

Telematics is set to transform society - Here's how

By [Cliff de Wit](#)

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Until recently, our homes and our workplaces were our connectivity hubs, where we were plugged into the world. Mobility was largely an offline state. Now, thanks to rapid strides in telematics technology, mobility is becoming the most connected part of our lives.



Cliff de Wit, CTO at Netstar

Sensors, smartphone apps, IoT devices and bespoke software ensure that many of us are online from the moment we enter our vehicles. Telematics employs these technologies to protect and connect drivers and fleets and to generate data that improves people's lives.

These are some of the most significant ways that telematics is reshaping the way we do business – and the way we live.

Data science

Telematics software and devices generate vast amounts of data. However, this is only one component of the value that telematics offers. The second is the ability to store, process and apply insights from the data.

Where the telematics industry was previously driven by hardware innovation, today, telematics companies are data-science leaders. Telematics data provides insights that can be applied quickly to optimise business services, as well as crucial public services and policy approaches.

Sustainable innovation

Business-process efficiency is one of the foundations for ensuring a sustainable – and even regenerative – society. The fewer inputs we use in our businesses, the less carbon we will produce and the more sustainable our economy will become. Productivity is enhanced, operational costs come down, fuel is used more efficiently, and vehicles stay roadworthy for longer.

Business fleets are increasingly using telematics to refine and optimise their processes. Telematic connectivity helps ensure drivers are driving in the most fuel-efficient way – and following the most effective routes – while also ensuring driver and cargo are protected. Stolen vehicles can also be recovered quickly, which discourages crime.

A telematics industry report by Mordor Intelligence has found that telematics increases fleet efficiency, cutting vehicle travel times by up to 68%, which lowers fuel consumption and emissions and minimises carbon footprint. This saves millions of metric tons of CO2 per year.

Driver safety

Drivers are the heartbeat of any fleet. Telematics is playing an ever-greater role in ensuring they are safe, well and driving as efficiently as possible.

Data from connected devices in vehicle offers great opportunity to improve the quality of the driver experience through training and incentives. The connected device keeps them in contact with their family and colleagues while they're on the road. Location services with live app-driven tracking, help keep drivers safe. Driver performance is monitored through in-vehicle video, real-time communication and data analysis.

Artificial camera solutions are leveraging artificial intelligence (AI) and machine learning technologies are raising driver safety to new levels. Emergencies are handled as quickly, and repair-scheduling is automated, to keep drivers protected and to get them back on the road with as little hassle as possible.

Usage-Based Insurance (UBI)

Telematics allows insurers to measure driver behaviour and incentivise driving habits that minimise risk. Customers are also embracing data-driven insurance offerings, as they feel empowered to reduce their premiums through more responsible behaviour.

The Mordor Intelligence telematics Industry report further predict that usage-based insurance will grow by 140 million subscribers globally by 2023.

Where historically, GPS tracking and fleet management solutions were installed as an aftermarket product, lately, carmakers have partnered with fleet-intelligence companies like Netstar to preinstall solutions that include WIFI and other beneficial technological solutions, and to enhance that value that data offers – in the insurance space, as well as vehicle recovery, content and maintenance.

App-driven fleet management

The latest fleet-tracking software allows business owners and operations staff to manage their fleets in real-time using their smartphones. Fleet management platforms consolidate data from sensors measuring fuel levels, engine temperature, cargo stability and humidity, as well as safety and compliance metrics.

Smartphone telematics uses GPS and mobile phone sensors to collect location and driver-behaviour data, and apply it to fleet logistics. IoT and smartphone telematics are making managers' jobs easier, while also using artificial intelligence (AI) to learn from the data and constantly build more effective operations.

V2X technology

Telematics also powers vehicle-to-everything (V2X) communication. This technology constantly shares data between vehicles and traffic infrastructure. Drivers and fleet managers get info about traffic and road conditions, while traffic authorities can use data from the vehicles on the road to manage road networks.

Smart traffic lights, smart signs, and intelligent road markings can be automated and use machine learning to constantly optimise traffic flows. Once autonomous vehicles become more common, they will navigate using V2X technology.

Safer roads

While telematics brings significant efficiency benefits for fleets, its safety benefits are hugely important – especially for a country like South Africa, with a horrific average of 14 000 road deaths every year.

Data gathered from vehicles can help road-safety authorities to better understand driving behaviours like speeding, parking, routing, lane selection, harsh braking, fatigue and driving under the influence.

Collision data can be used to identify accident hot spots where structural improvements may be required. AI can be used to predict traffic bottlenecks – due to weather or high usage – before they occur, and to take pre-emptive action – deploying traffic officers and advising drivers to take alternative routes.

“Data is the new oil” is a current catchphrase. Telematics is already almost ubiquitous – data and info are constantly being generated right across our mobility networks. The precious insights made possible by this data are the oil that will fuel the design of better, more efficient and more sustainable mobility networks, where all of us are safer, healthier and more successful.

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