d77-4eea-b665-4c896c95a0d8)

<sup>13</sup> [http://www.christopherdesaxe.com/publications/2018\\_HVTT15\\_Nordengen.pdf](http://www.christopherdesaxe.com/publications/2018_HVTT15_Nordengen.pdf)

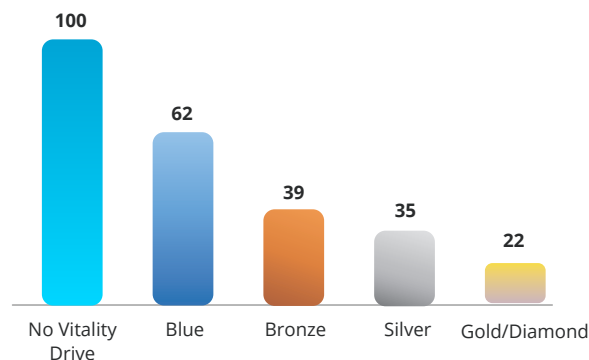


Even during this early stage of our Vitality Drive for Business programme, we have seen encouraging results from Vitality Drive for Business, similar to those we have seen for personal lines. The results show that vehicles driven by better drivers have a lower loss ratio. Our driving data for the period January 2019 to August 2020 shows that vehicles that have the best drivers have a loss ratio that is 87% lower than those vehicles that are not on the Vitality Drive for Business programme

Loss ratio by Vitality Drive for Business status



Claim severity by Vitality Drive for Business status





# LEADS GENERATION THROUGH VITALITY OPEN

Every few years we make Vitality Drive available to the general public. In the most recent iteration, all South Africans were able to participate in the Vitality Drive programme for 10 weeks with the chance to reap the rewards of being a good driver.

Over 60 000 drivers participated in Vitality Open and drove over 97 million km. We saw that 39% of drivers improved their driving over this period and 75% of these drivers considerably reduced their accident risk.

We also leveraged Vitality Open as a leads generation mechanism, as drivers need to provide contact details and opt-in marketing consent to participate. In addition to the competition prizes, participants who subsequently joined Discovery Insure were able to lock in a minimum monthly cash back based on their driving performance during the Vitality Open.





# Conclusion

There have been significant strides since the launch of Discovery Insure, but there is still much to do to achieve our core purpose of creating a world of great drivers. Through the Vitality Drive programme, we have made a significant impact in the driving behaviour of our clients. With advances in technology, data analytics and our expertise in programme design, we are able to gain valuable insights that allow new innovations that can lead to favourable outcomes for our clients and society as a whole.

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## ACKNOWLEDGEMENTS

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Head of Research and Development

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Technical Marketing

### **Precious Nduli**

Head of Technical Marketing and Vitality Drive Engagement

### **Ilan Ossin**

Head of Telematics Technology

### **Anton Ossip**

Chief Executive Officer

### **Karishma Parbhoo**

Technical Marketing

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## REACH OUT TO US

If you would like further information on Discovery Insure's Vitality Drive programme, and the insights contained in this paper please contact Precious Nduli at [PreciousN@discovery.co.za](mailto:PreciousN@discovery.co.za)



