



CHOOSING TRUCK SAFETY TECHNOLOGY

How to Evaluate the Risks Versus the Rewards

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Technology applications continue to drive change in our personal and professional lives. For those in the transportation industry, the trend provides no exception. In particular, the application of truck safety technology implicates business operations, workforce considerations, potential legal liability, and the defense of cases that arise.

Despite the potential breadth of truck technology applications, four

key technologies require particular attention, each of which merits a bit of explanation:

- Full stability braking.
- Collision mitigation systems.
- Lane departure warning systems.
- Event recorders.

Full stability braking and collision mitigation systems are active safety systems. Full stability braking is required to be included on tractors by original equipment manufacturers on or after

Aug. 1, 2017, pursuant to Federal Motor Vehicle Safety Standard No. 136. Furthermore, full stability braking may include safety options such as anti-lock braking systems, which allow the tires to maintain traction with the road surface while braking; electronic stability control, which helps the driver maintain vehicle directional control during non-braking maneuvers; and roll stability control, which helps the driver maintain vehicle directional control and aids in reducing tractor-trailer rollovers.

Collision mitigation systems provide such features as: Following distance alerts, that is, audio, visual and/or haptic (brake pulse) indications when the front radar picks up a lead vehicle to warn the driver of unsafe following distances. The collision mitigation system may apply as much as 50 percent braking when it detects that a rear-end collision is imminent. In addition, several collision mitigation systems include adaptive cruise control,



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which adjusts the speed of the truck while in cruise control and attempts to maintain a set following distance when detecting a lead vehicle in front of it. However, one must understand the multiple parameters of a particular vendor's collision mitigation system technology, specifically including radar detection of—and reaction to—moving vehicles, stopped vehicles, and stationary objects.

On the contrary, lane departure warning systems and event recorders are passive safety systems. Lane departure warning systems use camera technologies to identify lane markings and provide an audible, visual, or seat vibration alert to warn drivers of lane deviations when the appropriate turn signal has not been activated. Naturally, this technology application presents difficulties when the cameras are misaligned or the roadway markings are obfuscated, for example, by construction or by precipitation on the window.

Event recorders capture video and other data, and have basic features that may include:

- A one-way, road-facing camera that captures what is going on outside the truck.
- A two-way camera, with one lens road-facing to capture external events and another lens facing into the cab to capture the driver.
- A quad-view or 360-degree view, using multiple cameras to see all around the truck.
- Recorders that capture the speed, lateral movement, accelerations, and decelerations (measured by g-force change), as well as other mechanical aspects of the vehicle.

Event recorders typically operate in one of two modes: continuously recording or on demand. The latter is triggered by a certain set of events, such as a hard brake, overspeed, or high definition shock (variably measured by each vendor as a g-force change). Some implications of the technology's application are very clear. The CEO

of one major carrier recently testified before Congress that the use of collision mitigation systems reduced rear-end collisions by 69 percent in one year.

The value of other technologies is not always so obvious. For example, we are aware of carriers that have implemented roll stability control technology only to see instances of tractor-trailers rolling over increase, apparently because drivers endeavored to over-rely on the technology. A technology application's value, after all, rests largely upon the manner in which we humans interact with it. Accordingly, drivers will need to clearly understand how their safety technology functions in their vehicles.

SHAPING EVENTS

Technology choices cannot be made without careful consideration of the purpose to which the technology will be put. With respect to event recorders, attention must be paid to the size and type of fleet, as well as the nature of the workforce.

For instance, a relatively small workforce that has little turnover and whose drivers navigate familiar routes may take no offense to an inward-facing camera of an event recorder. In contrast, a larger carrier with a more diverse workforce of over-the-road drivers and a high turnover rate may choose not to impose an inward-facing camera on its drivers. Certainly, inward-facing cameras pose a potential privacy invasion for over-the-road truckers who sleep in their cabs, but drivers may perceive a privacy invasion even while they're awake. We are aware of more than one carrier that implemented a pilot program of two-way cameras only to find that turnover increased so dramatically as to make the pilot program untenable.

Event recorders have the potential to capture an enormous quantity of data. A carrier that implements event recorders is well-advised to decide in advance how the data will be used as well as the costs and benefits of using the recorded data as a coaching

tool. Certainly, in this regard, the overhead investment to use the data as a coaching tool is substantial. However, the carrier must also consider the uses to which the data will be put in the event no coaching is provided. Those who have been in the industry any meaningful length of time will anticipate the plaintiffs' bar seeking to use the failure to coach as a sword in future litigation.

With respect to the defense of any particular case, some implications of the technology are fairly straightforward. We can well expect, for instance, that event recorders—to the extent they act as impartial observers of the circumstances surrounding a collision—will provide enormous clarity to cases of clear liability and, just as clearly, prevent protracted litigation over disputed factual issues when viewed by plaintiff's counsel. We anticipate that claims with reasonably clear event recorder data will close more quickly either through a swifter settlement or a withdrawn claim once plaintiff's counsel sees the video.

From a legal perspective, carriers will need to make some policy decisions, too. These include determining the video or data retention policy; when and to whom video and data will be released (including instances when the subject driver is not involved in the occurrence itself); and when to seek protective orders for video and data produced, including a prohibition on social sharing. The savviest carriers already are headed down these paths, with no clear answers likely to emerge in the immediate future.

As the continued application and improvement of transportation technologies is inevitable, those in the transportation industry must remain vigilant to understand the current technologies, anticipate future technology, and carefully consider how these technologies will apply to their organizations. The only constant we can fairly anticipate is change. ■