



# MOBILITY ON DEMAND (MOD) SANDBOX: REGIONAL TRANSPORTATION AUTHORITY (RTA) OF PIMA COUNTY ADAPTIVE MOBILITY WITH RELIABILITY AND EFFICIENCY (AMORE) EVALUATION REPORT

## Background

The Regional Transportation Authority (RTA) of Pima County Adaptive Mobility with Reliability and Efficiency (AMORE) project is one of 11 Mobility on Demand (MOD) Sandbox Demonstrations funded by the Federal Transit Administration (FTA). RTA, the regional public transportation agency of Pima County, Arizona, partnered with Metropia and RubyRide to implement a pilot that aimed to provide more dynamic mobility services to residents of the Rita Ranch area in the Tucson region. RTA faced the common dilemma for area transit operators of a relatively low-density, auto-oriented exurban community; it operated a financially-constrained fixed-route bus service with limited capacity and low ridership and faced challenges delivering service with sufficient flexibility for the land use of the region. The AMORE project sought to enhance mobility and access to work and other destinations and to reduce personal car dependency in the region by integrating attributes of multiple emerging mobility services and technologies to deliver additional options for travel to local residents. Users engaged the system through an app that enabled them to book door-to-door service within the region.

## Objectives

The MOD Sandbox Program enabled RTA to explore innovative business models and partnerships with the goal of creating high-quality, seamless, and equitable mobility options. Objectives of the project included 1) establishing a financially-sustainable mobility ecosystem; 2) introducing a subscription-based mobility service, RubyRide, as a viable and affordable option for accessing work or other destinations; 3) integrating community-based social-carpooling via the mobile technology Metropia Driving UP Occupancy (DUO) with Ruby Ride; and 4) achieving higher occupancy of personal vehicles to make the total system capacity-dynamic, adaptive, and capable of meeting peak-hour demand. An independent evaluation was conducted to access the demonstration impacts and outcomes based on the project goals and objectives.

## Findings and Conclusions

*The AMORE project had limited impacts on travel and behavior; use of the system was low and dropped off during the project, which led to a high cost per trip that ultimately was not competitive with existing fixed route or on-demand services.*

This report presents the results of an independent evaluation of the RTA of Pima County MOD Sandbox Demonstration, with lessons learned that potentially can help advance similar initiatives within other transit systems. The evaluation was guided by 10 hypotheses analyzed using survey data, activity data, and stakeholder/project partner interview data.

Key findings include the following:

- **The service area was too constrained to be effective.** Lack of destinations within the service area limited the utility of the project, as many residents wanted to be taken outside the service area. The exurban environment required people to regularly travel 10–20 miles out of the pilot service area and was not conducive to making connections to the broader transit system in Tucson. Low-density areas within Tucson were determined to be less ideal for this type of project.
- **The project provided services to users at lower per-trip costs than other options, but the cost-effectiveness of trips to the agency were unfavorable.** The trip costs of AMORE were priced at a level that was affordable and competitive with most other modes, and many trips were free, but the per-trip cost suggests that agency spending per trip was not competitive with the average per trip operating expenses of conventional demand-response transit in the region.
- **The project did not reduce vehicle miles traveled (VMT).** Activity data analysis suggests that the use of personal automobiles either did not change or increased due to the project.

## Benefits

The AMORE project was an ambitious undertaking to deliver innovative mobility services to a low-density exurban environment. It provided lessons learned with respect to service area selection, issues of labor cost and reliability, insurance provisions, marketing, and other technical challenges that may allow future projects to provide better mobility service choices for low-density areas.

## FTA Report No. 0202 Project Information

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