MEETING SUMMARY

Meeting: Executive Committee, Meeting #6
Location: Virtual Meeting only
Date: June 24, 2020

Members in Attendance:

Member	Organization	Present (Y/N)?	Rep Sent in Place (Y/N)?
James A. Restucci (Acting Chair)	Washington State Transportation Commission	Y	--
Senator Curtis King	Washington State Legislature	N	N
Senator Ann Rivers	Washington State Legislature	N	N
Senator Joe Nguyen	Washington State Legislature	Y	--
Senator Mona Das	Washington State Legislature	N	N
Rep Zack Hudgins	Washington State Legislature	Y	--
Rep Shelley Kloba	Washington State Legislature	Y	--
Rep Mary Dye	Washington State Legislature	Y	--
Rep Matt Boehnke	Washington State Legislature	Y	--
John Batiste	State Patrol	N	N
Pam Pannkuk	State Traffic Safety Commission	Y	--
Mike Kreidler	State Insurance Commission	N	Y – Bryon Welch
Teresa Bertsen	Department of Licensing	Y	--
Roger Millar	Department of Transportation	Y	--
Joel Sacks	Department of Labor & Industries	N	Y – Maggie Leland
Laura Johnson	Department of Health	Y	--
Suzan LeVine	Employment Security Department	N	N
Jim Weaver	State Chief Information Office, WaTech	N	N
Charles Knutson	Governor's Office	Y	--
Dr. Yinhai Wang	Smart Transportation Applications & Research Laboratory (STAR Lab), University of Washington	Y	--
Justin Leighton	Washington State Transit Association	Y	--
Tom Alberg	ACES Northwest	Y	--
Sam Zimbabwe	City of Seattle Transportation Department	Y	--
Curt Augustine	Alliance for Automotive Innovation	Y	--
Brenda Wiest	Teamsters Local 117	Y	--
Todd O'Brien	Adams County	Y	--
Jessica Ramirez	Puget Sound Sage	N	N
Bryan Mistele	INRIX	Y	--
John Milbrath	AAA	Y	--
Bryce Yadon	Futurewise	Y	--
Caleb Weaver	Uber	N	N
Steve Gordon	Gordon Truck Centers	Y	--
Anna Zivarts	Disability Rights Washington	Y	--
George Ivanov	Waymo	Y	--

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A full recording of the virtual meeting and the meeting presentation deck are available on the WA AV Work Group website:

https://www.youtube.com/watch?v=ITRPr_KzB_w&feature=youtu.be

WELCOME AND INTRODUCTIONS

Jim Restucci, Acting Chair of the AV Work Group, opened the meeting with introductions of Executive Committee members, an overview of the meeting agenda, and a walk through of virtual meeting operations and functionality.

WORK GROUP FUTURE PATH
Scott Shogan, Vice President, WSP USA

Scott Shogan of WSP USA facilitated a work session with the Executive Committee, posing the question:

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

Mr. Shogan recapped the definition of an autonomous vehicle vs. the broader CAT definition, the legislative charge to the Work Group, and the 8 CAT policy goals adopted by the Executive Committee in 2019.

The proposal to the Executive Committee members was to use the adopted CAT policy goals as a framework for action, prioritizing overarching approaches and suggested actions, providing direction to subcommittees to help guide activities.

Mr. Shogan conducted a live polling exercise with Executive Committee members to identify priorities and direction for the Work Group's path moving forward. The polling exercise asked committee members to rank broad Work Group focus areas: Near-term testing, deployment, and CAT-oriented actions. Within each broad focus area, the members then ranked near-term achievable actions in order of priority to provide refined priorities of areas for the Work Group to focus on through 2023. Executive Committee members also provided additional actions and focus areas to include as priorities, and noted outcomes most critical to the success of the Work Group.

Next steps from this work session will be to synthesize input from the polling and discussion to provide subcommittee feedback and direction, update the Work Group roadmap to reflect the direction, and factor priorities into future meeting topics.

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Questions and presenter responses can be found in the Presentation Questions Log table at the end of this document.

ULC MODEL AV BILL

Michele Radosevich, Partner, David Wright Tremaine & member of ULC Automated Operation of Vehicles Act drafting committee

Michele Radosevich, Partner at Davis Wright Tremaine and a member of the Uniform Automated Operation of Vehicles Act drafting committee, presented on the Uniform Automated Operations of Vehicles Act ("The Act"), drafted by the Uniform Law Commission (ULC) in 2019. The Act addresses the deployment of automated vehicles on roads help open to the public, covering traffic laws and enforcement, vehicle registration, driver licensing, and resolves potential conflicts with existing state motor vehicle laws. The scope of the Act does not attempt to rewrite laws of product liability or tort reform.

Ms. Radosevich discussed three key points of the Act:

- Automated driving will likely be diverse – the Act contemplates this diversity
- The Act focuses on typical state vehicle code
- The Act respects established state and federal roles in vehicle safety

Ms. Radosevich also addressed a new entity introduced by the Act – the "Automated Driving Provider" (ADP) – which would be considered the legal driver of an automated vehicle under automated operation. The ADP might be a vehicle manufacturer, system developer, data provider, fleet operator, or another kind of market participant. Once an automated vehicle is associated with an ADP, the Act adopts a state's existing motor vehicle registration process, seeking to respect and empower state motor vehicle agencies.

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AV INDUSTRY PANEL – TESTING AND DEPLOYMENTS ACROSS THE COUNTRY

Representatives from the broad AV industry presented on testing and deployments across the country and provided industry perspective on considerations for Washington to prepare for and accommodate testing and deployment in the State.

Questions and presenter responses can be found in the Presentation Questions Log table at the end of this document.

Cruise LLC – Rachelle Celebrezze, Senior Manager, Government Affairs

Rachelle Celebrezze, Senior Manager for Government Affairs, presented on Cruise's self-driving car company, based on a fleet model, and focused on safety. Cruise was founded in 2013, and has since grown in a partnership with GM and expanding deployments and offices across the country.

Ms. Celebrezze discussed Cruise's design and testing philosophy, integrating automated technologies directly into the vehicle, conducting multiple layers of testing, and deploying in a fleet-based model so that what one vehicle learns, the entire fleet learns. She also discussed Cruise's integration into communities, working with them to understand what the benefits of AVs are and becoming a fabric of the communities.

Ms. Celebrezze highlighted several guiding AV regulatory framework principles and considerations for Washington:

- Clear Path to Deployment: Regulations should authorize AV deployments and remove roadblocks that assume a human driver.
- Testing in Real-World Environment: Ensure testing is permitted in domains where deployments are anticipated.
- Statewide Applicability: Avoid a patchwork of regulations, and create a unified, statewide framework for testing and deployments.
- Service-Neutral Approach: Ensure framework allows for both the transport of persons and delivery of goods.
- Technology-Neutral Approach: Allow new technology to mature and avoid overly prescriptive approaches that could constrain progress and innovation.

LM Industries Group, LLC – David Woessner, Executive Vice President

David Woessner, Executive Vice President of LM Industries Group (parent company of Local Motors), presented on their low speed autonomous shuttle Olli, its evolution, and previous and current deployments. Olli is a 3D printed, self-driving, electric autonomous shuttle with limited operational design domains, maximum speed of 25mph, and a variety of applicable use cases.

Mr. Woessner walked through a variety of different use cases, including first/last mile connections, private campus fixed-route deployments, leveraging Olli to test wear and tear on tires and tread, and testing urban area use. These deployments have led to a better understanding of customer and consumer preferences and requirements, have helped improve the technology, and shared data with state and federal agencies.

Mr. Woessner highlighted key considerations for Washington state legislation and regulation:

- Remove unnecessary barriers to testing and deployments on public roads.
- Develop or change relevant laws where current laws are a barrier.
- Collaborate with many stakeholders to collect and share relevant data at various levels to educate regulators and the general population.

Beep – Joe Moye, CEO

Joe Moye, CEO of Beep, presented on the company's offerings – controlled speed, electric, fixed-route, multi-passenger autonomous Mobility-as-a-Service solutions for both private and public communities. Beep's solutions build a scalable, dynamic route service, optimizing assets and deploying true on-demand mobility. Beep offers planning services such as route assessment and proof of concepts, deployment services such as mapping and route launching, and management services such as demand analysis and performance monitoring.

Mr. Moye walked through the 5 stages of controlled speed shuttle autonomy – fixed route, ride hailing and scheduling, variable mapped routes, route orchestration, and fully autonomous within a geofence.

Mr. Moye highlighted key lessons learned for Washington to consider as the state develops and advances AV policy:

- Engage early and often.
- Understand and leverage available sources of funding (e.g. public-private partnerships).
- Have skilled AV attendants that can also engage with riders.
- Technology requires more maturity and ubiquitous availability for safe autonomous operation at scale.
- Support operations and service level agreements must be designed for customer-facing impacts (e.g. head times).

EXECUTIVE COMMITTEE MEMBER ITEMS
Open forum

All Executive Committee members in attendance were given the opportunity to offer thoughts, insights, and observations.

- Pam Pannkuk asked what the next steps are.
  - Next steps are for the WSTC and contract team to synthesize results of the Work Group Future Path polling exercise and produce a report for the Executive Committee and Subcommittees that identifies areas of desired focus and priority for the Work Group for its remaining time, through December 2023

CLOSING REMARKS

Acting Chair Jim Restucci thanked the presenters, organizers, and Executive Committee members, and asked if there was any other business. No other business identified.

MEETING ADJOURNED.

Next Meetings:

- **September 24th** – Executive Committee meeting
- **November 12th** – Executive Committee meeting

PRESENTATION QUESTIONS LOG

Presentation	Participant	Question / Comment	Presenter Response
Work Group Future Path	Sam Zimbabwe	Supporting broader participation, focusing on BIPOC communities, beginning with the AV Health & Equity Subcommittee	*Noted as a focus area not listed in polling exercise that Executive Committee member would like prioritized.*
Work Group Future Path	Teresa Bertsen	Comparing various models for pros/cons and other considerations	*Noted as a focus area not listed in polling exercise that Executive Committee member would like prioritized.*
ULC Model AV Bill	Representative Jake Fey	Why haven't ULC modified definitions based on industry objection?	Industry was at the table throughout the drafting process; Every one of the major manufacturers objected to definitions as they stand now. They object to the idea of being responsible for operation of the motor vehicle, wants to leave that with the owner of the vehicle.
			The clear view of the committee was that the consumer is entitled to be able to look to the manufacturer or other entity/fleet owner standing in the shoes of the manufacturer.
			The topic of changing definitions was brought up on multiple occasions during drafting, multiple votes resulted in the definitions in the final draft.

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ULC Model AV Bill	Curt Augustine	I would like an opportunity to respond to her rather strong charges against automakers regarding acceptance of responsibility and liability. It is borderline dangerous to accuse automakers of refusing to take responsibility of their products. Auto manufacturers do agree not to touch tort reform, but do object to the introduction of a new entity, the ADP, that does not exist in any state, has not been accepted by any state, and is an entirely new entity. Current state and federal laws are in place to ensure vehicles comply with the rules of the road, would still apply in the AV space.	How does a state government ensure that the vehicle and manufacturer comply with the rules of the road in their state? What happens if a particular vehicle from a particular manufacturer consistently runs red lights? Doesn't the state have the right to compel the manufacturer to fix non-compliant vehicles? (Response) We believe both current federal and state laws do that, and those instances can be resolved under current law. We also believe that all states have a law enforcement role, not against having states have the ability to enforce laws – traffic, liability, insurance, etc. – that is their role of the state.
ULC Model AV Bill	Francesca Maier	The bill assigns legal responsibility to the ADP, but the ADP only has [limited] control over the software components of the Automated Driving System. How do you see that work when the functionality of the sensor suite is an integral part of the ADS?	Manufacturers may have different suppliers for sensors and software, under current law they have recourse against those providers. If the sensors do not work because of improper maintenance, then it becomes an owner question as they are responsible for keeping the car in good driving condition.

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ULC Model AV Bill	Francesca Maier	Initially the hardware and software is under the manufacturer's control, but the maintenance of the sensor suite will need maintenance and repair, e.g. if there is a crash. The manufacturer has an unlimited right to terminate the automated driving agreement under the bill, so how is a private owner's right to operate and repair their personally-owned automated vehicle protected? Current law recognizes the owner's right to repair.	ADP revocations are going to take place only when systemic problems occur with a particular vehicle. State government is not going to do that high-handedly, but rather give the manufacturer plenty of warning there is problem to fix before considering revocation. One problem is aftermarket – consumers caught with aftermarket products that cannot be used. Nothing in the law prevents the vehicle from continuing to be used without the automated features.
ULC Model AV Bill	George Ivanov	The ULC bill appears to primarily cover personal car ownership, while the primary commercial use cases in discussion in Washington and other states are on ride hailing, local delivery, and heavy duty trucking. Each of those categories has specific operator criteria in every state and how do you see the ADP concept aligning with these existing categories?	Fleet operation is easy to align with the Act, the ADP will be the same as the vehicle owner. Other categories as well, the ADP will likely be the same as the owner.

Presentation	Participant	Question / Comment	Presenter Response
AV Industry Panel – Cruise	Representative Shelley Kloba	How does this vehicle (Cruise Origin) accommodate people with disabilities?	The vehicle has sliding doors and is much lower to the ground. The production ready vehicle does not have a ramp, but does have additional space to allow two people to go in and out at the same time; the step is low enough for a foldable wheelchair or walker. Not all disabilities are about wheelchair access too, Cruise has done with the National Federation of the Blind to make sure the current vehicle and the Origin will be responsive to their needs. Cruise conducted focus groups and rides with human rideshare drivers for blind riders to narrate their experience so Cruise could better understand where to improve. Example: If a rideshare driver parks across the street, it has a huge impact to low-vision and blind riders to cross the street, the vehicle should appear exactly where the rider placed the pin and expects the vehicle to arrive.
AV Industry Panel – Cruise	Anna Zivarts	Are Cruise vehicles wheelchair accessible?	Currently they are not, they are also not being provided to the public at this time. The Origin is designed for hard of hearing/deaf, low vision/blind, walkers and foldable wheelchairs. There is some lead time to work on the rest.
AV Industry Panel – Cruise	Anna Zivarts	There are blind/deaf who use wheelchairs, FYI	Noted.
AV Industry Panel – Cruise	Anna Zivarts	Have you released a list of best practices/accessibility features Cruise is incorporating into your vehicles/services?	Cruise is still in testing mode. We have not released best practices yet, it is something we are incorporating into our service and want to continue working with entities like this Work Group to resolve.

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AV Industry Panel – Cruise	Jim Restucci on behalf of Work Group	Are there laws, regulations, or policies in place in Washington that would prevent you from testing/deploying in Washington?	No, but there is no certainty on a path forward to deployment. The testing system is in place, but without a better understanding of how that goes from testing to deployment, it may give companies hesitation. Having one regulator for companies to communicate to would encourage testing/deployment, rather than the proposed construct now in HB2676 where companies must communicate with each local enforcement entity directly – when testing across lines, companies may have to communicate with a large number of law enforcement making it cumbersome to test.
AV Industry Panel – Cruise	Jim Restucci on behalf of Work Group	What are your thoughts on the question of "how safe is safe enough"? How much testing needs to be done? How should safety be regulated?	Cruise is working hard on safety – members of the AV Safety Consortium and PAVE, operate a training program for safety drivers/operators, etc. We are not going to deploy until we believe the vehicle is safer than a human driver. We continue to test and learn to get life-saving technology to market and to communities.
AV Industry Panel – LM Industries Group	Representative Mary Dye	What are some of your findings when you deployed the vehicle on the bike/walking path in Australia?	We took pre and post rider surveys – A lot of fears were alleviated once people took a ride in the vehicle from a safety and interaction perspective. There was a wide range of views – Some saw the vehicle as too aggressive, getting too close to pedestrians or passing a bicycle only two feet away, while others though the vehicle was not aggressive enough. Overall people felt comfortable riding in a closed corridor near pedestrians.

Presentation	Participant	Question / Comment	Presenter Response
AV Industry Panel – LM Industries Group	Jim Restucci on behalf of Work Group	Are there laws, regulations, or policies in place in Washington that would prevent you from testing/deploying in Washington?	We are looking to find ideal locations to deploy shuttles in Washington, working with public and private partners. The self-certification process enables us to deploy shuttles, we want that in place to have a clear path to testing and ultimately to full commercial deployment. As long as those things are in place, we don't see hurdles to do testing and piloting in Washington State.
AV Industry Panel – LM Industries Group	Jim Restucci on behalf of Work Group	What are your thoughts on the question of "how safe is safe enough"? How much testing needs to be done? How should safety be regulated?	A lot of facets to that – vehicle safety vs. operational safety. Where does NHTSA's view of safety end and states' view of safety start? If autonomous system is driver or operator, is that a state matter or a federal matter, or both? Long-term, there should be one overall national framework. Short-term, we should be as flexible as we can be while ensuring public safety as we put this technology on the road in the intended environments. Our stated objective is zero accidents, and to-date we have not had any accidents with the Olli vehicle in autonomous mode. Ultimately, the question of how safe is safe enough… The answer is no accidents.
AV Industry Panel – Beep	Anna Zivarts	Beep's COVID test transports were followed by human drivers, correct?	Yes, initially. NHTSA required that to segment the vehicle from traffic. We have since removed the following vehicle. We have a command and control center on campus to monitor the vehicles. Even with the vehicle following, we have proven out the ability to interact perfectly and incident free for 3 months.

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AV Industry Panel – Beep	Jim Restucci on behalf of Work Group	Are there laws, regulations, or policies in place in Washington that would prevent you from testing/deploying in Washington?	Not familiar with Washington law, but in the 3 states we have deployed in, we have not run into any local laws or regulations that impacted the approvals we have gotten from NHTSA to deploy these vehicles.
AV Industry Panel – Beep	Jim Restucci on behalf of Work Group	What are your thoughts on the question of "how safe is safe enough"? How much testing needs to be done? How should safety be regulated?	There is still a long way to go in the maturation of these platforms. We have operated in pretty complex environments safely, we need more and more data to prove out the reality that these vehicles can operate at a level of safety that is good enough. The physical vehicles we are deploying today are not crash worthy which is why we operate them at the very low speeds that we do, something we need to address.