

Strategic Recommendations



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How to Use This Document

This document should be used by the MnDOT CAV-X office and partners supporting the implementation of Minnesota's CAV Program.

The Minnesota Department of Transportation (MnDOT) prepared this document to lay out the next steps for how Minnesota-based connected and automated vehicle (CAV) partners can elevate messaging and engagement programmatically in the next one to five years. MnDOT identified these strategic recommendations based on statewide engagement to better understand knowledge and sentiments related to CAV.

Throughout the document, you will find information related to:

- Strategic recommendations
- Action items
- Owners and supporters
- Goals
- Metrics of success
- Cost considerations
- Implementation guidance

Other references and case studies are noted throughout this document for additional guidance and support, including:

- **Minnesota CAV Messaging Toolkit:** A compilation of specific messages and talking points for project managers and other practitioners to reference for CAV-related communications on their projects. This toolkit helps provide a shared understanding and vocabulary of CAV.
- **MnDOT Public Engagement Planning Handbook:** A handbook for practitioners to incorporate CAV as they walk through the steps of public engagement planning in their work.
- **Med City Mover Case Study:** A real-world example of this guidance in action and the lessons learned from messaging and engagement on the Med City Mover CAV demonstration project in Rochester, MN.
- **Minnesota CAV Messaging and Engagement Strategic Recommendations:** Next steps for how Minnesota CAV partners can elevate messaging and engagement programmatically in the next one to five years.

This document outlines the most current information as it relates to strategic recommendations for CAV messaging and engagement in Minnesota. It should be revisited at least every five years to update and/or reaffirm the strategies. If technology and people's knowledge and feelings toward CAV evolve rapidly, the document should be revisited more frequently.

Strategic Recommendations

Based on the Minnesota CAV Messaging and Engagement Guidance, there are 12 strategies Minnesota CAV partners should implement to enhance the state’s overall CAV messaging and engagement goals. The recommendations are listed in priority order, based on timing, and include:

1. Prioritize Demonstration Projects
2. Update Messaging and Brand Guidance
3. Create and Maintain a Materials Library
4. Revise Minnesota’s CAV Web Presence
5. Enhance the Baseline Statewide Survey Data
6. Participate in Industry Events
7. Conduct Regular Statewide Surveying
8. Launch a Multiagency Communications Working Group
9. Implement a Stakeholder Management Process and Newsletter
10. Develop CAV Ambassadors, Thought Leaders and Champions
11. Develop CAV Community Advocates
12. Launch an Equitable CAV Community Advisory Committee

How to Use These Recommendations

These recommendations lay out a strategic plan for practitioners working on CAV in Minnesota to follow to help elevate CAV messaging and engagement programmatically. Each recommendation includes:

- **The “what”**—a high-level description of the strategic recommendation; broad evergreen statements that encompass multiple specific activities
- **The “who”**—suggested owner and supporters for the recommendation
 - » **Owner**—person or group responsible for making sure the recommendation happens
 - » **Supporters**—people who will need to be involved in the activities to move the recommendation forward

- **The “how”**—more specific activities that Minnesota CAV partners will need to do in order to achieve the “what”
- **The “why”**—a high-level summary of the rationale behind the recommendation, including which CAV messaging and engagement goal it helps to meet
- **Metrics of success**—proposed metrics to measure the success of the recommendation in the short and long term
 - » **Leading metrics**—things to track in the near term that will give us a sense of whether we will be successful
 - » **Lagging metrics**—things to track in the long term that tell us if we were successful
- **Cost considerations**—a high-level assessment of the level of effort to implement the recommendation and related resource considerations
- **Implementation guidance**—specific notes and next steps to help move the recommendation forward; the recommendation owner will use this information to inform their next steps

RECOMMENDATIONS TIMELINE

A note on timeline for recommendations:

As we were developing Minnesota’s CAV Messaging and Engagement Guidance, CAV communications and engagement work didn’t stop. We collaborated with specific, ongoing projects and programs to incorporate insights and lessons learned.

To highlight how existing CAV activities support these recommendations, we included recently completed and in-progress activities in the “how” sections, short-term (1-4 years) recommendations and long-term (5+ years) recommendations.

RECOMMENDATION 1

Prioritize Demonstration Projects

WHAT

- ❗ Prioritize planning and implementing demonstration projects to create opportunities for people to build knowledge by experiencing CAV technology firsthand. Specific focus areas for demonstrations are included in the Implementation Guidance on the following page.

WHO

- 👤 **Owner:** MnDOT CAV-X
- 👥 **Supporters:** CAV Innovation Alliance Outreach and Education Committee

HOW

✅ Completed:

- The CAV Innovation Alliance Outreach and Education Committee created a **demonstrations subgroup** to focus on implementing this recommendation.

🔄 In progress:

- The demonstrations subgroup is developing a framework to identify and implement a program of demonstration projects throughout Minnesota called **Learn, Drive, Shape**.

- **Secure funding** to support the implementation of the Learn, Drive, Shape framework.

📅 Short term (1-4 years):

- Incorporate **evaluation criteria for CAV funding programs** (e.g., Minnesota’s CAV Challenge, CAV-X master contracts) that prioritizes demonstration projects, specifically demonstrations geared towards the focus areas identified in this recommendation (see Implementation Guidance).
- Implement the Learn, Drive, Shape framework.
- Develop and maintain a **database of Minnesota demonstration projects** to track the use cases and populations engaged for each.
 - » Regularly review the data to identify gaps and incorporate prioritization of addressing gaps into future demonstration planning and selection.

📅 Mid-term (5+ years):

- Review and update the Minnesota CAV Messaging and Engagement Guidance and reassess this recommendation for demonstration projects in Minnesota.

CAV IN ACTION

Meet the Med City Mover

The Med City Mover Project operated two low speed, automated, electric, multi-passenger shuttles in downtown Rochester, MN to test CAV vtechnology in all weather conditions and provide opportunities for Minnesotans to experience the future of transportation. The shuttles operated for 12 months offering free public rides to downtown residents, businesses and visitors. The project was led by MnDOT with support from Destination Medical Center and the City of Rochester.



WHY

 MINNESOTA CAV MESSAGING AND ENGAGEMENT GOALS	ADDRESSED BY THIS RECOMMENDATION
1. Build knowledge of CAV technology throughout Minnesota so people have the information they need and can help shape the future of transportation in the state	
2. Develop two-way , trusting and lasting relationships with communities, organizations and entities to create a CAV-ready environment in Minnesota and increase confidence in Minnesota's CAV Program	
3. Integrate Minnesota's CAV messaging and engagement into transportation plans, projects and other related communication across partners to promote clarity, consistency and understanding among all audiences	

- Experiencing the technology is the most effective way to build knowledge of CAV.
- People’s excitement for CAV is generally correlated to their knowledge of the technology.
- Demonstrating real-world use cases are critical to answer questions people in Minnesota have about the potential personal and social impacts of CAV.
- Focusing on priority populations will help identify gaps and show a commitment to including the needs of everyone in planning for the future of transportation.

Proposed Metrics of Success

+ Leading:

- Number of demonstration projects completed.
- Demographics of locations where demonstration projects occur.
- Number of different use cases demonstrated.
- Number of different technologies demonstrated.

- Lagging:

- People in Minnesota expressing increased knowledge of CAV in survey data.

Cost Considerations



Medium cost: Minnesota CAV partners can implement the recommendation with a moderated increase in resources for a short period of time.

\$ Primary resource needs:

- Requires near term MnDOT CAV-X staff resources.
- Requires near term new funding for Learn, Drive, Shape framework.
- Continued state leadership support of the CAV Innovation Alliance.
- Continued MnDOT CAV-X and MnDOT Communications and Public Engagement staff resources to support and participate in the CAV Innovation Alliance.
- Continued partner staff resources to support and participate in the CAV Innovation Alliance.

General guidance

- Demonstrations will continue to be an effective strategy to build knowledge over time, though the focus is likely to shift as technology and people's knowledge evolve. In the near term, based on the Minnesota CAV Messaging and Engagement Guidance, demonstration projects in Minnesota should focus on:
 - » Connecting with the priority populations identified as part of the CAV Critical audience perspective (see the Minnesota CAV Messaging and Engagement Guidance):
 - Black, Indigenous and people of color (BIPOC)
 - New immigrants
 - People with limited English proficiency
 - People with low income
 - People with disabilities
 - People walking, bicycling and rolling (e.g., using mobility assist devices)
 - People with limited internet connectivity
 - Older people
 - Women
 - Rural communities
 - » Highlighting the core CAV messaging themes:
 - **Innovation**—Connected and automated vehicle technology is already in use and is the future of transportation, so Minnesota is proactively planning and preparing.
 - **Safety**—Safety is and will continue to be our top priority and CAV has the potential to improve safety for roadway users.
 - **Equity, Access and Mobility**—CAV technology can support Minnesota to create a transportation system that works for all.
 - **Economic and Workforce Development**—CAV will drive opportunity for Minnesota.
- » Showcasing both the technology and potential impacts to address the interests of all Minnesota CAV audiences.
- » Demonstrating CAV technology in real-world use cases, which allows people to experience the technology and see how it could impact their communities.
- » Featuring aspects of CAV not well understood by people in Minnesota:
 - Multi-passenger vehicles
 - Connected technology
- » A mix of demonstration projects completed in the near and mid-term should collectively address all these areas. When selecting new demonstration projects, Minnesota CAV partners should prioritize focus areas that haven't been addressed by previous projects.

Learn, Drive, Shape next steps

- Review the Learn, Drive, Shape framework and incorporate the general implementation guidance to direct specific projects deployed within the framework.

Other considerations

- The most effective way to achieve this recommendation is to involve the community, specifically priority populations, in planning for demonstration projects.
- The most efficient way to systematically move this recommendation forward is to adjust the evaluation criteria for CAV funding programs to support implementation of demonstration projects, specifically those focused on the focus areas identified in this implementation guidance.

RECOMMENDATION 2

Update Messaging, Engagement and Brand Guidance

WHAT

i Update Minnesota’s CAV messaging, engagement and brand guidance to better resonate with Minnesota CAV audiences—partner, industry groups and public perspectives—and provide easy-to-use resources for CAV partners to better integrate CAV messaging and engagement.

messages, talking points, and guidance for tailoring the messages to specific audiences.

- The **Med City Mover Case Study** provides an example of how this guidance was applied to a real-world CAV demonstration project.
- The CAV Innovation Alliance Outreach and Education Committee created a **messaging subgroup** to focus on implementing this recommendation.

WHO

Owner: CAV Innovation Alliance Outreach and Education Committee
Supporters: MnDOT CAV-X, MnDOT Communications and Public Engagement

Short term (1-4 years):

- Revise the **Destination CAV** brand guidance and tools to reflect updated Minnesota CAV Messaging and Engagement Guidance.
- Share **updated guidance and tools** with MnDOT project managers and Minnesota CAV partners.

HOW

Completed:

- The **Minnesota CAV Messaging and Engagement Guidance** document includes high-level guidance to inform creating specific tools and resources.
- The **Minnesota CAV Messaging and Talking Points Toolkit** includes a CAV glossary, specific

Mid-term (5+ years):

- At least every five years, reassess and update the **Minnesota CAV Messaging and Engagement Guidance** document and related resources, based on how technology and people’s knowledge of CAV evolve.

WHY

 MINNESOTA CAV MESSAGING AND ENGAGEMENT GOALS	ADDRESSED BY THIS RECOMMENDATION
1. Build knowledge of CAV technology throughout Minnesota so people have the information they need and can help shape the future of transportation in the state	
2. Develop two-way , trusting and lasting relationships with communities, organizations and entities to create a CAV-ready environment in Minnesota and increase confidence in Minnesota’s CAV Program	
3. Integrate Minnesota’s CAV messaging and engagement into transportation plans, projects and other related communication across partners to promote clarity, consistency and understanding among all audiences	

- There is a disconnect between how partners and industry talk about CAV and what people in Minnesota understand.
- Messaging, engagement and brand guidance will build knowledge and improve consistency in how we talk about the technology and work ahead.

Proposed Metrics of Success

+ Leading:

- Number of partners receiving updated guidance.
- Number of partners using updated guidance in their communications.

- Lagging:

- People in Minnesota expressing increased knowledge of CAV in survey data.

Cost Considerations



Low cost: Minnesota CAV partners can complete the recommendation with existing resources.

\$ Primary resource needs:

- Continued state leadership support of the CAV Innovation Alliance.
- Continued MnDOT CAV-X and MnDOT Communications and Public Engagement staff resources to support and participate in the CAV Innovation Alliance.
- Continued partner staff resources to support and participate in the CAV Innovation Alliance.

IMPLEMENTATION GUIDANCE

Revise brand guidance next steps

- Minnesota's Destination CAV brand will be the basis of brand guidance development, but will expand to include:
- Changes to make it resonate more with people in Minnesota
- Guidance for how the broader Destination CAV brand interacts with project specific brands (e.g., Med City Mover) and other related brands
- Guidance for future project-specific brand development and use

Share updated guidance next steps

- Include updated messaging, engagement and brand guidance in an easy-to-find location on MnDOT's CAV-X and/or another partner and industry-facing web presence.
- Present an updated guidance at industry events to inform partners.
- Implement a train-the-trainer model to share updated messaging, engagement and brand guidance with partners.

RECOMMENDATION 3

Create and Maintain a Materials Library

WHAT

i Create and update a library of Minnesota CAV communications materials that incorporate updated messaging and brand guidance. The library will make it easy for partners to integrate consistent messaging.

WHO

👤 Owner: CAV Innovation Alliance Outreach and Education Committee
👥 Supporters: MnDOT CAV-X, MnDOT Communications and Public Engagement

HOW

✅ Completed:

- The CAV Innovation Alliance Outreach and Education Committee created a **materials subgroup** to focus on implementing this recommendation.

📅 Short term (1-4 years):

- Develop an **initial list of desired materials** (see Implementation Guidance section) and continue to add to it as needs arise.
- Draft a general, customizable version of **each material** on the list based on the updated messaging and brand guidance.
- Share draft materials** with Minnesota CAV partners.
- Create the CAV materials library in an easy-to-find location on MNDOT’s website.

📅 Mid-term (5+ years):

- Review and update the **Minnesota CAV Messaging and Engagement Guidance** and update materials as needed based on revised guidance.

WHY

 MINNESOTA CAV MESSAGING AND ENGAGEMENT GOALS	ADDRESSED BY THIS RECOMMENDATION
1. Build knowledge of CAV technology throughout Minnesota so people have the information they need and can help shape the future of transportation in the state	 YES
2. Develop two-way , trusting and lasting relationships with communities, organizations and entities to create a CAV-ready environment in Minnesota and increase confidence in Minnesota’s CAV Program	 YES
3. Integrate Minnesota’s CAV messaging and engagement into transportation plans, projects and other related communication across partners to promote clarity, consistency and understanding among all audiences	 YES

- Improves consistency in communications among partners.
- Improves understandability of communications because it draws from updated guidance.
- Gives partners and public/ local agencies easy access to resources.

Proposed Metrics of Success

+ Leading:

- Number of materials created.
- Number of partners receiving updated materials.
- Number of partners using updated materials.

- Lagging:

- People in Minnesota expressing increased knowledge of CAV in survey data.

Cost Considerations



Low cost: Minnesota CAV partners can complete the recommendation with existing resources.

💰 Primary resource needs:

- Continued state leadership support of the CAV Innovation Alliance.
- Continued MnDOT CAV-X and MnDOT Communications and Public Engagement staff resources to support and participate in the CAV Innovation Alliance.
- Continued partner staff resources to support and participate in the CAV Innovation Alliance.

IMPLEMENTATION GUIDANCE

General guidance

- The following key materials are based on recommended tools for CAV engagement as well as input received from the CAV Innovation Alliance Outreach and Education Committee and the Governor's Advisory Council:
 - » Public focused CAV 101 presentation
 - » Industry focused CAV 101 presentation
 - » General CAV in Minnesota fact sheet
 - » CAV infographics
 - » Topic-specific fact sheets, including:
 - CAV and Safety
 - CAV and Equity, Access and Mobility
 - CAV and Economic and Workforce Development
 - CAV and Sustainability/GHG
 - CAV and Electrification
 - CAV and Shared-Use Mobility

Other considerations

- The CAV materials library should be created once all materials above have been finalized.
- Materials created must be accessible to people with different physical and cognitive abilities to be effective in reaching all Minnesota CAV audiences, especially CAV Critical priority populations.

RECOMMENDATION 4

Revise Minnesota’s CAV Web Presence

WHAT

- Update and organize the Minnesota CAV web presence to reflect messaging and brand guidance, provide both a partner- and industry-focused web presence, support resource sharing and collaboration, and expose different audiences to CAV technologies and activities.

WHO

- Owner:** MnDOT CAV-X
- Supporters:** MnDOT Communications and Public Engagement, consultant support

HOW

- Short term (1-4 years):**
 - Conduct a review of the **existing Minnesota CAV websites** (e.g., CAV-X, project-specific sites) and available virtual engagement platforms to assess their content, use and opportunities and recommend changes.
 - Reorganize and update **existing web content** based on review.
 - Develop Minnesota CAV **web guidance** for ongoing website updates and requests.
- Mid-term (5+ years):**
 - Maintain the Minnesota CAV **web presence** by keeping information up to date and relevant on an ongoing basis.
 - Reassess and update CAV **web guidance** based on how Minnesota CAV messaging and engagement guidance, technology and public and partner needs evolve.

WHY

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- MnDOT’s existing CAV website is not well known or used by the public.
- There is a difference in what information the public is looking for compared to partners and industry.
- Improves consistency in communications among partners.
- Improves understandability of communications because web content will draw from updated messaging and engagement guidance.

Proposed Metrics of Success

+ Leading:

- Number of hits on CAV website(s) and number of unique hits.

- Lagging:

- People in Minnesota expressing increased familiarity of CAV in survey data.
- Partners and industry stakeholders are consistently using MNDOT's CAV messaging and materials in their communications and projects.

Cost Considerations



Medium cost: Minnesota CAV partners can implement the recommendation with a moderate increase in resources for a short period of time.

\$ Primary resource needs:

- Requires additional near-term MnDOT CAV-X and MnDOT Web Team staff resources.
- Requires identifying funding for a small consultant contract to support in near term.

IMPLEMENTATION GUIDANCE

General guidance

- Consultant support is recommended for the initial website review and potentially for revisions depending on scope and scale, due to current staffing levels within MnDOT.
- MnDOT CAV-X would own ongoing website maintenance and updates, including identifying the process for updates/revisions and developing content.

RECOMMENDATION 5

Enhance the Baseline Statewide Survey Data

WHAT

- Conduct listening sessions with CAV Critical priority populations to supplement the input received as part of the initial statewide baseline survey conducted in 2020 and start to build relationships.

WHO

- **Owner:** MnDOT CAV-X
- **Supporters:** MnDOT Communications and Public Engagement, consultant support

HOW

- **Short term (1-4 years):**
 - Secure **funding** and solicit **support** for listening sessions and/or identify and commit **existing staff resources**.
 - Conduct **listening sessions** with priority populations to understand the knowledge and feelings related to CAV within these groups.
 - Revise **Minnesota CAV Messaging and Engagement Guidance**, to reflect new insights as applicable.
- **Mid-term (5+ years):**
 - As additional statewide surveys are conducted, review future **participation data** to identify any underrepresented communities and conduct listening sessions as needed.

WHY

MINNESOTA CAV MESSAGING AND ENGAGEMENT GOALS	ADDRESSED BY THIS RECOMMENDATION
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- Due to the COVID-19 pandemic, we were limited in how the 2020 statewide baseline survey could be distributed, which resulted in some communities being underrepresented in the data.
- Increasing participation from these underrepresented groups will help make sure messaging guidance connects with all audiences in Minnesota.
- Representative engagement is critical to building trust and relationships with community.

Proposed Metrics of Success

+ Leading:

- Number of listening sessions completed.
- Number of participants in listening sessions.
- Demographics of participants.

- Lagging:

- Total participation in statewide survey and listening sessions combined is representative of Minnesota's population.

Cost Considerations



High cost: Minnesota CAV partners need significant new resources to complete this recommendation.

\$ Primary resource needs:

- Requires additional near-term MnDOT CAV-X and MnDOT Communications and Public Engagement staff resources.
- Requires identifying funding for a moderate consultant contract to support in near term.

IMPLEMENTATION GUIDANCE

General guidance

- Priority populations are those underrepresented in the statewide survey data or those with unique perspective and needs related to CAV, as identified in the Minnesota CAV Messaging and Engagement Guidance. They include:
 - » Black, Indigenous and people of color
 - » New immigrants
 - » People with limited English proficiency
 - » People with low income
 - » People with disabilities
 - » People walking, bicycling and rolling (e.g., using mobility assist devices)
 - » People with limited internet connectivity
 - » Older people
 - » Women
 - » Rural communities
- Consultant support is recommended due to current staffing levels within MnDOT CAV-X and MnDOT Communications and Public Engagement.
- For implementation to be most successful, choose consultant support that is representative of and has existing relationships and experience connecting with priority populations.
- MnDOT Communications and Public Engagement has near-term budget and staff to support this recommendation.
- Listening sessions should ask questions compatible to those asked as part of the 2020 statewide baseline survey and follow-up interviews so the data can be integrated.

RECOMMENDATION 6

Participate in Industry Events

WHAT

- Partner with private industry to have a Minnesota CAV Program presence at significant CAV-related industry events, including conferences, trade shows and exhibitions to build relationships and integrate messaging and engagement.

WHO

- Owner:** CAV Innovation Alliance Outreach and Education Committee
- Supporters:** MnDOT CAV-X, CAV Innovation Alliance, Governor’s Advisory Committee

HOW

- Completed:**
 - The CAV Innovation Alliance Outreach and Education Committee created a **conference and tech showcase subgroup** to focus on implementing this recommendation.
- Short term (1-4 years):**
 - Plan and implement a Minnesota-specific **CAV conference and tech showcase**.
 - Identify significant **industry event opportunities** for participation.
 - Develop a **standard for evaluating** what makes an event significant to provide guidance for partners on how to prioritize participation.
 - Start participating** in significant industry events.
- Mid-term (5+ years):**
 - Ongoing participation** in significant industry events.

WHY

MINNESOTA CAV MESSAGING AND ENGAGEMENT GOALS	ADDRESSED BY THIS RECOMMENDATION
1. Build knowledge of CAV technology throughout Minnesota so people have the information they need and can help shape the future of transportation in the state	
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3. Integrate Minnesota’s CAV messaging and engagement into transportation plans, projects and other related communication across partners to promote clarity, consistency and understanding among all audiences	

- Private industry and government talk about CAV differently, which is confusing to people in Minnesota.
- Creates opportunity to share and coordinate information and messaging among partners and industry audiences.
- Shows government’s willingness to partner with private industry to build relationships and a CAV-ready environment.
- A consistent flow of knowledge between Minnesota technology companies and MnDOT that is also shared with the public will lead to increased CAV support, developments and activities.

Proposed Metrics of Success

+ Leading:

- Number of events with CAV participation.

- Lagging:

- Activities (e.g., research/testing, events, policies) resulting from strong public/private relationships and partnerships.

Cost Considerations



High cost: Minnesota CAV partners need significant resources on an ongoing basis to achieve this recommendation.

\$ Primary resource needs:

- Continued state leadership support of the CAV Innovation Alliance.
- Continued MnDOT CAV-X and MnDOT Communications and Public Engagement staff resources to support and participate in the CAV Innovation Alliance.
- Continued partner staff resources to support and participate in the CAV Innovation Alliance.
- Requires funding and staff support to plan, sponsor and participate in future industry events.

IMPLEMENTATION GUIDANCE

General guidance

- Expand the scope of the CAV Innovation Alliance Outreach and Education Committee conference and tech showcase subgroup to lead implementation of other aspects of this recommendation.

Event prioritization next steps

- Use the Minnesota CAV Messaging and Engagement Guidance and Strategic Recommendations to inform the criteria used to prioritize events.
 - » Criteria could include:
 - Event size (attendance, number of vendors, etc.)
 - Ability to reach priority populations
 - Event inclusivity (open to public, entry fees)
 - Location (geographic distribution)

Minnesota CAV conference and tech showcase next steps

- As part of planning the conference and tech showcase, review the Minnesota CAV Messaging and Engagement Guidance and Strategic Recommendations to incorporate into these events.

RECOMMENDATION 7

Conduct Regular Statewide Surveying

WHAT

i Continue to track Minnesotans' knowledge and sentiments related to CAV over time through a regular statewide survey and integrate top questions into other ongoing survey opportunities—to understand the success of communications and engagement activities.

WHO

Owner: MnDOT CAV-X
Supporters: MnDOT Communications and Public Engagement, CAV Innovation Alliance Outreach and Education Committee

HOW

✓ Completed:

- We completed a **statewide baseline survey** in 2020 as part of developing the Minnesota CAV Messaging and Engagement Guidance.
- The Med City Mover project team identified **initial top questions** for incorporation into

other survey opportunities as part of survey development for that project.

🗓 Short term (1-4 years):

- Confirm the **initial core set of questions** about people's knowledge and feelings related to CAV to track over time.
- Incorporate top questions into **MnDOT's Omnibus survey** to collect annual information.
- Incorporate top questions into **other survey opportunities** such as project specific surveys and planning engagement.
- Share **top CAV survey questions** with partners to incorporate into their outreach activities when possible and establish a process for sharing results.

🗓 Mid-term (5+ years):

- At least every five years—but could be more frequent based on how technology and people's knowledge of CAV evolve—conduct a **statewide CAV familiarity and perception survey**.

WHY

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- Guidance for Minnesota CAV partners will need to evolve as people's knowledge and technology change.
- Tracking knowledge and feelings related to CAV over time is critical to maintaining relevant messaging.
- Sharing top questions among partners will help integrate messaging and engagement.

Proposed Metrics of Success

+ Leading:

- Number of times core CAV questions are asked.
- Number of responses to core CAV questions.
- Demographics of participants responding to core CAV questions.

- Lagging:

- People in Minnesota expressing increased knowledge of CAV in survey data.

Cost Considerations



Low cost: Minnesota CAV partners can complete this recommendation with only minor additional resources.

\$ Primary resource needs:

- Requires a minor increase of MnDOT CAV-X and MnDOT Communications and Public Engagement staff resources in the short term.

IMPLEMENTATION GUIDANCE

Finalizing core and top questions next steps

- Work with the CAV Innovation Alliance Outreach and Education Committee to finalize the core set and top CAV questions.
- Use the 2020 statewide baseline survey questions as the basis for finalizing the core set of questions to using moving forward.
- Keep questions consistent with the 2020 survey whenever possible to allow for better tracking.
- Identify the top two to five CAV familiarity and perception questions to incorporate into other survey opportunities.
- The initial top questions identified as part of the Med City Mover provide a starting point to finalize top questions moving forward.
- Top priority questions:
 - » How familiar are you with automated and/or connected vehicle technology?
 - » What are your general feelings about connected and automated vehicles in Minnesota?

• Other top questions:

- » Tell us how much you agree with the following statement: I am excited about connected and automated vehicles.
- » Tell us how much you agree with the following statement: I am concerned about connected and automated vehicles.
- » Tell us how much you agree with the following statement: Connected and automated vehicles will improve traffic safety and reduce crashes.

Incorporating top questions into other survey opportunities next steps

- Work with MnDOT Communications and Public Engagement to incorporate top questions into the MnDOT annual Omnibus survey.
- Use the Med City Mover project as a model for how to incorporate top questions into project-level input opportunities.
- Work with the CAV Innovation Alliance Outreach and Education Committee to share core and top questions with partners and establish process for sharing results.

RECOMMENDATION 8

Launch a Multiagency Communication Working Group

WHAT

- Formally establish and engage a multiagency CAV Communications working group to coordinate and share messaging among State agencies, with participation from impacted partner agencies.

WHO

- Owner:** MnDOT CAV-X
- Supporters:** MnDOT Communications and Public Engagement, Communications departments from partner agencies

HOW

- Short term (1-4 years):**
 - Identify the appropriate **communications leads** at impacted partner agencies.
 - Establish a **working group structure** and leadership among communications leads.
 - Begin **regular meetings** to share information and coordinate and develop communications related to CAV.
- Mid-term (5+ years):**
 - Ongoing meetings** of the multiagency CAV communications working group.

WHY

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3. Integrate Minnesota’s CAV messaging and engagement into transportation plans, projects and other related communication across partners to promote clarity, consistency and understanding among all audiences	

- CAV communications are currently led almost entirely by MnDOT, but CAV is not solely a transportation topic.
- Reaches a broader audience with more agencies sharing CAV messages.
- Provides an avenue for easy information sharing among agencies.
- Develops greater CAV knowledge and capacity among more agencies.

Proposed Metrics of Success

+ Leading:

- Number of regularly participating agencies.

- Lagging:

- Number of times CAV messaging is being integrated into participating agencies' plans and projects.

Cost Considerations



Medium cost: Minnesota CAV partners can implement this recommendation with a small increase in staff resources over a long time.

\$ Primary resource needs:

- Requires a small amount of additional MnDOT CAV-X staff resources on an ongoing basis to support facilitation of this recommendation.
- Requires additional staff resources from MnDOT Communications and Public Engagement and Communications departments at partner agencies to implement.

IMPLEMENTATION GUIDANCE

General guidance

- The multiagency communications working group should include communications leads from each of the following partner agencies:
 - » Department of Transportation
 - » Department of Employment and Economic Development
 - » Department of Labor and Industry
 - » Department of Administration
 - » Department of Health
 - » Minnesota Housing
 - » Department of Human Services
 - » Minnesota Pollution Control Agency
 - » Regional, City and County representatives
- The current Interagency Connected and Automated Vehicle (I-CAV) working group or Governor's Advisory Council provide umbrella structures that this Communications-focused working group could be housed under.
- This recommendation is not meant to duplicate existing groups, rather build on them but with a communications focus.
- Existing groups are not currently focused on communications and the right people are not at the table to address messaging consistency and coordination.
- This recommendation should be advanced as a partnership between MnDOT CAV-X and MnDOT Communications and Public Engagement.

RECOMMENDATION 9

Implement a Stakeholder Management Process and Newsletter

WHAT

- Develop and build a CAV stakeholder relationship management system to help track interactions and relationships—including characteristics such as contact information, dates of interaction, topics discussed, and questions received.

Send out a periodic newsletter to regularly share CAV messaging with interested stakeholders to ensure they have the latest information and are aware of opportunities to further engage.

WHO

- Owner:** MnDOT CAV-X
- Supporters:** CAV Innovation Alliance Outreach and Education Committee, MnDOT Communications and Public Engagement

HOW

- In progress:**
 - MnDOT CAV-X currently sends out a **periodic stakeholder newsletter**.
- Short term (1-4 years):**
 - Establish and start to use a **stakeholder management process** to collect key characteristics of stakeholder interactions.
 - Collect contact information for stakeholders to build out a **stakeholder contact list**.
 - Revamp **newsletter template and content calendar** to reflect Minnesota CAV Messaging and Engagement Guidance and continue to send out periodic stakeholder newsletters.
- Mid-term (5+ years):**
 - Continue to build out the **stakeholder management system** over time.
 - Review and revise the **stakeholder management process** as needed based on how industry and stakeholder needs evolve.

WHY

MINNESOTA CAV MESSAGING AND ENGAGEMENT GOALS	ADDRESSED BY THIS RECOMMENDATION
1. Build knowledge of CAV technology throughout Minnesota so people have the information they need and can help shape the future of transportation in the state	
2. Develop two-way, trusting and lasting relationships with communities, organizations and entities to create a CAV-ready environment in Minnesota and increase confidence in Minnesota's CAV Program	
3. Integrate Minnesota's CAV messaging and engagement into transportation plans, projects and other related communication across partners to promote clarity, consistency and understanding among all audiences	

- Tracking interactions allows for identification of gaps in who is being engaged in CAV activities.
- Building a database of interested stakeholders helps streamline partner and industry focused messaging and engagement moving forward.
- Tracking and managing interactions will not lead to over asking partners or groups.

Proposed Metrics of Success

+ Leading:

- Number of interactions logged in stakeholder database.
- Timeliness of logging of interactions within database.
- Number of newsletters sent.
- Regularity of newsletters sent.
- Number of newsletter recipients.
- Open rate of newsletters.

- Lagging:

- A CAV stakeholder relationship management system that helps identify engagement gaps, streamlines messaging and engagement.

Cost Considerations



Medium cost: Minnesota CAV partners can implement this recommendation with moderate increase in resources on an ongoing basis.

\$ Primary resource needs:

- Requires additional MnDOT CAV-X staff resources on an ongoing basis to develop and maintain process and tools.

IMPLEMENTATION GUIDANCE

Stakeholder management process next steps

- There are a lot of different stakeholder management tools available but start with an easily available and easy to use tool, like Excel or available virtual engagement platforms.
- As part of reviewing and reassessing the process, look into more complex tools like a customer management system (CMS), which could be useful as CAV messaging and engagement activities grow.
- MnDOT CAV-X or MnDOT Communications and Public Engagement should own the stakeholder management database.

Stakeholder newsletter next steps

- Use existing MnDOT CAV-X newsletter as the starting point for future newsletter implementation.
- The CAV Innovation Alliance Outreach and Education Committee could own or support the CAV newsletter development and distribution.
- Create a content calendar and update on a regular basis to guide the development of the stakeholder newsletter.
- As part of revising the stakeholder newsletter, review the Minnesota CAV Messaging and Engagement Guidance and Strategic Recommendations to incorporate into the updated template and content calendar.

RECOMMENDATION 10

Develop CAV Ambassadors, Thought Leaders and Champions

WHAT

- i** Increase the network of individuals and partners regularly supporting CAV messaging and engagement by identifying and developing CAV Champions. These roles include:
 - **CAV Ambassadors**—Staff within MnDOT and partner organizations who are committed to helping communicate and engage on CAV independently or as called on to support.
 - **CAV Thought Leaders**—Partners with acknowledged influence, leadership and trust of different audience groups who are committed to facilitating CAV dialog.
 - **CAV Champions**—Elected officials or other partners in positions of power who can help resolve conflicts and overcome barriers to implementation of CAV programs, policies or projects and are committed to helping advance CAV in Minnesota.

WHO

- Owner:** CAV Innovation Alliance Outreach and Education Committee
- Supporters:** Minnesota CAV-X, CAV Innovation Alliance, Governor’s Advisory Committee

HOW

- Short term (1-4 years):**
 - Formalize the **responsibilities, expectations and plan** for how Minnesota’s CAV program will use each role.
 - Identify and **recruit people** who are interested in becoming CAV Ambassadors, Thought Leaders and Champions.
 - Regularly **coordinate with these individuals** to make sure they have up-to-date information and are helping to share CAV information according to their role.
- Mid-term (5+ years):**
 - Ongoing coordination with individuals.
 - Continue to identify and **recruit additional individuals** to these roles over time.

WHY

 MINNESOTA CAV MESSAGING AND ENGAGEMENT GOALS	ADDRESSED BY THIS RECOMMENDATION
1. Build knowledge of CAV technology throughout Minnesota so people have the information they need and can help shape the future of transportation in the state	
2. Develop two-way , trusting and lasting relationships with communities, organizations and entities to create a CAV-ready environment in Minnesota and increase confidence in Minnesota’s CAV Program	
3. Integrate Minnesota’s CAV messaging and engagement into transportation plans, projects and other related communication across partners to promote clarity, consistency and understanding among all audiences	

- Developing third-party advocates is key to reaching all audiences in Minnesota.
- Provides an avenue to share common CAV messaging, materials and engagement opportunities.
- Harnesses the interest and enthusiasm of partners related to CAV.

Proposed Metrics of Success

+ Leading:

- Number of CAV Ambassadors, CAV Thought Leaders and CAV Champions.
- Number of times CAV information was shared by these roles.

- Lagging:

- People in Minnesota expressing increased familiarity of CAV in survey data.

Cost Considerations



Medium cost: Minnesota CAV partners can implement this recommendation with moderate increase in resources on an ongoing basis.

\$ Primary resource needs:

- Continued state leadership support of the CAV Innovation Alliance.
- Continued MnDOT CAV-X and MnDOT Communications and Public Engagement staff resources to support and participate in the CAV Innovation Alliance.
- Continued partner staff resources to support and participate in the CAV Innovation Alliance.

IMPLEMENTATION GUIDANCE

General guidance

- The CAV Innovation Alliance Outreach and Education Committee should identify a subgroup to focus on this recommendation.
- Implementation of this recommendation can use the guidance and materials developed in Recommendations 1 and 2 of this document.
- For each role, the critical information/materials that will need to be provided to participants are:
 - » CAV Ambassadors—Provide Ambassadors with necessary guidance and materials so they can incorporate CAV messaging and engagement into their work and provide staff support to other programmatic messaging and engagement activities.
 - » CAV Thought Leaders—Provide Thought Leaders with necessary guidance and materials to further dialogue within their spheres of influence.
 - » CAV Champions—Provide Champions with policy guidance and education materials they can use to resolve conflicts and overcome barriers to CAV implementation.

Recruitment next steps

- Target individuals for these roles are staff or officials connected to partner and industry organizations with an interest in CAV.
- Focus on individuals for whom these roles can be considered part of their daily job duties.

RECOMMENDATION 11

Develop CAV Community Advocates

WHAT

i Build a network of individuals or organizations regularly supporting CAV messaging and engagement specifically focused on CAV Critical priority populations by identifying and developing CAV Community Advocates. CAV Community Advocates are individuals or organizations that have influence and trust within their community and can assist with CAV engagement.

WHO

Owner: MnDOT Communications and Public Engagement
Supporters: MnDOT CAV-X, CAV Innovation Alliance Outreach and Education Committee

HOW

Short term (1-4 years):

- Collaborate with community organizations to **design the program** and formalize the responsibilities, expectations and plan for how Minnesota’s CAV Program will use this role.
- Equitably **identify interested individuals and partner organizations** with capacity by reaching out to all organizations serving priority populations.

Mid-term (5+ years):

- Identify specific individuals or organizations to develop as CAV Community Advocates.
- Implement and sustain the CAV Community Advocate program.

WHY

 MINNESOTA CAV MESSAGING AND ENGAGEMENT GOALS	ADDRESSED BY THIS RECOMMENDATION
1. Build knowledge of CAV technology throughout Minnesota so people have the information they need and can help shape the future of transportation in the state	 YES
2. Develop two-way , trusting and lasting relationships with communities, organizations and entities to create a CAV-ready environment in Minnesota and increase confidence in Minnesota’s CAV Program	 YES
3. Integrate Minnesota’s CAV messaging and engagement into transportation plans, projects and other related communication across partners to promote clarity, consistency and understanding among all audiences	 YES

- Surveys are not effective at reaching all communities in Minnesota.
- Ongoing partnerships provide more effective and consistent engagement in CAV activities among priority populations.
- Ongoing partnerships will allow MnDOT to be responsive to future collaboration opportunities.
- Provides an avenue to share common CAV messaging, materials and engagement opportunities.

Proposed Metrics of Success

+ Leading:

- Number of diverse partner organizations participating.
- Number of new community experts.
- Amount of resources dedicated to support this program.
- Number of people engaged.

- Lagging:

- People in Minnesota from priority populations expressing increased familiarity of CAV.
- Number of CAV projects implemented serving priority populations.

Cost Considerations



Very high cost: Minnesota CAV partners will need a significant increase in resources on an ongoing basis to implement this recommendation.

\$ Primary resource needs:

- Requires MnDOT Communications and Public Engagement staff time on an ongoing basis to support the program.
- Requires budget for partnership stipends and/or salaries for internal Community Advocate roles.

IMPLEMENTATION GUIDANCE

General Guidance

- Priority populations for CAV Community Advocates include:
 - » Black, Indigenous and people of color
 - » New immigrants
 - » People with limited English proficiency
 - » People with low income
 - » People with disabilities
 - » People walking, bicycling and rolling (e.g., using mobility assist devices)
 - » People with limited internet connectivity
 - » Older people
 - » Women
 - » Rural communities
- Implementation of this recommendation can use the guidance and materials developed in Recommendations 1 and 2 of this plan.
- Program could be implemented in both ways:
 - » Externally—where Advocates are external to MnDOT, selected through a strategic process with inclusive criteria and compensated through stipends.
 - Identify candidate organizations/persons per priority population
 - Invite for applications, assess and choose based on: capability, capacity and priority population mix
 - » Internally—where Advocates are hired as MnDOT staff, through a competitive hiring process and paid as State employees.
 - This option would likely need to be part of a larger Community Advocate program housed within MnDOT, of which CAV messaging and engagement could be a part.

RECOMMENDATION 12

Launch an Equitable CAV Community Advisory Committee

WHAT

- Establish an equitable CAV community advisory committee made up on representatives from CAV Critical priority populations to meaningfully provide input on CAV decision-making in Minnesota and empower communities to lead their own conversations about CAV.

WHO

- Owner:** Governor’s Advisory Council
- Supporters:** MnDOT CAV-X, MnDOT Public Engagement, CAV Innovation Alliance, consultant support

HOW

- Short term (1-4 years):**
 - Conduct outreach to engage organizations and share information about the committee to identify potential participants.
 - Create a **plan for committee implementation** and partner with community-based organizations to provide meaningful input on the approach.
- Mid-term (5+ years):**
 - Identify participants and **launch committee**.
 - Partner with community organizations to **sustain and rotate committee members**.

WHY

MINNESOTA CAV MESSAGING AND ENGAGEMENT GOALS	ADDRESSED BY THIS RECOMMENDATION
1. Build knowledge of CAV technology throughout Minnesota so people have the information they need and can help shape the future of transportation in the state	
2. Develop two-way , trusting and lasting relationships with communities, organizations and entities to create a CAV-ready environment in Minnesota and increase confidence in Minnesota’s CAV Program	
3. Integrate Minnesota’s CAV messaging and engagement into transportation plans, projects and other related communication across partners to promote clarity, consistency and understanding among all audiences	

- Priority population perspectives need to be involved in CAV decision-making to create a more equitable transportation future.
- Currently, CAV partners and industry are not representative of Minnesota’s population, especially priority populations.
- Priority populations have been underrepresented in the statewide baseline survey and other similar CAV engagement activities.

Proposed Metrics of Success

+ Leading:

- Number of accessible meetings held.
- Number of diverse committee members engaged.
- Number of committee members retained or equitably replaced.

- Lagging:

- People in Minnesota from priority populations expressing increased familiarity of CAV.
- Number of CAV projects implementing serving priority populations.

Cost Considerations



Very high cost: Minnesota CAV partners will need a significant increase in resources on an ongoing basis to implement this recommendation.

\$ Primary resource needs:

- Requires additional MnDOT CAV-X staff support on an ongoing basis to coordinate.
- Requires identifying funding identified for participant stipends.
- Requires identifying funding for a small consultant contract to assist with set-up and ongoing facilitation.

IMPLEMENTATION GUIDANCE

General Guidance

- The primary focus of this committee is to bring diverse perspectives to the CAV decision-making table in Minnesota.
- Consultant support is recommended to provide a neutral third-party facilitator, which will help to reduce the real or perceived power imbalance among the group and the Governor's Advisory Council and State staff.
- Compensating participants for their time is critical to the success of this group in attracting and retaining participants, and showing Minnesota is serious about valuing their perspectives and role.

Recommendations Summary

RECOMMENDATION	OWNER	COST LEVEL	GOAL 1: Build Knowledge	GOAL 2: Develop Relationships	GOAL 3: Integrate Messaging	IN PROGRESS?
1. Prioritize Demonstration Project	MnDOT CAV-X					YES
2. Update Messaging, Engagement and Brand Guidance	CAV Innovation Alliance Outreach and Education Committee					YES
3. Create and Maintain a Materials Library	CAV Innovation Alliance Outreach and Education Committee					YES
4. Revise Minnesota's CAV Web Presence	MnDOT CAV-X					NO
5. Enhance the Baseline Statewide Survey Data	MnDOT CAV-X					NO
6. Participate in Industry Events	CAV Innovation Alliance Outreach and Education Committee					YES
7. Conduct Regular Statewide Surveying	MnDOT CAV-X					YES
8. Launch a Multiagency Communication Working Group	MnDOT CAV-X					NO
9. Implement a Stakeholder Management Process and Newsletter	MnDOT CAV-X					YES
10. Develop CAV Ambassadors, Thought Leaders and Champions	Minnesota CAV Innovation Alliance Outreach and Education Committee					NO
11. Develop CAV Community Advocates	MnDOT Communications and Public Engagement					NO
12. Launch an Equitable CAV Community Advisory Committee	Governor's Advisory Council					NO