



# Telematics Incentivizing Safe Drivers

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## What are telematic devices and how do these systems work?

Telematic devices combine telecommunications and informatics in a technology used to monitor vehicles and gather driving data. This information is then transmitted to a central system in real-time. These devices can track data related to speed, braking patterns, phone usage, seatbelt use, and more.

Telematics systems typically include a device installed in a vehicle, either as a plug-in, a built-in feature, or an app on a mobile phone. This device collects data through GPS, onboard diagnostics (OBD), sensors, and accelerometers. That data is then transmitted to a secure server where it can be analyzed and reviewed by drivers, parents, employers, or insurers.

While individual systems may vary, users may receive a variety of notifications including:

- Real-time alerts about speeding, harsh braking, or phone use
- Driving scores or behavior reports
- Coaching tips or incentives to encourage safe driving habits

## What is the purpose of telematic devices and who uses them?

These systems monitor driver behavior (e.g., speeding, harsh braking, rapid acceleration), and devices help drivers to identify risky driving patterns. They also promote safer driving habits and can help to reduce crashes and injuries. Telematics help drivers recognize and understand their driving habits. They can also enable insurers to offer usage-based premiums and provide companies with insights into how safely their teams are operating vehicles. These systems are already widely used in commercial fleets, insurance programs, and increasingly, in personal vehicles.

## What role does this technology play in driver safety and how frequently are telematic devices used?

Distracted driving is one of the leading factors in crashes on American roads. A telematics device is a proactive tool that gives drivers feedback in the moment of risk-taking to help them recognize patterns, and thereby the frequency, of risky behavior. These devices give personally relevant feedback to individual drivers which has advantages over traditional methods such as generalized awareness campaigns which may not be relevant to all drivers or relying on police stopping a driver and ticketing them. These devices perform the following functions:

- Detect distraction (such as phone use or eyes off the road) as it happens
- Alert drivers to risk-taking in the moment
- Measure patterns in behavior and improvement over time
- Equip parents and fleet managers to intervene when necessary

It is estimated that more than 50 million vehicles in the United States are equipped with telematics systems.<sup>1</sup> This includes both factory-installed telematics in new vehicles and aftermarket devices used for fleet management, insurance, and personal use.



## How can telematics devices help drivers & are there any limitations?

Motor vehicle crashes are more likely to occur in conjunction with certain driver behaviors such as speeding, hard braking and cornering, and cell phone distractions.<sup>2,3</sup> Data about these behaviors collected by accelerometer, gyroscope and GPS sensors as well as others can help drivers identify their own risky behaviors and help them make safer choices by reducing these risks.

According to data from Cambridge Mobile Telematics, drivers enrolled in a telematics-based insurance program may experience more than 60% improvement in behaviors related to hard braking, speeding, and phone distraction.<sup>4</sup>

While telematics can incentivize drivers to adopt safer driving habits, no technology is a silver bullet. For example, telematics devices capture data about certain types of risky driving behaviors such as hard braking, speeding and cell phone movement. Some devices do not differentiate between drivers of the same vehicle. They are also not able to fully assess a driver's level of skill and experience.

Technology should complement—not replace—a culture of responsibility and ongoing education. But when used alongside strong policy and public awareness, telematics can be a powerful tool in the mission to end preventable roadway deaths.

What are common misconceptions about telematics and how devices work?

**Myth 1: Telematics only track vehicle movement and location. FALSE.** Many people think telematics are solely about GPS tracking of vehicles. In reality, telematics encompass a wide range of data collection and communication technologies, including vehicle diagnostics, driver behavior monitoring, fuel usage, maintenance alerts, and more.

<sup>1</sup>. Cambridge Mobile Telematics, 2025.

<sup>2</sup>. Blincoe, L., Miller, T., Wang, J.-S., Swedler, D., Coughlin, T., Lawrence, B., Guo, F., Klauer, S., & Dingus, T. (2023). The economic and societal impact of motor vehicle crashes, 2019 (Revised). Report No. DOT HS 813 403. Washington, DC: National Highway Traffic Safety Administration.

<sup>3</sup>. Klauer, S. G., Dingus, T. A., Neale, V. L., Sudweeks, J. D., and Ramsey, D. J. (2009). Comparing Real-World Behaviors of Drivers with High Versus Low Rate of Crashes and Near-Crashes. Report No. DOT HS 811 091. Washington, DC: National Highway Traffic Safety Administration.

<sup>4</sup>. Cambridge Mobile Telematics. (2024). The State of US Road Risk in 2024: A data-driven analysis from Cambridge Mobile Telematics.

## **Myth 2: Telematics erode my privacy rights. FALSE.**

Some people believe telematics systems constantly spy on drivers in an intrusive way. While telematics do collect data, reputable systems are designed with privacy considerations and typically only collect data relevant to vehicle performance, safety, and efficiency, often with consent and transparency.

## **Myth 3: Telematics can remotely control a vehicle. FALSE.**

There is a fear that telematics systems can be used to remotely control or disable vehicles. While some fleet management systems can send commands (like engine shutdown in theft recovery scenarios), everyday telematics are mostly about data collection and reporting, not remote control.

## **How do telematics address privacy expectations or concerns?**

These systems integrate strong encryption, secure communication protocols, and robust cybersecurity practices to protect data from unauthorized access or breaches whether it is in transit or being stored. Data sharing with third parties is typically limited and controlled, often requiring explicit user consent, especially when data is used for marketing or sold to external entities.



Additionally, only necessary data relevant to provide the service is collected. For example, telematics systems may gather vehicle location, speed, and engine data but avoid collecting unrelated personal information. Users are informed about what data is collected, how it will be used, and who will have access to it. Consent is often obtained upfront, especially for consumer-facing telematics services like usage-based insurance.



## **Call-to-action**

**For Drivers & Vehicle Owners:** Explore telematics options available for your vehicle to improve your safety, reduce costs, and benefit from personalized insurance programs.

**For Fleet Managers & Businesses:** Implement telematics to optimize safety among drivers, reduce expenses, ensure regulatory compliance, and promote safer driving culture.

**For Telematic Providers:** Develop secure, user-friendly telematics solutions with transparent data practices that respect user privacy and empower informed decision-making.

**For Policymakers & Regulators:** Create clear, balanced regulations that encourage telematics innovation while protecting consumer rights and data privacy.

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# NATIONAL DISTRACTED DRIVING COALITION



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