NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

Transportation Technology Committee Meeting

Tuesday, September 30, 2025
9:00 a.m. EST
2600 Park Tower Drive, Suite 601
Vienna, VA 22180
This meeting will be held in person and livestreamed via YouTube.

AGENDA

1. **Call to Order/Welcome** — Chair Snyder

Action

2. **Summary Notes of June 17th, 2025 Meeting** — Chair Snyder
   Recommended Action: Approve Meeting Notes

Discussion/Information Items

3. **Member Introductions**

4. **Potential Next Steps for TTC Focus Areas** — Keith Jasper, Principal, and Griffin Frank, Regional Transportation Planner

5. **NVTA Updates** — Monica Backmon, CEO

6. **Adjournment**

Next Meeting
TBD

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

TRANSPORTATION TECHNOLOGY COMMITTEE

Tuesday, June 17, 2025
9:00 a.m. EST
2600 Park Tower Drive, Suite 601
Vienna, VA 22180
This meeting was held in person, virtually on Zoom and livestreamed via YouTube.

MEETING SUMMARY

1. **Call to Order/Welcome**
   - ✓ The meeting was conducted in-person. Chair Snyder called the meeting to order at 9:03 a.m.
   - ✓ **Attendees**:
     - **TTC Members:** Chair David Snyder (City of Falls Church Councilmember); Richard Mudge (Compass Transport and Tech); Reginald Viray (Virginia Tech Transportation Institute [VTTI]); Michael Garcia (Fairfax County Department of Transportation); and Mike Fontaine (Virginia Transportation Research Council [VTRC]) participated virtually. Supervisor Walter Alcorn (Fairfax County Board of Supervisors); Hari Sripathi (Virginia Department of Transportation [VDOT]); Andrew Burke (Metropolitan Washington Council of Governments/Transportation Planning Board [MWCOG/TPB]); Angie De La Barrera (Arlington County); Hillary Orr (City of Alexandria); and Brad Stertz (Audi/Wolkswagen) attended in-person.
     - **NVTA Staff:** Monica Backmon (Chief Executive Officer); Keith Jasper (Principal, Transportation Planning and Programming); Sree Nampoothiri (Senior Manager, Transportation Planning and Programming); Griffin Frank (Regional Transportation Planner); Starla Couso (Regional Transportation Planner); and Alyssa Beyer (Regional Transportation Planner) attended in-person.

2. **Summary Notes of September 27, 2023, Meeting**
   - ✓ A motion to accept the summary notes of the September 27, 2023, meeting was passed unanimously.

3. **Member Introductions**
   - ✓ Participants introduced themselves, representing regional and state agencies, local jurisdictions. and private industries.

- ✓ Two new members were introduced: Ms. Orr from Alexandria and Ms. De La Barrera from Arlington.

4. NVTA's Role in Transportation Technology

- ✓ Mr. Jasper provided a historical overview of the Transportation Technology Committee's (TTC) formation and accomplishments, including the original charge of the TTC: to prepare a Transportation Technology Strategic Plan (TTSP) for Northern Virginia.
  - The TTSP, composed of eight strategies, was originally approved by the Authority in May of 2021. In September of 2023, modifications were made to two strategies and added a ninth strategy (Enhance Mobility in the Region through Innovation and Emerging Technologies in Transit).
  - Mr. Jasper remarked on NVTA's role in the TTSP of outreach and education. Through virtual Lunch & Learn sessions and the NoVA Transportation Roundtable, staff host virtual and in-person events that highlight emerging technologies in the region. Staff also produce a technology-focused newsletter called Driven By InNoVAtion.
- ✓ Mr. Jasper noted key topics from the last TTC meeting, including the cybersecurity-focused presentation items, Federal Bureau of Investigation (FBI) and the Cybersecurity Infrastructure Security Agency (CISA), and artificial intelligence discussion. He mentioned the need to revisit these items for the TTSP.
- ✓ NVTA's commitment to advancing innovation was highlighted through regional and local funding programs, and coordination across jurisdictions. As of June 2025, NVTA has funded 10 technology-focused projects totaling $36 million of Regional Revenue Funds, and continues to provide staff support for the Regional Multi-Modal Mobility Program (RM3P) and its AI-enabled components, including the GoMyWayVA app.

5. Action Plan for the Transportation Technology Committee

- ✓ Mr. Jasper allowed committee members to weigh in on what gaps may exist for their respective agencies/jurisdictions that NVTA could help to fill as a regional entity.
- ✓ Chair Snyder mentioned the Northern Virginia Transportation Commission's (NVTC) work with transit technology.
- ✓ Mr. Stertz shared recent technological initiatives from the private sector, including road risk scores, which use historical crash and weather data to

assign certain roadways with scores to better inform drivers to be more aware and what to look out for. He also shared that Waymo's expansion into Washington DC which presents an opportunity for Virginia to also explore connected and autonomous vehicle (CAV) capabilities.

- ✓ Work zone alerts, notifying drivers through real time network communications via direct connections to worker's wearable devices, are effective and recognized as a valuable safety use case by states and USDOT.
    - Mr. Sripathi mentioned that the US-50 test proved that transitioning between cellular, local, and 5G ultra-wideband connections for work zone communications is technically feasible, but scaling it statewide raises challenges around spectrum and rural coverage.
    - Mr. Fontaine highlighted more near-term solutions such as Hos Alert systems, wearables, and speed sensors that improve work zone safety without requiring highly equipped vehicles.
    - Mr. Viray noted that VTTI is improving GPS accuracy for precise work zone alerts and is also testing automated truck-mounted attenuators in Northern Virginia to enhance worker safety.
- ✓ During introductions, Ms. Orr mentioned the need for regional coordination and information sharing especially when coordinating procurements. Jurisdictions may have similar problems they are trying to address. A regional coordination system would allow other localities to be more efficient in identifying those similarities.
    - Suggestion for a consolidated version of the TTSP that is in a more digestible format and cited Alexandria's Smart Mobility Framework as an example.
    - A region-wide map/inventory to look at what types of projects are being planned and constructed would be helpful for inter-jurisdictional information sharing on a project-by-project level. A consolidated inventory would support both policy development and cooperative procurement opportunities (e.g., shared transit signal priority (TSP) or automated enforcement systems).
    - Curbside Management Technology is evolving as curb space is more highly valued and competing uses emerge. Parking Technology vendors are actively entering this space, so a regional perspective would be valuable. Automated traffic enforcement could be a legislative ask for NVTA to consider.

- ✓ Dr. Mudge informed the committee that Waymo is taking market shares from Uber and Lyft and could potentially be taking away transit users also.
- ✓ Ms. De la Barrera added that autonomous vehicles (AVs) can be an asset to many types of travelers and can be an equitable solution for vulnerable populations. Waymo will be parking their vehicles in Arlington. Waymo should be part of the discussion moving forward as their influence will increase with time. She noted that the private sector needs the buy in from the jurisdiction and more importantly the public.
- ✓ Both Ms. De La Barrera and Ms. Orr emphasized the importance of ensuring Northern Virginia has a seat at the table in shaping legislation and agreements as Waymo expands into the region.
    - Ms. De La Barrera noted that she has worked on HB 2627 and Arlington County legislation efforts. She shared the need for a public-sector-led framework or pilot where local jurisdictions oversee AV operations, and share public interests (safety, routing restrictions during emergencies) with private sector innovation. She cautioned that if the public sector does not engage early, lobbyists will shape legislation without local input, potentially overlooking community needs.
    - Ms. De La Barrera suggested creating a pilot program or framework in Northern Virginia where jurisdictions can guide where and how AVs operate, while gaining transparency into the technology levels and capabilities of different companies.
- ✓ Mr. Fontaine provided insights into Virginia's House Bill 2627, which was passed earlier this year and establishes a working group to created automated vehicle legislation for Virginia. There is a two-year window for the legislation to be developed. With Waymo's operations coming to DC soon, this puts additional spotlight on Virginia's approach, creating opportunities to shape the legislative framework for AVs while highlighting the importance of state and local coordination as the working group begins its activities.
- ✓ Mr. Sripathi said that efforts working with Artificial Intelligence (AI) should be coordinated regionally so that jurisdictions can work together to connect technologies across county boundaries. He also placed importance on cybersecurity education for jurisdictional staff.
- ✓ Open discussion centered on priority focus areas for the Committee:
    - Active transportation: Applications of connected active transportation tech for Vision Zero.

- Automated traffic enforcement (ATE): ATE involves installing cameras to reduce speeding, running red-lights, and other traffic violations to deter unsafe driving patterns, change driver behavior, and supplement enforcement.
- Artificial Intelligence and Cybersecurity: Regional AI coordination and education of cyber risks and opportunities requiring regional frameworks.
- Autonomous Vehicle legislative coordination: Ensuring Northern Virginia jurisdictions are represented in shaping state legislation and pilot frameworks as AVs enter the Metro region.
- Dynamic curbside management and parking: Addressing growing competition for curb space (delivery, ride-hailing, shared mobility devices, parking, transit).
- Predictive safety analytics: Smarter signalization and predictive roadway risk assessment tools.
- Regional technology coordination and procurement strategies: A shared inventory of local technologies across jurisdictions to identify alignment and support efficient procurement.
- Transit technology integration: Zero emission buses (ZEB), charging infrastructure, shared inventories, fare payment, and bus priority systems.

6. Summary of Transportation Planning Board's (TPB) Technology Inventory Summary

- ✓ Due to time constraints, Mr. Burke was unable to present TPB's Technology Inventory Summary and this item was deferred to a later meeting.

7. NVTA Updates

- ✓ Due to time constraints, there were no NVTA updates.

8. Adjourn

- ✓ The meeting was adjourned at 10:34 a.m.
- ✓ The next meeting has not yet been scheduled but is anticipated for late September.

TTC Focus Area Rankings

Key	
Rating	**Alignment with TTSP, Core Values, TransAction Goals**
High	Focus Area **directly considers** TTSP Strategy/ NVTA Core Value/ NVTA TransAction Goal
Medium	Focus Area **somewhat considers** TTSP Strategy/ NVTA Core Value/ NVTA TransAction Goal
Low	Focus Area **does not consider** TTSP Strategy/NVTA Core Value/ NVTA TransAction Goal

		Focus Area alignment with...			
Overall Rank	**Focus Area**	**TTSP[1] Strategies**	**NVTA Core Values**	**TransAction Goals**	**Combined Average Rating**
1	**Transit Technology Integration** > Zero Emission Buses (ZEBs), charging infrastructure, shared inventories, fare payment, and bus priority systems.	*High*	*High*	*High*	**High**
2	**Active Transportation** > Applications of connected active transportation tech for Vision Zero.	*Medium*	*High*	*High*	**High**
2	**Predictive Safety Analytics** > Smarter signalization and predictive roadway risk assessment tools.	*High*	*High*	*Medium*	**High**
4	**Autonomous Vehicle Legislative Coordination** > Ensuring Northern Virginia jurisdictions are represented in shaping state legislation and pilot frameworks as AVs enter the Metro region.	*High*	*Low*	*High*	**Medium**
4	**Regional Technology Coordination and Procurement Strategies** > A shared inventory of local technologies across jurisdictions to identify alignment and support efficient procurement.	*High*	*Medium*	*Medium*	**Medium**
6	**Dynamic Curbside Management & Parking** > Addressing growing competition for curb space (delivery, ride-hailing, shared mobility devices, parking, transit).	*Medium*	*Low*	*Low*	**Low**
6	**Automated Traffic Enforcement (ATE)** > ATE involves installing cameras to reduce speeding, running red-lights, and other traffic violations to deter unsafe driving patterns, change driver behavior, and supplement enforcement.	*Low*	*Medium*	*Low*	**Low**
8	**Artificial Intelligence (AI) and Cybersecurity Education** > Regional AI coordination and education of cyber risks and opportunities requiring regional frameworks.	*Low*	*Low*	*Low*	**Low**

[1] Transportation Technology Strategic Plan

Key
Indicates NVTA staff to integrate Focus Area's goals into TransAction
Indicates primary effort lead

Potential Next Steps (pt. 1)

		Potential Next Steps		
Overall Rank	**Focus Area**	**NVTA**	**Other Organizations**	***Highly Aligned / Relevant TTSP Strategies***
1	**Transit Technology Integration**	• Convene working group for NVTA-funded and related transit technology deployments ○ (This could tie in with regional technology coordination and help serve as a platform for jurisdictions to share plans for technology projects)	• NVTC and DRPT Transit Technology meetings for coordination of regional project updates and information sharing from a technical/local perspective • WMATA's Cloud-Based Transit Signal Priority System staff provide updates to the TTC	*1, 2, 4, 6, 7, 8, 9*
2	**Active Transportation**	• Identify pilot corridors for connected active transportation tech (e.g. pedestrian detection, HAWK[High-intensity Activated crossWalK]/ connected crossings)	• MWCOG TPB Bicycle & Pedestrian Subcommittee to align with regional Vision Zero strategies • Vendors to share active transportation tech applications for NoVA jurisdictions	*2, 6, 8*
2	**Predictive Safety Analytics**	• Map high-risk roadway segments using crash data, traffic flow, weather data • Support development of regional platforms for data sharing among jurisdictions to enable predictive analytics	• VDOT to provide information session on using Pathways for Planning and Crash data portal for roadway safety applications • MWCOG TPB Safety Subcommittee integrates outputs into regional safety targets • Vendors to share roadway rick score applications for NoVA jurisdictions	*1, 2, 4, 6, 7*
4	**Autonomous Vehicle (AV) Legislative Coordination**	• Produce regional policy recommendations or a framework for AV deployment (safety standards, routes, data sharing) • Participate in meetings and monitor state legislation to ensure regional concerns are incorporated	• Members from VDOT/VRTC to provide status update on HB 2627 to the TTC • VTTI to conduct safety evaluations • Private AV providers to share deployment data	*1, 2, 4, 6, 7*

Key
Indicates NVTA staff to integrate Focus Area's goals into TransAction
Indicates primary effort lead

Potential Next Steps (pt. 2)

		Potential Next Steps		
Overall Rank	**Focus Area**	**NVTA**	**Other Organizations**	***Highly Aligned / Relevant TTSP Strategies***
4	**Regional Technology Coordination & Procurement Strategies**	• Build a shared inventory / map of existing technology assets across jurisdictions • Explore potential for creating model contracts, procurement templates for emerging transportation technologies	• Local jurisdictions share technology project information and procurement announcements via an online shared database • Collaborate with Virginia Institute of Procurement on best practices for regional procurement of technology projects	*4, 7, 9*
6	**Dynamic Curbside Management & Parking**	• Identify high-demand curb zones (e.g., commercial districts, transit hubs)	• Local jurisdictions to test dynamic pricing and curb allocation pilots • Arlington to coordinate with Alexandria on data gathered from Performance Parking Pilot	*5, 7*
6	**Automated Traffic Enforcement (ATE)**	• Assess legal and policy barriers/opportunities to ATE deployment regionally • Include ATE cost benefit analysis	• Local governments to pilot ATE in Vision Zero priority corridors • Legislative representative provide status update on ATE and obstacles that jurisdictions experience with keeping money in NoVA	*4, 5*
8	**Artificial Intelligence (AI) and Cybersecurity Education**	• Explore interest in workshops/trainings for NVTA-member jurisdictions on AI risk and cybersecurity best practices • Add Artificial Intelligence strategy to TTSP	• FBI, CISA (Cybersecurity and Infrastructure Security Agency) provide training modules • VDOT, ITS, and MWCOG's Homeland Security & Public Safety Committee to share best practices	*3, 7*

TTSP Strategies and Intentions

Strategies		Intent of Strategy (Long-Term)
1	**Reduce congestion and increase throughput**	Support deployment of transportation technologies that improve performance and optimize efficiency of the regional multimodal transportation system
2	**Maximize access to jobs, employees and housing**	Support deployment of transportation technologies that increase travel options and awareness of them
3	**Maximize cybersecurity and privacy for members of the public**	Monitor concerns on behalf of Northern Virginians, and leverage NVTA processes where appropriate and feasible
4	**Enhance operations of the multimodal transportation system through connectivity and automation**	To maximize the potential benefits of Connected and Automated Vehicles, while addressing avoidable increases in passenger vehicle miles traveled
5	**Develop pricing mechanisms that manage travel demand and provide sustainable travel options**	Identify technology-related measures at a regional scale to dynamically address congestion, including incentives; revenues will be re-invested in equitable solutions
6	**Maximize the potential of physical and communication infrastructure to serve existing and emerging modes**	Support adaptation of existing resources to support desirable technologies such as CASE (Connected, Autonomous, Shared, Electric) vehicles, travel apps, micro modes and robust data collection
7	**Enhance regional coordination and encourage interoperability in the transportation system**	Leverage regional synergies in the deployment of transportation technologies
8	**Advance decarbonization of the transportation system**	Support deployment of transportation technologies that reduce greenhouse gas emissions and synergistic technologies that improve resiliency
9	**Enhance mobility in the region through innovation and emerging technologies in transit**	Support an array of transit innovations, in a manner that is flexible enough to adapt to future innovation

TTC Focus Area Analytic Framework- DRAFT

9/30/2025
Version 8b

			Focus Area alignment with...				Potential Next Steps		
Overall Rank	Focus Area	Why it's Important	TTSP[1] Strategies	NVTA Core Values	TransAction Goals	Combined Average Rating	NVTA	Other Organizations	*Highly Aligned/ Relevant TTSP Strategies*
1	**Transit Technology Integration** > Zero Emission Buses, charging infrastructure, shared inventories, fare payment, and bus priority systems.	Bus rapid Transit, real-time information, mobile ticketing, and connected transit systems improve rider experience, expand accessibility, and encourage mode shift away from SOVs.	*High*	*High*	*High*	**High**	> Convene working group for NVTA-funded and related transit technology deployments (This could tie in with regional technology coordination and help serve as a platform for jurisdictions to share plans for technology projects)	> NVTC/DRPT Transit Technology meetings for coordination of regional project updates and information sharing from a technical/local perspective > WMATA's Cloud-Based Transit Signal Priority System staff provide updates to the TTC	*1, 2, 4, 6, 7, 8, 9*
2	**Active Transportation** > Applications of connected active transportation tech for Vision Zero.	Active transportation is enhanced by safe, connected, and visible infrastructure. New safety technologies protect vulnerable users and encourage sustainable travel.	*Medium*	*High*	*High*	**High**	> Identify pilot corridors for connected active transportation tech (e.g. pedestrian detection, HAWK [High-intensity Activated crossWalK]/ connected crossings)	> MWCOG TPB Bicycle & Pedestrian Subcommittee to align with regional Vision Zero strategies > Vendors to share active transportation tech applications for NoVA jurisdictions	*2, 6, 8*
2	**Predictive Safety Analytics** > Smarter signalization and predictive roadway risk assessment tools.	Smart traffic signals, variable speed limits, and connected vehicle systems can reduce crashes and improve traffic flow, which improves safety and reliability for commuters and freight.	*High*	*High*	*Medium*	**High**	> Map high-risk roadway segments using crash data, traffic flow, weather data > Support development of regional platforms for data sharing among jurisdictions to enable predictive analytics	> VDOT to provide information session on using Pathways for Planning and Crash data portal for roadway safety applications > MWCOG TPB Safety Subcommittee integrates outputs into regional safety targets > Vendors to share roadway rick score applications for NoVA jurisdictions	*1, 2, 4, 6, 7*
4	**Autonomous Vehicle (AV) Legislative Coordination** > Ensuring Northern Virginia jurisdictions are represented in shaping state legislation and pilot frameworks as AVs enter the Metro region.	AV deployment requires regulatory clarity and collaboration. Coordinating with Private Sector AV providers ensures safety, compliance, and integration with regional transportation systems.	*High*	*Low*	*High*	**Medium**	> Produce regional policy recommendations or a framework for AV deployment (safety standards, routes, data sharing) > Participate in meetings and monitor state legislation to ensure regional concerns are incorporated	> Members from VDOT/VRTC to provide status update on HB 2627 to TTC > VTTI to conduct safety evaluations > Private AV providers to share deployment data	*1, 2, 4, 6, 7*
4	**Regional Technology Coordination & Procurement Strategies** > A shared inventory of local technologies across jurisdictions to identify alignment and support efficient procurement.	Collaborative planning and joint procurement reduce costs, avoids duplication, and ensures interoperability of emerging technologies across jurisdictions.	*High*	*Medium*	*Medium*	**Medium**	> Build a shared inventory / map of existing technology assets across jurisdictions > Explore potential for creating model contracts, procurement templates for emerging transportation technologies	> Local jurisdictions share technology project information and procurement announcements via an online shared database > Collaborate with Virginia Institute of Procurement on best practices for regional procurement of technology projects	*4, 7, 9*
6	**Dynamic Curbside Management & Parking** > Addressing growing competition for curb space (delivery, ride-hailing, shared mobility devices, parking, transit).	Competition for curb space is increasing due to delivery services, ride-hailing, micro-mobility, outdoor dining, parklet spaces and transit. Technology solutions can balance these demands, reduce congestion, and ensure equitable access for all users.	*Medium*	*Low*	*Low*	**Low**	> Identify high-demand curb zones (e.g., commercial districts, transit hubs)	> Local jurisdictions to test dynamic pricing and curb allocation pilots >Arlington to coordinate with Alexandria on data gathered from Performance Parking Pilot	*5, 7*
6	**Automated Traffic Enforcement (ATE)** > ATE involves installing cameras to reduce speeding, running red-lights, and other traffic violations to deter unsafe driving patterns, change driver behavior, and supplement enforcement.	Can help in preventing fatalities and serious injuries of roadway users, especially vulnerable roadway users.	*Low*	*Medium*	*Low*	**Low**	> Assess legal and policy barriers/opportunities to ATE deployment regionally > Include ATE cost benefit analysis	> Local governments to pilot ATE in Vision Zero priority corridors. > Legislative representative provide status update on ATE and obstacles that jurisdictions experience with keeping money in NoVA	*4, 5*
8	**Artificial Intelligence (AI) and Cybersecurity Education** > Regional AI coordination and education of cyber risks and opportunities requiring regional frameworks.	As transportation systems digitize, AI can optimize mobility but also introduces risks. Cybersecurity awareness ensures systems remain resilient, secure, and trusted by the public.	*Low*	*Low*	*Low*	**Low**	> Explore interest in workshops/trainings for NVTA-member jurisdictions on AI risk and cybersecurity best practices > Add Artificial Intelligence strategy to TTSP	> FBI, CISA (Cybersecurity and Infrastructure Security Agency) provide training modules > VDOT, ITS, and MWCOG's Homeland Security & Public Safety Committee to share best practices	*3, 7*

[1] Transportation Technology Strategic Plan

Ratings Key	
Rating	**Alignment with TTSP, Core Values, TransAction Goals**
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Next Steps Key
Indicates NVTA staff to integrate Focus Area's goals into TransAction
Indicates primary effort lead