

Advancing Asset Management with Technology

According to the Federal Highway Administration Office of Operations, transportation asset management is used to manage the transportation infrastructure with improved decision making for resource allocation. Current research continues to suggest that transportation agencies can benefit from including ITS assets in their asset management planning.¹

This document provides examples of selected ITS technologies that help agencies in developing cost-effective asset management approaches. The featured benefits, costs, and lessons learned are based on ITS project evaluations contained in the ITS Databases at: www.itsknowledgeresources.its.dot.gov. **Click on each example to learn more.**

Bridge Inspection in Minnesota

The use of Unmanned Aerial Systems (UAVs) for bridge inspections can create an overall average cost savings of 40 percent without a reduction in inspection quality.



Internet-of-Things (IoT) in Missouri

An asset monitoring system in Missouri designed with 65 sensors based on IoT to monitor seven assets (i.e., bridges, pavement, retaining walls, signs, etc.) enabled remote data collection and had a projected system hardware cost of \$100,000.



Wireless Technology in Vermont

Emerging mobile systems utilizing wireless technology, such as passive radio frequency identification (RFID) tags attached to traffic signs and guard rails, were tested in Vermont. The system allowed automation of RFID interrogation with minimum human intervention and has an estimated minimum hardware cost of \$4,860 per 1,000 signs.



Data and Information Integration in Oregon

A statewide asset management system in Oregon that integrates two data-driven tools to provide up-to-date information and statistics on assets is expected to deliver approximately \$3.4 million in tangible benefits.