



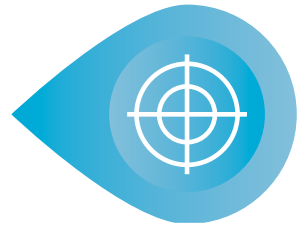
# Driving The Fleet Safety Movement

Practical Use of Telematics in a Safety  
Program to Save Lives and Reduce Costs

Whitepaper | 2014

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## Introduction

Each year, thousands of road fatalities are attributed to commercial vehicle incidents. Providing staggering figures, the Occupational Safety and Health Administration (OSHA) reports that “every **12 minutes someone dies in a motor vehicle crash, every 10 seconds an injury occurs, and every 5 seconds a crash occurs.**”<sup>1</sup> The majority of these incidents occur during workday hours, predominantly during the to-and-from work commute – and ultimately the employer bears a multitude of short term and long term costs associated with on/off job property damage and injuries. While these costs should provide enough incentive to avoid risky driving, a recent research study conducted by The Nielson & Harris Poll confirms that individuals engage in unsafe driving practices despite being fully aware of their unsafe nature.

For example, out of the 2,045 adults surveyed between May 27th and 29th, 2014,

Over **90%** believed texting while behind the wheel is a dangerous activity,



What's more, personal grooming, posting to social media, watching online videos, and driving after having a few drinks is a common reality for many. Drivers make choices, knowingly choosing the behaviors that puts them and other drivers at risk.

Due to this clear divide between what drivers know to be unsafe and what they choose to do anyway, it is evident that a deeper issue exists for organizations and fleet managers, and educating drivers on safe driving practices is simply not enough. With accidents generating “nearly **\$871 billion in economic loss and societal harm every year,**”<sup>3</sup> new measures that go the extra mile must be introduced to combat these occurrences. But how, exactly, can in-office fleet managers and driver supervisors effectively reduce driving risks, improve on-road safety, and illustrate measurable improvements, all the while managing the fleets day-to-day operations? With a countless number of different technology solutions available in the marketplace that claim to aid fleet safety efforts, where should the fleet manager start?

- 1 Occupational Safety and Health Administration. (n.d.). *Guidelines for employers to reduce motor vehicle crashes*. Retrieved from OSHA.gov: [https://www.osha.gov/Publications/motor\\_vehicle\\_guide.pdf](https://www.osha.gov/Publications/motor_vehicle_guide.pdf)
- 2 The Harris Poll. (2014, June 19). *From talking to texting, Americans fess up to dangerous driving behaviors despite recognizing that they're unsafe*. Retrieved from Harrisinteractive.com: [http://www.harrisinteractive.com/vault/Harris%20Poll%2058%20-%20Safe%20Driving\\_06.19.2014.pdf](http://www.harrisinteractive.com/vault/Harris%20Poll%2058%20-%20Safe%20Driving_06.19.2014.pdf)
- 3 Kilcarr, S. (2014, May 30). *Calculating the cost of crashes*. Retrieved from Fleetowner.com: <http://www.fleetowner.com/news/calculating-cost-crashes>

## Costs of An Accident

According to The American Society of Safety Engineers (ASSE), employers are faced with two types of accident-related costs: direct and indirect. While direct costs consist of more obvious items such as vehicle towing, motor vehicle repairs and replacements, deductibles, fines, insurance premiums, and workers compensation, it's critical to note that **"indirect costs of injuries may be 20 times the direct costs."**<sup>4</sup> These 'hidden costs' are vast and require fleet managers to take a closer look at various items:

- + Training
- + Compensating replacement workers
- + Accident investigations aimed at identifying core causes
- + Completing risk assessments to estimate potential damages
- + Enforcing corrective actions
- + Scheduling delays and lost productivity
- + Administration expenses
- + Employee morale and absenteeism
- + Customer satisfaction levels and loss of business
- + Negative publicity threatening an organization's reputation

Take for instance the highly publicized accident where famous comedian Tracy Morgan **"sued Wal-Mart Stores Inc. for negligence, after one of its truck drivers crashed into Mr. Morgan's limousine van,"**<sup>5</sup> ultimately killing one passenger and injuring three others. In this case, it was said the driver of the Wal-Mart truck was speeding and fell asleep behind the wheel as a result of being awake for more than 24 hours. While the results of the investigation are pending, on-road driver safety must always be managed by finding the weak spots that add risk to an organization. Moreover, businesses that operate commercial vehicles and require employees to drive for work purposes, and/or provide staff with company vehicles for private purposes, are legally obligated to manage driver and fleet safety <sup>6</sup>.



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- 4 American Society of Safety Engineers. (2014). *Indirect costs of accidents*. Retrieved from ASSE.org: <http://www.asse.org/professionalaaffairs-new/bosc/indirect-costs.php>
- 5 Banjo, S. (2014, July 12). *Comedian Tracy Morgan seeks crash damages from Wal-Mart*. Retrieved from WSJ.com: <http://online.wsj.com/articles/tracy-morgan-seeks-damages-against-wal-mart-for-highway-crash-1405179921>
- 6 Fleet Forum. (n.d.). *Fleet forum safety guide*. Retrieved from fleetforum.org: <http://www.fleetsafe.org/pool/Fleet%20Forum%20Fleet%20Safety%20Guide.pdf>

Another cost area to consider, as it relates to insurance, is whether organizations choose to self insure or commercially insure their vehicles. Under the commercial insurance umbrella, organizations can essentially transfer risk and the costs associated with claims straight to the insurance company, rather than taking on direct liability. With this peace of mind that can be found by working with commercial fleet insurers, many choose to opt out of fleet safety training programs that involve adding resources directed at improving driver behavior. However, as a way to incentivize organizations to manage fleet safety, many insurers now provide discounts to eligible companies, typically with a fleet size of 5-100, who use telematics data to manage risk and improve safety. As explained in a Deloitte University Press research post, “[behavior-based telematics is disrupting the auto insurance market](#)”<sup>7</sup> - data is analyzed to reveal driving behavior and provide precision in pricing to reward “less risky” organizations. With safety-driven insurance, telematics helps minimize the likelihood of collisions, improves driver performance, and reduces overall at-risk driving behavior. As fleet costs continue to climb, “[any opportunity to save money, even on insurance premiums, is something fleets need to take a long hard look at.](#)”<sup>8</sup>

## Driver Safety Program Challenges

One of the most effective ways to improve on-road safety is by developing and actively implementing driver safety programs. An investment in workplace safety and health initiatives backed by the support of an organization’s most senior levels of leadership has been known to result in a reduced number of fatalities, injuries, and illnesses. Traditional methods of communicating objectives aimed at facilitating a company-wide safety movement typically starts with equipping employees with training courses, educational programs, and newly developed training materials. Furthermore, the program should outline the severity of the penalties for driver safety violations. Nevertheless, generic safety education programs only scratch the surface as four key challenges remain:

1. Obvious weak spots are identified while the less apparent, and possibly more risky weak spots remain ambiguous.
2. Driver safety programs are applied holistically across the entire department instead of focusing the program to individual needs on a case-by-case basis.
3. Drivers with a solid understanding of what constitutes unsafe driving behavior can still engage in such activity regardless of the higher risk levels involved, especially when fleet managers lack insight into the on-road activities of drivers as they occur in real-time.
4. It is difficult to measure the effectiveness and payback of any driver safety program.

<sup>7</sup> Friedman, S., & Canaan, M. (2014, April 21). *Overcoming speed bumps on the road to telematics*. Retrieved from DUpress.com: <http://dupress.com/articles/telematics-in-auto-insurance/>

<sup>8</sup> Kilcarr, S. (2014, March 19). *Is it time for an insurance review?* Retrieved from Fleetowner.com: <http://fleetowner.com/blog/it-time-insurance-review>

## The Cart Does Not Come Before the Horse: Telematics is a Supporting Tool

The answer to improving fleet safety is not in giving drivers more education - it's in giving highly focused safety education and training which is continuously monitored, managed, and reported on. One of the most commonly used tools for fleet management is telematics. The technology offers fleet managers and supervisors with detailed visibility into the on-road performance and activities of drivers and vehicles in real-time. In its most basic form, fleet managers are able to leverage the technology to track vehicles on a map, re-create previous trips history, and view dashboard reports that show items such as total vehicle time spent idling and fuel consumed. Further to improving driver productivity and optimizing fleets, telematics technology can also be leveraged for safety management purposes. It pinpoints issues related to a fleet and the drivers which require more customized safety training. Some of the main risky driving behaviors include:



- + Speeding over the allowable legal limit
- + Aggressively accelerating
- + Taking sharp turns
- + Abruptly moving side-to-side, which is commonly associated with distraction like texting, and can be captured by the accelerometer
- + Using company vehicles after work hours for personal purposes
- + Driving without a seatbelt on

Although there is a business case for telematics technology, it is important to acknowledge that telematics simply serves as a tool which supports already well-established organizational safety policies, practices, and procedures. In other words, telematics alone is not a 'silver bullet' - the technology contributes to an organization's safety culture, rather than defining it. It is for this reason that not all organizations are ready to leverage telematics for safety purposes. As explained by Neil Cawse, Geotab's CEO, getting a 360 degree view of driver safety is no easy task: it requires a serious commitment from all managers to cultivate and enforce a culture of safety before telematics can be deployed. Those looking to drive a fleet safety movement are ready for telematics only after an internal culture for safety has been established.

The return on investment associated with using telematics can be significant. One company in the parcel delivery industry using Geotab, a well-known innovator in safety telematics technology, has seen their accident frequency rate drop from **6% to 2.5%**. Other research studies exploring whether telematics positively influences fleet driver safety have also provided a mounting level of improvement evidence: **"two commercial carriers reported 37% and 52% reductions in safety-relevant events per 10,000 miles."**



Dorn, L. (2013). *What's the evidence that telematics can influence fleet driver safety?* Retrieved from Brakepro.org: <http://www.brakepro.org/assets/docs/practitioner-tools/fleet-guidance-14-conference-technology.pdf>

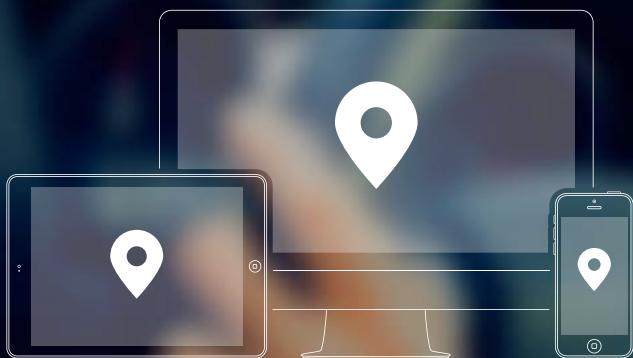
## Telematics: What Features Really Drive Safety?

Even the most experienced fleet professionals that manage some of the world's largest fleets are confronted with a confusing array of telematics choices. With hundreds of telematics organizations boasting similar solution benefits, the marketplace clutter has made it difficult for fleet managers to differentiate between all the different technology providers and the options they provide. While on the surface it may appear as though all telematics solutions are alike, many are surprised to learn that telematics technology vastly differs from one provider to the next. Before choosing a telematics company to work with, it is imperative for fleet managers to conduct diligent research.

To realize the benefits, fleet managers filtering through the various telematics providers should ask: **Does your telematics solution include a driver coaching feature where drivers are notified with in-vehicle audible buzzers and alerts while driving, as a way to proactively manage on-road driving behavior?** Although a majority of telematics organizations mention driver safety in their promotions, only a small handful offer this vital to safety management feature. In-vehicle coaching alerts the driver that an event, which has been deemed unsafe by the organization, has occurred or is about to occur. The driver then has the opportunity to modify his or her behavior within seconds in order to comply with company policy, thereby preventing a recorded event. On the other hand, if the driver chooses to continue

with the unsafe behavior by ignoring the active alerts, supervisors are automatically notified of the infraction via email, text, and/or on-screen messages. The event is also recorded in a driver scorecard - a report that compares and ranks like drivers to one another and highlights the specific areas needed for improvement. Under this scenario, drivers that need counselling on safe driving are highlighted and can be addressed with targeted, actionable training. This is a powerful tool that not only manages behavior, but also changes firmly ingrained on-road driving habits.

To gauge the innovativeness and quality level of a telematics offering, one should always ask: **Does your company manufacture its own telematics devices and build its own software?** Having a true, end-to-end telematics solution means your provider is investing in research and development to build the hardware and software, rather than selling pre-made devices manufactured by other organizations. In an industry that is rapidly evolving and expected to reach **"more than 600 million connections<sup>10</sup>"** on cellular networks by 2019, innovating and responding quickly to marketplace changes is key to meeting the changing needs of fleets and the ongoing demand for better management systems. Telematics technology is an investment, and fleet managers need to protect their investment by sticking with a provider that keeps a tight pulse on change, adapts to it, and also introduces necessary change to the industry.



Don't just address today's concerns. Prepare for your future fleet growth with an end-to-end telematics solution.

The questions below probe deeper into the sophistication level of the solution you may be considering, to go beyond the basics and to help you uncover the less obvious solution differences. If the telematics provider answers 'NO' to any of the questions below, in addition to the two already outlined above, you may discover that you'll quickly outgrow the solution:

- Q: If a driver unplugs the device and takes a trip "off the grid" then plugs it back into the vehicle, will the telematics system provide me with a tampering detection notification?
- Q: Do you report on how much drive time the driver is on the road for without their seatbelt on?
- Q: Can I create new, custom rules and reports in the software which sync up with my internal safety policies? For example, can I set a rule that enforces reversing into a parking spot?
- Q: If a vehicle is parked, and a collision occurs, will the technology still detect and report on the impact?
- Q: Should an on-road accident occur, does the system offer trip-level data at forensic detail so as to be able to re-create the trip and see what happened on a second-by-second level?

## Taking Telematics To The Next Safety Level

Telematics should not be standalone. In an in-depth academic research study conducted by the author, it was discovered that **91%** of fleet professionals equate the reputation of a telematics company with that of its products and services. The majority of these individuals indicated the importance of having highly intelligent technology with the ability to integrate with other thirdparty systems to provide additional data. Integration occurs in 2 core ways:

1. Your telematics device should offer expandability through the addition of third party devices, such as Garmin navigational devices and in-cab cameras systems.
2. Your fleet management software should have an easy-to-use SDK (software development kit). The data captured further improves operational efficiencies by combining safety data from a variety of sources, such as CSA scores and MVRs, to create more holistic views of driver behavior. Taking a big data approach highlights the leading indicators in driving behavior and how that translates to tickets and accidents overtime.



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1 // Seek an expandable platform



2 // Look for an easy-to-use SDK



## Conclusion

Purchasing telematics without acting on the data is similar to buying a gym membership, not going, and still expecting performance improvements. Likewise, in order to see beneficial results, the fleet safety movement starts with the implementation and enforcement of a safety program that spells out driver rules, obligations, and responsibilities aimed at preventing injuries and property damage. Telematics technology doesn't change behavior - actions do. Only once a culture of safety has been formed should telematics be introduced to the organization. Based on the fleet manager's safety rules, the technology chosen must be capable of monitoring and enforcing the policies, such as seatbelt utilization, obeying posted road speeds, and following predetermined routes. Additional value can be gained with the integration of third-party devices and the resulting actionable data. Hence, telematics eliminates the guesswork in managing on-road driver activities and provides new opportunities to enhance the fleet safety program.

# GEOTAB

management by measurement

Geotab is a leading global provider of premium quality, end-to-end telematics technology. Geotab's intuitive, full-featured solutions help businesses of all sizes better manage their drivers and vehicles by extracting accurate and actionable intelligence from real-time and historical trips data. Fortune 500 companies, including 40% of the top ten fleets and 18% of the top 100 fleets in North America, rely on Geotab's solutions to improve productivity, optimize fleets through the reduction of fuel consumption, enhance driver safety, and achieve stronger compliance to regulatory changes. The company's products are represented and sold worldwide through its Authorized Reseller network. To learn more about Geotab, visit [www.geotab.com](http://www.geotab.com) to learn about how the company tests its devices and where it stands in relation to various industry standards.

