WASHINGTON STATE
AUTONOMOUS VEHICLE
WORK GROUP

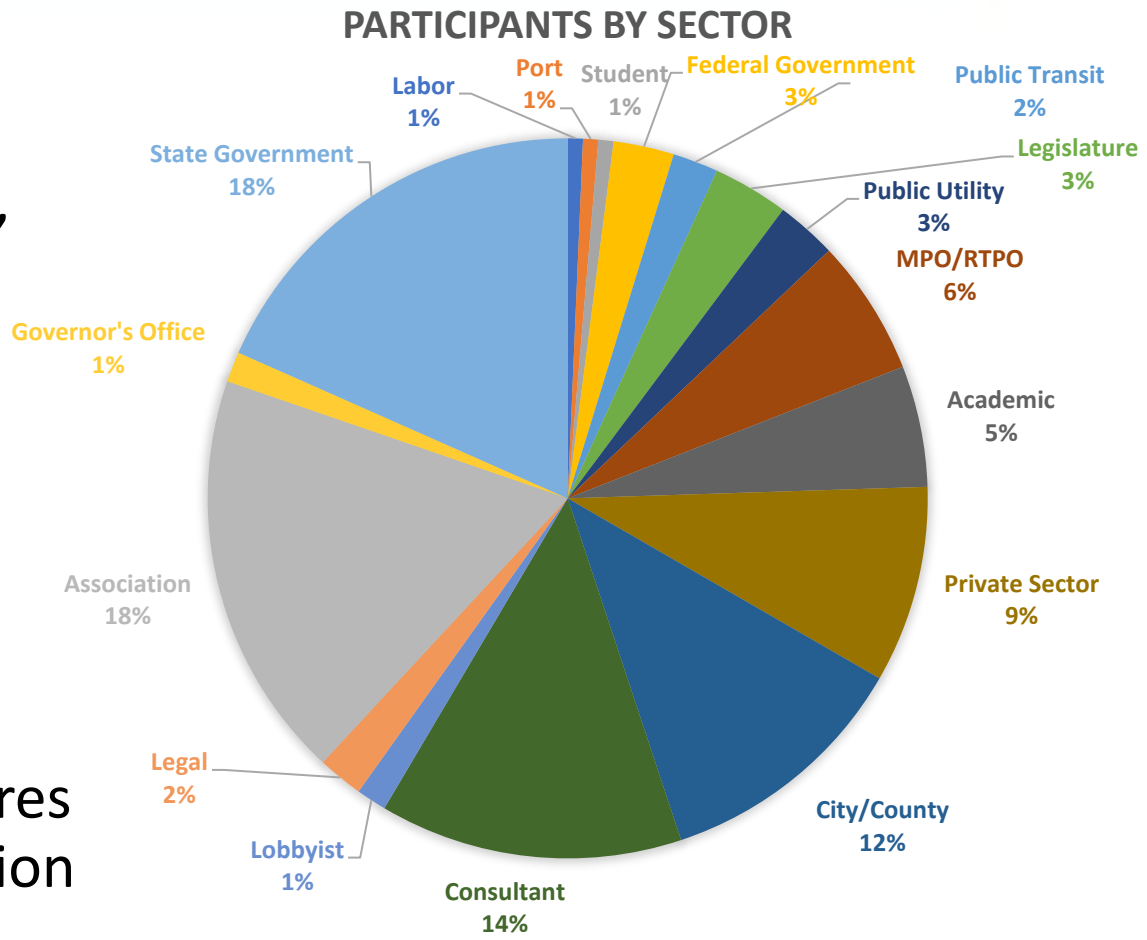
2020 Infrastructure & Systems Subcommittee Report and Recommendations

Roger Millar, Secretary, WSDOT,
Mike Ennis, AWB,
Subcommittee co-chairs
December 11, 2020 Subcommittee Meeting

Washington State Transportation Commission

Subcommittee Structure and Membership

- Subcommittee Co-Chairs:
  - » Roger Millar, Secretary, WSDOT
  - » Michael Ennis, Government Affairs Director, AWB
- Membership (147 participants)
  - » 77 working members, representing 58 organizations
  - » In addition, 70 interested parties
  - » Open membership structure
  - » Following the Operating Policies & Procedures established by the Transportation Commission through the Feb 27th, 2019 memo



2020 Subcommittee Meetings

- Special Workshop, April 1, 2020
- Meeting #8, April 22, 2020
- Meeting #9, July 13, 2020
- Meeting #10, September 11, 2020
- Meeting #11, December 11, 2020

All meeting materials, documents and minutes available online

https://wstc.wa.gov/Meetings/AVAgenda/Documents/InfrastructureSystemsSubcommittee.htm

Subcommittee Accomplishments 2020: Overview

The Subcommittee's adopted 2020 work plan consisted of three, major activities:

Work Plan Activity 1: **Develop CAT Policy Framework** with policy goals, strategies, and illustrative actions based on local, regional, and national "best practice" policy examples

- *Status:* **Activity completed**

Work Plan Activity 2: **Develop project selection criteria** and **identify potential funding options** to enable the selection of near-term pilot deployment proposals and projects

- *Status:* **Activity completed**, updates to the grant funding list will be provided as new information becomes available

Work Plan Activity #3 -**Collaboration Discussions with Private Sector Companies** Certified for Testing in WA

- *Status:* **Activity completed**, task lead transferred to Licensing Subcommittee and, moving forward, will be jointly conducted with currently certified companies

Activity #1: CAT Policy Goals as Adopted by the Executive Committee and WSTC

#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.

Accomplishments: Activity #1-CAT Policy Framework

2019

INITIATE

National scan of "best practices" and policy examples

Initial discussions and input toward development of a Draft CAT Policy Framework

8 Policy Goal statements adopted

2019 – April 2020

ENGAGE

Illustrative strategies & actions drafted

Circulation for comment and additional input

Public/private partners engaged for additional input and informational ranking

April – May 2020

REFINE

Host workshop - Apr 1

Discuss informational pre-workshop ranking of existing actions

Gather input on new/modified strategies & actions

Integrate results into comprehensive list of strategies & actions

June – Dec 2020

Finalize

Complete Post Workshop Strategies and Actions Document

Present to I&S SC

Continue to encourage other subcommittees to develop own goals, strategies and actions

Develop Recommendations

Accomplishments: Activity 2-Grant Programs

Goal:

Develop project selection criteria and identify potential funding approaches and grant opportunities to enable the selection of near-term pilot deployment proposals and projects.

Actions and Products include:

- Evaluate and build upon the Pilot Evaluation scorecard criteria developed by others
- Evaluate grant criteria from existing Federal, State and WSDOT grant programs
- Other State Funding Requirement Criteria Summary product
- State and Federal Funding Sources- Grants Inventory product

Accomplishments: Activity 3-
Partnership and Collaboration Discussions with Private Sector Companies Certified for Testing in WA

- 2019-2020 subcommittee efforts focused on interviewing companies self-certified with the WA DOL for AV testing.
- The products of this work: the Open Dialogue Survey Template and the Open Dialogue Survey Results are posted to the AV WG website.

- Moving forward, DOL will reach out to each newly certified companies and schedule joint webinars with the subcommittee's Activity 3 work group, along with staff from all seven subcommittees to conduct the open dialogue discussion, which include:
  - What they are looking to accomplish by testing AVs in WA?
  - What policies, regulations, opportunities and barriers should be evaluated to create a supportive environment?

2020 Subcommittee Recommendations

The Infrastructure & Systems Subcommittee considered and voted on two recommendations

- Recommendation #1: Pavement Markings
- Recommendation #2: Real Time Work Zone Data

2020 Infrastructure & Systems Recommendation #1: Pavement Markings

Request for the Legislature to consider increased ongoing investment in enhanced roadway pavement markings during future, new revenue discussions to increase traveler safety and support Advanced Driver Assistive Systems deployed on Washington's roads today (SAE Levels 0-2) and Automated Driving Systems (SAE Levels 3-5) Technologies that are currently being tested on public roads.

These enhanced markings have the potential for significant crash reductions and reduced societal costs.

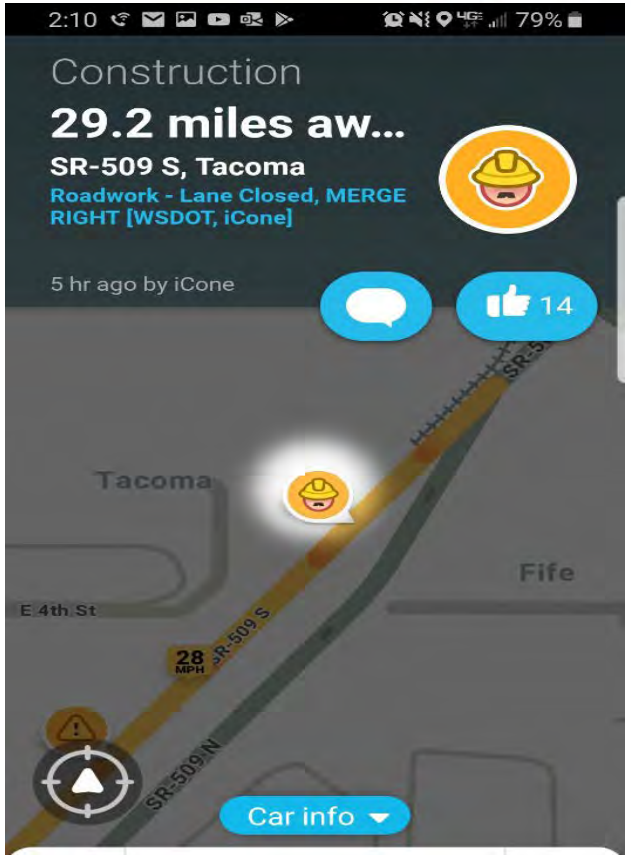
Subcommittee Vote: Yes = 24 Votes; No = 1 Vote; Abstain/Neutral = 1

AV WG Executive Committee Vote: Yes = 19 Votes; No = 0 Votes; Abstain = 2

2020 Infrastructure & Systems
Recommendation #2: Real Time Work Zone Data

Request for the Legislature to support WSDOT's work zone data initiative and to consider increased, ongoing investments during future, new revenue discussions to enhance WSDOTs capacity to develop a comprehensive, real time work zone data base.

This data base will provide real-time communication to vehicles on the road to enhance both traveler and work zone worker safety.



Subcommittee Vote: Yes = 23 Votes, No = 1 Vote, Abstain/Neutral = 2 Votes

AV WG Executive Committee Vote: Yes = 18 Votes; No = 0 Votes; Abstain = 3

2020 Recommendations: The Infrastructure & Systems Subcommittee presented two recommendations for subcommittee voting

Subcommittee Member and Friends Organizations that voted (one vote per organization):

1. AAA Washington
2. ACES NW Network
3. Association of Washington Business
4. Bellevue Chamber of Commerce
5. Chelan County
6. City of Auburn
7. City of Vancouver
8. Fair Cape Consulting LLC
9. Fehr & Peers/ITS WA
10. First Transit, Inc.
11. HDR Engineering
12. Modern Traffic Consultants
13. Northwest Seaport Alliance
14. Peloton Technology
15. Seattle DOT
16. Sightline Institute
17. Spokane Regional Transportation Council
18. TechNet
19. Thurston Regional Planning Council
20. University of Washington
21. Urbanova
22. UW Mobility Innovation Center
23. Washington Policy Center
24. Washington State Department of Transportation
25. Washington Traffic Safety Commission
26. Washington Trucking Association

2020 Infrastructure & Systems Subcommittee Recommendations: Sampling of Member Comments

"ACES was pleased to enthusiastically support the pavement marking enhancement and work zone data base recommendations. We appreciate the good technical work and outreach …….. We are happy to work with you to press the case to the Governor and legislative committees."(ACES Northwest)

This (pavement markings) is the single greatest action that WA can take to enhance safety with current technology and to prepare for future AV deployment. (Fair Scape Consulting LCC)

We would consider voting to approve this proposal if there were provisions for the funding to pay for all roads in the state, not State Roads only. We have a concern about local roads not meeting AV needs, and not having funding for it marking. (City of Auburn)

As a past participating organization in the WS AV Work Group Infrastructure and Systems Subcommittee, we support this modest proposal in support of necessary roadway infrastructure testing. (Bellevue Chamber of Commerce)

Full support for this initiative by the trucking industry for potential to enhance highway safety. However, its my understanding AV's are engineered to operate safety and efficiently despite "perfect" conditions such as roadway markings. (Washington Trucking Association)

This makes sense for human drivers now and for autonomous vehicles when they are ready (Sightline Institute)

This investment would help improve safety for all road users and should be prioritized based on the opportunities to provide the largest improvements in public safety with the added benefit of improved conditions for AV technologies, City of Seattle.

Moving Forward: 2021 Work Plan Development::

- The subcommittee evaluated the *Future Path* results received from the AV Executive Committee WG (AV Workgroup Polling Report and Results Matrix)
- Subcommittee members expressed interest in building more education and information sharing opportunities into upcoming meeting agendas
- Based on input received from the AV Executive Committee WG, the input from subcommittee members and a national scan, staff developed a draft 2021 work plan for member consideration
- The subcommittee meeting on December 11th, 2020, focused on the draft 2021 Work Plan discussion