January 8, 2021

Dear Governor Inslee, and Members of the Senate & House Transportation Committees:

We are pleased to present to you the annual report for our state’s Autonomous Vehicle (AV) Work Group, created in the 2018 legislative session. RCW 47.01.510 requires the Transportation Commission to submit an annual report to the Governor and Legislature describing the progress of the AV Work Group and the Commission’s recommendations.

This report represents the culmination of extensive research, deliberation, and discussion in 2020 led by a 34-member Executive Committee made up of public, private, and non-profit organizations, and seven subcommittees led by nine different state agencies with the participation of nearly 500 stakeholders.

The AV Work Group effort is truly a broad-based, transparent, and inclusive process with stakeholders and industry experts driving the research, assessment, and determination of what our state decision makers need to consider in order to prepare for the safe operation of AV’s on our public roadways in Washington State.

AV’s are present in our state today. Currently, six companies are self-certified with the Department of Licensing to test AV’s on our roadways. As private industry continues to bring unprecedented technology to our world of mobility, the efforts of this Work Group help support the achievement of public safety while encouraging innovation and partnership. This report sets forth the building blocks to accomplish this.

We look forward to your review and input.

Sincerely,

Jerry Litt, Chair
Washington State Transportation Commission

James A. Restucci, Chair
Autonomous Vehicle Work Group Executive Committee
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Foreword

Hindsight is 20-20, and a look back at the progress made within the Work Group over the year 2020 will undeniably reveal some deviations from what was expected at the end of last year. We would be remiss to recount the year without reflecting on the impact of the COVID-19 pandemic, which has forced a change of pace for the Work Group, and has also motivated a reevaluation of Work Group focus.

Priorities evolved quickly when the first known cases of COVID-19 were identified in Washington State. In the interest of protecting the health and well-being of all those involved in the Work Group, all meetings were swiftly transitioned from in-person to remote formats. As with many others around the world, this shift towards remote working was met with some bumps along the way. Technical challenges had to be overcome to enable virtual meetings, and new tools were adopted to enable digital engagement and collaboration across Executive Committee and subcommittee members. The Work Group sought and received an extension for the Annual Report to the Legislature due date from November 15, 2020 to January 8, 2021. This extension allowed the Work Group to hold an additional Executive Committee meeting this year, giving subcommittees more time to develop and refine recommendations.

Agencies and organizations comprising the subcommittees had incredible challenges to meet due to the pandemic which required significant staff focus, and in some cases left little time for anything other than mission-critical initiatives. For some subcommittees, these stumbling blocks resulted in fewer meetings, and greater difficulty progressing on recommendations. Other subcommittees used this as an opportunity to hold shorter, more frequent meetings, in turn fostering more active collaboration and discussion.

At the same time, the pandemic has also served to highlight the vulnerability that many communities face in meeting fundamental needs. Access to food and basic resources was particularly difficult in the early months of the pandemic, especially as emergency restrictions had to be put in place to slow the spread of the virus, and as public transport services were scaled back according to projected revenue and funding reductions. While developments in the autonomous vehicle (AV) space have similarly experienced short-term disruption, one area of growth has been in the deployment of AVs to support the delivery of goods and resources to those in need. Use cases such as these bring attention to the possibilities that AVs could bring, and highlight the importance of working collaboratively with industry to shape outcomes in ways that best serve the needs of our communities.

In light of these challenges, the Executive Committee sought the opportunity to identify changes to the industry brought about by the pandemic, and to reflect on priorities for the Work Group to tackle in the current environment before its sunset in 2023. The result is a clarified path forward for the Work Group, providing greater detail on potential actions for all subcommittees to undertake to address the most pressing needs for the state of Washington. This will serve as a critical tool to further Work Group progress in the coming years.
The autonomous vehicle (AV) industry continues to evolve rapidly, with new use cases and technologies being tested and deployed across the country. As of late 2020, six companies are self-certified with the Washington Department of Licensing to test AVs on Washington’s public roadways. Short- and long-term implications of AV technologies are continuing to evolve and still widely unknown, presenting the need for Washington State to explore AV regulatory approaches and policy changes to address these potential impacts.

The Washington State Autonomous Vehicle Work Group, convened in 2018, continues to promote a statewide dialogue to explore the potential impacts and benefits AV technologies may bring to the state. Despite the challenges of this year, 2020 has also been an opportunity for the Work Group to refocus and define a clearer path forward for its remaining purview, through 2023.

The Work Group spent 2020 continuing to educate on the AV industry, and develop an understanding of the impacts from the pandemic and other industry shifts. The Work Group also explored several topics that crosscut the interests and purviews of its members – including policy and regulatory changes to address AV testing and operations, AV testing and reporting requirements, and the need for balance between regulation and innovation – which fostered collaborative discussions and work sessions to refine the Washington State AV regulatory approach.

Work Group subcommittees brought forth eight recommendations in 2020, illustrating that even during this challenging year, the Work Group continues to charge forward to meet its objectives and advance the discussion. More information on these recommendations can be found in section 6 of this report.

2020 Work Group Accomplishments

Meetings in 2020
- 4 Executive Committee meetings
- 36 Subcommittee meetings

Recommendations
- 8 recommendations brought forth by subcommittees (See Table 1)

Education and Engagement Presentations
- AV Industry panels
- AVs in the COVID-19 era
- Best practices for state AV policy
- Guidance and regulations on safe design and testing of AVs
- National developments in Cooperative Automated Transportation
- Varying state approaches to AV policies and regulatory frameworks

Refocusing Path Forward
- Identified Work Group focus areas and priority actions
- Developed achievable activities for subcommittees to pursue
- Introduced Communications roadmap, milestones, and tools
2020 Recommendations

All recommendations brought forth by subcommittees and the Executive Committee are advanced to the Washington State Transportation Commission (WSTC). The WSTC, in turn, advances these recommendations to the Legislature and Governor, via this annual report. As a matter of maintaining a complete public record of the process and results, recommendations are advanced to the Legislature and Governor regardless of the Executive Committee's or the WSTC's actions on the recommendation.

To this end, provided below are all the recommendations brought forth by the Work Group in 2020 for the Legislature and Governor to consider, along with the actions taken by the Work Group's Executive Committee and the WSTC.

Table 1: Recommendations Advanced to the Executive Committee and WSTC for Consideration

<table>
<thead>
<tr>
<th>Source</th>
<th>Recommendation</th>
<th>Executive Committee Action/ Recommendation</th>
<th>WSTC Action/ Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Subcommittee</td>
<td>Clarify the State's definition for autonomous vehicle</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Safety Subcommittee</td>
<td>Requirement for a Law Enforcement/ First Responder Interaction Guide</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Safety &amp; Licensing Subcommittees</td>
<td>Repeal Section 1 of RCW 46.37.480 on TV screens for companies conducting driverless testing</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Licensing Subcommittee</td>
<td>Amendment of RCW 46.92.010 to enable rulemaking by the Department of Licensing for the Self-Certification Program</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Health and Equity Subcommittee</td>
<td>Conduct structured public outreach</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Health and Equity Subcommittee</td>
<td>Identification of testing locations</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Infrastructure and Systems Subcommittee</td>
<td>Increased investment on enhanced roadway pavement markings</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Infrastructure and Systems Subcommittee</td>
<td>Support WSDOT’s work zone data initiative</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
</tbody>
</table>
1 Introduction

The autonomous vehicle (AV) industry continues to evolve rapidly, with new use cases and technologies being tested and deployed across the country. As of late 2020, six companies are self-certified with the Washington Department of Licensing to test AVs on Washington’s public roadways. Short- and long-term implications of AV technologies are continuing to evolve and still widely unknown, presenting the need for Washington State to explore AV regulatory approaches and policy changes to address these potential impacts.

Substitute House Bill (SHB) 2970—which was signed into law on June 7, 2018—directs the Washington State Transportation Commission (WSTC) to appoint and convene an executive and legislative Work Group to gather information and develop policy recommendations to address the operation of AVs on public roadways in the State of Washington. The Work Group and the WSTC are charged with the following:

► Follow developments in AV technology and related policies;
► Explore approaches to modify state policy, rules and laws to further public safety and prepare for the emergence of AV technology;
► Share information on AV technology and policies with interested stakeholders; and Develop and provide recommendations based upon the input from the Work Group and submit them along with a progress report to the Governor and Legislature by November 15\(^1\) each year.


Purpose of the Work Group

The primary purpose of the Work Group is to identify regulatory, policy, and operational changes necessary to enable and ensure the safe operation of AVs on public roadways, and provide recommendations to the WSTC. The WSTC, in consideration of the Work Group’s recommendations, is required by law to make recommendations to the Legislature and the Governor each year.

The Work Group will execute its charge through a five-year process of gathering information and making fact-based determinations on actions necessary to support this objective. This collaborative and inclusive process is designed to engage a wide range of public and private sector stakeholders in the discussion to elicit a diverse set of opinions and insights. The process is also meant to be deliberative, recognizing that while this technology is at our doorstep, the state has time to achieve determinations through this process, rather than making premature changes without due consideration.

Purpose of this Document

As required under the enabling legislation, this document represents a summation of the Work Group’s efforts during the 2020 calendar year. This annual report discusses shifts in the AV industry during 2020, documents the organization and composition of the Work Group, summarizes the key points of discussion and decisions as part of various Work Group meetings, outlines recommendations brought forth in 2020, and the Work Group’s path forward for the remainder of its purview, through 2023.

\(^1\) The Work Group sought and received an extension for the 2020 Annual Report to the Legislature due date from November 15, 2020 to January 8, 2021.
AV Development in 2020

By some projections, the year 2020 was supposed to be a milestone year for AV development. Some automakers and technology companies had anticipated that 2020 would be the year when AV technology would be functionally ready for driverless mode—by conservative estimates, at least for highway driving, and by more ambitious estimates, as self-driving robotaxis. Neither outcome fully manifested this year, and the economic downturn caused by COVID-19 pandemic has led to layoffs and financial constraints that have slowed progress across many industries, including the AV field. At the same time, new developments in the AV field over the course of 2020 also signaled progress in different ways, including advancements in testing and new use cases.

This section highlights some of the developments across the AV and broader transportation fields that have come about in 2020. While most occur outside of Washington State, these developments have implications for the future of AVs in the state.

Sweeping cuts across the automotive industry

Economic challenges created by the COVID-19 pandemic has contributed to job cuts and layoffs across many different sectors, and the automotive industry has been similarly impacted. Adding to existing pressures from technological change that had been set to eliminate more than 80,000 jobs across the auto industry over the coming years, weakened sales have led to sweeping cost reductions and job cuts that, by mid-2020, amounted to more than 83,853 jobs. These reductions have extended to the AV development space, as companies made cuts to both development and testing staff. Early on in the pandemic, Zoox laid off about 120 of its backup drivers, and another 10% of its full-time employees; Cruise laid off about 150 employees, or about 8% of its workforce; and BMW cut about 6,000 jobs worldwide and stopped funding its self-driving car program.

Continued advancement despite delays

Reduced staffing and budgets are expected to result in at least near-term delays for AV development, and expectations around when AVs will arrive on the market or the form that it will take continues to evolve. Among the AV developers hindered by the pandemic was the Ford Motor Company, which shared that they would delay the launch of their AV service to 2022 as they work towards understanding the long-term impact of COVID-19 on customer behavior. BMW and Mercedes-Benz went a step further and put their self-driving collaboration on an indefinite hold. While some industry commentators anticipate that these delays will contribute to a shift in focus from full autonomy (SAE Level 5) towards improving more easily attainable levels

References:
of automation (SAE Levels 4 and below), there have also been efforts from AV developers that indicate a continued push towards advancing autonomy. For example, companies such as Waymo and Ford recently released open data sets of information collected during AV testing to challenge developers to come up with faster and smarter self-driving algorithms.\(^8\) Cruise announced in October 2020 that they would advance to driverless road testing in San Francisco by the end of the year,\(^9\) and Tesla forged ahead with pushing out beta software updates to some drivers said to enable further automated driving assistance systems built into existing vehicles.\(^10\) All this suggests that, despite some setbacks, AV development is likely to continue, and regulators will need to be ready for the coming changes.

**Rise in automated goods delivery**

Despite the challenges that have emerged, the climate of social distancing created by the pandemic also highlighted some valuable use cases of AV technology, particularly in the area of goods movement. As stay-at-home orders were put in place to slow the spread of COVID-19, challenges emerged around getting people access to basic needs, including food and household supplies. Alongside an increased reliance on delivery services, there has also been a rise in deployment of automated delivery vehicles. This has ranged from small-sized sidewalk delivery robots to self-driving delivery vehicles that are able to operate on public roadways, as well as passenger AVs that have been repurposed to support deliveries. For example, Nuro has deployed their R2 automated on-road vehicle to assist with contactless delivery of medical supplies at temporary healthcare facilities in San Mateo County and Sacramento,\(^13\) Optimus Ride has helped to shuttle food boxes to families in need in Washington, DC,\(^14,15\) and Beep mobility redeployed their vehicles to help deliver food to healthcare workers at the Orlando VA Medical Center.\(^16,17\) Amazon also recently acquired Zoox—an AV company—which signals potential advancement towards automation for the company.\(^18\)

**Growing public acceptance**

The concept of safety in transportation has taken on new meaning in the time of the COVID-19 pandemic, as concerns around the spread of disease have put emphasis on reducing person to person interactions across mobility options. The potential for contactless on-demand mobility through the use of AVs has become an attractive notion, especially as access for some parts of the population has been limited by transit service reductions. While broad-scale adoption of AVs is still expected to be a slow process, there have also been some indications that the public is becoming more comfortable with the idea of AVs. In early 2020, a study published by AAA indicated that

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\(^8\) [https://spectrum.ieee.org/transportation/self-driving/surprise-2020-is-not-the-year-for-selfdriving-cars](https://spectrum.ieee.org/transportation/self-driving/surprise-2020-is-not-the-year-for-selfdriving-cars)


\(^12\) [https://medium.com/nuro/helping-the-heroes-during-covid-19-49c189f216a2](https://medium.com/nuro/helping-the-heroes-during-covid-19-49c189f216a2)


\(^17\) [https://techcrunch.com/2020/06/26/amazon-to-acquire-autonomous-driving-startup-zoox/](https://techcrunch.com/2020/06/26/amazon-to-acquire-autonomous-driving-startup-zoox/)
only about 12% of drivers would trust riding in a self-driving car. However, a more recent report by Motional—a technology company created by Hyundai and Aptiv—suggests that nearly one in five consumers are now more interested in self-driving vehicles now than they were before the pandemic. Though few data points exist to fully understand the shifting sentiment, emerging commentary from the industry reflects enthusiasm for the ways in which AVs for both goods and people movement could be leveraged to overcome gaps in access and mobility.

► Each subcommittee is administered and supported by the state agencies who have jurisdiction over the subcommittee topical area (e.g. Dept. of Licensing administers and supports the Licensing Subcommittee).
► Each subcommittee is co-chaired by one public and one private sector representative.
► All meetings are noticed and open to the general public for participation.

20 https://motional.com/mobilityreport/
A Collaboration Towards Future AV Policy

The Work Group serves as a forum for collaboration, education, and information sharing among public sector leaders and private stakeholders. It has been structured to foster a bottom-up approach to AV policy development, where ideas are generated and curated through open discussions across seven subcommittees, and then advanced for discussion and vetting by the Work Group Executive Committee—comprised of representatives from a diverse set of public, private, and non-profit organizations. Vetted recommendations from the Work Group are then handed off to the WSTC for review and discussion prior to being presented to the Governor and Legislature. By the time a recommendation is put before the Governor and Legislature, it has already been thoroughly reviewed and curated by experts who bring a wide range of perspectives. This bottom-up approach, along with the organizational structure of the Work Group, is illustrated in the figure below.

Figure 1: Washington State Autonomous Vehicle Work Group Structure
The Work Group is governed by self-created and adopted policies and procedures for the Executive Committee and Subcommittees. These policies and procedures can be found on the Work Group website.\footnote{https://avworkgroupwa.org/} In line with the broader Work Group, the general jurisdiction of the subcommittees extend out to a sunset date of 2023. As shown in the figure above, each subcommittee is led by at least one Washington State agency, and co-chaired by a public and private co-chair.

### Executive Committee

Thought leaders on the Executive Committee contribute to the Work Group by applying diverse political, public, non-profit, and private sector perspectives on ideas and recommendations generated by the Subcommittees. Membership in the Executive Committee is established by current law, and allows additional members to be appointed by the WSTC as needed. The current membership of the Executive Committee is listed below.

**Table 2: Executive Committee Membership**

<table>
<thead>
<tr>
<th>Name and Title</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LEGISLATIVELY APPOINTED MEMBERS</strong></td>
<td></td>
</tr>
<tr>
<td>James A. Restucci, Work Group Chair and Commissioner</td>
<td>Washington State Transportation Commission</td>
</tr>
<tr>
<td>Shiv Batra, Work Group Vice Chair and Commissioner</td>
<td>Washington State Transportation Commission</td>
</tr>
<tr>
<td>Senator Joe Nguyen</td>
<td>Washington State Legislature</td>
</tr>
<tr>
<td>Senator Mona Das</td>
<td>Washington State Legislature</td>
</tr>
<tr>
<td>Senator Curtis King</td>
<td>Washington State Legislature</td>
</tr>
<tr>
<td>Senator Ann Rivers</td>
<td>Washington State Legislature</td>
</tr>
<tr>
<td>Representative Zack Hudgins</td>
<td>Washington State Legislature</td>
</tr>
<tr>
<td>Representative Shelley Kloba</td>
<td>Washington State Legislature</td>
</tr>
<tr>
<td>Representative Mary Dye</td>
<td>Washington State Legislature</td>
</tr>
<tr>
<td>Representative Matt Boehnke</td>
<td>Washington State Legislature</td>
</tr>
<tr>
<td>John Batiste, Chief</td>
<td>Washington State Patrol</td>
</tr>
<tr>
<td>Mike Kreidler, Insurance Commissioner</td>
<td>Office of the Insurance Commissioner</td>
</tr>
<tr>
<td>Teresa Berntsen, Director</td>
<td>Department of Licensing</td>
</tr>
<tr>
<td>Roger Millar, Secretary</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>Charles Knutson, Senior Policy Advisor</td>
<td>Governor's Office</td>
</tr>
<tr>
<td><strong>MEMBERS ADDED BY WSTC</strong></td>
<td></td>
</tr>
<tr>
<td>Joel Sacks, Director</td>
<td>Department of Labor &amp; Industries</td>
</tr>
<tr>
<td>Suzan LeVine, Commissioner</td>
<td>Employment Security Department</td>
</tr>
<tr>
<td>Jim Weaver, State Chief Information Officer</td>
<td>Office of the Chief Information Officer</td>
</tr>
<tr>
<td>Laura Johnson, Director of Policy and Technology for the Division of Disease Control and Health Statistics</td>
<td>Department of Health</td>
</tr>
<tr>
<td>Pam Pannkuk, Acting Director</td>
<td>State Traffic Safety Commission</td>
</tr>
<tr>
<td>Dr. Yinhai Wang, Director</td>
<td>University of Washington STAR Lab</td>
</tr>
<tr>
<td>Justin Leighton, Executive Director</td>
<td>Washington State Transit Association</td>
</tr>
<tr>
<td>Tom Alberg, Co-Chair</td>
<td>ACES Northwest</td>
</tr>
<tr>
<td>Sam Zimbabwe, Director</td>
<td>City of Seattle Transportation Department</td>
</tr>
</tbody>
</table>

\footnote{Jim Restucci served as Acting Chair for the Executive Committee from January 2020 to October 2020, and was officially voted in as Chair on November 12, 2020.}
<table>
<thead>
<tr>
<th>Name and Title</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curt Augustine, Senior Director of State Affairs</td>
<td>Alliance for Automotive Innovation</td>
</tr>
<tr>
<td>Brenda Wiest, Legislative Director</td>
<td>Teamsters Local 117</td>
</tr>
<tr>
<td>Todd O’Brien, Public Works Director</td>
<td>Adams County</td>
</tr>
<tr>
<td>Jessica Ramirez, Director of Community Engagement</td>
<td>Puget Sound Sage</td>
</tr>
<tr>
<td>Bryan Mistele, CEO</td>
<td>INRIX</td>
</tr>
<tr>
<td>John Milbrath, VP Member Services</td>
<td>AAA</td>
</tr>
<tr>
<td>Bryce Yadon, State Policy Director</td>
<td>Futurewise</td>
</tr>
<tr>
<td>Caleb Weaver, Director of West Coast Public Affairs</td>
<td>Uber</td>
</tr>
<tr>
<td>Steve Gordon, Principal</td>
<td>Gordon Trucking</td>
</tr>
<tr>
<td>Annabel Chang, Head of State Policy &amp; Government Relations</td>
<td>Waymo</td>
</tr>
<tr>
<td>Anna Zivarts, Director of Rooted in Rights</td>
<td>Disability Rights Washington</td>
</tr>
</tbody>
</table>
Executive Committee

The Executive Committee spent 2020 continuing to educate on the AV industry, impacts from the pandemic and other industry shifts, and the balance between regulation and innovation. The Executive Committee also reevaluated the Work Group’s path forward, discussed in more detailed in section 5. A summary of information gathered in 2020 is below:

► **AV Industry Panels:** Industry representatives shared their insights and experience testing in other states, offered input into Washington State's current law on AV's, and provided overviews of their work, products, and future plans.

► **Shifts in the AV Landscape:** The UW School of Law Public Policy Clinic presented on AV policies and initiatives across the U.S., including how different states are acknowledging and/or regulating safety, testing, public education, liability and insurance, data and privacy concerns, local preemption, and health and equity concerns.

► **Balance Between Regulation and Innovation:** Representatives from California and Arizona presented on their respective AV regulatory frameworks, shifting between heavy and light frameworks respectively, which impact how the industry is engaging with each state. The Reason Foundation presented on the 10 Best Practices for State Automated Vehicle Policy, which among others, acknowledges the need for a standard vocabulary, an audit of existing motor vehicle codes to identify and remove barriers, and to prepare for an extended period of uncertainty as this is still a new industry and is advancing at a rapid pace. The American Association of Motor Vehicle Administrators (AAMVA) presented on their recently published Safe Testing and Deployment of Vehicles Equipped with Automated Driving Systems Guidelines Edition, which provides a set of voluntary recommended guidelines for both jurisdictions and manufacturers and other entities, aimed at balancing current public safety with the advancement of vehicle innovations to reduce crashes, fatalities, injuries, and property damage. A new standard was also introduced to the Executive Committee, the ANSI/UL 4600 Standard for Safety for the Evaluation of Autonomous Products, a self-driving car safety case assessment that takes a goal-based approach to determining how safe an automated technology has been designed.

More information on Executive Committee meeting presentations can be found on the AV Work Group website: https://avworkgroupwa.org/resources.

Discussions Converged Across AV Work Group Subcommittees

Several topics crosscut the interests and purviews of multiple subcommittees, fostering collaborative cross-subcommittee discussions and work sessions, and resulted in recommendations supported by multiple subcommittees.

### Definition of “Autonomous Vehicle”

The need for standardized terminology in the AV space is an international conversation. Presentations given to the Executive Committee have highlighted this need for consistency among jurisdictions developing AV policy, as well as at the federal level and among the AV industry. The Work Group has explored this topic, with resulting recommendations from both the Licensing and Safety Subcommittees this year to define the term “autonomous vehicle” as it is referenced in both the Governor’s Executive Order 17-02 and in House Bill (HB) 2676 which was enacted into law earlier this year. The Licensing Subcommittee recommended the need to define the term “autonomous vehicle” as well as provide other clarifications in the Department of Licensing’s AV Self-Certification Pilot Program, through rulemaking authority given to the Department. The Safety Subcommittee also recommended that the term “autonomous vehicle” refer only to the Society of Automotive Engineer (SAE)
4 — 2020: A Year Focused on Engagement and Education

**J3016 driving automation levels** 26 4 and 5, which refer to automated vehicles that do not require a driver to take over the driving task. Clarity of terminology, as well as what levels of automation Washington AV policy refers to removes ambiguity or incorrect interpretation.

**ULC Automated Operation of Vehicles Act / HB 2470 (introduced)**

At the end of 2019, the Washington State Transportation Commission requested the subcommittees review what was to become House Bill (HB) 2470 27 (2020 legislative session) and provide feedback. Multiple subcommittees discussed HB 2470, which was modeled after the Uniform Law Commission (ULC) Automated Operation of Vehicles Act, and developed a suite of feedback. The feedback represents the diverse perspectives of subcommittee members across multiple domains, industries, and interests, and is sometimes conflicting. Consolidation of subcommittee feedback on HB 2470 was provided by the Licensing Subcommittee 28 and the Safety Subcommittee 29.

**HB 2676, Section 2: Testing and Reporting**

Multiple subcommittees discussed the 2020 enacted HB 2676 and potential updates and amendments to further support the safe testing of AVs on Washington public roadways. Subcommittee discussions mainly focused on Section 2 “Testing and Reporting”, which does not go into effect until October 2021. Key points of discussion included:

- There is a need for balance between the collection of data and the protection of proprietary information. The public and state agencies benefit from more data, to better understand and evaluate AV technologies, their progress, and potential impacts and effects on safety. The industry, however, needs to safeguard proprietary information to maintain competitiveness; There are also other sources, such as federal voluntary reporting, where this type of information could be obtained so companies do not have to report the same information to multiple entities.

- The annual collision report would provide important data points. The report’s intent is to develop a complete dataset to understand potential issues more fully. While an AV testing vehicle may not be at fault according to police reports, if a particular company’s vehicles are repeatedly involved in similar types of incidents (such as being rear-ended), this may point to other underlying issues that would be of interest to lawmakers and the public.

- A law enforcement interaction plan is critical to support law enforcement and first responders when they interact with an AV, whether proactively through a traffic stop or reactively because of an incident or crime. Discussions on this need resulted in the Safety Subcommittee recommending this be added as a requirement for companies testing Level 4 and 5 AVs without a safety driver, prior to conducting testing.

**Cooperative Automated Transportation (CAT) Policy Framework**

In 2019, eight CAT policy goals were adopted by the Work Group and the Transportation Commission, based on recommendation from the Infrastructure & Systems Subcommittee. Following this adoption, the Infrastructure & Systems Subcommittee drafted interim strategies and illustrative actions to further refine a statewide CAT Policy Framework. In April 2020, the Infrastructure & Systems Subcommittee held a workshop that included representatives from the other six subcommittee to informationally rank drafted strategies and actions, and gather additional input and new strategies and actions to include in the framework. The other six subcommittees were then encouraged to evaluate and discuss their relevant policy goal(s), strategies and illustrative actions and provide input and revisions to ensure the statewide CAT Policy Framework reflected the Work Group as a whole, and diverse set of perspectives and priorities. Subcommittees will continue to discuss and identify strategies and actions and additional policy goals as needed.

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26 SAE J3016 Levels of Driving Automation Standard: https://www.sae.org/standards/content/j3016_201806/
28 Licensing Subcommittee June 22, 2020 Meeting Minutes - HB2470 feedback pages 3-11: https://oohwstcavworkgroup.blob.core.windows.net/media/Default/documents/licensing-subcommittee/Meeting_5/WSTC_AWG_Licensing_Subcommittee_Meeting_5_Minutes.pdf
Subcommittees

Infrastructure & Systems Subcommittee

Coming in to 2020, the Infrastructure & Systems Subcommittee continued to execute its work plan, focusing on three key activities:

► Activity 1: Develop CAT Policy Framework with policy goals, strategies, and illustrative actions based on local, regional, and national “best practice” policy examples.
   - Draft strategies and illustrative actions were developed in early 2020
   - A workshop was held on April 1, 2020 with members and representatives from many stakeholder and interest groups and the other six subcommittees to gather additional feedback, as well as new strategies and actions
   - Subgroup conducted a fatal flaw review of the resulting strategies and actions, and an updated inventory of strategies and illustrative actions was presented to the subcommittee

► Activity 2: Develop project selection criteria and discuss potential funding options to enable the selection of near-term pilot deployment proposals and projects.
   - Incorporating results from Activity 1 efforts, pilot evaluation criteria were compiled and refined, and the feasibility of the criteria were assessed
   - The subcommittee continued to compile an inventory of funding opportunities and requirements and how they could support CAT initiatives

► Activity 3: Partnership and collaborative discussions with private sector companies certified for testing in WA
   - Results from collaborative discussions were compiled into open dialogue survey results, and an open dialogue survey template was developed for future discussions
   - This activity was transitioned to the Licensing Subcommittee to lead future conversations as the agency managing the AV self-certification pilot program

Liability Subcommittee

The Liability Subcommittee met five times over the course of 2020. Much of the subcommittee's efforts this year were focused on understanding the state of current technology, particularly advanced driver assistance systems (ADAS) already used in commercially available vehicles. Meetings included several presentations and discussions with industry experts who presented on topics such as experiences with current automated driving systems, onboard data collection and diagnostic systems, access to data, and vehicle control. The subcommittee also held a discussion on the Automated Operation of Vehicles Act by the Universal Law Commission (ULC).

Key issues that emerged from the subcommittee's discussions included considerations around the assignment of liability under various driving conditions and states of autonomy or vehicle control, as well as access to data from the vehicles. In particular, for assisted driving systems that are currently present in vehicles, there are challenges in understanding whether such systems are active at the time of an incident.

Moving forward, the Liability Subcommittee will continue to track progress in other jurisdictions to determine how liability can be determined for AVs, and to understand other implications relevant to liability. The Subcommittee also intends on exploring issues around insurance and criminal liability as it relates to AVs, and will look to develop recommendations around the data requirements for liability termination, and how to define a driver when considering travel by AVs.

Licensing Subcommittee

The Licensing Subcommittee explored several topics related to the licensing and regulation of AVs in Washington, including how it may differ based on type of AV (e.g. with safety driver vs. without, agricultural vehicles, highway use).

HB 2676 Minimum Requirements for the Testing of Autonomous Vehicles

House Bill (HB) 2676 was passed in the 2020 Legislative session, and puts further parameters around the AV Self-Certification Pilot Program administered by the Washington State Department of Licensing (DOL), which also serves as the lead agency for the Licensing Subcommittee. Section 1 focuses on minimum insurance requirements, which was informed by

Shifting to Education Mode

Mid-2020, the subcommittee identified the need to transition into education mode to better understand the AV landscape, implications, and opportunities for information. Subsequent subcommittee meetings had an educational focus, which proved fruitful as two educational presentations given at the September meeting – improving pavement markings & the WSDOT real-time work zone initiative – led to the subcommittee developing recommendations to support and advance these initiatives.
the Liability Subcommittee’s recommendation in 2019. The DOL implemented HB 2676 Section 1 in June 2020, resulting in six companies being self-certified with the appropriate insurance in place to test AVs on Washington public roadways; some previously self-certified companies were removed from the list due to no longer testing in the state, no longer in business, etc. Section 2 of HB 2676 focus on minimum reporting and law enforcement interaction requirements – being implemented in October 2021. The Licensing Subcommittee evaluated the language in HB 2676 and potential future updates as the DOL self-certification program and AV industry continue to evolve. This evaluation resulted in the subcommittee developing a recommendation for the Legislature to grant the DOL rulemaking authority, so the DOL can manage implementation-related aspects of the self-certification program without needing to go through the full legislative process. This allows the program to be flexible as the industry and technology advance at a rapid pace.

**Other Jurisdictional Regulatory Frameworks**
The Licensing Subcommittee evaluated other jurisdictions’ AV regulatory frameworks, such as those in California, Arizona, and the United Kingdom. This evaluation highlighted some key points for further consideration, including how a light versus heavy regulatory approach affects interest from and collaboration with the industry, the need for a clear path to deployment to encourage continued engagement from the industry, and the complexity of how different levels of government should interact with and regulate AVs.

**Safety Subcommittee**
The Safety Subcommittee leveraged the need for virtual meetings to hold shorter, more frequent meetings in 2020. These meetings were a mix of educational presentations and working sessions. Educational presentations included learning about the latest automated technology developments from the Consumer Electronics Show (CES) 2020, hearing from the California Highway Patrol on their experience with automated vehicle testing, and getting a presentation on the AAA’s study on pedestrian detection ADAS and its level of readiness for deployment.

**Evaluating Existing and Potential Legislation**
The subcommittee held various work sessions to gather subcommittee feedback on a variety of topics, with a focus on current and potential AV-related legislation with safety implications:

- HB 2470: The subcommittee reviewed all sections of HB 2470 and gathered feedback that reflect various, and sometimes conflicting perspectives of subcommittee members, providing a comprehensive catalog of member feedback.
- HB 2676: Implications of the current language on safety as well as the potential for amendments to support or advance safety, such as the Safety Subcommittee’s recommendation to require a law enforcement / first responder interaction guide
- Legislation needing reform: Carrying over from discussions in 2019, the subcommittee developed a recommendation to repeal RCW 46.37.480 (1) Television Viewers as it creates unnecessary barriers to AV testing and deployment, and newer RCWs (namely RCW 46.61.672 and 46.61.673) address the distracted driving components

One of the subcommittee’s 2019 initiatives, developing an AV Education Plan, was put on hold during 2020 and will be picked back up with the Washington Traffic Safety Commission and supported by the Safety Subcommittee in 2021.

**Systems Technology & Data Security Subcommittee**
The System Technology & Data Security Subcommittee focused this year on gaining a better understanding of existing cybersecurity, privacy, and data standards and best practices that could be leveraged in the AV space without creating something new.

**Cybersecurity Workshop**
The subcommittee held a cybersecurity workshop with technology experts to identify AV-specific cybersecurity and data privacy considerations and current best practices. Key takeaways from the workshop included the recommendation to leverage existing standards where possible, to recognize that connectivity introduces higher cybersecurity risk and not all AVs are connected, and that this risk goes beyond the vehicle.
itself and expands to downstream interfaces and systems. The subcommittee continues to explore near-term steps that can be taken to identify cybersecurity needs relative to AVs and to address gaps for transportation systems and services regarding cybersecurity.

**Washington Privacy Act**

The subcommittee is also engaged in the development and refinement of the Washington Privacy Act, draft legislation that has been introduced in past legislative sessions, and is planned to be introduced again in the upcoming session. There are some specific considerations in the Act that are unique to AVs, such as the fact that some data collected by the AV is not related to the individual(s) in the vehicle but rather about other vehicles and people within the range of the AV’s external cameras and sensors. The subcommittee and its members will continue to track the progress of this Act and engage in discussions with Legislators, consumer protection groups, industry, and other interested and impacted stakeholders.

**Leveraging Existing National Standards**

The subcommittee identified several standards and frameworks to focus on in future meetings to continue exploring what is already out there that can be applied to AVs without having to invent the wheel.

- ANSI/UL 4600 Standard for Safety for the Evaluation of Autonomous Products (“UL4600”), how the standard is evolving, and at what point state policy should reinforce this type of standard
- International Organization for Standardization (ISO) standards specific to coding that could apply to AVs
- Evaluate the National Highway Traffic Safety Administration (NHTSA) and National Institute of Standards and Technology (NIST) cybersecurity frameworks

### Health & Equity Subcommittee

The Health & Equity subcommittee was established by WSTC in July 2019. Originally a part of the Safety subcommittee, the Health & Equity subcommittee was created to ensure that the health benefits of automated mobility are equitably distributed, and that negative impacts are not disproportionately borne by historically marginalized communities. Over the course of 2020, the subcommittee met on a monthly basis, primarily through digital platforms.

**Confirmation of Subcommittee Charter and Work Plan**

As a new subcommittee, discussions during the early part of 2020 revolved around confirmation of a subcommittee charter, and the development of a workplan. The work plan outlines a set of seven actions for the subcommittee to progress, which included:

- Develop a comprehensive list of terms and overarching operating goal related to AV Health and Equity.
- Establish baseline of existing transportation system inequities through review of existing literature.
- Identify a checklist or tool to evaluate equity in proposed policies through review of existing checklists/tools.
- Review equity policy recommendations from California, Oregon, and other states to identify ones that may be useful in Washington.
- Review equity aspects of policy recommendations from other WSTC AV subcommittees, as they become available.
- Seek guidance and resources for improving community engagement of historically marginalized populations for Health and Equity Subcommittee.
- Select health and equity policy recommendations and test with equity checklist/tool.
- Develop communications strategy to promote Subcommittee’s policy recommendations to other Subcommittees and to AV Work Group.
- Continue to pursue resources to support Subcommittee participation and ensure Subcommittee diversity.

Several subgroups were established to help advance the actions of the workplan outside of the regular meetings. Research collected by the subgroups was presented back to the subcommittee, and will be leveraged as background resources as the subcommittee continues to advance its work in the new year.

**Understanding Health and Equity in the Context of AVs**

The Health & Equity Subcommittee focused part of their efforts this year towards developing a common understanding of the breadth of health and equity issues related to AVs. Meetings of the subcommittee included presentation from industry experts and other subcommittees, as well as internal discussion. Some of the key considerations discussed by the subcommittee include:

- Disparities in burden and access: considering how AV testing and eventual AV services might be distributed across the population, and how this might result in added burden or limitations to certain parts of the population. This may include added risks from testing, or disparate levels of access to future AV services due issues related to service coverage, infrastructure availability and condition,
cost of the services, access to technology and technological proficiency, and discrimination.

► Competing needs and priorities: considering how investment in the advancement of AVs in Washington may impact the ability to address other transportation investments that could benefit disadvantaged communities, and meet more immediate needs and priorities.

► Technological capability: considering how current pedestrian detection systems in AVs function, and how algorithms—depending on how they are structured and trained—may be less able to detect certain populations such as Persons of Color, potentially subjecting them to greater risk of injury as pedestrians.

► Exposure to and understanding of technology: considering the level of exposure that different parts of the population have to information about emerging technologies such as AVs, and their understanding of how such technologies may impact or benefit them. This may relate to needs around education, engagement, and outreach with certain communities.

The discussions of the Health & Equity Subcommittee culminated in the presentation of two recommendations to the AV Work Group. The first recommendation related to the need for funding to conduct structured public outreach. Throughout the year, subcommittee members noted on multiple occasions the need for funding to encourage more meaningful participation in the subcommittee by representatives of historically marginalized communities that would otherwise be unable to participate due to issues such as time and financial constraints. While the recommendation for funding structured public outreach would not accomplish the aim of increasing representation from historically marginalized communities within the subcommittee membership, it is intended to be a first step towards educating communities and understanding community needs. Similarly, the second recommendation, which is focused on identification of testing locations, is intended to provide the State with information to understand where testing is being done, and how it relates to historically marginalized communities.

One of the priorities of the Health & Equity Subcommittee in 2021 will be to review recommendations brought forth by other subcommittees from a health and equity perspective.

### Workforce Subcommittee

The Workforce Subcommittee held its first meeting in October 2019, and had planned to hold its second meeting in April 2020. In early 2020, the two public agencies supporting this subcommittee—Employment Security Department & Department of Labor and Industries—as well as engaged private sector organizations had to shift focus to COVID-19 response and put subcommittee efforts on pause.

The Workforce Subcommittee co-chairs have continued monitoring other subcommittees’ activities and how they interact, considering that much of the Workforce Subcommittee’s work will ramp up as other subcommittees’ work ramps down—as AVs complete testing and start entering deployments. The subcommittee co-chairs will continue to interact with labor partners offline and work in the background in preparation of the Workforce Subcommittee spinning up in the future.
Priorities for the Work Group Going Forward

Despite the challenges this year, 2020 has also been an opportunity for the Work Group to pause, re-focus, and re-evaluate its priorities for the short and long term. On June 24, 2020, the Executive Committee participated in a work session to explore the future path and direction of the Work Group over its remaining three years. During this work session, it was proposed that the adopted CAT policy goals be used as a framework for action. Due to the broad nature of the policy goals, it would require the Executive Committee to identify priorities within them so that immediate needs and actionable items can be identified and subsequently addressed by the subcommittees. With the CAT policy goals as the backdrop, the Executive Committee members provided input on immediate priorities and direction for the Work Group’s path moving forward through the sunset date of 2023.

A need to simultaneously tackle both near and long-term objectives

During the work session, Executive Committee members engaged in a live-polling exercise. When asked to rank broad focus areas for the Work Group, which included focusing on near-term testing of AVs, near-and long-term deployment needs of AVs, and achievement of CAT objectives and mitigating potential impacts of AVs, members were split on which should be prioritized first. All three focus areas emerged with similar ranking, which represents a balance of differing perspectives from across Executive Committee members, and collectively signals that all three focus areas are important for the Work Group to address. While most AV technologies remain in the testing stage, these results emphasize the need to go beyond testing programs to continue progress in action areas that prepare Washington for future deployment of AV’s.

Executive Committee members were then asked to rank actions within each focus area for the Work Group to prioritize:

Table 3: Executive Committee ranking results of actions by focus area

<table>
<thead>
<tr>
<th>Focus Area</th>
<th>Rank</th>
<th>Potential Action</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEAR-TERM TESTING ACTIVITIES</td>
<td>1st</td>
<td>Conduct open discussions with companies with DOL self-certification to understand what motivates testing decisions.</td>
<td>Results showed clear interest in having open discussions with companies undergoing testing and better understanding testing motivations to help inform policy decisions.</td>
</tr>
<tr>
<td></td>
<td>2nd</td>
<td>Implementation of and/or revisions to ESHB 2676 section 2: Autonomous Vehicle Testing &amp; Reporting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3rd</td>
<td>Identify and pursue funding to support pilot and testing activities</td>
<td></td>
</tr>
</tbody>
</table>
5 — Priorities for the Work Group Going Forward

### Focus Area: DEPLOYMENT-ORIENTED ACTIVITIES

<table>
<thead>
<tr>
<th>Rank</th>
<th>Potential Action</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Prioritize a list of near-term infrastructure investments to pursue (signing/striping, broadband, etc.)</td>
<td>Results signal particular interest in actions that help lay the groundwork for deployment, including near-term infrastructure investments, legislative reform topics, and developing AV data guiding principles.</td>
</tr>
<tr>
<td>2nd</td>
<td>Develop a prioritized list of topics needing legislative reform (e.g. video screens, public records act, etc.)</td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td>Identify and adopt AV data guiding principles</td>
<td></td>
</tr>
<tr>
<td>4th</td>
<td>Review and recommend revisions to the draft Uniform Law Commission AV Model Bill language &amp; HB 2470</td>
<td></td>
</tr>
<tr>
<td>5th</td>
<td>Develop an Education Plan to communicate the benefits and limitations of ADAS and AV</td>
<td></td>
</tr>
</tbody>
</table>

### Focus Area: CAT-ORIENTED ACTIONS

<table>
<thead>
<tr>
<th>Rank</th>
<th>Potential Action</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Conduct scenario planning to explore alternative AV futures and potential impacts and policy implications</td>
<td>Results suggest continued interest in conducting scenario planning to explore alternative AV futures, indicating a potential interest for better understanding of impacts and policy implications.</td>
</tr>
<tr>
<td>2nd</td>
<td>Based on policy goals, prioritize a list of deployment scenarios to enable focused policy and strategy discussion</td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td>Develop engagement opportunities for disadvantaged communities for Work Group discussions</td>
<td></td>
</tr>
<tr>
<td>4th</td>
<td>Develop AV health and equity guiding principles to apply across all subcommittees</td>
<td></td>
</tr>
</tbody>
</table>

### Making progress across the broad focus areas

To ensure that progress continues to be made across all focus areas, a list of potential actions was developed. Many of the actions identified are already being advanced by the subcommittees. Other actions include those that have been discussed by the Work Group, subcommittees and WSTC, but have yet to gain traction. The following table highlights the actions identified for each of the focus areas, and provides indication of where work has been done to progress those actions.

#### Table 4: Potential actions for subcommittee advancement by focus area

<table>
<thead>
<tr>
<th>Potential Action</th>
<th>Progress Made</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEAR-TERM TESTING ACTIVITIES</strong></td>
<td></td>
</tr>
<tr>
<td>Conduct open discussions with companies with DOL self-certification to understand what motivates testing decisions</td>
<td>Continued Progress</td>
</tr>
</tbody>
</table>

The Infrastructure & Systems Subcommittee developed an open dialogue survey template to be used when holding open discussions with DOL self-certified companies. The Licensing Subcommittee is lead on these discussions, inviting other subcommittees to participate.
### Potential Action

<table>
<thead>
<tr>
<th>Potential Action</th>
<th>Progress Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of and/or revisions to ESHB 2676 section 2: Autonomous Vehicle Testing &amp; Reporting</td>
<td>Some Progress</td>
</tr>
<tr>
<td>Identify and pursue funding to support pilot and testing activities</td>
<td>Some Progress</td>
</tr>
<tr>
<td><strong>DEPLOYMENT-ORIENTED ACTIVITIES</strong></td>
<td></td>
</tr>
<tr>
<td>Prioritize a list of near-term infrastructure investments to pursue (signing/striping, broadband, etc.)</td>
<td>Some Progress</td>
</tr>
<tr>
<td>Develop a prioritized list of topics needing legislative reform (e.g. video screens, public records act, etc.)</td>
<td>Not Started</td>
</tr>
<tr>
<td>Identify and adopt AV data guiding principles</td>
<td>Not Started</td>
</tr>
<tr>
<td>Review and recommend revisions to the draft Uniform Law Commission AV Model Bill language &amp; HB 2470</td>
<td>Some Progress</td>
</tr>
<tr>
<td>Develop an Education Plan to communicate the benefits and limitations of ADAS and AV</td>
<td>Some Progress</td>
</tr>
<tr>
<td><strong>CAT-ORIENTED ACTIONS</strong></td>
<td></td>
</tr>
<tr>
<td>Conduct scenario planning to explore alternative AV futures and potential impacts and policy implications</td>
<td>Not Started</td>
</tr>
<tr>
<td>Based on policy goals, prioritize a list of deployment scenarios to enable focused policy and strategy discussion</td>
<td>Not Started</td>
</tr>
<tr>
<td>Develop engagement opportunities for disadvantaged communities for Work Group discussions</td>
<td>Not Started</td>
</tr>
</tbody>
</table>

**Progress Made:**
- **Some Progress:** Multiple subcommittees discussed ESHB 2676 this year and have put forth recommendations for revisions to section 2.
- **The Infrastructure & Systems Subcommittee has compiled a list of potential funding sources for interested entities to pursue, including for future pilot and testing activities.**
- **While a prioritized list has yet to be developed, the Infrastructure & Systems Subcommittee did consider priorities and put forth a recommendation for investment in improved pavement markings.**
- **While a prioritized list has yet to be developed, subcommittees have independently put forward topics needing legislative reform.**
- **In 2019, the System Technology & Data Security Subcommittee put forth a recommendation for a set of AV data guiding principles; The Executive Committee and WSTC asked the subcommittee to evaluate existing national standards and best practices for potential adoption, rather than creating something new. No further progress has been made.**
- **Subcommittees have made progress on reviewing the draft Uniform Law Commission AV Model Bill language & HB 2470.**
- **The Safety Subcommittee started exploring this in 2019, putting a hold on the effort during 2020. The Washington Traffic Safety Commission recently received a grant to start this effort up again, supported by the Safety Subcommittee.**
- **No progress has been made to date.**
- **No progress has been made to date.**
- **The Work Group endorsed a recommendation in late 2020 from the Health & Equity Subcommittee to develop a structured public outreach campaign.**
<table>
<thead>
<tr>
<th>Potential Action</th>
<th>Progress Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop AV health and equity guiding principles to apply across all subcommittees</td>
<td>Not Started No progress has been made to date.</td>
</tr>
</tbody>
</table>

The AV Work Group Future Path Work Session Report and Actions Recommendations Matrix for Subcommittees can be found in [Appendix A: AV Work Group Future Path Work Session Report and Actions Recommendations Matrix for Subcommittees](#).
Recommendations from the various subcommittees were brought forward to the Executive Committee for review and discussion. Applying the lens of both public and private sector perspectives, the Executive Committee is able to provide a holistic evaluation of the recommendations. All recommendations reviewed by the Executive Committee, regardless of the Committee's actions or recommendations, are advanced to the Transportation Commission (WSTC) for consideration. The recommendations are then forwarded to the Legislature and Governor via this report, regardless of the actions or recommendations made by the Executive Committee or WSTC, to serve as a transparent and complete record of the process and results.

The table below outlines the recommendations brought forth by the Work Group in 2020, the actions taken by the Executive Committee, and the WSTC recommendation to the Legislature and Governor. Further detail is provided on each recommendation following the table.

Table 5: 2020 Recommendations advanced to the Executive Committee and Transportation Commission for consideration

<table>
<thead>
<tr>
<th>Source</th>
<th>Recommendation</th>
<th>Executive Committee Action/ Recommendation</th>
<th>WSTC Action/ Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Subcommittee</td>
<td>Clarify the State's definition for autonomous vehicle</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Safety Subcommittee</td>
<td>Requirement for a Law Enforcement/ First Responder Interaction Guide</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Safety &amp; Licensing</td>
<td>Repeal Section 1 of RCW 46.37.480 on TV screens for companies conducting driverless testing</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Licensing Subcommittee</td>
<td>Amendment of RCW 46.92.010 to enable rulemaking by the Department of Licensing for the Self-Certification Program</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Health and Equity</td>
<td>Conduct structured public outreach</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Subcommittee</td>
<td>Identification of testing locations</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Infrastructure and</td>
<td>Increased investment on enhanced roadway pavement markings</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
<tr>
<td>Systems Subcommittee</td>
<td>Support WSDOT's work zone data initiative</td>
<td>Endorsed</td>
<td>Endorsed</td>
</tr>
</tbody>
</table>
Recommendations

Clarity of the State's definition for Autonomous Vehicle

**Recommended by:**
Safety Subcommittee

**Recommendation:**
Clarify the definition of "autonomous vehicle" to consider only SAE levels 4 and 5. This would differentiate "autonomous vehicles" from "automated vehicles", which covers SAE levels 0 to 5, and includes commercially available vehicles that operate with a human driver on roads today.

The term "autonomous vehicle" is not currently defined in either the Governor’s Executive Order (EO) 17-02 or HB 2676. The lack of clear definition and differentiation of "autonomous vehicles" from "automated vehicles" hampers discussions of how best to support the safe testing and deployment of "autonomous vehicles", and presents potential legal implications in applying laws that impact EO 17-02 and HB 2676, and the safety measures afforded in these documents. Clear definition of "autonomous vehicles" to refer only to vehicles with levels 4 and 5 automation would enable the Work Group to focus discussions on the legal framework for vehicle systems that do not require that a human driver is present in the vehicle.

**Executive Committee Action:**
*Presented to the Executive Committee at the November 12th meeting*

With the exception of absent and abstained votes, the Executive Committee reviewed and unanimously endorsed the recommendation. While no further discussion was held on the recommendation, the Executive Committee requested that this recommendation be harmonized and reconciled with the related recommendation brought forward by the Licensing Subcommittee.

**WSTC Action:**
*Presented to the WSTC at the December 15th meeting*

With the exception of absent votes, the WSTC reviewed and unanimously endorsed the recommendation. No further discussion was held on the recommendation.

Requirement for a Law Enforcement/First Responder Interaction Guide

**Recommended by:**
Safety Subcommittee

**Recommendation:**
Establish a requirement for AV testing entities to provide a Law Enforcement / First Responder Interaction Guide to equip law enforcement and first responders with information on how to safely and effectively interact with AVs without a safety driver onboard the vehicle. Testing entities would be required to provide a Law Enforcement / First Responder Interaction Guide prior to conducting driverless testing in Washington.

While it is currently legal to test AVs in Washington without a safety driver onboard, law enforcement and first responders do not have access to information on how to respond if they were to encounter a driverless vehicle. Consistent with requirements set out in other states, including California and Arizona, the Law Enforcement / First Responder Interaction Guide would be provided by each testing entity, and include information such as:

- How to communicate with a remote driver
- Where to find the contact telephone number, owner information, vehicle registration and proof of insurance
- How to safely move the vehicle out of the flow of traffic and how to immobilize and tow a driverless vehicle

**Executive Committee Action:**
*Presented to the Executive Committee at the November 12th meeting*

With the exception of absent and abstained votes, the Executive Committee reviewed and unanimously endorsed the recommendation. No further discussion was held on the recommendation.

**WSTC Action:**
*Presented to the WSTC at the December 15th meeting*

With the exception of absent votes, the WSTC reviewed and unanimously endorsed the recommendation. No further discussion was held on the recommendation.

Repeal Section 1 of RCW 46.37.480 on TV Screens

**Recommended by:**
Safety & Licensing Subcommittees
**Recommendation:**
Repeal of [RCW 46.37.480](https://app.leg.wa.gov/rcw/default.aspx?cite=46.37.480) Section (1), which prohibits the use of motor vehicles equipped with any television viewer, screen, or other means of visually receiving a broadcast that is visible to the driver while.

RCW 46.37.480 Television viewers—Earphones.

(1) No person shall drive any motor vehicle equipped with any television viewer, screen, or other means of visually receiving a television broadcast when the moving images are visible to the driver while operating the motor vehicle on a public road, except for live video of the motor vehicle backing up. This subsection does not apply to law enforcement vehicles communicating with mobile computer networks.

This language is considered to be outdated as many commercially available vehicles feature screens that provide information to drivers and passengers. This citation is not widely used in the enforcement of distracted driving, as the use of electronic devices in vehicles and dangerously distracted driving is addressed in [RCW 46.61.672](https://app.leg.wa.gov/rcw/default.aspx?cite=46.61.672) and [RCW 46.61.673](https://app.leg.wa.gov/rcw/default.aspx?cite=46.61.673), respectively. It is anticipated that future AVs will rely on screens as a key interface for users, and that repeal of this citation would eliminate potential barriers to advancing AV technology.

**Executive Committee Action:**
Presented to the Executive Committee at the November 12th meeting

With the exception of absent and abstained votes, the Executive Committee reviewed and unanimously endorsed the recommendation. The Executive Committee discussed the potential to reword RCW 46.37.480 Section (1) rather than repeal it in its entirety, acknowledging the potential needs for this section, such as to prevent drivers from viewing streaming services on mobile devices. To this point, it was clarified by the subcommittees that newer legislation, including RCW 46.61.672 and RCW 46.61.673 specifically address the use of electronic devices in vehicles, which would adequately address concerns around distracted driving rather than rewording the RCW.

**WSTC Action:**
Presented to the WSTC at the December 15th meeting

With the exception of absent votes, the WSTC reviewed and unanimously endorsed the recommendation. No further discussion was held on the recommendation.

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**Amendment of RCW 46.92.010 to enable rulemaking by the Department of Licensing**

**Recommended by:**
Licensing Subcommittee

**Recommendation:**
Amendment of [RCW 46.92.010](https://app.leg.wa.gov/RCW/default.aspx?cite=46.92.010) Testing—Self-certification pilot program to grant the Department of Licensing general rulemaking authority over the self-certification program.

The amendment is intended to provide the Department of Licensing greater flexibility in addressing future items that require clarification as part of the self-certification process. For example, there is currently a lack of clarity in the level of autonomy (SAE Levels 1 through 5) which the self-certification process is intended to apply to. Rule-making authority granted to the Department of Licensing would enable the department to provide clarification according to the most recent information, without having to undertake a full legislative review process.

**Executive Committee Action:**
Presented to the Executive Committee at the November 12th meeting

The Executive Committee endorsed the motion with a majority vote. Notwithstanding absent and abstained votes, there were two votes in opposition to the motion from the Executive Committee. Discussion on the recommendation highlighted concerns around the vagueness of the scope and scale of rulemaking authority that would be granted to the DOL through the proposed amendment of RCW 46.92.010. As there are no clear guidelines as to what decisions would be appropriate for rulemaking under the granted authority versus what should go through the full legislative process, members of the Executive Committee suggest that the Legislature consider more specific parameters around the rulemaking authority that is granted to the DOL.

**WSTC Action:**
Presented to the WSTC at the December 15th meeting

With the exception of absent votes, the WSTC reviewed and unanimously endorsed the recommendation. No further discussion was held on the recommendation.

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32 RCW 46.61.672: [https://app.leg.wa.gov/rcw/default.aspx?cite=46.61.672](https://app.leg.wa.gov/rcw/default.aspx?cite=46.61.672)
33 RCW 46.61.673: [https://app.leg.wa.gov/rcw/default.aspx?cite=46.61.673](https://app.leg.wa.gov/rcw/default.aspx?cite=46.61.673)
34 RCW 46.92.010: [https://app.leg.wa.gov/RCW/default.aspx?cite=46.92.010](https://app.leg.wa.gov/RCW/default.aspx?cite=46.92.010)
**Conduct Structured Public Outreach**

**Recommended by:**
Health and Equity Subcommittee

**Recommendation:**
Conduct a structured engagement process to improve understanding of the health, equity, and access needs of historically marginalized communities as it relates to AVs. Outreach to communities would include education about AVs, presentation of different scenarios of AV use, and involve collection of feedback from community participants.

Historically marginalized communities, which include people of color and people in disinvested areas, are not well represented among decision makers who set AV policies, and may be inequitably impacted when AVs are tested and implemented in Washington. Public engagement would uncover insights that can help Washington State prevent or reduce inequitable consequences associated with the testing and deployment of AVs. Outcomes of this engagement process would be provided to policymakers and industry to assist them in meeting the mobility and access needs of historically marginalized communities.

**Executive Committee Action:**
*Presented to the Executive Committee at the November 12th meeting*

With the exception of absent and abstained votes, the Executive Committee reviewed and unanimously endorsed the recommendation. No further discussion was held on the recommendation.

**WSTC Action:**
*Presented to the WSTC at the December 15th meeting*

With the exception of absent votes, the WSTC reviewed and unanimously endorsed the recommendation. No further discussion was held on the recommendation.

**Identification of Testing Locations**

**Recommended by:**
Health and Equity Subcommittee

**Recommendation:**
Amendment of RCW 46.30\(^{35}\) to require that planned testing locations, at the zip code or census tract level, be reported to the State prior to pilot testing AVs on Washington roads. Reporting of this information would enable the State to examine the demographics and equity considerations of areas where testing is planned.

RCW 46.30 currently requires only provision of information such as company contact information, the name of the city or county in which testing is planned, vehicle identification numbers, and proof of insurance. A requirement to report the location of testing at the zip code or census tract level would provide more granular information that can better inform analysis of demographic and equity impacts. The results would be used to inform future decision making. It is not intended to regulate where AV testing should or should not be done.

**Executive Committee Action:**
*Presented to the Executive Committee at the November 12th meeting*

The Executive Committee endorsed the motion with a majority vote. Notwithstanding absent and abstained votes, there were six votes in opposition to the motion from the Executive Committee. Discussion on the recommendation highlighted concern from industry on the impact that information related to testing locations would have on market competition. It was also noted that some information on testing locations is already required of testing entities for the purposes of law enforcement, albeit with less granularity. Members in favor of the motion pointed to the need for a certain level of information to be available to the public, and recommended that such requirements be made to limit the disparities between the requirements imposed for public and private companies that similarly provide mobility services, including public transit.

**WSTC Action:**
*Presented to the WSTC at the December 15th meeting*

With the exception of absent votes, the WSTC reviewed and unanimously endorsed the recommendation. No further discussion was held on the recommendation.

**Increased investment on enhanced roadway pavement markings**

**Recommended by:**
Infrastructure & Systems Subcommittee

**Recommendation:**
Consideration during new revenue discussions for increase of ongoing investments in enhanced roadway pavement markings to improve traveler safety and support Advanced Driver Assistance Systems deployed on Washington roads today (SAE Levels 0-2) and Automated Driving Systems (SAE Levels 3-5) currently being tested on public roads. Enhanced markings have the potential to support significant incident reductions, and an overall reduction in societal costs.

\(^{35}\) RCW 46.30: [https://app.leg.wa.gov/RCW/default.aspx?cite=46.30](https://app.leg.wa.gov/RCW/default.aspx?cite=46.30)
Several policy and operational recommendations were brought forth by the Work Group in 2019. The table below outlines the recommendations, and how each recommendation was addressed in 2020 by the Executive Committee and WSTC, and the Legislature.

**A Look Back At 2019**

<table>
<thead>
<tr>
<th>Source</th>
<th>Recommendation</th>
<th>Executive Committee Action</th>
<th>WSTC Action</th>
<th>Outcome and Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POLICY RECOMMENDATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liability subcommittee</td>
<td>Consideration to enact legislation requiring self-certified (DOL) AV testing companies to maintain umbrella liability insurance no less than $5 million per occurrence for damages</td>
<td>Endorsed</td>
<td>Endorsed</td>
<td>This recommendation was incorporated into House Bill (HB) 2676, introduced and passed in the 2020 legislative session. Section 1 Minimum Insurance Requirements went into effect on June 11, 2020. Prior to implementation, 17 companies self-certified with the DOL to conduct AV testing on public roads. Following implementation, 6 companies remain self-certified. Companies removed from the list were removed for various reasons, such as no longer testing in Washington or no longer in business.</td>
</tr>
<tr>
<td>Source</td>
<td>Recommendation</td>
<td>Executive Committee Action</td>
<td>WSTC Action</td>
<td>Outcome and Current Status</td>
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<tr>
<td>--------------------------------</td>
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</tr>
<tr>
<td>Infrastructure &amp; Systems subcommittee</td>
<td>Adopt 8 policy goal statements revised by the subcommittee from the Washington State Department of Transportation (WSDOT) Cooperative Automated Transportation (CAT) Policy Framework</td>
<td>Endorsed</td>
<td>Endorsed</td>
<td>The eight policy goals were incorporated into a draft statewide CAT Policy Framework, which continues to be developed among the subcommittees, including drafting and refining strategies and illustrative actions to support the policy goals.</td>
</tr>
<tr>
<td>Infrastructure &amp; Systems subcommittee</td>
<td>Develop statewide CAT/AV Policy Framework that would integrate the WSDOT CAT policy goals along with policy goals developed by other subcommittees</td>
<td>Endorsed</td>
<td>Endorsed</td>
<td>The Infrastructure &amp; Systems Subcommittee developed a draft statewide CAT Policy Framework that incorporates the adopted policy goals, and is coordinating with other subcommittees to evaluate and refine the policy goals and supporting draft strategies and illustrative actions.</td>
</tr>
<tr>
<td>Health &amp; Equity subcommittee</td>
<td>Conduct Health Impact Assessment of AVs</td>
<td>No voting action</td>
<td>Endorsed*</td>
<td>The Health &amp; Equity Subcommittee reevaluated this recommendation in 2020, refocusing towards a structured public outreach campaign and collection of testing location data, which the subcommittee recommended at the end of 2020.</td>
</tr>
</tbody>
</table>

**OPERATIONAL RECOMMENDATIONS**

<table>
<thead>
<tr>
<th>Safety subcommittee</th>
<th>Establish new &quot;Health &amp; Equity&quot; Subcommittee</th>
<th>Endorsed</th>
<th>WSTC Created</th>
<th>Health &amp; Equity Subcommittee established and operating.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Committee</td>
<td>Establish new &quot;Labor &amp; Workforce&quot; Subcommittee</td>
<td>Endorsed</td>
<td>WSTC Created</td>
<td>Workforce Subcommittee established and operating.</td>
</tr>
<tr>
<td>Executive Committee</td>
<td>Appointment of a disabilities rights representative entity to the Executive Committee</td>
<td>Endorsed</td>
<td>WSTC Appointed</td>
<td>Disabilities’ Rights representative was appointed to the Executive Committee and began attending at the September 2019 meeting. No further action taken.</td>
</tr>
</tbody>
</table>

**RECOMMENDATIONS REQUIRING FURTHER WORK**

| System Technology & Data Security subcommittee | Adopt "AV Privacy and Data Security Principles" and "Data Standard revision 0.1" developed by the subcommittee                                                                                          | Request further exploration of best practices and standards | Agreed with Executive Committee action | No further action taken.                                                                                                                                                                                                                                                                   |
Although 2020 presented several roadblocks, the Work Group continued to charge forward with its roadmap milestones to develop an initial policy framework and refine priorities against the framework throughout the year. The Infrastructure & Systems Subcommittee drafted a statewide CAT Policy Framework that the Work Group continues to review and refine to support and guide Work Group efforts. And, through the Executive Committee’s prioritization exercise and identification of actions to advance, the Work Group and its subcommittees have a clearer path forward to hone in on tangible and achievable actions to conduct over the remaining time the Work Group has through 2023.

Figure 2: Washington State Autonomous Vehicle Work Group Roadmap to 2023

Communications Plan

The operation of AVs in Washington has broad implications for a wide variety of people ranging from policymakers to those who will be affected by potential policies. Therefore, readily available public information and clear communications on this topic is vital to enabling a long-term transition to more automation on our roadways and transportation system.

A Communications Plan was developed to provide milestone-driven recommendations for the Work Group to communicate with stakeholders and the general public in a comprehensive, transparent and equitable way. The plan includes the Work Group’s policy goals and objectives, communication-specific goals and objectives, an overview of potential stakeholders to communicate with, a communications toolkit, and next steps.

The plan also includes a communications toolkit, focusing on recommended milestones and tools for how to best engage with and communicate to stakeholders. These milestones describe ways to engage the public to inform developing recommendations before they are brought to the Legislature, as well as how to keep stakeholders informed on AV Work Group activities and developing recommendations before, during, and following legislative sessions each year. The following table outlines the major milestones, and the associated communication tools available in the toolkit.
### Table 7: Work Group Annual Communications Milestones and Tools

<table>
<thead>
<tr>
<th>Annual Milestones</th>
<th>Communication Tools for Today &amp; Tomorrow</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>March - September</strong></td>
<td>◼ Stakeholder interviews</td>
</tr>
<tr>
<td>Work Group and stakeholder engagement prior to legislative session</td>
<td>◼ Survey research and polling</td>
</tr>
<tr>
<td>◼ Development of public policy recommendations</td>
<td>◼ Public workshops</td>
</tr>
<tr>
<td>◼ Progress of Work Group</td>
<td>◼ Work group workshops*</td>
</tr>
<tr>
<td></td>
<td>◼ Q1 and Q3 newsletters</td>
</tr>
<tr>
<td><strong>December</strong></td>
<td>◼ Annual report*</td>
</tr>
<tr>
<td>Prior to legislative session</td>
<td>◼ Updated website*</td>
</tr>
<tr>
<td></td>
<td>◼ Share Q4 newsletter</td>
</tr>
<tr>
<td><strong>January</strong></td>
<td>◼ Earned media engagement</td>
</tr>
<tr>
<td>Start of legislative session</td>
<td>◼ Fact sheets/folios for legislators*</td>
</tr>
<tr>
<td><strong>January – March/May</strong></td>
<td>◼ Share results of policy recommendations and next steps through:</td>
</tr>
<tr>
<td>Legislative session</td>
<td>◼ Website updates*</td>
</tr>
<tr>
<td></td>
<td>◼ Q2 newsletter</td>
</tr>
<tr>
<td></td>
<td>◼ Earned media</td>
</tr>
<tr>
<td></td>
<td>◼ Digital/online engagement</td>
</tr>
<tr>
<td></td>
<td>◼ Factsheet/folio development</td>
</tr>
<tr>
<td><strong>March/May</strong></td>
<td>◼ Policy implementation</td>
</tr>
<tr>
<td>End of legislative session</td>
<td>◼ Website updates*</td>
</tr>
<tr>
<td></td>
<td>◼ Q2 newsletter</td>
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<tr>
<td></td>
<td>◼ Earned media</td>
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<tr>
<td></td>
<td>◼ Digital/online engagement</td>
</tr>
<tr>
<td></td>
<td>◼ Factsheet/folio development</td>
</tr>
</tbody>
</table>

* Communications Tools already being implemented

### Work Group Support & Facilitation

In 2018, the Legislature approved the WSTC receiving $300,000 per biennium through 2023, to support its charge under the legislation. The WSTC will continue to provide facilitation services for the Work Group through its sunset at the end of 2023, including:

- Maintain and update the Work Group five-year roadmap, charting major milestones the Work Group wants to accomplish to achieve its goals.
- Prepare for and administer Work Group meetings to facilitate discussion and enable guidance.
- Secure speakers / presenters on a range of AV topics from Washington State and nationwide.
- Conduct policy and legal research as needed to support the Work Group’s exploration and information gathering.
- Document subcommittee discussion and decisions.
- Host and maintain the Work Group website.
- Develop and maintain communications strategy and materials.
- Annual reporting support.
Appendix A: AV Work Group
Future Path Work Session Report
and Actions Recommendations
Matrix for Subcommittees
Future Path Work Session

Executive Committee Meeting – June 24, 2020

The WA AV Work Group Executive Committee participated in a work session at the June 24, 2020 meeting to explore the future path of the work group, considering it sunsets at the end of 2023. The following overarching question was posed:

*Given the legal purview of this Autonomous Vehicle Work Group and the sunset date of 2023, what does the Executive Committee (EC) wish to focus on for the duration of the group, and what role do the Cooperative Automated Transportation (CAT) policy goals adopted by the EC play in guiding that direction?*

**BACKGROUND**

The WA AV Work Group was legislatively created in 2018 with a charge to follow developments in AV technology and related policies, explore approaches to modify policy to further public safety and prepare for the emergence of AV technology, and share information on AV technology and policies with interested stakeholders.

In 2019, the Work Group’s Infrastructure & Systems Subcommittee explored Cooperative Automated Transportation (CAT) and its intersection with AV and the Work Group’s charge. CAT broadly represents the confluence of automated, connected, electrified, and shared mobility in a way which contributes toward a safe and efficient transportation that emphasizes public transit and active transportation, and promotes livable (walkable/bikeable), economically vibrant communities with affordable housing and convenient access to jobs and other activity centers. CAT is about more than just vehicles; it includes:

- **Modes:** Automobile, truck, plane, van, bus, rail, ferry, bicycle, scooter, pedestrian, etc.
- **Systems:** Vehicles, infrastructure, information, communications, etc.
- **Applications:** Traffic management, fare collection, mobility services, trip planning, etc.

The Work Group’s Executive Committee, and subsequently the Washington State Transportation Commission, voted to endorse the recommendation to adopt eight Cooperative Automated Transportation (CAT) policy goals recommended by the Infrastructure & Systems Subcommittee at the end of 2019. The adopted policy goals are as follows:

- **Organize for Innovation:** Enable organizational change that empowers officials to be flexible, accelerate decision-making, and adapt to changing technology.
- **Shared Mobility:** Encourage and incentivize shared mobility, including an emphasis on high occupancy and shared modes for moving people and goods.
- **Economic Vitality and Livability:** Create resilient and efficient regional networks and empower local agencies to create resilient, multimodal local networks.
• **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.
• **Land Use**: Encourage land use development patterns that support multimodal connectivity to efficient local and regional networks.
• **Equity**: Work with marginalized communities to increase access to desirable mobility options.
• **Safety**: Increase the safety of transportation systems and infrastructure to support the safe movement of people and goods.
• **Environment**: Reduce the local and cumulative environmental impacts of mobility to improve air and water quality, energy conservation and mitigate climate change.

At the June 24th Executive Committee meeting, it was proposed that the adopted CAT policy goals be used as a framework for action. Due to the broad nature of the policy goals, it would require the Executive Committee identify priorities within them so that near-term needs and actionable items can be identified and subsequently addressed by the subcommittees.

With this as the backdrop, the Executive Committee members participated in a live polling exercise to identify priorities and direction for the Work Group’s path moving forward. The polling exercise first asked members to rank broad focus areas, then rank actions within each focus area for the Work Group to prioritize. Finally, members were asked to provide insights and thoughts on additional actions to pursue and what the ultimate outcome is most critical to the success of the Work Group. The following report synthesizes the results of the polling exercise.

**SYNTHESIZED POLLING EXERCISE RESULTS**

**RANKING QUESTION #1: Broad Work Group Focus Areas** *(rank in order of priority)*

- Focus on needs for near-term testing of highly automated vehicles
- Focus on near- and long-term deployment needs of highly automated vehicles
- Focus on achievement of CAT objectives and mitigating potential negative impacts of AV technologies

**RESULTS**

*Collectively, participants did not indicate a strong preference on how to prioritize broad work group focus areas.*

*26 Executive Committee member responses*

The results of this poll showed almost equal preference across all three focus areas, noting that “Focus on achievement of CAT objectives and mitigating potential negative impacts of AV technologies” ranked at a slightly higher priority over the other two. Though there is little information to provide further context and explanation as to why participants voted in this way, these outcomes may represent the
balance of differing perspectives across the participants, and signal that participants as a collective, feel that all three focus areas are important for the Work Group to address in the near term.

RANKING QUESTION #2: Near-Term Testing Activities (rank in order of priority)

- Implementation of and/or revisions to ESHB 2676 section 2: Autonomous Vehicle Testing & Reporting
- Conduct open discussions with companies with DOL self-certification to understand what motivates testing decisions
- Identify and pursue funding to support pilot and testing activities

RESULTS

Participants showed clear interest in open discussions with companies undergoing testing to understand motivations for testing decisions, which may help to inform further policy revisions and implementation.

26 Executive Committee member responses

When asked to rank in order of priority, the above three different near-term testing priorities, participants showed clear preference for conducting “open discussions with companies with Department of Licensing (DOL) self-certification to understand what motivates testing decisions”. Second in priority was the “Implementation of and/or revisions to ESHB 2676 Section 2: Autonomous Vehicle Testing & Reporting”. This ordering indicates a desire for clear understanding of what motivates testing decisions, which could help inform implementation and revisions to ESHB 2676.

Ranked third was to “Identify and pursue funding to support pilot and testing activities”. While this activity ranked as a lower priority, responses from the free-form portion of the poll (covered later in this
report) did include several responses related to additional testing needed to strategically position Washington at the leading edge of AV development. Its lower ranking among the other two near-term testing activities may signal that participants perceive the other actions to be more pressing in the immediate term, or that funding to support pilot and testing activities is less of a need at this time.

RANKING QUESTION #3: Deployment-Oriented Activities (rank in order of priority)

- Review and recommend revisions to the draft Uniform Law Commission AV Model Bill language & HB 2470
- Identify and adopt AV data guiding principles
- Develop a prioritized list of topics needing legislative reform (e.g. video screens, public records act, etc.)
- Prioritize a list of near-term infrastructure investments to pursue (signing/striping, broadband, etc.)
- Develop an Education Plan to communicate the benefits and limitations of ADAS and AV

RESULTS
Prioritization of near-term infrastructure investments, topics requiring legislative reform, and the need for AV data guiding principles signals interest in laying the groundwork for deployment.

27 Executive Committee member responses

Regarding deployment-oriented activities, participants ranked “Prioritize a list of near-term infrastructure investments to pursue (signing/striping, broadband, etc.)” as highest priority. This was followed by “Develop a prioritized list of topics needing legislative reform (e.g. video screens, public...
records act, etc.)”, and then “Identify and adopt AV data guiding principles” ranked closely behind. Though the prioritization of infrastructure investments was ranked higher by a relatively large margin, all three of these activities relate to laying the groundwork for AV deployment.

Ranked lower were the activities “Review and recommend revisions to the draft Uniform Law Commission AV Model Bill language and HB 2470” and “Develop an Education Plan to communicate the benefits and limitations of ADAS and AV” tied at fourth and fifth. Regarding the Uniform Law Commission AV Model Bill language and HB 2470, the low ranking may be in part due to the fact many subcommittees have already been engaged in ongoing work to review the language, and have been asked to report back on their reviews by the end of 2020.

While the activity for developing an Education Plan for communicating the benefits and limitations of ADAS and AV was ranked the lowest, subsequent free-form responses suggest that it remains a priority for at least some participants. However, the development of an education plan requires a certain level of baseline understanding around the benefits and limitations of ADAS and AVs, and the free-form responses suggest this is an interest of some that has yet to be filled.

**RANKING QUESTION #4: CAT-Oriented Activities (rank in order of priority)**

- Conduct scenario planning to explore alternative AV futures and potential impacts and policy implications
- Develop AV health and equity guiding principles to apply across all subcommittees
- Develop engagement opportunities for disadvantaged communities for Work Group discussions
- Based on policy goals, prioritize a list of deployment scenarios to enable focused policy and strategy discussion
RESULTS
Interest in conducting scenario planning to explore alternative AV futures from participants may point to an interest or need for better understanding of potential impacts and policy implications.

26 Executive Committee member responses

Relating to CAT-oriented actions, participants demonstrated clear preference for the activity to “Conduct scenario planning to explore alternative AV futures and potential impacts and policy implications.” This was followed by the activities “Based on policy goals, prioritize a list of deployment scenarios to enable focused policy and strategy discussion” and “Development engagement opportunities for disadvantaged communities for Work Group Discussions.” This ranking would appear to suggest participants perceive the need for better understanding of possible impacts from alternative AV futures, which would help to inform subsequent opportunities such as prioritizing deployment scenarios to enable policy and strategy discussions, and to develop more targeted engagement opportunities for disadvantaged communities within Work Group discussions. Without thorough understanding of the different ways AV futures could evolve, and the policy implications each brings, it would be difficult to have a fruitful discussion on policy and strategy within the Work Group, as well as with the broader community.

Ranked fourth and last in this question was the activity to “Develop AV health and equity guiding principles to apply across all subcommittees”. Though ranked last in priority, free-form responses suggest this does not mean participants do not see this activity as important. On the contrary, health and equity were common considerations highlighted in the free-form responses. This may signal that while participants are concerned about health and equity, there lacks clarity on how guiding principles could be developed and applied across subcommittees without activities, such as scenario planning, to help them understand the various alternative futures. This further highlights the importance of prioritizing actions that contribute to building the collective understanding around the implications of ADAS and AVs.
Following the focus area rankings, Executive Committee members were asked to provide free-form responses to two questions:

- “What Action or Focus Area Did You Not See That You Feel Should Be Prioritized?”
- “In a Few Words, What Single Outcome Do You See as the Most Critical to the Success of this Group?”

Responses to these two free-form questions resulted in some key points coming to the surface that highlight the complexity of the Work Group’s charge, purview, and ability to achieve the desired objectives within its remaining 3 years. The following section synthesizes these key points. The full list of free-form responses can be found in Appendix A at the end of this document.

- Interest from participants in prioritizing achieving desired outcomes while also being at the leading edge of technology development poses a potential dichotomy the Work Group may need to contend with.

Clear from the freeform responses were two key priorities. On the one hand, participants highlighted the need for the Work Group to provide guidance to ensure desirable outcomes for people across Washington, particularly from the perspectives of safety, mobility, and equity. However, on the other hand, there were also participants who emphasized the need to strategically position Washington at the leading edge of ADAS and AV testing and development, and the need for a light-touch regulatory environment to make Washington the nation’s place to innovate in the AV industry. In some ways, these are competing priorities, and pose a potential dichotomy the Work Group and Transportation Commission may need to contend with. In addition to considering the prioritization of actions, there may be a need to consider how the needs of different constituents and stakeholders are prioritized in this space.
Participants highlighted a need for better assessment and understanding of impacts from AVs to inform the development of policies and the implementation and deployment of potential use cases. In alignment with the outcomes of the rank order questions, participants indicated a clear interest in pursuing opportunities to gain a better understanding of expected impacts from AVs. Participants specifically highlighted needs around understanding the risks of testing on public roads, the broader transportation system, and the specific needs of people from disadvantaged communities who are already mobility constrained.

Better intergovernmental coordination and information sharing, both with other levels of government and other states was suggested as a key priority.

Many participants highlighted the need for Washington to conduct better intergovernmental coordination and information sharing with other levels of government, as well as with other states. The responses emphasized that policies in this state need to align with federal policies, while also providing effective guidance to local governments. Participants also highlighted the need to collaborate with other states to ensure Washington does not function in a vacuum, and that the State is able to learn from the emerging state-of-practice being developed elsewhere.

RECOMMENDATIONS

Recommendations have been developed for how the Work Group can approach each action prioritized under the three broad focus areas, with suggestions for how each subcommittee can support the action going forward. These recommendations are meant to serve as a starting point for the Work Group and its subcommittees, providing an overview of each action, their benefits and implications, and how they may impact each subcommittee’s purview.

The recommendations are documented in Appendix B (separate document) WA AV Work Group Future Path Prioritization Recommendations Matrix.
APPENDIX A: FREE-FORM QUESTION RESPONSES

FREE-FORM QUESTION #1: What Action or Focus Area Did You Not See That You Feel Should Be Prioritized?

<table>
<thead>
<tr>
<th>EXECUTIVE COMMITTEE MEMBER RESPONSE</th>
<th>PRIMARY THEME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated impact of COVID-19 and state and local responses on AV deployments and use cases in Washington</td>
<td>Exploration of use cases</td>
</tr>
<tr>
<td>Risk assessment for testing on public roads</td>
<td>Assessment of impacts</td>
</tr>
<tr>
<td>Data privacy; Interoperability; legacy issues</td>
<td>System operations</td>
</tr>
<tr>
<td>We do need some focus on making testing and deployment happen in Washington</td>
<td>Washington based tech development</td>
</tr>
<tr>
<td>What kinds of applications are more implementable given the current AV technologies' maturity level?</td>
<td>Exploration of use cases</td>
</tr>
<tr>
<td>Identify potential for dedicated autonomous road corridors to facilitate freight shipping lanes</td>
<td>Guidance towards implementation and deployment</td>
</tr>
<tr>
<td>Develop a new 21st Century Transportation Plan that integrates AVs into all aspects of the plan, such as last mile, serving disadvantaged, etc.</td>
<td>Guidance towards implementation and deployment</td>
</tr>
<tr>
<td>Additional industry panels to education work group on what’s really happening on AV</td>
<td>Raise local industry awareness</td>
</tr>
<tr>
<td>Comparative regulatory analysis - what are other states across the country doing?</td>
<td>Raise local industry awareness</td>
</tr>
<tr>
<td>Status of highway infrastructure - what do we need to change as a state?</td>
<td>Guidance towards implementation and deployment</td>
</tr>
<tr>
<td>I would suggest a high-level reference point - from the point of policy that needs to be changed. From the point of people who will use or be affected by AV tech. Companies will do fine innovating - this work group should focus on impacts of tech</td>
<td>Assessment of impacts</td>
</tr>
<tr>
<td>Funding to support broader participation in this work, focused on BIPOC participation</td>
<td>Assessment of impacts</td>
</tr>
<tr>
<td>Multi state collaboration to standardize regulations/ approach</td>
<td>Raise local industry awareness</td>
</tr>
<tr>
<td>Federal guidance and efforts they are taking at that level</td>
<td>Raise local industry awareness</td>
</tr>
<tr>
<td>Federal and other state cooperation. We should not operate in a WA only vacuum</td>
<td>Raise local industry awareness</td>
</tr>
</tbody>
</table>
EXECUTIVE COMMITTEE MEMBER RESPONSE | PRIMARY THEME
--- | ---
Learning from other industries who are doing autonomous technology that is more widespread in adoption than AV is, such as aviation, and marine shipping. | Raise local industry awareness
Understanding who is currently left out/ negatively impacted by our transportation system and whether AVs will increase those disparities or create new ones | Assessment of impacts
Preparing and transitioning the workforce for changes in freight and supply chain work. | Assessment of impacts
Re: objective of the group: How do we continue to cultivate and nurture AV technology to improve mobility for all, reduce carbon emissions and help save lives, especially in the time of COVID-19? -- Charles | Guidance towards implementation and deployment

FREE-FORM QUESTION #2: In a Few Words, What Single Outcome Do You See as the Most Critical to the Success of this Group?

EXECUTIVE COMMITTEE MEMBER RESPONSE | PRIMARY THEME
--- | ---
Policy guidance for state agencies | Policy guidance for state agencies and local governments
WA is prepared for AVs and on the leading edge of deployment | Strategic positioning of WA at leading edge
Specific policy changes that keep people safe while expanding use of AV Tech | Guidance to ensure desired outcomes for people
Diversity and scale of AV deployment and testing in the state | Strategic positioning of WA at leading edge
Clear laws that enable and support AV deployment in the future | Strategic positioning of WA at leading edge
Clear, concise guidance that aligns with Federal for near term AV testing | Intergovernmental policy alignment
Accomplish several key milestones (policy, law, and applications) people would care | Guidance to ensure desired outcomes for people
The state is prepared to allow/receive AVs on our roadways | Strategic positioning of WA at leading edge
ADAS and vehicle automation systems improve the safety and mobility for all people traveling in Washington State | Guidance to ensure desired outcomes for people
## Executive Committee Member Response

<table>
<thead>
<tr>
<th>Primary Theme</th>
<th>Executive Committee Member Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish a foundation for safe and equitable deployment of AV technology</td>
<td>Guidance to ensure desired outcomes for people</td>
</tr>
<tr>
<td>Create a vision for how we want CAT to look/operate for Washington future</td>
<td>Guidance to ensure desired outcomes for people</td>
</tr>
<tr>
<td>An ecosystem that encourages AV development and implementation. We need more</td>
<td>Strategic positioning of WA at leading edge</td>
</tr>
<tr>
<td>action in this space or the system will develop without us</td>
<td></td>
</tr>
<tr>
<td>Informing a legal and regulatory framework that encourages testing/use of AV's</td>
<td>Strategic positioning of WA at leading edge</td>
</tr>
<tr>
<td>Policy guidance for the safe deployment of AV</td>
<td>Guidance to ensure desired outcomes for people</td>
</tr>
<tr>
<td>Policy recommendations on how to maximize benefits of AV's to our transportation system</td>
<td>Leverage benefits of AVs for transportation system</td>
</tr>
<tr>
<td>Support for local government to prepare for deployment and infrastructure development and clear guidelines for data collection to inform future decisions</td>
<td>Policy guidance for state agencies and local governments</td>
</tr>
<tr>
<td>Education for all those impacted</td>
<td>Public education and awareness of impacts</td>
</tr>
<tr>
<td>Desired outcome: WA continues to be a leader in cultivating and nurturing AV technology innovation</td>
<td>Strategic positioning of WA at leading edge</td>
</tr>
<tr>
<td>Policy direction to steer the industry toward positive impacts for the environment and to leverage current mass transit system options for those who would choose not to drive for whatever reason</td>
<td>Guidance to ensure desired outcomes for people</td>
</tr>
<tr>
<td>Policies that produce safe and equitable deployment of AV technology</td>
<td>Guidance to ensure desired outcomes for people</td>
</tr>
<tr>
<td>Definitive policies that align with the AV technology AND user-based needs for safe and cost-efficient implementation within the state</td>
<td>Guidance to ensure desired outcomes for people</td>
</tr>
<tr>
<td>Thoughtful planning that considered health, safety, mobility and equity</td>
<td>Guidance to ensure desired outcomes for people</td>
</tr>
<tr>
<td>Comprehensive study of equity issues of our current transportation system which allows us to develop a strategic approach to deploy AVs so that this technology bridges gaps/ reduce disparities</td>
<td>Guidance to ensure desired outcomes for people</td>
</tr>
<tr>
<td>A robust competitive innovative group of companies investing in Washington State. A light touch regulatory environment that makes Washington the nation's place to innovate in AV industry</td>
<td>Strategic positioning of WA at leading edge</td>
</tr>
</tbody>
</table>
APPENDIX B: WA AV Work Group Future Path Prioritization Recommendations Matrix

*Appendix B is documented in a separate document.*
<table>
<thead>
<tr>
<th>Action</th>
<th>Near-Term Testing Activities</th>
<th>Workgroup &amp; Subcommittee Priorities</th>
<th>Reporting Requirements</th>
<th>Funding Considerations</th>
<th>Measurement &amp; Evaluation Goals</th>
<th>Other Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify and pursue testing decisions during, and after testing, including any appropriate, find alignment with State activities that specifically address the Work Group, or a subset of the Work Group's membership.</td>
<td>Ensure alignment and non conflict between motivations for testing decisions.</td>
<td>Insufficient for public access to certification are currently registered with private companies, such as DOL as it progresses to consider how subcommittee or as its scope to capture the testing decisions do not conflict with private companies, such as DOL as it progresses to solicit input from other companies.</td>
<td></td>
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<tr>
<td>Identify infrastructure and data security and privacy requirements for self-certifying entities include contact information numbers, and proof of development of policy frameworks.</td>
<td>• Provide an overarching perspective on testing outcomes.</td>
<td>• Consider the liability implications of the self-certified entities.</td>
<td></td>
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</tr>
<tr>
<td>Vehicle Testing &amp; Reporting</td>
<td>• Explore potential for any pilot testing activities.</td>
<td>For example: Washington Department of Transportation Commission on Infrastructure &amp; Systems Technology</td>
<td>• Ensure motivations for testing are oriented towards improving impact assessment or other study requirements.</td>
<td>• Consider potential partnerships with private companies, such as DOL as it progresses to facilitate and/or provide guidance to the DOL on its stakeholders in the tracking of services being provided.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix A: AV Work Group Future Path Work Session Report and Actions Rec. Matrix for Subcommittees

<table>
<thead>
<tr>
<th>Subcommittees</th>
<th>Deployment-Oriented Activities</th>
<th>Near-Term Testing Activities</th>
<th>Legislation &amp; Regulatory</th>
<th>System Technology &amp; Data Security</th>
<th>Communication</th>
<th>Workforce Training</th>
<th>Workforce Development</th>
<th>Transportation System</th>
<th>Public Policy</th>
</tr>
</thead>
</table>
| Facilitate the submission of feedback on the guiding principles from a workforce training facilitator of dialogue between companies that have self-certified for prioritized investments that support safe deployment of vehicles with autonomous vehicles to subcommittee. | Review existing legislation to prioritize investments for the remainder of the Work Group to develop a list of priorities and objectives of each subcommittee. | Review and provide input on the data guiding principles, and feedback on the guiding principles from the Uniform Law Commission to subcommittee. | Provide overarching guidance and revisions to the draft language. | Consider review of driver vehicle security features or vehicle data protection in mind. | Ensure that the education plan communicates the benefits and limitations of ADAS and AV. | Work Group and develop a list of priorities and objectives of their members, and the impact on the assignment of liability that may be in conflict with other users of the transportation system. | Provide overarching guidance and revisions from the perspective of different road rights-of-way by the transportation commission. | Discourage infrastructure investments to subcommittee. | Facilitate the submission of comments from companies that have self-certified for automation to the subcommittee. | Consider legislative reform to ensure that changes to the Uniform Law Commission AV Model Bill language and HB 2470 that the information is disseminated to the various users of the road, this actions is greatly by the proposed definitions and terms on the rules of the road by an understanding of the information. |}

For example:

- **Deployment-Oriented Activities**
  - Near-Term Testing Activities
  - Legislation & Regulatory
  - System Technology & Data Security
  - Communication
  - Workforce Training
  - Workforce Development
  - Transportation System
  - Public Policy
Appendix A: AV Work Group Future Path Work Session Report and Actions Rec. Matrix for Subcommittees

Highlighted cells in columns F through M indicate a suggested lead entity for the action.

<table>
<thead>
<tr>
<th>Broad Focus Area</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public and stakeholder engagement</td>
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<tr>
<td>State would help to identify potential deployment towards more desirable</td>
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<td>broad impacts on the transportation system, and required legislative reform.</td>
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<tr>
<td>Despite increasing certainty around health and equity guiding principles</td>
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<tr>
<td>their needs.</td>
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<tr>
<td>potential safety implications of changes to licensing may be needed or serve as</td>
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<tr>
<td>a solution.</td>
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<tr>
<td>planning process includes allocation of liabilities across the industry, and</td>
<td></td>
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<tr>
<td>elevate the need for scenario planning, and engage in planning exercise at this</td>
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<tr>
<td>time, each subcommittee must contend with.</td>
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<td>...</td>
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</tbody>
</table>