

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY**MEMORANDUM**

FOR: Chair Phyllis J. Randall and Members
Northern Virginia Transportation Authority

FROM: Councilmember David Snyder, Transportation Technology Committee

DATE: Chair April 14, 2022

SUBJECT: Transportation Technology Committee Report

1. **Purpose:** To inform the Northern Virginia Transportation Authority (NVTA) on recent activities of the NVTA Transportation Technology Committee (TTC).
2. **Background:** The Transportation Technology Committee met on April 13th, 2022, at 8:30am. The meeting was held at the NVTA office. Six committee members attended in-person, two committee members participated virtually, and the meeting was also livestreamed via the NVTA YouTube Channel.
3. **Action Items:**
 - a. **Summary Notes of October 10, 2021, Meeting:**

The summary notes for the October 10, 2021, meeting was unanimously approved.
4. **Discussion Items:**
 - a. **Transportation Technology Strategic Plan (TTSP) Update**

NVTA Transportation Planner Mackenzie Love provided an overview of progress that has been made towards implementation of the Transportation Technology Strategic Plan (TTSP) since the last meeting of the Committee in October 2021. This included continued work to integrate the TTSP into the TransAction update process; increased outreach and education through an update to NVTA's Driven By InNoVation newsletter which now features TTSP content monthly; and incorporation of a new position to NVTA's State and Federal Legislative Program and Legislative Priorities to "Support use of effective transportation technology".

Ms. Love also informed the Committee of any major developments, locally and/or in the transportation sector, as a whole, that are relevant to each of the eight strategies included in the TTSP. She went on to note three important developments that did not directly map to one of the existing eight strategies; OmniRide's consideration of a microtransit pilot; NHSTA's finalization of the first occupant safety protection standards for autonomous vehicles (AVs); and the Virginia Department of Transportation's (VDOT) finalization of a Connected and Automated Vehicle Investment Roadmap.

b. Presentation on VDOT's Connected and Automated Vehicle Program

Ms. Amanda Hamm presented information about VDOT's Connected and Automated Vehicles (CAV) Program. She indicated that CAVs could beneficially or adversely impact safe, accessible, and efficient travel in the Commonwealth, and this program is intended to prepare VDOT to maximize benefits. There are four primary tasks associated with the program, including a literature review and CAV program readiness assessment; identification of use cases and creation of an investment roadmap; production of an education strategy; and development of a business strategy.

Ms. Hamm also provided examples of CAV efforts already underway in Virginia: a Cellular Vehicle-to-Everything (C-V2X) Deployment; the Fairfax County Automated Shuttle; a Work Zone Builder App; Connected Smart Vests prototype and pilot; and the Automated Truck Mounted Attenuator (ATMA) program. VDOT is also participating in external initiatives like Federal Highway Administration's (FHWA) Cooperative Automation Research Mobility Applications (CARMA) testing; Daimler's testing of automated trucks on I-81; and two U.S. Department of Transportation (USDOT) grant funded projects led by the Virginia Tech Transportation Institute. The first will work to develop a Concept of Operations (CONOPS) for managing mixed trucking fleets that include Automate Driving Systems (ADS), and the second will create an optimized automated driving corridor demonstration.

c. TTSP candidate topic overview and discussion

Chairman Snyder led the members of the Committee in a discussion of topic areas for potential addition to the TTSP. Throughout that discussion the Committee also asked questions of and received information from Amanda Hamm and NVTA Staff, who provided an overview of the relationship between the TTSP and the ongoing update of Northern Virginia's long-range transportation plan, TransAction. Several Committee members also shared their unique expertise on an array of transportation innovations including AVs, hydrogen propulsion systems, pedestrian safety, and the status of vehicle fleets including turn-over rates and the prospects for existing personal and public vehicles to be modified for emerging technologies.

Ultimately the Committee advised NVTA Staff to explore two topics further and make recommendations for incorporating them into the plan. These topics were connected and automated vehicles and related infrastructure like smart intersections, and transit innovation with a focus on microtransit. The Committee made special emphasis to NVTA's Core Value of safety, while noting the Core Values of Equity and Sustainability will also be applied. Finally, the Committee requested recommendations on how to enhance the representation of hydrogen propulsion systems and infrastructure within the TTSP.

d. 7th Annual Northern Virginia Transportation Roundtable Recap

The 7th Annual Northern Virginia Transportation Roundtable was held on Wednesday March 30, 2022. The event was comprised of two panels, the first of which focused on electrification and touched on other propulsion options like hydrogen. Both the content of the panel and the subsequent moderated discussion were highly relevant

to TTSP strategy #8 to “Advance decarbonization of the transportation system.” The speakers in the second panel presented on an array of innovations being developed in the transportation sector in the Northern Virginia region and beyond. This included a presentation on how the TTSP is informing scenario analysis work as part of the TransAction update; information on New York City’s Central Business District Tolling Program, which is relevant to TTSP Strategy #5 to “Develop pricing mechanisms that manage travel demand and provide sustainable travel options”; an update on the Regional Multi-Modal Mobility Program (RM3P), which is relevant to several TTSP strategies, most notably #5 to “Develop pricing mechanisms that manage travel demand and provide sustainable travel options” and #7 to “Enhance regional coordination and encourage interoperability in the transportation system”; and a presentation on use of AVs for local deliveries, which is relevant to TTSP Strategy #4 to “Minimize potential for Zero Occupancy passenger Vehicles” and the discussion of potential topics to add to the TTSP as described above.

e. NVTA Updates

Ms. Backmon informed the Committee of upcoming opportunities to provide feedback on NVTA’s FY2022 – 2027 Six Year Program (SYP). These include the Public Comment Period, which will be from April 15th – May 22nd; the Annual Northern Virginia Joint Transportation Meeting on May 4th, which will also serve as the Open House for the SYP; and the Public Hearing on May 12th.

f. Member Updates

Chairman Snyder invited all members to provide any feedback on developments in their own work and/or on TTSP-related content and deliverables, at any time.

- 5. Next Steps:** The TTC will continue to provide guidance and expertise in developing content for Transportation Technology Strategic Plan (TTSP), which is maintained as a living document. It will also continue to guide progress in implementing deliverables recommended in the TTSP.

The next meeting of the Committee is scheduled for July 6, 2022.