AUTONOMOUS TRUCKING IN THE NORTHERN PLAINS

With support from the Federal Motor Carrier Safety Administration, the Upper Plains Transportation Institute will host its 2025 conference on autonomous trucks at the Alerus Center in Grand Forks, North Dakota on September 15 and 16. The conference will provide a forum for autonomous truck companies; tech entrepreneurs; motor carriers; safety enforcement personnel; the agricultural, energy, and manufacturing industries; state and local governments; and community leaders to discuss the evolution of autonomous trucking in North Dakota and the northern plains. The conference will start at 1 p.m. on September 15 and conclude by 3 p.m. on September 16. A reception and networking opportunity will follow the program on September 15. Registration is free, and breakfast and lunch will be provided on September 16. The sessions will cover a range of timely topics including:

SEPTEMBER 15, 2025

1:00 p.m. Opening Remarks

1:15 p.m. How Do Autonomous Trucks Work?

- Alex Rudin, MITRE
- Gary McCarthy, Aurora Tech

In this session, autonomous vehicle experts will provide an overview of autonomous trucking technology including sensors, algorithms, fault monitors, and remote operations. This conversation will separate autonomous trucking myths from reality and provide an introduction to the technology for all audiences. This session will be paired with an autonomous vehicle exhibit so that participants can observe the systems up close.

2:00 p.m. Developments in Autonomous Trucking in the United States

- Richard Bishop, Bishop Consulting

Discussants

- Gary McCarthy, Aurora Tech
- Kevin Siegel, Kodiak Robotics
- Bart Teeter, Bot Auto

Autonomous trucking is growing and spreading across the southern and eastern United States. This dynamic industry is changing almost daily, with new users, customers, and routes coming online. While growth trends are apparent, many uncertainties remain. Different business models are being followed within the industry and the roles of original equipment manufacturers are in various stages of development. Additionally, autonomous truck developers and operators are faced with a variety of state policies and regulations and, up until now, the federal government's roles have not been formative. This panel of experts and industry leaders will explore key developments and trends in autonomous trucking from a variety of perspectives: autonomous

truck developers and tech firms; original equipment manufacturers; commercial motor carriers; and government.

3:00 p.m. Break

3:15 p.m. State Perspectives on Autonomous Trucking

- Amanda Abruzzo, Arizona DOT
- Eric Belford, Montana DOT
- Michael Kisse, North Dakota DOT
- Cory Johnson, Minnesota DOT

In the absence of specific federal regulations, each state is developing its own policies, creating variations and uncertainties for the trucking industry. This session will delve into the roles and views of states in facilitating and overseeing autonomous truck services. A focus will be on creating a business and regulatory framework for success while assuring the public through a level of transparency. A panel of State Department of Transportation leaders and technical specialists will describe current and planned approaches to autonomous trucking. Areas of difference and consensus will be highlighted.

4:15 p.m. Challenges to Widespread and Year-Round Autonomous Truck Operations in Northern Regions

- Jon Dege, PLUM Catalyst
- Eric Belford, Montana DOT

Many challenges remain before autonomous trucking can effectively penetrate rural areas in northern regions, which will require year-round operations over two-lane rural roads. These challenges include (1) operating and remotely monitoring autonomous trucks that must travel on two-lane rural roads and under extreme weather conditions; (2) the impacts of extreme cold on sensors and ADSs; (3) the implications of extreme winter conditions for safety inspections; and (4) change detection of operational conditions and appropriate responses. This session will highlight these and other challenges, existing and potential solutions, and ongoing research questions that will support expansion of autonomous trucking into rural and northern regions.

5:00 p.m. Networking Reception and Poster Displays

SEPTEMBER 16, 2025

7:00 a.m. Networking Breakfast (Provided)

8:00 a.m. Enhanced Inspection Procedures for Autonomous Trucks

- John Sova, Commercial Vehicle Safety Alliance
- Bart Teeter, Bot Auto

Inspection protocols are being finalized for autonomous trucks that will allow these vehicles to move efficiently between origin and estimation while providing maximum safety assurances. In this session, a panel of safety experts will describe the forthcoming North American safety inspection procedures and protocols, highlight success stories from regional pilots, and describe a vision for a consistent approach that will allow autonomous trucks to operate seamlessly over the national highway network.

9:00 a.m. Interactions between Autonomous Trucks and First Responders

- Gary McCarthy, Aurora Tech
- Bart Teeter, Bot Auto

While autonomous trucks receive enhanced safety inspections at origin and destination, safety enforcement personnel may still need to interact with these vehicles enroute when responding to an emergency, issuing a citation, or in response to an identified vehicle issue. Moreover, recovery plans and procedures are necessary in situations where autonomous vehicles fail in a safe mode and must be retrieved along the roadside or other remote location. This panel of autonomous truck developers and safety experts will discuss the industry's first-responder plans and procedures and trainings available for first responders.

10:00 a.m. Break

10:15 a.m. Insurance and Liability for AVs

- Katelyn Magney-Miller, Partners for Automated Vehicle Education
- Ben Lewis, Simulytic

Autonomous trucks will be deployed across a range of business models, applications, and partnerships with different risk structures. Nonetheless, without a driver in the vehicle, traditional expectations for liability and insurance will need to change to enable this new driving paradigm. This discussion will cover current leading knowledge and industry practices regarding insurance and liability for autonomous vehicles.

11:00 a.m. Applications of Autonomous Trucks in Agriculture, Energy, and Rural Industries

- Maynard Factor, Kratos
- Kevin Siegel, Kodiak Robotics

Autonomous trucks have widespread applications including agriculture, mining, energy, logging, and yard operations, with new applications emerging regularly. As the technology continues to develop, autonomous trucking companies and their partners are identifying new applications that

can benefit from driverless operations. This panel will cover a range of these current and potential applications, considerations for integration, and opportunities for growth or expansion in these domains.

12 p.m. Lunch (Provided)

1:00 p.m. Engagement, Education, and Workforce Development

- Katelyn Magney-Miller, Partners for Automated Vehicle Education
- Jon Dege, PLUM Catalyst

While much of the development of autonomous trucks focuses on the vehicle itself, there are many other stakeholders involved in the process of their operation and deployment including policymakers, technology integrators, emergency responders, and the workforce. In order to effectively deploy autonomous trucks, all of these stakeholders must provide input into the deployment process and receive education on the necessary skills and information. This session will offer perspectives on engaging with stakeholders across the autonomous vehicle landscape in order to inform policymakers, educate the public, and develop a technical workforce.

2:15 p.m. Projecting the Next Decade of Autonomous Trucking

- Gary McCarthy, Aurora Tech
- Bart Teeter, Bot Auto
- Kevin Siegel, Kodiak Robotics
- Maynard Factor, Kratos

Autonomous trucking has changed rapidly over the past decade and is reaching a critical inflection point in 2025, where the first companies are beginning commercial driverless operations on public highways. In the next decade, companies will focus on scale and expansion, while continuing to develop their driving systems to support these goals. This discussion with experts and industry leaders will provide a forward-looking view at autonomous trucking, including the expected growth in the industry, and what steps new and interested stakeholders can take to prepare themselves for that growth. The session would feature a roundtable discussion including all AV developers present at the conference.

3:00 p.m. Q & A