INNOVATION AT THE VIRGINIA DEPARTMENT OF TRANSPORTATION
Virginia is Innovating

VIRGINIA
America’s Home
to SMARTEST ROADS
VDOT has Established an Office of Strategic Innovation

Office has the Expertise to Implement Innovations Across the Agency including:

- Connected Automated Vehicle Expertise
- Technology and Cybersecurity Expertise
- Operations and Integration Expertise
- Proven Delivery of Successful Pilot and Full-Scale Implementations
- Direct Linkage to the VTRC
What Makes Virginia Transportation Innovative?

Taking Innovative Approaches

- No Regulations
- Consistent Highway System
- Focus on State of Good Repair
- Leading Implementation/Proven Innovation Leader
- Extremely Capable and Knowledge-based workforce
- University Expertise
- World-Class Testing Facilities
- Leader in Cybersecurity
- Executive Level Commitment to Innovation – Director of Innovation Position Created
- Cloud-Based Data Portal – SmarterROADS.org
- Enhanced Traveler Information
- Dedicated ITTF Funding - $105M over SYIP
Areas for Innovation in Virginia

Taking Innovative Approaches

• Drone Queue Backup Detection
• Drone Accident Reconstruction
• Lidar/photogrammetric salt volumes
• Kiosks for WIFI, emergency calling, national calling, and information at rest areas, VRE lots, Metro, dense urban
• Datathons across the state
• PPP’s
• VTRC
• Leadership in national Connected Vehicle pooled fund study
• Truck Platoon testing
• E-invoicing
• Cybersecurity of our operational technology
• Smart Scale Prioritization
• Dashboard
VDOT’s Cloud-Based Data Portal

SMARTERROADS.org
Cloud Data Portal Objectives

- Accelerate the CAV technology development by exchanging transportation data and video with private sector CAV business, application developers, and university partners.
- Provide all relevant VDOT data beyond current traffic operations data in one portal site.
- Encourage auto manufacturer device, application, and business development to increase the frequency, quality, and accuracy of data shared with private sector.
- Improve 2-way data exchange for VDOT to publish and obtain data for internal use.
- Simplify the process to add new users and manage existing users.
- Serve as a national model for other state DOT’s.
SmarterRoads.org usage

Users representing many types of organizations have signed up for the data portal.

Private businesses, research, localities, MPO’s/PDC’s, News Media, Consulting Firms, Contractors, to citizens.

Our Top 10 data sets used are:

• Traffic Volumes (ADT)
• Crashes
• Map Data
• Road Construction
• VDOT Incidents
• Quarterly Crash Data
• Paving Schedules
• Speed Limit data
• Traffic Sensor stations
• Signal Controller Status
Drone Usage in Virginia
Drone Usage in Virginia
Why are VDOT and the Virginia State Police Focused on Crash Reconstruction?

- NCDOT estimates using drones will reduce the time it takes troopers to reconstruct a crash based on pilot testing.
VDOT partners with Waze to provide navigation
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Robert H. Cary, PE, LS, Chief Deputy Commissioner 10/2/2018