
VDOT
Virginia Department of Transportation

COMMONWEALTH TRANSPORTATION BOARD

TRAFFIC OPERATIONS SERVICES

Program VISTA

Virginia's Integrated Solution for
Traffic-Operations Applications

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Richmond District Traffic Operations Director
Program VISTA Lead/Champion

September 15, 2026

Overview

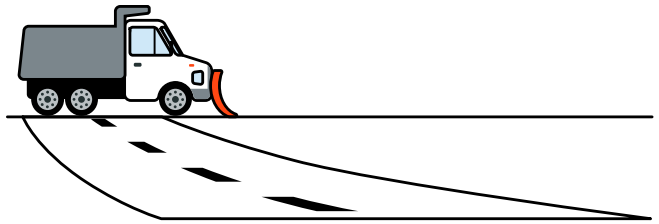
- VDOT is a national leader in Traffic Operations
- Traffic Operations relies heavily on technology
- VDOT is well-positioned to evolve our program
- **Today we will provide a brief on VDOT's plan moving forward and an upcoming procurement.**
- **No Board action required at this time**



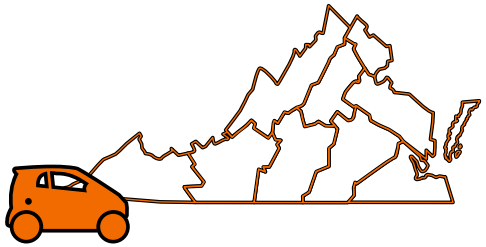




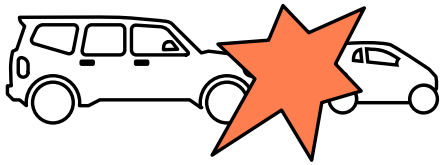
Traffic Operations is a Core VDOT Function



VDOT managed lane miles (2025)
130,527 miles



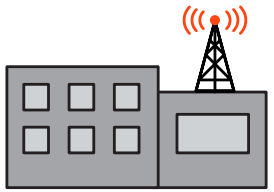
Vehicle Miles Traveled (2025)
245.3 million/day



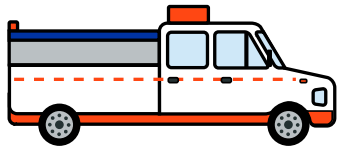
Number of Incidents
18,000/month

- **Traffic volumes continue to increase, infrastructure is aging, capacity growth is limited - our processes and support systems must evolve**
- **“Growing” capacity with better operations where we can is more cost-effective than adding physical lanes.**
- **VDOT is pursuing an innovative path-forward**
  - *A nimble procurement approach, with faster adoption of proven solutions*

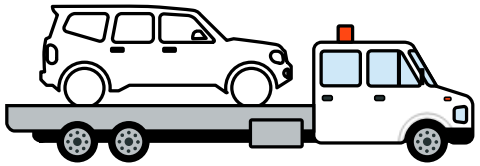
Traffic Operations – Infrastructure and Services Overview



Traffic Operations Support Centers



Safety Service Patrol



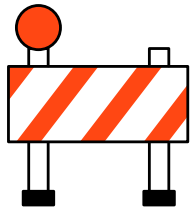
Towing and Recovery Program



Detour Management



Statewide Emergency Operations Situation Room



Work Zone Management Solutions



Corridor & Arterial Traffic Management Service



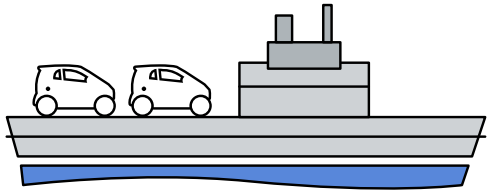
Customer Support Center



Winter Weather and Emergency Services



Traffic Safety Services

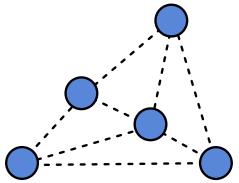


Ferry Management Services

Traffic Operations – Devices



3,200 Signals



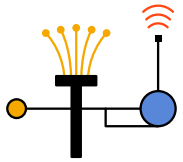
5 Traffic Operations Centers 24x7x365



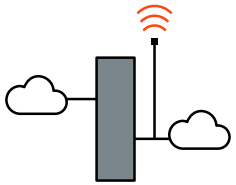
1,475 Closed Circuit TV Cameras



786 Message Signs



6,800 Miles of Fiber/Communication Networks



400+ Servers
400+ Laptops

14,500+ Networked Devices and Growing…

Traffic Operations – Disparate Systems

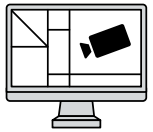


Advanced Traffic Management System

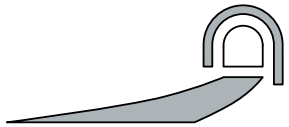


Statewide Traffic Signal System

511 Traveler Information System



Video Distribution System



Tunnel Management System



Device Asset Management System

Integration is currently limited

What is driving this effort and the need for change?

- **Our current systems:**
  - *Developed as ‘stand-alone’ over past 12+ years*
  - *Data exchange/interoperability between systems is limited*
  - *Foundational technologies are evolving rapidly*
  - *Major contracts reaching end-of-life; must re-procure*
  - *Stand-alone systems have served us well, but are not sustainable*

- **A new approach is needed**

Traffic Operations - Program VISTA

Project VISTA Video

Traffic Operations Opportunities

- **A confluence of opportunities**
  - Safety and mobility continue to increase in importance in a future with less growth in highway capacity
  - Traffic Operations is rapidly evolving with significant influences from data analytics, AI and technology innovations, and more tech savvy customers
  - Cybersecurity is an ever-present challenge
  - Key contracts are coming to an end

- **Procurement, Governance, and Delivery Approach**
  - Collaboration between VDOT, VITA, and the Industry

Program VISTA Goals and Outcomes

- **Improve traffic operations**
  - Make Virginia's transportation system safer and more reliable
- **Enhance customer experience**
  - Improve real-time situational awareness
- **Faster, more informed, AI supported decision-making**
  - Re-imagined data management strategies
- **Leverage innovation**
  - Utilize best-in-breed, proven solutions and create a framework that can grow and evolve with technology
- **Implement nimble improvement processes**
  - Acquire systems, tools, and services using just-in-time processes
- **Cybersecurity enables resilient systems and services**
  - Systems will be secure by design - not an add-on

Traffic Operations – Disparate Systems

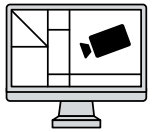


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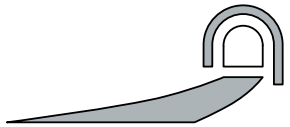


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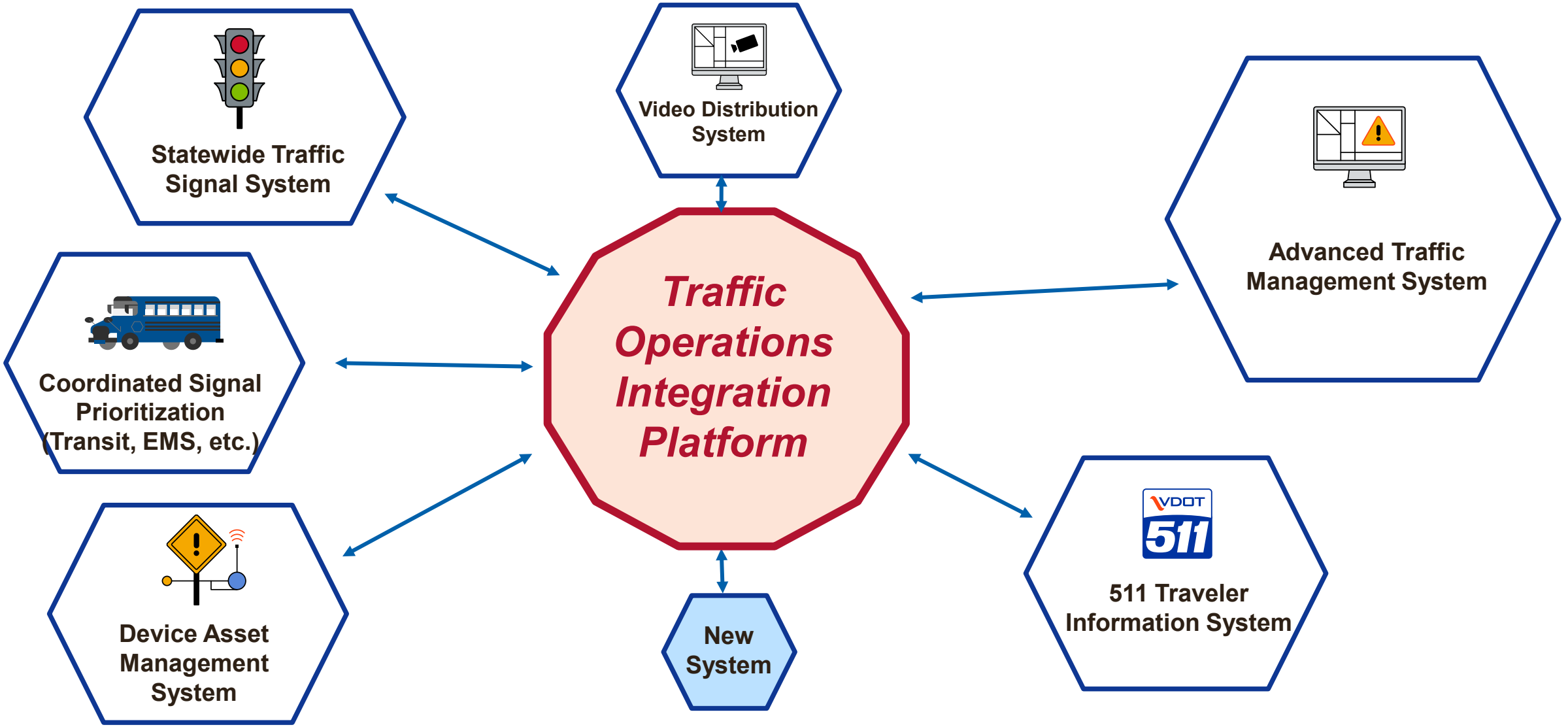
Tunnel Management System



Device Asset Management System

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Program VISTA Federated Model (Illustrative)



What is Program VISTA?

Virginia's Integrated Solution for Traffic-Operations Applications

- More than software, data, fiber-optic cable and IT infrastructure
- A programmatic approach to managing a system of interconnected systems
- Built for continuing evaluation and refinement of our tools and services
- Allows us to influence industry advancements

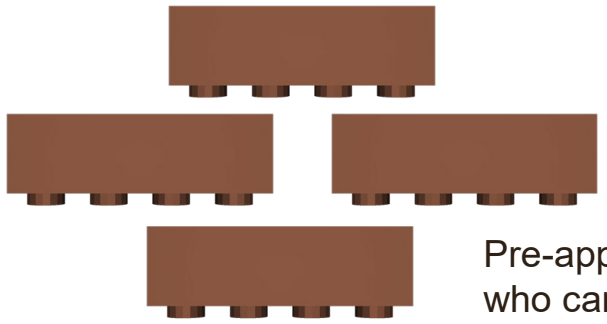
Program VISTA – Procurement Strategy

- **Establish a pool of service partners**
  - Engage both transportation expertise as well as traditional information technology disciplines
  - Adapt to changing market conditions
  - Drive innovation in processes, not just in systems and technology



Clearly defined set of requirements for a function

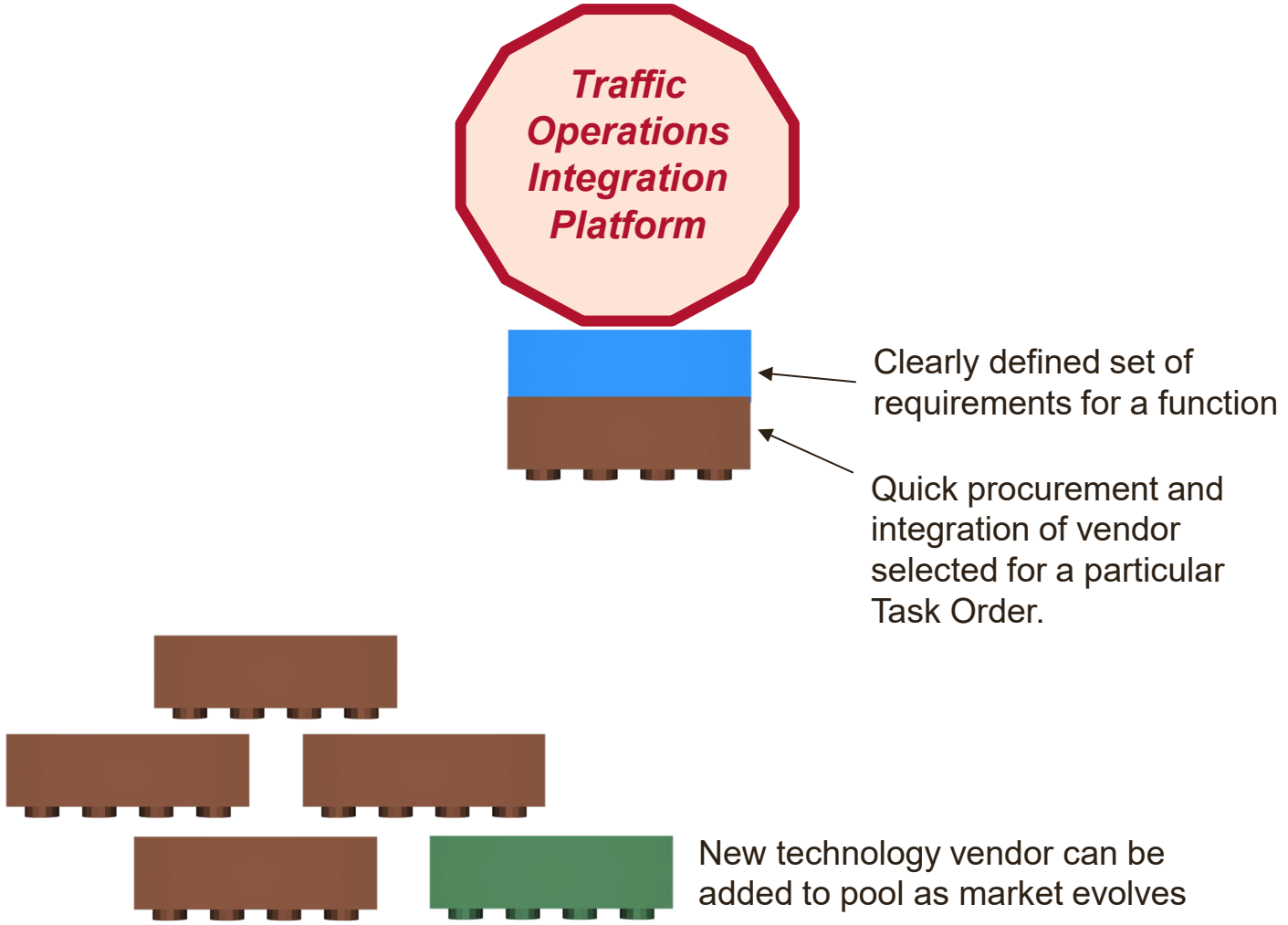
Clearly defined set of requirements for a function



Pre-approved “bench” of vendors who can provide function.

Program VISTA – Procurement Strategy

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Program VISTA – Planning Level Cost Estimation

- **Current systems O&M costs are ~$12M annually**
- **Projected future annual O&M cost ~$18M to $20M**
  - Annual increase includes data management, data integration services, statewide fiber network growth, new system features, etc.
- **Estimated implementation costs ~$60M (spread over 3 years)**

Program VISTA – Schedule of Activities

- Planning Phase: June 2025 – Fall 2026
- Procurement Phase: Winter 2026 – Fall 2027
- Implementation and Transition Phase: Continuous upon contract award
- Operations, Maintenance, Enhancement Phase: 10+ years


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