



WASHINGTON STATE
AUTONOMOUS VEHICLE
WORK GROUP

MEETING SUMMARY

Washington State AV Work group - Infrastructure and Systems Subcommittee
September 9th, 2019 | 1:30 pm – 4:30 pm
WSDOT HQ Nisqually Board Room | 310 Maple Park Ave SE - Olympia, WA 98501

Attendees:

First Name	Last Name	Organization
Robert	Acevedo	HDR
Bruce	Agnew	ACES Northwest
Amanda	Anderson	Peloton Technology
Ted	Bailey	Washington State Department of Transportation (WSDOT)
Calvin	Beaton	Urban Logiq
Debi	Besser	Washington Traffic Safety Commission (WTSC)
Gaia	Borgias	University of Washington
Daniela	Bremmer	WSDOT
Brian	Brooke	Sound Transit
Marc	Daily	Thurston Regional Planning Council (TRPC)
John	Deskins	City of Richland
Jeff	DeVere	DeVere Public Affairs
Mike	Ennis	Association of Washington Business
Mariya	Frost	Washington Policy Center, Coles Center for Transportation
Chris	Grgich	Intelligent Transportation Society of Washington (ITS-WA)
Les	Jacobson	WSP USA
Daniel	Lai	City of Bellevue
Francesca	Maier	Fair Cape Consulting
Steve	Marshall	City of Bellevue
John	Milbrath	AAA Washington
Kyle	Miller	WSDOT
Markell	Moffett	WSP USA
John	Niles	Global Telematics
Paul	Parker	Washington State Transportation Commission (WSTC)
Eric	Pierson	Chelan County
Scott	Shogan	WSP USA
Gary	Simonson	Puget Sound Regional Council
Ryan	Spiller	Alliance of Auto Manufacturers
Michael	Transue	Association of Global Automakers
Shannon	Walker	Seattle DOT
Andrea	Weckmueller-Behringer	Walla Walla Valley Metropolitan Planning Organization
Ian	Wesley	WSDOT

First Name	Last Name	Organization
Mike	Wendt	Mike
Bryce	Yadon	Futurewise
Joey	Yang	HDR

WELCOME, INTRODUCTIONS, OPENING REMARKS

Mike Ennis

- Walkthrough agenda
- Go-To-Webinar remote participant process
- Safety briefing

Topic closed.

PUBLIC COMMENT

- No public comment.

Topic closed.

2019 ACTION PLAN PROGRESS AND DISCUSSION

Activity 1: Developing a “Best Practices” Policy Summary Document

Presenter: Francesca “Ches” Maier (Remote)

Voting Process: Ted Bailey

Materials: Activity #1 Update

Activity #1 Voting Instructions and Proposed CAT Policy Goals

- Goal to take the WSDOT CAT Policy Framework, as a starting point, to become an element of an overall , Statewide Washington CAT Policy Framework
- Activity efforts started mid-April, reviewing policy frameworks and other documents being reviewed by AASHTO and others
- Activity progress evaluated in July, behind schedule, refocused efforts to speed up completion of activity – shift efforts to revising policy goal statements
- Walk through of current status, participation level, documents reviewed, and general review process
- Policy goal statement revision process:
 - Received 4 markups of the WSDOT CAT Policy Framework
 - Markups aggregated and discussed among subgroup members in two online discussions
 - Subgroup presented the draft revised policy goal statements at the August 12th subcommittee meeting
 - Received insightful feedback from subcommittee meeting attendees
 - Subgroup received 3 action items
 - Include resiliency in Goal 3 and Goal 8 statements
 - Include reliability in Goal 6 and as an overarching concept in the WA State CAT Policy Framework document
 - Remove security from Goal 7

- Subgroup members reviewed the statements after the August 12th meeting and incorporated action items, other edits for clarity and conciseness
 - Revisions presented today did not receive substantive feedback from most subgroup Requesting at this meeting to take a vote on whether to adopt the policy goal statements as a recommendation to move forward to the Executive Committee – to be presented to the Executive Committee on September 26th
- Walkthrough of the opportunities subcommittee members had to participate in Activity 1 up to this point and provide input
 - Volunteer as an Activity 1 subgroup member and actively revise the statements
 - Participate in webinar discussions
 - Conduct offline edits using the review process provided
 - Participate in subcommittee meetings where these statements were presented
 - Participate in the monthly subcommittee working group calls
 - Vote and provide comment on statements at this subcommittee meeting
- Overarching themes / notes for all goal statements:
 - Some of the concerns and ideas brought up in statement discussions will be addressed in strategies (next activity to take on) where they can be addressed in more detail / defined
 - “Movement of people and goods” was removed from goal statements, will be addressed in policy framework document preamble to holistically cover throughout document
 - How/that statements relate directly to cooperative automated transportation and autonomous vehicles will be addressed in policy framework document preamble to holistically cover throughout document
 - Specific feedback and suggested edits on each policy goal statement needs to be noted in voting tool comments to be taken into consideration
- Overarching group discussion:
 - Intent of reviewing statements today was to discuss and receive feedback but still vote on language as-is, rather than a group editing session
 - Some of the revisions presented today were made following the last Activity 1 subgroup meeting, some subgroup member were not available to review the most recent version.
 - Some suggested to postpone the vote by one week to allow other subgroup members time to review, discuss and agree
 - It was noted that subgroup members were given the opportunity to review and respond prior to this meeting, some did not have time to provide feedback
 - Voting process allows voters to provide comments. Voters can incorporate feedback given today as comments for each statement in the voting tool
 - Vote will be on aggregate of all policy goal statements, rather than voting to support/not support each specific statement
 - Executive Committee will be provided an aggregate vote results and with all comments as they were submitted. Depending on the result of the vote, this will be presented in the form of a formal recommendation or just as information on the process to date.
- **Goal 1 – Innovation:**

- Changes are grammatical
- Questions/Discussion: None.
- **Goal 2 – Shared Mobility:**
 - “encourage” and “incentivized” were similar, removed “encourage”
 - Removed intangible “shared mobility” – repeating title
 - Questions/Discussion:
 - Some attendees prefer August version of revisions
 - “Encourage” allows the opportunity to encourage private sector use, such as through employee shuttles
 - “Incentivize” is embedded in WA State’s commitment to high occupancy; incorporates benefit to users – Cost (fiscal/budgetary), time (time savings by taking HOV lanes), etc.
 - High occupancy should not be only focus, but should be included and defined
 - Transit
 - Passenger vehicles (e.g. 2/3+ HOV lanes)
 - Freight / commercial movements
 - Suggestion to add “autonomous” or “automated” to statement to address intention of this work group’s efforts
 - Several suggested to revert back to the August 20th version
- **Goal 3 – Economic Vitality and Livability:**
 - Replace “regional mobility” with “regional networks”
 - Removed repeating title language, replace with “to create resilient, multimodal local networks” – includes addition of resiliency per August action item
 - Creates a more tangible goal statement, separates state and local responsibilities
 - Questions/Discussion:
 - None.
- **Goal 4 – Infrastructure and Context Sensitive Street Design:**
 - Change “movement of people and goods” to “that enhance adjacent spaces”
 - Change “appropriate for the context” to “durable physical and digital networks”
 - Questions/Discussion:
 - Definition of adjacent spaces: Areas adjacent to infrastructure – pavements, sidewalks, ways for pedestrians and bicycles to get across infrastructure to the next adjacent space
 - Example: There is a state route, then a strip mall, then a river. How do pedestrians, bicycles, etc. get from one to the next?
 - Unknown at this time what entity(ies) would be responsible for managing adjacent spaces in this context
 - Some attendees prefer August version of revisions
 - If this goal statement is reverted back to August version, need to look for ways to incorporate long term maintenance and preservation (one of the August meeting action items)

Several suggested to further refine Goal 4 statement
- **Goal 5 – Land Use:**

- Can define “efficient” in the preamble.
- “Multi-modal development” is vague, refined to “support multi-modal connectivity to efficient local and regional networks”
- Questions/Discussion:
 - Some attendees prefer August version of revisions
 - “Connectivity to local and regional networks” is jargon. People understand “mobility of people and goods”.
 - Some attendees prefer current version of revisions
 - More inclusive
 - Jargon-based is acceptable
- **Goal 6 – Equity:**
 - Action item to incorporate availability and reliability, and not just reliably slow
 - Excellent way to describe the equity goal
 - Discussed competitive and efficient – Rolled back adjectives to “desirable”
 - Can define “desirable” in strategies
 - Put communities in lead instead of just serving them
 - Questions / Discussion:
 - Revisions highlight the need to turn this over to the communities, instead of dictating for them
 - Understanding who is in each subcommittee and on the Executive Committee, need to make sure that we engage these communities when we develop the strategies.
 - Have to be careful what we are saying at this table on their behalf
- **Goal 7 – Safety:**
 - August action item to incorporate physical resiliency
 - Replaced “increase safety” to “promote mobility options”
 - Replaced “support the movement of people and goods” with “reduce the rate of death and injury for individuals.”
 - Tried to create something more tangible
 - Questions / Discussion:
 - Suggest to replace “rate of death” with “frequency of death” (or fatalities)
 - Suggest to add reference to infrastructure back in – need to capture physical aspects of resiliency
 - TargetZero is already a state goal, this statement should align with that – “promote mobility options that achieve TargetZero” – zero accidents, zero congestion, zero emissions
 - Some attendees prefer August version of revisions
 - “increase safety” should be included – WSDOT’s goal is safety
 - “Promote” has a connotation for preference of certain options
 - New version has no reference to goods. Should be covered under preamble note on “movement of people and goods”
 - Safety subcommittee should take this goal statement on – Safety subcommittee staff support agreed
- **Goal 8 – Environment:**
 - August action item to address climate change aspects of resiliency

- Changed “minimize” to “reduce” – you can minimize something and it can still increase
- Replaced “energy conservation” with mitigate climate change”
- Want to be conscious of climate change policies so as not to be in conflict
- Questions / Discussion:
 - Some attendees prefer August version of revisions
 - “Energy conservation” was focused, “climate change” is more broad
 - Energy conservation and air quality mitigation are actionable, measurable. Difficult to put performance measures around climate change.
 - “reduce local and cumulative environmental impacts” instead of “reduce environment impacts”
 - Some attendees agree with clarification, provides more specificity
 - Some attendees prefer broader definition, inclusive of any/all
 - Should include “water quality” as well
 - There is a difference between energy conservation and climate change.
 - Energy conservation may mean an autonomous vehicle uses gas, but less gas
 - Climate change mitigation would veer in the direction of electrification of autonomous vehicles
 - One attendee stated that this goal should be removed, or entirely rewritten. "Cumulative environmental changes" should be removed (it is unclear what this means), as should "mitigate climate change." The 8/20 version had general agreement, "energy conservation" rather than “climate change”. Also, including "energy conservation" aligns the CAT goal with the state's transportation policy goal on Environment, which also includes "energy conservation."

- **Voting:**

- Voting tool was designed to take aggregate vote of all 8 policy goal statements
- 3 options for voting
 - 1 – Support
 - 2 – Can live with it
 - 3 – Cannot support
- Place to include specific comments – what would it take for voter to gain support for the statements?
- Question to group – Do we want to vote now, or leave the tool open for a few days and allow folks to vote offline?
 - What will the final product to the Executive Committee look like?
 - There are several options. For example, depending on results, Executive Committee might see all goals move forward or some goals move forward, some goals could be reverted back to the August revision etc.
 - Can we vote no on a specific statement and yes on the others?
 - This is an aggregate vote. Must vote “no” on the aggregate and list suggested changes in comments.

- Unless a voter, in general, agrees with all statements as written, do not vote “yes”.
- What happens when the results come back and everyone voted no? Are we stopping and reassessing, or pushing to the Executive Committee?
 - Receive feedback/comments from voting tool aggregate and communicate to Executive Committee
 - List of goals everyone agreed on
 - Other goals may need to be refined based on votes and comments received.
 - If goals are not supported by majority of voters, there will be no formal recommendation to Executive Committee in September
- Can voting take place offline? What is the timeframe?
 - Suggest voting by end of week. Looking to get materials to the Transportation Commission by September 20th for the Executive Committee.
- Some attendees suggested reverting some or all goal statements back to August revision versions as some Activity 1 subgroup members did not have time to review the language being presented today, and noted that subgroup members did reach consensus on the language presented in August
 - **DECISION:** Subcommittee members / meeting attendees are moving forward with a vote, using today’s language (“Proposed CAT Policy Goals for the 9-9-19 meeting”) as the starting point. Voting is staying open until noon on Friday, September 13th
 - **ACTION ITEM:** Subcommittee members / meeting attendees to access the online voting tool (per link provided in meeting materials and follow up email(s)) to vote on the policy goal statements, with comments, no later than noon on Friday, September 13th.
 - **ACTION ITEM:** Ted Bailey to reset online voting tool following meeting.
 - **ACTION ITEM:** Ted Bailey to send reminder of voting instructions to meeting attendees / subcommittee members with 3 versions of the CAT Policy Goal Statements side by side (9-9-19 Proposal, August 20th Version, WSDOT Original Version).

Activity 2: Project Selection Criteria

Presenter: Robert (Remote)

Materials: Activity #2 Update

Activity #2 Funding and State Requirement Master Table

- Objective: Develop project selection criteria and potential funding opportunities for C/AV projects
- Somewhat reliant on Activity 1 – without concrete goals, difficult to focus criteria to meet goals
- Developing a matrix that organizes/compares all states/localities’ selection criteria to determine what overlaps, and what is missing
- Will use matrix to develop draft project selection criteria for Washington
- As we make progress in developing policy goal statements (Activity 1), noticing they are following along the same themes that other states are concerned with.
- Next step is to look at funding opportunities (state, federal, etc.) and create a searchable tool to use as a one-stop-shop
 - Research and document what is useful for entities with projects they are looking to fund
 - What funding mechanisms to develop, consider or refine through this process
- Criteria matrix was sent to subgroup members to review and refine, the group added funding match, percentage of match, maximum award available and criterion to the matrix

- In total, 34 funding sources were identified, we have input data for 22
- The matrix also flags which of the 8 policy goals the grant program would be meeting / addressing
- Group Discussion:
 - Matrix is close to completion, dependent on when subgroup members have time to review and populate remaining information – matrix is living document, does not need to be a finished product to move forward
 - Activity 2 assesses grant programs in place, informing those grant program owners/developers on what types of things could be incorporated to accommodate AV-related projects
 - A descriptor field could be added to the matrix to flags how competitive AV-related projects could be right now
 - Don't necessarily want to change existing grant programs – received some pushback on idea at since many grant programs are already competitive and have limited funds
 - Is the subgroup finding grant programs that already encompass AV-related projects?
 - Yes. Programs such as the Advanced Traffic and Congestion Management Technologies Deployment (ATCMTD) program address AV-related projects.

Activity 3: Partnership and Collaboration Discussions with Private Sector

Presenters: Ted (in person) & John (remote)

Materials: Activity #3 Update

- Objective: Communicate with AV companies self-certified through DOL to test in WA state, find out how subcommittee can help, share information, collaborate.
- Reached out to 12 self-certified companies
 - Contact and responses separated into 2 categories:
 - 1 – Responses received
 - Local Motors (LM Industries Group)
 - Navya Inc
 - May Mobility
 - Waymo LLC
 - TORC Robotics
 - PACCAR Inc.
 - Peloton Technology, Inc.
 - 2 – Non-responsive (either no response or refusal)
 - NVIDIA Corporation
 - Drivent LLC
 - Simple Solutions
 - Dooblai LLC
 - Galilei
- Detailed feedback from responsive companies included in the Activity 3 Update document (included in meeting materials)
- No company that responded is currently testing on public roads in the State of Washington
 - No public road testing since the initial onset of Waymo and TORC Robotics in 2017
 - Companies shared a few reasons for no public road testing such as
 - Need funding and partnerships to conduct pilot deployments

- Noted the benefit to public entities to partner and provide some funding – pilot deployments could include infrastructure changes, such as signal upgrades and antenna installations to support AV operation,
 - Public sector endorsement of testing while maintaining a “light regulatory touch”
- Do any of the response companies plan on testing in the near term?
 - Peloton testing auto-follow capabilities in other states, no near-term rollouts planned in WA
 - PACCAR and Peloton looking at SAE Level 1 driver assistive truck platooning
- Anything Washington State can do to support AV testing and deployment efforts?
 - Maintain a regulatory-light environment
 - Better coordinate regulations – patchwork makes it difficult for companies to stay compliant
 - Define specific use cases the public sector would endorse
 - Restrict the establishment of corridors where AVs are specifically allowed or not allowed – makes it difficult to manage testing and deployment, hope AVs being tested/operated can operate on all roads
 - Establish minimum disclosure requirements - Competitive marketplace, do not want to provide data that shows insight in proprietary information / trade secrets
 - Determine and communicate where the public sector is looking to invest
 - Request for military-grade GPS installations on buildings to help with guidance systems
 - Review state statutes that inhibit use of TV screens for blind spot monitoring, and other uses
 - Dedicated public sector investment in partnerships and infrastructure, such as in DSRC / C-V2X, uniform pavement markings, and incentive programs
 - Increase clarity on the AV Work Group, relationship between Executive Committee and Subcommittees

Topic Closed.

ROUNDTABLE

All Meeting Attendees

- Co-chair: Appreciate all of the time and effort everyone is putting into this subcommittee and subgroup work. Sometimes we disagree, but that is good, that means folks are engaging.
- Appreciation conveyed for efforts to proactively reach out and engage with AV companies, seeing this as a partnership
- INRIX conducted a national study of freight corridors, and I-5 was identified as the best test for automated trucking in the country.
- Clarification – The AV Work Group is operating under the legislative bill that passed in 2018, as well as the original 2017 Governor’s Executive Order
 - There is value in being reminded of the spirit of the order. It is not a legislative mandate, but it is a meaningful document and should be taken into consideration in our efforts.

Upcoming Meetings: *Participate and/or listen in remotely*

- September 25th, 10am-3pm, Autonomous Vehicle Work Group **Executive Committee** TOUR - PACCAR Tech. Center
- September 26th, 10am-2pm, Autonomous Vehicle Work Group **Executive Committee** Meeting SeaTac Airport Conference Center in the International A Conference Room.
- October 15/16th, **Transportation Commission Meeting**, WSDOT HQ Olympia WA WSDOT HQ Building Nisqually Conf Room 310 Maple Park Ave SE Olympia WA

- December 6th, 9am-12pm: **Infrastructure and Systems Subcommittee**, WSDOT HQ Olympia WA
WSDOT HQ Building Nisqually Conf Room 310 Maple Park Ave SE Olympia WA
- December 17/18th, **Transportation Commission Meeting**, WSDOT HQ Olympia WA WSDOT HQ
Building Nisqually Conf Room 310 Maple Park Ave SE Olympia WA

Topic Closed.

MEETING ADJOURNED.