

Washington State Autonomous Vehicle Pilot Recommendation Outline

For consideration by the WA AV Work Group & Transportation Commission

Introduction

The autonomous vehicle (AV) industry is continuing to evolve as it works to meet safety, mobility, environmental, and many other transportation needs. The State of Washington is evolving with the AV industry – through the efforts of the Washington State Autonomous Vehicle Work Group (the “Work Group”) – identifying, evaluating, and implementing policies to ensure the safe testing and operation of AVs on public roadways in the state.

To support this work, in 2021 the Washington State Transportation Commission (WSTC) recommended the advancement of a state AV pilot program to explore through live AV demonstration the impacts, implications, and opportunities for operational, administrative, and legislative policies to support the safe testing and operation of AVs in Washington.

Over the course of 2021, the Work Group considered two types of AV pilot approaches that could be taken in Washington – a defined pilot or a grant-like program (open, rolling requests for proposals). These pilot approaches differ in how they balance public vs. private ownership and control, cost and risk sharing, the level of scope defined, the contracting approach, and how objectives are approached and achieved. The WSTC AV pilot recommendation included plans to explore both types of pilot approaches, and perhaps a hybrid approach that lends from both a defined pilot approach and a grant-like program.

This document presents a recommendation to advance a pilot program and seek funding from the legislature. The pilot plan presented herein provides an overview of the goals and objectives the AV pilot seeks to achieve, administration of the pilot program, the structure of the AV pilot along with expectations and evaluation criteria, and the process for pilot advertisement and selection.

Goals and Objectives

The overarching goal of the AV pilot is to inform policy and operational considerations that can be acted upon by the Washington State Legislature and State Agencies to support safe operations of AVs in Washington. Activities conducted during the pilot, key findings, and lessons learned will inform this overarching goal and assist in identifying potential policy implications and changes to move forward.

Three key goals of this AV pilot are to explore opportunities and challenges related to equity, public awareness and exposure, and organizational knowledge. Objectives under these key goals include:

Equity

- Demonstrate how AV technology could support transit accessibility in disadvantaged urban and rural (small city/town) communities
- Explore barriers to AV technology access for disadvantaged communities and approaches to overcome them

Public Awareness and Exposure

- Increase public understanding of AV technology capabilities
- Educate the public on safe use of AV technology
- Measure public opinion towards AV technology

Organizational Knowledge

- Better understand agency roles and responsibilities for AV deployment and operation
- Better understand necessary inter-agency and private sector partnership needs
- Better understand regulatory framework needed for testing and commercial deployment of AVs
- Identify areas of preparedness for agencies to address operationally, administratively, and/or legislatively

Structure of the Pilot

AV Pilot Use Case

Last-mile solutions to increase accessibility to transit in urban and rural (small city/town) settings

Recommended Pilot Approach

AV testing and deployment goals and objectives development work done by the WA AV Work Group to date highlight the desire to better understand how AVs can help fill gaps in traditional transportation modes, such as last mile solutions for public transit. It also highlights the need to consider equity impacts and opportunities in the conversation, ensuring that those impacted by AV testing and deployments have a seat at the table to help shape policies that support various aspects of equity.

It has also been indicated that Washington State may want to take a “crawl, walk, run” approach to AV testing and deployments – conducting AV testing with lower risk thresholds first to enhance supporting agencies’ knowledge base and public awareness of AVs before allowing full deployments on the state’s roadways.

To support these findings, it is recommended Washington State pursue an AV pilot structured around low risk threshold use cases – such as lower speed automated vehicles or those on fixed routes – that will test last mile solutions in both urban and rural settings, to explore impacts to different communities, expand public awareness and exposure, and identify equity considerations. To best serve this AV pilot direction, transit agencies and industry partners will be asked to propose AV pilot approaches, including scope, duration, and location(s), that will achieve the desired use case and its identified goals and objectives.

To gauge transit agency and industry interest in this AV pilot plan and to better support a potential AV pilot recommendation to the legislature and inform cost estimates, the WSTC will publish a Request for Information (RFI) in Summer 2022 to:

- Solicit Washington State transit agencies’ interest in pursuing funding for an AV pilot that meets the desired use case
- Solicit industry interest in an AV pilot pursuant to this pilot plan, and rough order costs to assist the Work Group determine a legislative funding ask

The budget available for transit agencies to propose for an AV pilot is TBD – a recommended budget ask to the Washington State Legislature will be developed later in 2022 following a RFI to the AV industry in Summer 2022 to better understand potential costs related to an AV pilot that meets the desired use case.

Anticipated Pilot Documentation and Evaluation

The following items are anticipated to be required of pilot awardees (to be further defined during the RFP process) should this recommendation be approved and funded by the legislature:

Pilot Execution

- Concept of Operations
- Pilot Plan, including scope, schedule, success measures, and deliverables
- Risk Management Plan and Assessment
- Safety Plan
- Communications and Engagement Plan
- Pilot Coordination Plan (agencies, partners, and subcontractors, etc.)
- Operations and Maintenance Plan (includes warranty period)
- Other (to be defined for RFP)

Pilot Outcomes

- Pilot Summary and Findings Report (*proposer prepare or independent third party – TBD*)
 - Overview of Pilot planning, deployment, and operations
 - Evaluation of pilot success measures against Pilot execution
 - Take-aways for agency readiness
 - Lessons learned relative to the pillars of the roadmap
- User survey
- Report-out to the Legislature (and Work Group if still assembled)

Anticipated Criteria for Evaluating Proposers

The following are criteria for selecting pilot awardees (to be further defined during the RFP process) should this recommendation be approved and funded by the legislature:

- Degree to which goals and objectives are addressed
- Qualifications and past experience of the team
- Plan to execute the pilot
- Some measure of value (how much of the goals are accomplished relative to the total budget used by the proposal)
- Plan to address regulatory and stakeholder hurdles
- Pilot plan must include explicit outreach and inclusion of those impacted by the policy(ies) being explored to meet the needs and objectives of the pilot
- Verification that applicant and associated stakeholders follow all applicable laws and regulations
 - And are also strongly encouraged to show dedication and implementation of accepted best practices for equity, privacy, transportation safety, and cybersecurity

- How Proposer Meets Minimum Qualifications / Requirements (e.g., must be self-certified to test AVs in Washington, must be an FMVSS approved vehicle, must operate at SAE level 4 or higher for the majority of the proposed ODD, etc.)

Award

It is recommended that the pilot program allow award of multiple proposals, if more than one proposed AV pilot meets various aspects of the desired use case, goals, and objectives, while remaining within the overall budget.

Administration of the Pilot Program

A designated lead state agency (to be determined by the legislature) would serve as the recipient agency to administer the pilot program, considering its depth and experience in procurement and contract administration. The Legislature would appropriate funds to the designated lead state agency for program administration, solicitation of proposals, award of the contract(s), and technical direction of the pilot(s). It is recommended that additional staff resources be allocated legislatively to support the lead state agency and other supporting agencies required to be involved for the administration of the program, rather than using only existing resources with limited capacity to support these additional duties.

The lead state agency would solicit transit agencies across the state to submit pilot approaches for an AV pilot that focuses on last-mile solutions to increase accessibility to transit in urban and rural (small city/town) settings. The selected transit agency(ies) would procure pilot resources (e.g., a low-speed AV shuttle, planning and preparation, public outreach, etc.) and manage the pilot, under the overall technical direction of lead state agency.

Role of the Work Group

The AV Work Group is providing input into the design of the pilot plan (this document), and may issue a recommendation to pursue an AV pilot per this plan at the end of 2022, for 2023 legislative session.

If an AV pilot plan is recommended and pursued by the Legislature, the Work Group will receive updates during the pilot development and solicitation process, through its purview (sunsets December 31, 2023). If the Work Group is extended beyond 2023, the body could serve in an oversight role of the process.