

# CONOPS

## Trucking Fleet Concept of Operations (CONOPS) for Managing Mixed Fleets

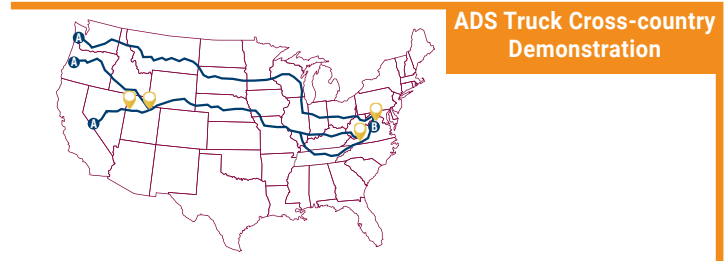
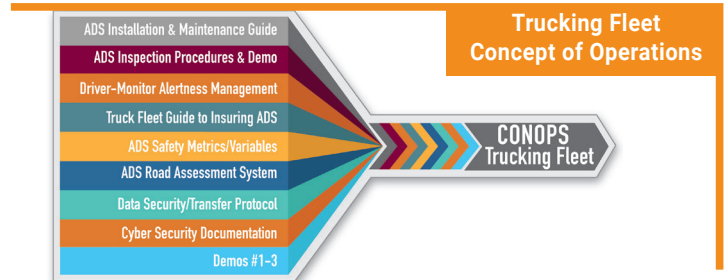


MARCH 7-10, 2022

### CONOPS ROADSHOW DEMONSTRATION AT TECHNOLOGY MAINTENANCE COUNCIL ANNUAL MEETING AND TRANSPORTATION TECHNOLOGY EXHIBITION

## CONOPS ROADSHOWS

To support the concept of operations (CONOPS) and provide the trucking industry with clear information on how to safely implement automated driving system (ADS)-equipped trucks among mixed fleets, the Virginia Tech Transportation Institute (VTTI) and Pronto, a leading automated heavy vehicle transportation company, are hosting a series of demonstrations under the Trucking Fleet Concept of Operations (CONOPS) project, a four-year, \$10 million effort sponsored by the Federal Motor Carrier Safety Administration and the Federal Highway Administration. Three demonstrations, or roadshows, allow end users, stakeholders, and the public to experience ADS technology on closed test tracks. The roadshows will engage the public with driving automation systems to share information about their functionality, benefits, and limitations. The roadshow events demonstrate real-world, practical integration of increasingly sophisticated ADS into road freight operations with live traffic.



## TECHNOLOGY MAINTENANCE COUNCIL ROADSHOW

### ADS Truck Ride-and-Drive

The second of three roadshows was held during the Technology and Maintenance Council (TMC) Annual Meeting in Orlando, FL, March 7-9, 2022. The TMC Roadshow showcased a live ride-and-drive for attendees to experience the capabilities of an ADS truck. Attendees had the opportunity to ride in a Pronto ADS truck (with a safety driver) as it queued behind a traditional truck on a closed-course route around the Orange County Convention Center, the site of the TMC Annual Conference. Along the closed course route, the ADS truck navigated a work zone scenario, which was designed and executed with the support of the Florida Department of Transportation (FDOT). Early signups for the ride-and-drive were available beginning one month prior to the event, and TMC organizers helped to disseminate information by sending daily email blasts to registrants. During the two-and-a-half-day conference, VTTI and Pronto conducted 54 ride-and-drive trips with 161 total attendees. The ride-and-drives were well attended and garnered positive attention from the media, state and federal DOT representatives, and industry attendees.



TMC Ride-and-Drive demonstration



VTTI CONOPS



## TMC ROADSHOW *continued*

To collect information from attendees about their opinions, perceptions, and attitudes toward ADS applications in fleet operations, the VTTI team collected questionnaires both prior to and following attendee participation in the ride-and-drive. Collecting surveys both pre and post ride-and-drive allowed researchers to examine attendee attitudes before and after experiencing the demonstration and observe any changes in opinions and perceptions that may be attributed to their experience during the demonstration. A total of 100 paired pre- and post-roadshow questionnaires were collected from attendees who participated in the ride-and-drive. In general, feedback from participants on ADS opinions and acceptance was positive and did not change practically before and after demonstration participation.



Ride-and-Drive workzone



Attendees completing questionnaires



Ride-and-Drive workzone

## EXHIBITOR BOOTH

To accompany the live ride-and-drive, VTTI and Pronto hosted an exhibitor booth to showcase the overall CONOPS project and demonstrations, including the ADS Port Queueing and ADS Cross-Country Road Testing data collection efforts. VTTI personnel networked and interacted with attendees who visited the booth in the exhibit hall to further market the CONOPS project and disseminate information. Additionally, a video of the

outdoor ride-and-drive was displayed at the booth to garner additional attention for the dynamic demonstration.



Exhibitor booth at TMC



## TMC TECHNICAL SESSION

The assembled panel included experts in the automated commercial trucking industry to address important issues that fleets, shippers, brokers, state governments, and service/maintenance providers need to understand to plan for ADS deployment. Dr. Rich Hanowski, Division Director of Freight, Transit, and Heavy Vehicle Safety at VTTI, provided an overview of the active research project and pointed to some operating environments where automation might help drivers perform consistently and safely. Next, Jeff Loftus, Division Chief at the Federal Motor Carrier Safety Administration (FMCSA) Technology Division, shared information about the role that FMCSA is playing in supporting and guiding ADS trucking deployment. Jessica Kearney, Assistant Vice President at Travelers Institute, spoke about what the future of insuring ADS-equipped trucks may look like. Assuring that ADS-equipped trucks are well maintained through the right level of electronic and manual interactions was discussed by Will Schaefer, Director of Safety Programs at the Commercial Vehicle Safety Alliance. Additionally, the fleet perspective was covered by VP of Maintenance at Bison

Transport, Mike Gomes, who discussed his fleet's experience with automation that supports drivers on the road. Finally, an expert who has watched the development of ADS vehicles for years, Ognen Stojanovski, Chief Operating Officer and Co-founder of Pronto, discussed the beginnings of automation and where it can do the greatest good to support the safety and efficiency goals of every fleet.



CONOPS partners presenting at the TMC Technical Session

