TELEMATICS
TECHNOLOGIES

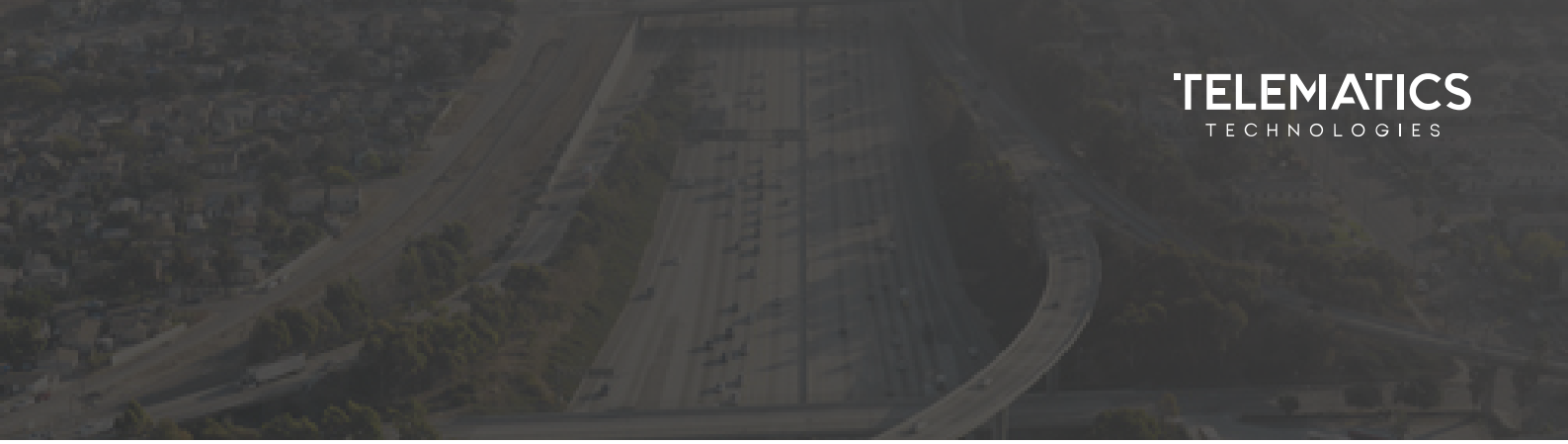
Will OEMs eat the aftermarket up?

THE FUTURE OF AUTO INSURANCE TELEMATICS

Facts you need to know when planning an investment in insurance telematics

REPORT

JUNE 2022



TELEMATICS
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DOES THE FUTURE OF UBI BELONG TO OEM TELEMATICS?

In the last few years, the motor insurance industry has begun to seriously recognize the potential of IoT technology in providing data, which can revolutionize existing methods of risk assessment. Without a doubt, one of the key drivers that increase technology awareness among major insurance market players is the growing trend among car manufacturers to equip their vehicles with OEM [Original Equipment Manufacturer] telematics devices.

No wonder that at meetings with insurers, in many conference presentations, backstage and official industry discussions, we hear one question more and more often: does aftermarket telematics still have any future?

As we want to answer this question reliably every time it comes up, we can't do so without taking a look at the data describing the current challenges for the automotive market:

In 2020, approx. 62% of all new cars sold worldwide were equipped with an OEM embedded telematics system. In the EU+EFTA region, this figure is even higher reaching 72%

https://www.globenewswire.com/news-release/2021/11/15/2333887/28124/en/Global-Automotive-OEM-Telematics-Market-Report-2021-Nearly-62-of-All-Cars-Sold-in-2020-were-Equipped-with-OEM-Embedded-Telematics-Market-Analysis-Forecast-to-2026.html

These impressive numbers demonstrate the great role of OEM devices in the automotive market digitalization process. And no doubt this trend will continue – this consideration becomes clear when you look at the data from over the past few years, when the number of connected OEMs leaving production lines has constantly grown, up to today's level.

However, the same numbers also mean that still almost 30-40% of newly produced cars don't have any telematics device built in by the manufacturer. And those cars will be a big part of the future automotive landscape too, for (at least) the next few years.

Let's move on to the next figure:

New cars sales in the EU fell by 2.4% in 2021 compared with the lowest level in 2020.

https://www.acea.auto/pc-registrations/passenger-car-registrations-2-4-in-2021-22-8-in-december/

For the UBI market, the post-COVID drop in new car sales means that the number of vehicles with OEM telematics on board is growing at a much slower rate than the percentage share of newly manufactured units indicates.

One reason for that dropdown are for sure the increasing production delays that have forced customers to wait for their new cars from 4 to 6 months in 2021, or even from 9 to 12 months in early 2022. These delays are certainly not helping OEM telematics to saturate the market as quickly as it could be done with aftermarket devices.

But all these difficulties that stand in the way of today's automotive market lead us to the third important figure:

In 2021, the average age of passenger cars in the EU was 11.5 years.

https://www.acea.auto/figure/average-age-of-eu-vehicle-fleet-by-country/

What does this mean for entities that want to develop their own UBI policyholder base? Two things come to mind first:

- To evaluate the real hardware potential of the current vehicle fleet, we must simply go back over a decade. How did the telematics market look back then? OEMs were mainly installed by premium brands such as BMW, which decided to equip all its newly produced cars with OEMs in 2013 – less than a decade ago. So now even in the premium segment, there are still a lot of cars on the roads that need some type of an aftermarket device to become a connected car and to be able to use a UBI offer.

- Today's dominance (but no exclusivity) of connected cars in the production mix will credibly describe the UBI market not today or tomorrow, but in over a decade from now. This means, at best, a medium to long term advantage for OEM telematics.

But behind the problem of limited saturation with OEM devices in the currently used vehicles, there are some other barriers which effectively limit their potential as a mass market solution for insurance purposes in the short- to mid-term business perspective. These are mainly data processing related issues caused by the technological immaturity typical for systems of this type. Let's take a closer look at them.

OEMs are just a new data source. But it's not enough to offer an insurance service.

Connected Vehicles provide a new source of vehicle usage data, but from the point of view of an insurance telematics service provider, this is just another endpoint that needs to be served with a device-independent telematics platform. Currently these platforms use most common aftermarket data sources – smartphones (in the case of smartphone-only solutions), beacons, OBD II or 12V devices. However, it should be emphasized that device data (from any device) alone... is just device data. It still needs to be embedded in a road context to be interpreted. This is the role of Telematics Service Providers (TSP).

From this point of view, OEM datasets do not offer the same advanced capabilities as specialized aftermarket services, especially in driver behavior assessment and accident reconstruction, where map context or even comparison to other drivers' behavior is crucial.

This is because OEM telematics solutions are often developed as part of additional features for car customers. For this reason, time-to-market is far more important in the eyes of car manufacturers than focusing on generating rich and specialized data sets.

There is another important factor when it comes to the context of data from other devices, but we'll come back to that in a moment.

Multiple data standards

Again, OEM data sets are often proprietary and compatible only with the products for which they are designed. The lack of standardized data types and formats makes sourcing from many different OEMs a key obstacle to mass adoption by insurers. Let's take a deep dive into this problem.

The portfolio of cars 'owned' by each insurer is extremely diverse – in terms of brands, models, cars production dates, and vehicle versions. In order to offer these customers policies based on telematics data from connected cars – the offering would be aimed at a very narrow group of customers.

Each new brand that an insurer wanted to cover with an insurance telematics offer would require integration with the car manufacturer.

Covering such a diverse set of car brands and models with insurance telematics now and in the next few years will only be possible with the use of aftermarket solutions.

Over the years, of course, the proportions of aftermarket/OEMs equipment will be changing. But it will take years. This perspective may shorten a little thanks to Vehicle Data Hubs, but we shouldn't expect miracles.

Vehicle Data Hubs

A large number of stakeholders wish to collect reliable car data to provide more advanced services to the end user. As a result, multiple sources need to send data to multiple players, creating a very complex environment. A point-to-point model doesn't scale.

To solve this problem – new entities started to appear in the market – Vehicle Data Hubs. VDHs aggregate a wide variety of data from multiple sources and deliver data sets to a very large number of stakeholders. Without them, telematics data exchange will still be a complicated process, forcing service providers to establish 1-on-1 relationships with many OEMs. Each new connection requires new development and integration, creating complexity.

VDHs put themselves between data providers and service providers to facilitate data exchange. The neutral server (VDH) creates a win-win-win situation for OEMs, service providers (TSP, insurers) and drivers. The role of a Telematic Service Provider is still (as in a situation of acquiring data from any other data source) to clean, standardize and interpret data. This way, the insurer obtains data-driven insights ready to be used in policy pricing.

Unfortunately, we are still not talking about a situation in which one VDH has all car manufacturers in its portfolio. To service the entire fleet of a given insurer, integration with several VDHs would be required and, due to the varying age of cars, also the use of aftermarket devices. At this stage of market maturity, the use of aftermarket solutions is simply faster and cheaper, which we're going to prove in a moment.

Will the Data Act be a game changer?

Everything about today's OEM market is still very immature. Also, in terms of regulation.

One thing which can become a real breakthrough in this area is the Data Act, a regulation draft recently published by the European Commission that aims to remove barriers to accessing data from IoT devices such as OEM telematics. Its goal is to reject a business model in which data from IoT devices is locked in for use by the car manufacturer, and to allow data to be shared easily and freely with third parties – such as telematics service providers and insurers.

These new rules can provide an excellent opportunity to set the right conditions for VDHs, insurers and TSPs to use connected car data from OEM devices more effectively, and for customers, to freely switch between different UBI providers. The proposal is at the initial stage of the legislative path that the act has to follow to become a law, with the prospect of its adoption extending over at least one or two years, because the industry has opposed to the draft act.

OEM based telematics as an opportunity to remove the cost of aftermarket devices. Just forget it.

When telematics data is available straight from cars, there will be no need to pay for additional devices – this is one of the first associations when we think about the potential benefits of using Connected Vehicles to offer any services. For insurers, the cost of additional telematics devices has always been one of the main blockers to absorb telematics on a large scale. Unfortunately, this consideration is pure utopia. Not only will costs remain, but they will also not decrease at all. At most the billing model will change.

Why? Because to access data from OEM, you must simply pay a fee. Instead of purchasing your own device, the service provider spends the money for the ability to use data.

What is the price?

Access to OEM data often costs more than $50 per year. To answer this question, let's look at the cost of alternative solutions.

The cost of insurance telematics services based on aftermarket devices in the first year may look similar to OEM (TSP needs to cover the cost of the device). However, if the device can be used for a longer period – e.g., 2 or 3 years – the cost breaks down.

In the case of smartphone-only solutions it can be 1/3 or even 1/2 lower. When we talk about access to OEM data – each year of use will be at the same level. It is also worth remembering that in case of OEM data we pay for... data only. To provide services based on that data requires a TSP role, which of course generates further expenses. So, the lack of a device is no guarantee that the price of telematics services will go down. In fact, the opposite may even be the case.

And last, but not least, there are a couple of serious business problems that make OEM telematics less useful than aftermarket devices for insurance purposes today, and nothing is bound to change in the next few years:

First, the obvious conflict of interests between insurers and OEMs

For car makers, opening vehicle data to third parties is not as profitable as it may look at first sight. In fact, they see their datasets as a source of market advantage. This situation is the result of the fact that relevant automotive industry profits are made from the repair business. Quite a similar situation occurs when we talk about the profits of car manufacturers. So, their purpose is to keep the data and utilize it to simply maximize after-sales service profits.

And what's the goal of insurance companies? Yes, it's exactly the opposite. Their profitability depends directly on the low cost of claim settlement.

A conflict of interests between insurers and carmakers is also clear in another area. It is about car manufacturers entering the insurance domain. In the last two years, over a dozen OEMs have launched insurance telematics products, all of which use their built-in connectivity. It's their first step to remove insurers and Telematics Service Providers (TSPs) from the equation. For now, it's hard to talk about winning the war, or at least the battle, but it's worth to keep this aspiration in mind.

The second business problem results from the first one, namely:

The lack of experience among OEMs as telematics service providers for the insurance sector

As already mentioned, one of the main reasons for OEMs' lack of success is certainly their lack of experience in supporting such programs. Insurance telematics is a very specific field of operations that requires not only access to data, but a lot of expertise in its proper interpretation. And proper data interpretation is the substance of any UBI program.

To properly assess driver behavior on the road, telematics data is not enough – its analysis is only a piece of the whole picture. To see it fully, context is essential.

In the case of speed limits (used in the interpretation of drivers' behavior) – this data is captured by connected vehicles thanks to the camera embedded in a car. However, this is not enough. To be able to fully analyze a driver's driving style, the following data are required:

- How does the driver drive in and out of built-up areas?
- On which category of roads does he/she drive?
- Was a given maneuver forced by the situation on the road (road condition, accident, other driver's behavior, and road works)?
- How does your speed compare to the average speed of other drivers on the same road section?

A full assessment of driving style is only possible if we have access to data on current traffic, road conditions and current repairs, as well as events influencing drivers' behavior in real time. The data is part of good aftermarket telematics systems and is often the result of aggregating information from many additional sources.

To honestly solve these problems, service providers need a lot of direct, real-world experience in this field, which car manufacturers certainly don't have yet. And won't acquire it any time soon.

Between eliminating the conflict of interests and achieving operational efficiency, there is plenty of time that favors entities with existing experience in processing data from aftermarket devices.

In general, for insurance companies, cooperation with service providers that have access to data from both OEM and aftermarket sources, appears to be most beneficial, in the short- and long-term perspective. Their advantage comes from a good understanding of the UBI data ecosystem based on current and past experience with aftermarket telematics, and the ability to gather and process data from OEMs, which may likely dominate the market over for over a decade.

So now, with all of the above information, finally we can provide a simple answer to the question opening this chapter:

OEMs are certainly the future of insurance telematics, but that future is more distant and more complex than many insurance market players used to believe.

Then, what is the best solution for today and for the coming decade?

THE MARKET ALREADY KNOWS THE ANSWER

To see how the future of the UBI market will look like in the years to come, the best we can do is to take a look at the current situation and focus on solutions that are already working well. So what can we see on the playing field right now?

Quoting the Berg Insight's 2020 Insurance Telematics report:

The European insurance telematics market is so far largely dominated by aftermarket hardwired in-vehicle telematics devices.

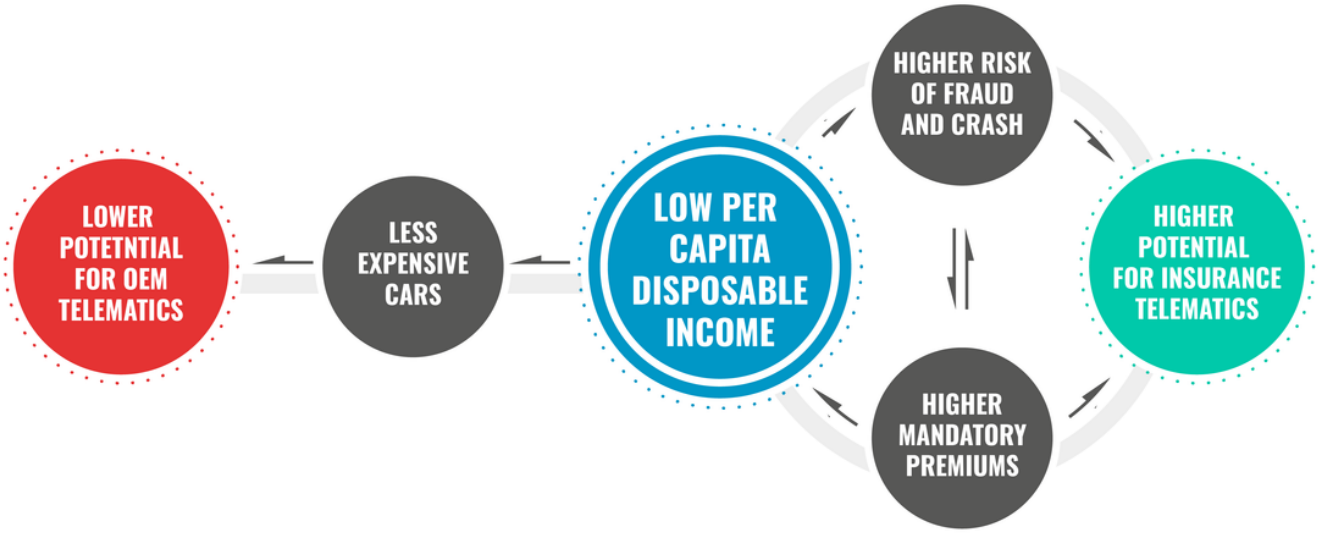
https://www.berginsight.com/insurance-telematics-in-europe-and-north-america

Indeed, some aftermarket approaches have gained mass popularity. Here are some examples:

- **UnipolSai blackbox** – had more than 4.4 million active devices installed at the end of 2019.
- **Allianz's telematics smartphone-only solutions** – launched in a number of markets including Italy, Germany, France, Spain, Greece, Switzerland, Austria, Belgium, the Netherlands and the Czech Republic. Around 650,000 active policyholders at the end of 2019.
- **Generali's professionally installed blackboxes and other self-installed devices** – with more than 1.6 million telematics policies at the end of 2019.
- **Groupama's hardwired telematics** – around 450,000 active telematics-enabled policies at the end of 2019.
- **HUK-Coburg's solution using BLE beacon and app** – 215,000 enrolled policyholders by mid-2020.

These numbers, although impressive, give us only a shallow picture of the real, deep market context. Let's have a look below the surface, and see why parties want to use insurance telematics? The answer to this question has vital implications for the UBI development directions in the near future.

Italy and Germany cases show us that insurance telematics is more profitable for both customers and insurers, on markets with a higher risk of fraud and crash – which correlates with lower disposable per capita income and, in effect, lower potential for OEM telematics solutions. Of course, high profitability gives UBI policies a higher chance of being adopted.



We can see this when we analyze the distribution of policies from the examples in the above-mentioned countries, and compare it with the data about fraudulent claims and average disposable income:

The largest market for UBI in Europe is Italy with around 9.6 million active telematics-based policies at the end of 2019. This market is also well known for its high occurrence of fraud and vehicle theft.

In contrast, the country with nearly 30% higher average disposable per capita income – Germany, had only 0.5 million active policies in the same year.

https://www.berginsight.com/insurance-telematics-in-europe-and-north-america

There's another thing. Usage-based policies are products often targeted at young drivers. Due to high premiums, they would have to pay because of their age, so they turn to UBI

offers. As they are usually new in the labor market, they often own cheaper, and therefore older cars. Also in their case, aftermarket solutions for many years will be the only option to benefit from telematics policies.

Conclusion: OEM-based insurance excludes crucial groups of potential clients

Our final observation on what we can learn from the current market about insurance telematics is that customers prefer offers from insurers with a well-known brand to those of car manufacturers. And OEM offers often contradict this fact.

It's because connecting insurance programs with the car manufacturer's brand seems like a good idea, especially from the perspective of business strategy and building new sales channels. But has anyone asked customers what they have to say about it?

According to expertise.com, 60-70% of them say they are more likely to buy a policy from a company they've seen an advertisement for. Even when these well promoted insurance giants may not always offer the cheapest premiums or the best customer experience – in this business a strong brand and customer trust are still often worth more than purchase comfort.

Considering this data, there's no surprise that recognizable labels such as Groupama, Allianz and Generali dominated the European usage based insurance market with aftermarket devices – the real strength lies in constant, conscious development, not in anticipation of a revolution.

APP-BASED INSURANCE TELEMATICS – A NEW CHAPTER

Moreover, companies developing smartphone-based solutions have one more advantage which can make them the biggest winners of the connected car insurance market in the mid-term future – it's Google's latest ecosystem codenamed Android Automotive.

Android Automotive – will Google take it all?

Two solutions offered by Google for the automotive sector prove that the Mountain View giant has a concrete plan to conquer the OEM market. What solutions are we talking about?

- **Android Automotive OS**, which is an operating system that will allow apps to run on the OEM's screen. AA OS makes it possible to download apps from Google Play directly onto the OEM infotainment unit, without connection to mobile devices (that's different than Android Auto). It also facilitates data exchange between vehicle ECU and apps, so they can handle very specific features such as cabin climate control, EV charge level, and direct telematics data collection.

- **Google Cloud Automotive** enables to 'Use Google Cloud's Connected Car Telemetry Platform to collect, manage, and activate vehicle data at scale, with native integration to Android Automotive' [source: https://cloud.google.com/solutions/automotive].

What does it mean to the market?

There are many indications that mobile app providers who have so far built apps to get telematics data directly from smartphones will have new opportunities. In the case of cars that support Google Automotive Services (which are a collection of applications and services), the source of this data will be the vehicle instead of the smartphone. Thanks to that, companies with displayed experience in Android-based solutions will have almost instantaneous time to market, when Google solutions become a market standard.

The first car with Android Automotive appeared on the market in mid-July 2020. According to Google, currently over 50% of annual car volumes use Android as the built-in system. Still, the material available online concerning this system is relatively fresh and not exhaustive. At the moment, the list of apps made available to drivers isn't very extensive and includes a small number of app categories (navigation, parking, and charging apps), but as Google's materials read: You can start developing your charging, parking, and navigation apps for Android Automotive OS today, and we are working to enable you to place them in the Google Play store in the coming months*.

Recent announcements made by various brands, like Ford and Honda indicate that in just a few years Android Automotive could become an industry standard for car makers, and then companies with a smartphone-based track record will have both – experience in telematics data processing and a ready-to-use platform for the new unified OEM standard.

App-based value-added services – the biggest chance for insurers to stop being a commodity

One of the advantages of telematics services is the potential to offer value-added services (mobile but also desktop) to customers. These services are also used by insurers, among others, to differentiate themselves from the competition and generate additional revenue streams.

Popular types of value-added services offered in the insurance telematics market include:

- solutions used while driving a car – then the natural interface for the user is the screen in the vehicle; this category certainly includes all solutions that support real-time safety, also at the time of an accident, car diagnostics, highway, or parking payments and, of course – navigation,

- solutions that, despite using telematics data, are used for services offered 'outside the car', we mean here all kinds of services for fleet management [vehicle monitoring, pool car management, etc.], anti-theft services, parental control or, what is very important in the case of the insurance market, supporting interaction with the customer in order, for example, to coach them to improve their driving style.

In both cases, integration with the vehicle alone is not enough to offer full-featured value-added services. Even for those in the first category, limiting the possibility of interaction with the system only to the time spent 'behind the wheel' is rather unlikely. Let's look at some of the examples. When going on vacation, we often check the route while still at home. Along similar lines, when the car 'screams' about a diagnostic error while driving, we will probably take care of it anyway (verifying what it means, making an appointment at the Authorized Service Center) when we return home. The same way of thinking can also be adopted for

*https://www.berginsight.com/insurance-telematics-in-europe-and-north-america

when we're paying for highways or parking lots, in which case we will also want to be able to manage our payment method while sitting comfortably on the couch in the living room.

Anything that can distract from safe driving will continue to land in the smartphone, which will remain a personal device that provides access to services and data extracted from the car on demand.

Well, let's just say it straight – solutions based only on built-in telematics limit insurers' potential to compete in the red ocean of the motor insurance market.

And that's not even the final conclusion, because:

46% of people driving a connected car in the US do not even know that it is connected.

2017, Kantar TNS

This fact indicates that market awareness is an even bigger barrier to the development of general insurance telematics than any hardware and software issues. No one can acquire customers who don't even know that their product exists.

Do applications make a difference in this matter?

Apps and value-added services help build awareness of the opportunities/benefits a user can get from a connected car. Using apps outside cars builds additional engagement, gives space for any additional value that can build a relationship with the brand, and helps increase customer loyalty and retention.

The change is fundamental. Features like Manage How You Drive for example can be a separate product itself – and they often are. Customers not only like this type of apps, but they also organically seek occasions to engage with them , because they see the value on a practical, emotional, and entertainment level.

In addition to influencing customer's driving style to help reduce claims and increase profitability of polices, engagement through the app creates multiple points of interaction with the insurer's brand. The relationship becomes more personal, and it leads to stronger loyalty at renewal.

App-based value-added services are already playing an important role in the telematics industry and will continue to grow. The same is withTSPs which are responsible for them.

GLOBAL CHANGES: WHICH HARDWARE SOLUTION WILL BE SUPPORTED BY THE FUTURE SUPPLY CHAIN AND PROJECTED REGULATIONS?

Over the last two years, a lot of people have become convinced to UBI by the lockdowns and the urgent need to cut costs:

The number of customers open to sharing their telematics data in exchange for a discount has increased by more than 12% from 30-40% in 2019 to around 50% in 2020.

https://www.arity.com/move/just-consumers-now-much-comfortable-sharing-driving-data/

But that's only the tip of the iceberg when it comes to the wider, post-pandemic market situation, most recently triggered by the rising global economic and military tensions.

When the economic picture is becoming more unclear from day to day, both production and demand for new cars are expected to head toward an even bigger downtrend. And the following conditions: the limited growth of OEM telematics device base on the one hand, and the need for more conservative spending by customers on the other hand will likely be a strong impetus for UBI solutions based on hardware that everyone already owns – smartphones. This is another point against pure OEM solutions.

But there is a third element between production and demand – the global supply chain – a very important link which may suffer the most and become a real game changer altering all past and present trends.

Basically, all we know today is that the market is becoming more and more unstable. And when instability promotes cheaper, ready-to-use quick fixes (read: aftermarket and smartphones) the regulators tend to go against this trend.

In the past few years, EU directives have primarily been aimed at increasing the share of low-emission vehicles in commercial fleets. And this means that, contrary to general market trends, commercial fleets will be the first to absorb automotive innovations, including OEM telematics.

52.9% of all new cars registered in the UK in first half of 2021 were bought by company fleets. In Poland, the fleet share is even higher, rising from 63.3% in 2019 up to 67.36% in the pandemic months of 2020.

https://www.fleeteurope.com/en/financial-models/europe/features/fleets-drive-rise-sales-key-markets-first-half-2021
https://moto.rp.pl/tu-i-teraz/art17308921-flota-ratuje-wyniki-sprzedazy

Well, it just so happens that for insurers commercial fleets are close to the ideal customer profile for products like usage-based policies. The need to control assets? Checked. The need to cut expenses without privacy concerns? Checked. Fleets now largely use telematics for purposes other than insurance, so they are natural early adopters for policies based on real-time driving data.

So, what policy should insurance companies adopt to deal with such divergent trends? And in such unstable macroeconomic conditions?

The answer to these challenges is adaptability. A proper strategy should take into account all the conclusions that we made throughout this analysis. Let's remind them:

1. OEMs will become the main source of data for insurance telematics in the long term.
2. Data does not mean services based on data – this is the playing field for telematics service providers who will simply change the source of data acquisition.
3. Due to unstable political and economic conditions, slower market saturation with new cars and multiple standards offered by their manufacturers, the market of insurance telematics providers will have to provide support for multiple data sources. In the short- and mid-term perspective, this will still be achievable most quickly with aftermarket solutions.
4. The gas pedal of change in terms of mass access to data from Connected Vehicles may become the adoption of a single standard of telematic support for new cars. It is likely that this will be achieved by mass adoption of a single vehicle operating system by all car manufacturers. All indications are that this is what Google aspires to do. Such a solution will further strengthen the role of telematics service providers experienced in building mobile apps.
5. With the gradual increase in the awareness of 'smart cars', application-based value-added services will have an even greater impact on the competitiveness of insurance telematics offerings than today.

Given that, we can assume that entities which focus on the continuous operation on flexible and device-independent platforms will benefit the most in the short, medium and long term. This attitude will give them a big advantage over more hesitant competitors when OEMs will eventually fill the car market. Partnering with TSPs gives insurers the best opportunity to adapt to changes.

ABOUT TELEMATICS TECHNOLOGIES:

"WE CHANGE INSURANCES FOR THE BETTER. FOR THE ONES THAT CAN SAVE LIVES IN CASE OF AN ACCIDENT, ALLOW GOOD DRIVERS TO PAY LESS FOR THEIR POLICY, AND ALLOW INSURERS TO DIGITIZE SERVICES AND MANAGE RISK IN A BETTER WAY."

Telematics Technologies is a Poland-based company developing LBS and telematics services. The company was founded in 2005 as NaviExpert - premium navigation app provider. Since 2017, the firm has been operating under its current name, but NaviExpert -which is used every month by over 600k active subscribers - still remains a brand of Telematics Technologies.

Since 2015, the company has been creating the insurance telematics market in Poland. Telematics Technologies develops solutions in the field of technologies used in UBI (both, private and fleets cars), crash detection, reconstruction, eFNOL and VAS for drivers. The firm cooperates with such insurers as LINK4, PZU, MNOs - Orange, Play, Plus, T-Mobile, as well car dealers.

The company's insurance telematics and fleet management services are based on smartphone-only, hybrid (smartphone + beacon) and hardware (OBDII, 12V) solutions. Telematics Technologies also offers business consulting services related to LBS, insurance telematics and fleet management.

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Will OEMs eat the aftermarket up?

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