



Gulf Coast Underground Transforming Fleet Operations with an Integrated Telematics Program

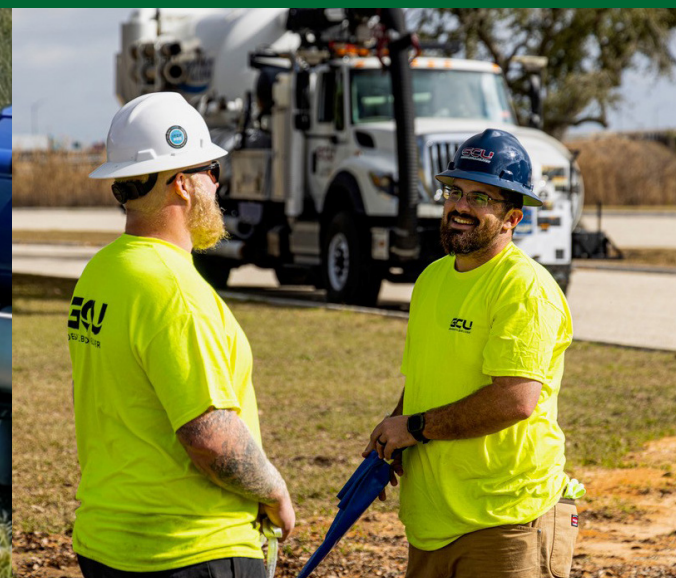


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In Partnership with



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Introduction

Seven years after transforming its telematics use, Gulf Coast Underground (GCU), LLC, a general construction and engineering firm whose drivers log more than 2 million miles a year, sees an exceptional return on the investment. Key to their success was leveraging telematics to transform the company's safety culture.

GCU began to see improved safety metrics soon after launching the new system. Then, remarkably, GCU maintained and even improved its solid safety record through a period of rapid expansion. Read on to see how GCU's thoughtful implementation planning helped it reduce risk and cost as its employee driver pool grew sixfold and its vehicle fleet doubled.

Company Snapshot

- **Business Model:** Underground pipeline inspection and rehabilitation services
- **Annual Revenue:** Approximately \$50M
- **Geography:** While rooted in Alabama, the company operates across the mid-Atlantic and southeastern U.S. states as well as in Puerto Rico and the U.S. Virgin Islands
- **Workforce:** 135 employees total; mobile work crews of 3-6 technicians
- **Fleet Scale:** Diverse fleet of 122 vehicles, from pickup trucks to specialized DOT-regulated equipment
- **Total Annual Vehicle Miles:** 2 million
- **Telematics Focus:** Hardware and software provided by Samsara; GPS tracking; preventive vehicle maintenance; dashcam video; driver behavior monitoring with performance incentives



Key Drivers for a New Approach to Telematics

The challenges of managing a diverse, geographically distributed fleet, combined with the failures of a legacy telematics system, were key drivers for GCU to rethink its approach to telematics back in 2019.

GCU's operational complexity had increased dramatically since its 2003 founding as a manhole and sewer line rehabilitation company. As GCU diversified into conducting sewer system evaluations and building sewer systems for new infrastructure, its vehicle fleet grew as well. It now includes pickup trucks and box trucks, as well as specialized units such as E-550 camera vans with robotic cutter systems, vacuum trucks, refrigerated and boiler trucks, and F-550 jetter platforms.

Today, GCU's 135 employees operate as about 20 small, mobile crews, handling jobs from Texas to Virginia, as well as in Puerto Rico and the U.S. Virgin Islands. GCU prides itself on its in-house design-build capabilities. It strives to be the design-build firm of choice for critical infrastructure by focusing on innovative processes, environmental sustainability, and exceeding customer expectations. Until 2019, however, the company did not have much success with telematics.

GCU had outgrown a compliance-focused mentality in which leaders tolerated an expensive, difficult-to-use telematics system mainly in order to meet a regulatory requirement. The system was plagued with inaccuracies, hindering GCU's ability to use the data, and required costly, long-term dependence on vendor support. So, accuracy, cost-effectiveness, and ease-of-use were of course top priorities in evaluating new options.

And, critically, GCU leaders knew that they had to match the shift in technology with a shift in safety culture. As they began to envision how to cultivate a safety-first mindset within the organization, they saw great potential for a new telematics system to play a central role.



Laying Groundwork for a Safety-First Organizational Culture

GCU sought to fundamentally reinvent how the organization approached driver safety and accountability, improving positive behaviors across the entire driver pool. As Josh Martin, GCU's Vice President of Corporate Infrastructure, told NSC, "we framed this initiative as a commitment to becoming the best possible version of ourselves." To achieve this, Martin and GCU leadership developed a comprehensive implementation strategy.

The strategy included updating policy and training and defining the new roles and responsibilities for leaders and team members alike. GCU also made targeted efforts to gain buy-in from leaders and drivers and developed a detailed installation plan. By taking a holistic view to ensure alignment among all these changes, GCU aimed to integrate the system throughout all aspects of company operations.

In terms of policy and training updates, GCU:

- **Established a clear incentive structure:** GCU set a target minimum score for every driver and defined a reward system for top performers. The company also outlined how leaders would support those not meeting the new standard and determined consequences for persistent challenges. GCU secured buy-in from operational leadership up front, ensuring the new standards would be consistently enforced without exception.
- **Developed new-hire training and expanded ride-alongs:** GCU rolled out in-person training for all newly hired drivers. The training covers fleet safety rules and regulations and how to use the telematics system's driver-facing app. The new program also featured ride-alongs with all drivers, not only with CDL drivers as GCU had done previously. The Employee Handbook received a new Dashcam Policy section to formalize the company's expectations and leaders developed a Frequently Asked Questions document for all staff (see downloadable templates under Additional Resources).
- **Gained buy-in with an emotional appeal:** GCU brought in a motivational speaker who provided a powerful dual perspective. Having lost his daughter in a motor-vehicle crash caused by a distracted driver and having also worked as an attorney who defended individuals in similar cases, his testimony provided a uniquely credible and emotionally charged catalyst for change.

Alongside the policy and training updates, changes in roles and responsibilities occurred across the organization. This approach reflects how GCU treated the new system not just as a standalone technology but as an integrated ecosystem in which the main players – from executive leaders to crew supervisors to in-house garage staff – planned to leverage its features to enforce standards, identify risks, and improve efficiency.

- The **Office Manager** would focus on driver behavior, translating raw telematics data into actionable insights and consistent coaching. This role would also monitor the platform's Safety Inbox daily, contact drivers directly with behavior-based safety coaching tips, and compile and publish a monthly driver performance report to ensure company-wide transparency.
- The **Fleet Maintenance Manager** would use the system for driver training and asset management. This role would train new drivers to use the platform throughout their workdays and manage the company's three in-house mechanics assigned to install the telematics hardware. The Fleet Manager would additionally track preventive maintenance schedules based on vehicle miles and engine hours, review diagnostic codes, and be responsible for recovering stolen vehicles and non-powered equipment.
- The **Operations Team** would maximize efficiency, using a real-time view of fleet activity to identify and address operational bottlenecks, such as a field crew spending an excessive amount of time refueling.
- **Fleet drivers** would be responsible for meeting new performance standards and for using the system's app to complete pre-trip inspections, access key documentation, receive nudges and coaching based on detected behaviors, and monitor their safety scores.

Key Considerations for Vendor and System Selection



GCU sought a new system that would meet their goals of improving safe driving behaviors, mitigating risk, and optimizing efficiency. The company needed a user-friendly system, with an intuitive driver-facing app, easy-to-install hardware, and software that would not require constant technical support from the vendor. Years later, GCU finds that the telematics system they selected from Samsara remains a good fit and has played the anticipated role in transforming company safety culture.

Rollout and Early Implementation

GCU's careful planning, grounded in operational alignment, set the stage for the dramatic and measurable improvements that followed. With new policies, training, and responsibilities in place, GCU installed the hardware in every vehicle, prioritizing CDL vehicles and training CDL drivers first. This sequencing focused initial efforts on the greatest potential for severe incidents.

Importantly, GCU was prepared to identify and address challenges as they arose in early implementation. Part of a successful technology adoption strategy is a sober assessment of any barriers. By acknowledging and mitigating these issues, the company ensured the program's long-term credibility and sustainability.

Gaining Drivers' Buy-In

Drivers were initially wary about being watched "24/7" – understandably so, since the new system included both roadway- and driver-facing cameras. GCU leaders addressed these concerns with a gradual technology rollout, education on safety goals, the new training and policy documentation, and strict privacy policies. For example, dashcams did not record audio, and staff with access to video footage must sign a Dashcam Footage Access and Use Agreement (see Additional Resources).

Drivers also had to adapt to the new, system-related performance expectations. After GCU installed dashcams in all fleet vehicles, the company allowed camera-detected behaviors (i.e., inattentive driving, cell phone use, seat belt use, rolling stops) to impact driver scores without lowering the minimum performance standard. But drivers quickly rose to the new expectations.

Over time, drivers came to appreciate the system, especially when they reaped rewards for maintaining excellent performance and saw video evidence exonerate their colleagues in roadway incidents. As Josh Martin notes, drivers check their own safety scores often, sometimes even daily, partly because top performers are eligible for monthly financial incentives and bonuses. This bonus system fosters a unique type of collaboration, encouraging drivers to look out for their partners and help everyone maintain high scores.

Managing Other Challenges

Despite the overall success of the new system, the company initially navigated two minor technical hurdles – most notably, a 10% false-positive rate for events like lane departures and rolling stops. However, the system's iterative AI has turned these occurrences into a feedback loop. By manually reviewing and dismissing inaccuracies, GCU decision-makers directly refine the algorithm, ensuring that only validated data impacts driver performance scores.

The other challenge was that the system's fleet maintenance management features did not meet all of GCU's needs. The company supplements that functionality with an internal system for tracking certain maintenance tasks, thereby focusing the telematics platform on its core strengths. Proactively managing these issues contributed to the program's success. With this approach, GCU has maximized value while navigating real-world imperfections.



Using Data for Improvement

The ways that GCU embedded the telematics platform into the daily workflow and responsibilities of different departments helped them leverage the new Samsara system to consistently enforce standards, identify risks, and improve efficiency.

Drivers Have Grown to Love the System

GCU drivers have all become power users, opening the telematics app on their phones before they even hit the road, receiving safe driving tips, and frequently checking their performance scores. As they start a shift, drivers complete a digital Driver Vehicle Inspection Report (DVIR) by logging into a specific vehicle to verify its condition, and checking systems like tires, fluids, and brakes using a self-explanatory checklist. Drivers then use the app to take pictures of the vehicle from all angles. Longtime employees appreciate that the app streamlines tasks they had previously handled on paper.

Throughout the workday, the app operates hands-free in the background, providing crucial, real-time feedback through immediate alerts – such as sound or voice notifications – for speeding, harsh maneuvers, mobile phone use, and signs of drowsiness. These features significantly impact behavior by offering instantaneous correction. Furthermore, the app gives drivers instant access to job resources including vehicle paperwork, Job Safety Analyses, and Safety Data Sheets. By delivering support and electronic coaching – often through video evidence of incidents like rolling stops or mobile device use – the system transforms telematics from a punitive measure into a valuable learning tool.

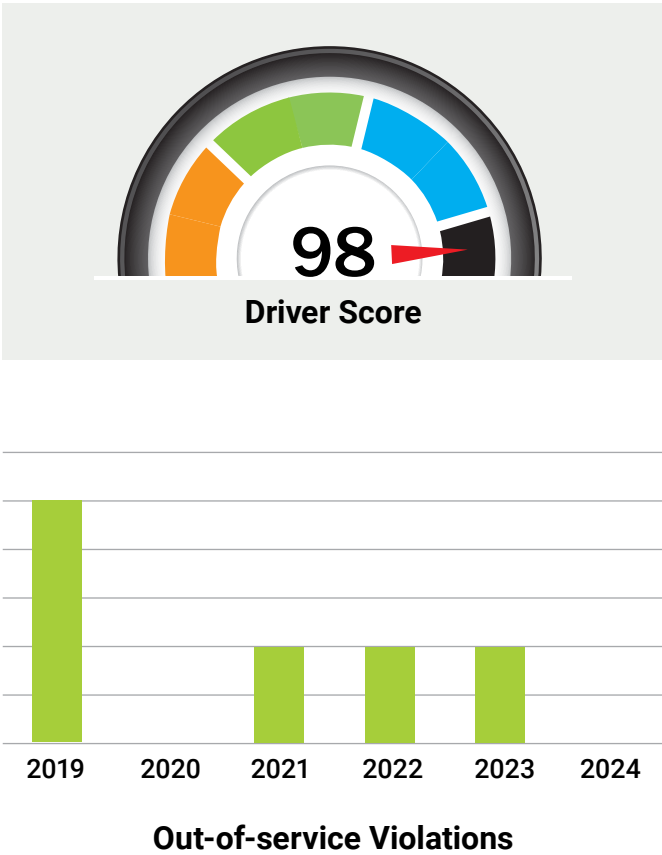
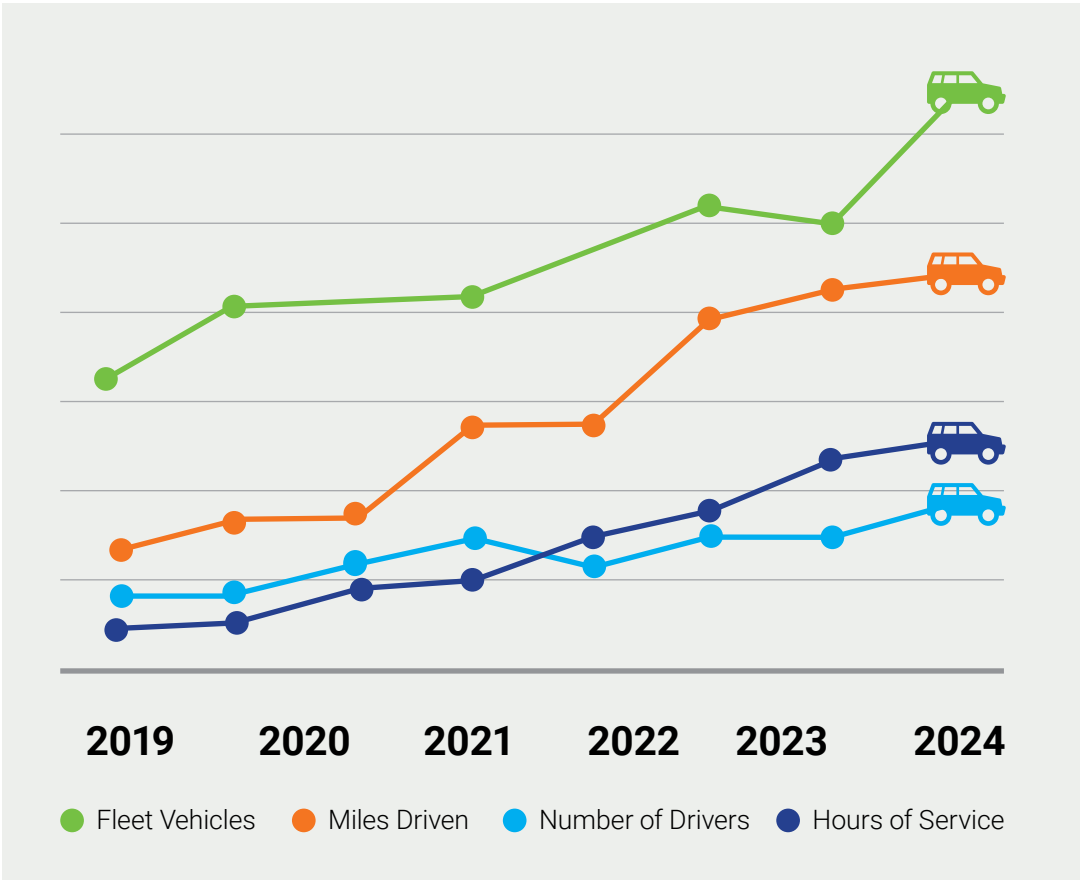
Overall, GCU has found the system's real-time responsiveness remarkable. When a company truck was stolen, its real-time location data enabled law enforcement to recover the vehicle in under an hour. GCU had the truck back in service within three hours. When one employee driver was rear-ended, the Office Manager called to check on him before he even got out of the truck. This constant focus on driver behavior and support has even extended into drivers' personal lives, prompting some to adopt safer driving habits when operating their private vehicles off the job.

The Return on Investment

Clear improvements in GCU's safety metrics, a profound cultural shift toward accountability, and tangible operational benefits all demonstrate the return on investment the company has realized through its telematics program.

Data GCU shared with NSC present an impressive record. Metrics from 2019 to 2024 show that safety performance improved even while GCU experienced significant growth in capacity and production (see Figure 1). Over this period, driver safety scores captured by the telematics system rose from the baseline of 94 out of 100 in 2019, when the new telematics platform was launched, to 98 in 2021 through 2024, showing that the company improved its safety performance metrics even as it grew rapidly. It is also impressive that GCU's regulatory risk declined while its vehicle fleet doubled. In 2024, eleven DOT inspections recorded no out-of-service (OOS) violations – an exemplary accomplishment.

Figure 1: Fleet Growth and Safety Improvement (2019-2024)



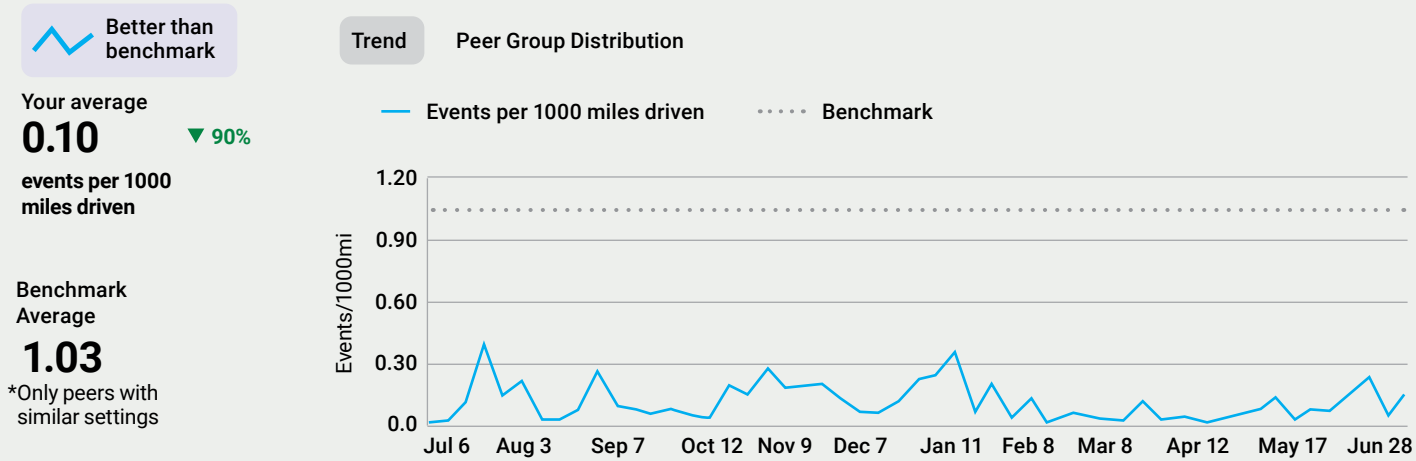
GCU’s cultural transformation was driven by a framework of high standards (a required safety score of 95 for all drivers), absolute accountability (no one gets a pass), and transparency. By making monthly reports openly accessible, the company fostered internal competition and active engagement from the workforce.

Figure 2: Severe Speeding



The one driver behavior GCU still wants to further reduce is texting while driving. While the company has already seen drastic reductions, texting remains an “ongoing safety concern” because of its high potential to cause harm. Leaders focus coaching and communication efforts on this low-frequency, high-severity behavior, particularly among new hires.

Figure 4: Inattentive Driving



Conclusion: The Value of a Mature Telematics Program

GCU's journey from a compliance-focused approach to a safety-first organizational culture provides guidance for leveraging telematics technology to drive meaningful business outcomes. By pairing a robust platform with an unwavering commitment to safety and accountability, GCU transformed its fleet management from a liability into a competitive advantage.

The telematics program has delivered undeniable value across four critical domains:

- 1. Forging a positive culture of accountability:** Far more than a monitoring tool, the system has become a mechanism for cultural change. Through absolute accountability and transparency, it has embedded safety as a shared, non-negotiable value.
- 2. Mitigating enterprise risk:** The program has demonstrably reduced safety incidents, slashed costly DOT violations, and provided an objective video record that protects the company and its drivers from legal liability.
- 3. Resource optimization:** Vehicle location data is used to streamline random drug testing and allows mechanics to be scheduled more efficiently by identifying vehicle clusters in the field.
- 4. Unlocking operational value:** The platform provides critical data that optimizes asset utilization, improves preventative maintenance scheduling, streamlines complex logistical tasks, protects the company from theft, and ensures faster recovery.

Ultimately, this integrated telematics program is now a foundational capability that enables safe, profitable growth in a high-risk operational environment.



This Dashcam Footage Access and Use Agreement (the "Agreement" is made and entered into on _____ **DATE** _____
by and between _____ **COMPANY** _____ and _____ **EMPLOYEE NAME** _____, in Employee's
capacity as the designated individual responsible for managing driver safety on the dashcam platform.

1. Purpose of Access

Employee is granted access to review and, when necessary, download dashcam footage from the dashcam platform strictly for the following purposes:

- o Investigating vehicle incidents, near misses, or collisions.
- o Reviewing safety violations and coaching drivers on safe driving practices.
- o Ensuring compliance with Company policies and regulatory requirements.
- o Responding to legal or insurance claims when authorized by management.
- o Other business-related purposes as explicitly approved in writing by Company leadership.

2. Confidentiality and Non-Disclosure

Employee acknowledges that dashcam footage is confidential Company property and may contain sensitive or personal information. Employee agrees:

- o Not to share, distribute, or disclose dashcam footage to unauthorized individuals.
- o Not to use dashcam footage for personal reasons or outside the scope of their professional duties.
- o Not to edit, alter, or manipulate footage in any way that misrepresents the original content.
- o To store and handle all footage securely, ensuring that only authorized personnel have access.

3. Restrictions on Downloading and Sharing

Employee shall only download dashcam footage when necessary and for the purposes outlined in Section 1.

Any sharing of footage must be:

- o Limited to Company leadership, legal counsel, or relevant third parties (such as insurance providers) as approved by the Company.
- o Conducted via secure, authorized Company systems to prevent unauthorized access.

4. Prohibited Actions

Employee shall not:

- o Access or review footage for any reason other than those explicitly outlined in this Agreement.
- o Share, distribute, or display footage for personal, entertainment, or non-business-related purposes.
- o Use footage in a manner that could harm the Company, its employees, or its reputation.
- o Copy or retain footage on personal devices or unauthorized storage systems.

5. Compliance and Enforcement

Employee understands that any violation of this Agreement may result in disciplinary action, including but not limited to suspension of access, formal reprimand, termination of employment, and/or legal action.

6. Acknowledgment and Acceptance

By signing below, Employee acknowledges that they have read, understand, and agree to comply with the terms of this Agreement. Employee further understands that violation of these terms may result in disciplinary action up to and including termination of employment.

Employee Name: _____ **Signature:** _____ **Date:** _____

Company Representative: _____ **Signature:** _____ **Date:** _____

At _____, COMPANY _____, we believe in the importance of safety, security, and transparency for our employees and customers. To this end, we have invested in dashcams for our vehicles. Dashcams serve as a crucial tool for protecting our employees, providing evidence in the event of accidents, and improving overall driving safety. By capturing video, dashcams help us ensure a safer working environment and foster trust with our clients.

Purpose of Dashcam: The dashcam installed in the vehicle records video for operator and public safety and security.

Data Collection: The dashcam will continuously record video while the vehicle is in operation. This data may include, but is not limited to, road conditions, vehicle speed, location, and interactions with passengers. This data is video only, no audio will be recorded.

Data Usage: Recorded data may be used for accident investigations, insurance claims, monitoring driving behavior for safety and training purposes, and legal and regulatory compliance.

Data Privacy: The recorded data is stored securely and accessible only to authorized personnel.

All vehicle safety systems, including dashcams, must remain properly installed and unobstructed at all times.

All employees must review and sign the Dashcam Policy as part of the onboarding process at the time of hire.

1. What is the purpose of the dashcams?

Dash cameras, or dashcams, enhance driver safety and capture road events, providing evidence to protect drivers and the company in case of incidents.

2. Do the dashcams record all the time?

Yes, the dashcams continuously record while the vehicle is in operation. However, only safety-related events trigger the upload of footage to the cloud.

3. What's the button on the camera for?

The button on the camera allows the driver to manually share video footage. This can be useful if the driver wants to immediately share a clip of an event with a manager or safety representative.

4. How long does a camera record after the vehicle is turned off?

The camera continues recording for 10 minutes after the vehicle is turned off.

5. Does my camera record audio?

While the camera can record audio, the Company chooses NOT to record audio. This policy is in place to respect privacy while still capturing essential video evidence.

6. Are drivers being watched live?

No. Live streaming is only used on demand by authorized managers for safety or investigative purposes. It's not used for continuous monitoring.

7. What kind of events does the dashcam detect?

Driving events such as harsh braking or acceleration, speeding, collisions, and other vehicle-related behaviors are detected by the vehicle's telematics system. When one of these events occurs, it automatically triggers the dashcam to save and upload video footage. The dashcam may also identify certain in-cab behaviors such as phone usage, distraction, or drowsiness.

8. Can the camera be turned off?

No. Drivers are strictly prohibited from unplugging, blocking, or obstructing dashcams in any way.

9. How is the footage used?

Footage is primarily used for driver coaching, investigating incidents, supporting insurance claims, or enhancing safety improvement programs.

10. Is the driver notified when an event is recorded?

Yes. Drivers receive audible alerts when certain events are triggered.

11. Who has access to the video footage?

Only authorized personnel—such as safety administrators—have access to view or download footage through the dashboard.

12. Do the dashcams violate privacy?

The dashcams are designed with privacy in mind. Footage is securely stored and is only accessible by authorized personnel for legitimate safety-related purposes.

13. How is the speed limit determined?

Speed limits are identified using GPS data from the vehicle's telematics gateway and the telematics provider's Global Speed Limit Database (GSLD), which is updated quarterly.

Overview: In-Cab Nudges are gentle reminders that help drivers stay safe on the road. These are real-time alerts that let you know if you're doing something that could be unsafe and gives you the chance to correct your behavior before anything is sent to the safety inbox.

How Do They Work? The dashcams and sensors detect certain driving behaviors. If something needs attention, you should hear a quick alert (nudge) in the cab. These nudges are meant to help, not punish—they're friendly reminders to stay safe.

What Will Trigger a Nudge? You **might** hear a nudge if you:

- Exceed the speed limit
- Follow too closely behind another vehicle
- Brake or accelerate too hard
- Forget to wear your seatbelt
- Use your phone while driving
- Roll through a stop sign
- Show signs of drowsiness
- Nudges DO NOT impact score

Speed-Related Nudges

- A nudge is triggered if speed reaches 5 mph over the limit for 60 seconds
- 5–9 mph over the limit for 60 seconds = **Moderate Speeding** (impacts score)
- 10+ mph over the limit for 60 seconds = **Heavy Speeding** (impacts score)

Drowsiness Nudges

- For Safety awareness only
- **DO NOT** affect driver scores

Distracted Driving Nudges

- Reviewed by the Safety Admin
- Dismissed if no policy violation is found, and does not impact score
- For example: a yawn can trigger an alert, which is not a policy violation

What Happens Next?

- You are **allowed 2 nudges within a 12-hour period** before anything is sent to the safety team for review.
If unsafe behavior continues after 2 nudges your score will be impacted.
- **Exception: Nudges without an assigned driver are automatically sent to the safety inbox, even if it's the first event.**

Purpose of In-Cab Nudges

- Real-time alerts that encourage safe driving habits
- Intended as helpful reminders—not disciplinary actions
- Promote safety, reduce risk, and reinforce positive driving behavior
- Prevents accidents and promotes safer roads
- Helps reduce maintenance costs and improve fuel efficiency
- Encourages accountability and creates a proactive safety culture

Remember: In-Cab Nudges are like having a co-pilot looking out for you. They're here to help you drive safely, not to get you in trouble. The system isn't perfect and shouldn't replace good driving habits—it's a tool to help retrain and reinforce safe driving practices.

RANK	DRIVER NAME	SCORE	TIME	DISTANCE
1	Robinson, James	100	60:13:37	3298
2	Brooks, Olivia	100	65:09:00	2574
3	Jones, David	100	57:48:02	2543
4	Martin, Jose	100	53:21:54	2185
5	Perez, Isabella	100	34:32:39	1696
6	White, George	100	42:32:11	1615
7	Lewis, Emma	100	44:40:45	1497
8	Moore, Alexander	100	37:55:42	1483
9	Baker, Daniel	100	51:25:46	1466
10	Garcia, Sofia	100	37:10:26	1422
11	Jackson, William	100	35:46:05	1161
12	Parker, Henry	100	25:48:20	860
13	Walker, Charles	100	18:43:33	901
14	Evans, Thomas	100	01:32:52	100
15	Foster, Michael	99	94:11:57	4614
16	Thomas, Lucas	99	84:01:29	3941
17	Johnson, Matthew	99	77:14:59	3414
18	Young, Nicholas	99	69:54:20	2903
19	Campbell, Andrew	99	71:45:12	2858
20	Harris, Ethan	98	63:10:25	2387
21	Lee, Jacob	98	56:24:29	2386
22	Taylor, Grace	97	58:19:26	2262
23	Adams, Ryan	97	61:17:14	2239
24	Clark, Benjamin	97	48:56:20	2199
25	King, Robert	97	56:36:04	2155
26	Davis, Samuel	95	64:50:39	2149
27	Hall, Christopher	94	55:01:05	2007
28	Williams, Richard	93	57:27:41	1932
29	Miller, Ava	90	60:59:38	1809
30	Smith, John	89	49:22:31	1783

* Fictitious names have been used to maintain employee anonymity. Driver scores are provided for illustration purposes only.

August Safe Driver Award Winners

Robinson, James
Brooks, Olivia
Jones, David
Martin, Jose

Substandard Driver Performance for August

Hall, Christopher
Williams, Richard
Miller, Ava
Smith, John

To qualify for the award drivers must:

1. score 100 points; and
2. have no at-fault crashes, citations, or violations.

DISCIPLINARY ACTION

Drivers qualify for disciplinary action for substandard monthly performance if they:

1. drive at least 400 miles and
2. score below 95 points.

Drivers that score below 95 will receive a written warning, scoring below 95 for two consecutive months will result in one week suspension without pay.