

Planning, Policy  
&  
Programming

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Project Title:  
A Before and After Evaluation of  
Shared Mobility Projects in the San  
Joaquin Valley

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## A Before and After Evaluation of Volunteer Ride-hailing and a Mobility as a Service Platform in the San Joaquin Valley

Evaluate the EV carsharing program, volunteer ride-hailing program, and the MaaS application.

### WHAT IS THE NEED?

In rural areas, cost-effective transit service is challenging to provide due to greater distances, lower population densities, and longer travel times than in cities. Rural transit agencies often struggle to meet farebox recovery ratios. Per-trip costs, particularly for dial-a-ride services, can range from \$50 to \$100.

The people who rely on public transit contend with infrequent and slow service. Access to a personal car is essential to the quality of life for most residents, from work to health care, education, healthy food, and other basic services. However, keeping two (or sometimes even one) car in reliable working order can consume a significant share of the household budget for low-income families. New technology services may offer cost-effective and cleaner mobility options for residents of rural communities.

### WHAT ARE WE DOING?

In the spring of 2018, California cap and trade revenues and local matching funds supported a set of pilot projects to provide affordable transportation options for residents of rural disadvantaged communities in the San Joaquin Valley:

- 1. Electric Vehicle Carsharing:** The first project is a battery electric vehicle (BEV) carsharing and ridesharing program. This pilot infrastructure for 24 BEVs will be initially located in affordable housing complexes and later in other strategic locations in three disadvantaged rural communities of Tulare and Kern counties. The goal is to provide a financially viable model of a low-cost, carbon-neutral alternative to private auto ownership and auto travel in rural communities.



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2. **Volunteer Ride-Hailing:** The second project is a volunteer-ride hailing service that serves people in rural disadvantaged communities around Lathrop, Manteca, Escalon, and Riverbank, who cannot get to essential destinations by available transit services or need access to a transit stop. The volunteer ride-hailing service uses a back-office system and a driver-routing application specifically designed to facilitate pooling of customer trips and lower operating costs for volunteer transportation organizations.
3. **Mobility-as-a-service (MaaS) Application:** The third project introduces MaaS to San Joaquin and Stanislaus counties. This project creates a smartphone application that aggregates the demand and supply of available services (i.e., transit, dial-a-ride, volunteer ride-hailing) to improve cost-effective mobility choices for all.

In this task, both stated and measured data will be used to evaluate the EV carsharing program, volunteer ride-hailing program, and the MaaS application. The data will be collected via before and after surveys, trip surveys, and service use data. An anonymous identifier will link survey responses and service use data. This project, "A Before and After Evaluation of Shared Mobility Projects in the San Joaquin Valley," will collect data up until the end of the currently funded evaluation periods to conduct a full pilot evaluation that integrates all stated and observed data using statistical methods to understand the following effects of the program on:

- Change vehicle ownership (shed, deferred, postponed),
- Change in the use of personal vehicles,
- Change in frequency and use of mode, and
- Unmet travel demand (transit, destinations, purpose).

## WHAT IS OUR GOAL?

The study will use individual data (where possible) on users' travel behavior before, during, and after the program to understand how the programs have impacted their travel behavior. Regression analysis will be performed on the individual data to evaluate the significance of the program intervention on the users' change in vehicle ownership, transportation mode choice, and ability to take new trips.

## WHAT IS THE BENEFIT?

There are few options to barriers to travel in rural areas. This study evaluates several promising methods to overcome these barriers with new shared mobility technology to reduce GHGs and increases access at a lower costs.

## WHAT IS THE PROGRESS TO DATE?

- October 2020 - Continued to collect data and draft VOGO interim report.
- Miocar service restarted on August 1. We have been collecting, cleaning, and analyzing data monthly. Vogo the volunteer ride service has been operating with stops and starts due to COVID-19. We have collected data for the program to date and are currently conducting an interim evaluation report.

The research team is currently implementing surveys, collecting data, and integrating the data for analysis.