

0-6818: Dynamic Ride-Share, Car-Share, Bike-Share, and Statewide Mobility

Background

As one of the fastest growing states in the nation, Texas faces the challenge of prioritizing limited resources. This has led to increased interest in developing proactive approaches to better manage travel demand on its roadways. This project provides guidance to the Texas Department of Transportation (TxDOT) and its partners and stakeholders in planning and mobility efforts, specifically through a better understanding of the viability of three specific shared mobility travel options: dynamic ride-share, car-share, and bike-share (Figure 1).

What the Researchers Did

Researchers performed a detailed review, focusing on who uses each program and the business models, funding sources, regulatory impacts, and documented impacts and measures of success associated with each program.

Using a combination of quantitative and qualitative research methods, researchers gathered stakeholder input about these shared mobility programs. Focus groups were used to capture detailed impressions of uses and potential users of any of the programs. A statewide, web-based survey used information gathered in the focus groups to further understand travelers' decision making about using the programs. Finally, researchers interviewed several people with knowledge of these programs, either as implementers, researchers, or program representatives.

This information, gathered from best practices and lessons learned, executive interviews, focus groups, and the general survey, was synthesized to create a guidebook that provides TxDOT and

its partners with guidance on how to identify, attract, implement, and monitor shared mobility programs. It also highlights key factors that contribute to the development and success of a shared mobility program. These factors include the role of agencies involved, regulations in force, regional travel behavior characteristics, and vendor criteria for program implementation.

The content, structure, usefulness, and applicability of the guidebook were vetted with members of the TxDOT Project Management Committee, as well as with staff from various agencies and local elected officials in the El Paso, Texas, region during a half-day workshop held in El Paso.

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Project Completed:

12-31-2015



Figure 1. Photos of Dynamic Ride-Share, Car-Share, and Bike-Share.

What They Found

Shared mobility programs offer flexible transportation options that vary based on cost, travel time, travel distance, and other trip needs of travelers. Existing programs range in scale and scope, often operating in multiple regions, to provide creative solutions and to increase travel options. The objectives of the programs are also varied depending on the perspective as a user, operator, implementer, or regulator. Recognizing there is not a one-size-fits-all approach, the key factors for assessing program viability include the:

- Agencies involved.
- Regulations in place.
- Regional travel characteristics.
- Preference of the population.

Shared mobility programs have the potential to offer multiple benefits to the communities and regions where they are implemented, including cost and time savings, emissions reductions,

vehicle trip reductions, reduction in vehicle miles traveled, improved health, economic boosts, and equity.

What This Means

These programs have a place in today's mobility and can serve to increase access to transportation options. New technology and changing travel trends have spurred the development and uptake of these new models of transportation, which expand the set of available travel options and have the potential to provide social, economic, and environmental benefits. The guidance provided as part of this research and documented in the guidebook provides an important step in understanding the programs and identifying how they may be integrated into a community to enhance transportation options. Together, they give insight into the issues that are important for TxDOT and its transportation planning partners to understand in order to support these programs.

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Keyword: Research