



Environmental risk bulletin

Telematics and fleet safety

You are a fleet safety manager or terminal manager, you conduct quarterly driver safety meetings, have safety policies in place, and follow set driver hiring practices, yet accidents still occur. Following an accident, people turn to the safety director and ask why did it happen? We all know we can't put a safety manager in each truck; however, maybe we can do the next best thing – Telematics.



Telematics are improving and becoming more and more a part of transportation companies' safety programs. New technology is now capable of capturing, displaying, and analyzing data to help manage driver behavior, driver routes, vehicle performance, and equipment/cargo security. These solutions include video event recorders, phone/ wireless applications, GPS tracking, Hours-of-Service compliance, and advanced driver assistance systems.

Besides the benefit of crash avoidance, telematics has proven to reduce vehicle running costs, improve driver performance/retention, increase operational efficiency, reduce "in-transit exposures" such as theft or breakdown, and most importantly save lives. This technology enables fleet managers to capture data more efficiently and improve profitability. Data is readily available via dashboards, reports, and downloadable spreadsheets.

Telematics background

Telematics is the joining of two sciences—telecommunications, a branch of technology including phone lines and cables, and informatics such as computer systems. Today, the term is commonly used to refer to the telematics solutions utilized in commercial fleet vehicles. At its core, a telematics system includes installing a vehicle tracking device that allows the sending, receiving, and storing of telemetry data. The telematics data points can include location, speed, idling time, harsh acceleration or braking, sharp turning, fuel consumption, vehicle faults, and more. When analyzed for particular events and patterns, this information can provide in-depth insights across an entire fleet of vehicles.

With your telematics software, you can map out the best and safest routes possible or get emergency assistance to drivers if/when accidents occur.



Driver behavior improves when each driver realizes monitoring is in place, and subsequent coaching is provided. In much the same way that a video camera positioned over a traffic light can lessen the frequency at which a driver runs a red light, a driver in a monitored vehicle is more likely to obey speed limits, brake judiciously, reduce idling time, and use caution in lane changes or choice of stopover locations.

A 2014 U.S. Department of Transportation study monitored truck driver performance using a telematics system that included feedback and coaching to drivers. The findings demonstrated a reduction in unsafe events and incidents of speeding. A side benefit seen was an improvement in fuel economy between 5% and 9%. The study showed unsafe events, defined as sudden acceleration, hard braking, and sudden lane changes, decreased by almost 50% across both day cab and sleeper cab groups. The study also showed that the distance driven at speeds more than 65 mph decreased by more than 33% for day cabs and 42% for sleeper cab groups.

One earlier study demonstrated a 28% reduction in crashes with telematics monitoring in place. Studies conducted in later years have shown similar improvements by demonstrating that installing telematics systems into vehicle fleets can cut accident occurrences by 20 – 30%.

Using telematics data to improve your fleet's safety culture

Telematics can improve both fleet safety performance as well as driver and company safety culture. These benefits and considerations include:

GPS data

GPS monitors your vehicles' locations. With your telematics software, you can select the optimal and safest route or request emergency assistance if accidents occur.

Driver's scorecard

In the classroom, drivers agree they should behave safely, but this does not always translate to how they act on the road. Track your drivers' behaviors, like speeding, braking, accelerating, idling, and any other actions you want to monitor as drivers are out on the road. By monitoring how they really drive on the road, you can more effectively refine driver training, reward positive behaviors, or adjust disciplinary actions.

Beware – do not fall into the trap of receiving too much information that you start to ignore it. Work with your telematics provider to receive timely and relevant data that you can act on promptly. You do not want to have to explain during a lawsuit defense that you had data on an unsafe driver but chose not to act upon it.

Driver feedback

While the aggregated raw data is great to have, you should also be requesting direct feedback on the data from your drivers to make sure you have the complete picture. Constant communication between drivers and fleet managers is very important for a fleet to operate smoothly. When employees feel their input is valued and will be taken into consideration, they're more likely to comply with the rules outlined by management. Foster an environment where drivers feel empowered to speak up and voice their own ideas of how to improve the fleet's safety culture.

Safety risks

Did you know Americans check their phone on average once every 12 minutes? That's about 80 times per day that we're picking up our phone to see if there's anything new waiting for us and most of us know that behavior doesn't stop when we're behind the wheel. Similar to checking driving behavior, telematics data can be used to see how distracted drivers are while on the road. Remind drivers of your no texting or calling policies and require that drivers only use their phone during times when it's safe to do so.

Seatbelt use is another safety risk among drivers. Enforce seatbelt usage as a requirement among your drivers and add it as an item on your driver scorecard.

There is technology out there that prevents these risks immediately, including features that lock drivers' phones when they shift out of park. Similarly, seatbelt-enforced features will not allow a driver to shift out of park if they are not buckled up.

Maintenance needs

Sometimes a driver can do everything right but still end up in an accident or emergency situation because something is wrong with the vehicle. Including maintenance checks as part of your telematics solution, can ensure vehicles are serviced routinely and performing the way they should to keep your drivers safe.

Solutions that are telematics-based pull engine diagnostics data straight from the in-vehicle diagnostics systems. They deliver real-time data on vehicle odometer readings and fuel efficiency. The data helps fleet operators employ appropriate fleet maintenance solutions. Telematics technology provides warning signs as vehicles start to develop mechanical issues. These predictive signals allow problems to be addressed as early as possible, effectively reducing the downtime of vehicles. It makes scheduling of preventative maintenance activities simpler and maximizes the uptime of vehicles.

Improved communication

In the past, it could be a challenging task to keep connected with the drivers in the field. Telematics has helped in simplifying the communication process and significantly reducing the need for drivers to report and check-in. It has helped in automating the majority of the process and allow drivers to spend more time focusing on doing their job well. Real-time communication while behind the wheel can be distracting, however, and should be discouraged.

Regulatory compliance

Meeting regulatory compliance requirements and avoiding costly penalties are essential. Telematic systems create accurate work diaries and ensure that drivers are taking breaks as per the prescribed schedules.

Telematics technology provides warning signs as vehicles start to develop mechanical issues.

Telematics is definitely not a magic wand that will correct everything. It is however a valuable tool for fleet management which, if used correctly, can improve safety culture. The key to success is its use and understanding by both drivers and management. Jointly discuss your feedback program for safe driving. Let your drivers know that:

- The program is designed to acknowledge safe driving and highlight opportunities for safe driving improvement
- Technology is used as a positive means to help reinforce and encourage safe driving behaviors.
- You will be periodically providing and seeking driver feedback; explain how this will happen.

On-board video recorders

Using video telematics in today's world can make a major difference as it relates to safety and business expenses. Studies have shown that video telematics reduces fatal crashes by 20% and injury crashes by 35%. As video technology evolves, it is predicted that these numbers will increase. If your fleet doesn't implement some form of video telematics, your company could be at risk for an issue that might affect the longevity of your business. The National Transportation Safety Board actually recommends that heavy truck and bus fleets use video recorder technology as a standard practice.

Video telematics use a cellular network to collect both driving data and vehicle data, combined with real-time video footage, to advise about behaviors and incidents that may need your attention. Most video telematics solutions are incident-driven, meaning they respond to specific driver behaviors, such as speeding, hard braking, and distracted driving. The main goal of video telematics is to gather data to show a comprehensive picture of what is going on inside and/or around commercial vehicles at any point in time. Video telematics also helps in improving driver safety by providing data to inform personalized driver coaching and training plans.

Video telematics can be an investment in your business that quickly pays for itself. Here are some key reasons to add video telematics as a way to protect your fleet management brand:

- In an accident, commercial trucks often get blamed even when it's not their fault. Fortunately, this becomes close to impossible when using video telematics. Dash cams and rear and

REDUCTION OF INCIDENTS THROUGH USE OF VIDEO TELEMATICS

FATAL CRASHES

20%

INJURY CRASHES

35%



Many of the factors associated with rising claims and loss frequency are rooted in poor driver behavior.

front-facing video cameras give you the visibility necessary to protect your fleet from these types of incidents. Usage of external and internal video telematics creates a buffer to mitigate these types of issues. Likewise, if the video shows your driver is at fault, this will allow insurance carriers to work towards closing the claim immediately before it expands into unnecessary costs.

- Using video telematics in your fleet operations shows both your employees and clients the level of importance you place on safety and accountability. The presence of video hardware provides additional data that can be extremely helpful for identifying driver-specific improvement areas. Video also provides an additional level of assurance to clients that their cargo will be safe in your hands and, should an issue arise, there will be plenty of real-time documentation.
- Training and coaching should be ongoing for both new hires and veterans in your company. Dash cams provide quality videos that are sensitive to numerous types of problematic driver behaviors that can more easily be corrected.

Summary

Many of the factors associated with rising claims and loss frequency are rooted in poor driver behavior. Statistics from studies conducted on in-vehicle monitoring with telematics show a clear relationship between monitoring and improved driver behavior. Safety is one of the critical factors that vehicle operators deal with. Telematics helps by monitoring driver behavior and vehicle performance. This allows fleet managers to routinely identify unsafe practices so that they can quickly be communicated and resolved. Telematics is no longer viewed by fleet operators as a form of big brother technology. It is now perceived as a solution to keep small problems from turning into bigger ones.

Resources

- Verizon Connect - 'What is Telematics?' - 2/2/20. <https://www.verizonconnect.com/resources/article/what-is-telematics/>
- Insurance and Mobility Solutions - 'Improving Fleet Safety and Driver Behavior With Commercial Insurance Telematics' - 2020. <https://ims.tech/opinion/telematics-fleet-safety/>
- Derive Blog - 'How to Use Telematics Data to Improve Your Fleet's Safety Culture' - June 21, 2019. <https://derivesystems.com/blog/how-to-use-telematics-data-to-improve-your-fleets-safety-culture>
- Fleet Management - 'Telematics For Fleet Management - All You Need to Know' - Nov. 13, 2019. <https://www.fleetmanagement.ae/blog/telematics-for-fleet-management/>
- US Department of Transportation - Federal Motor Carrier Safety Administration Website - "Study of the Impact of a Telematics System on Safe and Fuel-efficient Driving in Trucks"; April 2020 <https://www.fmcsa.dot.gov/>

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