CASE STUDY IN SUSTAINABILITY:
Minnesota DOT's Sustainability Initiative and Use of FHWA's INVEST Tool

Overview

Minnesota Department of Transportation's (MnDOT's) Sustainability Initiative was established in 2010 to create a broad focus on both internal and external sustainability for the agency, expanding the concept of sustainability beyond environmental issues to social and economic ones, or, as MnDOT's sustainability coordinator terms it, "from light bulbs to planning to pavement".

Initial objectives for the Sustainability Initiative included gaining an understanding of what MnDOT was already doing well and establishing an agency-wide baseline. MnDOT decided to approach the project by using what was then the beta version of the Federal Highway Administration (FHWA)'s Infrastructure Voluntary Evaluation Sustainability (INVEST) Tool. With the aid of a consulting agency, MnDOT undertook a "stem-to-stern" self-evaluation in April-June of 2011, becoming the first State DOT to do so.

Approach

MnDOT hired a consulting firm to review documents, interview MnDOT staff, and assign scores to MnDOT policies, programs, and projects for the INVEST criteria in the System Planning, Project Development, and Transportation System Management and Operations and Maintenance categories of that tool. Using an external consultant allowed the project to be done quickly and, by having a single person do the scoring in all categories, helped ensure consistency in scoring. To help MnDOT staff become actively engaged in the process, over 60 key MnDOT staff members were asked to review the tool and identify relevant documentation in their area of expertise during this three-month period.

MnDOT chose to combine sections of the beta version, released in October 2010, and the pilot version, released in April of 2011, for its self-evaluation. In some cases, the scoring criteria were also adapted to capture areas where agency "intent" was clearly aligned with the criteria, but formal documentation may have been missing.

Outcomes and Next Steps

The agency-wide scale of the self-evaluation process meant that it produced a lot of information. While the immediate product of the self-evaluation was a 130-page project report, available on MnDOT's website, the real work is just getting underway. Due in part to MnDOT's strong history of multimodal planning, scores in the System Planning category were relatively high. The self-evaluation process identified opportunities in other areas, which will be the focus for follow-on activity.

The consultant's assessment found that, although MnDOT scored fairly well overall, there were some opportunities for improvement, and in some cases, scores were lowered by a lack of documentation (Figure 1). MnDOT's Sustainability Coordinator is using the findings of the self-evaluation in a series of meetings with key management groups within the agency to identify action items and next steps. She is also developing training materials on the INVEST tool and the self-evaluation process. One early action item identified is

Figure 1: Minnesota's Trunk Highway (TH) 95. Pavement preservation on TH 95 was one of the projects selected for review in the INVEST-based self-analysis. The self-evaluation emphasized the importance of good documentation for this type of project. Photo: David Gonzalez, MnDOT

the implementation of "green sheets" to highlight environmental commitments and better link the planning and project development processes (see sidebar).

Lessons Learned

Think through what the criteria mean in context. MnDOT notes that it is important for States to think about what the scores for a particular project or category mean for the agency, and whether the criteria make sense in context for each project, rather than focusing on achieving a high score. Seeing a "zero" score can be unsettling for participants. In some cases documentation of an existing process may be missing, or in other cases, the existing process may not score well, but is working well for the agency. As MnDOT's focus was to gain a better understanding of existing processes and to improve the kinds of work that is done routinely throughout the department, MnDOT chose typical projects for the self-evaluation, instead of picking the "star" projects (see Figures 1 and 2). In the case of one particularly low-scoring rural project, MnDOT is conducting a follow-up analysis to understand the scoring and to determine if the criteria are appropriate for rural projects.

Figure 2: TH 75, another project selected for the analysis, scored highly for bicycle access, construction waste management, and the use of context-sensitive solutions in the planning phase. Photo: Dana Hanson, MnDOT

Make the tool work for your agency's needs. In the Project Development category, INVEST includes both a Basic and an Extended Scorecard. The Basic Scorecard includes 20 criteria and is intended for smaller projects; the Extended Scorecard includes 30 criteria and is intended for new construction and major reconstruction projects. MnDOT chose to create a modified version of the Basic Criteria, adding three criteria from the Extended Criteria which the agency wanted to use in examining smaller projects, as well: PD-23 Reduced Energy and Emissions in Pavement Materials, PD-24 Contractor Warranty, and PD-30 Construction Waste Management.

Ground the sustainability conversation by using relevant, real-world examples. In addition to creating the sustainability baseline and identifying areas for improvement, MnDOT chose to use the self-evaluation process as a learning tool for staff to begin an ongoing conversation about sustainability. Sustainability touches every area of an organization and it can be difficult for staff to apply sustainability concepts to their daily work. MnDOT found that one benefit of going through the self-evaluation process was that it helped staff understand what sustainability means for them in the context of their jobs. Previously, when people heard the term "sustainability", it sounded like just one more thing to do when they were already busy. Going through the evaluation process and discussing performance on specific criteria grounded the conversation in concrete actions and made it seem less intimidating.

Sidebar: Green Sheets

An early result of the self-evaluation process was a renewed focus on a process improvement which has long been discussed at MnDOT: the introduction of "green sheets" as a way to highlight and communicate environmental commitments as projects move from environmental review through construction. Green sheets may be as simple as bulleted lists of commitments and references, to be attached to the front of construction documents and plan sets. While the technique has been used on high profile projects in the past, the self-evaluation identified implementation of green sheets as a standard practice as a way to formalize the lines of communication and help to ensure that environmental commitments are honored. A new process to establish the use of green sheets is under development.

For more information:
http://www.dot.state.mn.us/information/talk.html