LexisNexis® RISK SOLUTIONS | Insurance

WHITE PAPER

The Societal Benefits of Telematics

The role telematics plays in reducing UK road casualties

APRIL 2019

Five people die in road accidents **every day** in the UK.[1]

Worldwide, road accidents remain one of the top ten causes of death.[2] Car accidents are the biggest killer of teenagers, according to the World Health Organization (WHO).

Executive summary

As a leading provider of data and advanced analytics, LexisNexis Risk Solutions has been supporting the provision of telematics insurance in the UK and in insurance markets globally for nearly a decade. Telematics insurance evolved in the UK as a means to help the youngest, most inexperienced drivers with the highest accident risk gain access to insurance for vital road experience and to incentivise safer driving.

Because telematics insurance adoption in the UK young driver market is nearing mass penetration, we set out to study its impact in reducing road casualties in this age group, and to see what other conclusions could be drawn from this trend.

What we found from our research is that amongst the youngest drivers (17–19 year-olds), road casualties have fallen by more than 35% over the past seven years, compared to 16% for all motorists. In parallel, we examined the penetration of telematics insurance in this age group which has now reached 80–90% market penetration. One of the distinguishing differences between young drivers and their older counterparts is that an estimated 4 out of 5 young drivers are covered by telematics insurance.[3]

Our study marks the first time road casualty statistics have been analysed in direct relation to the exponential 875% growth based on 100,000 telematics policies in 2011 and 975,000 active policies today. Our analysis suggests telematics insurance has done more to cut accident risk than other road safety initiatives targeting the young driver market.

In this white paper, we describe how we conducted our analysis and present a five-point plan to help encourage more motorists to adopt telematics-enabled insurance products.

What's so special about the UK's youngest drivers (17–19) over the past seven years?

35% fewer accidents — whilst the whole motoring population only had 16% fewer.

80–90% telematics market penetration

What do we mean by telematics-enabled insurance programmes?

Telematics-enabled insurance can take multiple forms and is described in multiple ways. For example, usage-based insurance (UBI) is a catch-all phrase that offers consumers differentiation from traditional motor insurance through:

Pay as you drive (PAYD) schemes

Motor insurance premiums are linked to how frequently you use the vehicle on a cost-per-mile-driven basis, based on GPS, accelerometer and sensor data.

Pay how you drive (PHYD) models

The cost of the insurance premium is dependent on how many miles are driven, where the vehicle is driven, what time the vehicle is driven and how the vehicle is driven, using GPS, accelerometer and sensor data.

Telematics provides much of the information in near real-time and allows the cost of insurance to be dynamically managed through driver smartphone applications or other methodologies. The cost of insurance variances combined with driving-style notifications and alerts provide drivers with a strong incentive to improve their driving behaviour, which, if followed, can reduce the risk of both a collision and an insurance claim. Combined, these features provide the basis of telematics-enabled insurance programmes.

Why does telematics insurance work?

The driving factor behind telematics effectiveness is the Hawthorne/Observer effect (measured originally in factory worker productivity), where people behave differently if they think they are being observed. This same principle applies when a person is driving.

People that apply for telematics policies generally do so knowing their driving will be monitored and are comfortable with this idea. As such, there is an element of self-selection in why telematics insurance programmes work.

The cost of insurance is also a motivation factor. There is now a significant gap between the prices of telematics-enabled insurance and standard policies. The consumer's driving score has become intrinsically linked to price, and the consumer knows that if the driving score is not within the tolerances provided by their insurer they run the risk of paying more or their policy being terminated.

About the research

LexisNexis Risk Solutions worked with Consumer Intelligence Ltd to conduct a survey of 3,100 UK motor insurance purchasers. We wanted to understand their attitudes, opinions and preferences for telematics-enabled motor vehicle insurance policies.

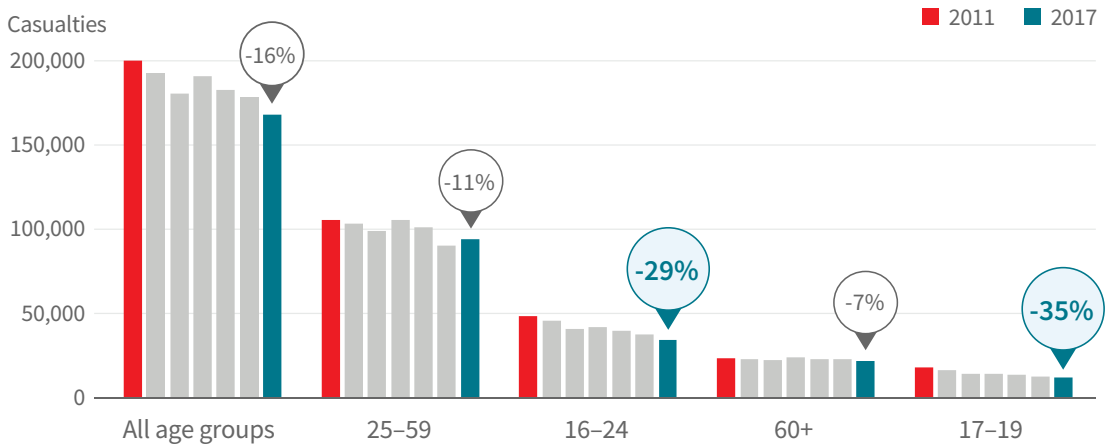
We also wanted to gain a granular understanding of what it would take for consumers to buy telematics-enabled programmes and what main blockers (if any) exist today. From this, we endeavored to calculate if there is mass-market potential for this innovative technology.

Methodology

In September 2018, the UK Government released its annual Road Safety Statistics.[4] Using this data and comparing the road casualty statistics with those from the past seven years, we set out to see whether we could first see a fall in road accidents in young drivers and then if we could attribute this to an increase in telematics policy penetration in this age group.

Figure 1. Variances in car casualties by age group

Seven years of car casualty analysis — *significant variances by age group*



Road casualty rates have broadly fallen

For the purposes of the research, the casualties in Figure 1 are segmented as "slight," "serious" or "killed." The statistics are gathered from the police and hospitals, and are broadly consistent in format as part of the ONS (Office for National Statistics – Stat 19 package).

We first looked at this trend in the context of the volume of vehicles on the road and the number of UK licence holders. We found the volume of vehicles in use has increased year-on-year. There are 3.3 million (10%) more vehicles on the road since 2011, and 800,000 (7%) more driving licences held across all ages since 2012. Therefore, across the motoring population, road casualties have decreased as motor traffic levels have increased.

We believe the broad reduction in road casualties is attributed to a combination of factors such as weather conditions, holiday timings, new car safety systems, improved road design, speed cameras and traffic-calming measures.

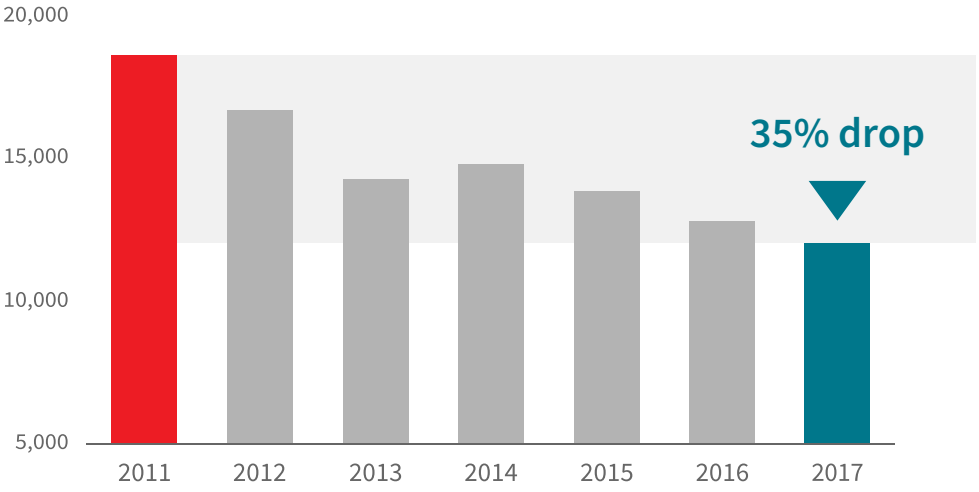
Road traffic casualties have fallen **from 204,000 to 170,993 over the past seven years** even as motor traffic levels increased.

Road casualty rates vary hugely between different age groups

When we drilled down to look at the casualty rates in specific age groups, we found that, since 2011, car casualty rates amongst 17–19 year old drivers have fallen over a third (35%) compared to a 16% decrease for the driving population as a whole. In contrast, in the past year, road casualties have increased amongst more experienced motorists.

Figure 2. Number of casualties: 17–19 year old drivers

Seven years of car casualty analysis young drivers — *casualty rate falls by over one-third*



This **35% reduction** in road casualty rates occurred despite the 10% increase in the number of vehicles on the road (2011–2016) and the increase in the number of registered drivers of all ages, which is up 7% (2012–2017).[5]

We found that, since 2011, car casualty rates amongst 17–19 year old drivers have fallen by more than a third (35%) compared to 16% for the driving population as a whole.

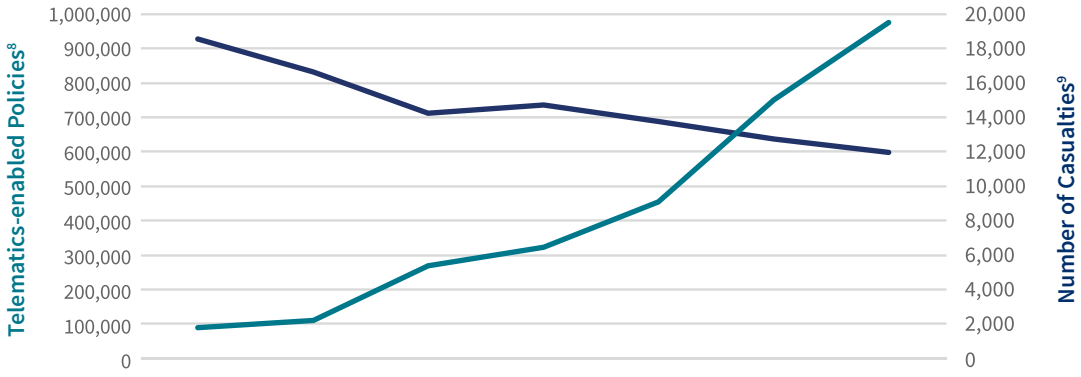
Casualty rates decrease as telematics penetration increases

The latest BIBA research shows that there are now 975,000 active telematics policies in the UK.[6]

Figure 3 below shows that as car casualty rates have decreased, telematics insurance penetration has increased.

Figure 3. Telematics adoption in relation to automotive casualty rates

Telematics adoption vs casualty (car) rates 17–19 years old



	2011	2012	2013	2014	2015	2016	2017
Casualties	18,529	16,620	2,013	14,715	13,774	12,772	11,984
Adoption	90,000	110,000	269,000	323,000	455,000	750,000	975,000

We believe telematics insurance is doing more to cut accident risk than **any other young driver road safety initiative.**

These results clearly imply that the 35% reduction in road casualties among 17–19 year-olds is directly linked to telematics insurance. Telematics adoption is the one major difference between young drivers and their older counterparts. It's estimated that four out of five young drivers have a telematics policy today, a much larger market penetration than can be seen in other age groups.

This study is the first time road casualty statistics have been analysed in direct relation to the exponential growth in telematics policies since 2011 and suggests telematics insurance has done more to cut accident risk than other road safety initiatives.

Why is this analysis so important?

We believe our analysis is important because it not only helps validate the insurance sector's significant investment in telematics by providing firm evidence of the role of telematics in improved road-safety amongst young drivers, it also reveals the mass market potential for telematics beyond the young driver market.

This analysis is also timely, as the methodology and classification of road casualty statistics collection by the UK Police is changing and may make historical trend comparisons much harder to do in the future.

Most insurers see loss ratio improvements on the UBI telematics component of their book. However, there are multiple factors at play here, including the consumer self-selection mentioned earlier, as well as the impact of policy cancellations when a customer has a consistently poor driving score or multiple speeding infringements.

Technology can help us all drive better

One out of four people will be involved in a road traffic accident. One in one hundred will die as a result.[7] Our analysis shows that telematics insurance can offer a more general benefit by helping to improve people's driving habits.

In 2017 there were approximately 170,000 road casualties in the UK.[8] In 2017, road casualties amongst the wider motoring population of 25–59 year olds increased close to 4% compared to 2016 — a fact that is masked by the reduction in road casualty rates in young drivers. We have seen the impact of telematics on the young driver market reducing casualties by over a third. Were this to be extrapolated across the whole of the population there could be 60,000 fewer casualties. That's 60,000 fewer people visiting hospitals; 60,000 fewer lives impacted by road collisions — all thanks to increased market penetration of telematics insurance policies across all age groups.

If all UK motorists had a telematics policy, we believe drivers as a whole would be better drivers, which could result in **significantly fewer accidents every year.**

Next Steps

Our message to the insurance industry

Telematics can help insurers save lives. Our analysis supports this. The market of 17–19 year-old drivers, where telematics has the deepest penetration, is capped at around 1.1 million drivers. With close to 1 million policies in force today, there is very little room left to grow in this segment.

If insurers remain focused on providing telematics insurance exclusively to the 17–19 year-old or inexperienced driver segment of the market, telematics will remain niche and the societal benefits will be capped.

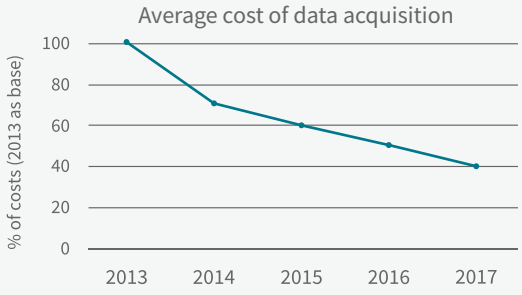
Telematics should be taken to the mass market and made available to everyone. Insurers should develop the products their customers want and communicate their value. Cost concerns should not be a barrier, as advances in data collection methods have reduced the cost of telematics insurance by around 50% over the past three years.

Social obligation

Based on our findings, it could even be argued the industry has a social obligation to offer telematics to the wider motoring population.

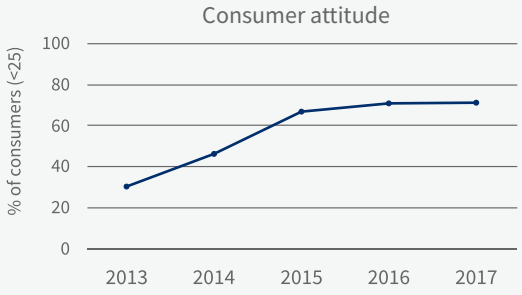
Figure 4. Telematics sales cost trends

Telematics sales up across the industry by eroding the traditional barriers



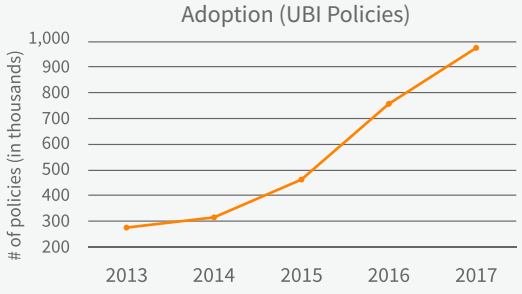
Average cost of data has fallen by 50%

- Reduced SIM data cost
- Smarter logistics and transport
- Smartphone applications (including tethered)[9]



Willingness to enroll up 136%

- Consumer shift in attitude
- Understanding the exchange between driving data and affordable premium[10]

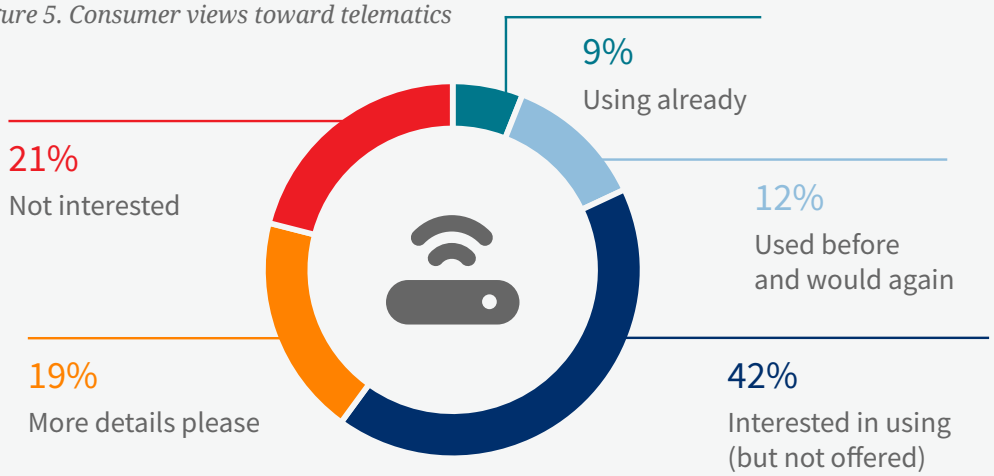


Almost exponential-like growth

- 229% growth from 2013
- 44.5% 3-year CAGR[11]

Consumers want telematics — but we need to build trust

Figure 5. Consumer views toward telematics

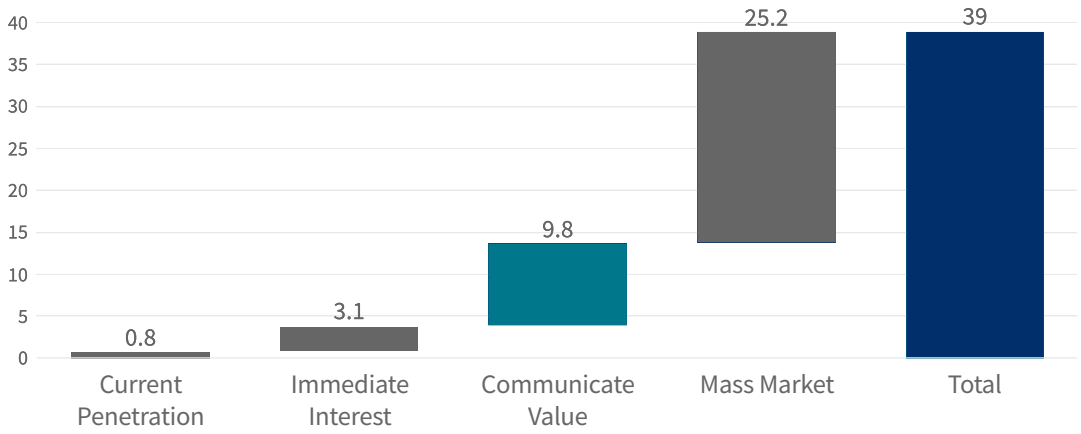


We know consumers want telematics-enabled insurance programmes. Our research amongst 3,000 motorists[12] representative of the total UK motoring population revealed the potential to reach over 9.7 million people interested in purchasing a telematics policy.

However, to succeed in this market insurers must build consumer trust. Trust-building depends on creating clarity around data use. To this end, we would like to see a Memorandum of Understanding between the Association of British Insurers (ABI) and the Association of Chief Police Officers that agrees and clarifies for the consumer which data can be used by whom and when.

Figure 6. Telematics market potential

Consumer research study (in millions)



Additionally, insurers should share stories of lives saved, which they believe are due to the use of telematics, so consumers appreciate and internalize the wider benefit of telematics usage. Finally, insurers and their partners should work together with regulators and consumer groups as well as engage with Government to encourage wider telematics adoption. It is crucial to reducing road casualties across all age groups.

THE SOCIETAL BENEFITS OF TELEMATICS

Our message for Government

We have identified and are now beginning to engage with Members of Parliament (MPs) and sub-committees to create greater interest and support for the societal benefits of telematics insurance. Our findings are being presented as evidence of the role telematics insurance could play in improving road safety.

Incentivise telematics take up

Alongside BIBA and some of the UK's leading motor insurers, we want to see motorists incentivised to enroll in telematics insurance through a reduction in the Insurance Premium Tax.

We would welcome engagement between the Government and the insurance industry to learn how telematics benefits can be extended to more motorists.

Our message to motorists

You can be safer and save money, too. The more people who have telematics policies, the safer our roads will be. Safer roads mean lower claim costs, which means lower premiums for all motorists.

Together we can change the game

1. Push for UBI to be mandated in an effort to save lives
2. Work together to develop a Memorandum of Understanding to help consumers
3. Educate consumers on all the good telematics does — don't let outliers be perceived as the norm
4. Adopt a platform approach that allows for scalable UBI offerings as the market grows
5. Contact us to leverage data that can be used in business cases to expand UBI adoption today

Sources

[1] 1793 in 2017 = 5 road fatalities per day. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/744077/reported-road-casualties-annual-report-2017.pdf

[2] http://www.who.int/mediacentre/factsheets/fs310/en/

[3] 975,000 live policies, over 1m 17–19 year old drivers, DVLA UK Driving Licenses Issued - data.gov.uk

[4] Analysis of Stats 19 data 2011-2017. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/744077/reported-road-casualties-annual-report-2017.pdf

[5] DVLA UK Driving Licences Issued - data.gov.uk

[6] https://www.biba.org.uk/press-releases/biba-research-reveals-telematics-almost-reach-one-million-mark/

[7] BIBA

[8] Stats 19, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/744077/reported-road-casualties-annual-report-2017.pdf

[9] LexisNexis Risk Solutions

[10] LexisNexis Risk Solutions

[11] BIBA annual survey

[12] Consumer Intelligence Research conducted September 2017 of 3025 motor insurance policyholders. Respondents were 50% males, 50% females and representative of the driving population across 7 age groups (17–19, 20–24, 25–34, 35–44, 45–54, 55–64, 65+) and social demographic groups –A, B, C1, C2, D, E.

Classification**	Description	Percentage of Population	Survey Respondents
AB	Higher & intermediate managerial, administrative, professional occupations	22%	38%
C1	Supervisory, clerical & junior managerial, administrative, professional occupations	31%	32%
C2	Skilled manual occupations	21%	16%
DE	Semi-skilled & unskilled manual occupations, unemployed and lowest grade occupations	26%	15%

	2011	2012	2013	2014	2015	2016	2017	Avg.	CAGR	Change '11 vs '17
Total Casualties	203,950	195,723	183,670	194,477	186,189	181,384	170,993	188,055	-2.49	-16.15%
16–24	49,364	46,530	41,388	42,862	40,576	37,979	34,951	41,950	-4.81	-29.19%
17–19	18,529	16,620	14,261	14,715	13,774	12,772	11,984	14,665	-6.04	-35.32%
25–59	107,573	105,382	100,762	107,270	103,120	92,101	95,732	101,706	-1.65	-11.00%
60+	23,979	23,357	22,712	24,544	23,369	23,409	22,375	22,375	-0.98	-6.68%

About the author

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Graham Gordon joined the LexisNexis Risk Solutions team in 2016. Formerly, he was part of the senior leadership team as Director of Marketing at commercial fleet specialist, Masternaut. Graham has led several key data and analytics initiatives, including forming much of the early analysis and commercial understanding of the value of driver-behaviour in the commercial fleet and business car sector.

Graham holds a bachelor's degree from Lancaster University, post-graduate qualifications from the Chartered Institute of Marketing and more recently completed his master's degree from the University of Cambridge, graduating from the Judge Business School's Executive MBA programme.

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