



nauto

Your Roadmap for Improving Fleet Safety

4 best practices for a safer and smarter fleet

Keeping commercial drivers and bystanders safe on the road is becoming a bigger and more costly challenge for many fleet management and safety leaders. To date, there have been limited solutions in the market that meet fleet owners' needs. New technologies powered by artificial intelligence (AI), however, help fleets understand and coach drivers in real-time while maintaining driver privacy. With this new breed of intelligent driver safety systems, fleets are becoming safer and smarter, keeping vehicles and drivers productive on the road, reducing collisions, and decreasing liability and maintenance costs.

This eBook offers four best practices that will help safety and operations leaders, fleet managers, and owners improve fleet safety using advanced video and sensor technology, AI, and powerful analytics. The best practices are:

- #1 Stop collisions at the source: distracted driving**
- #2 Identify and coach high-risk drivers**
- #3 Reward and incentivize drivers**
- #4 Build a brand recognized for safe driving**

With safety at the core, fleet owners can keep drivers safe behind the wheel, vehicles on the road, and liability claims at a minimum.

A ROADMAP FOR REDUCING RISK AND RAISING PERFORMANCE

Every time drivers shift their vehicles into gear, they put themselves at risk. In fact, the risk of a fatal collision in the United States increased 14% [between 2014 and 2016](#).

Distracted driving is already a major and growing contributor to these dangerous roads. According to research in 2016 from the Virginia Tech Transportation Institute, nearly seven out of ten traffic collisions — across private and commercial vehicles — can be attributed to distracted driving. More recently, Nauto and its insurance partner, Atlas Financial Holdings, Inc., specifically assessed the impact of distracted driving in commercial fleets and observed similar findings: [71% of commercial fleet collisions involved distracted drivers](#).

For fleet management and safety leaders, safety starts and collisions stop when they can proactively detect and coach drivers to focus on the road in real-time; identify and coach high-risk drivers to correct and improve driving behavior outside of the vehicle; and reward and incentivize drivers to continue improving safety performance over time. A new generation of smarter, AI-powered solutions are helping fleets reduce risky driver behaviors and achieve better safety results.

THE REAL-LIFE DANGERS OF DISTRACTED DRIVING

9

people killed daily in collisions involving distracted driving ¹

3,450

people killed in collisions involving distracted drivers in 2016 ²

71%

Collisions that involved distracted drivers ³

1,000+

people injured daily in collisions involving distracted driving ¹

9%

of fatal collisions in 2016 due to distracted driving ²

Sources:

- ¹ U.S. Department of Transportation
- ² National Highway Traffic Safety Administration
- ³ Nauto and Atlas Financial Holdings Research



DID YOU KNOW?

Every Distracted Driving Event Counts

Distracted driving comes in a variety of forms: texting, phone calls, eating, drowsiness, or even reviewing paperwork. The Virginia Tech Transportation Institute found that activities such as texting takes 4.5 seconds at minimum to complete and increases the risk of collisions by 23x. And when combined with a travel speed of 55 miles per hour, this is equivalent to driving blind for the entire length of a football field.

Helping commercial drivers stop distracted driving is critical to road safety. This begins with coaching every distracted driving event. Some technology providers can identify distracted driving after a hard acceleration, braking or cornering event (ABCs) occurs — meaning many distracted driving events are going unnoticed and uncoached. Nauto's intelligent driver safety system detects and coaches distracted driving events independent of ABCs, enabling fleets to meaningfully improve fleet safety by addressing one of the biggest challenges in road safety.

BEST PRACTICE #1

STOP COLLISIONS AT THE SOURCE: DISTRACTED DRIVING

Fleet managers do not have the time to ride along with every driver, but they can rely on an intelligent driver safety system that detects distracted driving the moment it occurs and coaches drivers to return their focus to the road — all in real-time.

Advanced, intelligent driver safety systems are stopping collisions with a unique combination of real-time alerts and coaching that reach the driver at exactly the right moment. Here's how it works:

STEP 1: DETECTION

Dual-facing cameras installed in the vehicle's cabin use computer vision (a form of AI) and proprietary algorithms to assess the situational risk and determine the severity of the distraction, as well as understand potential risks in the road ahead, such as tailgating or nearly running traffic lights and stop signs.



DID YOU KNOW?

AI at the Edge Makes Safety Possible in Larger Fleets

While safety is core to fleet management, fleet managers and safety leaders have too many competing priorities to engage with each driver in their fleet every day, but deploying AI at the edge can meaningfully improve behavior in real-time. What is "AI at the edge?" By running AI-powered algorithms on a device, Nauto enables fleets to understand driver behavior and automatically detect distracted driving and other high-risk behaviors in real-time. Because these AI-powered algorithms run in real-time, Nauto is immediately able to coach drivers with progressive alerts to help them return their focus to the road.

Nauto's progressive distracted driving alerts have already helped commercial drivers reduce average distractions per hour by 54%, and over 70% reduction in some drivers, during early tests of the AI-powered feature. Unlike other technologies, such performance improvements have come without intervention from fleet managers (e.g., managers being notified after a high-risk event has occurred and intrusively calling a driver to inform them they just witnessed the incident). Instead, intelligent driver safety systems like Nauto aim to maintain driver privacy while enabling fleets to improve safety at scale.

STEP 2: REAL-TIME COACHING

Once a significant distraction event is detected, intelligent driver safety systems issue a series of progressive alerts depending on the severity of the distraction. Unlike other vehicle equipment, these smarter technologies also pair the alerts with verbal cues to clearly communicate the reason for the alert to the driver and enables them to correct the behavior.

STEP 3: CONTINUOUS LEARNING

When drivers return their eyes to the road, the progressive alerts stop. However, the AI-powered algorithms do not. With each distracted driving event, the AI in intelligent driver safety systems continue to improve as the details of each event are incorporated into the proprietary algorithms to ensure drivers will continue to be coached when they are truly distracted and pose a risk to themselves and others on the road.

BEST PRACTICE #2

IDENTIFY AND COACH HIGH-RISK DRIVERS

Fleet management and safety leaders understand that distracted and aggressive drivers in their fleet expose their business to risk every day. What they don't know, though, is:

- **The context for aggressive driving maneuvers: why did the driver record 20 braking events in one hour?**
- **The drivers that are consistently putting the organization at risk: which drivers are the most aggressive and distracted in the fleet?**



DID YOU KNOW?

Proprietary Algorithms Maintain Driver Privacy

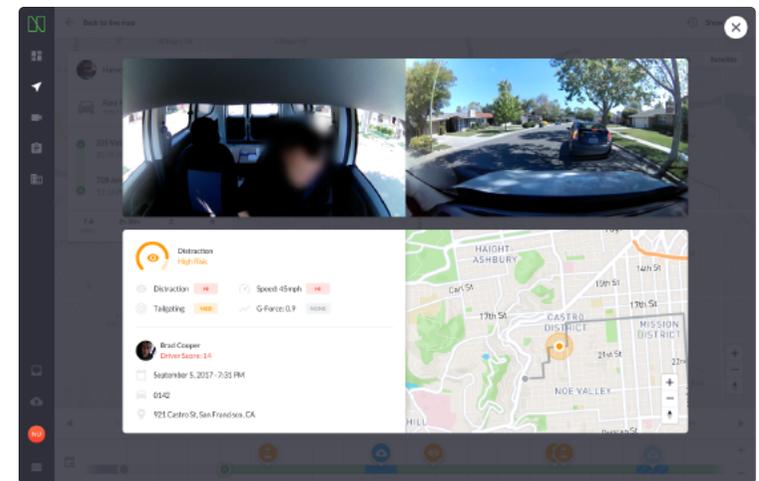
Nauto only uploads high risk events to the cloud via LTE to be synthesized into actionable insights and are only made available to fleet managers to better coach drivers.

All other data remains secure in the device to protect the privacy of drivers. If a driver is attentive and drives smoothly, video events will not be uploaded for fleet manager review.

In addition to detecting and coaching the source of collisions in real-time — distracted driving — intelligent driver safety systems are also able to upload such distraction events, as well as aggressive driving events in real-time to capture the full context of high-risk events. “Full context” includes nearly 300° of the road around the vehicle and the driver, and critical vehicle information including speed, location, and g-force of an event. These technologies also automatically identify drivers and associate the events with them.

Intelligent driver safety systems give managers this full context, and managers are equipped to more effectively coach drivers and improve their safety habits. To obtain “the full context,” three critical vantage data points are required:

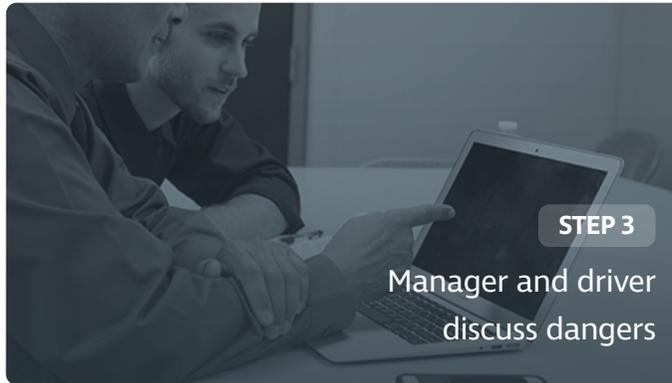
- **The road ahead: what was happening in front of, the lanes beside, and even behind the vehicle?**
- **The vehicle itself: how fast was the vehicle going, where was it at the time of the incident, and what was the impact of the maneuver?**
- **The driver’s behavior: what was the driver doing before, during and after the incident?**



A video report includes the type of driving event, its location, speed, and g-force.

When managers understand the full context of the risky events, they are better able to coach the drivers. They have multiple resources available to them. Not only do automated alerts help drivers focus on the road in real time, managers also have access to cloud-based video and associated event data, such as speed, location, severity, and driver. Other high-risk behaviors, such as ABCs, tailgating, and collisions are also uploaded to the cloud. These events are synthesized into actionable insights, including driver safety scores.

FOUR EASY STEPS FOR ONE-ON-ONE COACHING



When handled proactively, a manager can turn the driver distracted behaviors, safety scores, and real-world, high-risk events into a coachable moment that will help the driver avoid danger in future situations.

Fleets can also integrate past high-risk events from anonymized drivers into their onboarding and safety training curriculum to further improve driver safety or equip third-party safety consulting agencies with the context-rich events to create new curriculum to improve driver performance.



DID YOU KNOW?

New Technology Can Also Empower Drivers

Nauto connects drivers directly with fleet managers during dangerous or suspicious events. When drivers need support or aid, they can connect with the fleet manager through Nauto's Bluetooth-connected Mark Button.

Drivers can tap the button three times to notify and upload video of unusual events to their managers, or once to simply record an event. Drivers have already used this feature to notify managers of other dangerous drivers, attempted carjackings, and unruly passengers.

BEST PRACTICE #3

REWARD AND INCENTIVIZE DRIVERS

Context-rich coaching produces results, and it can be paired with an incentives program to further raise overall fleet performance. In fact, turning safety into a competition can make drivers push themselves to be better and more aware of what they are doing every day in their vehicles. An intelligent driver safety system can assign a safety score to drivers based on their actual driving behavior. When the data is collected and analyzed, fleet managers have a wealth of driver and fleet information at their fingertips.

Fleet managers can compare both individual and team performance, as well as that of similar fleets to help them in analyzing weekly, monthly, and annual reports.

The screenshot shows a 'Tucson, AZ report' with the following data:

Driver Name	VERA Score™	Attentive Driving	Smooth Driving	Hours Driven	Acceleration	Braking	Cornering	Distraction	Tailgating
Douglas Barber	87	73	90	231	0	0	0.2	0.1	0
Jorge Bates	73	87	73	231	0.2	0	0	0.2	0
Chris Cross	68	64	77	1,881	0	0.6	0.1	0	0.2
Daniel Duncan	65	68	77	1,881	0	0.2	1.1	0	0.6
Theodoros Ingo	62	35	87	899	0	0.9	0.1	0.8	0.1
Victor Patton	62	35	87	899	0	1.9	0.1	0.2	0.1
Arthur Higgins	58	64	87	265	1	0	1.1	0	0.7
Billy Pittman	58	68	90	265	1.4	0	0.6	0	0.7
Juan Bates	39	35	64	486	0.6	1.2	0.2	0	3.7
Alvin Nash	34	39	68	486	0.6	0.3	2.2	0	2.1
Harvey Gonzales	14	12	24	486	0.6	0.3	0.2	3.6	3.7

A driver report assigns a safety score to each driver based on their driving behaviors.

When drivers are ranked, they can see how their personal driving performance compares with other drivers. Big and small incentives to raise their rankings will also improve overall fleet safety. Since every fleet is different, managers can test what works best to motivate the drivers. What will appeal to the drivers? Incentive options could be recognition in the staff room, a bonus, or time off. Even small incentives can go a long way.



DID YOU KNOW?

Incentives Payout in Better Safety

The Nauto leaderboard ranks drivers from safest to riskiest based on Nauto's proprietary VERA Score™ — the industry's only safety score that accounts for distracted and aggressive driving behaviors.

When offered an incentive — such as time off, a one-time bonus or monthly recognition — drivers will push themselves to improve their scores. Another option is to create driving teams where individuals work together and motivate one another to win an award.

Just as personal wearable devices that track steps and heart rate can encourage us to live a healthier lifestyle, drivers who know their safety score can feel empowered to raise their overall level of driving skills.

BEST PRACTICE #4

BUILD A BRAND RECOGNIZED FOR SAFETY

When a fleet has the right resources and vehicle technology, preventing distracted and aggressive driving is an achievable goal. Once achieved, a stellar safety record can help build a brand that keeps customers coming back again and again. A safety-first fleet can differentiate itself from competitors by making its safe-driving records public and forming relationships defined by long-term trust and loyalty.

Similarly, a safety-first company attracts drivers who believe in creating danger-free work environments and will share the company's goals. With a fleet of risk-conscious drivers and a mission to excel in safety, the business will realize incremental operational changes. As safety records improve, for example, liability claims decrease. The time and resources spent fighting wrongful, at-fault claims will drop. When accidents and collisions do happen, context-rich video resources are available to show what occurred and support a driver who is wrongfully accused. In-vehicle video provides visual proof of incidents, which can reduce insurance costs for insurers and internal risk teams.

Building a strong, recognized brand is no easy task. Fleets that can easily quantify their driving improvements have the facts and figures to show how they are making safety a core value throughout their organization.



DID YOU KNOW?

Collisions Take a Nosedive in Safety-First Fleets

Fewer claims translate to lower loss costs for insurers. [Atlas Financial Holdings](#) - insured fleets equipped with Nauto's intelligent driver safety system have reduced claims by over 35%.

When given permission by their insured fleets, Nauto can provide collision data to insurers to streamline claims processing to provide fleets with faster resolutions.

NAUTO MAKES SAFE DRIVING SIMPLE

When organizations rely on Nauto, they have the technology they need to enable these best practices, prevent vehicle repairs and losses, reduce liability, and decrease risk. Nauto's mission is to revolutionize fleet and driver safety to help commercial fleets achieve zero traffic collisions.

With Nauto, safety and operations leaders, fleet managers, and owners can take fleet safety to the next level. Fleets equipped with Nauto's artificial intelligence-powered device can detect distracted driving behaviors in real-time, coach high-risk driver behavior with automated alerts, capture the full context of high-risk events to more effectively coach drivers, and incentivize them to improve overall fleet safety with the industry's only safety score that incorporates distracted and aggressive driving behaviors.



The fleet wins when it has more vehicles on the road than in the shop and fewer claims to process. Customers also win when they choose a trusted brand that keeps them safe.

Contact Nauto to discuss a [demo for your fleet](#) or learn more about a safer tomorrow at nauto.com.

FURTHER READING

Still wondering about the impact of distracted driving on commercial fleet safety? Check out this research from Nauto and [Atlas Financial Holdings, Inc.](#)

Atlas and Nauto partnered to study the impact of distracted driving on 1,450 commercial fleet drivers. Read the key insights, stats, and analysis from the assessment.



ABOUT NAUTO™

Nauto is an intelligent driver safety system that helps commercial fleets and drivers prevent collisions before they occur. The system's multi-sensor device contains bidirectional cameras and embedded computer vision to detect risky driving events — including distracted driving — in real-time, while giving safety, operations, and fleet management leaders unparalleled visibility and insights into the safety performance of each vehicle and driver. The company was founded in 2015 and is headquartered in Palo Alto, California, with offices in Japan and Europe.

