NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

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

FROM: Councilmember David Snyder, Transportation Technology Committee Chair

DATE: July 7, 2022

SUBJECT: Transportation Technology Committee Report
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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 July 6th, 2022, at 8:30am. The meeting was held at the NVTA office. Five committee members attended in-person, two committee members participated virtually, and the meeting was also livestreamed on YouTube.

3. **Action Items:**

   a. **Summary Notes of April 13, 2022, Meeting:**
      The meeting summary for the April 13, 2022, meeting was unanimously approved.

   b. **Transportation Technology Strategic Plan (TTSP) Content and Progress Update:**
      This was the first meeting of the TTC since the first anniversary of the adoption of the TTSP. For that reason, the Committee received updates on both major developments in the field, as well as an update on the implementation of the TTSP itself.

   In the April TTC meeting, the Committee requested that NVTA Staff make recommendations for integrating three topics into the TTSP going forward:

   - Topic: Connected and Automated Vehicles (CAVs) and related infrastructure

       o Staff recommended incorporating this topic into the existing TTSP strategy #4 - Minimize Potential for Zero Occupancy passenger Vehicles. They also recommended changing its title to reflect this change.

       o The Committee and staff discussed that the nature of the recommended change would expand the strategy from focusing on minimizing potential negatives to also maximizing potential benefits, taking a more comprehensive approach to CAVs.

- o <u>The Committee voted unanimously to adopt the expansion of the scope of TTSP strategy #4 and to update its title to "Enhance operations of the multimodal transportation system through connectivity and automation."</u>

- Topic: Hydrogen propulsion systems
  - o Staff recommended incorporating this topic along with content on other synergistic technologies that could improve overall resiliency, like Vehicle to Grid (V2G), into the existing TTSP strategy #8 - Advance Decarbonization of the Transportation System.
  - o The Committee noted that this approach increases the flexibility of strategy #8 to incorporate other technologies as appropriate in the future.
  - o <u>The Committee voted unanimously to adopt the expansion of this strategy.</u>

- Topic: Transit innovations, such as microtransit
  - o Staff recommended creating an entirely new strategy to focus on transit due to the number of technologies currently available to enhance this mode. Additionally, this approach would allow flexibility to address any new technologies that may emerge in the future. Topics that could be covered immediately include microtransit and Bus Rapid Transit (BRT), which would synergize with the work of NVTA's BRT Working Group.
  - o The Committee discussed how to best scope a new strategy of this type, with twin objectives of being well-aligned with the current structure and intention of the TTSP and effectively complimenting the ongoing update to TransAction without duplication.
  - o <u>The Committee voted unanimously to adopt this new strategy, under the title "Enhanced mobility in the region through innovation and emerging technologies in transit."</u>

Based on this discussion of the TTSP, its implementation thus far, and the collaborative decision to expand the content it covers, the Committee determined there would be value in NVTA staff exploring ways to facilitate the advancement of transportation technology projects. This could include convening a meeting with local and regional staff involved in transportation planning, funding, and operations.

4. **Discussion Items:**

   a. **TransAction Update**
   Mr. Jasper provided the Committee with an overview of the project list developed through the ongoing process to update TransAction, which includes 429 projects, 17 of which are technology focused. He said that in past funding programs not many technology projects have been submitted, noting that in the current cycle NVTA received its first application for a technology project outside of Alexandria and Arlington for an Information Technology Service project on Rte. 7, submitted by Loudoun County. He went on to explain that technology projects have historically

performed very well, particularly in terms of Congestion Reduction Relative to Cost (CRRC.) This was followed by a discussion of potential action the Committee and NVTA could take to convey the history of success for technology projects to funding applicants going forward, and staff were requested to make recommendations for this during the next TTC meeting.

Next Mr. Jasper explained the use of scenario analysis in the update of TransAction, including one scenario that focuses on transportation technologies. Three key takeaways include that if these technologies were adopted in accordance with assumptions made, they could generate a 25% fall in Person-Hours of Delay, a 37% reduction in duration of severe congestion, and 28% less emissions. Separately he noted that only the scenario that addressed pricing and incentives showed a potential to increase transit trips, which would require multi-layer government policies to realize.

b. NVTA Updates

Ms. Backmon informed the Committee that at the July 14th Authority meeting, the Authority is anticipated to adopt the funding of 20 projects for the FY2022-2027 Six Year Program and approve the public comment period and public hearing date for the TransAction update.

5. Next Steps

The next meeting of the Committee will be scheduled in coordination with the members.