MARYLAND CONNECTED & AUTOMATED VEHICLE WORKING GROUP

April 20, 2021

Virtual Meeting

…The Meeting Will Begin Soon…

Please Ensure You Are On Mute

AGENDA

1:00 pm	Introductions & Opening Items
1:20	Panel Discussion: Cybersecurity
2:05	Maryland CAV Strategic Framework
2:15	Maryland HAV Testing Updates
2:30	Lightning Round Updates
2:45	National Updates
3:00 pm	Closing Comments and Wrap-Up

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VIRTUAL MEETING

Approach for Today

- Moderated virtual meeting
- Opportunities for interaction
- Presentations available afterward at
  https://mva.maryland.gov/safety/Pages/MarylandCAV.aspx

Ground Rules

- Please remain on mute unless you are speaking
- Use the Question Box at any time during the meeting
- Consider the group size and diversity if posing questions

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INTERACTIVE TOOLS
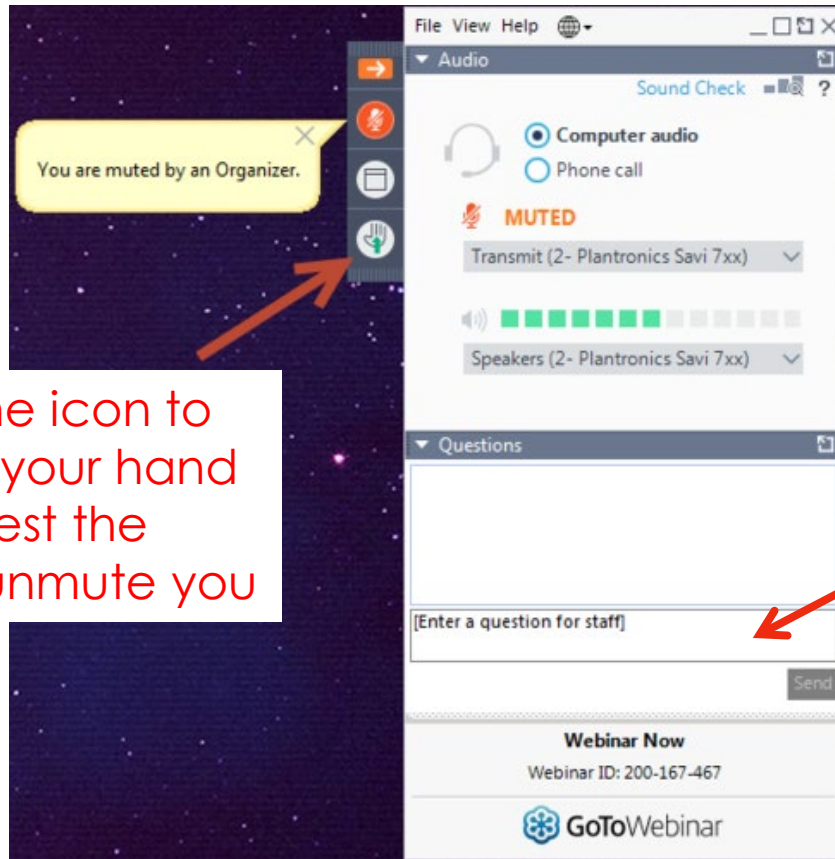
Click on the icon to raise/lower your hand to request the moderator unmute you

Best Option: type here to ask a question or provide a comment

MARYLAND DEPARTMENT OF TRANSPORTATION

WORKING GROUP LEADERSHIP

Maryland CAV Working Group Introductions

Chrissy Nizer
Administrator
MDOT MVA

Jim Ports
Executive Director
MDTA

MDOT CAV web landing page – mdot.maryland.gov/MarylandCAV

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PANEL DISCUSSION

Cybersecurity

Protecting the Privacy of CAV Customers

- Justine Kasznica & Ashleigh Krick, Babst Calland
- Brian Knighton, National Security Agency
- Scott Bernard, MD Dept of Information Technology

Moderator: Corey Tsang, National Security Agency
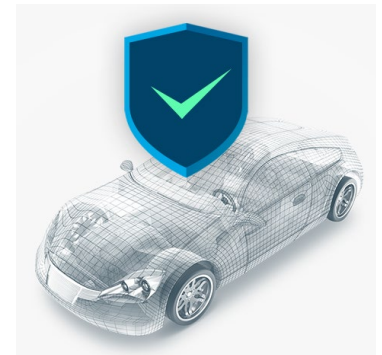
QUESTION/ANSWER

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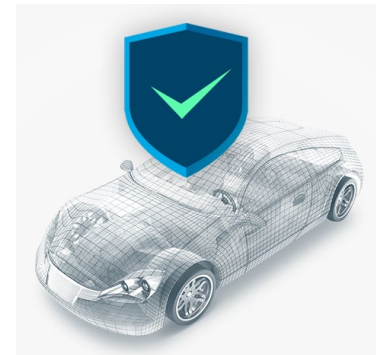Moderator: Corey Tsang, National Security Agency

UPDATE

Progress on the use of the

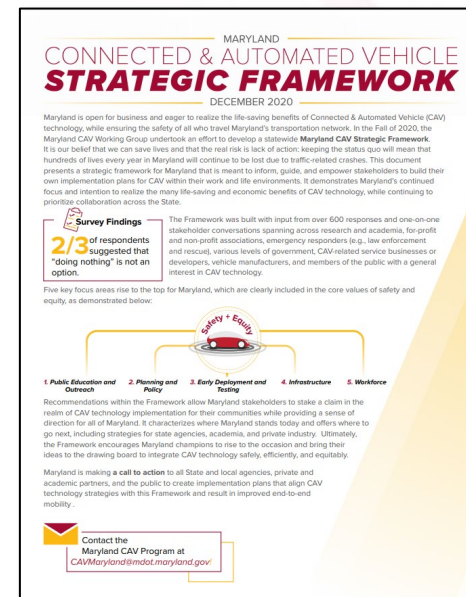**Maryland CAV Strategic Framework**

Carole Delion, PE
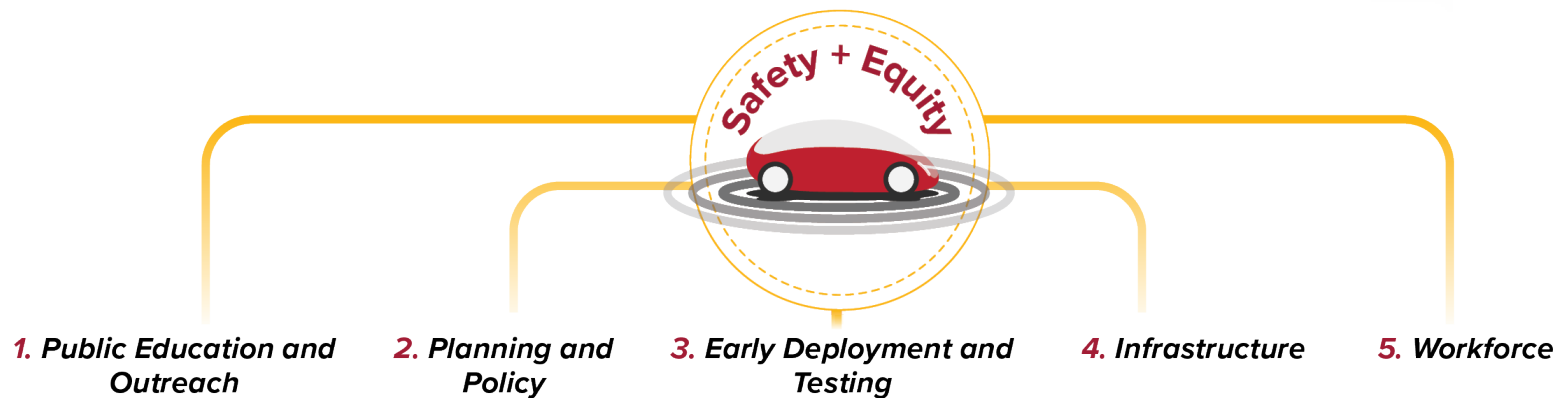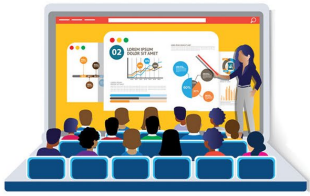
MDOT SHA

cdelion@mdot.Maryland.gov

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FRAMEWORK LOCATION

Full report, plus 1-Page Executive Summary available at:

https://mva.maryland.gov/safety/Pages/MarylandCAV.aspx

FRAMEWORK PURPOSE

- Call to action for Maryland stakeholders to be involved in CAV

- Intended to provide guidance through core values and key focus areas

- Increase awareness and engagement in CAV

Safety + Equity

1. *Public Education and Outreach*   **2.** *Planning and Policy*   **3.** *Early Deployment and Testing*   **4.** *Infrastructure*   **5.** *Workforce*

PUBLIC EDUCATION AND OUTREACH

- Increase transparency of educational CAV material and ongoing efforts.
- Ensure diverse audience when communicating initiatives.
- Leverage existing outreach avenues.

PLANNING AND POLICY

- Facilitate opportunities through the Maryland CAV Working Group.
- Establish clear goals and metrics for CAV in Maryland.
- Identify and address barriers to CAV.
- Incorporate CAV into planning and policy documents.
- Establish policies on cross-collaboration and open data sharing.
- Anonymize CAV data and safeguard from mishandling.

EARLY DEPLOYMENT AND TESTING

- Broaden use cases for early deployment and pilot projects.
- Gather public perception and adjust pilots.
- Grow the list of locations for CAV testing.
- Prioritize freight-focused CAV strategies in the short term.
- Leverage deep bench of academic excellence.
- Embrace new partnerships for non-traditional research.

INFRASTRUCTURE

- Establish baseline operation of technology infrastructure.
- Establish acceptable equipment downtimes.
- Remain engaged with national guidelines and integrate or create State-specific specifications.
- Dedicate resources and create partnerships to build out the communications infrastructure.
- Asset-management and software configuration management.

WORKFORCE

- Promote and enhance existing workforce.
- Address recruitment & retention gaps at the local level.
- Establish expectations for future staffing.
- Field training and traditional trade jobs should be encouraged.

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PUBLIC EDUCATION & OUTREACH

- CAV State Agency Coordination team has met regularly – expanded diversity of ideas and strategies to integrate CAV

- Emerging technology survey (CAV and ZEV) closed April 5, 2021

- Local jurisdiction webinars tentatively scheduled for mid-June

- AUVSI virtual conference in May

- Two Maryland Highway Safety Office Safety Seminars recorded efforts on CAV in Maryland
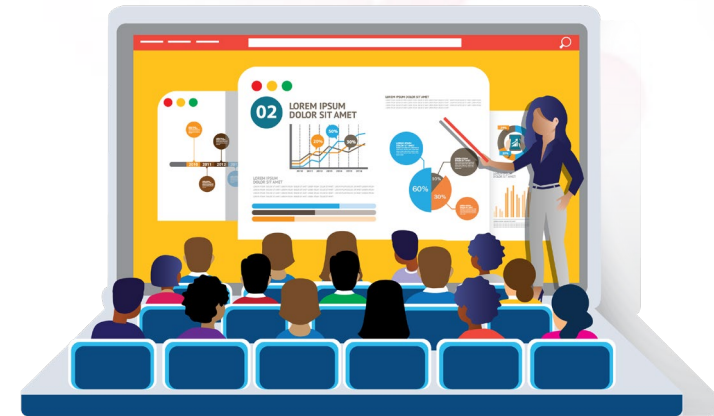
PLANNING AND POLICY

- Local Jurisdiction "planning for CAV" document

- John Hopkins University Institute for Assured Autonomy is developing a policy framework for autonomous vehicles

- Maryland CAV Law Review impacts underway

- Maryland advanced legislation this session that supports driver-assisted truck platooning (SB 291/Chapter 118)

- Legislation was also passed related to robotic personal delivery devices (SB 726)

INFRASTRUCTURE

- Pedestrian I2V safety application, Prince George's County

- SPaT/MAP deployments across state:

  - National Harbor, Prince George's County

  - Montgomery County

  - US 1 in Howard County

- Response to the US DOT MUTCD Notice of Proposed Amendments

  - Of note: new chapter for AV & line markings for AV vision

- Establishing a statewide SCMS web-portal for credential management of messages exchanged across connected vehicle applications
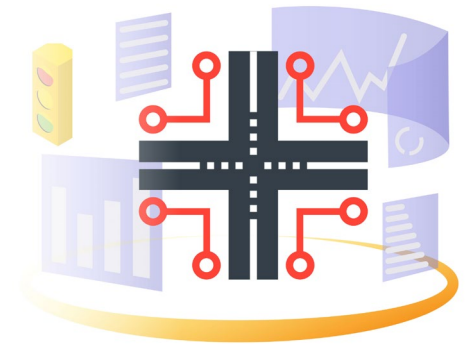
EARLY DEPLOYMENT AND TESTING

- **AV shuttles (planning/consideration stage):**

  - Charles County

  - John Hopkins University

  - Westminster, Carroll County

- **AV shuttles (mixed used testing):**

  - National Harbor, Prince George's County

  - Clarksburg, Montgomery County (closed course)

- **Autonomous parking pilot**

  - Across state

WORKFORCE

- Evaluation of workforce impact of automated maintenance operations vehicles

- University of Maryland has a new minor within the Clark School of Engineering related to autonomous vehicles (includes planetary autonomy and over the road vehicles)

- Morgan State has been holding webinar series on CAV research currently underway at their University

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QUESTION/ANSWER

Progress on the use of the

Maryland CAV Strategic Framework

Carole Delion, PE

MDOT SHA

cdelion@mdot.Maryland.gov

UPDATE

Highly Automated Vehicle Permits

Current Testing in Maryland

- Anuja Sonalker, STEER Tech

- Bryan Brilhart, Robotic Research

- Rasheed Walford, Local Motors, LLC

Moderator: Nanette Schieke, MDOT MVA
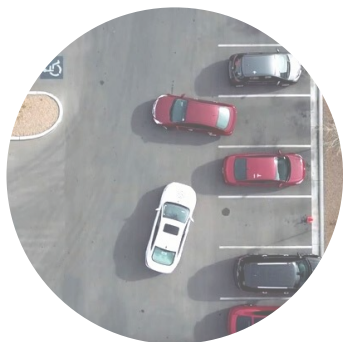
Updates from STEER

1,422

Road Test Runs in Q1 2021

Company Updates

- All three phases of the onsite autonomous vehicle testing for the IDEA Project have been completed
- Partner on winning contract to bring autonomous parking to an airport in California
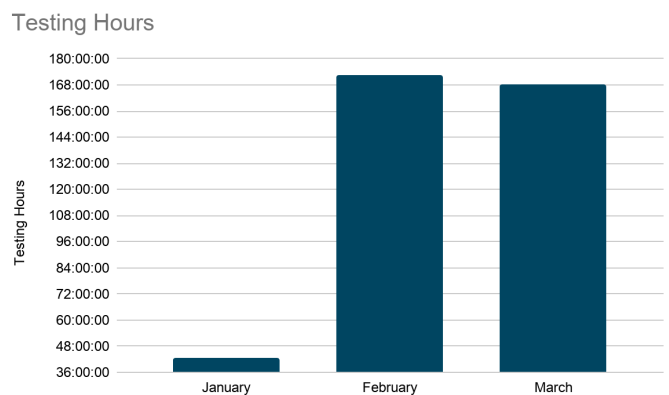
170

Scenarios Tested in Q1 2021

2021 TESTING HOURS

Number of testing hours by month

Testing Hours

STEER

Moving into Material Transport

ROBOTIC RESEARCH

Platooning class 8 trucks for paved and dirt roads
- Canadian forestry industry

Automated Yard Trucks
- Warehouses, truck and train terminals.

QUESTION/ANSWER

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LIGHTNING ROUND

CAV Expressions of Interest

- Steve Sprouffske, Kapsch TrafficCom USA
- Dr. Enes Karaaslan, Connected Wise, LLC
- Kiel Ova, Traffic Technology Services, Inc
- Peter James, Crystal Clear Automation, LLC
- Robb Jenkins, Beep, Inc
- Graham Dodge, MAGIC

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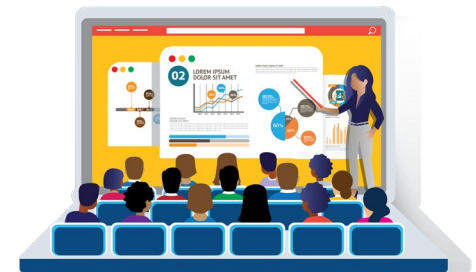
UPDATE

Connected & Automated Vehicle

National Activities

- Steve Kuciemba, WSP USA

CLOSING REMARKS

Maryland CAV Working Group Leadership

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ADJOURN

- Next Meeting: August 10, 2021 @ 1:00 pm

- MDOT CAV web landing page – https://mva.maryland.gov/safety/Pages/MarylandCAV.aspx

- Please give us your feedback!
    Email CAVMaryland@mdot.maryland.gov

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