COMMONWEALTH OF VIRGINIA
Office of the
SECRETARY OF TRANSPORTATION

Acting Director of Research and Innovation Cathy McGhee, PE
Office of Transportation Innovation

Drive and enable innovation in Virginia’s transportation ecosystem to ensure advanced technology and ideas are leveraged to solve the most pressing transportation issues.
Office of Transportation Innovation
Focus Areas

Office of Innovation

- Infrastructure/Broadband
- Automated Virginia
- Information/Data Analytics/Logistics
Automated Virginia

- Automated and unmanned systems are making their way into all facets of transportation
- Virginia is seeking opportunities to improve safety and mobility as well as encourage economic development
- Ground, aerial, and underwater systems can be applied to transportation activities
Testing, Demos, and Pilots are Active in Virginia

FORD AND VIRGINIA TECH TRANSPORTATION INSTITUTE ARE USING THIS CAR-SEAT COSTUME

Isn’t really driverless.

Increased throughput
Improved fuel economy
Lower operating costs

Office of the Secretary of Transportation
Northern Virginia Challenges
Next Steps

Automated Maintenance Vehicles

Work Zone Information

First and Last Mile Solutions

Work Force Development

Fleet Challenge

Industry Coordination

Data Management and Security

Leveraging Broadband
UAS Activities in VDOT

• VDOT has participated in a number of pilots and demonstrations in a variety of functional areas to “get our feet wet” and begin to understand where we can bring UAS into agency operations now
  • Early demonstrations of infrastructure assessment
  • Tethered and untethered systems for traffic and incident management
  • Assessment of rock slope condition and risk of slide
  • Public communications for large scale projects (Rt. 29 Solutions)
• Hosted a Peer Exchange to gain insight from other states
VDOT UAS Action Plan for 2019

• Infrastructure assessment
• Incident and traffic management
• Environmental applications
• Rock slope stability
• Surveying/Construction monitoring
Data and Analytics

- A wealth of data exists across the transportation Secretariat but it tends to be isolated within individual agencies (and even within agencies)
- SmarterRoads.org is an initial attempt to expose data to public use
Welcome to SmarterRoads, VDOT’s new data portal.

SmarterRoads makes VDOT’s transportation data available to approved users online. This cloud-based portal will provide raw data pertaining to road conditions, incidents, work zones, multi-modal transportation and road signs to the connected and automated vehicle industry, third-party enterprise and the public. Data sets range from real-time sensor streams updated every minute, to road statistic shape files updated annually. Browse available data sets, then create a free account to get started.

About SmarterRoads

The data sets on this portal are all available to approved users. Create a free account to sign the required data sharing use agreement. Once approved, we will receive an email with login instructions. When you are logged into the SmarterRoads data portal, you can customize your settings to subscribe to specific data sets. Additional logins may be required for some data sets.

VDOT

Data is collected via a network of sensors and systems...

SmarterRoads Data Portal

The data portal continuously connects to different data sets and makes the latest data available to subscribers.

Users

Users like you can subscribe to datasets for use in your applications.
Broadband/Fiber Connectivity

• Many areas of the Commonwealth are still unserved with respect to internet connectivity
• Studies have shown that access to affordable connectivity is a significant contributor to future educational success
• Availability of reliable high-speed internet is key to economic competitiveness
• Transportation is becoming more dependent on connectivity and future transportation systems will require it.
Opportunities abound

• There is a focus on innovation, at the Secretariat and particularly within VDOT
• As a primary expenditure for VDOT, innovation in our paving program could pay significant dividends
• Our continued partnership on research, innovation, and implementation will be key
Thank you!