

TPB MEMBER TECHNOLOGY INVENTORY SURVEY

Overview of Findings

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TPB Technical Committee
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Agenda

- Project Overview
- Survey Results
- Conclusions and Next Steps



Background and Purpose

- Snapshot of current technology use by member agencies in the TPB region
- Build on past surveys – Traffic Signal Timing, Power Back-up, and other Technology Surveys
- Inform future planning activities and feed into ITS architecture update



Technology Survey – Scope of Work

- Survey performed by team from ICF and Mead & Hunt in coordination with members of TPB staff
- Transportation Systems Management & Operations (TSMO) service areas were selected as the focus of the survey
- In addition, information on Emerging Technologies, Communications Networks, and available GIS datasets were collected in survey efforts
- Online form or word document options used for agency responses
- Existing technologies versus planned technologies – 2 year implementation cutoff



TSMO Categories Surveyed

- **Active Traffic and Demand Management** (Adaptive Ramp Metering, Managed Lanes, Variable Tolling, etc.)
- **Traffic Management Centers** (e.g., Arterial Management, Real-time traffic management, Real-time dynamic messaging, etc.)
- **Traffic Signal Operations** (e.g., Adaptive Traffic Signal Control, Traffic Responsive Signal Control, Automated Traffic Signal Performance Measures (ATSPMs), etc.)
- **Integrated Corridor Management** (e.g., Roadway Incident Detection, Incident Response, Support System for Arterial Traffic Signals, etc.)



TSMO Categories Surveyed Continued

- **Traveler Information** (e.g., Advanced Transportation Management Systems (ATMS), website, smart phone applications, etc.)
- **Work Zone Operations** (e.g., Smart Work Zone, Variable Speed Limit, Real-time Work Zone Information, etc.)
- **Emergency Transportation Operations** (e.g., Decision Support Systems, Evacuation Management, etc.)
- **Connected and Automated Vehicle Deployment** (e.g., SPaT Messages Broadcast, BSM Messages Broadcast, CV applications, etc.)
- **Plus Emerging Tech., Comm. Networks, and GIS datasets**



Participating Agencies

District Department of Transportation (DDOT)

Maryland Department of Transportation State Highway Administration (MDOT/SHA)

Virginia Department of Transportation (VDOT)

Arlington County

City of Alexandria

City of Fairfax

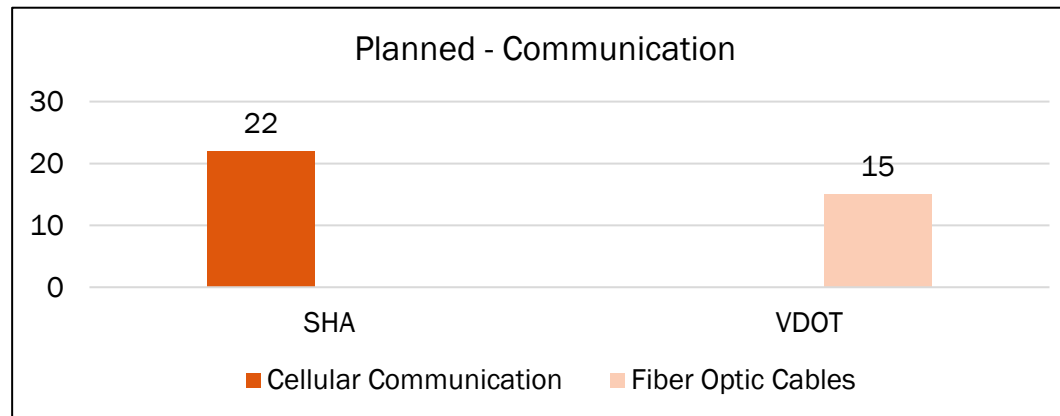
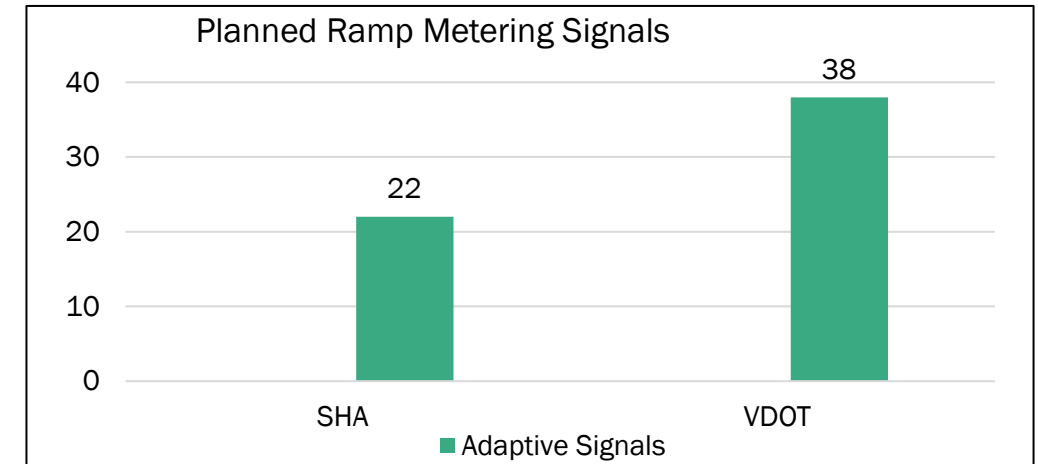
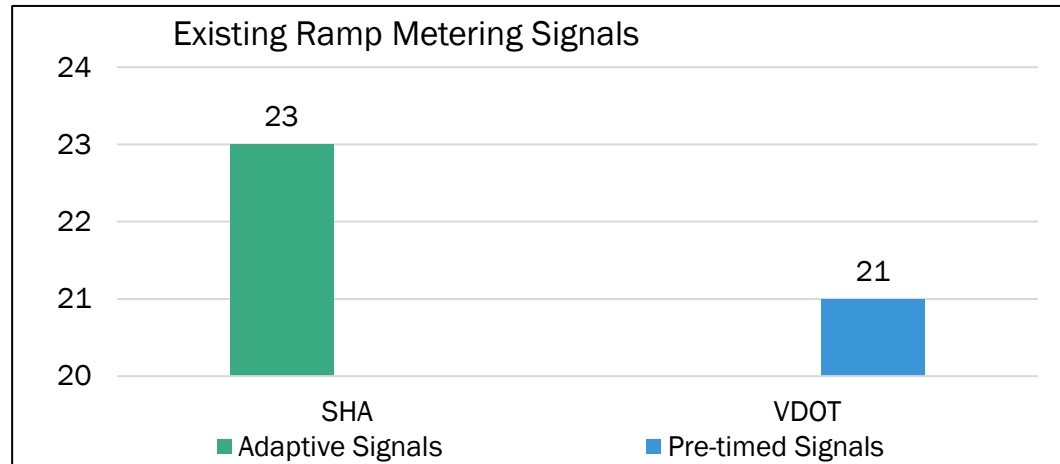
City of Gaithersburg

City of Manassas

Montgomery County Department of Transportation (MCDOT)



Result Highlights - Active Traffic and Demand Management



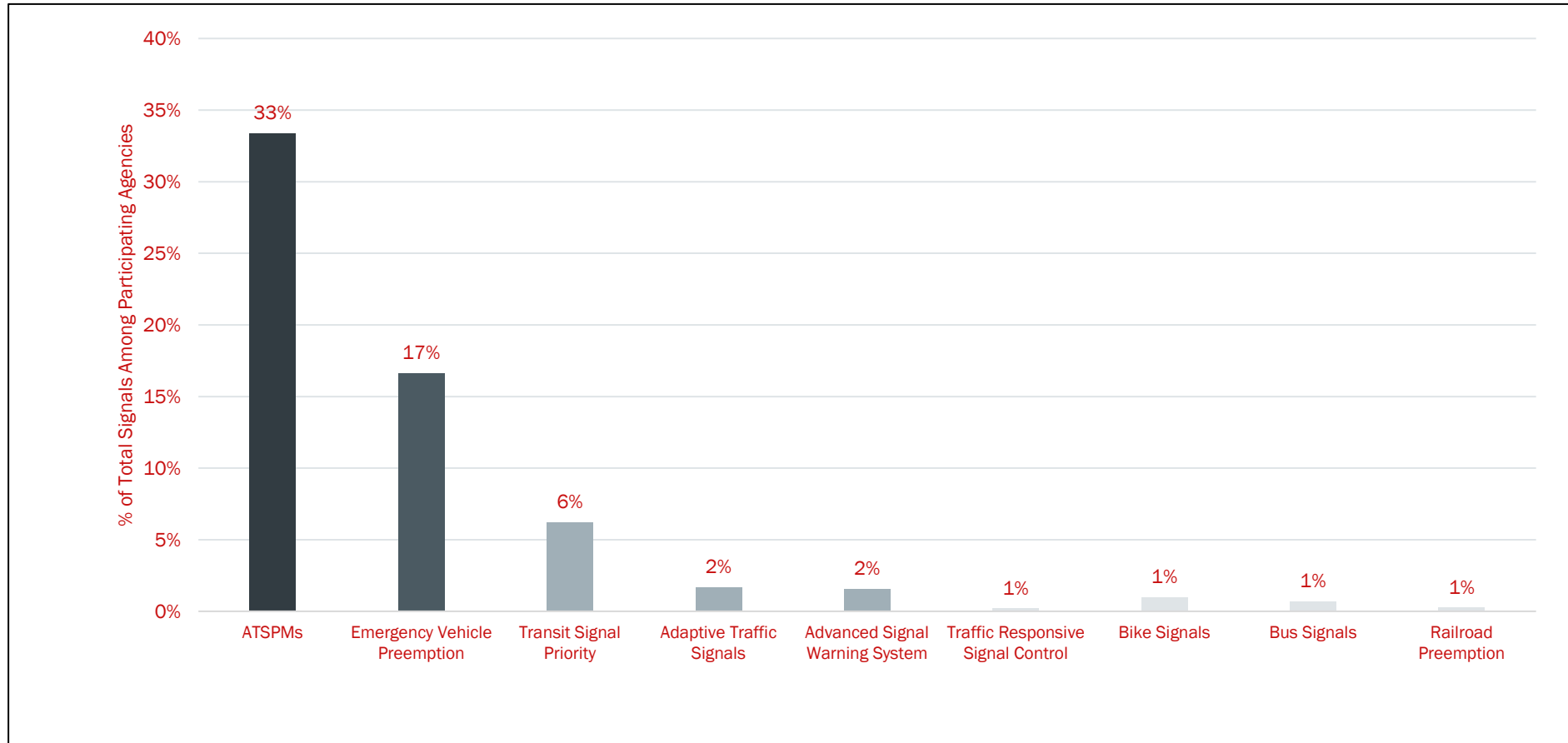
Ramp Metering Detectors:

- **SHA:**
 - 23 Locations with Existing Video Detectors, 23 Locations Existing Radar Detectors
 - 22 Locations Planned Video Detectors; 22 Locations Planned Radar Detectors



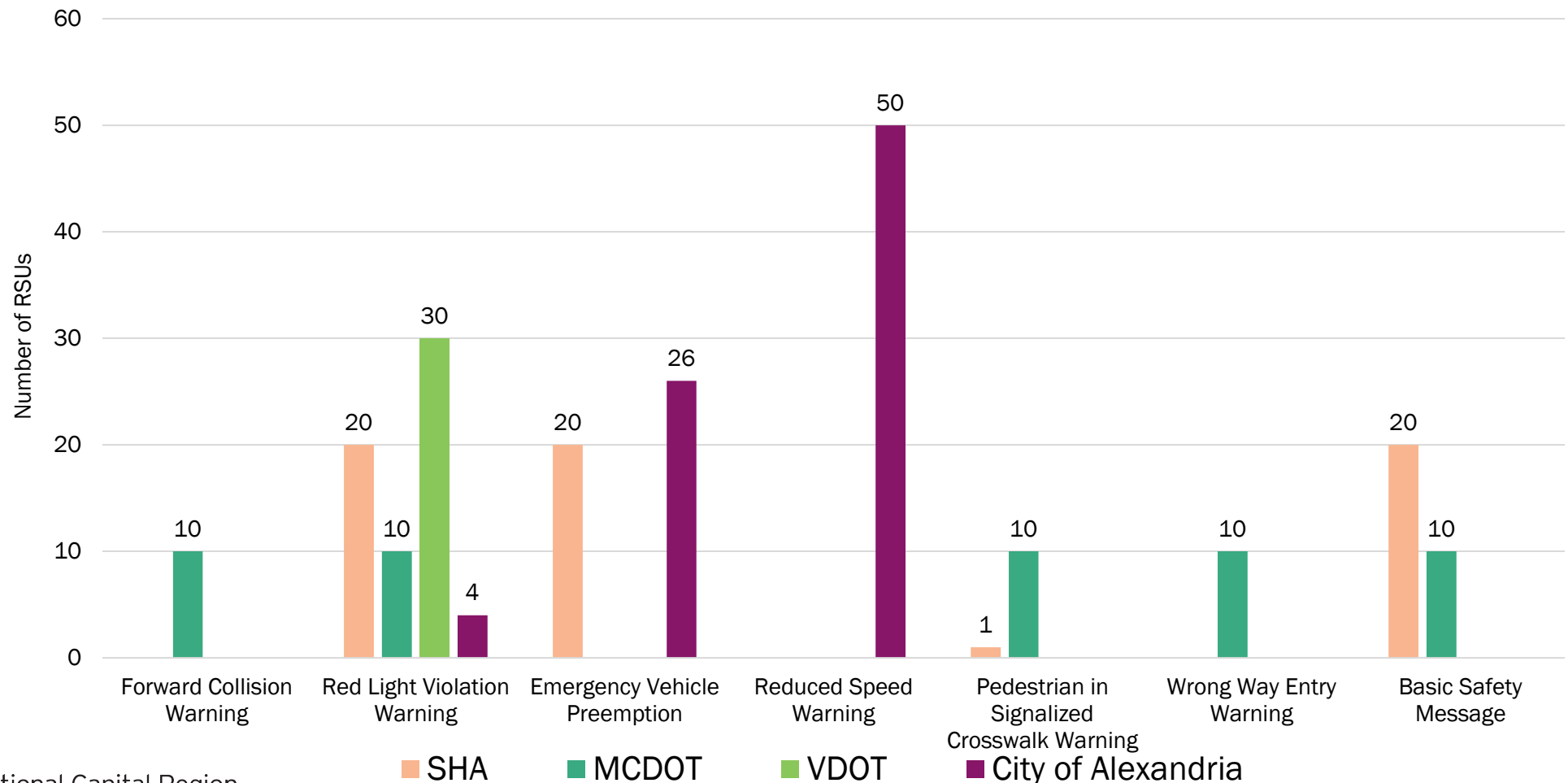
Result Highlights - Traffic Signal Operations

EXISTING TRAFFIC SIGNAL STRATEGIES



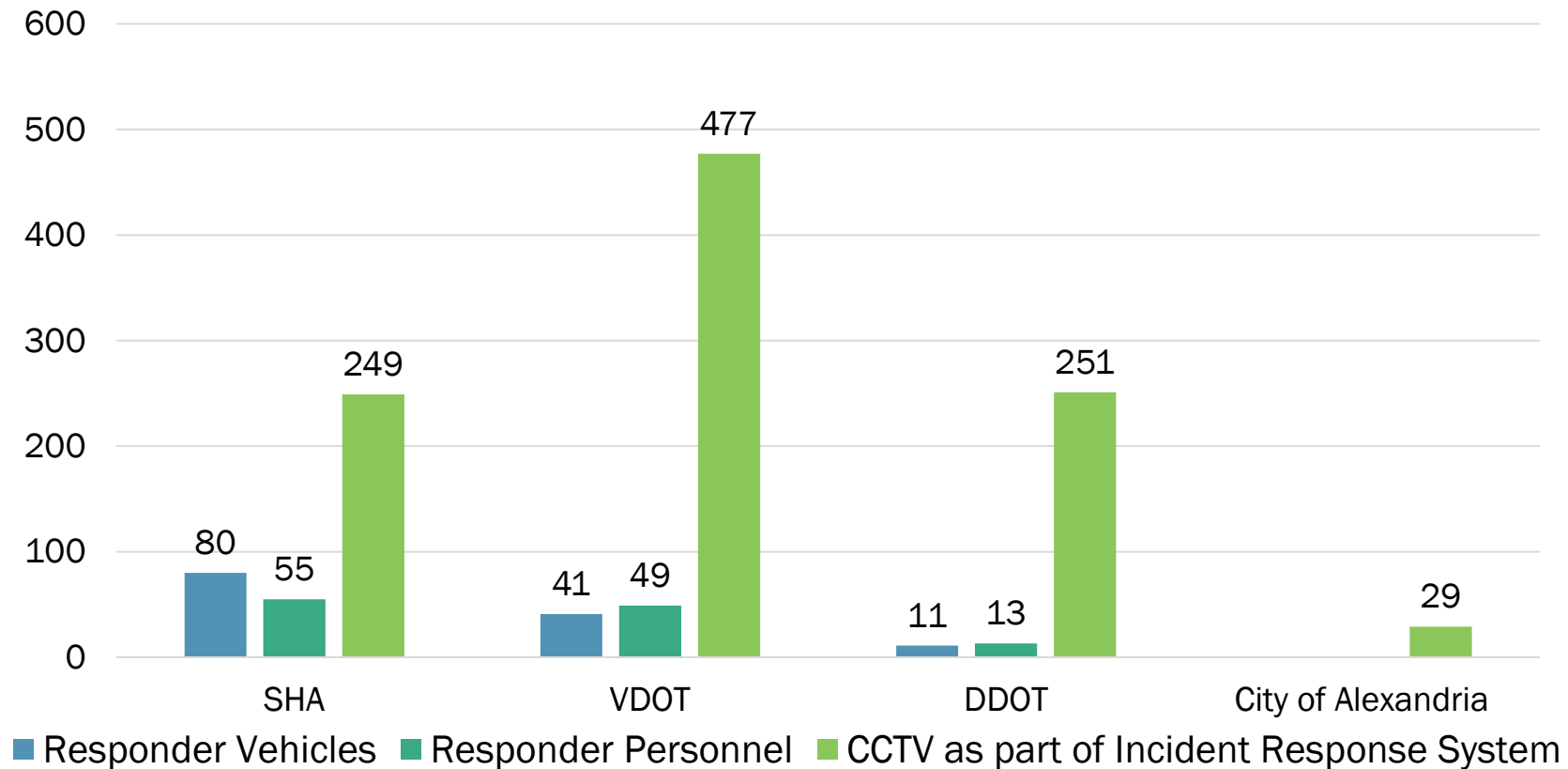
Result Highlights – CAV Deployment

Safety Applications – Existing Roadside Units (RSU)



Result Highlights - Integrated Corridor Management

Incident Response System



Conclusions & Next Steps

- Technology changes at fast pace, use Systems Performance, Operations and Technology Subcommittee (SPOTS) as technology showcase
- Encourage increased member participation in future surveys
- Research making survey a “living document” and resource directory for members



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