



 DriveScore

The Role of Mobile Telematics in Differentiating the Best (and Worst) Drivers

DriveScore, powered by
Cambridge Mobile
Telematics

 **CAMBRIDGE**
MOBILE TELEMATICS

Foreword

Car insurance has not changed significantly for decades. The role of underwriters and pricing specialists has been to decide who gets covered and how much they will pay. The riskier the individual, the more they'll pay for insurance.

The car insurance industry is ripe for disruption though, and we know that consumers want more control of their data. Traditional telematics, which has been used in one form or another for decades, works very much for the insurer, whereas we at DriveScore are ensuring that it works for both sides of the market

The increasing adoption of mobile telematics has given underwriters a new perspective on driving safety – one that is personalised to individuals and their actual driving behaviour, rather than based on statistical averages. It has also given drivers a chance to differentiate themselves and leverage the power of their data. Mobile telematics has the potential to transform the car insurance industry for both drivers and insurers, with the best drivers easily identifiable and highly sought after.

We set up DriveScore to help good drivers reap the rewards and help insurers better manage risk. Since DriveScore launched in 2021 we have grown to hundreds of thousands of users giving us a unique insight into driving behaviour across the UK and into the needs of UK drivers. We have found that drivers want a new way to buy insurance and want to be able to differentiate themselves based on their actual driving behaviour. We've also found that the DriveScore proposition appeals to safer drivers.

We studied over a billion driving miles and we found that a user's **DriveScore is a very powerful predictor of their likelihood to have an accident.** This has major implications for the car insurance industry, with providers now able to identify better drivers when making a pricing decision. There really is no better evidence of driving risk than actual driving data at point of quote, and that is what we can now deliver at scale.

DriveScore is powered by the world leader in telematics, Cambridge Mobile Telematics (CMT), with whom we are proud to partner on this report.

We are entering exciting times for DriveScore and smartphone telematics as we push the boundaries of underwriting. We hope that this report provides insight into a potential way forward for making car insurance more efficient, more accurate, more profitable for insurers and better value for drivers.



Andrew Hooks
VP
DriveScore

Executive Summary

DriveScore brings personalised driving data to the forefront of the car insurance underwriting and pricing process. Unlike traditional black box policies, DriveScore gives users control over their driving data while creating a free, sustainable model for insurers to harness the benefits of telematics without significant investment.

Our research, based on 1 billion miles of driving data (powered by Cambridge Mobile Telematics), concluded that a driver's DriveScore is highly predictive of their likelihood of having an accident. We found that there is a 6x lift from the best to the worst decile of drivers. In other words, the worst 10% of drivers are six times more likely to crash than the best 10%.

A separate analysis which cross-referenced driving scores with age discovered that scores are variable within each age band: there are young drivers with very good scores and therefore the driving score could parse out safer drivers at any age.

The ability for insurers to split risk by looking at personalised driving behaviour has significant implications for pricing, customer segmentation and claims handling.

DriveScore's research also suggests that the vast majority (around 75%) of DriveScore users have a driving score of 750+ (out of 1000), indicating positive selection in the DriveScore portfolio. 750 is considered 'good' and is the base score for which drivers need to qualify for cheaper insurance.

DriveScore rewards good driving behaviour, meaning users can access discounts on their insurance premiums and other motoring-related expenses after submitting their score. Users can also use the app to gain a better understanding of how they drive and compare against others. As a result, the DriveScore app is quite 'sticky', with users coming back regularly – an average user logs in 11 times per month.

Smartphone telematics allows underwriters to look at fresh driving statistics and factor that in at the quote stage. This means no surprises for either driver or insurer, more accurate quotes, better risk management and better deals for good drivers.



Risk and the development of telematics

Car insurance providers use several factors to work out the price of insurance. There are personal factors, like the type of car someone drives, their age and where they live – these can impact how likely they are to make a claim. And there are external factors, like the cost of parts and labour and hire car provision that can impact the cost of a claim when made.

Insurance providers will look at a range of statistics from an area including population density, education level, the crime rate, how busy it is and the average number of claims (both legitimate and fraudulent) and work out how likely it is that an individual will make a claim.

However, the missing (and yet highly significant) factor is personalised driving behaviour, meaning that most insurers are not yet looking at how safe a driver is before calculating a premium. Even traditional telematics programmes using black boxes require insurers to offer a discount to encourage take-up, but are only able to accurately account for a customer's actual driving risk at renewal.

For too long, the full benefits of telematics have remained untapped. While insurers are interested and aware of the benefits of telematics technology in improving risk profiles and pricing accuracy, it has failed to take off for several reasons:

Firstly, telematics has typically been expensive to operate and integrate into insurance pricing – meaning insurers have focussed on the highest-risk segment of the driving population to justify hardware and installation costs. This has impacted engagement among the wider market.

Secondly, with a black box policy, insurers must price first and measure the risk later, which creates a significant lag in being able to ingest vital driving behaviour data.

Thirdly, this can create a poor user experience, given that drivers must share their driving data before they know what that data will say about them. After that, their premium may eventually be adjusted at point of renewal (or, in the worst case, they may have their policy cancelled altogether).

DriveScore solves these issues – we give users control over their data while creating a free, sustainable model for insurers to harness the benefits of telematics without significant investment.

We believe that good drivers should be able to use telematics to reap the rewards for their careful driving, regardless of their age, where they live or what car they drive.

DriveScore's unique proposition facilitates just that – through telematics technology we allow users to privately track their driving behaviour and access discounted, tailored premiums based on how well they drive from our panel of insurance partners.

DriveScore at a glance

Q: How does DriveScore work?

DriveScore is a free app designed to help good drivers save money on their motoring expenses. After the app has recorded an initial 150 miles of driving it has enough data to calculate a score out of 1000 based on their driving behaviour. A score of 750 or above indicates they are a good (better than average) driver and are likely to get discounts on the price they are quoted by an insurer.

This score is completely private to the user until they choose to use it to access quotes for insurance policies on the DriveScore marketplace.

We are not an insurer and we do not provide our own insurance policies – we connect good drivers with our panel of insurance partners.

Q: At what point is the data shared with an insurer?

We empower users with their own data – users opt-in to share a snapshot of their score and related metrics at the point of accessing a quote from our panel.

Q: How is the score calculated? Does the telematics tech pick up noise?

The score is calculated over a minimum of 150 miles of driving – it is an average snapshot, meaning rare incidents of 'noise' do not count towards their overall score. As the driver continues to drive their score is constantly updated to reflect their behaviour – and many drivers manage to improve their score over time as the app helps them spot opportunities for improvement.



Q: How much of a safety issue is phone use?

With the advent of smartphones comes an additional insurance risk – distraction. DriveScore’s app monitors this behaviour and it is one of the core factors which make up the driving score. We monitor for when a screen is on, the phone is being physically moved and the car is in motion.

CMT’s data suggests that in the UK an average telematics driver will be more or less distracted depending on road types, time of the day and day of the year. For illustration in 2023, 15% of the trips taken in the UK included at least one instance of phone distraction. But at night this goes above 20%, and higher again in the summer.

The impact on safety is severe.

- 34% of drivers were distracted with their phone when they crashed
- Handheld calling increases the average impact speed of an accident by 31%
- As with screen interaction, drivers with the 10% highest levels of phone motion activity are 240% more likely to crash.
- The drivers who make the most handheld phone calls are 135% more likely to crash
- As a comparison, drivers who hard-brake the most are 70% more likely to crash.

Q: What are the benefits for consumers?

DriveScore rewards good driving behaviour, meaning users can access discounts on their insurance premiums and other motoring-related expenses after submitting their score. Users can also use the app to gain a better understanding of how they drive and compare against others. A bit like fitness trackers, they can track how they’re doing and keep a good score or improve it over time.

We empower users with their own data, giving them a free score and a marketplace to access products pre-approved for them based on their driving behaviour and risk.

This is an entirely different proposition to traditional insurance telematics – though it measures the same data. Nowhere else can drivers get their score privately and understand how they compare before engaging with an insurer to get a quote.

Q: What are the benefits for insurers and brokers?

Insurers have access to a snapshot of a potential customer’s driving behaviour, meaning they can underwrite and price as accurately – and competitively – as possible at the point of sale on DriveScore’s marketplace.

What makes up a score

- ⚠ Harsh acceleration
- ⚠ Hard braking
- ⚠ Hard cornering
- ⚠ Distraction – phone motion
- ⚠ Speeding



Q: What costs are involved for insurers/brokers? How do they go about accessing the platform/tech?

We have removed as many barriers to entry as possible for insurance partners – it is quick, free and simple to join our panel. Our technology has been built with ease of integration in mind. In doing so, our data is available through software houses like CDL and is available to all Vast Visibility partners through their existing integrations.

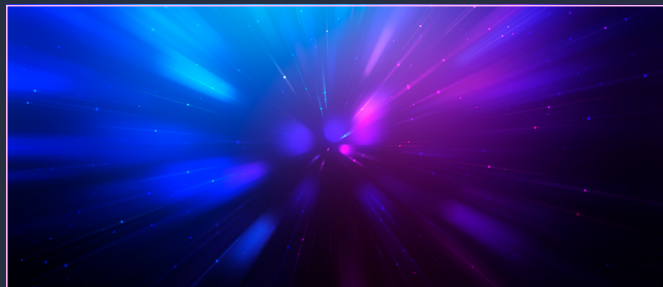
Q: Is there potential that a user could 'game' the proposition to present a false score and be quoted a cheaper price?

Thanks to the measures we have in place, gaming behaviour is very rare and fewer than 1% of users show any signs of manipulation.

DriveScore lets users reclassify a trip (for example, if the user was a passenger at the time) to help train the app to become more accurate and over time to identify their driving behaviour as effectively as possible.

Gaming behaviour is very rare, but for peace of mind we provide insurers with the scores that the driver would have got both before and after any manual reclassification to identify discrepancies.

Furthermore, all our users are fully ID verified meaning we know that people are who they say they are, and application fraud is minimised as a result. We monitor logins and app usage on an ongoing basis to ensure authenticity.



What CMT does and how it powers the app

CMT provides comprehensive telematics solutions directly integrated into the DriveScore app. For example, CMT powers automatic trip detection, driver behaviour monitoring, and real-time feedback.

CMT's technology automatically detects the start and end of trips using a combination of sensors from the phone and multiple algorithms. This includes recognising when a vehicle is in motion and accurately identifying the beginning and end of a journey.

CMT then employs advanced machine learning classifiers to distinguish between drivers and passengers. The system uses phone sensors, user history, and driving patterns to accurately classify the user's role during each trip. Additionally, users can manually re-label trips if the system misclassified them.

Each trip is evaluated based on several criteria such as speed, braking, and phone usage during the drive. These metrics are then used to provide actionable feedback to the driver, helping them improve their driving behaviour.

CMT calculates an actuarially validated measurement of the driver's risk, which is highly valuable for insurers to assess and price risk accurately. This scoring model is validated based on claims and the DriveScore data uses telematics collisions to ascertain predictiveness.

What a billion miles of driving data tells us about risk

DriveScore and Cambridge Mobile Telematics analysed more than a billion miles of driving data from hundreds of thousands of DriveScore trips captured exclusively using the smartphone app, and we found some compelling results. In this study,

we were able to capture telematics collisions - the significant accidents which make up most of an insurer's claim costs - and look at how predictive a user's DriveScore is vs their propensity to be involved in an accident.

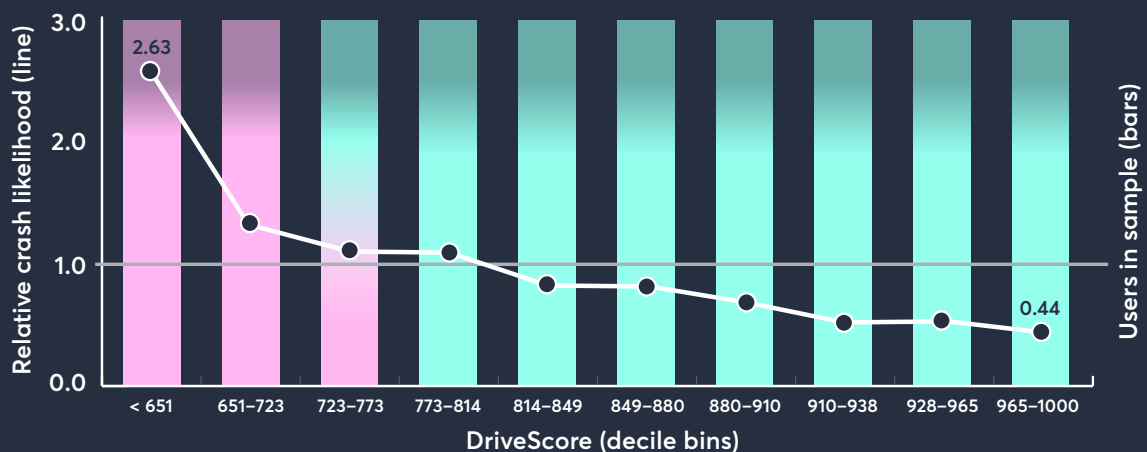


Finding 1 – A driver's DriveScore is highly predictive of their likelihood of having an accident.

- We split DriveScore users into 'deciles' – in other words, we divided the sample into equal groups of 10% of the total, based on their scores. We overlaid that data with relative likelihood to crash and we found that there is a 6x lift from the best to worst deciles of drivers. In other words, the 10% worst drivers are six times more likely to crash than the 10% best drivers.
- We also found that the top 30% of drivers are half as likely as the sample population average to have an accident.

The findings are based exclusively on smartphone telematics collected through the DriveScore app and reflect any trip reclassifications (the 'honoured' score).

6x difference in crash likelihood across deciles

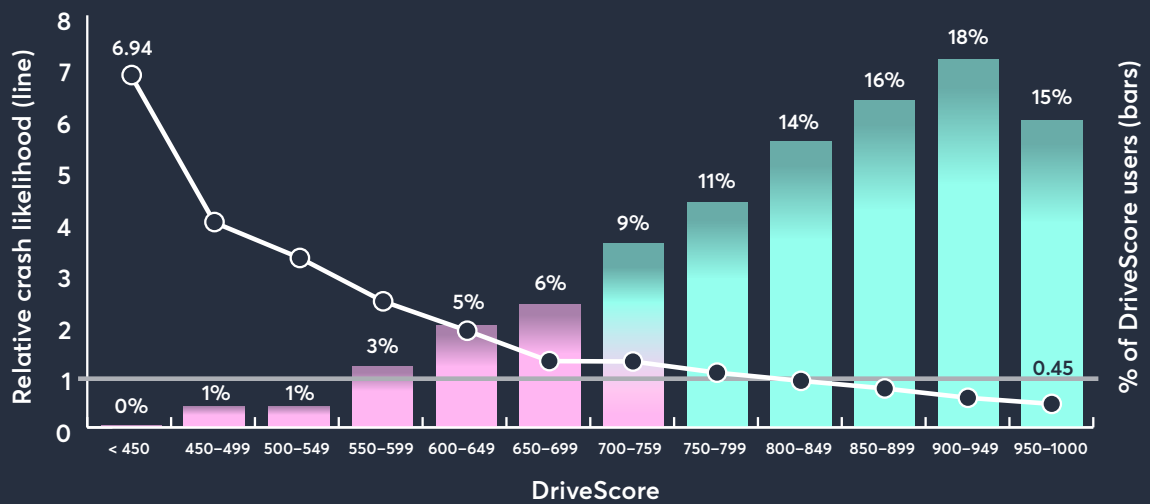




Finding 2 – DriveScore users tend to be lower-risk drivers

The vast majority (around 75%) of DriveScore users have a driving score of 750+ (out of 1000). 750 is considered 'good' and is the base score for which drivers need in order to qualify for cheaper insurance.

DriveScore userbase skews towards low-risk drivers



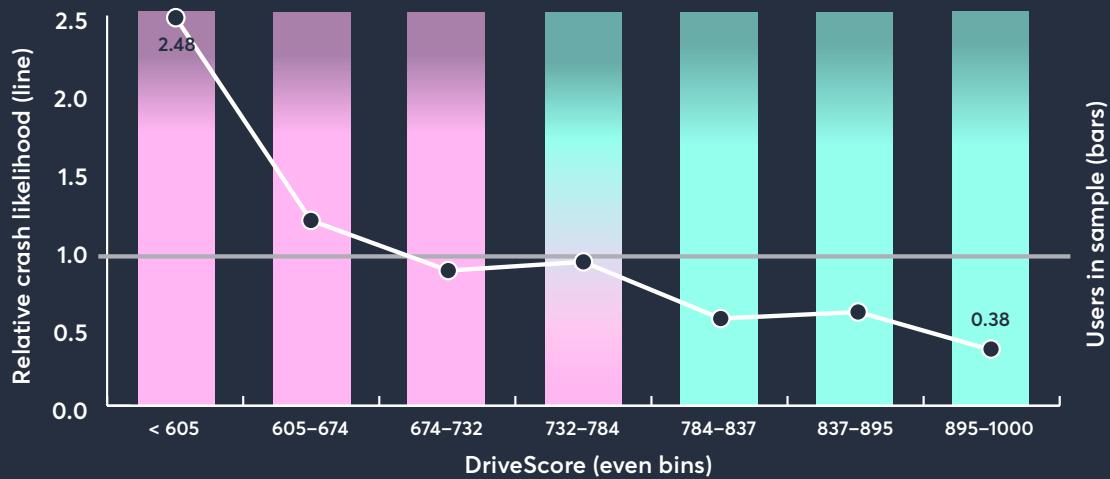
It is safe to assume that DriveScore users are safer than the general driving population due to self-selection. In other words, poor drivers are generally unlikely to choose to download and use an app that analyses driving behaviour. If it were possible to directly compare DriveScore user likelihood to crash with general driver population likelihood to crash we would expect to see that DriveScore users skew to the lower risk end of the risk spectrum.



Finding 3 – Young drivers can be safe drivers

DriveScore and CMT analysed a sample of over 300,000 drivers to determine if there was a correlation between age and unsafe driving behaviour. The conclusion was that while risky and aggressive driving behaviour was indeed more common among younger drivers, there are nevertheless significant numbers of safe, younger drivers with high scores. The likelihood of these drivers to have a crash compares favourably not only to their age-group peers, but also to the wider driving population.

16-29 y.o. Collision Frequency Relative to Age Cohort Mean



Finding 4 – DriveScore users are highly engaged

DriveScore is a uniquely engaging app that our users come back to multiple times throughout the year, with the average users logging in 11 times per month. In addition, almost a quarter (24%) log in at least once a day.

DriveScore users engage all year-round to help monitor their driving and to ensure they get a score that will unlock discounts for good drivers. It is not just something users engage in when in urgent need for insurance.

That implies a very different market and a different set of user behaviours compared to traditional price-driven aggregators (which rely on high-cost marketing to attract transactional users). This engagement in itself is a positive sign for risk as engaged customers are typically better risks.

Many DriveScore users want to monitor and improve their driving, plus they enjoy the added features we have introduced, such as league tables, to compare their scores to friends and family.

The power to split risk at point of quote

While traditional telematics analyses driving behaviour, underwriters still have to price first and measure the risk later. Smartphone telematics, however, allows underwriters to look at fresh driving statistics and factor that in at the quote stage. This means no surprises for either driver or insurer, more accurate quotes and better deals for good drivers.

Mobile telematics allows insurers to lower claims handling expenses by avoiding the worst drivers and targeting more profitable business. While growing fast, the relative immaturity of the market is an advantage in terms of creating new pricing

models and increasing sophistication at low cost and relatively low risk. This could currently be considered a 'beta phase' for mobile telematics and pricing.

Using alternative data in the underwriting process is becoming more common in other areas of financial services. Take, for example, the use of affordability data from spending patterns via open banking, which is increasingly being used to make more informed decisions in the credit industry, opening up loans to people who might otherwise have been declined based on their credit histories (or indeed a thin credit file). The use of mobile telematics in car insurance is part of a growing trend in alternative data having a bigger influence and creating greater efficiencies in financial services.



An underwriter's perspective

Using DriveScore telematics at quote means you can focus on winning profitable business.

50% fewer crashes mean fewer injuries, fewer cases of damage to driver and other vehicles, fewer claims handling expenses and shorter replacement vehicle rentals. As a result, technical premium can decrease by almost 40%.

Other benefits include:

- Positive selection linked to the customer journey to DriveScore
- Automatically avoiding the worst 30% of drivers because DriveScore will not provide quotes to them
- Lower incurred cost and claims handling cost with good First Notification of Loss (FNOL) process

Rudi Van Delm, *Non-Executive Director, ClearScore*



If you or your teams would like to find out more about how you can use DriveScore data in your underwriting and pricing decisions, contact us at:

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