Customer-driven highway maintenance

If a heavy snowstorm makes a highway impassable for very long, state DOTs will hear about it from motorists. And when winter gives way to spring potholes, drivers again let highway agencies know their displeasure.

“A Report 511 was a springboard for defining common highway maintenance performance measures that can be used by multiple agencies.”

Maintenance activities like snow and ice control and pavement resurfacing can significantly affect customers’ satisfaction with a state DOT. Knowing this, some states have begun emphasizing driver satisfaction by benchmarking their performance on maintenance activities against other state DOTs—comparing progress in key areas that matter to the driving public.

To help states implement this ambitious strategy, NCHRP initiated Project 14-13, which in 2004 produced Report 511: Guide for Customer-Driven Benchmarking of Maintenance Activities. Produced by consulting firm Booz Allen Hamilton, the guide outlines the key concepts of benchmarking, including the use of performance measures and selection of benchmarking partners, and provides a step-by-step guide to implementation.

Getting agencies to agree on common performance measures is a necessary first step in the benchmarking process, says Leonard Schultz, assistant chief of the highway maintenance division at Maryland State Highway Administration, who chaired the project panel.

“Report 511 was among the first publications to document the concept of performance frontiers—graphical representations of the best practices that can be achieved using different levels of resources.”

Performance across the state improved dramatically, and the results we’re measuring are observable by the public.

“Using performance frontiers makes a lot of sense from a DOT standpoint,” Evans says. “In Ohio we have 88 counties, all different sizes with different mixes of resources. If we ask ourselves who’s doing the best job, it’s not necessarily the county that gets the most work done, it’s the one that gets the most work done with the resources that it has.”

Project 14-13 also produced a primer geared at promoting customer-driven benchmarking to senior executives who have the authority to implement a benchmarking program.

“As more states adopt the same measures, the usefulness of Report 511 for comparing performance and unearthing best practices will steadily increase,” says principal investigator Bill Hyman. “I personally think this report will be enduring and consulted for a long time in the future.”


Resurfacing activities can be benchmarked across counties or states.