

REQUEST FOR ENGAGEMENT



Seeking Connected and Autonomous Vehicles (CAV) and related Intelligent Transportation Systems (ITS) Solutions for a Safer, Efficient, and Resilient Transportation System



Request for Engagement Issue Date: January 23, 2025
Request for Engagement Closing Date: March 7, 2025

INTRODUCTION

Overview of DOTD's Interests and Goals

Since 2017, the Louisiana Department of Transportation and Development ITS Section (DOTD ITS) has leveraged a Connected and Autonomous Vehicles (CAV) Working Group to:

- understand the safe integration of CAV into the Louisiana transportation system,
- identify opportunities to support the safe and efficient operations of CAV,
- understand actionable steps DOTD ITS can be taking to support CAV operations, including from an infrastructure investment perspective, and
- identify institutional needs and resources, including technical expertise, to manage and operate CAV in the State of Louisiana.

The CAV Working Group is comprised of at least one representative from every section within DOTD, generating a wide range of perspectives and insight into the opportunities and challenges associated with CAV adoption, including roadway design, maintenance, safety, traffic engineering, data management, and beyond.

Through the CAV Working Group, DOTD ITS is committed to building a strong foundation of knowledge about CAV technology readiness, and policy and governance considerations to better inform DOTD ITS decision-making around CAV across different sections. This includes considering how CAV fits into DOTD ITS operational and management priorities. Additionally, given the funding opportunities through the Bipartisan Infrastructure Investment and Jobs Act, the Working Group is supporting collaborative conversations around innovative projects to align with innovation and mobility focused grant opportunities. This includes the ongoing submission of grant applications with private sector partners.

The purpose of this Request for Engagement (RFE) is to solicit information, understand best practices from industry experts, including but not limited to the private vendor community, original equipment manufacturers (OEMs), and mobility partners to identify entities interested in incubating and scaling new CAV and ITS related innovations with DOTD. Through the work completed to date by the CAV Working Group, the following guiding questions have been identified for this RFE:

- How to support deployment of CAV solutions that support **multi-modal connectivity**, including the movement of freight and goods and port network connectivity within Louisiana?
- How to leverage CAV solutions to support **safety and mobility connectivity**, including considerations around extreme weather events, including superfog and hurricanes, as well as national events such as football championship games, Mardi Gras, and other special events?
- What **infrastructure investments** should DOTD focus on to support the safe and effective deployment of CAV solutions, particularly those from an ITS, digital, spectrum, and artificial intelligence standpoint?
- How to approach modernizing **policy and governance** foundations to support safe and efficient deployment of CAV solutions?
- What are the opportunities to support **workforce and economic development** through the integration of CAV solutions into the transportation system?

What is the focus of this Request for Engagement and What Opportunities Does it Provide?

This Request for Engagement (RFE) is being used to gather initial information from as many industry experts and potential suppliers as possible about their products, services, and capabilities. The RFE will help DOTD ITS understand the market landscape and how potential solutions align with Louisiana's needs and unique operating environment. **The primary focus of this RFE is CAV operations and ITS solutions to directly support the safe operations of CAV.**

The insights gained from the RFE responses will help DOTD ITS make informed decisions, mitigate risks, and prepare for future procurements and funding applications. Additionally, the RFE will identify potential partners for further engagement. **DOTD is working towards holding a CAV Innovation Day on April 30, 2025, and anyone that responds to this RFE will have the priority opportunity to participate in the Innovation Day.**

DOTD ITS understands and respects the time and effort that goes into preparing responses to this RFE. DOTD ITS is not looking for detailed responses, but instead, seeks innovative and Louisiana-focused responses that demonstrate an interest and willingness to partner with DOTD ITS to support a next generation transportation system. **No responses to this RFE should be longer than 5 pages, including cover letter.**

There should be no expectation that a response to this RFE will lead to a contract and no responder will be eligible for any cost reimbursement related to the time and effort to respond to this RFE.

Who Should Respond to the RFE?

This is an open RFE, and all are encouraged to respond, including vendors and contractors, OEMs, businesses, startups, academic institutions, consultants, designers, researchers, and non-profit organizations. We welcome responses from local, national, and international participants. **Respondents to this RFE are invited to respond to any or all of the questions in this document.**

Responses to this RFE shall serve solely to assist DOTD ITS in understanding the current state of the marketplace with regards to the solicited information and/or to inform the ongoing development of its CAV related programs and potential future solicitations for products and services, and future grant funding applications. **This RFE does not in any way obligate DOTD to issue or amend a solicitation or to include any of the RFE provisions or responses in any solicitation.**

As noted above, DOTD ITS is very interested in identifying other entities, organizations, and companies that want to partner with DOTD ITS to leverage CAV solutions for a **safer, efficient, and resilient transportation system**. Such partnership is expected to include opportunities to:

- Participate in future CAV Working Group Meetings
- Participate in future CAV Innovation Days
- Partner on grant funding applications
- Inform and respond to future procurements
- Partner on research, pilot, and demonstration projects

DOTD ITS AND CAV INTEREST AREAS

DOTD ITS is currently engaged in a number of ITS forward initiatives to support the ongoing evolution of the transportation system and is keen to better understand how technology and public-private partnerships can support Louisiana's ongoing efforts. Focus areas for workstreams include:

- Planning for the integration of ITS solutions through updating its statewide ITS architecture
- Understanding what actions can be taken to support the safe operation of CAV
- Developing strategic plans for the integration of Transportation Systems Management and Operations (TSMO) throughout DOTD
- Privacy, security, and ethical concerns with the collection, use, and storage of data, including considerations around the use of artificial intelligence for decision-making and data analysis
- Social and economic impacts of CAV implementation
- Freight signal prioritization
- In-vehicle messaging to support safer and more efficient movement on roadways
- Electronic logging device (ELD) safety messages
- CAV data sharing with traffic management centers
- Anticipating systems and procedures that will be needed to handle new data about crashes and other reported emergency incidents
- Considering the necessary workforce and financial investment for sustainably maintaining new hardware deployed across the state
- Impact of severe weather, high traffic, and low connectivity in rural areas of Louisiana

Louisiana has not yet received the same levels of interest in CAV solutions as other states, but is keenly interested in identifying use cases and supporting the development of corridors for the operation of CAV that will run in and through Louisiana. This includes consideration of autonomous freight out of Texas and along the I-10 corridor, and growing robotaxi operations in Texas and Georgia. In addition to CAV, the following types of technologies are currently in focus by DOTD ITS and DOTD ITS welcomes responses to align with such:

- Queue Warning Systems
- Adaptive Ramp Metering
- Wrong Way Driving Prevention
- Emerging Vehicle Detection Technologies
- In-Vehicle Messaging (focus on road safety and weather events)

It should be noted that DOTD ITS is not just interested in the solutions, but also the resources and investment DOTD ITS can and should be prioritizing now to support continued advancement of CAV technologies focused on supporting a safer, efficient, and resilient transportation system.

Key issue areas that align with the interests of DOTD ITS in working with partners to incubate and scale CAV solutions include:

- Interoperability
- Funding
- Public trust and adoption
- Policy and regulation modernization
- Public safety and law enforcement interaction
- Data governance and management

QUESTIONS AND INFORMATION REQUESTED AS PART OF RFE

DOTD ITS is very interested in understanding and starting a conversation around the following:

- 1) *What can and should DOTD ITS be doing to ensure it is leveraging opportunities that come from CAV focused solutions?*
- 2) *What CAV products and services are available for testing and operational deployment in a state with demographics like Louisiana? This includes considerations around inclement weather and rural operating environments where DOTD is actively considering innovative approaches to improve public safety related to extreme weather.*
- 3) *How should DOTD ITS be investing resources to support autonomous vehicles, including interstate corridors for freight? This includes considerations as a State that does not yet have a large number of AV deployments, but has a permissive regulatory structure.*
- 4) *What operational opportunities are there for CAV within Louisiana?*
- 5) *What are public outreach and engagement opportunities around the deployment of CAV solutions within Louisiana?*
- 6) *What ITS strategies, solutions, or products should DOTD ITS be considering to support the safe operations of CAV in Louisiana? This includes considerations for both physical and digital infrastructure.*
- 7) *Are you interested in participating in the CAV Innovation Day being planned for April 30, 2025?*
- 8) *Is there any other information, guidance, references, or best practices that you would like to share with Louisiana DOTD ITS to inform its CAV and innovation forward planning for a safer, efficient, and resilient transportation system?*

As noted herein, responders can answer as many questions as applicable or relevant to their experience, solutions, services, or general awareness around CAV and ITS. **Not all questions have to be answered to submit a response to this RFE.**

CAV INNOVATION DAY OPPORTUNITY



In coordination with its CAV Working Group and this RFE, DOTD ITS is planning to host its first ever CAV Innovation Day on April 30, 2025. The CAV Innovation Day will be a one-day event with the following programming planned:

- Discussion panels focused on current findings and recommendations from CAV Working Group that will be released;
- Booths for vendors to display and discuss services and solutions;
- Short presentations by selected vendors that submit RFE responses;
- Networking with DOTD leadership and staff; and
- CAV technology displays, including vehicles, focused on interactive engagement.

The event will take place on DOTD's campus and will prioritize education and implementation focused ideas and solutions.

INSTRUCTIONS FOR SUBMITTING RESPONSES

All responses to this RFE are due no later than 5:00 p.m. Central Standard Time on Friday, March 7, 2025. Responses can include all information you believe could be important or useful for DOTD ITS within the goals and focus areas described in this RFE. **No responses to this RFE should be longer than 5 pages, including cover letter. Do not submit confidential, proprietary, or trade secrets information in your response.**

DOTD ITS requests that responses be made in the following format:

- 1) Cover letter (1 page or less) with brief description of company and relevant contact information, including:
 - a. Organization Name (and parent company, if applicable)
 - b. Organization Address
 - c. Organization Website
 - d. Contact name and contact information (e-mail address required)
- 2) Responses to any questions on page 5 of this RFE responder chooses to provide information on.
- 3) **Please make sure to answer yes if interested in learning more about the CAV Innovation Day being planned for April 30, 2025. If this is the only question being answered, an email expressing interest will suffice.**
- 4) Any additional information that would be useful for DOTD ITS to consider within the goals and focus areas of this RFE.

Responses should be submitted electronically as a PDF to LADOTD-CAV@la.gov. **Please make sure to include the following in the email subject line: "Response to RFE"**

If you have any questions or are seeking clarifications on any parts of this RFE, please send your inquiry to LADOTD-CAV@la.gov. **Please limit any inquiries concerning this RFE to emails only.** DOTD will do its best to respond to any relevant questions in a timely manner.

Thank you in advance for your valuable time and response to this RFE.