



Northern Virginia Transportation Authority
The Authority for Transportation in Northern Virginia

TRANSPORTATION TECHNOLOGY COMMITTEE
Wednesday, January 30, 2019, 8:30am

Northern Virginia Transportation Authority
3040 Williams Drive, Suite 200
Fairfax, Virginia 22031

AGENDA

- I. Call to Order/Welcome** Chairman Snyder

Discussion/Information

- II. Introductions (15 mins)**
- III. Purpose of TTC (5 mins)**
- IV. Recap of relevant TransAction findings/recommendations (5 mins)**
- V. Brief overview of current NVTA 'innovations' (5 mins)**
- VI. Discussion on key topics to support the development of the TTC Workplan, and associated deliverables/schedule (60 mins)**
- A. What outreach and education role should NVTA play with respect to transportation technologies? What messages to which audiences, using what media?
 - B. What can NVTA do to capture the positives of technology while mitigating the negatives? What current or future technology-related policy areas could benefit from a regional approach?
 - C. What technology investments should NVTA consider that support its vision and goals? What do we know about costs, impacts, and benefits?
 - D. Are there any technology-related grant opportunities that NVTA should pursue on behalf of the region/Commonwealth?
 - E. How should technology be addressed in the next TransAction update? Sensitivity analysis (as previously), targeted predictions or something else?

F. What skill/expertise gaps should the TTC address? Identify potential new TTC members.

G. Other topics?

The following timescales should be considered for a) thru g) above

- i. Today's technologies, e.g. TNC's, micro-mobility
- ii. Near term technologies (next couple of years), e.g. MaaS, RM3P
- iii. Future technologies (next couple of decades), e.g. CAVs, EVs

VII. Administrative items (5 mins)

VIII. Future meeting schedule (5 mins)

Adjournment

IX. Adjourn

Next Meeting: TBD



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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); Jim Kolb (Authority Member and Summit Strategies), Leonard Wolfenstein (Fairfax County); Bee Buergler (Arlington County); Robert Schneider (OmniRide); Kamal Suliman (VDOT); Andrew Meese (TPB/COG); Jana Lynott (AARP); Richard Mudge (Compass Technologies); Nicholas Zabriskie (Uber); Tim Melrose (EY); Myra Blanco (Virginia Tech).
 - **NVTA Staff:** Monica Backmon (Executive Director); Keith Jasper (Principal, Transportation Planning and Programming); Harun Rashid (Transportation Planner); Sree Nampoothiri (Transportation Planner); Michael Longhi (Chief Financial Officer); Peggy Teal (Asst. Finance Officer); Erica Hawksworth (Communications & Public Affairs Manager).
 - **Other:** Cheryl Lowrance (VHB); Sean Schweitzer (FCDOT); Ciara Williams (DRPT); Peggy Tadej (NVRC).

Agenda

II. Member Introductions/Purpose of TTC

- Each member briefly described their professional backgrounds/areas of expertise. Chair Snyder elaborated on Ms. Backmon's description of NVTA's background and history, and then invited Mr. Jasper to detail purpose, scope, and objectives.
- Mr. Jasper explained NVTA's planning and programming activities, and outlined three main topic areas for the Transportation Technology Committee (TTC):
 - Supporting the NVTA's Five-Year Strategic Plan;
 - Providing recommendations to consider in the development of the region's long-range transportation plan (TransAction); and
 - Developing a body of knowledge to guide planning/programming in NVTA.

III. TransAction Recap and Innovation in NVTA

- Mr. Jasper highlighted major findings from the current version of TransAction. In his presentation, Mr. Jasper explained NVTA's planning and programming activities, with major NVTA-funded transportation technology projects highlighted, which included NVTA's recent funding application to initiate a regional multimodal mobility program. Ms. Backmon explained the legislative structure of NVTA, and how the TTC fits in the overall context of other committees. She also stressed that NVTA has always been proactive regarding upcoming technology trends.

IV. Key Topic Areas and Discussion

- Mr. Jasper highlighted the following areas of discussion for the TTC members:
 - NVTA's outreach/education goal in terms of transportation technologies and messaging;
 - Technology-related policy areas to explore from regional perspective and how to highlight the positives of new technologies and mitigate the negatives;
 - Technology investments to support NVTA's vision and goals – What should NVTA consider? What are the benefits?
 - Technology-related grant opportunities to consider pursuing;
 - Technology topics and scenario planning for the next TransAction; and
 - Any skill/expertise gaps that need to be addressed.
- Chair Snyder then invited each member to share their ideas and thoughts on these topics.
- In response to questions from Mr. Zabriskie and Ms. Lynott related to NVTA's mission, its project prioritization process, current performance measures, and rapidly-developing technologies and travel behaviors, NVTA staff explained the historical and legislative legacy of its current set of performance measures, and that because the TTC is the NVTA Executive Director's committee, it is not bound by existing NVTA legislative mandates, but the goal is to come up with new ideas/suggestions. Committee members then discussed the potential shortcomings of measures that may over-emphasize vehicular congestion, and may not fully account for a holistic picture of personal mobility and human services transportation issues.
- Ms. Lynott mentioned an FHWA technical grant opportunity for AV deployments.
- Given the unique opportunities and challenges that the Northern Virginia area faces, Chair Snyder asked - What are current technology issues in Northern Virginia and what are the needs of the region? Ms. Blanco opined that the approach should be to not chase the technology, but to target problems to solve, with which the technology will be aligned. This committee should identify priorities and realistic goals for this region, e.g. transit, managed/tolled lanes, human service transportation and para-transit. On Connected and Autonomous Vehicle (CAV) technologies, members clarified the role and scope of such vehicles. Mr. Melrose suggested that this committee may consider to conduct surveys; to identify applicable case studies of successful transportation technology applications; to create an information base for the region that would list needs, issues, and gaps; and to prioritize technology solutions that can address local congestion and the most congestion-reducing outcomes.

- Mr. Zabriskie raised the following questions for discussion - how do we focus on personal mobility based on economic incentives, how can we build choices and get people to places as quickly as possible, and how do we influence people's mode choice in the realm of shared mobility and mobility-as-a-service (MaaS)? Members discussed the need to eliminate the political and administrative barriers to create a seamless MaaS platform. In an integrated scenario, a traveler with a single smartphone app would be able to access multiple modes/services to fulfill all travel needs, without owning a car. NVTA can play a regional coordinator role to create such a platform. NVTA staff mentioned the proposed Regional Multimodal Mobility Program (RM3P) project has the potential to address this issue. Mr. Suliman emphasized that we should not chase the tech, but rather chase the problem.
- Ms. Blanco and Ms. Lynott highlighted how European systems are efficiently run by for-profit entities, and in the process, technology is intuitively implemented in transit services making these systems all the more attractive to travelers. At the same time, public sectors effectively regulate these systems, to ensure equitable distribution of benefits among all users. A successful transit system is also market-driven, and culturally ingrained in the society, with an effective public-private partnership. Mr. Schneider asked whether it is possible to have a flat rate commuter service via multiple modes using technology. He suggested letting the customer decide and give options.
- Mr. Mudge opined that as a regional body, we should consider accessibility, not just mobility. Committee members identified that accessibility to jobs and other quality-of-life aspects is also a consequence of land use decisions, although it is generally understood that land use issues are not in this committee's purview.
- Mr. Mudge suggested that private-sector economic incentive packages, tied with technological solutions, could address commuting issues. Many employers offer benefits to employees to eliminate single-occupancy-vehicle commute trips. Businesses can assess the labor force requirements for commuting, and government entities can plan solutions to address that, based on reasonable cost assessments. Travel time reliability is also a major issue, and members opined that MaaS has the potential to address this. During the conversation, it was suggested to talk to businesses and find out their needs, e.g. telecommuting, transit, carpooling, etc.
- Do we know all the unknowns? What roles do freight traffic and parking management play? How will the CAVs impact the overall mobility and accessibility of the population? Will all income and race groups be equally served? Mr. Meese pointed out that automated freight vehicles running overnight can ease up substantial roadway capacities during the peak periods, together with an effective curbside management policy in dense urban areas. He continued to suggest that an effective CBD parking policy can also reduce vehicle traffic; there are lessons to be learned from other parking policy implementations in the nation. Mr. Meese also asked whether NoVA will be safer because of technologies or more vulnerable, and how will communities be impacted and changed, e.g. jobs and people getting driven around when they can't drive.
- Any transportation solution needs to consider the rapid changes in demographics, and the resulting shifts in travel behavior - opined Ms. Lynott. For example, car ownership, and corresponding single-occupancy car trips are on the decline among

millennials. But on the flip side, an overall aging U.S. population may adversely impact transit ridership, since the Baby Boomer generation historically relies on car trips more than public transportation. These issues should be considered in the next TransAction planning process. It is important not to leave the aging population behind as new technologies are explored. Ms. Lynott also asked how we will maintain streets with freight, rideshares, scooters, automated vehicles, etc.

- Mr. Zabriskie suggested that there exist gaps among mass transportation options, even in dense urban areas in the region. New micro-mobility modes, like e-bikes and scooters, in addition to ride-hailing services, can fill these gaps. Public investments in transit need to be aligned with these private sector solutions, so that they do not compete with each other. Mr. Suliman highlighted VDOT's parking management policies and projects, and the need for effective curb-side management policies in urban areas. Most members identified that parking management is a major factor in urban transportation planning. Ms. Lynott suggested that demand-response paratransit services can be linked with private TNC companies for more cost efficiency. NVT A can play a regional coordinator role to achieve that.
- Committee members emphasized the importance of including a freight representative in the conversation. How is freight impacting livability? Also, how do we maintain streets with freight, ride-shares, scooters, bikes, AVs, etc. sharing the same space? There is a need to find space and parking solutions.
- To recap, how do we synthesize and articulate all these thoughts to derive actionable solutions? What role can the TTC and NVT A play? Some suggestions, include:
 - a. Committee members can draft a strategic plan identifying issues and realistic solutions;
 - b. NVT A can play advisory role in forming effective public-private partnerships – Ms. Blanco suggested looking at an organization called Partners for Automated Vehicle Education (PAVE), which educates the public on automated driving systems and debunks myths;
 - c. NVT A can act as a regional coordinator to create a seamless technological platform for an effective MaaS solution.
- Chair Snyder concluded the meeting by thanking everyone for a thoughtful discussion and invited committee members to present on topical items during future meetings. He validated the needs/purpose of this committee, recognizing all the members' expert insights and feedback, stressing that this group will not only foster intellectual discussions, but also offer realistic ideas and solutions to transportation issues impacting the region. He said we need to meet the needs that need to be met and the objective is to give people more options and more trips.

Adjournment

The meeting adjourned at 11:13 am.

Proposed TTC Work Plan

Topic Summary from 1/30/2019 TTC meeting

Proactive	Reactive	Other
NVTA/NoVA Background/Context		
<ul style="list-style-type: none"> • Provide TTC members with a better understanding of TransAction vision, goals, performance measures, etc. • Summarize region’s transportation technology activities 	<ul style="list-style-type: none"> • Improved accessibility (to jobs, rec, healthcare, etc.) should be the goal of a transportation system 	<ul style="list-style-type: none"> • Parse and focus on what we control • TTC members should not be constrained by NVTA’s Six Year Program project selection process
Appropriate Role of Technology		
<ul style="list-style-type: none"> • Needs should ‘pull’ technology solutions rather than a technology ‘push’; identify the problems we are trying to solve with technology that could work in the region • What is most congestion-reducing approach using technology? • Prioritize technology initiatives • Can we verify that technology works, e.g. Transit Signal Priority? • Address resilience/emergency management, new vulnerabilities 	<ul style="list-style-type: none"> • Freight could be an early adopter, enabler of livability • Solutions exist that can provide benefits to employees, employers, and reduce congestion • Parking management • Must not be too costly to operate • Must be economically sustainable and scale-able • How should we use technology to manage streets/curbs? 	<ul style="list-style-type: none"> • Moral/ethical implications of how technology is implemented – need to avoid unintended consequences such as exacerbated economic segregation • Understand ‘technology immigrants’ (do not leave behind) versus ‘technology natives’ (embrace) • Are AVs safer? What opportunities will they create/stifle?
Regional Technology Policy Development Needs		
<ul style="list-style-type: none"> • Public sector should set objectives, private sector provides, allow multiple vendors • Caution that AVs may make things worse – clarify roles of public and private sector • Focus on people/throughput 	<ul style="list-style-type: none"> • Land use matters; mismatch between supply and demand • Affordable housing is key • Public sector should not compete with private sector • Public and private sectors should not be restricted from achieving their goals and being able to flourish 	<ul style="list-style-type: none"> • Can technology knock down parochialism, and will elected officials support? • Technology development often outpaces policy development • Good to break policy silos

Proactive	Reactive	Other
Outreach/Education		
<ul style="list-style-type: none"> • Outreach is important • Need to eliminate myths, use facts to help the adoption process • Focus on features and functions, rather than AV levels; people will become more comfortable as fleet turns over – important for messaging 		
Behaviors/Trends		
	<ul style="list-style-type: none"> • Ok to encourage more trips through more choices provided safety, congestion, and environmental impacts can be mitigated • People make choices that suit their needs – provide what they want • Break down barriers to understanding how to use transit • Cars are expensive, but investing in automobile solutions makes cars more attractive 	<ul style="list-style-type: none"> • What are the implications of changing demographics? • Shared vehicles, falling cost of travel over the next 10-20 years will result in improved access to labor/jobs • Will mobility subscription plans change people’s emotional attachment to cars? • Will our communities be overwhelmed with vehicles in the future?

Proposed TTC Work Plan

Overall work plan approach is to focus on four specific TTC deliverables, using topics listed under 'Proactive, with suggestions for possible content:

1. NVT/NoVA Background/Context (draft April 2019)
 - Vision, goals, etc.
 - Transportation needs
 - Selected regional technology initiatives, e.g. CAV, RM3P, TSP
2. Appropriate Role of Technology (draft June 2019)
 - Reduce congestion
 - Improve accessibility
 - Improve safety
 - Reduce emissions/build resilience
 - Enhance emergency management
3. Regional Technology Policy Development Needs (draft July 2019)
 - Incentivize increased vehicle occupancy across all modes
 - Variable use-based pricing for AVs
 - Facilitate development of EV infrastructure
 - Data (sharing/security/privacy) policies
4. Outreach/Education (draft September 2019)
 - Authority members; policy development; investment strategies
 - Regional stakeholders; collaboration; synergies
 - Northern Virginians; technology awareness; safeguards

The TTC may propose/prioritize alternative content and/or additional work plan deliverables.

Topics listed under 'Reactive', together with any other relevant topics not listed above, will be addressed in the proposed TTC deliverables to the extent possible.

Topics listed under 'Other' and 'Behaviors/Trends' will be monitored, together with any related topics not listed above, and periodically summarized.