# Washington State Transportation Commission

# AV Work Group Update

October 20, 2020

# COVID-19 Impacts on Work Group Activity

- **A challenging year for Work Group efforts and recommendations**
  - » Sudden shift to virtual constrained collaboration and progress
  - » Public and Private Sector attention shifted to response / recovery, and keeping the lights on
  - » Budget restrictions and cuts – short and long term effects on Work Group recommendations and actions

- **AV development and testing has been disrupted and motivated to shift**
  - » COVID-19 put the brakes on elements of AV development previously a priority
  - » Highlighted key use cases to focus AV testing and deployment on (e.g. contactless delivery

**Opportunity to Refocus**

Re-evaluate Work Group priorities and road map

Provide discrete direction to subcommittees

# Long-Term Impact of COVID-19 on AV and Mobility

What do the trendlines tell us today?

What trends are likely to stick?

What are the impacts of the economic damage?

# Long-Term Impact of COVID-19 on AV and Mobility

- **Delivery use cases more likely to be here to stay**
  - » COVID accelerating use case that is not COVID-dependent
  - » Opportunity for increased policy focus

- **COVID likely to delay AV service launches**
  - » Economic impact on development
  - » Concerns on multiple passengers/vehicle cleaning

- **Uncertain impact on long-term fundamentals**
  - » Nature of work is set to change, but long term impacts are unclear
  - » Where people choose to live may also change with different work arrangements

# Executive Committee Future Path Work Session

- **Overarching questions posed to the Executive Committee (EC):**
  - » What should the focus of the Work Group be through to the sunset date of 2023?
  - » What role the Cooperative Automated Transportation (CAT) policy goals adopted by the EC play in guiding that direction?

- **Proposal put forward on use of CAT policy goals as a framework for action**

- **Live-polling exercise used to identify priorities and direction for the Work Group's path moving forward**

# Adopted CAT Policy Goals

- **#1 Organize for Innovation:** Enable organizational change that empowers officials to be flexible, accelerate decision-making, and adapt to changing technology.

- **#2 Shared Mobility:** Encourage and incentivize shared mobility, including an emphasis on high occupancy and shared modes for moving people and goods.

- **#3 Economic Vitality and Livability:** Create resilient and efficient regional networks and empower local agencies to create resilient, multimodal local networks.

- **#4 Infrastructure and Context Sensitive Street Design:** Promote durable, physical and digital networks that accommodate the movement of people and goods in ways that are appropriate for the context.

# *(continued)*
# Adopted CAT Policy Goals

*(continued)*

- **#5 Land Use:** Encourage land use development patterns that support multimodal connectivity to efficient local and regional networks.

- **#6 Equity:** Work with marginalized communities to increase access to desirable mobility options.

- **#7 Safety:** Increase the safety of transportation systems and infrastructure to support the safe movement of people and goods.

- **#8 Environment:** Reduce the local and cumulative environmental impacts of mobility to improve air and water quality, energy conservation and mitigate climate change.

# Re-cap of Questions from the Live Polling Exercise

## Part 1 Rank in Order of Priority

- » Broad Work Group focus areas
- » Near-term testing activities
- » Deployment-oriented activities
- » CAT-oriented activities

Used to establish prioritization of key actions

## Part 2 Free-form 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?

Used to provide context for contributing or supplementary actions

# RANKING QUESTION #1:

# Broad Work Group Focus Areas

- Results showed no strong preference on how to prioritize broad Work Group focus areas

- Split outcomes possibly due to a balance of differing perspectives across the EC on Work Group priorities

| | |
|---|---|
| 1st | Focus on achievement of CAT objectives and mitigating potential negative impacts of AV technologies |
| 2nd | Focus on needs for near-term testing of highly automated vehicles |
| 3rd | Focus on near- and long-term deployment needs of highly automated vehicles |

# RANKING QUESTION #2:

# Near-term testing activities

- Results showed clear interest in having open discussions with companies undergoing testing
- Understanding of motivations for testing may help to inform further policy revisions and implementation



1st — Conduct open discussions with companies with DOL self-certification to understand what motivates testing decisions

2nd — Implementation of and/or revisions to ESHB 2676 section 2: Autonomous Vehicle Testing & Reporting

3rd — Identify and pursue funding to support pilot and testing activities
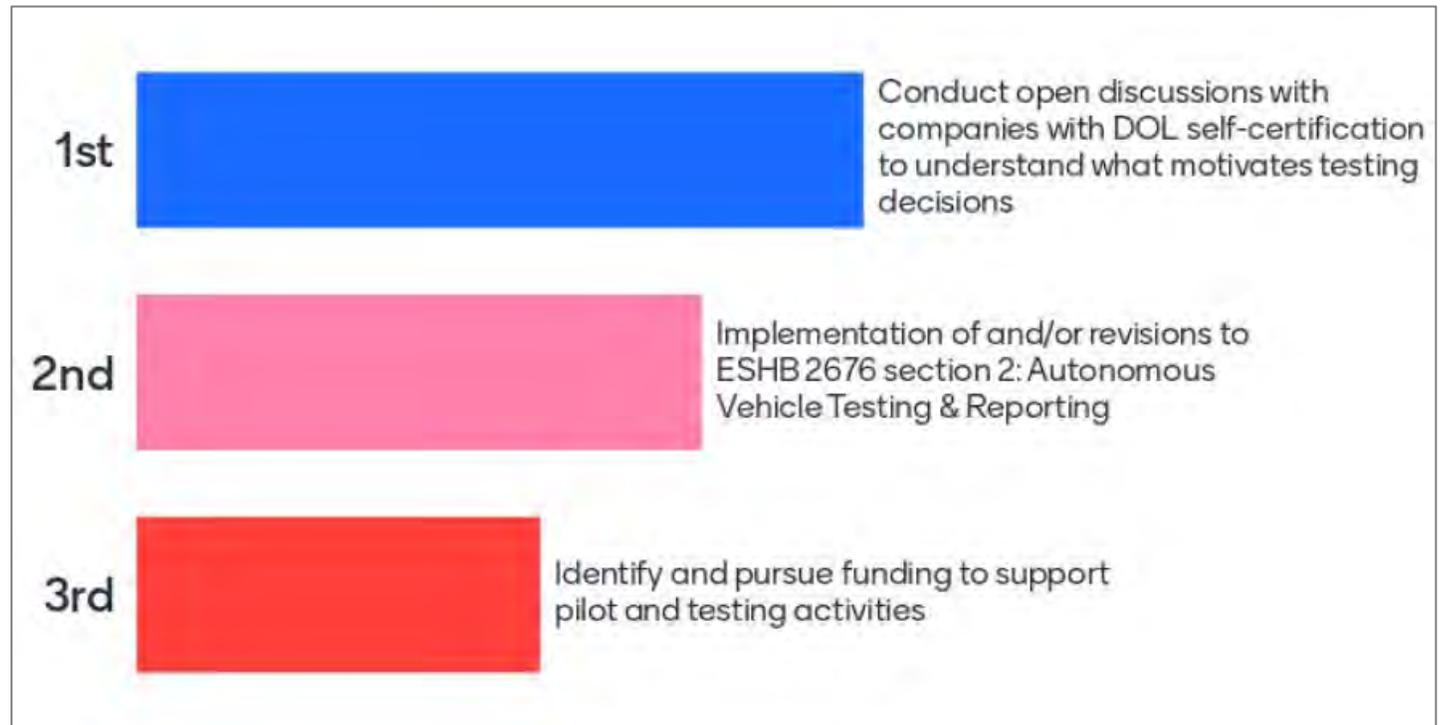
# RANKING QUESTION #3:
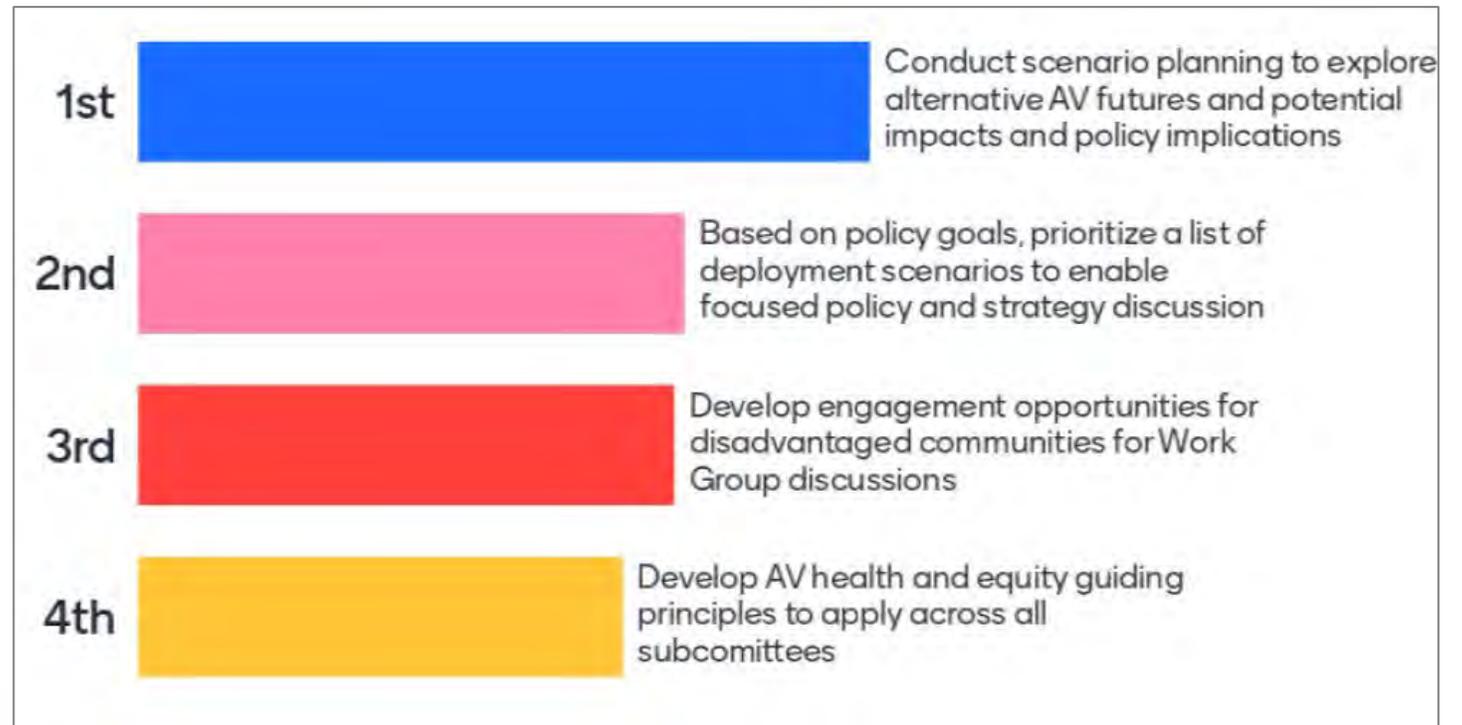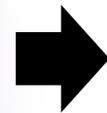
# Deployment-oriented activities

- Results signal particular interest in actions that help lay the groundwork for deployment, including:
  - » Near-term infrastructure investments
  - » Topics requiring legislative reform
  - » AV data guiding principles



| | | |
|---|---|---|
| 1st | | Prioritize a list of near-term infrastructure investments to pursue (signing/striping, broadband, etc.) |
| 2nd | | Develop a prioritized list of topics needing legislative reform (e.g. video screens, public records act, etc.) |
| 3rd | | Identify and adopt AV data guiding principles |
| 4th | | Review and recommend revisions to the draft Uniform Law Commission AV Model Bill language & HB 2470 |
| 5th | | Develop an Education Plan to communicate the benefits and limitations of ADAS and AV |

# RANKING QUESTION #4:

## CAT-oriented activities

- Results suggest continued interest in conducting scenario planning to explore alternative AV futures

- This may point to a potential interest/need for better understanding of impacts and policy implications

| | |
|---|---|
| **1st** | Conduct scenario planning to explore alternative AV futures and potential impacts and policy implications |
| **2nd** | Based on policy goals, prioritize a list of deployment scenarios to enable focused policy and strategy discussion |
| **3rd** | Develop engagement opportunities for disadvantaged communities for Work Group discussions |
| **4th** | Develop AV health and equity guiding principles to apply across all subcomittees |

# Matrix of Contributing Actions

- Prioritizes actions and outlines potential contributing actions for each subcommittee

- These are suggestions/recommendations, not a mandate/must

- Meant to start discussion and help subcommittees see how they fit in the bigger picture of each action

- Provides context for the priorities identified for each focus area/action

| | | | | | Work Group Subcommittee | ... |
| | | | | | Description of Subcommittee | ... |
| Broad Focus Area | Rank | Action | Description | Workgroup Roles | contributing action | .. |
|---|---|---|---|---|---|---|
| Broad focus area grouping | Priority of Action | Overarching Action | Description of the action | Overview of Roles | Description of contribution actions | ... |
| | | | | | Examples | ... |

# Example Action #1

## "Conduct open discussions with companies with DOL self-certification to understand what motivates testing decisions."

Licensing Subcommittee facilitates discussions

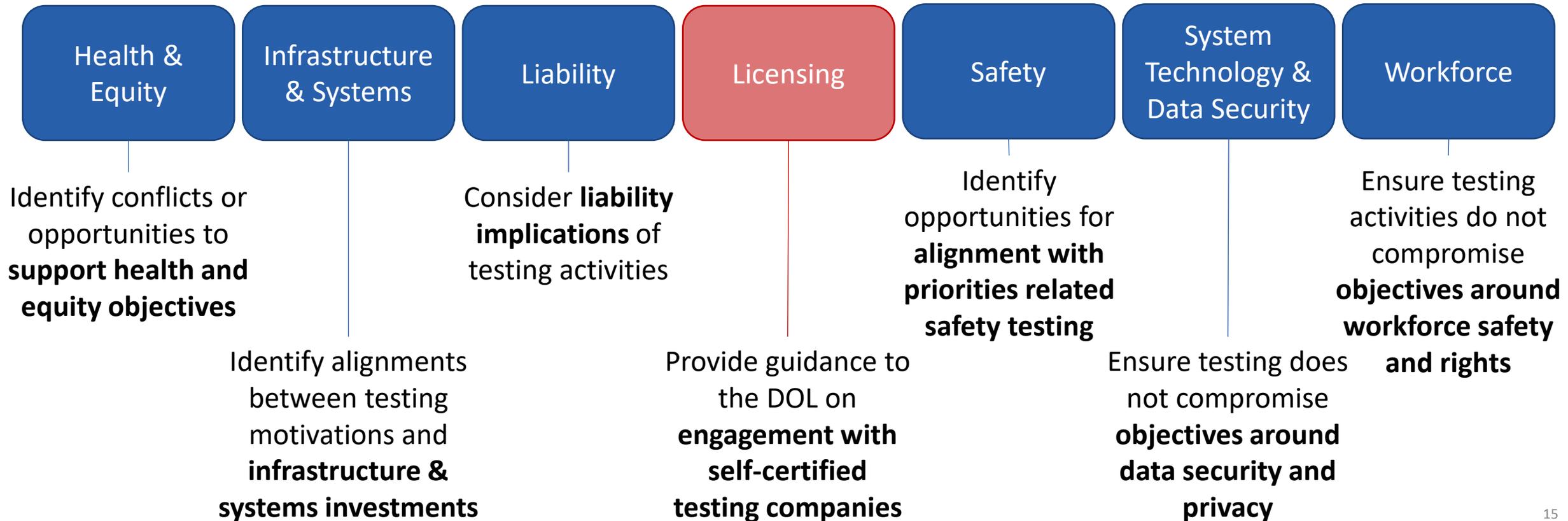Other subcommittees contribute to discussion

Other subcommittees contribute to discussion

| Executive Committee | Health and Equity Subcommittee | Infrastructure & Systems Subcommittee | Liability Subcommittee | Licensing Subcommittee | Safety Subcommittee | System Technology & Data Security Subcommittee | Workforce Subcommittee |
|---|---|---|---|---|---|---|---|
| *contributing action* | *contributing action* | *contributing action* | *contributing action* | *contributing action* | *contributing action* | *contributing action* | *contributing action* |
| Contribute to the discussion and ensure that key questions and considerations around motivations for testing are considered. | Contribute to discussions as a subcommittee and/or as its members desire. | Contribute to discussions as a subcommittee and/or as its members desire. | Contribute to discussions as a subcommittee and/or as its members desire. | Facilitate and/or provide guidance on discussions with self-certified companies. | Contribute to discussions as a subcommittee and/or as its members desire. | Contribute to discussions as a subcommittee and/or as its members desire. | Contribute to discussions as a subcommittee and/or as its members desire. |
| For example:<br><br>• Provide an overarching perspective on testing considerations to address areas not covered by any subcommittee<br>• Ensure a balance of perspectives are considered | For example:<br><br>• Ensure motivations for testing decisions do not conflict with health and equity objectives<br>• Identify opportunities where testing decisions may be leveraged in support of health and equity objectives | For example:<br><br>• Identify potential alignment between motivations for testing and priorities from the perspective of infrastructure and other supporting systems<br>• Identify infrastructure and systems needs that may encourage testing opportunities | For example:<br><br>• Consider the liability implications of various testing scenarios that are of interest to industry partners | For example:<br><br>• Engage self-certifying entities through the DOL<br>• Provide guidance to the DOL on interviews and/or workshops with self-certifying entities | For example:<br><br>• Ensure motivations for testing decisions to do not conflict with or compromise safety objectives<br>• Identify potential alignment between motivations for testing decisions and priorities for testing related to safety | For example:<br><br>• Ensure motivations for testing decisions to do not conflict with or compromise objectives around data security and privacy<br>• Identify potential alignment between motivations for testing decisions and priorities for system technology and data security | For example:<br><br>• Ensure that motivations for testing decisions do not conflict with or compromise objectives related to workforce safety and rights |

# Example Action #1

**"Conduct open discussions with companies with DOL self-certification to understand what motivates testing decisions."**

| Health & Equity | Infrastructure & Systems | Liability | Licensing | Safety | System Technology & Data Security | Workforce |
|---|---|---|---|---|---|---|

Identify conflicts or opportunities to **support health and equity objectives**

Identify alignments between testing motivations and **infrastructure & systems investments**

Consider **liability implications** of testing activities

Provide guidance to the DOL on **engagement with self-certified testing companies**

Identify opportunities for **alignment with priorities related safety testing**

Ensure testing does not compromise **objectives around data security and privacy**

Ensure testing activities do not compromise **objectives around workforce safety and rights**

**"Develop AV health and equity guiding principles to apply across all subcommittees."**

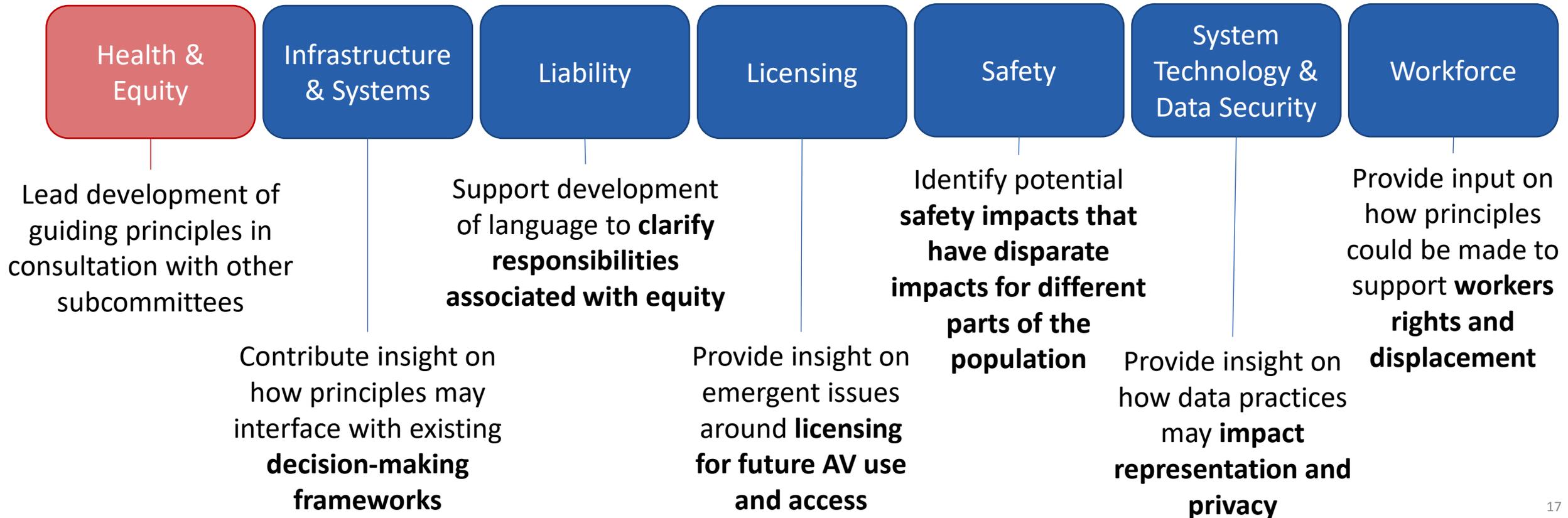Health and Equity Subcommittee leads the development

Other subcommittees provide insight on use cases and applicability to support development

| Executive Committee | Health and Equity Subcommittee | Infrastructure & Systems Subcommittee | Liability Subcommittee | Licensing Subcommittee | Safety Subcommittee | System Technology & Data Security Subcommittee | Workforce Subcommittee |
|---|---|---|---|---|---|---|---|
| *contributing action* | *contributing action* | *contributing action* | *contributing action* | *contributing action* | *contributing action* | *contributing action* | *contributing action* |
| | Lead the development of health and equity guiding principles in consultation with other subcommittees to ensure applicability. | Provide insight on how the health and equity guiding principles can interact with the work of the subcommittee, and give insight on ways to make the principles broadly applicable. | Provide insight on how the health and equity guiding principles can interact with the work of the subcommittee, and give insight on ways to make the principles broadly applicable. | Provide insight on how the health and equity guiding principles can interact with the work of the subcommittee, and give insight on ways to make the principles broadly applicable. | Provide insight on how the health and equity guiding principles can interact with the work of the subcommittee, and give insight on ways to make the principles broadly applicable. | Provide insight on how the health and equity guiding principles can interact with the work of the subcommittee, and give insight on ways to make the principles broadly applicable. | Provide insight on how the health and equity guiding principles can interact with the work of the subcommittee, and give insight on ways to make the principles broadly applicable. |
| Review and serve as a clearinghouse for health and equity guiding principles put forward by the Work Group. | For example: <br> • Research and evaluate industry and national best practices on health and equity principles related to AVs <br> • Consult with other subcommittees on approaches to maximize the utility of the health and equity principles for their work | For example: <br> • Support the Health and Equity Subcommittee by providing information on how principles may interact with standard infrastructure investment decision making processes and existing evaluation frameworks. | For example: <br> • Consider the responsibility that different actors within the AV environment have in upholding health and equity, and support the development of language in the guiding principles that clarify expectations in this area. | For example: <br> • Provide insight on existing equity challenges related to licensing, such as the ability for different parts of the population to access licenses due to issues such as cost, or access to training and testing, and consider how these implications will manifest in an AV | For example: <br> • Contribute to the health and equity guiding principles by identifying potential safety implications that have disparate impacts for different parts of the population | For example: <br> • Provide insight into how existing and emerging data collection and management practices impact the representation and privacy of various parts of the population. | For example: <br> • Provide input on how the health and equity guiding principles could be made applicable to the protection of worker rights, and in the development of training programs aimed at countering dislocation of workers |

**"Develop AV health and equity guiding principles to apply across all subcommittees."**

| Health & Equity | Infrastructure & Systems | Liability | Licensing | Safety | System Technology & Data Security | Workforce |
|---|---|---|---|---|---|---|

**Health & Equity:** Lead development of guiding principles in consultation with other subcommittees

**Infrastructure & Systems:** Contribute insight on how principles may interface with existing **decision-making frameworks**

**Liability:** Support development of language to **clarify responsibilities associated with equity**

**Licensing:** Provide insight on emergent issues around **licensing for future AV use and access**

**Safety:** Identify potential **safety impacts that have disparate impacts for different parts of the population**

**System Technology & Data Security:** Provide insight on how data practices may **impact representation and privacy**

**Workforce:** Provide input on how principles could be made to support **workers rights and displacement**

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# Other Sample Actions

- Implementation of ESHB 2676 (AV testing and reporting)

- Identify and pursue pilot funding

- Prioritize near-term infrastructure investments

- Prioritize topics needing legislative reform

- Develop AV data guiding principles

- Review ULC model bill language

- Develop education plan for ADAS and AV

- Conduct scenario planning to explore alternative AV futures

- Prioritize a list of deployment scenarios

- Develop engagement plan for disadvantaged communities

# Examining Other States' Regulatory Frameworks

| California | Arizona |
|---|---|
| Adopted Regulations | Governor's Executive Order |
| Multiple agencies with regulatory authority (DMV, CHP, CPUC) | One agency with regulatory authority (DOT) |
| "Heavy touch" regulatory environment | "Light touch" regulatory environment |
| Applicable to SAE Level 3 thru 5 | Applicable to SAE Level 4 thru 5 |
| Permit application, fee, and approval | Self-certification |
| $5 million insurance policy (or equivalent) | No requirement beyond existing motor vehicle insurance requirements |
| Law enforcement interaction protocol for driverless vehicle testing | Law enforcement interaction protocol required for all AV operations |
| Passenger services pilot program in second year | Allows passenger services operations |

# AV Industry Panels
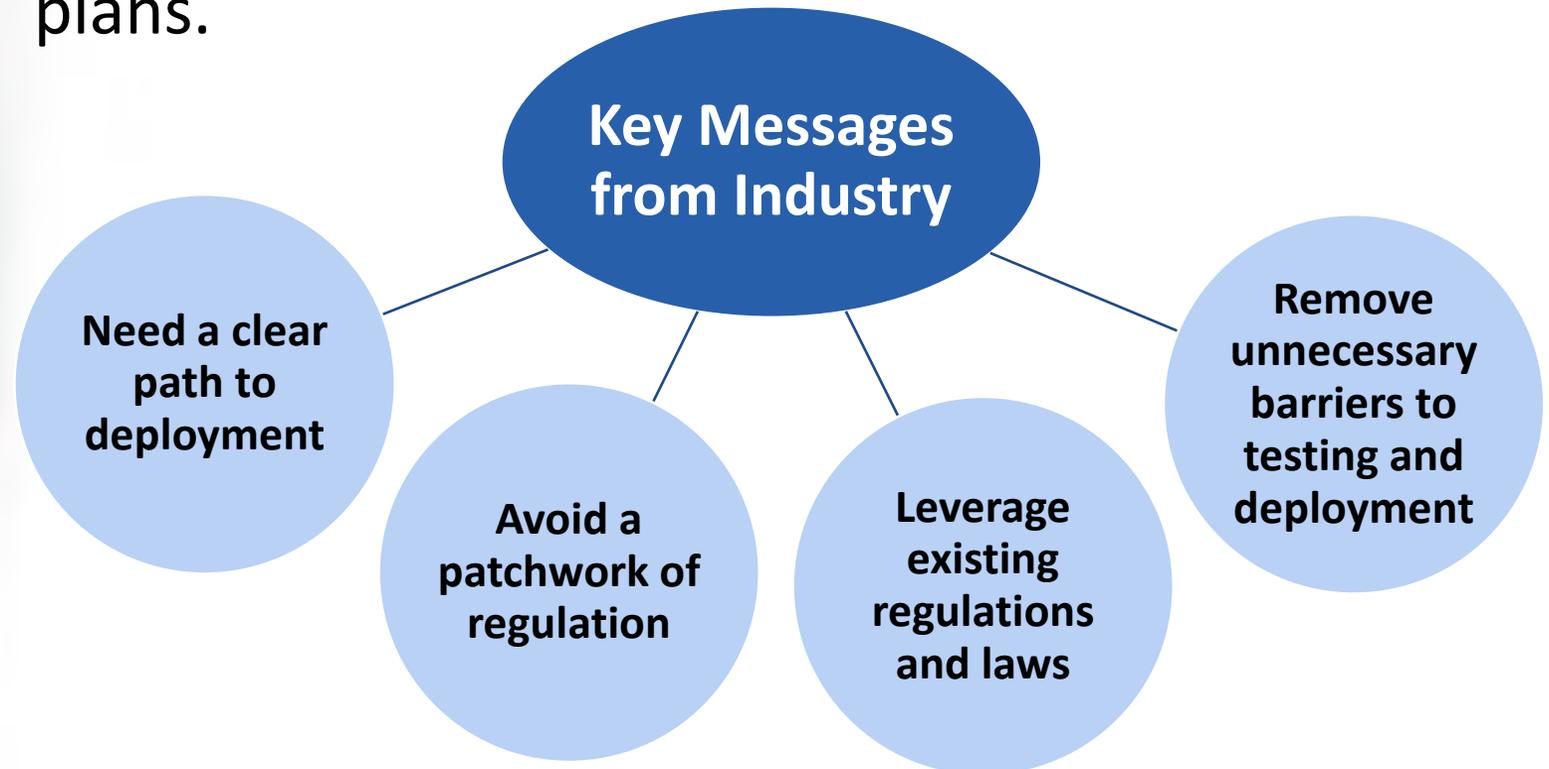
Cruise

LM Industries Group

Beep

Aurora

EasyMile

Self-Driving Coalition
for Safer Streets

Industry representatives shared their insights and experiences testing in other states, offered input into Washington State's AV policy development, and provided overviews of work, products, and future plans.

**Key Messages from Industry**

Need a clear path to deployment

Avoid a patchwork of regulation

Leverage existing regulations and laws

Remove unnecessary barriers to testing and deployment

## House Bill 2676 - Minimum Requirements for AV Testing

- Passed legislature and signed by Governor Inslee March 2020

- RCW 46.92.010 – Self-certification requirements (effective October 2021)
  - » Outlines required information and unique identification number
  - » Specifies collision and moving violation reporting requirements
  - » Notification of testing activities

- RCW 46.30.050 – Liability insurance requirement
  - » Requires umbrella liability insurance policy for no less than $5 million per occurrence in order to test on public roadways

# Focus on Washington State AV Policies

## House Bill 2470 – Automated Operation of Vehicles

- HB 2470 introduced in 2020 session, not passed

- Would place authority into State agencies' hands to certify and manage AV qualifications to operate on public roadways

- Varying perspectives on level of regulation needed and the State's role
  - » Presentation from Uniform Law Commission on history and intent of Model AV Bill used to draft HB 2470
  - » Presentation from industry on alternatives to HB 2470 / Model AV Bill that removes potential restrictions to innovation and deployments

# Expert Presentations

- **University of Washington Law School – AV Law National Scan**
  - » AV Policies and Initiatives from all 50 states
  - » Scanned topics included ongoing testing, local preemption, oversight entities, infrastructure development, safety, data and privacy concerns, public education, liability and insurance, and health and equity concerns

- **Expert presentations to Subcommittees**
  - » Infrastructure initiatives
  - » Other states' AV progress and lessons learned
  - » ADAS advancements and challenges
  - » Cybersecurity
  - » Emerging mobility and equity

**Final Executive Committee meeting this year: November 12<sup>th</sup>**

- Recommendations from multiple subcommittees anticipated
  - » Path to clarify what vehicles are subject to AV regulations in Washington
  - » Development of a law enforcement interaction plan requirement
  - » Structured public outreach and engagement process
  - » Public-private partnership to report on testing locations – traffic safety, demographics, area characteristics – to help inform future decision making

*Annual Report to the Legislature: Due date pushed to January 8<sup>th</sup>, 2021*

Thank You!

WASHINGTON STATE
AUTONOMOUS VEHICLE
WORK GROUP

Washington State
Transportation Commission