HIGHWAY CONGESTION

Intelligent Transportation Systems' Promise for Managing Congestion Falls Short, and DOT Could Better Facilitate Their Strategic Use

Why GAO Did This Study

Congestion is a serious and growing transportation problem for the nation. Many strategies—like adding new lanes—have the potential to alleviate congestion but can be costly and have limited application. Another strategy is the use of communications, electronics, and computer technologies—intelligent transportation systems (ITS)—to more effectively utilize existing transportation infrastructure by improving traffic flow. Congress established an ITS program in 1991, and the Department of Transportation (DOT) subsequently set an ITS deployment goal.

In this report GAO (1) describes the federal role in deployment; (2) assesses DOT's ITS goal and measurement efforts; (3) identifies what ITS studies have found regarding the impacts of ITS deployment; and (4) identifies the barriers to ITS deployment and use.

What GAO Recommends

GAO recommends that the Secretary of Transportation improve the measurement of ITS deployment and address some barriers to ITS deployment to help state and local governments select projects that cost effectively meet transportation goals. GAO provided a draft of this report to the Department of Transportation for its review and comment. The department generally agreed with the information in the report and agreed to consider the recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-05-943.

To view the full product, including the scope and methodology, click on the link above. For more information, contact JayEtta Z. Hecker at (202) 512-2834 or heckerj@gao.gov.

What GAO Found

The federal role in ITS deployment includes goal setting, funding, and facilitating states' investment in ITS. In 1991, Congress set broad goals and established funding for ITS, and in 1998, Congress established a program to support ITS deployment. In a 1996 speech, the Secretary of Transportation established a vision for ITS deployment to save time and lives and improve quality of life. As part of this vision, the Secretary also established a goal that the 75 largest metropolitan areas deploy a complete ITS infrastructure by 2005 and measures to track progress toward this goal. DOT has taken several actions to support this goal, though it does not plan to update it.

Progress has been made toward achieving DOT's deployment goal, but DOT's goal and measures have limitations and fall short of capturing ITS's impact on congestion. Among other things, the measures do not capture the extent to which deployed ITS technologies are effectively operated, and we found that some metropolitan areas' operations of ITS technologies are limited. For example, Chicago developed 10 traffic management centers to monitor and respond to traffic congestion by notifying emergency responders of traffic accidents, among other things; however, 6 centers do not have full-time operators, which is likely to limit their impact on congestion mitigation.

Many of the ITS studies we reviewed suggest that ITS deployment can have benefits such as relieving congestion, traffic throughput, safety, and air quality. Results from some studies suggest that ITS benefits depend on effectively operating ITS technologies to meet local conditions. However, few studies provided information about cost effectiveness of the ITS deployments, which is essential for maximizing public investments.

According to transportation officials GAO spoke with, barriers to ITS deployment and use include the limited public awareness of the impact of ITS, difficulty of funding ITS operations, limited technical expertise, and lack of technical standards. DOT actions have had limited success in overcoming these barriers.

A Chicago Metropolitan Area's Traffic Management Center That Lacks Staff Dedicated throughout the Day

Source: GAO.