

Technology in trucking

Joseph Doer explores the changing role of drivers.

At the SC&RA Specialized Transportation Symposium February 28-March 1 in St. Louis, I will be giving a presentation titled “In-Cab Technology: Changing the Role of Drivers.”

As the title suggests, I’ll be taking a deep dive into some of the ways in which technology is changing the role of truck drivers. I’ll be talking about how companies are implementing modern technology, the return on investment of that technology, its positive safety implications and some the long-term effects I see technology having on the transportation industry. In preparation for my presentation, I thought it made sense to preview some of what I will be talking about at the Symposium. Technology, as we all know, is a hotly debated subject.

Fleet-monitoring and IOT

The Internet of Things – connecting virtually any device with an on/off switch to the internet – has dramatically changed the world in which we live. We now have Wi-Fi-enabled refrigerators, televisions, coffee makers, lamps, washing machines and a whole slew of other items – and all these connected devices have completely changed the way we operate inside our homes. However, it doesn’t stop there. The Internet of Things (IOT) isn’t limited to household items or what we do inside our homes. It extends to the trades and businesses and has completely changed the way trucking companies operate. Perhaps the clearest example of this can be seen in the adaptation of fleet-monitoring technology.

Fleet monitoring technology comes in a variety of forms, including:

- telematics, which uses a combination of GPSs and telecommunications systems

to give trucking companies real-time data about their fleet’s location, drivers’ behavior and vehicle diagnostic information;

- collision-avoidance systems, which uses technology to sense vehicles and other hazards and either warns the driver or autonomously avoids the collision by braking or returning the truck into its proper lane; and
- advanced driver assistance systems, which automate certain driver tasks (examples include adaptive cruise control, adaptive exterior lights and blind-spot detection.)

These systems use the internet, sensors, cameras, cellular-baseband radios and complex algorithms to monitor things like driver performance, a truck’s mechanical status and other critical truck safety issues. Fleet management technology certainly isn’t meant to replace human decision making, but it is meant to enhance it. Which is almost always the case with technology – and almost always leads to discussions about outcomes, both positive and negative.

Embracing good and bad

In its 2017-2018 “most wanted” list of safety improvements for the trucking industry, the National Transportation Safety Board (NTSB) called for an increased use of technology-based safety measures in the trucking industry.

The positives are pretty easy to see. Advancements in trucking technology often deliver substantial benefits almost immediately upon implementation. The return on investment for adopting these tech tools is often significant, with the technology paying for itself by helping to improve compliance issues with government regulations and eliminating the cost associated with being out of compliance. This, on top of the increased efficiency and productivity the company often realizes, combines with an improved safety profile, which can then lead to a reduction in expenses like insurance premiums, vehicle downtime and the costs associated with litigation.

According to the NTSB, collision avoidance technologies can reduce

Three take-aways

Here are three important takeaways as it concerns technology in trucking.

- 1 Address the “Big Brother Bias” at the start of planning process. People are often reluctant to change and the idea that someone is monitoring their actions can set off alarm bells. Everyone within your organization must buy in to the new technology being adopted for the effort to be successful. Don’t wait.
- 2 If you collect the data, use it. Having the ability to monitor the performance of your fleet is a very powerful thing. But monitoring alone doesn’t cut it. Take the lessons your data is teaching you and make the necessary adjustments within each area of your business. Coaching and open communication are the keys to having a successful program.
- 3 Be the one who embraces change first. Lead by example. Have answers to the inevitable questions that will come, especially the ones that stem from a “this is how it has always been done” mindset. Embrace the change technology brings and use these new tools as a catalyst for growth within your organization.

fatalities and injuries over the long term. In 2012, the National Highway Traffic Safety Administration (NHTSA) predicted that autonomous emergency braking (AEB), meeting certain requirements, could prevent 13,000 to 28,000 minor injuries and 500 to 700 serious injuries from rear-end crashes – and could save as many as 65 lives each year.

In a 2015 study by the University of Michigan Transportation Research Institute, researchers found that in the large motor carriers they surveyed, lane departure warning systems (LDWSs) reduced crashes by 14 percent, electronic stability control by 19 percent, forward



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collision warning systems (FCWS) by 14 percent, blind spot detection by 5 percent and vehicle communications systems by 9 percent.

On the flip side – and there’s always a flip side – the biggest detriment I see with all this new technology comes with what I call “technology complacency,” which

is when an organization implements new technologies and then doesn’t do anything with all the data that is captured as a result.

Each of these new systems is emitting a steady stream of data – and all that data is discoverable in court. If a company finds itself in the midst of litigation, all

that data can be harmful if it hasn’t been dealt with appropriately. Turning data into action items, addressing the harmful behaviors that are discovered during data analysis and providing the proper training and coaching as a result of what is learned, can help favorably position an organization in court should something happen, rather than having to rush and play defense when unexpected events occur. The ability to leverage data to help proactively manage risk is one of the great benefits technology gives us. ■

For more information on how technology in trucking can help or harm your business, contact Joseph Doerr or another NBIS risk management specialist at 1-877-860- 7677.

Don’t miss Doerr’s presentation at the SC&RA Specialized Transportation Symposium on Thursday, March 1, at 2:30 p.m.