

# TELEMATICS: DRIVING AN ACCURATE INSURANCE MODEL

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Telematics presents new opportunities across industries. The insurance and automotive sectors can be the first to benefit. As users get more comfortable with devices and as attitudes to data privacy change, telematics and smartphones represent a major step in modernizing motor insurance solutions. In the race to deliver a win-win solution to everyone in the motor insurance ecosystem, the real winners will be those who partner, innovate and win the hearts and minds of the consumer.





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**The need to make motor insurance precise**

A recent study by the Automobile Association (AA) found that of all the drivers who had been involved in car accidents, nearly 40% had crashes by the time they were 23 years old<sup>1</sup>. For many, that may be a predictable metric. But it is also the reason why young drivers are forced to pay high insurance premiums. The other 60% of young drivers who drive safely want to know, “Why do I have to buy overpriced insurance products?” Now, new methods make it possible to price motor insurance premiums more accurately and without a bias.

Broadly, here is how: Breakthrough technology using smartphones provides insurers with accurate assessment of driver performance, behavior, trip data and other associated parameters; the technology with telematics at the core has the potential to improve motor underwriting insight and add to the services that can be offered to customers.

The smartphone-based solution ensures that premiums

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need not be limited only to calculations based on historic data or distance-driven “Pay **As** You Drive (PAYD)” models which are slightly more accurate. Instead insurance providers can now adopt better “Pay **How** You Drive (PHYD)” models.

The smartphone PHYD systems monitor precise driver behavior to calculate premiums. In addition, they bring unprecedented value to the driver by helping model safer driving behavior, reduce fuel bills and decrease automobile wear and tear. At the heart of the Usage Based Insurance (UBI) model, which works in favor of insurers and customers, is modern telematics.

**UBI versus traditional insurance**

The smartphone-based UBI solution does not merely track mileage. It also takes into account time of day the vehicle was driven, where it was driven (GPS), speed and acceleration, braking, cornering and swerving and correlates those insights directly to the underlying road network to provide underwriters with the ability to infer how a driver adapts his/her behavior to their environment. To extract even more value, live telemetry data can be mashed-up with other external sources of data.

Clearly, pricing for UBI can be radically different from that based on historic accident rates, driving records, vehicle type, zip code, age, gender, etc. As a matter of fact, in many countries, newly-enacted legislation is making it

illegal to include gender to calculate insurance rates<sup>2</sup>. Whilst we haven't seen any similar legislation relating to "age", there is a growing belief that "age discrimination legislation" is inevitable. Once these 'advantages' are removed, historical rating proxies will become unusable. Underwriting will move to more insightful, real-time assessment of drivers.

For policy buyers who view motor insurance as an immutable annual fixed cost, this is great news. Converting insurance into a variable cost, with the promise of some savings, holds major appeal. Estimates vary, but UBI may reduce accident rates by 10%-40% with considerable benefit for the individual and society.

From an insurance provider's perspective, telemetry data holds the promise of adjusting premiums based on the appetite for risk the business demonstrates. Insurance providers will be able to, as an example, be more selective in whom they provide insurance to (high, medium or low risk customers) and will be able to address the markets they believe yield maximum returns.

Insurers will also be able to lower their risk by ensuring the live telemetry data is converted into immediate feedback for drivers. This can reinforce positive behavior, reducing accidents and payouts. Finally, telemetry data can be used to identify, curb and reduce fraud. The abundant availability of data can act as a huge deterrent for customers who may be tempted to misrepresent facts about their claims.

Telematics is an entirely new route to building a more optimized business and of offering accurately tailored insurance products to customers. But it also holds an attractive opportunity for insurers to build new revenue streams and gain benefits from non-traditional areas such as using driving scores for claims predictions, using accurate data for third party capacity rationalization (like towing services, curb side assistance and replacement/replenishment of consumables such as batteries), and

for cross-selling and upselling other insurance products. All this spells a major change for the insurance business which has always been an 'unsexy' pursuit. Insurance is a legal requirement and has become a commodity purchase. UBI and telematics offer the insurer a completely different way of engaging with their customers – a world entirely removed from the traditional process with little or no opportunity to build a relationship with the customer.

The key reason why insurance has been unable to change the game is because it could not improve customer interactions. A smartphone based solution alters this. Used intelligently, a smartphone solution increases the frequency and richness of customer interaction. It adds interactivity to the relationship with the customer and makes it possible to have a regular dialogue with them. The outcome is improved customer satisfaction and loyalty.

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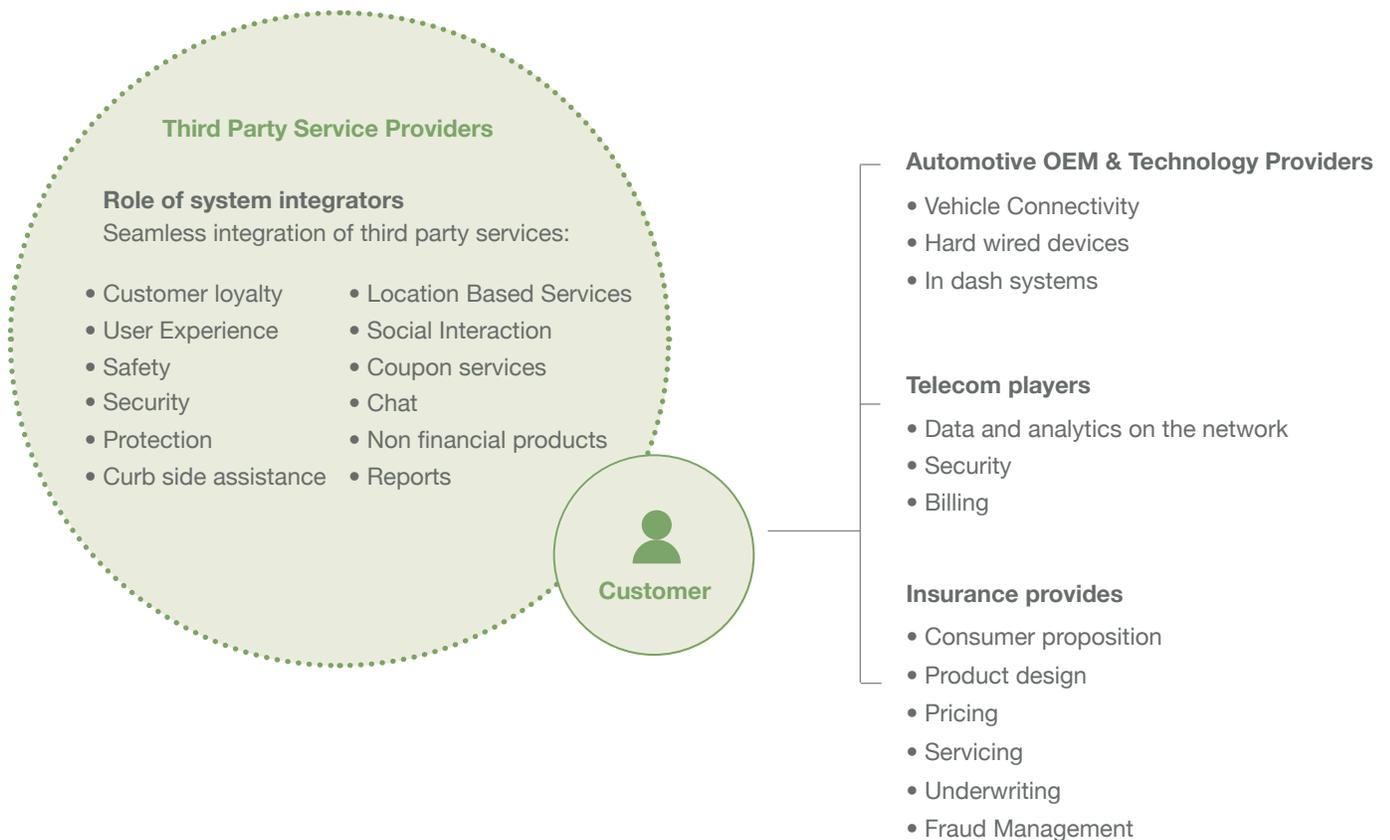
### **UBI adoption: poised for growth**

In a few years from now we will regard the way we sell motor insurance today as quaint, wonder how we ever underwrote risk without proper behavioural insight and understanding.

Motor insurance was once sold through advertisements in mass media and print coupons. By the 1980s, it had migrated to direct sales over the telephone. When the Internet arrived, many felt that insurance could not be sold in such an impersonal manner and that it would require direct agent intervention. Yet, in many territories the majority of motor insurance today is sold over the Internet. In a similar way widespread adoption of UBI is inevitable.

## Fig1: The UBI Ecosystem

Can it be driven by customer focus?



Historically, the telematics approach has been to install a wireless device or a “black box” in the vehicle that stores data. The data is downloaded periodically (say every 15 days or every month) via a web portal. But customer uptake for black box solutions has been low as the hardware, by nature, does not interface with the customer (40% customers hate the black box). The black box approach has several drawbacks that include:

- Weak customer engagement
- Expensive hardware and installation

It is no surprise that the black box is already being usurped by embedded telematics and smartphones in vehicles. These are advanced systems. They allow the driver and the vehicle to connect wirelessly to a host of related services. A study by Strategy Meets Action (SMA)<sup>3</sup> in late 2012 showed that almost 20 motor insurers in the US and Canada were running UBI programs and 8 of the top 10 US companies had UBI programs or pilots underway. A Ptolemus Consulting Group global study for 2013 estimates there are 5 million UBI policies already in existence (it also estimates that 112 UBI programs have been launched worldwide)<sup>4</sup>. The numbers are indicative of the future potential of UBI.

What the numbers tell us is this: Vehicle owners are warming up to the idea of using telematics for improving their drive experience. But let there be no doubt - after the first wave of early adopters, the larger market will look for the inexpensive solutions quickly making the 'black box' a relic of the past.

The smartphone type of solution offers several advantages to the end user:

- **Easy and quick to deploy:** simple downloadable application with expert driving benchmarks and local maps, fully hosted solution offered as Software as a Service(SaaS) or Platform as a Service(PaaS)
- **No hardware cost:** leverages existing smartphone investment, extract more value from it
- **Intuitive and immersive experience:** drives high user acceptance
- **Easy integration:** Bluetooth technology ensures different phones can be tethered to the vehicle. Tethering offers opportunity to facilitate multi-driver policies and more targeted offers
- **Geo specific:** driver data algorithms tailored for specific markets; algorithms and models can be dynamically updated
- **Access to more robust data:** the approach enables determination of driving behaviours and from a rating perspective, anticipation and consistency. By contextualizing GPS data to establish a driver's speed in relation to the road and their location, against benchmarked "optimum" performance data, safe driving values can be determined. These rich data sets can be analyzed to develop more accurate risk profiles than has been possible with accelerometer data.

### The need for collaboration: The challenge ahead

Vehicle manufacturers have been quick to see new and long-term revenue streams in UBI. But they believe they own the customer and the data and that a major part of the UBI pie belongs to them. Telecom players are also waking up to UBI opportunity, seeking to work with hardware providers to embed software that

handles data and analytics and provides security and billing services over their networks. Third party services vendors are jockeying for a position in the value chain to provide better users experience, curbside assistance, live chat and a host of other social services. Amidst this customers remain wary about whom they share their personal information with. But they are very keen to be able to say, "You know what, my insurance is calculated in a fair manner – based on the way I drive and not on aggregated customer data, or gender."

Can the key players in the UBI ecosystem – insurance companies, automobile OEMs, third party service providers, telecom players and customers – come together, share customer data and make life easier for everyone? Can the collaboration between them spark innovation and inspire everyone, to build a better consumer proposition, making predatory pricing a thing of the past?

Telematics is going to be at the center of this change and will drive accurate insurance models.

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