

The Invest Tool in Practice

INVEST is a free, web-based, collection of best practices designed to help transportation agencies integrate sustainability into their programs and projects. Developed by FHWA, INVEST is voluntary and confidential. DOTs, MPOs and other agencies are using it to find ways to make their work more economically, socially and environmentally sustainable.

Users can employ one or more of INVEST's modules:

1. System Planning (SP)
2. Project Development (PD)
3. Operations & Maintenance (OM)

Here are a few examples of agencies that have used the current version of INVEST or previous versions.

► Illinois Tollway Authority

MODULE USED: SP, PD, OM

WHY USED: Minimize the environmental impacts of new roadway construction by reducing, recycling, and reusing materials; reduce energy costs; and measure sustainability of these best practices.

HOW USED: Complete a programmatic retrospective evaluation in 18 projects in order to set baselines for future work and identify potential barriers to implementing sustainable practices. Programmatically implement INVEST throughout the Illinois Tollway's 15-year, \$12 billion Move Illinois program. Continue to use INVEST in order to monitor progress going forward.

OUTCOMES: Illinois Tollway intends to use INVEST proactively and during the entire cycle of planning, development, and operations. They will be using it in a program-wide analysis to develop target scores, score projects during several stages of design, and then again after substantial completion. Each year they will look at the previous year's scores and evaluate areas that need change to improve overall sustainability. INVEST will allow them to identify institutional and other barriers that may be preventing implementation of sustainable practices. It also will be used to consistently report sustainability performance to stakeholders.



► Ohio DOT

MODULE USED: PD

WHY USED: The reconstruction of the Cleveland Innerbelt Bridge/I-90, also known as the George V. Voinovich Bridge, is the largest project in ODOT history. The high priority bridge replacement project involves a coast-to-coast interstate highway and affects a historic district and a high traffic sports complex. As such, ODOT saw achieving sustainability goals as critical, and targeted major savings in fuel, steel, water, and waste.

HOW USED: ODOT used INVEST to score the first phase, the westbound bridge, to see if the project was meeting its goals. They found the process so valuable, that for the second phase of the project, the eastbound bridge, ODOT required in its request for proposals (RFP) that contractors use INVEST to develop a sustainability plan and commit to achieving a certain number of points.

OUTCOMES: ODOT validated substantial savings in water, fuel, steel, and waste during Phase 1 and found INVEST to be a useful tool to assure performance from contractors in Phase 2. By including a requirement on INVEST in the RFP for the design-build contract, ODOT provided a strong incentive for bidders to incorporate sustainability practices in their proposals while keeping costs competitive. The winning bidder committed to achieve a Platinum INVEST rating and bid below the ODOT official engineering estimate. An eco-charrette with the winning contractor, ODOT, and FHWA allowed all parties to further improve the project and increase the INVEST score.

▶ Minnesota DOT

MODULE USED: SP, PD, OM

WHY USED: MnDOT's INVEST project had three objectives: 1) Better understand and document its current practices, 2) identify gaps and high-value opportunities, and 3) establish priorities and next steps to further increase sustainability. In addition, the agency was interested in helping shape the national discussion around sustainability and transportation.

HOW USED: MnDOT hired a consultant to use INVEST to intensively investigate agency practices and policy and shape future improvements.

OUTCOMES: MnDOT developed a sustainability plan that will provide policy direction and serve as a catalyst for increasing sustainability awareness and engagement throughout the planning, project delivery, and maintenance/operations phases of work, including performance measures to document progress towards sustainability goals. The report is available at <http://www.dot.state.mn.us/sustainability/>.



▶ Utah DOT

MODULE USED: OM

WHY USED: UDOT wanted to preserve infrastructure, optimize mobility, improve safety, and strengthen the economy. Budget pressures were driving need for more sustainable practices.

HOW USED: To identify cost-effective ways to promote sustainability in operations and maintenance, such as improving data on pavement conditions.

OUTCOMES: After using the pilot INVEST tool during winter 2011-12, UDOT drew up a list of recommended actions to improve sustainability throughout operations and maintenance. Each recommended action was rated by importance, benefits, relationship to sustainability, effort/cost, and ease of implementation.

▶ North Central Texas Council of Governments

MODULE USED: SP

WHY USED: Evaluate the update of the Dallas-Fort Worth Metropolitan Transportation Plan. The MPO faced projected population growth from 6.5 million to 9.8 million between 2010 and 2035 while facing a budget shortfall of \$45 billion.

HOW USED: Evaluate the Long Range Transportation Plan to assure that all possible sustainability opportunities had been covered.

OUTCOMES: INVEST showed agencies had done a good job on operations and maintenance efforts that extend the useful life of infrastructure. It also validated the MPO's effort to manage travel demand by improving the link between transportation and land use. Through use of the tool, NCTCOG found that it needed to improve the connection between asset management and planning, and to address infrastructure resiliency. NCTCOG then used sustainability best practices from INVEST to improve in these areas and incorporate changes in the next iteration of its transportation plan.

To try the INVEST tool for yourself, visit www.sustainablehighways.org

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