**Domestic Scan Proposal Form**

AASHTO is now soliciting proposals for a **Calendar Year 2018 US Domestic Scan Program** (NCHRP Panel 20-68A).

Selected scan topics will be investigated by one of three ways: (type 1) site visits to three to six locations for approximately a two week period or less, by webinar; (type 2) peer exchange; or (type 3) conducted by a group of eight to 12 transportation professionals with expertise in the selected topic area. Proposed topics should meet the following criteria:

* Address an important and timely need for information by transportation agencies;
* Are of interest to a broad national spectrum of people and agencies;
* Are complex and also “hands-on,” meaning they lend themselves particularly well to exploration through on-site visits; and
* Are sufficiently focused that the tour participants are able to investigate and understand key issues in the limited time available on the tour.

Before submitting your proposal it is highly recommended that you read [**What Makes a Good Scan Topic Proposal**](http://www.domesticscan.org/what-makes-a-good-scan-topic-proposal)[**http://www.domesticscan.org/what-makes-a-good-scan-topic-proposal**](http://www.domesticscan.org/what-makes-a-good-scan-topic-proposal)

This form is designed to collect the full length of your proposal. Sections requiring essays have unlimited space for you to use. Contact information has some limited text. ***Use your TAB🡪 key to advance to the area where you need to complete information.***

**Proposals should be returned no later than SEPTEMBER 29, 2017.**

**IMPORTANT NOTE on How to save your document**: ***LastNameFirst Initial, underscore\_Organization Acronym \_CY2017.***

***Saved Document Name Example: VitaleM\_AASHTO\_CY2017***

***If you have more than one, add a number after first initial: VitaleM1\_AASHTO\_CY2017***

**Domestic Scan Proposal Contact Information**

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| --- | --- | --- | --- |
| Name | Shailen Bhatt | Address |  |
| Title | Executive Director | E-mail | shailen.bhatt@state.co.us |
| Member Department | Colorado DOT | Telephone number | 303-757-9201 |
| AASHTO Committee | Transportation Systems Operations | Date of submission | 9/28/2017 |

**Title of Proposed Scan****:** Institutionalizing Collaboration And Cooperation In Maintenance, Operations, And Traffic Engineering To Support The Transition To New And Emerging Transportation Technologies

**Problem Statement** (What topic is to be examined? What drives the need for the scan? Why now?)

The introduction of new transportation technology solutions, including such things as public and private deployments of Connected and Automated Vehicles (CAV) and improvements in real-time road and traffic condition monitoring has begun to change many aspects of the transportation industry. For example, state and local Departments of Transportation (DOTs) are beginning to see increasing demands for geospatial mapping, data and infrastructure communications systems, but are also beginning to recognize a host of benefits from increased data availability that only promises to continue increasing as CAVs are introduced. The introduction of these and other solutions is occurring simultaneous to a transition towards a Transportation Systems Management and Operations (TSMO) centric approach and these two together are creating opportunities to re-evaluate many aspects of our industry. Three key areas likely to change during this transition are maintenance, operations, and traffic engineering. As state and local DOTs transition into a TSMO centric approach and concurrently adapt to the challenges and benefits offered by new technologies such as CAV solutions, each DOT will continue to perform maintenance, operations, and traffic engineering, however the interdependence of the three will create an increased need for collaboration and cooperation between the three areas.

Weather events are a good example of situations where maintenance, operations, and traffic engineering all play critical roles in moving traffic safely and efficiently while improving road conditions as quick as possible; however, their activities are not always as coordinated as they could be. Looking ahead to advances in the coming years in areas such as CAV, traffic, and road condition forecasting and reporting, it will be more imperative than ever that each DOT institutionalize the collaboration needed and break down 'silos' between maintenance, operations, and traffic engineering. Furthermore, with the enormity of real-time data now available from 3rd party data providers and data collection on DOT vehicles (and the future data expected from CAVs) it is more important than ever for DOTs to have clear plans for how they will use, manage, secure, and benefit from this data, not just within ITS groups but throughout the entire agency.

There are examples where DOTs have accomplished inter-collaboration among and between maintenance, operations, and traffic engineering, benefiting greatly from recent advances in data availability or technology solutions. These examples include:

- Integrated Corridor Management (ICM);

- Traffic Incident Management (TIM); and

- Road Weather Management (RWM).

While the technologies employed in these solutions are often the highlight of discussions or information sharing, the most critical aspect currently is the collaboration that occurs between these and other groups within one DOT. There is a need to do more than just identify these collaboration success stories. Representatives of maintenance, operations, and traffic engineering need to engage with each other to discuss how such collaboration can be institutionalized within a DOT, what barriers exist, and how to overcome the barriers. For this level of detail discussion, conference or workshop presentations/panels do not allow the detailed discussion to occur between these groups, and for this reason a scanning tour is proposed.

**Scan Scope** (What specific subject areas are to be examined? Which cities and states might be visited? Which agencies/organizations (including specific departments or types of staff if applicable)?

Maintenance, Operations, and Traffic Engineering are typically represented by three different committee structures within AASHTO. This scan proposes to cross committee boundaries by involving one member from each of these groups (three individuals) from each of the four AASHTO regions for a total of 12 members (four from operations, four from maintenance, and four from traffic engineering). The geographic and focus area spread will help ensure the scan acknowledges the existing inderdendence among maintenance, operations, and traffic engineering, and allows this group to work as a team to have the detailed discussions about institutionalizing collaboration in a TSMO centric environment.

The subject area of the scan is to focus on instituational arrangements within the subject DOTs that enable collaboration between maintenance, operations, and traffic engineering. We anticipate the emphasis will be on ICM, TIM, and RWM as these are areas with proven track records for internal collaboration, however the focus will be on extracting institutional lessons learned and expanding them across the TSMO spectrum with a perspecitve on the evolving focus on CAV and increased data. The focus will not be on the technology deployments, nor will the focus be on policy and procedure documents. Rather, by exposing this panel of 12 individuals to detailed examples, and allowing the panel the time together to understand what was successful and why (and conversely what was not successful and why not), they will gain a deeper understanding of what collaboration is possible, and what factors helped the collaboration occur. Documenting this subject will then be useful to individual DOTs as they consider future staffing structures, internal policies, and training.

The structure of the scan is proposed to initially be a virtual scan where members of the scan would experience material presented from 20-25 states describing how they have encouraged collaboration within their organization, highlighting success stories from the perspective of institutional arrangements and areas of active cooperation. Once the initial webinar scan is completed, the scan team will select eight sights for in-person visits.

Ultimately, the scan hopes to capture examples where true collaboration and cooperation exist, recognizing that they might be isolated to topic specific cooperation (e.g. ICM, TIM, RWM, or other specific areas), and to extrapolate concepts to be share across the TSMO spectrum.

**Anticipated Scan Results** (What key information is to be gained? What information is to be shared after the scan? Who would the audience be for this information?)

The scan will identify best practices where DOTs have been successful in accomplishing cooperation and collaboration between maintenance, operations, and traffic engineering groups, especially in regards to TSMO and CAV activities, and describe opportunties to expand these practices to other TSMO areas.

Documentation of the results of the scan will go beyond simply describing the best practices to also describing how these success stories can translate to other TSMO and CAV areas.

**Benefits Expected** (Including potential impacts on current technology or procedures)

Successfully completing this scan will provide the transportation industry with best practice examples for how maintenance, operations, and traffic engineering can work more closely regardless of the administrative organizational structure. It is estimated that possibly 80% of the roles of each group will always be performed independently from the other groups. However, situations caused by extraordinary circumstances occur roughly 20% of the time would benefit greatly through this increased collaboration. Finally, the increased cooperation and coordination will help DOTs prepare for the crosscutting activities that will become regular activities as more and more CAV solutions are deployed.