READY RESULTS
Sharing Innovative Practices from State DOTs

NCHRP
NATIONAL
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HIGHWAY
RESEARCH
PROGRAM

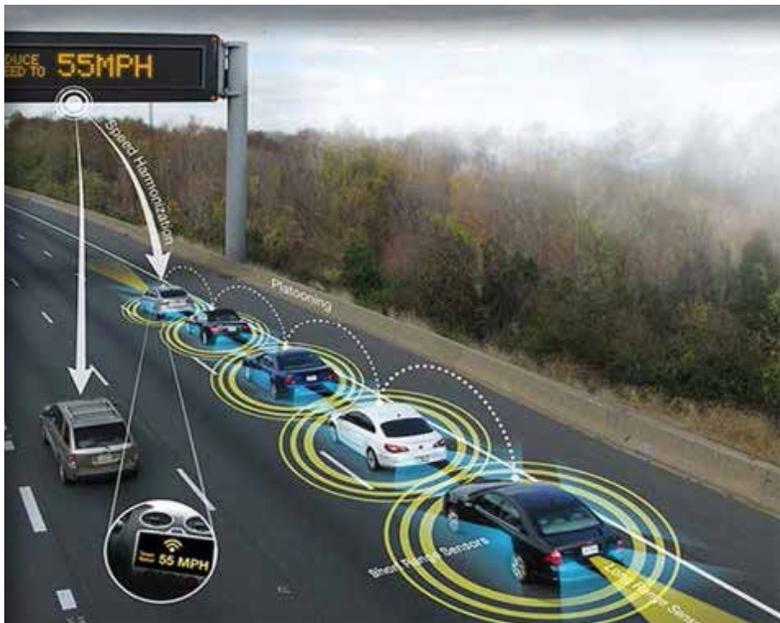**FOCUS ON:** NCHRP U.S. Domestic Scan 18-02

October 2020

New Technologies Drive New Management Strategies

Image courtesy of U.S. DOT Intelligent Transportation Systems Joint Program Office

As connected and autonomous vehicles become more common, updated organizational and management strategies can help DOTs meet the technology's requirements and realize its benefits.

SCAN FOCUS

As state Departments of Transportation (DOTs) implement rapidly evolving technologies, many agencies have found that their organizational and management strategies need to be modernized as well. By studying the experiences of DOTs that are leading the way in cutting-edge technology, Domestic Scan 18-02 sought to identify the structures and practices that have helped them adapt effectively.

PERSON-TO-PERSON RESEARCH

The 12-member scan team hosted a knowledge exchange over several days in August 2019, inviting six state DOTs widely regarded as technology leaders to discuss their experiences. The forum focused on six key issues:

- Leadership and culture
- People
- Organizational structures
- Business processes
- Performance management
- Collaboration

NEXT STEPS
Put It into Practice

REVIEW STATE INSIGHTS

Identify organizational strategies used by the six participating states that might work for your agency.

GET CURRENT INFORMATION

Attend upcoming TRB, AASHTO and ITS America webinars (see domesticscan.org/18-02), and contact scan participants for project updates.

READ MORE

The full report on Scan 18-02 is available at domesticscan.org/18-02.

SUGGEST FUTURE SCANS

What topic do you have for an NCHRP Domestic Scan?

See web.transportation.org/nchrp/20-68A.

PRELIMINARY FINDINGS

While specific experiences varied from state to state, the scan team noted common themes across all of the presenting agencies. For instance, as technology evolves, the demand for employees with the necessary skills to use and understand it increases. Therefore, the strategies that worked in the past to attract and retain workers may need to be reevaluated in order to accommodate the changing workforce. The scan team members compiled their findings into a list of recommendations that address each of the scan's six topics.

Image courtesy of Washington State DOT

Technological advances will lead to an increase in data collected in the future. DOTs must develop plans for how they will use, store and manage this data.

PUTTING IT TO WORK

The scan identified several effective approaches for agencies to consider as they implement new technologies.

1. Establish and maintain a culture of innovation and collaboration; this starts with agency leadership.
2. Use innovative techniques to recruit and retain technologically proficient employees.
3. Employ organizational structures that are flexible, cut across silos, engage field staff and encourage collaboration.
4. Consider a three-tiered planning approach—strategic, programmatic and tactical—in implementing business process improvements.

SHARING THE RESULTS

To help disseminate the findings of this scan, team members will continue to present their findings at regional and national meetings and through webinars. In addition, Scan Chair Michael Lewis provided a "Quick Take" video discussing the project and the scan team's conclusions at domesticscan.org/18-02.

ABOUT THE PROGRAM: The NCHRP U.S. Domestic Scan Program (NCHRP Project 20-68, domesticscan.org) recognizes the value of firsthand sharing of new technologies and practices. Launched in 2006, the program typically sponsors two or three scans per year, putting state and federal DOT practitioners who need solutions in touch with innovative peers around the country, speeding the transfer of technology and know-how. During the intense experience of the scan (typically one to two weeks), participants see how a new technology or practice works in the real world. They also develop close professional relationships that remain readily available to them years later.

SCAN PARTICIPANTS

Image courtesy of Federal Highway Administration

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