



How Does Telematics Affect Your Car Insurance Premium?

by Harjot Singh Narula, Director of Engineering

What is Telematics?

Telematics comes from two words: telecommunications and informatics. Telematics helps you share information wirelessly using a telecommunications system. The concept has been around since the 1960s, but it has become commercially viable only recently. With 5G technology, telematics has the potential to become mainstream. However, there are many concerns around security and privacy in IoT devices, and telematics is no different.

Telematics offers the possibility of achieving the unimaginable. Telematics devices can be used in healthcare, transportation, safety, insurance, etc. They all work in the same way: collecting data and sending it to a server through a cellular network. The server would process the data and use it in various ways to increase productivity, safety, compliance, optimization, and other such goals.

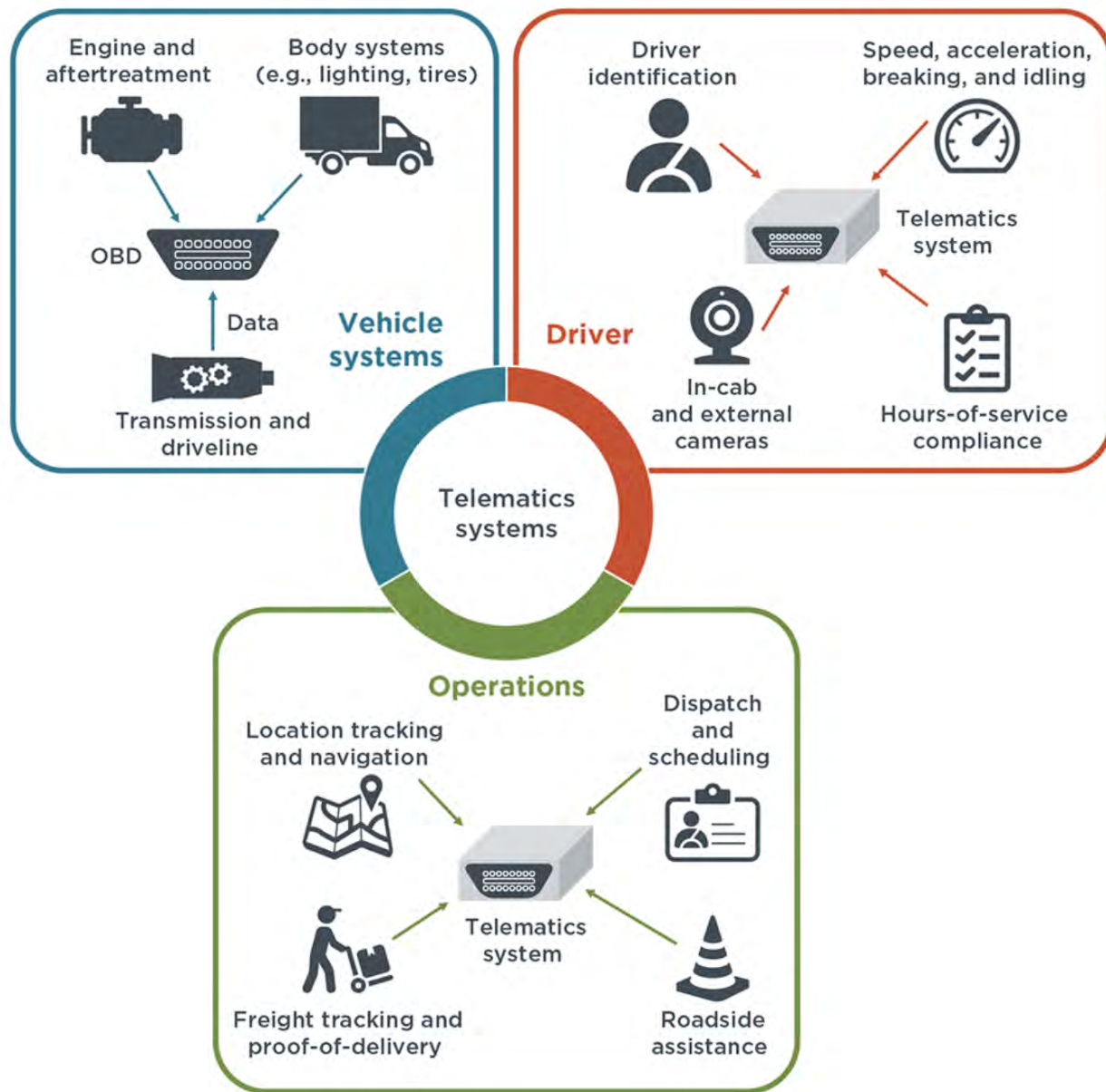


Fig 1: Types of data collected by telematics systems

Today, telematics devices are used primarily in vehicles for fleet management and tracking purposes. This could soon change as more devices are able to talk to each other using 5G technology.

Telematics devices can collect information about a vehicle, its driver, and how it operates. Insurance companies are mainly interested in driver information, but sometimes they will collect vehicle information as well.

Telematics in Insurance

Telematics in insurance is also known as Black Box Insurance. A telematics device enables insurance companies to personalize a premium based on current driving behavior instead of a historical driving record. It also allows them to develop innovative plans like pay-per-use insurance. All this has been possible because of advancements in technology. Insurtech helps reduce dangerous driving, rewards good driving behavior (by reducing premiums), and boosts customer satisfaction.



Fig 2: Telematics in insurance

Telematics helps overcome some of the challenges faced by the insurance industry:

- All drivers pay the same insurance premium. Telematics can help identify safe drivers, and insurance companies can charge them lower premiums.
- It is challenging for insurance companies to create accurate risk profiles of customers. Telematics collects real-time data that allows insurers to accomplish this task and issue the appropriate policies.
- Telematics encourages safer driving, which will lead to fewer accidents.

How does it work?

A telematics device is a physical device that is installed in a vehicle. This device measures and records speed, distance traveled, location, frequency of driving, time of the day/night when the vehicle is driven, how you brake and accelerate, how many breaks you take on a long journey (and how long they are), etc. All this data helps the insurance company track your vehicle in case it is stolen, assess the risk based on your driving habits, and adjust the premium for safe driving habits.



The telematics device typically consists of the following items:

- GPS System
- Motion Sensor
- SIM Card
- Computer Software

Usage-Based Insurance (or PAYD: Pay As You Drive)

When you apply for a vehicle insurance policy, an insurance company will ask you a number of questions in order to provide a quote. In the US, the quote will be based on the number of miles you drive. For example, someone driving their car for 30,000 miles a year will have to pay more than the person driving their car for only 12,000 miles a year. Using telematics devices, the insurer can track how many miles you have driven and charge you accordingly.

Different insurers have come up with different ways to reward safe drivers:

- Some offer a refund at the end of the year if the driver has demonstrated good driving habits
- Some insurers may offer to renew the policy at a lower rate
- Some insurers increase the mileage allowance for the next year

If a driver often exceeds the speed limit, works a night shift, or makes long commutes, the insurer might charge them more than standard rates because the risk would be higher. If a driver operates a vehicle safely, stays within the speed limit, and does not brake or accelerate abruptly, they might be eligible for a discount on the basis of safe driving habits.

References

[Telematics in the Canadian trucking industry](#)
[Implementing Automotive Telematics for Insurance - IRDAI](#)

About the Author



Harjot Singh Narula is Director of Engineering at GlobalLogic, a Digital Product Engineering company. He manages a leading US-based insurtech engagement.

He was previously the founder and CEO of comparepolicy.com, an IRDAI-approved insurance web aggregator focused on selling online insurance for companies like HDFC Life, Aegon Life, Max Life, Bajaj Allianz, and others. Harjot has two decades of experience in software development. He has also spent five years in the US working for the mortgage and risk management industry.

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