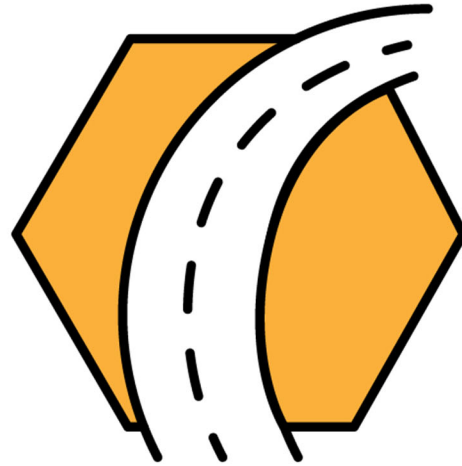


2022 Northeast



**COMMERCIAL VEHICLE
— SAFETY SUMMIT —**

**Advancing Technology to
Prevent Truck & Bus Crashes**

Briefing Report





Introduction

The landscape of roadway safety is always changing, altering the way roadways are designed, vehicles are driven, and enforcement is conducted. In part, this landscape is (and always will be) governed by the technologies available, from something as simple as turn signals to a concept as speculative as fully-automated vehicles. To provide a venue for the exchange of ideas and resources and to showcase innovative programming and technologies aimed at improving the safety of commercial motor vehicles and preventing crashes, the University of Massachusetts Traffic Safety Research Program (UMassSafe) received a Federal Motor Carrier Safety Administration (FMCSA) grant. The result of this grant was the 2022 Northeast Commercial Vehicle Safety Summit: Advancing Technology to Prevent Truck & Bus Crashes.



Summit Overview

The Summit, held October 25-26 in Providence, Rhode Island, hosted over 170 participants — with at least one representative from each Eastern Service Center (ESC) region, state, and territory. Also in attendance were four representatives from the California Highway Patrol. Over the two days, 34 presentations were offered, encouraging open discussion and collaboration between presenters and attendees. Furthering the work established by the Summits held in 2016 and 2019, attendees were encouraged to continue developing partnerships between truck and bus associations, motor carriers, law enforcement agencies, state driver's licensing agencies, researchers, and government organizations.

Post-Summit Survey Results

- 97% of attendees indicated the Summit was excellent/good, with 3% indicating it was adequate
- 100% of survey respondents indicated the Summit should be held regularly, with 59% suggesting a yearly Summit, 33% indicating it should be held every two years, and the remaining 3% suggesting it should be held every three to four years
- Each element of the Summit (keynotes, plenary panels, and concurrent sessions) received more than 90% satisfaction (excellent/good)





Summit Highlights

Day one opened with a discussion concerning the greatest risks to CMV operations and the most effective actions for improving CMV safety. Facilitated by Taft Kelly, the FMCSA Regional Field Administrator, and Michael Knodler, PhD, the director of the UMass Transportation Center, this topic kicked off the Summit with an engaging topic that inspired excellent conversation.

According to Knodler, getting carriers, law enforcement, and government to the same table promotes partnerships that promote safety. Taking this idea one step further, Kelly said, “Maintaining and improving safety on our roadways takes more than our individual efforts. We’ll accomplish nothing if we’re cordoned off from one another. The only way we can meaningfully move forward is by understanding each other’s roles and expertise, and working with each other, not just alongside each other.”

This initial discussion segued into the Summit’s first Plenary Panel, which considered emerging trends and challenges in CMV safety, and how existing and emerging safety technologies could be prioritized to address and/or evolve with:

- The impacts of the pandemic (including increased demand for consumer goods leading to an increase in trucking).
- Opportunities to accelerate the deployment of Advanced Driver Assistance Systems (ADAS).
- The impact of rising insurance costs on the trucking industry.

Other sessions focused on various industry safety technologies, including truck parking technologies, innovative enforcement tools, work zone safety navigation, and how technology is being utilized in our courts to reduce masking. In addition to workshops on technology, Summit sessions addressed the ongoing challenges of impaired driving, the psychological factors of changing driver behavior, and self-reported incidence of risky driving in CMV fleets.

A major topic across both days of the Summit was the advent of autonomous vehicles, their regulatory obstacles and anticipated safety benefits, and real-world incidents used to evaluate them.

“Every year there are half a million large truck crashes on our roads,” said Melissa Froelich of Aurora Innovation, Inc. “And an estimated 5,601 people were killed in large truck crashes in 2021. These fatalities represent a 13% increase from 2020.”



By reducing or outright removing human error as a factor, many believe vehicle automation can help reduce crashes and their associated fatalities and injuries.

A luncheon keynote address from Missy Cummings of the National Highway Traffic Safety Administration (NHTSA) and Duke University discussed the role of autonomous vehicles within the National Roadway Safety Strategy's Safe System approach. Safe System is a holistic approach emphasizing the need to anticipate human mistakes and reduce crash impact energy to tolerable levels. Because automated vehicles have the potential to account for some human error with regard to collision avoidance and driver distraction, they will likely play an enormous role in the future of roadway safety.

Safe System is guided by six principles:

- Death/Serious Injury is Unacceptable
- Humans Make Mistakes
- Humans Are Vulnerable
- Responsibility is Shared
- Safety is Proactive
- Redundancy is Crucial

Using these guiding principles, a unified Safe System accounts for the following elements of a safe roadway: Safe Road Users, Safe Vehicles, Safe Speeds, Safe Roads, and Post-Crash Care. Through an integrated approach encouraging collaboration across disciplines, Safe System recognizes that everyone has a role and responsibility to keep roadways safe and eliminate serious and fatal injuries, proactively accounting for human error in vehicle and roadway design, and putting redundant elements in place in case one safeguard fails. The overarching keynote takeaway was that, with collaboration, the vision of zero roadway fatalities can become a reality.



An off-site demonstration showcased a technology that could assist law enforcement in addressing distracted driving. Accusensus' Heads-Up solution consists of a camera stationed above the roadway that captures images of activity inside passing vehicles. The purpose is to determine instances of seat belt noncompliance and distracted driving (such as a driver operating a cell phone). The images are sent in real time to a law enforcement official stationed down the road, where they can determine whether drivers are distracted or engaging in other dangerous activity and act accordingly. Because the camera is set above the roadway, it offers a unique perspective as CMVs sit much higher up than a passenger car or SUV.

FMCSA Executive Director and Chief Safety Officer, John Van Steenburg, gave a keynote address focused on the bipartisan infrastructure law and the importance of forging strong partnerships between the commercial vehicle industry, law enforcement, and all other stakeholders. According to Van Steenburg, these relationships are essential as new needs and challenges. Maintaining the safety and efficiency of



roadways, vehicles, and road users is paramount, and working closely together is the only way conditions can be changed for the better.

Another major topic of the Summit was cannabis-specific impaired driving, which is creating challenges for lawmakers and law enforcement as cannabis continues to be decriminalized and legalized at the state level across the country. It is important to note that after alcohol, [cannabis is the drug most often linked to impaired driving](#) for CMV drivers. In a moving session entitled, *The High-Way: The Ongoing Challenges of Impaired Driving*,” Darrin Grondel of the Foundation for Advancing Alcohol Responsibility, and Brian Swift of the National Association to Stop Impaired Driving, spoke on the human toll of impaired driving, outlining the ongoing challenges to changing social norms around impairment, the variances in



recreational drug trends by state, and potential improvements for enforcement activities to better protect those traversing our roadways.

The Summit closed with a luncheon keynote address and call to action from Emily Schweningen of the U.S. Department of Transportation. In this talk, Schweningen outlined the National Roadway Safety Strategy — which includes adopting the aforementioned Safe System approach and leveraging the funding and policies from the Bipartisan Infrastructure Law, including nearly \$14 billion for Safe Streets and Roads for All programs, the Highway Safety Improvement Program, expanded data collection, vehicle safety programs, and truck safety. Schweningen closed with a call to action, emphasizing that in order reach the vision of zero roadway fatalities across the country, collaboration between all levels of government, business and U.S. citizenry will be required. A massive cultural shift will need to take place, wherein everyone recognizes that even a single roadway death is not only unacceptable, but wholly preventable. Important to this recognition is understanding that everyone has a right to travel safely on roadways, whether they are a driver, passenger, worker, pedestrian, or bicyclist.

Throughout the Summit, organizers and speakers asked participants to share best practices across disciplines, compare successes and challenges, and plan next steps to promote and expand partnerships. Today, a variety of emerging trends and brand new issues exist within the field of transportation safety. Gathering as a group, participants of the Summit gained a more comprehensive understanding of these trends, looking at each from a variety of different angles and through the unique lenses of different agencies and organizations.