FleetOwner®

EXECUTIVE SUMMARY

Technology's Role in Improving Driver Safety

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KEY TAKEAWAYS

- A hands-on approach to safety that uses data and is driven by leadership positions an organization in front of safety issues.
- Cultivate a culture of safety through a combination of technology and behavior.
- To build driver buy-in and overcome resistance to change, reframe the purpose of technology.
- Engage the entire organization in the process.
- The most important way to address safety is by reducing distracted driving through available technologies.
- Existing technologies can improve the experience of drivers and the fleet, while technology trends point to more breakthroughs.

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Technology's Role in Improving Driver Safety

OVERVIEW

Risky driving behavior is the top cause of crashes, making driver safety a top priority for fleet managers. A hands-on approach to safety positions an organization to build a culture of safety, shaping habits and leveraging technology. Generating buy-in throughout the organization is critical. It is particularly important to engage drivers in the process and position the program positively through awards and incentives. Fleets can mitigate risk and generate solid ROI from technology deployment and smart use of the data generated.

CONTEXT

FleetOwner's Mindy Long engaged in a discussion with James Rose of UScellular™ and Virginia Tech's Matthew Camden about building a culture of safety, deploying technology, and overcoming challenges.

KEY TAKEAWAYS

A hands-on approach to safety that uses data and is driven by leadership positions an organization in front of safety issues.

Risky driving behavior is the #1 cause of crashes—far ahead of all other causes. To manage risk in a fleet, it is critical to focus on reducing risky behaviors. A hands-on approach ensures that the organization is in front of safety initiatives and allows it to use technology and data wisely. Fleet managers can analyze data to determine their current safety challenges and the most appropriate solutions, whether this means using technology or otherwise.

Leadership matters. Top management's commitment to safety is a keystone of success. Similarly, buy-in from drivers is critical. Leaders among the drivers can help build support by being hands-on in creating the safety program and how it is rolled out.

Cultivate a culture of safety through a combination of technology and behavior.

To build a culture of safety, understand the organization's trends. Initially adopt readily available current technology. Sensors are an example. Dots on a map give visibility to drive behaviors, such as acceleration from a stop or idling too long. Many fail to see the connection between the telematic data they already have and safety, highlighting the need to understand the data properly. A safety culture is built on a foundation that encourages good driving behaviors, framed through positive incentive programs.

Changing culture can be daunting. Don't expect a quick fix. Take time to plan and implement. Fleet managers should identify specific risks and particular driving behaviors their drivers are performing, matching these behaviors to specific solutions. Take time to pilot test if those solutions are working well. A gradual integration leads to less culture shock. A culture of safety will require continuous refinement as the organization is able to absorb and utilize more data.

Ultimately, driver engagement is foundational to creating a culture of safety.

To build driver buy-in and overcome resistance to change, reframe the purpose of technology.

Driver retention is a critical issue to fleet operators. Drivers frequently resist change and reject perceived "big brother" scrutiny, requiring careful positive framing of technology.

- **Cameras raise particular suspicion.** While camera technology holds great promise, it can generate pushback from drivers, causing fleet owners to fear excessive driver turnover. Build buy-in by demonstrating the benefits for all. A camera provides objective information on driver behavior and what

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they encountered on the road; it can show if the driver was speeding or if someone else cut the vehicle off. Inward-facing cameras offer the additional benefit of detecting the driver picking up the phone, addressing the most critical distraction.

- **Show the "why's."** Preventing driver turnover starts with ensuring that drivers see the reasons for the program. Start with education prior to the technology rollout and encourage drivers to take ownership of the program. Seek their input and address their concerns.
- **Generate excitement through rewards.** Use technology to incentivize good behaviors through positive structures. Rewards, gamification, and scorecards are tools to build driver engagement and promote constructive competition.

> Creating a rewards program on these [technologies], making it a positive experience, getting drivers engaged and excited about these things . . . really helps change culture.
>
> *Matthew Camden*

- **Address sensitive matters, such as speed detection, collectively.** Keep the big picture in mind and use information to build a scorecard of trends. Review drivers monthly or quarterly for worrisome behavior trends.
- **Set an example.** Fleet managers can show buy-in and relate to the drivers by installing the technology in their vehicles.
- **Share the results.** Before implementing technology, let the drivers know key statistics, like the fleet had 30% more speeding events, likely leading to crashes.

Real Examples That Prove the Benefits to Drivers and Fleet Owners	
Idling	– A driver on an ordinary daily schedule had a morning routine: start the vehicle, then go back in the house for breakfast. – This behavior caused one hour of idle time each morning. – The fleet management solution detected that this habit burned 500 gallons of fuel per year. – The organization discussed it with the driver, causing an "aha" moment for him. He hadn't realized the implications of his behavior. – The driver sees his interest aligned with the organization doing well: he does the right things, he gets more incentives, the organization is more profitable.
Camera	– One week after a company implemented inward-facing cameras, a driver and vehicle were involved in a crash. – The organization with the other vehicle sued the fleet. – But the recording showed the driver was engaged, alert, and driving defensively. – The camera provided evidence that the other vehicle caused the crash. – As soon as the video was shared, the lawsuit went away. – Other drivers heard about this and asked for an inward-facing camera too.

Engage the entire organization in the process.

When UScellular partners with a fleet owner to deploy new technology, they engage with a broad cross-section of the organization from technology procurement to operational managers, maintenance managers, and even HR.

A key is to make the information that is generated meaningful for each function, utilizing different elements of the data. Deploying new technology requires a training and implementation program for each department. Conversely, collecting large quantities of data and failing to use it creates increased risk, as that failure can be looked to in the result of an accident.

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The most successful organizations embrace data sharing across departments. Sharing fleet data extensively—to dispatchers, management, administration—helps paint a comprehensive picture of the cost of safety to the organization and allows for recognition of successes.

> We talked to fleets who had been successful at significantly improving their safety and culture . . . one of the things we heard from a number of fleets was this whole idea of sharing data.
>
> *Matthew Camden, Virginia Tech Transportation Institute*

Organizations may be concerned about the risk of disrupting current operations and hesitant to integrate new technology. Showing the value of the solution through an improved culture, increased employee satisfaction, and greater profits can help overcome reluctance. The right technology partner facilitates design, training, and installation with end-to-end service that mitigates the risk.

Build a case for positive ROI by aligning with the organizational priorities. Publicly available data proves the ROI from investing in these technologies. In one example, every $1 invested in a lane departure warning system resulted in at least a return of $5 in crash avoidance. Virginia Tech Transportation Institute offers a public ROI calculator of several technologies for fleets to input their own data and receive a customized estimate.

The most important way to address safety is by reducing distracted driving through available technologies.

Risky driving behavior is the largest cause of crashes. Phones and distracted driving are the most significant safety problem. Increasingly companies are deploying technology to address the problem.

Existing technology can reveal when a driver is pulling up an application or looking at a website. Preventing handheld cell phone use and using simple cell blocking technologies can go a long way to reduce risk, keeping the driver's safety top of mind and protecting the brand.

> Folks are really paying attention right now . . . to whether or not the driver is looking at their phone. Whether it's having an inward-facing cab camera or having an application on your mobile devices . . . you're alerted any time the driver picks the phone up and is looking at a part of the phone that they shouldn't.
>
> *James Rose, UScellular*

Existing technologies can improve the experience of drivers and the fleet, while technology trends point to more breakthroughs.

Fleets can handle their workloads better than ever with sensors and telematics enabling route optimization. Data allows more jobs in a week, leading to an increase in revenue. This same data set provides insights into driving behaviors and risks, reducing speeding and crashes.

Evolving technology includes additional safety features. Newer light vehicles and cars already possess features like automatic braking, lane centering, and blind spot warning; these features are migrating to large Class 8 vehicles with potential safety benefits. Newer camera systems with up to five cameras on the vehicle—front, rear, each side, and inside the cab—are increasingly being deployed, ensuring greater accountability.

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> All of those solutions are typically used for incident scenarios, just so you can have accountability, not just for your drivers, but maybe for the other folks that could be involved in the accident as well. It could definitely help you mitigate insurance risks.
>
> *James Rose, UScellular*

Breakthrough technology that uses AI and machine learning to alert drivers when they are tired or distracted holds promise to reduce crashes. The drastically reduced latency of new 5G wireless technology promises faster alerts to prevent distracted behaviors.

BIOGRAPHIES

Matthew Camden

Senior Research Associate, Center for Truck and Bus Safety, Virginia Tech Transportation Institute

Matthew Camden joined the Center for Truck and Bus Safety at the Virginia Tech Transportation Institute in 2008 and is currently a senior research associate in the behavioral analysis and application group. His research experience includes designing, implementing, and evaluating transportation safety programs and equipment using naturalistic and carrier-collected data. He specializes in applying and evaluating programs and technologies to improve occupational driver performance, management systems, vehicle safety systems, transportation safety culture, and driver distraction and fatigue.

James Rose

Senior Manager, Wireless Solutions Architects, UScellular

As senior manager of wireless solutions architects at UScellular, James Rose is responsible for advising and educating businesses and government agencies on the best IoT solutions to meet their needs. He drives innovation within various organizations and guides a team of wireless solutions architects to provide customers with a great wireless experience. James joined UScellular in 2015 and has worked in the wireless industry for more than 10 years. He has held several leadership, project management, and business sales positions with various industry-leading organizations. James has also led teams focused on increasing wireless security and safety, and has overseen the implementation of software, hardware, and end-to-end cloud-based solutions used by many businesses to streamline communications.