



Spotlight on White Paper Opportunities

The Texas CAV Task Force was created at the request of Texas Governor Greg Abbott in January 2019. The Texas CAV Task Force is responsible for preparing Texas for the safe and efficient rollout of CAVs on all forms of transportation infrastructure.

The primary functions are:

1. Coordinating and providing information on CAV technology use and testing in Texas.
2. Informing the public and leaders on current and future CAV advancements and what they mean in Texas. This process includes reporting on the current status, future concerns, and how these technologies are changing future quality of life and well-being.
3. Making Texas a leader in understanding how to best prepare and wisely integrate CAV technologies in a positive, safe way, as well as promoting positive development and experiences for the state.

The Texas CAV Task Force is composed of a voting group of no more than 25 members and represents the full spectrum of CAV stakeholders.

The following opportunities have been summarized for each of the five subcommittees for the Texas CAV Task Force.

DATA, CONNECTIVITY, CYBERSECURITY, AND PRIVACY SUBCOMMITTEE

Within the world of data, there are numerous high-level issues and opportunities, including the regulatory environment in which Connected Vehicles (CV) and Autonomous Vehicles (AV) operate, data used and produced by CVs and AVs, and their influences on data ownership, data privacy, and data sharing and exchange. While advancements are being made, and numerous pilots and deployments are taking place within Texas, the time frame to transitioning to higher capability vehicles is not clear. Addressing the ownership, technical, and policy issues surrounding the following high-priority data categories will accelerate the safe deployment of AVs and CVs in Texas:

- Which entities are collecting, storing, and using what CV and AV data—how, for what purposes, and with what protections?
- What data gaps exist that hinder innovation and furthering the public interest?
- What data can be shared or exchanged to facilitate the safe and successful integration of AVs and CVs into the transportation ecosystem?
- What security and privacy protections need to be addressed and incorporated into AV and CV data collection and sharing?

FREIGHT AND DELIVERY SUBCOMMITTEE

The freight landscape is rapidly evolving. As new technologies and vehicle types continue to emerge, Texas's infrastructure and policies must keep pace. Many Texans rely on the freight ecosystem for their livelihoods. Connected and autonomous vehicle (CAV) technologies present significant safety and economic potential to the state. This white paper provides an overview of the ground-based freight ecosystem, highlighting challenges and opportunities in (1) Long haul, (2) Warehouses, distribution centers, and intermodal facilities, and (3) Last-mile delivery. Across this broad spectrum, the following opportunities exist:

- Prioritize roadway maintenance along CAV corridors, focusing on lane striping, pavement quality, and signage.
- Launch a cooperative research program targeted at research gaps for common infrastructure challenges such as work zones, forced merges, and transfer points.
- Expand the Texas connected freight network to include local roads, using the Texas Connected Freight Corridors project as an opportunity to develop critical applications, gain experience in connected vehicle technology, and formulate best practices for deployment.
- Invest in workforce development programs that upskill workers and create new educational pathways.

EDUCATION, COMMUNICATION, AND USER NEEDS SUBCOMMITTEE

The Texas CAV Task Force's Subcommittee on Education, Communication, and User Needs supports statewide efforts to inform and engage with agencies, stakeholders, industry, and the general public. Education and outreach about CAV benefits and opportunities in Texas will benefit from fundamental communication best practices for effectiveness, including:

- Identify the audience and their motivations to enable message development that empower supporters, convince uncertain individuals, and minimize the impact of opponents.
- Use market research to learn about the audience, what they care about, and what messages will best convince them.
- Utilize effective message design to keep education simple, positive, personal, and offering a call to action.
- Effectively deliver messages and continually and consistently repeat the message so it will not get lost.

LICENSING AND REGISTRATION SUBCOMMITTEE

By enacting AV legislation in 2017, the Texas Legislature created an environment that has allowed the AV industry to expand its testing and development in Texas. By clarifying the legal obligations of AV developers and vehicle owners, the regulatory certainty for these firms to consider deployment and development opportunities in Texas has increased. Within the licensing spectrum, opportunities have been identified for adding regulatory clarity for more AV innovation:

- AV developers and Texas Department of Public Safety (TxDPS) could collaboratively discuss compliance with state motor vehicle equipment standards and current AV configurations, particularly for Personal Delivery Devices (PDD) and zero-occupant vehicles. TxDPS can determine how much regulatory flexibility it has to accommodate these unique AV designs.
- AV developers and manufacturers, Texas Division of Motor Vehicles (TxDMV), and the Texas Automobile Dealers Association could discuss how current dealer licensing/sales laws and registration rules affect the range of commercial relationships between Original Equipment Manufacturers (OEM) and AV developers.
- If some AV developers are considering alternatives that include AV operation entirely by remote operators (rather than by onboard software that controls vehicle driving tasks), the AV industry may want to interact with applicable state agencies to determine how the current regulatory structure addresses such operations.

SAFETY, LIABILITY, AND RESPONSIBILITY SUBCOMMITTEE

As Texas continue to embrace CV and AV testing within both the public and private sectors, it is important to understand several aspects of this dynamic and continually developing ecosystem. Opportunities for future policy considerations include:

- Design an AV public education campaign developed with national partners, with distribution carried out by local officials and first responders, and through other avenues such as the Texas CAV Task Force website and social media campaigns.
- Work with AV developers to create a website showing a map of AV testing and deployments within Texas, with highlights of each deployment.
- Promote ongoing and open public-private stakeholder dialogue and collaboration efforts on safety information and transparency.
- Initiate conversations on data sharing (including security and privacy considerations) with AV companies that focus on which data can be shared, which data cannot be shared, and which data are open for discussion.
- Encourage discussion between operators and developers and law enforcement to explore how to incorporate AV and automated driving function crash factors into state crash report forms.