



# Accelerating SmartPark Deployment Strategic Plan

## BACKGROUND

SmartPark is a system that disseminates real-time parking availability information to truck drivers. Several States have launched pilot programs, but widespread deployment has been slow. Because SmartPark is expected to improve compliance with hours-of-service regulations and aid in safe, legal parking, its use aligns with the Federal Motor Carrier Safety Administration’s (FMCSA’s) safety goals. This study sought to identify barriers limiting the deployment of SmartPark programs, and offers specific actions to speed deployment. Table 1 provides a summary of recommended actions, by barrier, actor, and timeframe.

## SMARTPARK CONCEPT SUMMARY

A SmartPark system counts available parking capacity in instrumented locations and communicates this information (real-time) to drivers through roadside signs, websites, smartphone applications, or in-cab electronic logging devices (ELDs). As such, the system has

three main parts: sensors for monitoring parking availability, a means of collecting and processing sensor data, and a channel for sharing data. Both public and private entities have deployed SmartPark systems using a variety of technologies, data formats, and dissemination channels. SmartPark does not create new parking capacity; it enables more efficient use of existing space by giving drivers a clear picture of real-time parking options along their routes.

## CURRENT STATUS

Several States have deployed limited SmartPark systems. System scalability and integration of private parking facilities both vary, but overall, current SmartPark pilots have not made extensive use of private parking locations, which make up most of the Nation’s parking capacity. These pilots are also new and have yet to generate concrete, quantifiable data on costs and benefits. Anecdotal evidence is encouraging, but a complete, data-driven account of early SmartPark efforts is needed but not yet available.

**Table 1. Recommended actions by barrier, actor, and timeframe.**

Action	Financial Barrier	Institutional Barrier	Technology Barrier	Acceptance Barrier	Responsibility	Duration	Start
Publicize early successes	--	--	--	P	Federal	Short-term	Soon
Deploy pilots strategically	P	--	--	S	State	Intermediate	When possible
Start small and grow	P	S	--	S	State	Intermediate	When possible
Promote available Federal grants	P	--	--	--	Federal	Ongoing	Immediately
Distribute how-to guides	S	S	S	P	Federal	Short-term	Soon
Involve private parking providers	--	P	--	--	State	Ongoing	When possible
Design a modular system	--	S	P	--	Federal	Long-term	Soon
Establish consensus on data formats	--	S	P	--	Federal	Intermediate	Immediately
Continue researching truck parking	--	--	P	--	Federal	Long-term	When possible

Notes: P means the action primarily addresses this barrier.  
S means the means the action has a secondary impact on the barrier.

Currently, there is not a universal format for sharing information between systems, and drivers may need to consult multiple sources to gain a useful picture of parking options along their routes. Expanding and integrating existing systems will require USDOT leadership and coordination with State and private entities.

## **FINDINGS AND RECOMMENDATIONS**

The study identified four sets of barriers to SmartPark deployment and proposed specific actions to overcome those barriers. The actors involved in each action will vary. Refer to Table 1 for more information about responsibility, duration, and starting time of an action. The four barriers and actions to overcome them follow:

### **Financial**

SmartPark competes with other State budget priorities, and State decision makers lack concrete data demonstrating SmartPark's cost-benefit relative to other transportation and parking programs. While concrete, quantifiable data on cost-benefits are accumulating, proposed interim actions include:

- Increasing awareness of USDOT grants for SmartPark deployment and operational costs.
- Deploying pilot SmartPark projects strategically, at locations where they are most likely to succeed.
- Starting small-scale deployments in promising locations with room for growth.

### **Institutional**

A complete system must also rely on private entities, requiring negotiation of legislative and attitudinal barriers to public/private cooperation. The proposed specific action includes:

- Involving private parking providers. Because most truck parking is owned by private entities, they must be part of the total solution to the truck parking problem.

### **Technological**

Technology is less a barrier to SmartPark compared to other barriers. Still, making the right

technological choices is critical to long-term success. Key actions include:

- Developing national consensus standards for data formats and, where appropriate, standard displays for truck parking information.
- Designing modularity into SmartPark hardware and software—this will ease scaling and system integration and reduce downtime during upgrades.
- Continuing researching the needs of truck parking (e.g., understanding the ways in which drivers use data and preferences for receiving data).

### **User Acceptance**

To accelerate the deployment of SmartPark, there must be an effort to increase acceptance by those who are only vaguely familiar with SmartPark. Proposed actions include:

- Publicizing early successes of SmartPark's benefits among State, local, and private entities.
- Distributing How-To guides to familiarize newly deploying organizations with basic concepts of SmartPark and lessons learned from pilot projects.

## **CONCLUSION**

Moving forward, data from current SmartPark pilots will be a valuable resource for promoting the system to State agencies and private entities. The full potential of the system will become more visible as States partner with private parking facilities to increase coverage. In the long-term, strategically placed small-scale SmartPark systems have the potential to win over truck drivers and State decision makers, creating both market pull and budgetary support. Shepherding deployments and documenting successes will be critical to widespread adoption.

To read the complete report, please visit <https://doi.org/10.21949/1503463>.