Raising the Bar for Driver Safety

How to Improve Safety with Coaching, Digital Tools, and Programming

By Crystal Jeffers

Driver safety involves more than just wearing a seatbelt and using turn signals out on the road. Keeping teams safe relies heavily on what happens before and after driving in addition to what happens behind the wheel. As driver safety standards evolve, so do the tools available for tracking and training. Using the available tools in today's market saves time, adds convenience, and provides deeper insights, making it easier to be proactive about keeping drivers safe.

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The safety climate of each organization can range drastically depending on the type of operations and shared perceptions about policies, procedures, and practices[1]. Coupled with consequences of violations, these all directly impact driver perceptions about what kind of behaviors are appropriate. For example, if business practices emphasize and encourage productivity or efficiency over safety, the likely outcome is that safety-oriented behaviors will take a backseat to make way for the articulated focus of productivity[2]. In fact, so much research has been performed in this area that safety climate theory was developed. Safety climate theory argues that there are identifiable factors, particularly in an organization's safety climate, that can predict the likelihood drivers will perform unsafe actions[3]. Much of the research conducted comes from surveys, analysis of statistics, and draws from Ajzen and Fishbein's Theory of Planned Behavior (TPB). The idea is that behaviors are based on logical and reasonable evaluations of the information that is available to a person. It follows that there is a causal link between climate and behavior[4]. Utilization of safety-oriented systems and tools can enhance the safety climate and help to keep safety top of mind, as they often tend to incorporate some sort of daily touchpoint or report out.

Use of Daily Vehicle Inspection Reports (DVIRs) keeps drivers aware of potential problems and safety hazards on the vehicle before it even leaves the yard. This also provides time for the fleet to correct the problem or schedule a different truck, eliminating unnecessary confusion and hold ups. In an interview with Jarit Cornelius, vice president of asset maintenance and compliance at Sharp Transport, he estimates that "99% of the things that happen over the road are truly preventable with good pre-trip and post-trip inspections"[5]. "Good" pre and post trip inspection reports require individuals to be knowledgeable, thorough, and present. It is easy for something as repetitive and mundane as trip inspections to be rushed through or done absent-mindedly. Missing something here though could pose potential safety threats to the driver doing the inspection as well as anyone to operate the vehicle after. For this reason, being fully present and attentive while performing inspections is critical.

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There is no denying the importance of pre and post trip inspections. What many forget to consider, however, is the knowledge level of their drivers[6]. It is imperative that time is set aside to train and retrain drivers on what to look for and how to properly conduct a pre or post trip inspection. Never assume that they already know or that inspections are being performed on a regular basis. Performing random inspections are a great way to keep drivers on their toes as well as reinforce the importance of this practice at the company. Random inspections go a long way toward not only ensuring pre and post trip inspections are being done regularly but that they are also being done thoroughly. This is a preventive measure that takes little to no time at all yet provides an additional layer of accountability and quality control. Practices like this minimize the number of potential hazards and safety violations that get missed.

In addition to training and testing, there are other tools and practices that can improve the quality and convenience of pre and post trip inspections. Electronic DVIRs provide a simple, organized way to capture inspection notes and ensure inspections are at least happening but they are not necessarily a good measure of how thoroughly inspections are being performed.

1   Zohar, D., & Tenne-Gazit, O. (2008). Transformational leadership and group interaction as climate antecedents: A social network analysis. *Journal of Applied Psychology, 93*(4), 744–757. https://doi.org/10.1037/0021-9010.93.4.744

2   Zohar, D., & Luria, G. (2005). A Multilevel Model of Safety Climate: Cross-Level Relationships Between Organization and Group-Level Climates. *Journal of Applied Psychology, 90*(4), 616–628. https://doi.org/10.1037/0021-9010.90.4.616

3   Zohar, D. (1980). Safety climate in industrial organizations: Theoretical and applied implications. *Journal of Applied Psychology, 65*(1), 96–102. https://doi.org/10.1037/0021-9010.65.1.96

4   Fogarty, G. J., & Shaw, A. (2010). Safety climate and the theory of planned behavior: towards the prediction of unsafe behavior. *Accident; analysis and prevention, 42*(5), 1455–1459. https://doi.org/10.1016/j.aap.2009.08.008

5   Brajkovic, V. (2021, May 17). *4 Ways to Improve Fleet Uptime*. HDT - Trucking Info. https://www.truckinginfo.com/10143404/4-ways-to-improve-fleet-uptime?utm_source=email&utm_medium=enewsletter&utm_campaign=20210602-NL-HDT-HeadlineNews-BOBCD210527018&omdt=NL-HDT-HeadlineNews&omid=1102409784&utm_content=01&oly_enc_id=6244E1877712A1A.

6   Evangelist, J. (2018, August 21). *The importance of pre- and post-trip inspections*. FleetOwner. https://www.fleetowner.com/industry-perspectives/ideaxchange/article/21702863/the-importance-of-pre-and-posttrip-inspections.

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A good test of inspection knowledge after training is to stage an issue and ask the driver to inspect the vehicle. Additionally, periodically observing drivers as they perform inspections can help to ensure inspections are happening as well as provide an opportunity to give feedback that will help improve the quality of their inspections.

Once inspections have been performed and the driver is on the road, another tool that can help to keep them safe is camera systems. While cameras have much to offer in the way of coaching opportunities and driver exoneration, there is much debate about the implications of camera utilization. Most of the push back tends to be around the topic of in-cab cameras in particular, the primary reasoning being that the cameras are an uncomfortable and unwarranted invasion of privacy that insinuates a lack of trust in the driver on behalf of the company[7]. For fleets facing these kinds of concerns, it is important to note that road-facing cameras are still able to capture many helpful pieces of data and do not infringe on the driver's personal space in the cab. There are more than just the infamous driver-facing cameras. There are front-facing, side-facing, and backup cameras, which do not generally cause the same level of upset.

In addition to fostering safer driving habits, taking advantage of coaching opportunities can make the driver feel more in control behind the wheel.

The data that video intelligence can provide is invaluable, both with accident prevention and mitigation of the aftermath in the event an accident does occur. Reports and recordings can provide insights and opportunities to offer preventive coaching on dangerous driving behaviors. In a Large Truck Crash Causation Study conducted by USDOT, unsafe driving actions were identified as the leading cause of truck-caused accidents[8]. Common areas for coaching are braking and turning, which are easy to correct with a little practice and guidance. A study from 2009 found that practices like these, which are associated with helping the driver operate safely and productively, are more influential and better received than compliance only focused practices[9]. Driver behaviors and attitudes toward unsafe actions are also influenced by the perceived control over their actions. In addition to fostering safer driving habits, taking advantage of coaching opportunities can make the driver feel more in control behind the wheel.

Many of these camera systems and video telematic programs also include artificial intelligence (AI) options that can monitor behaviors to determine whether fatigue or distraction are increasing throughout the drive. This helps to mitigate accidents by alerting the driver and fleet manager in advance of an incident. In a study on one trucking company, implementation of this type of system resulted in a 67% reduction in fatigued driving, a 40% reduction in distracted driving, and a 97% reduction in cell phone use[10]. These two pieces can go a long way in preventing an accident. If an accident does occur, camera footage provides undeniable clarity as to who was at fault in an accident. This has help to exonerate innocent drivers from unjust responsibility in many accidents over the years, protecting them from the consequences of someone else's actions on the road.

Another tool designed to promote safety behind the wheel is Body Control Module (BCM) Programming. BCM Programming builds safety features right into the truck, helping to enforce safety standards on site and off site. The BCM coordinates all electronic modules through a vehicle's sensors, performance indicators, and variable reactors. Some general safety features include driver authorization systems and immobilizers. Driver authorization systems verify only authorized drivers are behind the wheel, protecting fleets from theft, improper use of vehicles, and other related incidents. Immobilizers work hand in hand with this and can also be programmed in conjunction with other features. For example, an immobilizer can be programmed to prevent a vehicle from starting until the driver has fastened their seatbelt. This goes beyond making requests and hoping drivers will buckle up, guaranteeing all drivers in programmed

7   Morgan, J., Crissey, A., & Sickels, D. (2021, June 17). *The pros and cons of truck driver-facing cameras.* Fleet Equipment Magazine. https://www.fleetequipmentmag.com/pros-cons-heavy-duty-truck-driver-facing-cameras/.

8   Douglas, M., & Swartz, S. (2016). *Truck Driver Safety: An Evolutionary Research Approach.* Transportation Journal, 55(3), 258-281. doi:10.5325/transportationj.55.3.0258

9   Douglas, Matthew & Swartz, Stephen. (2009). *A Multi-Dimensional Construct of Commercial Motor Vehicle Operators' Attitudes Toward Safety Regulations.* International Journal of Logistics Management, The. 20. 278-293. 10.1108/09574090910981341.

10   Law, S. T. (2020, July 7). *Why Truck Companies Don't Want Driver-Facing Cameras.* Seattle Truck Law, PLLC. https://www.seattletruck-law.com/blog/why-truck-companies-dont-want-driver-facing-cameras/.

vehicles will be wearing a seatbelt while driving. Other application specific safety features can be programmed in to protect the equipment, driver, and anyone who may be around. For example, trucks with mixers utilize features like hopper control, which are designed to automatically stow a hopper if the truck is going faster than ten miles an hour. Use of features like these can easily prevent unnecessary incidents and help to enforce company mandated safety protocols.

Manual and automated safety efforts produce the best results when they are used in tandem. Having a safety culture, training on best practices, and leveraging technologies can greatly improve driver safety. Digital DVIRs encourage safety by making the process of recording and exchanging information more convenient and streamlined. Camera systems provide opportunities to coach safer driving practices as well as protect drivers in the event of an incident. BCM Programming offers an array of built-in, safety-oriented tools for standard and specialized vehicles across industries. Safety is never guaranteed. But as technology improves, so does the degree to which companies can prioritize safety culture.

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