Transportation Technology Committee (TTC) Work Plan Update

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Deliverable One - Needs and NVTA roles

Need	TransAction Goal/Objective	Technology Opportunities	Technology Challenges	Possible NVTA Roles (All = Inform)
Safety	2/1	AVs reduce human error	Near perfection required	Input to regional/state policies?
Emergency Management	2/4	Data/AI mitigate incident impacts	False positives, data protection issues	Funding opportunities, possibly subject to new approaches to procurement?
Congestion	1/1 1/2	CAVs increase highway efficiency, freight, env.	Uncertainty, Curb Mgt., ZOVs, increased VMT	New approaches to what we fund? Pricing/ incentives policy?
First/Last Mile	1/4 2/2 2/3	Reduce SOV VMT, active transportation	Transit impact	Funding for AV shuttles and facilities? New healthcare partnerships
Accessibility to Labor, Jobs, etc.	1/3	Strengthen regional economy, quality of life	See 'Safety' and 'Congestion'	New biz community partnerships. NVTA role in transp./land use discussion?
Accessibility for Mobility Impaired	Multiple/ non-specific	Improve quality of life, opportunities	See 'Safety' and 'Congestion'	New community partnerships, e.g. AARP
Emissions	3/1	AVs=EVs	Revenue Streams	EV infrastructure policy
Resilience	2/3	Better data=better info	Complexity of 'threats' (type/location/scale/ timing/duration)	Consider investment obsolescence and need for infrastructure redundancy options

Deliverable Two - Policy Area Prioritization

- **Priority Policy Areas:**
  - #1 - Incentivizing right-sizing modes (optimization)
  - #7 - Creation of usage-based pricing schemas for EVs/AVs, and
  - #9 - Facilitation of development of infrastructure for EVs and AVs.

- **Core Values:**
  - Safety
  - Equity
  - Accessibility
  - Sustainability

Policy area	Number	Rank base on sum score	Rank based on frequency of high scores
Incentivizing right-sizing modes	#1	2	1
Encouraging equity in access to transportation technologies	#2	5	7
Establishing guidelines for deployment of future transportation technologies	#3	7	8
Fostering development of standardized or complimentary SMD policies, region-wide	#4	10	8
Creation (and standardization) of curbside Management and Parking Policies	#5	6	3
Regional standardization of data collection	#6	7	8
Creation of usage based pricing schemas for EVs/Avs	#7	2	3
Guidelines for funding future technologies	#8	4	5
Facilitation of development of infrastructure, for EVs and Avs	#9	1	2
Development of simulation strategies for CASE vehicle deployment	#10	9	5

Deliverable Three - NVTA/ NoVA Transportation Primer

- Summarize regional transportation needs;
- Provide TTC members with a better understanding of TransAction vision, goals, performance measures, etc.;
- Summarize region's current transportation technology activities, e.g. Connected Corridor, RM3P, TSP, data-sharing, EV infrastructure and private sector initiatives;
- Identify future technology-related deployment opportunities, e.g. Bus Rapid Transit(BRT), AV-only boulevards, AV-Express Lanes;
- Identify potential funding sources for future technology ('soft infrastructure') deployments; and
- Identify existing and potential roles of public and private sectors, and opportunities for partnership.

Deliverable Four - Research/Outreach/Education

- Better understand Northern Virginians' level of awareness, concerns, and desires with respect to technology;
- Using facts rather than 'hype', develop appropriate messaging for multiple target audiences:
  - Authority members; policy development, investment strategies
  - Member jurisdiction and agency staff; technical education, skill needs/gaps, encourage 'big thinking'
  - Regional stakeholders, including the business community; collaboration opportunities, synergies
  - Northern Virginians; technology awareness, safeguards, impacts, advantages, disadvantages, and value for money
  - Private sector; partnership opportunities
- Incorporate 'trigger points' into NVTA staff annual reports on transportation technologies and emerging trends. Trigger points could be when certain thresholds are reached, such as market penetration levels, which may in turn 'trigger' a review of prior analyses or assumptions.

Proposed Structure of Transportation Technology Strategic Plan

- Executive Summary
- Purpose and Scope
- Glossary/Terminology
- Vision and Goals
- Overarching Core Values
- Northern Virginia's Transportation Needs
- Transportation Technology Trends
- Linkages between regional transportation needs and transportation technologies
- Transitional and Data Considerations
- Strategies
- Roles for NVTA (applied to each need/technology combination)
- Timeline for Action (varies by strategy)
- Related initiatives by other regional partners
- Monitoring Progress and Update Cycle
- List of TTC Members and Participants
- List of References

Linkages between Transportation Technologies and Needs

TransAction Goals	Enhance quality of life and economic strength of Northern Virginia through transportation				Enable optimal use of the transportation network and leverage the existing network		Reduce negative impacts of transportation on communities and the environment	
Needs	**Safety**	**Emergency Management**	**Accessibility to labor, jobs etc**	**Accessiblity for Differently Abled**	**Congestion reduction**	**First/last Mile**	**Emmissions Reduction**	**Resilience**
Automated / Autonomous vehicles	◑			●	◑		◑	
SMDs	◑		◕	◔	◕	●	◕	
Signal technologies	◕	●	◔		●	◔	◑	
Apps	◑	◑	◕	◑	◑	◑	◕	
System optimization	●	●	●	●	◕	◕	●	●
Drones	◑		◔		◑			◕
Changes to delivery and freight systems	◕		◔		◕		◕	
Surveillance/monitoring (including telematics)	◑	◑	◑	◑	◕	◔		
Data generation/collection/sharing	●	●	●	●	●	●	●	●
Improvements to mass transit (including BRT)	◕	◕	●	●	●	◕	●	◕
Smart technologies/cities and IoT	◕	◕	●	◕	◕	◕	◕	●

Detrimental	Potential to help	Potential to help or be detrimental	Most likely to be helpful	Will definitely be helpful
○	◔	◑	◕	●

Transportation Technology – Opportunities and Challenges

	Opportunities						Challenges					
	Reduced reliance on fallible humans	System optimization (reliability, compliance, management)	Reduced congestion	Reduced pollution	Facilitate emergency management	Resiliancy and redundancies	Reliance on resource-intensive technology	Transition challenges	Need for cross-jurisdictional coordination	Technologies outpace legislation (certifications, regulations)	Privacy concerns	Cyber security concerns
Automated / Autonomous vehicles												
SMDs												
Signal technologies												
Apps												
System optimization												
Drones												
Changes to delivery and freight systems												
Surveillance/monitoring (including telematics)												
Data generation/collection/sharing												
Improvements to mass transit (including BRT)												
Smart technologies/cities and IoT												

Green = Opportunity Gray = Neutral/Minor Impact Red = Challenge

Next Steps

- NVTA Staff will begin drafting the Transportation Technology Strategic Plan
- The first draft of the plan will be shared with the TTC members in late-February or March 2020
- TTC members will have at least one month for review and comment
- NVTA staff will then take approximately one month to incorporate feedback from TTC members