CAT Coalition Planning Scenarios Working Group

July 1, 2020 Webinar Notes and Summary of Discussions

Welcome

Matt Hardy welcomed everyone to the call. Justine Sydello recapped the agenda for today and thanked everyone for attending.

WSDOT CAT Policy Framework

Kyle Miller and Daniela Bremmer updated on the WSDOT CAT Policy Framework. Kyle noted that WSDOT has an internal CAT Work Group that reports to the secretary and assistant secretary. In addition, they are positioned to contribute to and benefit from national CAT activities.

WSDOT started the Policy Framework several years ago and released an early draft document as well as an updated version. They are now working on a revised Washington State CAT Policy Framework.

The overall CAT Policy Framework Development Process was introduced as a four-step process:

Initiate. A national scan of best practices and policy examples as well as internal discussions led to

identifying eight policy goals.

Engage. Between 2019 and April 2020, a series of illustrative strategies and actions were drafted

and circulated for comment and additional input. At this point, public private partners

were engaged for additional input and informational ranking.

Refine. In April 2020, a workshop was hosted to discuss the pre-workshop informational ranking,

gather new information on strategies and actions, and develop a comprehensive list of

strategies and actions.

Prioritize. Between June and December 2020, the strategies and actions will be presented to the

Infrastructure and Systems Subcommittee (I&S SC) for ranking and prioritization before being presented to the AV Executive Committee and Washington State Transportation

Commission for adoption.

Daniela and Kyle provided additional details on the eight policy goals adopted in October 2019, summarized as follows:

#1 **Organize for Innovation:** Enable organizational change that empowers officials to be flexible, accelerate decision-making, and adapt to changing technology.

- #2 Shared Mobility: Encourage and incentivize shared mobility, including an emphasis on high occupancy and shared modes for moving people and goods.
- #3 Economic Vitality and Livability: Create resilient and efficient regional networks and empower local agencies to create resilient, multimodal local networks.
- #4 Infrastructure and Context Sensitive Street Design: Promote durable, physical and digital networks that accommodate the movement of people and goods in ways that are appropriate for the context.
- #5 Land Use: Encourage land use development patterns that support multimodal connectivity to efficient local and regional networks.
- #6 Equity: Work with marginalized communities to increase access to desirable mobility options.
- #7 Safety: Increase the safety of transportation systems and infrastructure to support the safe movement of people and goods.
- #8 Environment: Reduce the local and cumulative environmental impacts of mobility to improve air and water quality, energy conservation and mitigate climate change.

Recently, the April 2020 workshop to refine the strategies was conducted as a six-hour virtual workshop divided into eight sections to discuss ideas around each policy goal. Daniela noted that WSDOT used the resource called IdeaBoard and it worked very well. It allowed both verbal participation as well as nonverbal offerings of input.

The workshop resulted in over 150 articles of feedback. The feedback included new ideas, strategies and actions; modifications to existing language; clarifications on intent and expectations; and examples to further explain ideas.

WSDOT was sensitive that they did not want to introduce any bias into the consideration of the feedback and approached the integration of the feedback with the following tenants:

- Inclusive all input was considered, no actions removed (some were combined)
- Transparent All workshop input was documented (verbal, written, or IdeaBoard during the virtual workshop)
- Informed Industry knowledge and best practices were leveraged to inform any revisions or references.

Anticipated Next Steps

Daniela noted that they are currently in the "prioritize" phase with a goal of prioritizing actions prior to December 2020. Daniela noted that there is recognition that policy discussions and decisions are best discussed in person but given the current situation the current plan is to move forward and continue virtual meetings until they are able to meet in person.

Questions

There was a question about how IdeaBoard worked as a virtual meeting tool. Daniela noted that they were happy with the IdeaBoards. WSDOT has used them before in smaller meetings. She noted that attendees felt comfortable and she believes they heard from more attendees than they would have if only verbal input were allowed. She noted there was a verbal dialogue ongoing, but the chat box conversation was also very active.

There was a question about how much the 5.9 GHz spectrum reallocation impacted discussions. Daniela noted that on a staff level at WSDTO, they are very aware of this and the potential impacts. However, on committee level, there was not as much discussion as WSDOT has had internally on the topic. She noted that perhaps they should have made the other attendees more aware of this, but it did not come up much in the discussions.

There was a question about how far down the engagement went with public agencies. Kyle noted that it included both cities and counties. They already had several cities engaged and outreached to additional. Kristin White also answered this question in the chat box, describing MnDOT's approach to engagement in CAT planning as follows: "We coordinate through the state's county association, League of Cities, MPOs and RDOs. Similar to what Kyle mentioned we have liaisons on our state advisory council and innovation alliance that represent those organizations, including counties and municipalities."

National Strategy for Transportation Automation

Kristin White (MnDOT) noted that she is the co-chair of the AASHTO National Strategy on Automation Task Force (along with Joey Sagal, MDDOT). Kristin presented on the National Strategy for Transportation Automation.

Kristin discussed that currently there is a patchwork of policies for AV, and it is recognized that we need one national strategy to move this forward. Kristin echoed the point that Scott Marler has made that "unity is strength", and if we all work together (e.g. through AASHTO Planning or the AASHTO Community of Practice) we can help ensure that all communities are involved, are enabled to contribute, and do not get left behind in the process.

Kristin introduced the focus of the national strategy as trying to solve and anticipate six topics that are critical:

- Equity access and mobility;
- Safety
- Efficiency
- Economic competitiveness and workforce development
- Infrastructure investments and
- Public health and environment.

Kristin reminded members of the National Conference on State Legislatures (NCSL) Database on legislation and policy and recognized the democracy within each state but reiterated the need for a national consistent approach.

Goals of the National Strategy

Kristin described the three goals of the national strategy are to:

- Develop a Vision
- Define needed collaboration and
- Define an overall strategy.

Development Efforts to Date

Kristin recapped the activities so far related to the National Strategy:

 The FHWA National Dialogue on AV kicked off in June of 2018 and was really the genesis of this idea.

- In September 2018, the AASHTO CTSO National Strategy Task Force was formed during the CTSO annual meeting in Atlanta, GA.
- During the winter 2018 and spring 2019, an overall scope for the National Strategy was developed
- o In December 2019, there was a workshop held in Des Moines Iowa that resulted in a workshop summary report in February 2020.
- Between March and May 2020, AASHTO has been reviewing and refining the summary report.

How the National Strategy Fits into Other Efforts

Kristin discussed the close connection with the current FHWA Highway Automation ConOps project, the CAT Coalition, and TRB research.

Feedback at the Des Moines Workshop

Kristin noted that a National Strategy workshop was held in December 2019 in Des Moines, Iowa. Kristin shared four key points that came out in the Des Moines workshop:

- Need a unified vision and mission
- Need to understand what "ready" for CAV means
- Stakeholder engagement is critical
- Equity and vulnerable communities must be addressed.

Kristin shared the current *vision* of the strategy as:

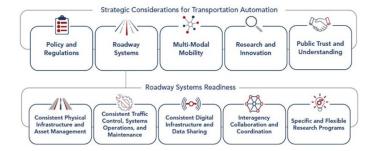
- Multi-modal system
- Connecting a **global economy**
- Advancing zero deaths and congestion
- Interoperable with future emerging technologies

Kristin shared the *mission* of the strategy as:

Bold leadership and effective policy that readies our infrastructure and institutions for continuous innovation and the future.

Kristin noted that the question of "what does 'Readiness' mean?" is something that the FHWA Highway Automation ConOps will address in detail about, but shared a graphic illustrating outcomes of the Des Moines workshop as follows:

What does "Readiness" mean?



Kristin shared a path toward the national strategy that includes three phases:

- 1. Interstates and Highways (e.g. building fiber and utilities)
- 2. Major Metropolitan Areas that are already Smart Cities
- 3. Inter-regional multi-modal network

As far as next steps, Kristin noted that they are advancing the concepts of the first strategy. There will be more outreach in the next few months. The plan is that by the end of 2021 there will be a draft National Strategy. Kristin also noted that Zenzic is a model they are using to illustrate an interactive based approach.

Eastern Transportation Corridor (formerly I-95 Corridor Coalition)

Ginna Reeder introduced the Eastern Transportation Corridor as the new official name of what was formerly the I-95 Corridor Coalition. Ginna noted that the coalition has three tracks:

- Transportation System Management and Operations (TSMO)
- Intermodal Freight; and
- Innovations in Transportation (which includes Connected Vehicles).

Ginna reviewed the coalition's CAV Program's FY21 Focus Areas as:

- 1. Readiness of public infrastructure.
- 2. Existing Legislative and regulatory requirements and potential changes needed to support emerging technologies.
- 3. Testing and deployment of new systems, including sharing lessons learned, identifying funding sources, and connecting members.
- 4. Use and sharing of additional data from technologies.

Ginna noted that the coalition identified three CAV Regional Groups:

Northeast/New England CAV Working Group: ME, VT, MA, CT, RI

- This group completed a quick response project on CAV in New England that defined a roadmap of activities through 2023 that include: technical projects, legal and regulatory review, and public and staff education.
- This group received a New England Transportation Consortium grant to advance New England CAV legal and regulatory policy. This will involve a multi-state legal and regulatory assessment related to issues which may impact CAV operations where consistency across state lines would facilitate testing and deployment. The grant was recently awarded, and they are currently putting together the scope with an RFP planned for the coming months. Ginna cited the example of "what if an automated vehicle is registered in New Hampshire but gets in crash in another state?" as an example of the topics to be explored.

Mid-Atlantic CAV Working Group: NY, PA, NJ, DE, MD, DC, VA

- This group conducted an informal meet up at the PA AV summit 9/2019
- This group meets by quarterly calls, with topics as follows:
 - Nov 2019: Testing and Pilots
 - o Jan 2020: PANYNJ AV Bus Pilot
 - May 2020: FY 21 planning and prioritization

Southeast CAV Working Group: NC, TN, SC, GA, FL, AL

- This group held a kick off meeting in April
- State updates were shared
- Big picture goals for the group were defined as:
 - Drive national conversation through regional alignment
 - Solve CV/AV issues together with consistent approaches
 - Work regionally on specific issues to make progress

Ginna updated on overall Coalition CAV Activities:

Quarterly Regional meetings are held. They are planning one big workshop - online using IdeaBoard or other framework for the virtual meeting.

Ginna concluded by sharing a large-scale effort to explore "How do we know if our infrastructure is ready for AVs"? This project is funded through FHWA. The coalition is partnering with NREL. The Coalition is bringing the connection of practitioners and planning to address what state DOTs need to think about and prepare for. A kickoff meeting was held on June 17th. They agreed to address three topics through separate virtual meetings (vs. one large meeting). These topics include:

- 1. Physical infrastructure and traffic control development
- 2. Operations and multimodal
- 3. Data and data infrastructure.

Ginna noted that they had approximately 45 participants in each of the breakouts. They did not use IdeaBoard or Mural as there was not enough time to get participants up to speed.

The next step is a Readiness framework assessment. The project ends January 2021, and they are planning to do another workshop to present findings.

A question was asked about whether the status of 5.9 GHz is affecting the planning activities. Ginna noted that the topic is in the back of everyone's minds, and it is easy to feel hamstrung by it. But they all recognize that conversations need to keep happening. There are also many other outstanding questions in this area that are unanswered, if we wait for them all to be answered, it will be too late.

Kristin White added to this answer that it really is broader than just the 5.9 GHz uncertainty. With technology, we never know what the challenges will be, even cellular drops need to be avoided in an AVcentric world that relies on cellular communications. However, she noted that the auto industry is involved and working with them will really help ensure it. Also is broader than just FCC, also reflects what is in the National INVEST Act.

Member Updates and Volunteers for Future Planning Presentations

Matt opened the floor for updates from members:

- Jeremy Raw noted that he is working on a pooled fund approach to scenario and sketch model planning. This could plug into the backend of the ConOps and other aspects FHWA is working on. Trying to push out more systematic tools for scenario planning.
- Mark Norman noted that the AVS Symposium will be entirely virtual. TRB Forum for AV and Shared Mobility is pursuing the Top 10 Issues raised by participants in the forum. They have

collected ideas on research needed on AV and shared mobility. Now consolidating and prioritizing and will be put forward to TRB and NCHRP for consideration.

- Ray Derr updated on two projects:
 - NCHRP 23-10 trying to consolidate information on impacts of 5.9 GHz spectrum and V2X technologies.
 - o CAT Scanning Tour was paused, but will restart virtually in August.
- Kristin White noted that there will be a session on Scenario Planning for CAVs titled "Planning for Automated Vehicles: How to Plan for an Unknown Future (session 2108 on Wednesday July 29, 2020). More details on this session can be found at:

https://s36.a2zinc.net/clients/auvsi/avs2020/Public/SessionDetails.aspx?FromPage=Sessions.aspx&SessionID=3638 &SessionDateID=59

Next Webinar and Close

Matt noted that the next webinar will be scheduled for September 2, 2020. Matt will consider having a presentation from Zenzic on the September webinar.

Justine reminded members that there is an opening for a public sector representative to co-chair this working group with her and encouraged members to consider co-chairing this group. Justine thanked everyone for participating.

With no other business presented, the webinar was adjourned at 1:30 pm EST.

CAT Planning Working Group – July 1, 2020 Webinar Participants

- Matt Hardy
- Justin Sydello
- Daniela Bremmer
- Cynthia Jones
- Tom Kearney
- Shane McKenzie
- Amanda Hamm
- Kandee Bahr Worley
- Will Lusk
- Virginia Reeder
- Tom Kern
- Charles Wade
- Melanie Alvord
- Abbas Mohaddes
- Linda Sitz

- Kristin White
- Hari Sripathi
- Ali Lohman
- Kyle Miller
- Charles Wade
- Scott Belcher
- Mark Norman
- Mike Floberg
- Mark Wingate
- Jeremy Raw
- Gummada Murthy
- Ray Derr
- Dean Deeter

AASHTO Committee on Planning: CAV Planning Working Group &

CAT Coalition: Planning Scenarios Working Group

Webinar

July 1, 2020





Welcome and Agenda Review

- 1. WSDOT Progress on CAT Policy Document, Kyle Miller & Daniela Bremmer (WSDOT)
- National Strategy for Transportation Automation, Kristin White (MnDOT)
- Eastern Transportation Coalition CAT Scenario Planning, Ginna Reeder
- **Member Updates**
- **Next Webinar / Close**





Agenda Item #1: WSDOT Progress on CAT Policy Document Kyle Miller & Daniela Bremmer	
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Agenda Item #2: National Strategy for Transportation Automation,

Kristin White







National Strategy on Transportation Automation

June 24, 2020

Kristin White, Minnesota DOT Co-Chair National Strategy on Transportation Automation Task Force

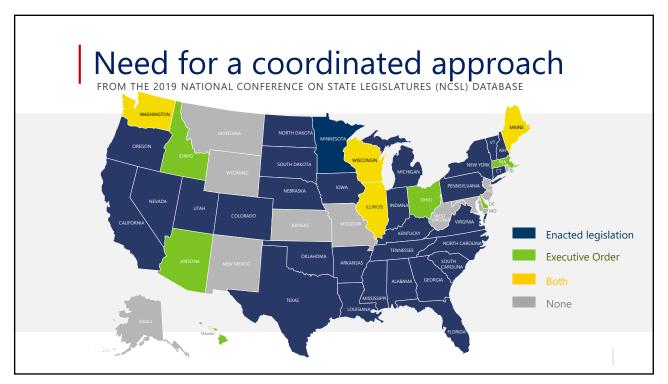
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Why is a national strategy important?

- Transportation technology is rapidly advancing
- Automation and connectivity has the opportunity to reduce crashes, increase access, expand mobility, and advance sustainability
- Technology, innovation, and automation can address current challenges like COVID-19 public health impacts, economic and equity disparities and challenges
- Private industry is deploying technology and seeks infrastructure readiness
- Public agencies are preparing with limited resources
- National consistency is critical to successful deployment
- "Unity is Strength" Emerging technology can advance equity among states

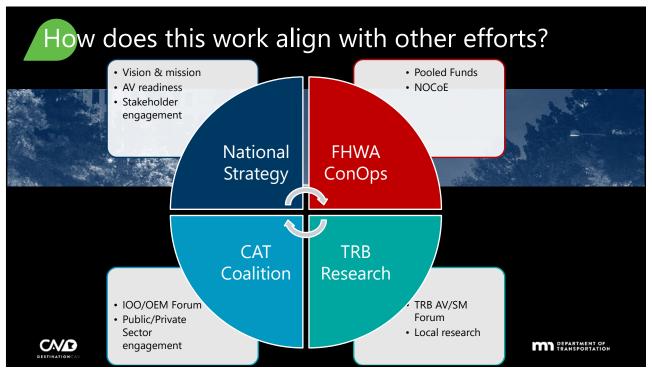


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What did we hear?



- Need to create a unified vision and mission
- Need to understand what it means to be "ready" for CAV
- Stakeholder engagement is critical
- Equity and vulnerable communities must be addressed

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Vision



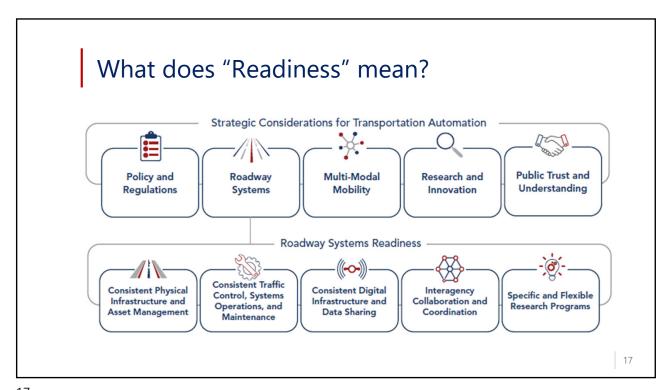
- Multi-modal system
- Connecting a global economy
- Advancing zero deaths and congestion
- Interoperable with future emerging technologies

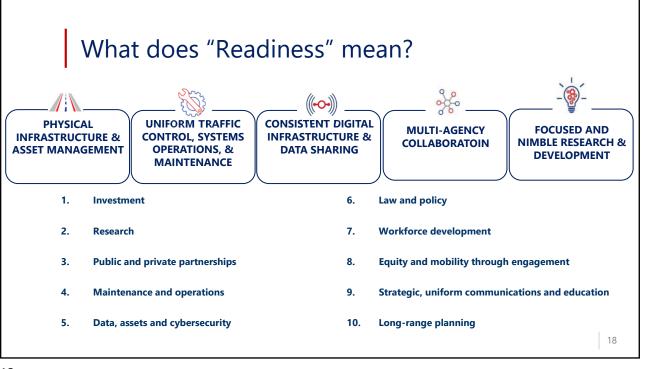
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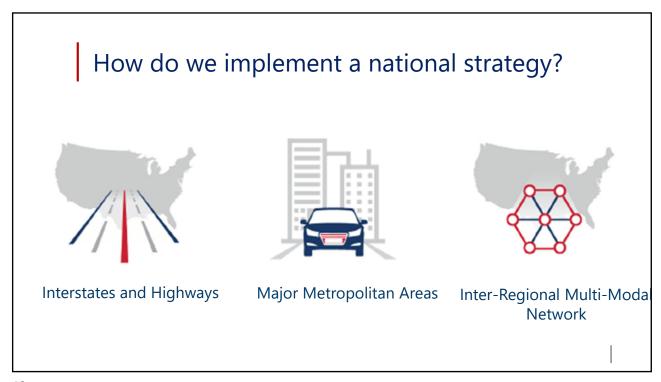
Mission



Bold leadership and effective policy that readies our infrastructure and institutions for continuous innovation and the future









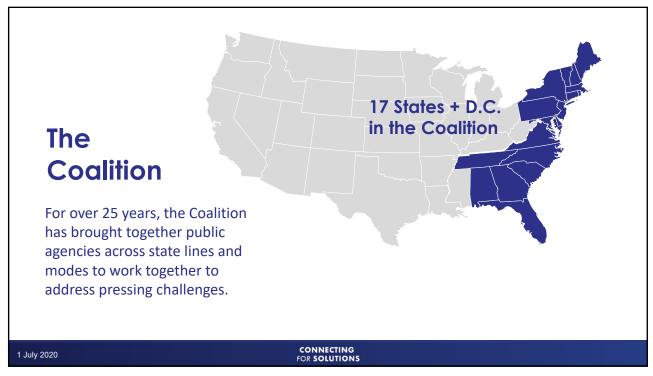


Agenda Item #3: 95 Corridor Coalition – CAT Scenario Planning

Ginna Reeder





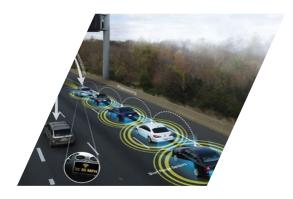




EXECUTIVE BOARD DOT CEOs COALITION STAFF STEERING COMMITTEE THE COALITION & CO-CHAIRS **STRUCTURE** PROGRAM TRACK COMMITTEES TRANSPORTATION SYSTEMS **INNOVATIONS IN INTERMODAL FREIGHT TRANSPORTATION MANAGEMENT & OPERATIONS** CONNECTED VEHICLE VPP MARKETPLACE FREIGHT PLANNING FREIGHT DATA & PERFORMANCE MBUF DATA TOOLS & USER GROUPS TRUCK PARKING TOLLING RECIPROCITY TRAVELER INFORMATION FREIGHT PARKING TRAFFIC INCIDENT/ EVENT MANAGEMENT **OPERATIONS ACADEMY** CONNECTING FOR SOLUTIONS 1 July 2020



The Coalition's CAV Program



What should we be doing today for the CAV future of tomorrow?

- 1. Learn from each other
- 2. Separate the noise
- 3. Leverage regional interoperability and transferability

...and connect for solutions!

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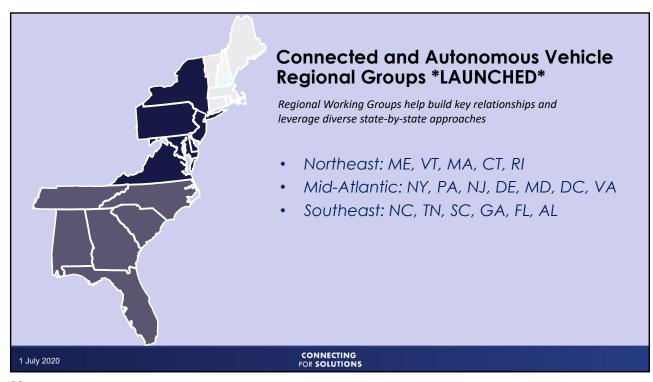


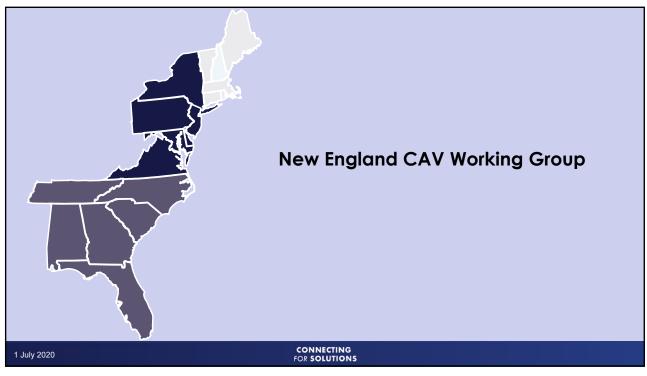
The Coalition's CAV Program FY21 Focus Areas We will work with members to explore...

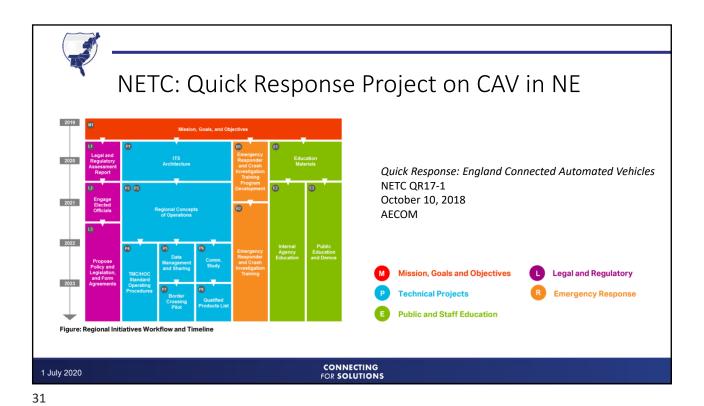
- 1. The readiness of, and potential enhancements needed to, enhance roadside and other public **infrastructure** to support CAV.
- 2. Existing **legislative and regulatory** requirements and potential changes needed to support emerging technologies.
- **3. Testing and deployment** of new systems, including sharing lessons learned, helping identify funding sources, and connecting members to explore potential pilot projects, such as automated trucks.
- 4. The use and sharing of additional **data** available from these technologies.

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Implementing the NECAV Roadmap

VISION:

 Seamless operation of connected and automated vehicles (CAV) across New England States and surrounding regions of the United States and Canada.

MISSION:

• To share resources and information and work collaboratively with neighboring transportation agencies and other stakeholders to facilitate the deployment of CAVs in New England and its surrounding region for freight and passenger movement.

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NECAV Activities in past year

- ➤ Getting together about quarterly
- > Web-based meetings with outside presentations
 - CAV Regulatory Overview (March 2019) Greg Rodriguez, Stantec (formerly BBK Law)
 - ADAS Terminology "Clearing the Confusion" (Jan 2020) Kelly Funkhouser, Consumer Reports
- ➤In-person meetings
 - NECAV Summit (June 2019)
 - Fall Peer Exchange (October 2019) Focus areas: CAV terminology & education; data access requirements and data use

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(4B)

NETC Grant: NE CAV Legal and Regulatory Assessment

PROJECT PURPOSE

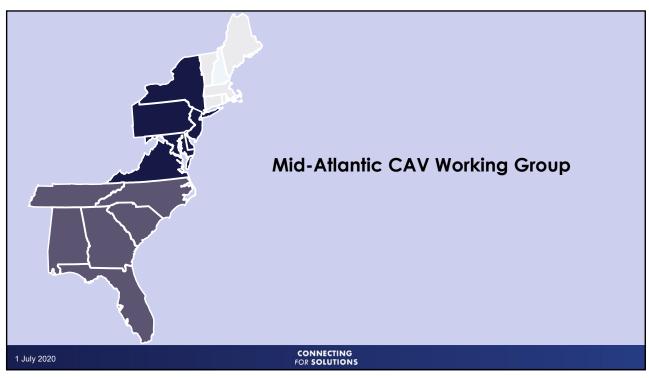
Conduct a multi-state legal and regulatory assessment related to issues which may impact connected/automated vehicle (CAV) operations and where consistency across state lines would facilitate testing and deployment.

AREAS TO EXPLORE

- Insurance coverage
- vehicle credentialing (registration, titles, etc.)
- operator licensing
- crash investigations
- · motor vehicle citations
- commercial vehicle regulations
- · pilot testing of emerging technologies

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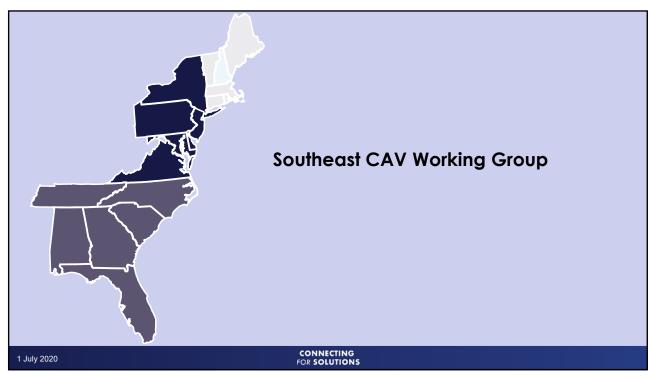




Mid-Atlantic Activities in Past Year

- ➤ Informal meet-up at PA AV Summit (September 2019)
- ➤ Kick-Off Call (September 2019)
- ➤ Quarterly Calls (including state updates)
 - ➤ November 2019 Focus Areas: Testing and Pilots
 - ► January 2020 PANYNJ AV Bus Pilot
 - ➤ May 2020 FY21 Planning and Prioritization

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Southeast CAV Activities in Past Year

- ➤ Kick-off meeting in April 2020!
 - ➤ State updates
 - ➤ Big picture goals for the group
 - ➤ Drive national conversation through regional alignment
 - ➤ Solve CV/AV issues together with consistent approaches
 - ➤ Work regionally on specific issues to make progress



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Coalition CAV Activities – FY21

Events

- Quarterly Regional Meetings
- AV Readiness Project
- 1 Workshop
- 2 Peer Exchange Events

Menu of Topics

- Infrastructure
- Testing & Deployment
- Data
- Policy

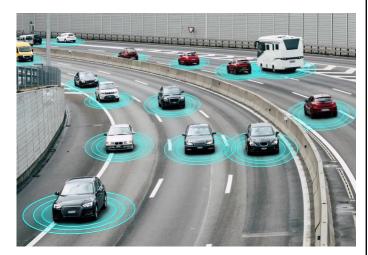
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How do we know if our Infrastructure is ready for Automated Vehicles?

- Objective: explore the use of infrastructure readiness assessment methodologies in developing approach for determining a multistate region's readiness for automated vehicles
- Coalition role: connect the work to practitioners
- June 2020 January 2021
- USDOT Funded, NREL as partner



<u>Project</u>: Initial Prototype Approach for Regional
Assessment of Readiness for Automated Vehicles

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Agenda Item #4: Member Updates

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Future Webinar Topics

- September Webinar
 - What topics would you like to cover?
 - Volunteers or suggestions for speakers?
 - Suggestions from the May webinar:
 - ❖Early Deployers Group (Michelle Noch, USDOT ITS JPO as a contact)

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Any Other Business / Adjourn

