Northern Virginia Transportation Authority
The Authority for Transportation in Northern Virginia

TRANSPORTATION TECHNOLOGY COMMITTEE
Wednesday, September 11, 2019, 8:30 am
Northern Virginia Transportation Authority
3040 Williams Drive, Suite 200
Fairfax, Virginia 22031

SUMMARY NOTES

I. Call to Order/Welcome   Chairman Snyder

- Chair Snyder called the meeting to order at 8:40 am.
- Attendees:
  - **TTC Members:** Chair David Snyder (City of Falls Church and Authority Member); Mayor Jeanette Rishell (City of Manassas Park and Authority Member); Jim Kolb (Summit Strategies and Authority Member); Tim Melrose (Ernst & Young); Joe McAndrew (Greater Washington Partnership); Hari Sripathi (VDOT); Sean Schweitzer (FCDOT); Andrew Meese (TPB/MWCOG); Nick Zabriskie (Uber); Dr. Richard Mudge (COMPASS); Bee Buergler (Arlington County DOT); Jana Lynott (AARP); Greg Rogers (SAFE).
  - **NVTA Staff:** Monica Backmon (Executive Director); Keith Jasper (Principal, Transportation Planning and Programming); Harun Rashid (Transportation Planner); Erica Hawksworth (Communications Manager); Ria Kulkarni (Transportation Planner); Mackenzie Jarvis (Transportation Planner).
  - **Other:** Noelle Dominguez (FCDOT); Sonali Soneji (VRE).

Action

II. Approval of July 10, 2019 meeting
The meeting summary was approved unanimously, with abstention from members not present.

Discussion/Information

III. Introductions and Member Updates

- Chair Snyder welcomed and invited members present to introduce and brief the group on recent activities/updates.

- Mr. Melrose (Ernst & Young) stated his firm's involvement in the infrastructure development for electric vehicle charging stations. He mentioned two such initiatives in the state of California.
- Mr. Sripathi (VDOT) highlighted VDOT's partnership with FCDOT for the automated shuttle pilot project in the Mosaic district. He then briefly described VDOT's crash data predictive analytics, with machine learning and artificial intelligence technologies. Mr. Schweitzer (FCDOT) mentioned an upcoming FCDOT announcement on the AV shuttle pilot project.
- Mr. Meese (TPB/MWCOG) mentioned a recent event hosted by Commuter Connections at the National Press Club where a smartphone application called incenTrip was launched and unveiled. incenTrip, which was funded using a Department of Energy grant, uses gamification and incentives to encourage efficient route and mode choices. Real-time traffic updates are used to help the user choose a route. The user is rewarded for using the app, contributing to less congestion and improving energy. Mr. Meese also mentioned TPB is planning to host regional forums on connected and autonomous vehicles (CAVs) in the near future. Winter and spring events are being planned.
- Dr. Mudge (COMPASS) updated the group about his recent Transportation Research Board (TRB) presentation on economic impact of transportation technology deployments. He also mentioned he was attending an AECOM event to build AV buses/shuttles, level 4. A number of transit authorities and tech firms to attend and planning an end-of-year operation. He then highlighted recent, nationally significant legislative initiatives in the state of California that regulate Transportation Network Companies (TNCs) that will create more full-time drivers for these TNCs. Drivers will have to pay a fee. Ms. Backmon also mentioned regulatory activities in other cities, and curbside usage management by the Metropolitan Washington Airports Authority (MWAA).
- Ms. Buergler (Arlington County) stated that the shared mobility pilot program in Arlington County is nearing its completion, and there will be a report published based on findings. County staff are participating in a site visit to Fort Myer's automated shuttle program. She also announced her retirement from active employment, and thanked the committee for the opportunity to participate.
- Ms. Lynott (AARP) expressed her interest in tracking latest advancements in Mobility as a Service programs (MaaS), and how that can modernize human services transportation. She also mentioned she will be attending the World Economic Forum in Detroit.

IV. Regional Multimodal Mobility Program (RM3P) Update

- Mr. Jasper updated the committee members on current activities of this Commonwealth-funded initiative and partnership with NVTA – NVTA staff worked with VDOT staff on the selection/start-up process and the project contract is being finalized. A kick-off meeting is being planned to be held in early October. Stakeholder engagement will be formed at a later date with details to come.

V.   TTC Workplan

- Mr. Jasper then presented on the proposed work plan deliverables with a series of PowerPoint slides:
- With the objective of drafting a Transportation Technology Strategic Plan, the role of committee members is to: review draft deliverables and provide feedback; suggest additional work plan deliverables; and inform the TTC on matters relevant to the TTC Work Plan. There are 2 major sets of deliverables; **Action-oriented deliverables** (Appropriate Role of Technology, Challenges/Opportunities; Regional Technology Policy Development Needs) and **supporting deliverables** (NVTA/NoVA Transportation Primer, Research/Outreach/Education). All these separate but linked pieces will ultimately lead to NVTA's Transportation Technology Strategic Plan.
- This Strategic Plan will then inform NVTA's Long Range Transportation Plan, TransAction, about potential projects/programs, which is the basis of funding programs in NVTA. TransAction is based on three goals, as approved by Authority members –
    1. Enhance quality of life and economic strength of Northern Virginia through transportation
    2. Enable optimal use of the transportation network and leverage the existing network
    3. Reduce negative impacts of transportation on communities and the environment

    These goals lead to a set of objectives, which are then benchmarked using 15 weighted performance measures, which are used in the technical analysis for TransAction. These measures were derived from state legislation (HB 599 in 2012 and HB 2313 in 2013), which formed the legal basis for NVTA's transportation and planning and programming activities. Responding to questions from TTC members Mr. Melrose and Mr. Zabriskie, Ms. Backmon explained the role of these two pieces of legislation. Mr. Jasper added that in addition to quantitative measures, NVTA staff utilize other qualitative criteria at the project level during the programming stage to ultimately make individual investment recommendations.

- Mr. Jasper then presented a matrix that identified needs (as determined by the TTC), related TransAction goals/objectives, technology opportunities/challenges, and possible NVTA roles. Ms. Lynott commented that Goal 2 of TransAction can be interpreted as an integrated system of MaaS providers to serve the vulnerable population. Mr. Meese asked if the stated safety concerns considered the mix of legacy vehicles with automated vehicles. Mr. Jasper agreed that market penetration rate of CASE vehicles will definitely be an issue, but such details are intentionally kept at a broad level in this matrix. The safety issues can be also dealt with current available technologies, and regulations by NHTSA, opined Mr. Mudge. Mayor Rishell suggested adding software certification to hold people accountable. Ms. Backmon also raised other issues with deployment of CASE vehicles and associated technologies, e.g. the changing landscape of fuel usage and related gas tax and other traditional revenues. Different safety challenges now which need to be taken into consideration. How does the changing safety landscape impact NoVA?
- Mr. McAndrew highlighted the importance of last column in the matrix regarding possible NVTA roles for each identified need. He mentioned the importance of

looking at resilience data and stressed NVTA's role as an advocate in the region working with other agencies. Ms. Backmon added to this point that NVTA is in an excellent position for such a role, since many of its members also serve in other agencies' decision-making bodies. Possible roles for NVTA include funding, advocacy, owner, partner, champion, and leader.

- In terms of funding decisions, the risk with "investment obsolescence" was discussed by several committee members at this point, and ways to mitigate/manage such risks, while still allowing for innovation (e.g. with common data standards and specifications). Ms. Buergler emphasized while obsolescence is hard to predict, we don't want to stop experimenting and trying things. NVTA could foster experimentation and share lessons learned. She said NVTA could embrace experimentation and make recommendations. Ms. Backmon said NVTA could make recommendations to jurisdictions.
- Mr. McAndrew recommended understanding who holds the responsibility/role – Is it NVTA, or NVTA in collaboration with someone? Mayor Rishell said to keep taxpayer monies in mind and emphasized while jurisdictions can't always predict, private companies can but don't always share the intel. Mr. Sripathi expressed his concerns with various terminologies used in the matrix, e.g. the need to clarify between autonomous vs. automated vehicles. Some level of automation to assist drivers are in existence in many vehicles, and can address many safety issues without relying on infrastructure and technologies that require the "near perfection" identified in the matrix.
- Chair Snyder summarized the discussion so far – the importance of NVTA's role as facilitators, as opposed to just planning for projects; reinvigorate the state legislative program to pursue technology priorities and identifying whether anything needs to stay at the federal level; encourage pilot projects and ensure data standards; determine what services are needed for various projects; NVTA not just a planner and a funder but a place where solutions can be found; and enhanced communication activities. On safety, he mentioned that while AV vehicles offer some promises, they may bring other risk factors, e.g. cyber-securities. He also asked how technology can tackle the issue of individual incident management and manage the risk of incidents.
- Members asked what NVTA's role should be related to electrification of the transportation system.
- Mayor Rishell also expressed deep concerns about software self-certifications for AV vehicles. Chair Snyder then mentioned two critical needs in the region that may need immediate attention – traffic signal optimization across the region, and vehicle-to-infrastructure communication system; need to meet the needs of what's making Northern Virginians frustrated. Mr. Zabriskie suggested that the focus should be on the biggest issues we see right now, such as crashes, and don't worry about what we don't know yet and the obsolete. Build upon and invest in known needs and on the landscape of the future. Mr. Kolb asked how we build in design standards and dedicated spaces, and emphasized the need to look at the bigger picture with a focus on moving people through the region. He encouraged everyone to think broadly and in a holistic fashion with a regional focus.
- Members then discussed how to organize/integrate these ideas into actionable projects and policies within the matrix. Several ideas were discussed, e.g. prioritize based on regional/local geography, project-based and policy-based ideas, long-term vs. short-term initiatives, and use of incentives. Responding to a question from Mayor Rishell, Ms. Backmon emphasized that pilot projects can be difficult to fund within the

current selection criteria framework in NVTA, rather this body may act as a think-tank/advocates of technologies to seek other funding sources. Mr. Jasper mentioned that NVTA's RM3P program is an example of such, where NVTA's idea was funded with the Commonwealth's Innovation and Technology Transportation Fund (ITTF), which can absorb uncertainties with new technology deployments.

- Mr. Sripathi mentioned several VDOT-tested proof-of-concepts which NVTA can invest in. Mr. Sripathi emphasized the cyber game needs to step up in localities, as the hardware is dated in many localities. Everyone needs to come up to standards. Ms. Buergler agreed on the importance of upgrading infrastructure and mentioned how legacy software could use NVTA's funding to upgrade, which would help on a network level, communications, connectivity, bus systems, faster emergency response, etc. Mr. Zabriskie said NVTA could likely fund faster and get technologies upgraded quicker, as well as become a voice on the legislative side encouraging upgrades in infrastructure technologies.

- In the light of this discussion, Mr. Jasper stressed on NVTA's investments in technology-based ITS/ICM/TSP projects, specifically in Arlington and Alexandria, and opined that maybe NVTA can do more. But at the same time, Northern Virginia's transportation system is over-saturated, and maybe just infrastructure and technology will not be enough to address the issues of congestion. Mr. Jasper continued a big challenge is that different jurisdictions have different technologies, even between Metro Bus, DASH buses and Arlington's buses. He further hinted that maybe a behavioral-based pricing approach, or other non-traditional solutions, may produce congestion relief opportunities, and mentioned there is no one-size fits all approach. He said the technology is an important investment but the congestion is still there. Ms. Lynott suggested looking into incentives to change behaviors.

VI.   Candidate Future TTC Briefings

- Chair Snyder solicited ideas on topical presentations from members in upcoming meetings, and requested such ideas to be shared with Mr. Jasper. Mr. Jasper proposed to hold the next meeting on October 23rd, and offered December 4th or December 11th as the last meeting dates of the year.

Adjournment

b. Adjourn

The meeting adjourned at 10:25 am.