

# Strategic Communication Plan for Advancing the Dialogue about Connected and Automated Vehicle Technology

Texas CAV Task Force Subcommittee on Education, Communication, and User Needs

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### Disclaimer

The contents of this white paper reflect the views of the Texas CAV Task Force members, who are responsible for the information presented herein. The contents do not necessarily reflect the official views or policies of the State of Texas or any Texas state agencies. The white paper does not constitute a standard, specification, or regulation, nor does it endorse standards, specifications, or regulations. This white paper does not endorse practices, products, or procedures from any private-sector entity and is presented as a consensus broad opinion document for supporting and enhancing the CAV ecosystem within Texas.

## **Texas CAV Task Force Charter**

The Texas CAV Task Force was created at the request of Texas Governor Greg Abbott in January 2019. The 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:

- Coordinating and providing information on CAV technology use and testing in Texas.
- 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.
- 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 CAV Task Force is composed of a voting group of no more than 25 members and represents the full spectrum of CAV stakeholders.

## **Terminology Note**

The Texas CAV Task Force addresses the full spectrum of connected, automated, and autonomous vehicles. An *automated vehicle* refers to a vehicle that may perform a subset of driving tasks and requires a driver to perform the remainder of the driving tasks and supervise each feature's performance while engaged. The performance capabilities of automated and autonomous vehicles

consist of levels 0–5 with level 0 having no driving automation and level 5 having full automation, with automation increasing at each progressive level. A fully autonomous vehicle can perform all driving tasks on a sustained basis without the need for a driver to intervene.

These definitions are still blurred in common discussions and language. Currently, the industry is developing automated vehicle capability while pursuing fully autonomous vehicles. The white papers generally use the term *autonomous* to refer to vehicles with fully autonomous capabilities and the term *CAV* to refer to the grouping of connected, automated, and autonomous vehicles. Please see the 2021 terminology white paper for a full listing of terms and definitions used in this developing technology ecosystem.

## List of Terms and Acronyms

- CAV connected and autonomous vehicle; also, connected, and automated vehicle
- FAQ frequently asked question
- TCP tactical communication plan

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## **Executive Summary**

Connected and autonomous vehicle (CAV) technology holds much promise, but questions remain surrounding its widespread use and adoption. The issues include planning, policy making, regulatory and legal frameworks, institutional issues, operations, funding, and ultimately public trust and acceptance. 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.

This document sets forth a strategic communication plan for the CAV Task Force. The strategic communication plan identifies four overarching goals:

Educate, Generate awareness, Build trust, and Increase adoption. The strategic communication plan is premised on best practices of communication including:

Audience identification and segmentation, Market research, Message design, and Message delivery.

This plan recognizes that specific outreach and education messages and tactics, tailored to specific audiences based on their needs, serve to enhance overall education and outreach efforts. Based on guidance from the subcommittee, this plan identifies stakeholders and audiences. It presents communication techniques and tools, messages, and message delivery mechanisms. It is strategic but also suggests various tactics. Importantly, it recognizes the need for continuous evaluation and adaptation as audiences change and grow and technology advances. Public outreach plans can guide development of materials for specific audiences and provide a comprehensive roadmap for education and outreach efforts beyond the key messages.

The education subcommittee, with its broad multidisciplinary representation, is the forward-facing entity responsible for executing an engagement plan. The subcommittee's charge and responsibility are to develop tools and resources that allow for meaningful engagement. This strategic plan will guide those efforts.

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## Introduction

Communication, education, and outreach each have roots in many of the social science disciplines. Social marketing programs have been used for decades in everything from smoking cessation to litter control. The marketing campaigns have led to changes in social behaviors and attitudes, and this has had a positive impact on society.

In the transportation arena, messaging has been used to accomplish a wide range of goals including communication campaigns, education campaigns, and safety campaigns. Moreover, we know that education and awareness increase acceptance. This is a primary goal of the Education, Communication, and User Needs Subcommittee of the Texas Connected and Autonomous Vehicles Task Force. Previous research around acceptability, use, and trust of connected and automated vehicle (CAV) technology shows that familiarity and experience with the technology increase favorability, but the public still has concerns, even beyond the technology itself.

Education and outreach to multiple audiences can build awareness, generate trust, and increase adoption. Efforts should expand beyond the identification of benefits and should seek to answer questions and address issues across broad categories based on audience. Baseline research should inform these efforts by identifying the positions and interests of each audience. Overarching key messages will be supported by secondary messages that are relevant to each audience. Education and outreach should function in a continuous feedback loop so that as issues are raised, input can be gathered, and solutions can be formulated.

## Background

In June 2021, the CAV Task Force published a white paper entitled *Understanding Perceptions and Opinions about Connected and Automated Vehicle Technology: Advancing the Dialogue*. The paper researched and synthesized recent efforts to educate the public about CAV technologies through pilots, demonstrations, and first-use operations. The paper documented the results of consumer acceptability following some CAV pilots projects and identified tactics that may be effective for future educational efforts. This white paper builds on that effort by documenting communication best practices and applying those principles. The result is a strategic communication plan. The plan will guide the work of the subcommittee as it implements specific tactics to achieve the goals of the communication strategy.

## **Communication Best Practices**

Education and outreach about CAV benefits and opportunities in Texas will benefit from fundamental communication best practices for effectiveness. These include:

- Audience identification and segmentation—Identify the audience(s) and their motivations to develop messages that empower supporters, convince uncertain individuals, and minimize the impact of opponents.
- Market research—Learn about the audience, what they care about, and what messages will best convince them.
- **Message design**—Several principles define the best ways to design a message including keep it simple, stay positive, use metaphors, make it personal, and offer a call to action.

• **Message delivery**—Inconsistent delivery will derail even the best messages. Continually and consistently repeat the message so it will not get lost.

## **Communication Plan**

This communication plan, developed by the Texas CAV Task Force Subcommittee on Education, Communication, and User Needs, broadly outlines the *communication strategy* for the CAV Task Force. The plan recognizes that specific outreach and education messages and tactics, tailored to specific audiences based on their needs, serve to enhance overall education and outreach efforts. Based on guidance from the subcommittee, this plan identifies stakeholders and audiences. It presents communication techniques and tools, messages, and message delivery mechanisms. It is strategic but also suggests various tactics. Importantly, it recognizes the need for continuous evaluation and adaptation as audiences change and grow and technology advances. Public outreach plans can guide development of materials for specific audiences and provide a comprehensive roadmap for education and outreach efforts beyond the key messages.

Development of such plans will ensure that messaging is consistent across formats. The plans will also serve to allocate adequate time and resources by identifying specific actions. The plans can prioritize activities. Subplans should be developed for different audiences. For example, a plan specific to the legislature should focus on why investment in these activities is important and how legislation can support that; a plan aimed at local government should include development of information that addresses local issues and why these activities are important.

#### **Communication Process**

As outreach occurs, it is imperative that its effectiveness be measured. This evaluation will reveal what messaging is resonating and what methods are most effective. Evaluation can identify gaps in knowledge that can be addressed. Evaluations can also uncover misperceptions that can be addressed before they become set in the public's opinion. Systematic and consistent evaluation will reveal trends over time that will aid in understanding outreach effectiveness. Polls and surveys are useful methods of evaluation, but qualitative research through structured interviews and focus groups



that results in wasted time and resources.

allows for a deeper understanding of why a person feels a certain way about something. These rich data will inform subsequent outreach efforts. To be clear, this evaluation should focus not only on the public's perception of CAV technology but also on the effectiveness of the educational information that is being provided. Not assessing the effectiveness of outreach and educational campaigns is a misstep that results in wasted time and resources.

In addition to tailoring messages for specific audiences, information should be provided in a manner that is appropriate to the audience. In all instances, the information should clearly communicate the key messages. It should be comprehensible to the intended audience without the need for additional research. Messages should be available in the media of choice for the receiver and should be accessible and available as requested by the receiver. Fact sheets, frequently asked questions (FAQs), myths, and truths are products that provide information in an easy-to-manage and -digest

format. Moreover, this information can be provided in many forms such as printed materials, a website, videos, and social media. Figure 1 illustrates this progressive but not necessarily linear process that builds on the fundamentals identified previously.

The first step of the process is fundamentally stating the goals for the communication plan. These are likely to be the same regardless of the audience. Identifying and segmenting audiences allow messages to be targeted and focused on what is important to each cohort. And the messages can be delivered in a way that is most appropriate for that audience, by an appropriate messenger. This leads directly to message development. This step is critical because audiences are subjected to a barrage of messages daily. Messages need to be conveyed quickly, clearly, and simply with opportunities for more detailed information.

Message development will benefit from pre-implementation testing in much the same way that market research can inform the message development. This step is often skipped but can help determine how messages will be received and, perhaps more importantly, *interpreted* prior to a final campaign launch. Qualitative methods such as focus groups or interviews are useful for conducting pre-implementation testing because they allow for in-depth discussions of why a message does or

does not resonate. Because there are so many mechanisms available for message delivery, it is necessary to give critical thought to which might be most effective. Knowing where, when, and how the audience receives its information will make this step easier.

The final step is another that is often overlooked. A well-formulated evaluation plan is imperative to gauge the success of the campaign. And mini evaluations during the campaign can allow the campaign to shift, pivot, or clarify during the campaign, thereby saving time and resources.

Figure 1 serves as a starting point for completing the necessary steps to develop an effective communication strategy. The strategy can then be used to develop specific outreach plans for each audience. It is likely that many of these components will overlap, so the user should not be dissuaded by the number of audiences or messages nor the complexity of those overlapping relationships. Conducting this exercise is a necessary first step, and it is important to be as inclusive and comprehensive as possible; prioritization may be necessary and can be accomplished later.

## Examples of Stakeholders and Organizations

- Texas Legislature
- Texas Department of Transportation
- Transportation agencies
- Transit agencies
- Toll authorities
- AAA
- Technology providers
- Original equipment
   manufacturers
- Vehicle manufacturers
- Vehicle dealerships
- Consumer organizations
- Research agencies/centers
- Universities and colleges
- Consumer technology
   associations
- Smart mobility initiatives
- Businesses deploying CAV for services
- Mobility-as-a-service providers



Figure 1: Important Components of a Communication Strategy

#### Stakeholders

The subcommittee benefits from the involvement of partners from various public agencies, private sectors, universities, and special interest groups. Stakeholders are key in the communication process because they can help identify audiences, perform message testing, and serve as conduits for message delivery. Collaboratively, the stakeholders can move the education and outreach efforts forward. The subcommittee, collectively, can assess program activities based on the needs identified by stakeholders.

#### **Communication Goals**

Messaging from the Texas CAV Task Force and the subcommittee seeks to:

- Educate,
- Generate awareness,
- Build trust, and
- Increase adoption.

Each communication technique, tool, or material developed will be designed to contribute to one or more of these communication goals. The four areas are overarching and common goals regardless of the audience.

#### Educate

Beginning with education, communication materials should provide information about why Texas, as a whole, has an interest in CAV technology. Education provides context to the audience. Education tells the audience why they should be interested and/or what might be important to them. It is not about persuasion but simply providing information. The technology(ies) should be explained in terms understandable and accessible to a general public audience. Examples can help to illustrate how CAV works and who might be impacted and how. Specific strategies can be developed to address the educate goal, based on the audience.

Education can also extend to stakeholders. Helping stakeholders to understand their role in advancing CAV technologies in Texas and providing them the tools to do so will multiply educate efforts.

#### Generate Awareness

Similar to educating, generating awareness is also a primary focus of communication from the subcommittee. Awareness of CAV advancements in Texas can be increased by providing available information about pilots and demonstrations that are happening in the state and beyond. Specific tools and techniques to general awareness should be based on the audience. A careful audience analysis and situational assessment will provide useful information about how specific audiences receive information, what factors increase the trust in or credibility of that information, and who is best to convey the information.

Moreover, the active pilots and demonstrations are unique opportunities to generate awareness and educate people about the technologies. Subcommittee activities should capitalize on opportunities to generate awareness by focusing on pilots and demonstrations when available. Events should focus on bringing the technologies to the people so they may experience CAV in action, firsthand.

#### **Build Trust**

The subcommittee's communication should help to build trust. The goal is to establish trust first in the communication materials and should extend to the CAV technologies themselves. It is important to consider research that has been conducted when considering messages to build trust. The issue of trust is multifaceted. Early research indicates there is some trust in the belief that CAV technology can improve safety. But that same research also states that individual trust in the technology is more limited, as is trust that the government will ensure the safety of the technology by enacting laws. Messages to build trust must provide reassurance about the technology and outline safeguards that have been enacted for consumer protection. Again, careful audience analysis and situational assessment will identify areas of mistrust or distrust, and messages can be crafted to address them.

#### **Increase Adoption**

One of the primary goals of the Texas CAV Task Force is to become a central point for CAV advancement in Texas. Research also reports that education and awareness help to build trust, which increases adoption rates. Communication about pilots and demonstrations contributes to adoption by helping the general public to become more familiar with the technology. Likewise, communication tools, techniques, and applications can serve as resources for other stakeholders. This, too, can increase adoption.

#### Audience Identification

The subcommittee determined that the intended audience of the communication plan is the general public. However, communication will be served best by grouping or categorizing portions of the general public so that message content can be tailored, and message delivery can be best suited to audience preferences. Understanding what each audience cares about and what motivates them will inform communication tactics. Some of the audiences are also stakeholders. This beneficial relationship allows information to flow freely back and forth and leverages outreach activities. Also, it will be necessary and useful to prioritize audiences to align resources. Based on discussions with the subcommittee, Table 1 represents potential audiences. A strategy work session with the CAV Task Force and all members of the subcommittees will further refine and prioritize the list.

Table 1: Universe of Audiences

Message Development and Testing

#### Key Messages

Two or three key messages should be communicated across the board to all audiences. More than that will dilute the focus. The key messages should be clear and concise and tie back to the communication goals. Research about attitudes and perceptions related to CAV can uncover the biggest misperceptions. The communication goals include education and awareness, so it is likely that key messages should focus on the misperceptions. The key messages should be broad enough that they are useful to all audiences.

#### Supporting Messages

Supplemental messages tailored to specific audiences can support the key messages. Market research will improve the understanding of the attitudes of particular audiences and help to guide supporting message development.

#### Message Development

Particularly with support messages, messages should center on the motivations of each group and address the issues that are important to each group. If previous market research is conducted, it can provide information about what kinds of information are most credible, whether a group prefers facts and figures, whether a group prefers a visual or narrative message, and what style or tone will be best received. This research will also answer more straightforward questions such as which language to use for communication.

As communication materials are developed, it is important to consider materials that address issues beyond the benefits of CAV technology. Research shows the public has many unanswered questions, especially related to the legal and regulatory nature of CAV technology. Acknowledge that some questions cannot be answered at this time and explain how they are being studied.

Another important consideration in communication planning is to assess plans and materials from an equity viewpoint. Ensure that outreach and education are made available to all citizens. Demonstrate how CAV technology deployment and investment will create benefits for all users of the transportation system.

#### Message Testing

After the messages are developed, they should be tested with the intended audience. Key messages can be vetted with the entire CAV Task Force and primary stakeholders. Qualitative research such as focus groups can test other supporting materials before time and resources are expended on a full-scale production and deployment.

#### **Pre-implementation**

Testing at this stage can answer questions such as:

- Is the message appropriate for the intended audience?
- Is the message understood as intended in the campaign goals?
- Is the message clearly stated?
- Is the message perceived as useful to the target audience?
- Is the message remembered?
- Is the message provoking unexpected feelings or reactions in the target group?

## Message Delivery

Many factors determine how a message reaches an intended audience. There are many mechanisms for message delivery, just as there are many messengers. The tool, technique, material, and frequency should be based on knowledge and understanding of the audience. In all cases, there should be multiple mechanisms. Table 2 outlines options for message delivery. The key messages can be provided by a member of the CAV Task Force, who can then help to ensure message consistency even when partners use and/or adapt those messages to their constituencies. It will be important to maintain consistency as the messages are communicated.

Techniques	Tools	Materials	Messengers
<ul> <li>Briefing presentation</li> <li>Stakeholder meetings</li> <li>Educational brown bags</li> <li>Special event booths</li> <li>Media partnerships</li> <li>Career fairs</li> <li>Specialized curriculum</li> <li>Tabling at community events</li> <li>Social media campaigns, such as Facebook, NextDoor, etc.</li> </ul>	<ul> <li>CAV Task Force website</li> <li>Surveys</li> <li>Focus groups</li> <li>Social media</li> <li>Paid media</li> <li>Town halls</li> <li>Neighborhood meetings</li> <li>Workshops</li> <li>Conferences</li> <li>Demonstrations</li> </ul>	<ul> <li>FAQs/fact sheets</li> <li>Newsletters</li> <li>Animations/videos</li> <li>Live demonstrations</li> <li>Informational flyers/posters</li> <li>PowerPoint slide deck</li> <li>Media kit/news releases</li> <li>Direct mail</li> </ul>	<ul> <li>Key stakeholders</li> <li>Task Force partners</li> <li>Elected officials</li> <li>Neighborhood advocates</li> <li>Trade group spokespersons</li> <li>Educators</li> <li>Disability advocates</li> <li>National or local celebrities</li> <li>Religious leaders or respected elders</li> <li>Friends/family</li> <li>Other implementers</li> </ul>

#### Table 2: Message Type and Delivery Options

## Message/Communication Evaluation

A thoughtful evaluation plan will determine if the communication is effective. The plan evaluates specific activities and allows for fine-tuning if something is not working as intended. Prior to deploying a communication program, key performance indicators, metrics, and thresholds should be defined. Evaluations should include both quantitative and qualitative data and measurement. The focus should be on the communication and not the technology though there will be some overlap.

Evaluation can occur at both strategic and tactical levels.

#### Strategic Evaluation

Strategically, goals are to educate about and bring awareness of CAV technology in Texas. These are precursors to building trust and increasing adoption. Therefore, it is necessary to measure people's awareness of the technologies and assess their knowledge of technologies. To assess the change, this evaluation should be conducted prior to initiation of the communication plan and post-deployment, at a minimum. Ideally, evaluation should occur at regular intervals or milestones of the communication plan deployment so that adjustments can be made if necessary.

#### Tactical Evaluation

Tactical evaluation centers on measuring specifics about the communication strategy such as measures of reach, the number of website visits, the number of messages retweeted, the number of media mentions, etc. But tactical evaluation also includes the quality of messaging. Measures may

include message understanding, message clarity, trust in the message, message credibility, and changes in levels of support.

Specific measures should be identified for each indicator. Likewise, thresholds should be established. For example, an evaluation indicator might be the *percentage change of people that correctly identify at least five CAV technologies.* The metric is the percentage of people that correctly identify five technologies. The objective is to increase that percentage based on the communication goal to educate. And a threshold could be set, such as a 10 percent increase in the first six months.

## **Summary and Conclusion**

The Subcommittee on Education, Communication, and User Needs has set four specific communication goals. This strategic communication plan outlines the steps necessary to implement strategies and tactics to achieve those goals. It identifies stakeholders that can support implementation and provides an initial categorization of primary audiences. Further, the plan describes activities for pre-implementation testing and evaluation.

The next step is for the committee to put the communication plan into action by determining roles and responsibilities for activation. Specific education and outreach plans can be developed based on the key messages of the communication campaign. The subcommittee needs to agree upon the two or three key messages first and then develop detailed plans targeted to specific audiences that detail audience-specific messages, tools, and techniques. The commitment to a comprehensive communication plan provides coordinated and consistent messaging about the CAV activities in Texas. This can build the trust and credibility of the Texas CAV Task Force as a knowledgeable and reliable source of factual, unbiased information.

## **Opportunities**

Moving forward, the subcommittee has many opportunities to communicate about CAV activities in Texas, be they pilots, demonstrations, research findings, or workforce initiatives. In December 2022, the subcommittee convened a communication workshop to engage members of other CAV Task Force subcommittees. While the Education, Communication, and User Needs Subcommittee is leading communication efforts, the subcommittee will rely on the members from other subcommittees to expand the reach of the communication messages. For this reason, it is imperative that regardless of subcommittee, members of the CAV Task Force are speaking with one voice about CAVs in Texas.

This is the objective of the tactical communication plan (TCP). CD&P, the communication consultant engaged to support this effort, is responsible for the development and implementation of the TCP, guided by this subcommittee and with input from other subcommittees when appropriate. The TCP builds upon findings from the communication workshop that helped identify and prioritize audiences and their respective motivations. The key messages that provide the foundation for outreach, engagement, and communication will be created based on input from the communication workshop.

The TCP will outline collateral and associated messaging based on the prioritized audiences identified in the workshop. Specifically, an early opportunity is to develop information kits. The kits can include branded and formatted messages in a variety of pieces, such as fact sheets, FAQs, graphics, social media messages, infographics, short use cases, etc. This information will be

packaged so that it is easy to share with partners and messengers. Providing ready-made information helps ensure the message from the CAV Task Force is consistent. Moreover, branding can help instill trust that the message comes from a reliable and reputable source.

Additionally, the TCP guides implementation practices and evaluation protocols. As noted in this strategic communication plan, measurement and evaluation are critical for any campaign. The TCP will identify specific metrics that can be used to gauge reach and effectiveness. The Education, Communication, and User Needs Subcommittee can provide guidance on appropriate metrics, establish thresholds and targets, and determine evaluation time frames and schedules. Moreover, evaluation should measure changes in attitudes and/or behaviors related to the communication goals and also the messages themselves, including factors such as clarity, comprehension, ability to affect change, etc.

Finally, the TCP should define communication protocols between the subcommittees of the CAV Task Force. Each subcommittee will likely be the conduit or messenger for outreach to audiences that are particularly relevant to that subcommittee. For example, the Licensing and Regulation Subcommittee may be the individuals to reach out to law enforcement and/or regulatory agencies. It is necessary to document these encounters to accurately and comprehensively measure the reach of the program and the effectiveness of the messages. The TCP can outline these protocols and establish a process to ensure each engagement is captured.

The TCP will provide the roadmap necessary for this subcommittee to effectively and efficiently reach the prioritized audiences and deliver a clear and consistent message about CAVs in Texas.