

Implementation Examples from the U.S. Domestic Scan Program

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NCHRP project 20-68B is an ongoing effort to measure and document successful technology transfer and implementation activities resulting from each tour in the U.S. Domestic Scan program (domesticscan.org). The December 2011 report *Accelerating the Rate of Innovation Among State DOTs—Tracing Domestic Scan Impacts* details a number of successful implementation activities for each of the first six completed scans:

- Scan 07-01. Best Practices in Project Delivery Management
- Scan 07-02. Best Practices in Accelerated Construction Techniques
- Scan 07-03. Best Practices in Winter Maintenance
- Scan 07-05. Best Practices in Bridge Management Decision-Making
- Scan 08-01. Best Practices in Managing State Transportation Improvement Programs (STIPs), Transportation Improvement Programs (TIPs), and Metropolitan Transportation Plans in Response to Fiscal Constraints
- Scan 08-03. Best Practices in Addressing National Pollutant Discharge Elimination System (NPDES) and Other Water Quality Issues in Highway System Management

Each chapter of the report includes numerous and diverse examples of successful implementation efforts as cited by the scan tour participants. Highlighted examples appear in the report's Executive Summary and are reproduced below. These examples may prove useful for participants of future scan tours as they consider the broad range of opportunities for implementing new technologies and practices.

From the Executive Summary of *Accelerating the Rate of Innovation Among State DOTs—Tracing Domestic Scan Impacts*, (<http://www.domesticscan.org/wp-content/uploads/NCHRP20-68B01-Final-Report-December-2011.pdf>):

- **States implemented technologies learned on the scan tour.** These typically involve transfer of practice from one state to another. A sample from each of the six scans in the report follows:
 - “As the federal government is moving toward electronic bidding for construction projects, I used information learned on the scan tour to help us move in that direction.” (Scan 07-01, Project Delivery Management)
 - “[Our agency] has created an innovative contracting manual to assist decision-makers in appropriate project acceleration techniques.” (Scan 07-02, Accelerated Construction.)
 - “Based on information brought back from the scan, our agency has piloted four different initiatives, acquired three different types of equipment, and are in the process of changing three or four policies or procedures with regard to snow removal practices and material applications.” (Scan 07-03, Winter Maintenance)

- “We enhanced our bridge performance measures as a result of this scan.” (Scan 07-05, Bridge Management)
- “Our live STIP ... is similar to the program the federal government piloted in New York. This tool automates the STIP development and communication process and allows our managers both to have daily access to data and to develop the annual report required by federal law.” (08-01, STIPs and TIPs)
- “We are implementing a stormwater retrofit program that is using the asset management efforts from Maryland and North Carolina DOT.” (08-03, Addressing NPDES)
- **Scans had an impact on federal policy and practices.** These additional examples illustrate how scans had an impact at the federal level.
 - A federal representative who participated in Scan 07-01 (Project Delivery Management) noted that “many of the recommendations and options in Every Day Counts (EDC), the national initiative to address accelerated project delivery, grew out of and were supported by the findings of this scan. What states could and were doing and what my peers considered best practices for project delivery had significant impact on EDC.”

Similarly, a participant of Scan 07-02 (Accelerated Construction) expects that the scan will support more widespread implementation of practices promoted by EDC, such as the use of prefabricated bridge elements and systems or the Construction Manager/General Contractor (CM/GC) alternative project delivery method.
 - In another example, a participant of Scan 08-03 (Addressing NPDES) stated, “An important aspect of this tour was the inclusion of EPA, the agency that regulates us, as a scan participant. I believe EPA’s participation led to a separate transportation permitting section in the national stormwater regulations now in development, to be finalized in 2012.”
- **Among these implementation successes, additional standout outcomes are noteworthy.**
 - Scan 08-03 (Addressing NPDES) led to the creation of a national working group on stormwater policy.
 - Scan 07-05 (Bridge Management) was the basis of a follow-up NCHRP research project to develop a handbook and software for maintenance and preservation of bridges.
 - Scan findings were incorporated into National Highway Institute courses for Scan 07-05 (Bridge Management) and Scan 08-03 (Addressing NPDES).
- **The success of implementation efforts depended in part on each individual scan and the nature of the scan topic.** For example, certain practices observed in Scan 07-01 (Project Delivery Management) could not be implemented in other states due to state legislative rules and limitations. By contrast, more technology-based scans, such as Scan 07-03 (Winter Maintenance), included practices that could be explored and tried more readily.

This is not a strict rule, however. Scan 08-03 (Addressing NPDES) was concerned with regulatory and planning issues, yet the scan led to implementation efforts among participants of a number of the technologies and practices highlighted in the scan.