

eBook

What is telematics?



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In its broadest sense, telematics is the joining of the two sciences of telecommunications and informatics (information processing).

Today, the word telematics is generally used to refer to the tracking of vehicles, assets and high-value equipment using GPS technology, which has become an important management tool for commercial and government fleets. Telematics is also commonly referred to as GPS fleet tracking solutions or fleet management software.

Some common types of business assets that can be tracked are:

- Cars
- Light-duty trucks
- Heavy-duty trucks
- Heavy equipment (e.g., cranes, tractors)
- Trailers and flatbeds
- Stationary equipment (e.g., generators, dumpsters)

With a comprehensive telematics solution, you can track a range of fleet performance metrics, including:

- Operational costs
- Driver performance
- Routing efficiency
- Vehicle performance





How does telematics work?

A telematics system includes a GPS tracking device, which is installed in a vehicle, that allows for the sending, receiving and storing of telemetry data. It connects to the vehicle's own onboard diagnostics (OBD-II) or CAN bus port with a SIM card, and an onboard modem enables communication through a wireless network.

The device collects location information as well as other vehicle-specific data and transmits it via General Packet Radio Service (GPRS), 4G cellular networks or satellites to a centralized server. The server interprets the data and transfers it to a computer or mobile device for the end user, such as a fleet manager, to access.

The telematics data captured can include location, speed, idling time, harsh acceleration or braking, fuel consumption, vehicle faults, engine data and more. When analyzed for particular events and patterns, this information can provide in-depth insights across an entire fleet.

Video telematics

While GPS vehicle tracking can provide deep insights into vehicle data and driver behavior, adding a video component, like a dashcam, completes the overall picture. Fleet managers can get better visibility to help improve efficiency, promote safety, and protect drivers and the company from false accident claims.

With video telematics, the full context of harsh driving events and accidents can be seen, including in-cab driver behavior, weather conditions, vehicle positions and other circumstances for informed decision making.

If a crash happens, video footage of the incident can be used as evidence to help mitigate liability, deflect false claims and keep insurance premiums down.



Key benefits of using telematics

Telematics solutions can help fleets of all sizes:



Streamline fuel costs

Telematics can help identify areas of waste, such as inefficient driving patterns, unproductive idling or fuel slippage. This allows fleet managers to address them promptly, which positively impacts fuel efficiency and the bottom line. It also can help management plan efficient routes for each driver to help reduce unnecessary mileage.



Enhance productivity

Near real-time GPS system data can help drivers avoid traffic delays and plan for inclement weather. Back-office managers can quickly and easily assign any new or additional site visits to the nearest vehicle and instruct drivers on efficient routes to get there.



Improve maintenance

Vehicle maintenance and asset lifecycle management can be improved by using fleet telematics to track usage hours and schedule preventative maintenance, as well as help track service records and keep tabs on warranty recovery. Using reports and alerts, fleet managers can help decrease expenses and keep vehicles in safe-operating condition by staying on top of engine diagnostics, including battery voltage, coolant temperature, powertrain malfunctions, intake valve issues, oxygen sensor problems and more.



Promote safety

A telematics system offers continuous feedback regarding driving style and driving behavior, so fleet managers can coach drivers on how to reduce unwanted driving habits like speeding or harsh braking. Improvements can be made based on actionable, data-based reports that highlight driver performance and support new safety targets.



Simplify payroll management

A telematics solution can track when a vehicle is started at the beginning of the day and the moment it shuts down at the end of the night. This helps fleet managers have accurate, automated records of how long an employee worked. Telematics also helps business owners verify that employees are paid only for the hours they work, while eliminating unnecessary time spent manually matching time sheets to job tickets.

Telematics helps you put the customer first.

When you want to elevate your level of customer service, this is where telematics technology can really help. You'll have tools that can help you improve processes directly linked to customer service:

- **Rerouting vehicles:** During unexpected weather events or construction, telematics can identify new efficient routes and direct drivers how to get there. This can help cut down on late arrivals to a customer location.
- **ETAs:** Telematics helps companies provide their customers with accurate arrival and delivery times for specific jobs. Fleets can communicate delays in near real time, helping to better manage customer expectations.
- **Streamlined interactions:** Using electronic forms, service-based organizations can automate many of the required forms, including work orders, proof of delivery, authorizations and liability documents. Drivers and technicians can use a smartphone or tablet to complete forms and submit data back to the home office quickly.



Find the solution that's right for your fleet

The best telematics solutions offer easy-to-use technology, customizable reporting and troubleshooting when you need it.



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