AASHTO International Day Singapore 2019

Panel 1: The Research, Policy, Legislative, and Regulatory Framework related to CAT

CAT Coalition Updates

Roger Millar
Secretary of Transportation
Washington State Department of Transportation







CAT Coalition

Joint Cooperative Effort between USDOT and AASHTO, ITE and ITS America

Formed to serve as a collaborative focal point for federal, state and local government officials, academia, industry and their related associations to address critical program and technical issues associated with the nationwide deployment of CVs and AVs.

Coalition membership includes representation from infrastructure owners and operators (IOOs), original equipment manufacturers (OEMs), technology and service providers, academic researchers, consultants, and internet of things (IOT) suppliers.





CAT Coalition - Organization

Co-Chairs Roger Millar, WSDOT & Jennifer Cohan, Del DOT

USDOT / FHWA

Focus Area: Programmatic & Strategic Activities

Focus is on documenting needs and best practices for programmatic, strategic, and technical activities to encourage CAT deployment & operation through initiatives such as the SPaT Challenge & Connected Fleet Challenge.

Policy, Legislative and Regulatory **Working Group** J. Toth P. Ajegba

Strategic Initiatives **Working Group**

B. Leonard J. Averkamp

Focus Area: Planning, Scenarios, & Resources

Supports the CAT industry in understanding Automated Transportation planning & scenario development, available resources, and documenting resource needs

Planning /

Scenarios

Working

Group

Sondra

Rosenberg

J. Sydello

Technical Resources Working Group

F. Saleem N. Katta

Supports the CAT industry in defining the digital & physical CAT infrastructure, and establishing secure, verified connections between vehicles &

> IOO/OEM Forum

C. Castle F. Saleem M. Shulman

Infrastructure & Industry

this infrastructure

Focus Area:

Infrastructure Industry Working

> Group T. Larkin-Thomason. S. Gehring

Peer Exchange & Outreach Working Group (E. Seymour) – Supports all focus areas

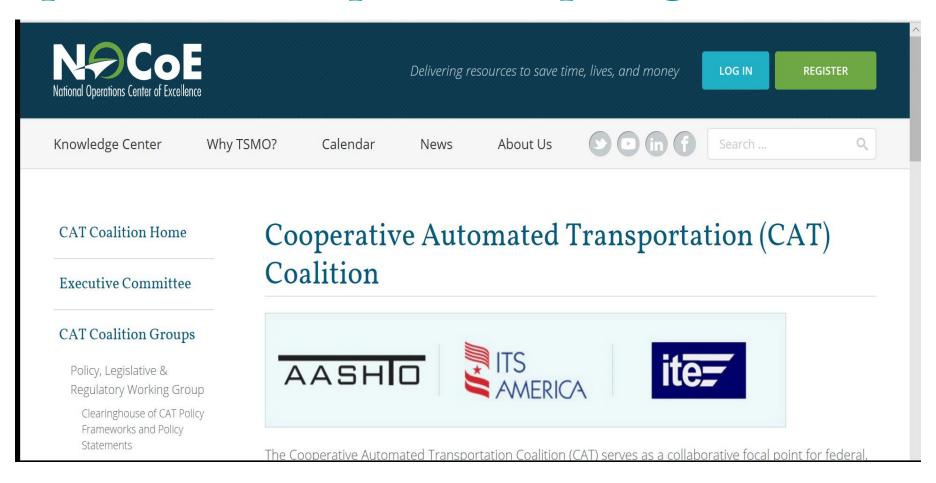
Research Testing and Demonstration

(e.g. NCHRP 20-102, CV Pilot Sites, ATCMTD Sites, and other Federally & State led activities)



CAT Coalition Online

http://www.transportationops.org/catcoalition





CAT Coalition Recent Activities / Accomplishments

Programmatic & Strategic Accomplishments (examples)

- CAT Funding and Staffing Survey Results & Summary
- Connected Fleet Challenge Resources & Website
- SPaT/Fleet Challenge Webinar (Oct. 3rd)
- Initiation of efforts for common (plain language) Automated Driving Terms Lexicon as used in AV Policy documents

Planning Scenarios & Resources Accomplishments (examples)

- Facilitated multi-agency presentation for a Cellular V2X Overview
- Initiated and progressed towards a new resource titled "CV Deployment Environment" –that broadly highlights communications and back end systems needs.

Infrastructure & Industry Accomplishments (examples)

- Initiated activities for a "Communications 101" resource and developed the outline and preliminary content.
- Initiated efforts to survey AV shuttle pilot deployments to summarize as a resource
- Planning an outreach webinar to explain the Software tool chain for work zone MAP creation
- Completed Draft Clarifications for Consistent Implementations (CCI) for Signalized Intersections.





CAT Coalition Policy, Legislative & Regulatory Work Group

- ☐ Part of the *Programmatic & Strategic Initiatives*Focus Area of Coalition
- ☐ Emphasis on conducting policy analyses, and tracking legislation and regulations related to Cooperative Automation (includes AV's and CV's)
- Create an open dialog and information sharing regarding policy, legislative, and regulatory topics



CAT Coalition Policy, Legislative & Regulatory Work Group – Initiatives

I. Clearinghouse of CAT Policy Frameworks and Policy Statements.

CAT Policy Framework Analysis & Emerging Practices Summary Report Completed

II. CAT Funding and Staffing Survey of IOOs

Preliminary survey completed and results available online

- III. Identify Model Regulations that Enable Near-Term Pilots and Deployments [ONGOING]
- IV. Develop further understanding and definition of CAT related terminology [ONGOING]





Clearinghouse of CAT Policy Frameworks and Policy **Statements**

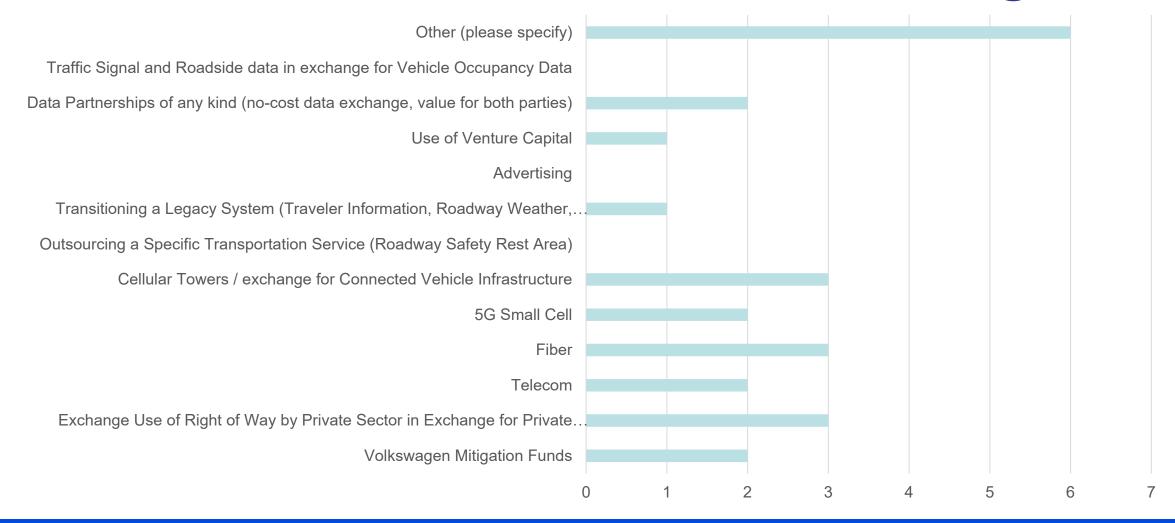
Agency / Organization	Content	Summary of Content
Arizona	Law Enforcement Protocol for Fully Autonomous Vehicles	 Includes the policy statement on testing or operation of autonomous vehicles; Includes key definitions of terms Includes requirements for fully autonomous vehicle companies Describes the enforcement protocols
New South Wales, Australia	Connected and Automated Vehicle Plan	Five-year CAV Plan for New South Wales with clear goals and actions to embrace technology and address potential challenges like cybersecurity and ensuring safe interactions between automated vehicles and other road users.
Centralina Council of Governments, Great Charlotte Area	Automated and Connected Vehicle (ACV) Roadmap	 Highlights ACV technologies; Provides near- and long-term actions with associated obstacles and solutions for a collaborative approach for all regional partners for various issue areas like fleet management, transportation planning, infrastructure costs, and land use planning.
Colorado	<u>CAT Program</u>	Includes mission, purpose, issues, objectives, priorities, and risks associated with the Connected and Autonomous Technology in Colorado.

https://transportationops.org/CATCoalition/clearinghouse-cat-policy-frameworks





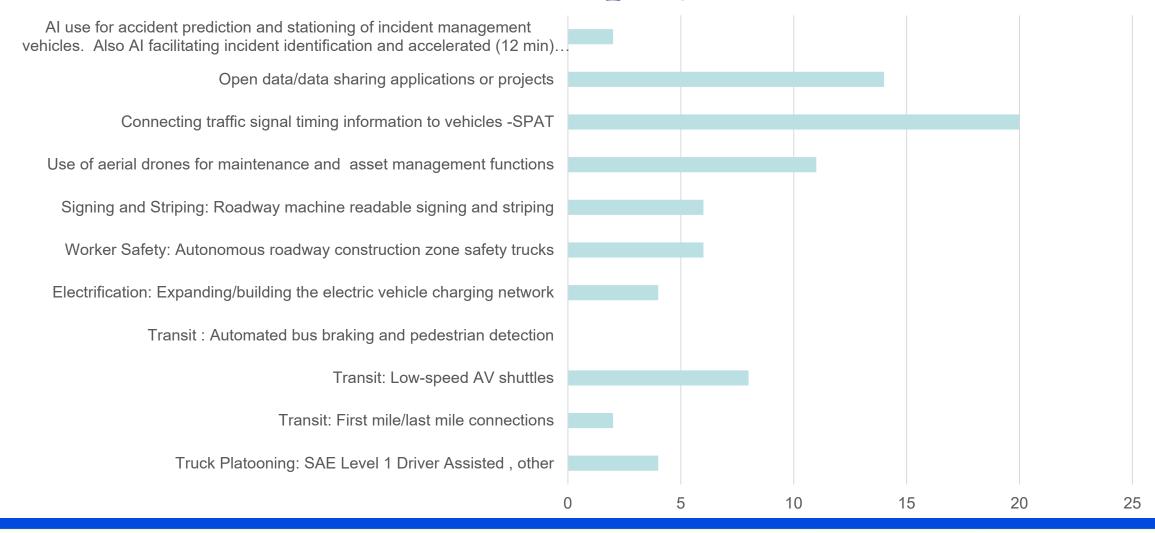
Current Use of Innovative Financing







Current CAT/CAV Deployments (funded):







Additional Resources

- Link to report on emerging and noteworthy practices that were identified in the review of these 30 CAT policy frameworks.
- Link to report state and local transportation agencies' funding of Cooperative Automation related deployments



CAT Coalition – Planning Scenarios & Resources Focus Area

- CV/AV Deployment Environment Current and Future
- □ National CAT snapshot Initiating an update to a previous survey
- □ International Scan − Starting an effort to conduct international document research on CAT activity
- □ CAV/CAT Strategic Plans Identify current landscape, capture available Plans
- □ Resource Review of RSZW Concept of Operations developed by IOO-OEM Forum
- Development of a broad view CAT/CV Ecosystem document





CAT Coalition – Infrastructure-Industry & IOO-OEM Forum Ongoing Initiatives

- ☐ Survey of AV Shuttle Deployments nationwide [ONGOING]
- □ Communications 101 webinar High level webinar on communications to raise awareness and assist in decision making
- Outreach and engagement with other organizations (SAE, AAMVA, etc.)
- ☐ Clarification for Consistent Implementation (CCI) Document
- ☐ Work Zone Software Tool Chain: Encouraging IOOs to use and test software to enable creation of work zone map data
- ☐ Collaboration on SPaT/RLVW, RSZW, TOSCo tools





Questions?

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