eBOOK

What are your fleet's biggest challenges?

By Don Osterberg: Safety Advisor, Solera and former Senior Vice President, Schneider

SOLERA

Introduction

Fleets and drivers today face challenges from every direction. Rising collision rates. Rising fuel costs. Poor transportation infrastructure maintenance. A shortage of skilled, experienced drivers and an aging CDL workforce. Next-day and same-day deliveries are putting pressure on fleets and drivers. Not to mention completely irrational payouts for collision-related verdicts.

Don Osterberg is a transportation executive with many years of experience working with leaders, safety experts, drivers, recruiters, and other trucking industry professionals. In a recent series of blogs, Don shared information and advice on how owners, managers, and drivers can meet today's biggest challenges.

The unacceptable increase in truck-involved crashes and fatalities
Learn why collision rates are rising and what you can do

Hiring and retaining drivers in a tight market
Understand today's hiring market to compete successfully for drivers

Protection from nuclear verdicts: why compliance isn't enough
Verdict amounts are out of control. Find out why and how to protect yourself

How aggressive driving increases fuel consumption and other costs
Even great drivers develop bad habits. Learn to spot and mitigate aggressive driving

Identify crash-prone behaviors to keep fleet and drivers safe
Find out which driver behaviors can more than double crash likelihood

Technology can help fleets, drivers, and businesses improve safety, control costs, and respond to litigation. Dive into this comprehensive and insightful guide and let's discover how we can solve these challenges together.

The unacceptable increase in truck-involved crashes and fatalities

The statistics, causes, consequences and possible solutions to rising truck crash rates

Large truck crash injuries and fatalities. Not just another set of stats.

From 2009 to 2019, truck crash fatalities rose by 48%.[1] In 2020,[2] nearly 5,000 people died in truck crashes, an average of 14 per day. Truck-involved crash injuries soared by 115%, averaging 4,363 per day in the period, reaching 146,000 in 2020.[2] In human terms, this means hundreds of thousands of loved ones emotionally devastated, lives disrupted, diminished, or ended every year due to truck crashes.

But why?

Why, during two decades in which truck miles driven rose by 32%,[4] did fatalities rise by 48% and injuries by 115%? Keep in mind that during this same period, occupant protection improved, and active safety technologies proliferated into the automobile market. Before we answer the question, let's look at where and how crashes happen.

As trucks, passenger cars, bikers, and cyclists encounter each other, knowing where crashes happen and who's behind them can help everyone recognize dangerous situations:

- In a high percentage of crashes involving passenger cars and commercial trucks, the car was at fault. However, as professional drivers, we can and should be held to an even higher standard of defensive driving.
- Carriers often route drivers on the shortest routes rather than the safest routes. Only one in four crashes occurs on an interstate highway; 75%[5] of truck crashes are on non-interstate roads.
- Four-way intersections see 27%[6] of crashes.
- Rural roads endure a majority of the country's fatal truck crashes, 57%.[5]
- On the trucks themselves, the initial contact points are 58% front, 19% back, and 15%[6] side collisions.

A 2019 state-by-state map[5] of truck-involved fatalities shows that states near the coast have the lowest truck-involved fatality rates, generally under or just above 10% (Hawaii, 2%; New Hampshire, 4%). Fatal truck crash rates are highest in the Midwest and Mountain states, with Wyoming and Nebraska at 25% and 17%, respectively. Nationally, 9%[5] of fatal crashes involved trucks in 2019.

It should be noted that drivers of large trucks in fatal crashes had a *much* lower rate of alcohol involvement than drivers of passenger cars, light trucks, or motorcycles, which had the highest, at 29%.[5] On the other hand, truck drivers in fatal crashes had the highest rate of previous crashes: 23%.[5]

Behind the fall and rise of crash rates

From about 1999 to 2009, crashes, deaths, and injuries involving large trucks declined significantly and then began a sharp climb back up until 2020, when Covid-19 reduced road traffic, and the trendline stabilized. Three things changed that helped push the rates back up in the last ten years.

- **Infrastructure:** As the Great Recession that began in 2008 started to ease, the trucks of an improving economy were operating on congested, underfunded transportation infrastructure.
- **Fatigue:** The pressures of "just in time" inventory and the spike in fast home deliveries pushed both carriers and drivers to test the limits of endurance behind the wheel, and speed limits, too. As drivers look for more hours, they can change sleep schedules drastically from week to week, impairing situational awareness and peak function.
- **Distraction:** Cell phones have become a dangerous source of distracted driving for all types of vehicles. The government is doing the first study in over 15 years,[7] but we all know what can happen in the few seconds our eyes are on a device instead of the road. Cognitive distractions from even hands-free cell phones reduce situational awareness and increase the risk of distraction.

Driving mistakes

Speeding, either above the limit or driving too fast for conditions, 'tailgating', and careless lane changes create dangerous situations, for both truckers and cars alike.

Other factors

Poor vehicle maintenance, tire failure, or improperly loaded freight can cause serious crashes.

> "Nationally, 9% of fatal crashes involved trucks in 2019."

Alcohol and drugs, prescribed and otherwise, also can cause crashes, but the rate of alcohol-impaired truck drivers involved among truckers was 3% in 2020, while other vehicle-type drivers ranged from 19 to 27%.[8] The most important thing to note is that most crashes are caused by human behaviors and decisions, which we have the means to improve.

The high cost of crashes

In addition to the human costs, truck crashes damage a business's brand as well. The estimated cost of police-reported large-truck crashes was $91,112 in 2005,[9] according to the last major study on the topic ($140,000 today).[10] A recent American Transportation Research Institute (ATRI) study revealed that truck insurance rates increased 62% from 2009 to 2022,[11] reflecting the concurrent rise in crashes and "nuclear verdicts" in post-crash litigation.

Nuclear verdicts, punitive damages, the paperwork of lawsuits

Any verdict over $10 million is considered nuclear, and the defendant may not even be at fault. For example, in 2018, a jury in Texas issued a $90 million verdict[12] against a trucking company when, in fact, it was the driver of the passenger car that lost control, crossed a median, and crashed into the truck.

Small to midsized companies can be consumed by the costs of responding to litigation record requests and other requirements. And in smaller fleets, the loss of just one vehicle due to a crash can inflict high costs on daily business operations.

Solutions for crash reduction

The most important element in reducing crashes is creating and leading a true 'culture of safety.' In a report on safe trucking, the FMCSA[13] says, *"The norms, attitudes, values, and beliefs of organizations define the culture of an organization and are manifested in the behaviors of its agents."*

For a fleet or even a single driver, that means safety is a core value, consistently shown in its actions.

These are some of the essential steps in building a safety culture:

- Define and communicate the company's shared values regarding safety
- Develop well-defined policies and rules; communicate them clearly and consistently
- Create a robust safety training program; communicate its importance; make sure it's accessible
- Ensure drivers are working within DOT Hours of Service regulations
- Collect and analyze fleet safety data for training purposes
- Match driver skill level to trip requirements
- Create a rewards program to recognize safe driving practices

"The norms, attitudes, values, and beliefs of organizations define the culture of an organization and are manifested in the behaviors of its agents."

While authentic safety cultures are built over time, there are more immediate steps you can take to reduce crashes:

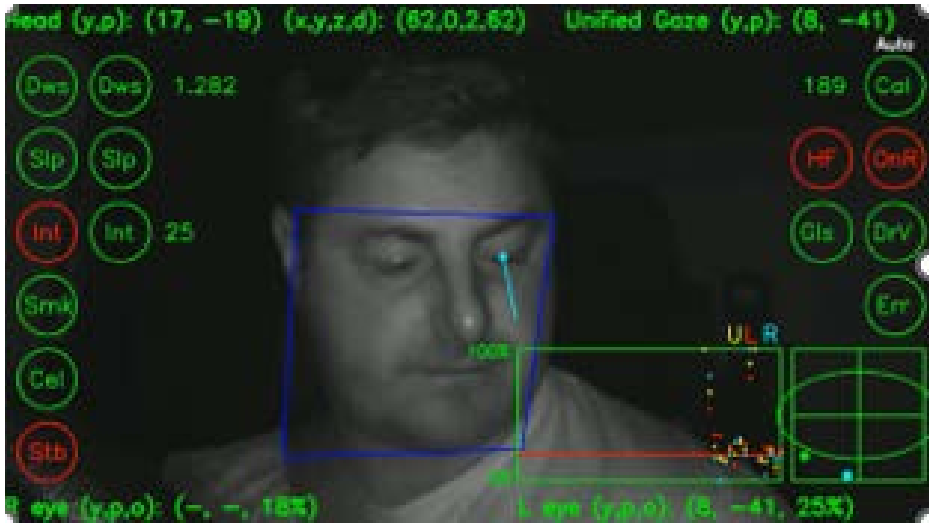
- **Fleet maintenance:** Brake problems were a factor in 29% of truck crashes.
- **Tire care:** Proper inflation, reasonable load weights, regular inspection. Tire problems factor into 6%[14] of truck crashes.
- **Hiring practices:** Past behavior is the best predictor of future performance. Truck drivers with crash histories are at much greater risk of a crash than drivers with clean driving records.
- **Skill matching:** Make sure driver skills are up to trip requirements.

Video safety in accident reduction

A comprehensive video safety system provides complete fleet and driver visibility. Video is captured inside the cab, on the road ahead, and ideally on the truck sides and rear, automatically recording notable road incidents for study, coaching, and legal exoneration in a crash. Complete systems include third-party expert examination of recorded incidents and driver activity for additional safety insights.

Once set up, the system functions as a virtual ride-along, observing everything and taking notes. The system keeps an eye on the driver, and may use Artificial Intelligence to provide alerts for speeding, tailgating, lane drifting, U-turns, texting, eyes off the road, signs of drowsiness, inattention, and other unsafe behaviors where coaching will be needed.

Video safety can be especially effective at addressing distracted driving and fatigue, two of the most significant crash risk factors. The camera's ability to discern distraction and drowsiness is a new capability. As the first technology that provides true insight into driver and vehicle activities to improve safety, every fleet should consider adopting a video safety program.



Most crashes are not accidents

The most important thing to know is that most crashes are not accidents, but results, primarily of human decisions or actions. Fortunately, through communication, technology, persistence, and reward, we can improve decision-making and actions to reduce the tragic loss of life on our roads.

Hiring and retaining drivers in a tight market

The truck driver shortage: anecdotes vs. data

By many estimates, the truck driver shortage is real and getting worse. The American Trucking Association (ATA) anticipates the industry will be short 100,000 drivers by 2024, and 160,000 by 2030.[15] Yet the growth in trucking jobs by 2030 is projected to be 6%, just below average.[16]

A huge part of the problem, then, is that drivers are leaving the industry. According to the ATA,[17] there were 3.36 million drivers employed in the U.S in 2020, down 6.8% from 2019, stretching the remaining workforce over a more competitive hiring landscape. What does that workforce look like?

For one, it's only 7.8% female,[18] about half the 15.3% rate of female police officers.[19] Drivers over 55 are 31% of the workforce; only 6% are under 25.[20] By comparison, youth participation in construction is 9.4%, and only 22% are 55 or older.[21]

So trucking companies are competing for a diminishing, aging, and overwhelmingly male workforce not just against other companies, but against other industries that are more appealing to women, younger workers, and increasingly, the general driver population.

Why drivers leave jobs

The turnover rate among drivers was a breathtaking 91%[22] in 2019. Why? Like everyone else, truck drivers want their working lives to be a positive experience.

In exit interviews, drivers say their biggest issue is the frequency, duration, and predictability of time at home. Other major frustrations include breakdowns and equipment failure, and poor or disrespectful treatment (by the carrier, shipper, and consignee).

Many drivers are leaving the industry altogether, finding the schedules, economics, or physical wear and tear unsustainable. With nearly one-third of drivers 55 and over, retirements are looming.

> "The turnover rate among drivers was a breathtaking 91% in 2019."

Attracting drivers

To compete successfully for drivers, fleet operators must be willing to look objectively at their employment value proposition relative to other carriers or employers in different verticals. Drivers talk with one another daily, so a positive reputation is a powerful tool in attracting new drivers. Finally, drivers want to get home safely to their families, so investments in safety technologies and creating an authentic safety culture will enhance the carrier's attractiveness to new drivers.

The employment value proposition

The employment value proposition (EVP) has become a popular recruiting tool across many industries. At its core, an EVP proposes something of value to your employees in exchange for the value created by the driver for the company. It needs to be a fair and equitable exchange.

A positive and fair EVP can help ease recruiting while raising hiring standards. Driver surveys, interviews, and focus groups will yield valuable insights about your offering and culture that can help create a hiring and retention strategy. An effective EVP will have several traits:

- **Differentiation:** It defines what's unique about your company
- **Honesty:** It's based on genuine insight into your employment experience
- **Real Value:** It's relevant to the kind of people you want to attract
- **Balance:** It provides a reasonable balance between work and home time

The EVP may invoke treatment, opportunity, safety, equipment, growth, or whatever you truly offer employees that's of value to them. If your EVP is hard to discern, you may be compelled to look at your offering critically.

"A positive and fair EVP can help ease recruiting while raising hiring standards."

Salary and wages

According to the latest ATA survey,[23] more than 90% of truckload fleets raised pay by an average of 10.9% in 2021, with median truckload drivers earning more than $69,000. Drivers for LTL fleets reached $73,000, and $85,000 in private fleets. Sign-on bonuses were also popular.

Compensation may be the best proxy we have for the quality of the people we are able to attract, but continually outbidding each other is not a long-term fleet staffing solution. Other tools are needed.

Culture as a recruiting tool

"People join and leave cultures, not companies" is a popular recruiting concept. But what is culture? The definition I embrace is "a set of shared beliefs, values, and attitudes that characterize an organization." Culture guides behavior, decisions, and interactions. Negative cultures repel. Positive cultures can attract and keep good people.

Video safety and the value of a safety culture

An authentic safety culture not only reduces crash rates, it's also an effective recruiting and retention tool. Consistently communicating and living a strong safety culture demonstrates your commitment to doing the right things and can be an important part of your value proposition.

An investment in video safety is a particularly visible demonstration of concern for your drivers. It can be used for employment marketing and for retention through skills training and incentivized safety reward programs. You can read more about video safety in the previous chapter, The unacceptable increase in truck-involved crashes and fatalities.

Where drivers look for jobs

While job boards and websites are used by some drivers, my experience suggests that most drivers are picked off by another carrier, often using truckstop recruiters and mailings to all CDL holders in a given area. Most for-hire recruiters are smooth salespeople whose rhetoric often doesn't match reality. Predatory truckstop recruiting represents a stain on our industry, in my opinion, but it is often used effectively.

Radio, TV, social media, and direct mail to home where the family might see it are other avenues to reach drivers.

> "An investment in video safety is a particularly visible demonstration of concern for your drivers."

Employee referral programs

Referral bonus programs for employees who refer new drivers are widely popular. Current employees are motivated to refer quality candidates, and sufficient bonuses can energize your workforce to participate, aiding retention.

Retaining drivers

To escape the 90% turnover rate, figure out why your long-term drivers stay and why drivers leave. A serious EVP process can help you learn why people come and stay. You can find general statistics about why drivers leave companies, but exit interviews will reveal why drivers leave your company and help you address common reasons.

Reviews on Glassdoor, Indeed, and other job boards can reveal general trends among both satisfied and unhappy employees and suggest a basis for improvement.

You can improve both hiring and retention by enhancing and promoting your positive aspects, addressing the negative, and improving transparent communication around things you can't change.

Traits of the best and worst employers

Drivers have differing priorities, but the best companies are known for treating their employees with fairness and respect, evident in pay, benefits, communications, work schedules, safety, and everyday interactions. They make drivers feel valued. The worst are companies that fail in those respects, particularly in areas that could be improved if they'd choose to.

A commitment to safety is an excellent indicator of a company's concern for its drivers. The best companies know how to match load complexity to driver skill level, for example. They see protecting lives as a moral obligation and make safety a core value. Their goal is zero fatalities or serious injuries.

The worst companies view safety as a situational priority and risk/financial calculation. They take a minimalist approach, and fatalities are viewed as the cost of doing business. Bottom line, if you're a carrier who embraces a "ride 'em hard and put 'em up wet" mentality, you'll get the turnover you deserve. Drivers are NOT a robotic component of the truck. They are human beings doing a difficult but critically important job. They need to be recognized as such.

If you or any member of your family were looking for a job, which kind of company would you consider, regardless of the salary?

Protection from nuclear verdicts: why compliance isn't enough

What exactly is a nuclear verdict?

The term "nuclear verdict" is generally defined as a damage award exceeding $10 million. It's also been defined less precisely as "a high damage award that exceeds rational parameters...inflated, outlandish or even destructive."[24] Any litigator or defendant who's been on the losing side of a nuclear verdict would likely go with the second description.

Nuclear verdict is a more recent term for a phenomenon going back to at least the 1980s, with the 1984 $180-million Agent Orange settlement against the chemical's manufacturer. One year later, a $10.5 billion settlement in favor of one oil company against another in a business dispute became the largest-ever monetary award up to that point. Over time, a certain irrationality set in. In 2011, a jury awarded $150 billion[25] in damages to the family of a burn victim, larger than the $145 billion settlement in the Florida tobacco case.

The trucking industry has not been immune to this trend. In fact, it's an exemplar of the destructive effect that nuclear verdicts can have on an industry essential to the national economy and to basic, everyday life. The fact is, we are living in the Nuclear Verdict Age and it impacts all of us.

The billion-dollar trucking verdict

In 2021, a jury in Florida helped set a trucking industry record: a $1-billion[26] verdict against a Canadian trucking company, Kahkashan Carriers, and a Staten Island, NY, company, AJD Business Services. The victim was a Florida college student. In a quirk, AJD was hit with 90% of the verdict but was no longer in business. Kahkashan and its driver were responsible for the rest, $900 million and $100 million respectively.

The quirk is meaningless. And no one is dismissing the loss of life that occurred or the need for justice and fair compensation for those who have suffered injury or loss. Fair compensation is an essential part of the system; enriching personal injury attorneys beyond all reason is not. Yet this verdict was **10 times larger** than a $90-million[27] decision against a trucking company in Texas just three years earlier. The biggest problem with verdicts like these is that they pave the way for even larger, more incomprehensible verdicts that are clearly based on something other than rationality and reason.

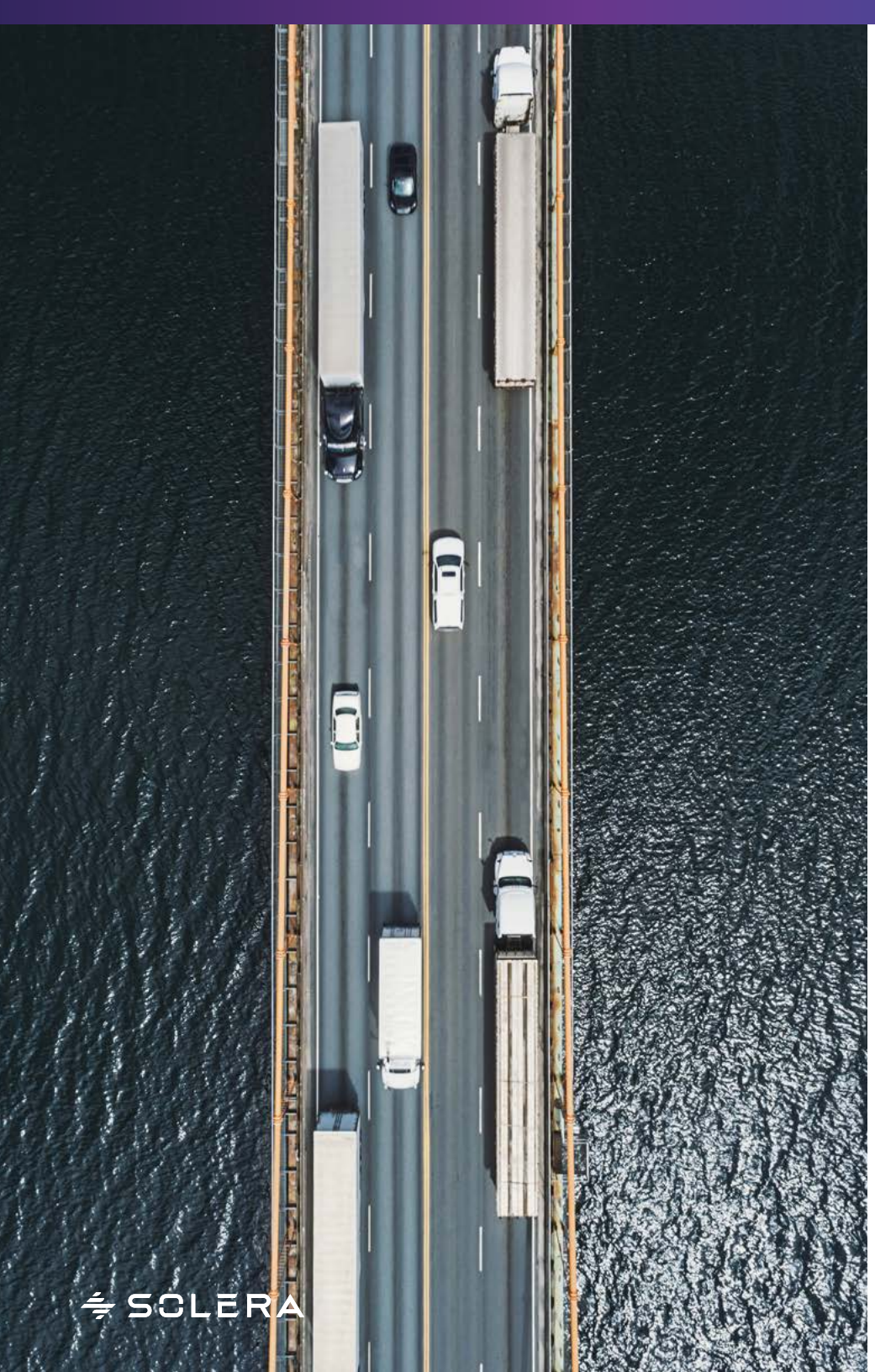
Reptile theory: Godzilla goes to court

If you Google the phrase "Reptile Legal Theory," you'll get a lot of scholarly articles with stock images of actual reptiles. LexisNexis features a confident-looking Godzilla.[28] The images are apt.

Reptile Theory was first thrust upon the legal world in the book *Reptile: The 2009 Manual of the Plaintiff's Revolution* by plaintiff attorney Don Keenan and theatrical director-turned-jury consultant David Ball. In a May 2022 article, the National Law Review[29] described reptile legal theory this way: *"...authors Don C. Keenan and David Ball advocate persuading jurors by appealing to their 'reptile brains'—the 'oldest' part of the brain and the part responsible for primitive survival instincts."*

Primitive survival instincts are hardly a prelude to rationality and reason. They're a response to the fear and panic we feel when threatened. In reptile legal theory, the goal is to make the jury members themselves feel as though their very lives were threatened by the actions of the defendant and respond with a verdict to match their emotion. It's not surprising that a study by the American Transportation Research Institute found that *"when children are involved in a crash, either being injured or killed, the size of the verdict increases 1,687 percent, from $2.3 million to $42.3 million."*[30]

Keenan and Ball claim their reptile approach is responsible for $7.7 billion[28] in verdicts and settlements. It's certainly spawned an industry of legal strategizing to defang it, but in the meantime, verdicts based on emotion instead of reason keep rising.



> "...when children are involved in a crash, either being injured or killed, the size of the verdict increases 1,687 percent, from $2.3 million to $42.3 million."

Another driver of nuclear verdicts may be "litigation funding."[31] Basically, ultra-large verdicts are now seen as an investment opportunity by firms who are willing to fund expensive litigation for a share of the settlement. Frankly, even if a purely financial incentive for outrageous settlements that let wealthy third parties turn the death of a stranger into a payday is legal and profitable, it's also part of the problem, not to mention morally bankrupt.

The impact of nuclear verdicts

The costs of nuclear verdicts against trucking companies can ricochet through the economy. The trucking companies, their customers, their customers' customers, and the insurance companies all pick up some of the cost. That adds cost pressures to insurance rates, shipping rates, and eventually, the prices of products down the line.

They also destabilize the industry. Larger trucking companies may be able to handle a verdict that exceeds their coverage, but not easily. For smaller companies, if the cost of responding to litigation didn't do them in, a settlement may. If they have to be absorbed by a larger carrier, industry consolidation tightens.

To protect against nuclear verdicts, move past the myths

Here's a popular misconception among carriers: Operating an FMCSA-compliant fleet will protect you from punitive damages and nuclear verdicts in post-crash litigation. It won't.

Plaintiff's attorneys have identified two paths to punitive damages they'll pursue simultaneously:

1. They'll attempt to demonstrate that the carrier is consciously **indifferent** to the safety implications of the choices they make.
2. They attempt to prove that the carrier is **incompetent** to manage the complexity of the business and that they put company profits ahead of safety.

During depositions, the plaintiff's attorneys will ask the carrier's safety director if they're aware of other carriers who have dramatically improved their safety performance by investing in proven safety programs and technologies, such as video-based safety. If they answer that they're NOT aware, well, they're responsible for safety at a trucking company and it's their job to know. They'll be painted as incompetent. On the other hand, if they acknowledge that they are aware yet chose to do nothing, then they knowingly acted in a way that put the public at risk. The attorneys will paint them as indifferent, practically an invitation to a Reptile strategy.

In these situations, mere compliance is not a workable defense in court. The laws on negligence leave plenty to exploit, so to protect themselves, carriers must go beyond compliance and demonstrate they did everything a "reasonable person" would do to protect the public.

Why compliance is not enough

Here is why the myth that an FMCSA-compliant fleet is enough to make safety programs or technologies unnecessary fails in court.

A long-ago lawsuit (in the United Kingdom) established a legal standard of negligence called "duty of care" that was essentially adopted in the U.S. and is referred to as the "standard of care" we still use today to establish negligence:[32]

standard of care (n): *"the watchfulness, attention, caution and prudence that a reasonable person in the circumstances would exercise. If a person's actions do not meet this standard of care, then his/her acts fail to meet the duty of care which all people (supposedly) have toward others. Failure to meet the standard is negligence..."*[33]

In either situation 1 or 2 that I described above: a company knows that additional safety technology and training really could save lives and did nothing; or they failed to exercise the professional competence to investigate. Their acts are considered negligent, regardless of FMSCA compliance.

> "...mere compliance is not a workable defense in court."

Bottom line — complying with minimum requirements will NOT provide insulation from exposure to nuclear verdicts. In fact, doing only what's required by FMCSA is the highest-risk position a carrier can take. At the risk of sounding like Captain Obvious, the #1 way to avoid a nuclear verdict is to prevent the high-severity crashes that create the exposure and to proactively invest in proven technologies and programs. The unfortunate reality is that bad things can and do happen to good companies. Make sure that you can credibly demonstrate in post-crash litigation that you are neither indifferent nor incompetent.

How aggressive driving increases fuel consumption and other costs

We've all seen and experienced aggressive driving. And we've been put at risk by it, along with all the other drivers on the road.

For a better handle on what aggressive driving can look and feel like on the road, consider some synonyms for "aggressive": "cocky, forceful, zealous, brassy, cheeky, domineering, imperious, pushy, sassy, and smart-alecky".[34] Put any of those words in front of "truck driver," and you get the idea.

What does it mean to drive aggressively?

Aggressive driving generally encompasses braking late and accelerating hard; tailgating, *particularly if to signal irritation with the driver ahead*; and lane changes that are sudden, unsignaled, or too slow for the new lane, forcing the driver behind to respond quickly. Constant lane weaving is something we've all seen as well.

And then there's speeding. Speeding is one of the most common expressions of aggressive driving. It's also the costliest and most deadly. I will come back to that shortly.

Why truckers drive aggressively

Before I discuss why some truckers drive aggressively, I want to say this. Most truckers on the road are dedicated professionals who perform a critical service that's also very demanding, and they do all they can to get themselves, their vehicles, and the motoring public safely to their destinations. Drivers are also human beings, with the same foibles we are all subject to and sometimes take on the road with us, our more aggressive tendencies included. It's no excuse behind the wheel, but it's a fact just the same.

Another reason truckers might drive aggressively is the economics of a profession in which they are encouraged to meet tight schedules. In some cases, speeding may seem incentivized.

With piece-rate compensation, for example, pay is based on miles driven. Simple math says the more miles driven in an hour, the more profitable that hour is for the driver. (In theory, anyway, until you factor in the added fuel costs of faster driving.) In previous blogs, I've mentioned that the stress of on-time deliveries on tight schedules can encourage aggressive driving in all its forms. If a driver feels forced to prioritize arrival time, they may look to seize every opportunity the road offers.

As I've also mentioned in previous blogs, under-investment in transportation infrastructure has increased congestion, thus slowing traditional supply chain transit times. The compulsion to "catch up" to meet a schedule, and the exasperation and impatience we all feel in traffic, can cause driving to become aggressive.

A driver's personal issues can lead to aggressive driving as well. According to a frequently cited study[35] on anger, aggression, and risky behavior, there's a category of drivers called "high-anger" drivers. Unsurprisingly, the report finds that high-anger drivers are frequently angry off the road, too. They're more likely to engage in hostile thinking, drive 10 to 20 miles over the speed limit, get more tickets, and report more near-crashes.

This is not to say that every angry person also drives angry. And while truckers have emotions like everyone else, experienced, professional drivers are better equipped than most to drive rationally, not emotionally. Training and counseling can also help improve a driver's emotional performance on the road.

The consequences of aggressive driving

I said earlier that speeding was the costliest and deadliest aggressive driving habit. Consider this: if a vehicle's speed increases by 50%, the energy released in a crash more than doubles.[36] Kinetic energy to be dissipated in a crash is the best proxy we have for crash severity. Recalling your high school physics, the formula for calculating kinetic energy (KE) is .5 Mass X Velocity (speed) squared. In 2020, speeding killed 11,258 people, 29% of all fatalities, and injured 308,000.[37] Financially, speed-related crashes cost society more than $40 billion a year.[36]

> "...if a vehicle's speed increases by 50%, the energy released in a crash more than doubles."

Speeding also guzzles fuel. A truck traveling 75 mph uses 27% more fuel than at 65 mph,[38] which makes speeding a substantial segment of the overall cost of aggressive driving. According to a study by Oak Ridge National Laboratory,[39] speeding is one of three specific aggressive driving habits that greatly impact fuel efficiency. Rapid acceleration and late, hard braking also increase fuel use. The impact of these habits is a 15%–30% reduction in fuel economy at highway speeds and 10%–40% in stop-and-go traffic, according to ORNL.

> "A truck traveling 75 mph uses 27% more fuel than at 65 mph."

Another cost of aggressive driving among truckers is damage to the public image of commercial drivers and the trucking industry. As I said earlier, most drivers are conscientious professionals. But one aggressive driver, especially in the event of a crash, can bring disrepute to the whole profession.

The bottom line is clear. Aggressive drivers burn more fuel and have more crashes than defensive, fuel-efficient drivers. Fortunately, there are solutions. For carriers who wish to validate (or invalidate) my argument, I suggest you compare the safety (and citation) performance of the top 10% best fuel-efficient drivers in your fleet with the performance of the bottom 10% of fuel-efficient drivers to see if you find correlations. I can almost guarantee you'll find a strong correlation.

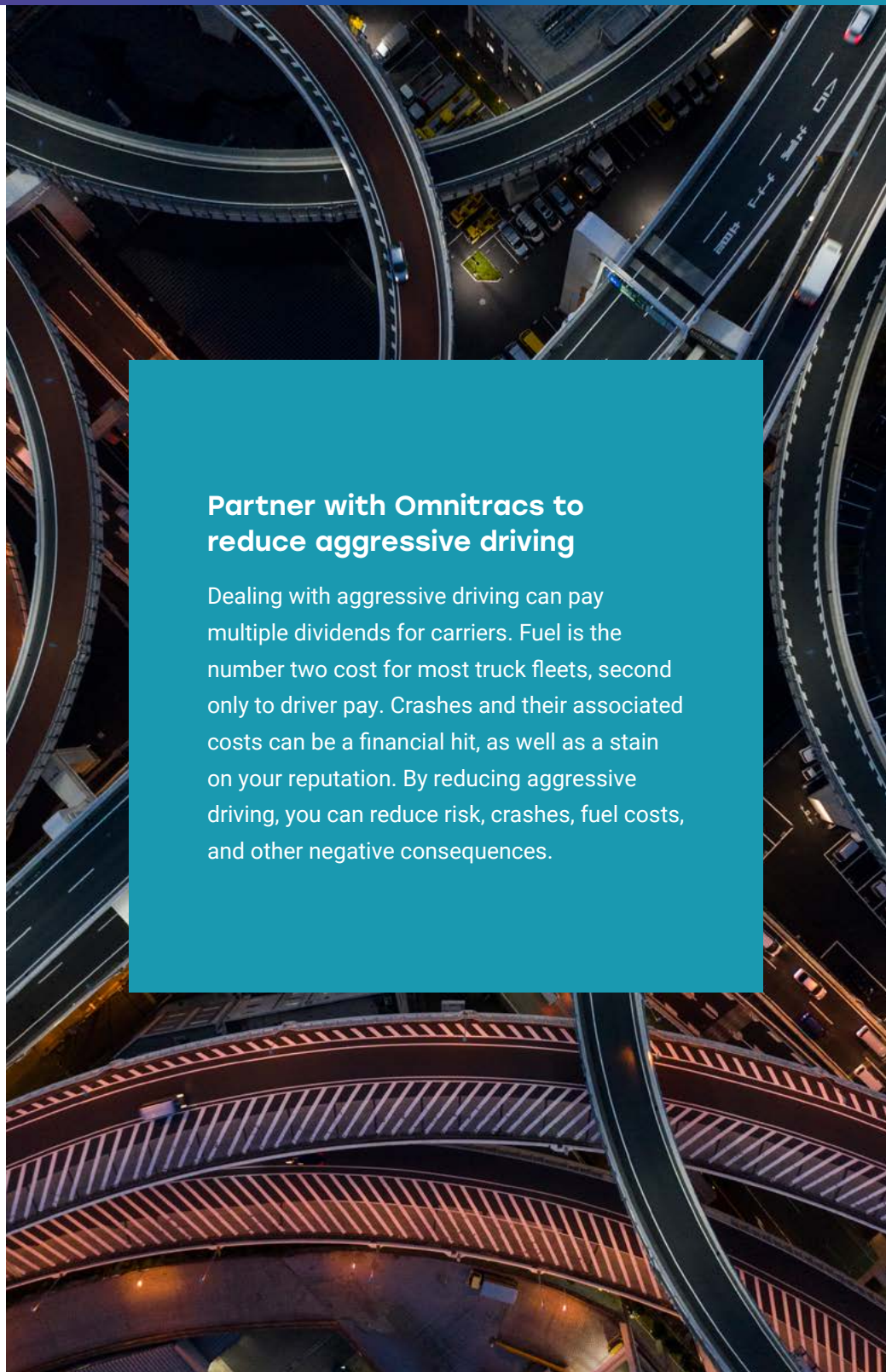
Video safety and fleet telematics can reduce aggressive driving

I mentioned that help is available for drivers with personal issues that lead to aggressive driving. And training can help as well, educating drivers about the causes, signs, and consequences of aggressive driving habits. But the key to reducing aggressive driving is understanding what each driver is doing and focusing on drivers who exhibit aggressive behavior regularly. Technologies like telematics and video safety can be very helpful.

Fleet telematics can provide a range of data on aggressive driving and other activities that impact fuel use and safety. For example, you can monitor hard braking incidents and provide context to drivers on how their hard braking rates compare with other drivers in the fleet. While a single hard-braking event may not mean much, looking at trends and seeing the fleet average for hard brakes can show you the drivers who really stand out. A comprehensive telematics system will also report speed, rapid acceleration, and engine idling. Fuel consumption monitoring can be used to reward or train drivers, as the data indicate. In fact, all the data can be incorporated into focused and effective driver training programs.

Video technology can monitor tailgating and other driving habits. When telematics are used in conjunction with a video safety program, their impact on safety and costs can be significant.

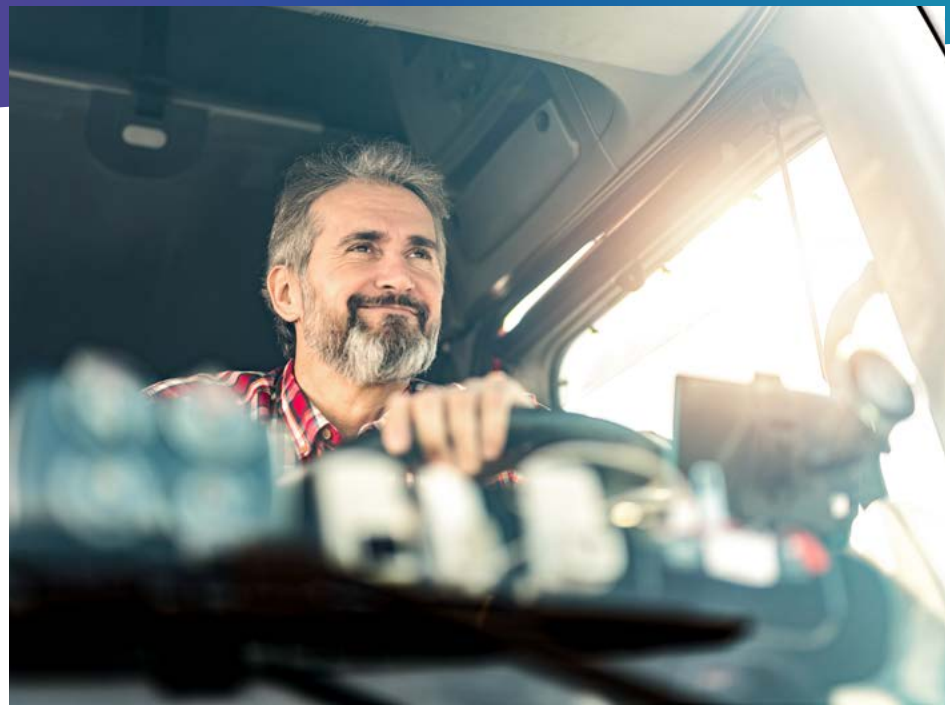
You might also encourage shippers to increase inventory levels to include a sufficient safety stock (inventory of parts or products on hand) to avoid shortages and rushed deliveries. This can reduce the pressure on drivers to deliver on time in difficult or impossible conditions.



Partner with Omnitracs to reduce aggressive driving

Dealing with aggressive driving can pay multiple dividends for carriers. Fuel is the number two cost for most truck fleets, second only to driver pay. Crashes and their associated costs can be a financial hit, as well as a stain on your reputation. By reducing aggressive driving, you can reduce risk, crashes, fuel costs, and other negative consequences.

Identify crash-prone behaviors to keep fleet and drivers safe



Regular readers of my blog posts are familiar with what I've called the "unacceptable increase" in truck-involved crashes resulting in injuries and fatalities.

From 2009 to 2019, the number of trucks involved in fatal crashes rose 56%,[40] from just over 3,200[41] to over 5,000. Fatalities rose 48% to 5,032.[42] The impact is financial as well. Insurance rates rose 62% from 2009[43] to 2022, while the estimated cost of police-reported large-truck crashes was $91,112 in 2005:[44] adjusted to $140,000 today.[44] In a recent blog about nuclear verdicts, I also mentioned the cost of so-called nuclear verdicts, with recent amounts climbing from $90 million to a billion dollars in just a few years.

The 2006[45] large truck causation study by the FMCSA showed that in 88% of fatal and injury crashes, driver factors such as driving too fast for the conditions, illegal maneuvers, illegal drug use, lack of familiarity with the road, and driver fatigue all played a significant role.

> "From 2009 to 2019, the number of trucks involved in fatal crashes rose 56%, from just over 3,200 to over 5,000."

Predicting crashes by driver performance

A more recent study, Predicting Truck Crash Involvement (2022 Update) by ATRI (American Transportation Research Institute), looked at driver behavior as a predictor of crashes rather than a causation. If you could identify the drivers who exhibited the predictors, you could take pre-emptive action.

The report identified a database of 583,805 unique drivers: those who had undergone inspection during a specific three-month period (Jan, Feb, and March of 2019), as noted by MCMIS (Motor Carrier Management Information System). Information on inspection violations, either vehicle or moving violations, convictions, and crash history was gathered from both MCMIS and CDLIS (Commercial Driver's License Information System) data. I know many of you would agree that MCMIS data is untimely, inaccurate, and inconsistent. I wouldn't disagree with those who see it that way, but it's consistently inconsistent and the best database available.

Of these 583,805 drivers, 38,797 were involved in crashes, about 6.6%, while the rest, over 93%, were crash-free. So let's take a look at that 6.6%.

Of that 6.6%, 34,000 drivers had one crash; 1,881 had two, and only 81 drivers had three crashes. Six drivers had four crashes each, and last place was tied: two drivers with five crashes each. One can imagine learning a lot from just those last 89 drivers. But let's take a look at the bigger picture.

What the inspections found

It's always interesting to note what inspectors find during truck inspections, and here, the drivers performed better than the trucks. Violations included 291,000 for lighting, 250,000 for other vehicle defects, and 238,000 for brakes and other problems. Driver violations included Hours of Service (116,000) and speeding (51,000), plus size and weight, log book, and other issues. In all, the study incorporated more than 1.69 million violations among the 585,000 drivers.

Crash predictors

The study found four specific violations, convictions, or historical occurrences that each raised the likelihood of a crash by over 100%:

141%
Failure to yield right-of-way violation

116%
Failure to signal or improper signal conviction

113%
Past crash

104%
Reckless driving violation

These convictions predicted an increased crash likelihood of 50% - 100%:

- Failure to obey a traffic sign
- Failure to keep in the proper lane
- Improper or frequent lane changes
- Reckless or negligent driving
- Traffic signal violations

Other significant predictors include speeding, HOS and log book violations, tailgating, and size/weight violations.

Intervening before there's a problem

Interesting statistics. But, as I like to say, *so what and then what?* Now that we have statistics on crash predictors, what do we do with them? How do we use them preemptively to reduce the frequency of truck crashes and the injuries, deaths, and costs they incur?

Consider three steps:

- Evaluate the drivers for these specific behaviors
- Determine the root cause:
  - Did the driver not know these are improper actions and thus, a training issue?
  - Or did the driver know and proceed anyway, and thus a behavioral issue?
- Choose the remedial path that best matches the situation

Evaluation: video and telematics

New technology has provided some excellent tools to objectively observe and evaluate fleet drivers with greater accuracy and detail than previously possible. Video technology, available inside the cab, road-facing, and multi-directional, can observe any number of risky driving actions, from distracted driving to tailgating, and then alert the driver and note the event. Fleet telematics registers driving patterns for signs of aggressive or reckless driving, such as speeding, hard braking, or fast accelerations. Either system is helpful; used in conjunction, the driver insights they provide can be extremely accurate and actionable.

Get to the behavior's root cause

You can't fix a behavioral problem with training or a training problem with a behavioral approach. Successful interventions need to address the correct root cause, and here I find that the 80/20 rule generally prevails: 80% of crashes are due to behavior. About 20% are a skill or knowledge deficit. To get to the root cause, I often apply what I call the *Five Why's methodology*. Here's an example of the Five Why's:

Problem: **Driver cited for failure to yield right-of-way**

Question 1: Why did the driver fail to yield?
Answer: The driver was distracted.

Q2: Why was the driver distracted?
A: The driver was distracted by a cell phone text message sent by his/her dispatcher.

Q3: Why did the dispatcher text the driver while he/she was driving?
A: It was easier than checking the telematics to see if the driver was moving.

Q4: Why was it easier for the dispatcher to send a text message to the driver than to check to see if the driver was driving?
A: Because the dispatcher was task-saturated and was cutting corners by texting without first checking to see if the driver was driving. The dispatcher texted to check on the status of the load to ensure it wasn't running late.

Q5: Why was the driver reading/responding to a text message on a cell phone while driving?
A: Because he/she had done it before without issue and was desensitized to the risk.

Root causes:

1. Dispatcher taking the path of least resistance to save time and effort. *[Behavioral]*
2. The driver was desensitized to the risk and chose to violate company policy and FMCSA regulations by reading a text while driving. *[Behavioral]*

Interventions to preclude a recurrence:

1. Reinforce with the dispatcher that telematics, not the driver, is the first source of this and other data.
2. Reinforce with the dispatcher to NEVER text a driver while the vehicle is in motion, regardless of the reason (or if the vehicle is stopped and the driver is on the sleeper berth line).
3. Reinforce the expectation with the driver to NEVER read or respond to a cell phone text message while driving. Ask the driver to commit to changing his/her behavior. Have them sign a document committing to the behavioral change.

> “80% of crashes are due to behavior. About 20% are a skill or knowledge deficit.”

Decision or awareness?

The texting was basically poor decision making all around. But even excellent drivers may have developed certain habits they are unaware of and even defensive about because they may not see things in context.

For example, I was involved in an accelerometer test, and we needed to calibrate truck standards for acceleration, hard braking, etc. I took our five best drivers, all million-milers, and put sensors on their trucks to monitor performance and establish the baseline. When it came to hard braking, one driver was noticeably over-represented, and yes, he was very defensive when I mentioned it. I responded by laying out the metrics of all five drivers, so he could objectively see what the difference was. He never said I was right, but he didn’t have to. By the next week, his performance was right in line with everyone else’s because he had awareness and objective context.

Addressing situations preemptively

We seek out the root cause because root causes are actionable. You can effectively address predictors before they become incidents.

With the million-mile hard-braker, I didn't lecture or reprimand or judge; I provided objective context. For the texting dispatcher and driver, it was a case of reinforcing expectations. And if it's really a training or skills issue, then it's a training solution.

Here is what I think is the best way to apply the Crash Predictors to reduce the likelihood of crashes:

- Evaluate all drivers. It establishes a baseline and keeps any drivers from feeling singled out. And even your best drivers will benefit.
- For drivers over-represented above the baseline, apply the Five Why's and establish the root cause and address the actual situation.
- Make sure to communicate to drivers that these measures are proactive and protective, not punitive. You want to keep them safe.

And do everything within a culture of safety.

"Nothing we do is worth harming ourselves or others" is an adage from early in my career that still holds sway. It says that safety is a core value, a part of the culture. Any efforts to improve safety will be much more successful within a culture that prioritizes safety at all points and all levels, including and especially from leadership. Within such a culture, all safety initiatives will have the greatest chance of success.

Don Osterberg

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His distinguished career in commercial transportation spans several decades, and he is a recognized authority on carrier safety, having held leadership roles with organizations including the National Safety Council, FMCSA Motor Carrier Safety Advisory Committee, American Trucking Association's Safety Policy Committee and American Transportation Research Institute's Research Advisory Committee. Osterberg is a retired Airborne and Ranger qualified US Army Infantry Colonel. Prior to entering into the commercial transportation industry, he held many leadership positions during his military career including Chief Plans Officer for the 1st Infantry Division (The Big Red One) during Operation Desert Storm and an appointment as the strategic advisor to the President and Chairman of the Joint Chiefs of Staff while serving on the National Airborne Operations Center staff.

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