

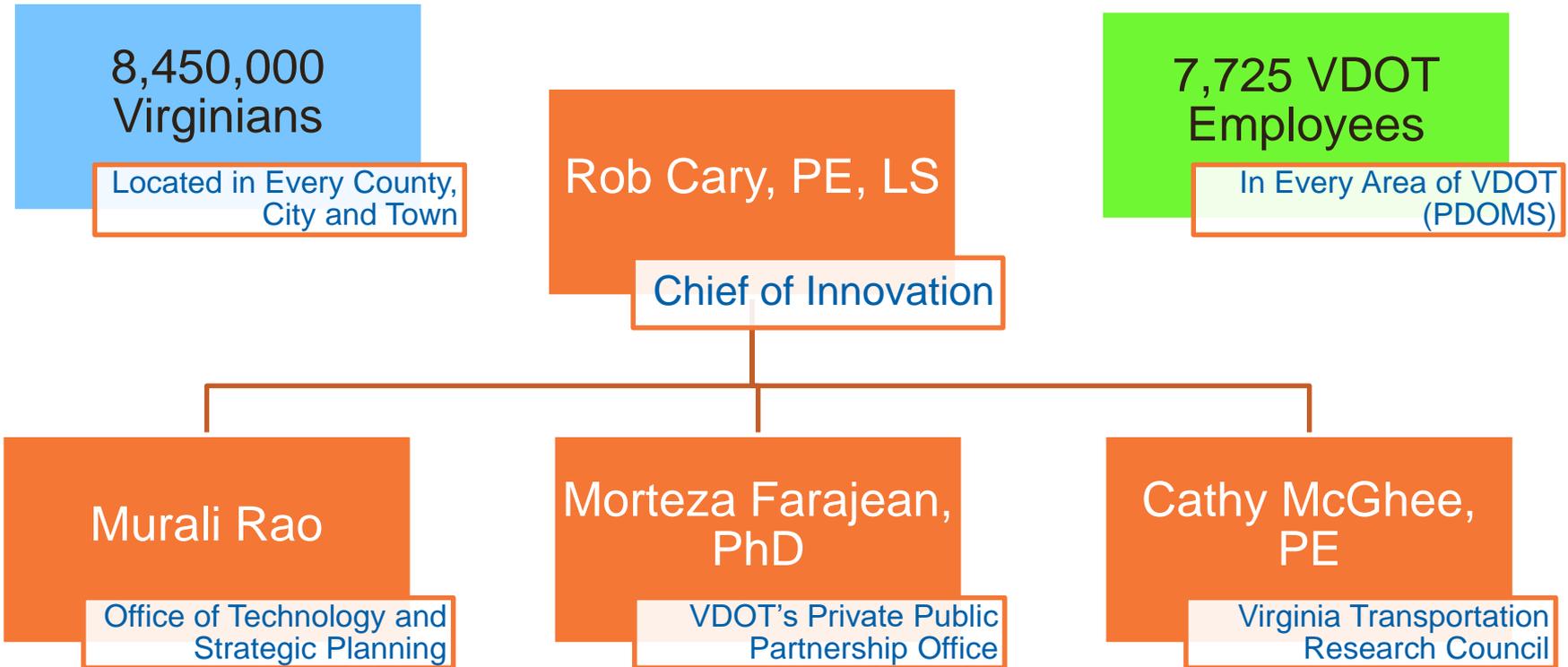


## **Innovation at VDOT**

Rob Cary, PE, LS  
Chief of Innovation

Virginia Asphalt Association  
October 3, 2017

# Organization



## Chief of Innovation

- Coordinates new innovations across the organization
  - All equipment from handheld to big;
  - All technology VDOT to private;
  - Facilities – Smart buildings and innovative workplaces;
  - Improved processes, eliminating redundant steps, eliminating paperwork, and automating processes;
  - Staying abreast of business needs and technology and creates synergy across VDOT's various disciplines;
  - Ensuring that we don't have duplicative technology procurements avoiding multiple platforms doing what one could have done;
  - Approximately 75% of my time is focused on the future and how it will impact transportation;

## Chief of Innovation

- Coordinates new innovations across the organization
  - Leading VDOT's activities in the Connected and Autonomous Vehicle arena. Making sure that Virginia is the place where leading businesses want to locate to research, prototype, develop and manufacture these new transportation technologies to grow Virginia's economy;
  - Serve as VDOT's executive liaison with the CTB Innovation and Technology Subcommittee;
  - Review and recommend adjustments to the CTB so that VDOT's Innovation and Technology Transportation Fund (ITTF) is leveraged to maximize its benefits in alignment with VDOT's Innovation, Technology and Business strategies;
  - Coordinate with local governments, planning organizations, other states, and nationally to learn, expand and implement innovations and technology to improve VDOT's projects and services to the citizens of the Commonwealth;

## Chief of Innovation

- Coordinates new innovations into the organization
  - Work with the private sector and higher education to advance innovation and technology within the transportation industry;
  - Provide leadership to the technical teams delivering the implementation of new innovation and technology within VDOT
  - Work across VDOT and with other state agencies to ensure policies and laws help support the implementation of new technology;
  - Seek cost sharing opportunities with the private sector to develop, test and implement new technologies; and,
  - Seek opportunities to generate revenue through the use of or marketing existing transportation infrastructure or intellectual properties.

## Why VDOT is Poised to Accelerate Innovation

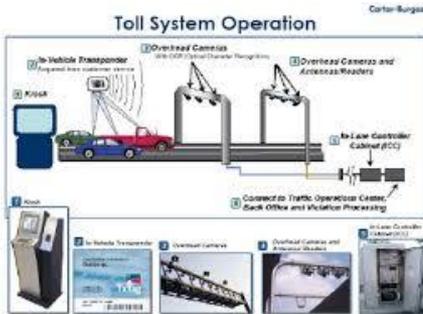
- Our path to innovation has matured and advanced significantly over the last 7-10 years. Today, VDOT has:
  - Excellent statewide and regional leadership;
  - Our core functions/assets are on a stable foundation and improving;
  - We have mature measures in place to track performance;
  - We have a clear understanding of our core functions across the agency;
  - In most areas, we have unambiguous data driven methods of allocating resources;
  - Legislative and executive branch leadership are generally supportive of our efforts;
  - Strong relationships at the local level with local elected officials and legislators;

## Why VDOT is Poised to Accelerate Innovation

- (Continued):
  - We have strong partnerships with our constituents, private sector partners and other government agencies;
  - We demand measurable results;
  - We empower our staff (particularly our middle managers);
  - We hold staff accountable for their successes and failures;
  - We already encourage out-of-the-box thinking and innovation; and,
  - We have resources. The CTB allocated \$99.9M total through FY 2022 for Innovation through the Innovation and Technology Transportation Fund (ITTF) in the SYIP.

**Because of this, we are very well situated to embark on a strong innovation agenda.**

# What Does Innovation Look Like at VDOT?



- Yes – It is Autonomous and Connected Vehicles
- Yes – It is ITS and Technology
- Yes – It is Data Analytics
- Yes – It is High Tech Signal and Tolling Systems
- Yes – It is Incredibly Complex Construction
- Yes – It is Challenging the status quo in everything we do



**BUT,**



# What Does Innovation Look Like at VDOT?

- But, it is also may be:
  - The new limb rack designed by maintenance
  - Better ways to alert drivers to a work zone
  - Improved construction materials
  - Inventory Bar Code Readers
  - Web-based Public Hearings
  - Electronic Signatures
  - External Electronic Bulletin Boards
  - Digital Vouchers
  - More Efficient Recruiting of Underrepresented Groups
  - Deploying Technology in the Hands of Field Employees
  - Digital Signage for Conference Rooms



## What Does Innovation Look Like at VDOT?

Innovation at VDOT is what our 7,725 employees, our partners, and our citizens can imagine it to be.

The opportunities are immense.

## What can VDOT do to overcome potential barriers to innovation in VDOT?

- Managing the balance between risk and change, specifically between the more adventurous knowledge seekers willing to tolerate risk and those within an organization who are more conservative and incremental in their approach.

## Actions Underway

- Working with VDOT's P<sup>3</sup> Office to position them to facilitate the use of P<sup>3</sup>'s in the delivery of innovation and technology as they become even more major parts of transportation in the future.
- Working with VDOT's P<sup>3</sup> Office as they fill the role as VDOT's long-term project manager for the oversight and maintenance of each P3 contract across Virginia and to ensure that they coordinate with local District staff who will have a tactical local role in support of the strategic management of each of these contracts.
- Working with the VTRC to focus on implementation of research for our citizens measuring specifically whether the research is being implemented across Virginia.

## Actions Underway

- Working with the Office of Technology and Strategic Planning to reduce the number of platforms and making data more accessible.





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