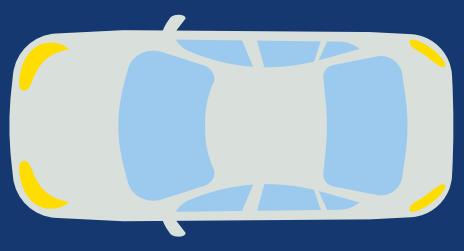
U.S. Department of Transportation

ITS for Parking Management

This document provides examples of Intelligent Transportation Systems (ITS) technologies deployed or modeled to support parking management. The parking management service area of the National ITS Reference Architecture addresses the management of parking operations, including both space management and electronic payment for parking.[1]

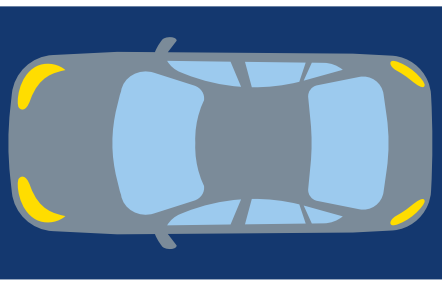
The featured benefits, costs, and lessons learned are based on ITS project evaluations contained in the ITS Databases at: www.itsknowledgeresources.its.dot.gov. ***Click on each example to learn more.***

Benefits



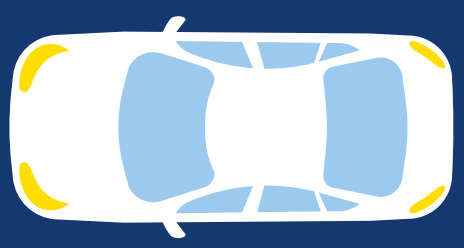
Smart Parking Management in Texas

A smart parking management tool that helps drivers efficiently find and pay for available parking in the City of Houston is estimated to reduce congestion and save the city $4.4 million per year based on modeled results.



Connected and Automated Vehicle Parking in Maryland

A pilot study found that Automated Valet Parking technology, allowing vehicles to park as close as 10 centimeters to adjacent vehicles, could lead to a possible parking capacity expansion of up to 20%.



Curb Management App in Washington, DC

Over 6,350 drivers registered to use a curb management app that was piloted in 9 loading zone locations. Findings suggest that double parking was reduced by 64% and that safety improved in crosswalks and bike lanes.

Costs

Ultrasonic Parking Space Sensor System in USA: $300 to $500 per parking space

Smart Parking Meter in Milwaukee: $250 to $500 per meter to install

LPR for Parking Enforcement in USA: $50,000 to $65,000 per vehicle

Lessons Learned

Maryland

Infrastructure readiness lessons learned from a pilot deployment of an Automated Valet Parking technology

Massachusetts

Operational lessons learned from City of Boston's performance parking pilot

1. USDOT, The National ITS Reference Architecture, Service Area: Parking Management.

Last modified on December 6, 2022