MOD On-Ramp Program Lessons Learned Webinar MOD for First/Last Mile Solutions June 30, 2020
Lessons Learned from the MOD On-Ramp Program
June 23 & June 30

In this series of two webinars, the Federal Transit Administration (FTA), the Shared-Use Mobility Center (SUMC), and the six participating transit agencies from the Mobility on Demand On-Ramp Program (MOD) will share lessons learned. This program provided technical assistance and project-building strategies to support six innovative MOD projects in developing concepts, partnerships, and plans to prepare for the implementation of mobility options.

MOD for Mobility Integration
Date: Tuesday, June 23
Time: Noon - 1:30 p.m. PT / 1:00 - 2:30 MT / 2:00 - 3:30 CT / 3:00 - 4:30 ET

MOD for First/Last Mile Solutions
Date: Tuesday, June 30
Time: Noon - 1:30 p.m. PT / 1:00 - 2:30 MT / 2:00 - 3:30 CT / 3:00 - 4:30 ET
HOUSEKEEPING

All attendees are muted and cameras off

Closed captioning available

Submit questions through Q&A box

Questions are going to be addressed during the Q&A portion of this webinar

Chat box to interact with other participants

Webinar recording will be available at the MOD Learning Center
AGENDA

Opening Remarks

- Federal Transit Administration
- Shared-Use Mobility Center

Presentations

- MATA: Microtransit for Low-Density Area
- BART: On-Demand Accessible Ride-Hailing
- MDOT MTA: Access to Opportunity Microtransit

Q&A Session
Research & Innovation

FTA envisions the US having a world-class public transportation system with access and mobility for all. FTA’s research strives to advance public transportation innovation by leading research, development, demonstration, deployment, evaluation, and implementation practices and technologies that enhance effectiveness, increase efficiency, expand quality, promote safety, and ultimately improve the transit rider’s experience.

Through testing and deployment, FTA’s Research, Demonstration and Innovation program helps the transit industry adopt tried-and-proven technologies. Demonstrations of new technologies can reduce risk and help create both supply and demand. Learn more about FTA’s research program in our latest video, Harnessing Innovation for Public Transportation.

What’s New

- In May, FTA posted research reports on the demonstration of a fuel cell electric bus in Birmingham, AL, the status of seven 2016 Safety, Research and Demonstration (SRD) projects, and a Mobility on Demand (MOD) research and demonstration project in Palo Alto, CA.
- On May 25, 2020, FTA announced a $1.25 million funding opportunity to demonstrate and evaluate innovative technologies and designs to improve the state of good repair for transit agencies.
- FTA’s Accelerating Innovative Mobility (AIM) initiative highlights FTA’s commitment to support and advance innovation in the transit industry and promotes forward-thinking approaches to improve financing, system design, and service.
Creating a Multimodal Transportation System that Works for All

- Scooter-sharing
- Bikesharing
- Microtransit/Shuttles
- Ridehailing/Ridesourcing
- Public Transit
- Carsharing
- Patchpooling/Vanpooling

Map showing locations with various transportation modes.
Shared-Use Mobility Center
Mobility on-Demand Learning Center

Case Study: Vermont Flexible Trip Planner: Bringing Fixed and Flexible Transit Together on a Single Platform

Author: Shared Use Mobility Center

The Vermont Agency of Transportation (VTrans), in partnership with MITrum Solutions and Cambridge Systematics, developed an online trip planning tool that provides statewide options that include flexible transportation services such as dial-a-ride, bus on-demand, and shovel fixed-route services. The tool allows users to select in particular, rural transit systems to gain a more complete picture of their mobility options when planning a trip. The online platform was developed as a pilot project within the municipal transit administrators’ Mobility on-Demand sanctions program. Since its launch, several other transit agencies have taken steps to replicate the innovative resulting technologies. This case study explores how VTrans developed and marketed this tool, as well as the implications for the future of transit agencies, one-stop shop trip planning platforms.

Case Study: COVID-19 Resource Homepage

On March 11th, 2020, the World Health Organization declared coronavirus COVID-19 a worldwide pandemic. While responses to the spread of COVID-19 throughout the spring of 2020 varied by outbreak severity, location and culture, many people around the globe found themselves suddenly facing unfamiliar contexts in their movements and access to familiar services. This homepage aims to serve as a centralized hub for insights into how cities and transportation systems have been impacted by the viral and the resulting travel restrictions, as well as how public agencies and shared mobility operators have responded. The page will be regularly updated as new resources become available, and as trends and lessons emerge in the aftermath of this crisis.

SUMC Publications

Status Update:

These status updates are part of SUMC’s ongoing effort to explore how cities and transportation systems are impacted by the novel COVID-19 coronavirus. Subsequent status updates on the coronavirus impact on travel and shared mobility will be published as new information is shared.

Shared Mobility Benefits Calculator: Portland, OR, USA

Set Overall Emissions Reduction by Mode

Reduce by Transit and Shared Mobility

Calculates the potential benefits for Portland

Carpool Commuters

Shared Scooter

Carpool Commuters

Vanpool Commuters

Additional Reductions Through Electrification

Transit Electrification

Vanpool Electrification

Personal Vehicle Electrification

Impacts of Shared Mobility Per Trips

Reducing the Footprint

Reducing the Footprint

Reducing Emissions

Reducing Emissions

Shared vs. Private Vehicles
Objectives

The MOD On-Ramp program serves as an incubator to develop innovative mobility ideas and to convert them into implementable (business) plans.

Participate in a community of transit agencies developing MOD projects.

Create practical knowledge and lessons learned to disseminate with the transit and mobility industry.
MOD On-Ramp Project Selection Process

Call for applications and webinar

About 40 applications received

Independent reviewers group

Criteria-based project selection
Technical Assistance

Applied Research

Community of MOD agencies

Project-Building Strategies

Facilitate Partnership

Community Engagement

Plan Development

Identify Funding

You are invited to attend a COMMUNITY MEETING to learn more about a new BOXTOWN and WESTWOOD neighborhood PUBLIC TRANSIT project

Join the MATA team on Wednesday, November 14 at 1:30 AND 6 p.m. at the Charles Powell Community Center 810 Western Park Drive
Activities

Technical Assistance

Monthly calls

Webinars

On-Site Visits

Local Workshops

National MOD Workshops

Industry Events
Local Workshops
MOD National Workshops
Lessons Learned

Projects moving towards Implementation

Transit Agencies becoming Mobility Integrators

Innovative Partnerships

Integration of Technologies

Expanding Mobility Options
THANKS
Memphis Area Transit Authority
Mobility on Demand
For First/Last Mile Solutions

June 30, 2020
PARTNERSHIPS

• The University of Memphis

• Innovate Memphis

• TransLoc (a Ford Mobility company)
PREVIOUS ON-RAMP ACTIVITIES

Three Community Meetings to meet with community stakeholders and neighborhood residents:

• **November 14, 2018** held at the Charles Powell Community Center

• **July 25, 2019** held at Mt. Vernon Baptist Church

• **August 22, 2019** held at Mitchell Community Center at the request of a community organization

• Completion of the Business Plan
Memphis 3.0 Comprehensive Plan & Transit Vision
• Implement a Mobility-on-Demand Pilot Project in the Boxtown/Westwood Neighborhood of Memphis, TN.

• The Boxtown/Westwood Neighborhood is served by Routes 38, 39, 12, and 69.

• Due to the population demographics and land use patterns, there is low ridership on route 38.

• The Transit Vision identified the Boxtown/Westwood community as an ideal location for Demand Responsive Transit.
Based on the results of the simulations that were performed by TransLoc, the original boundaries of the pilot project service area were expanded to include a larger area of southeast Memphis.

Many of the destinations or points of interest were located in the adjacent Whitehaven community.

By expanding the boundaries, we are better able to serve the needs of the community and improve first/last mile connections.
PROJECT GOALS

- Provide a new microtransit service that will supplement fixed-route service in the area.
- Provide an equitable, scalable and replicable model service.
- Improve mobility and access by providing first/last-mile connections to fixed-route bus service.
- Decrease average travel time.
- Encourage MATAplus customers to use Microtransit.
- Provide a complete trip.
- Improve accessibility and resident’s quality of life.
PROJECT CHALLENGES

• 30% of the population is over the age of 64.
• 13.8% of the population is school-aged (5-17).
• Low-density land use patterns that are difficult to serve with fixed route transit.
• Limited access to smartphones with data plans.
• Long wait times with fixed-route service preclude many residents from using transit as a viable option to reach employment and other destinations.
• Educating & familiarizing residents with new technology and new service.
• Identifying key destinations and drop-off locations.
• Respond to numerous challenges due to COVID-19 pandemic.
LESSONS LEARNED

• Residents are highly concerned about receiving service even though the area has low demand and it is difficult to serve.

• Transit Vision and the route system redesign provided microtransit an opportunity to incorporate flexibility into the service while improving mobility and access for residents.

• Moving forward required working with the community.

• The Transit Vision redesign provided MATA the ability to connect with other partners and expand the pilot project to link with other projects such as the new fare system implementation, website redesign, BRT planning and design as well as other stakeholders such as the Downtown Memphis Commission and Memphis Medical Design Collaborative for a broader systemwide effort.
LESSONS LEARNED

• Ensure strategic communications with elected officials and the community.

• Engage internal staff early and obtain buy-in and ownership of the project.

• Plan for employee turnover and how to transition from planning to operations.

• Expect the unexpected – COVID-19, which has created a new need for the technology and services offered by the microtransit pilot project.

• Utilize all your available resources – FTA, SUMC, Peer Agencies, Vendors, and Consultants.
NEXT STEPS

• Continue Community Engagement.
• Acclimate and Train MATA operators, dispatch, and customer service staff.
• Order Vehicles & Equipment.
• Set up Call Center.
• Complete Naming, Marketing, and Branding.
• Interface TransLoc’s Software with MATA’s existing systems.
• Identify specific Launch Date for service to go live. Current Project Launch Date is late Fall 2020.
THANK YOU!

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Tiena Gwin, Project Manager
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MATA
MEMPHIS AREA TRANSIT AUTHORITY
SAN FRANCISCO BAY AREA, CA
MOD On-Ramp Program: First/Last Mile Solutions
Lessons Learned
June 30, 2020

BART’s Project:
On-Demand Accessible Ride-Hailing
Original Project
Motivation

When a BART elevator is out of service, wheelchair users are prevented from entering or exiting that station.

Currently it takes a long time to get a vehicle to assist this passenger.

On-ramp: use a staged vehicle to transport passengers to adjacent stations with working elevators.
Project Objectives

Mission

- Improve on-demand mobility options around transit hubs for people using wheelchairs.

Goals

- Offer an on-demand ride-hailing service with wheelchair accessible vehicles.
- Improve access to an existing public transportation network.
- Provide an accessible first and last mile alternative.
Pilot Locations: A test of two environments

**Urban area**
Downtown Oakland, with 5 BART stations in a high density city center.

**Suburban area**
City of Fremont, with nearby hospitals and limited transportation alternatives.
Initial Concept for On-Ramp Grant

- Give pre-qualified drivers access to staged wheelchair accessible vehicles (WAV) at BART stations to transport passengers with wheelchairs.
  - Non-dedicated WAVs removes specialized resources from those who need it.
- Increase fleet size of WAVs at transit hubs.
- For BART elevator mitigation trips only.
- Operated by pre-qualified TNC drivers.
Evolution of Project

- Public process of the On-Ramp grant began to change and improve initial concept.
  - In-person meetings
  - Workshops
  - Conversations with stakeholders
  - Project Feasibilities
Pilot Elements

**Riders:** Only for wheelchair users and for short, on-demand trips.

**Where:** To or from transit hubs, hospitals, and city-run service programs.

**Drivers:** Pre-qualified drivers trained to transport passengers with wheelchairs.

**Vehicles:** Wheelchair accessible vehicles staged near transit hubs. Drivers granted access upon trip request.

**App:** An app that pairs riders, drivers and vehicles all together.

*Project partners discussing logistics*
Sample Trip - Driver View

- Trip request goes out to nearby pre-qualified drivers.
- Driver (👤) accepts ride request.
- Driver picks up shared-use wheelchair accessible vehicle (🚗) staged near a transit hub.
- Driver picks up passenger (♿️).
- Driver transports passenger to adjacent BART station (ба).
Key Partners

- Cities of Oakland and Fremont
- East Bay Paratransit, a paratransit broker
- Metropolitan Transportation Commission, a regional MPO
- Community Resources for Independent Living (CRIL)
- Goin, a software developer
- Driver organizations
- BART Accessibility Task Force
Draft Flowchart

Add "Elevator Required" preference to Trip Planner linked to elevator status

Wheelchair Accessible Options

A. Takes BART passengers to adjacent station.

Elevator Out of Service?

Yes

No

B. FM/LM for passenger

C. Sponsored Program

Area with OdAW?

Yes

No

OdAW

Wheelchair Accessible Trip Planner with RT + dedicated, on-demand options

Options

EAST BAY PARATRANST

CALL

BACK-TRACK

ODS STAR

TRAVEL CALL

SHUTTLE

TAXI TBD

CALL

LiST

CRIL (H) RECOUP

LIAIS

S.T.
Value of On-Ramp Process

Initial concept has been constant: provide on-demand rides for people who use wheelchairs. But implementation tactics have changed.

<table>
<thead>
<tr>
<th></th>
<th>Initial Thought</th>
<th>Updated Proposal</th>
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<tbody>
<tr>
<td>Drivers</td>
<td>TNC Drivers</td>
<td>Known Pool of Drivers</td>
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<tr>
<td>Vehicles</td>
<td>BART-managed</td>
<td>Added other interested parties</td>
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<tr>
<td>Trip Purpose</td>
<td>BART elevator mitigation trip only</td>
<td>Anyone with a wheelchair</td>
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<tr>
<td>Use Case</td>
<td>Between 2 BART stations</td>
<td>Anywhere in geofenced area</td>
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<tr>
<td>Ride option</td>
<td>Staged vehicle only</td>
<td>Comparison of all options available</td>
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</tbody>
</table>
Upcoming Work

- Create app to provide all options available.
  - Scalable
  - Easy to add new alternatives

- Look for funding to pilot this concept.
  - Grant applications

- Lessons learned
  - Listen to people to help develop initial concept
  - Engage the public, partners and future users
Access to Opportunity Microtransit Project

June 30, 2020

Lessons Learned from the MOD On-Ramp Program
Project Overview

- Kick-Off
- Interviews, Site Visits
- Data Collection, Surveys
- Concept Development and Analysis
- Request for Proposals
- Award Contract & Mobilize
MOD On-Ramp

• 2018 - Applied for On-Ramp
  • Previous studies, stakeholder engagement, data
  • Strong case for third shift workers, persistent need

• Identified opportunities with LocalLink 75.
Current Service

- 24/7 service, 56 bus stops
- 30 to 60-minute headways
- 50 to 70-minute travel time
- Connects to rail, bus, local services
- Ad-hoc extensions for industrial parks
- LL75 vs. LocalLink Average
  - Daily ridership: 1,200 vs. 2,100
  - On-time Perf.: 62% vs. 72%
  - Cost per Trip: $11 vs. $6
  - Cost per Rev. Hour: $180 vs. $146
  - Length in miles: 32 vs. 14
Problem Identification

Local studies, research + Site visits, route tours, interviews, rider surveys + Data and spatial analysis
Problems Identified

Rapid Suburban Development

- Employment centers oriented away from existing transit
- On-time performance and frequency falling with each new segment added

![Graph showing on-time performance for LocalLink 75 and All LocalLinks]

- LocalLink 75
- All LocalLinks

- Summer 2017
- Fall 2017
- Winter 2018
- Summer 2018
- Fall 2018
- Winter 2019
- Summer 2019

55.0%
60.0%
65.0%
70.0%
75.0%
Problems Identified

Transit Travel Time vs. Driving

• Expect commute by bus to take about 1.7x longer than driving.
• On LL75, taking the bus is 3.2x longer than driving
  • 1.6x longer from Patapsco to the airport (northern half)
  • 2.6x longer from the airport to the mall/casino (southern half)

Source: Census Household Travel Survey, Schedule and GTFS data
Problems Identified

LL75 has below average on-time performance (2018)

LL75 costs more per passenger than other LocalLinks (2018)
Problems Identified

More learned from surveys

- Total of 310 complete responses
- **70% transfer more than once**, 32% transfer twice to complete their trip
- **93% walk** to/from the bus stop.
  - “long, lonely walk” around/across parking lots, near busy traffic, etc.
- **74% pay cash**, 14% pay cash for one-way fare
- Few riders **have data plans**, and **fewer use credit cards or mobile payment apps**
- Fewer than 25% use Uber or Lyft
Proposed Solution

Why: Improve the reliability, flexibility, and overall quality of service for existing riders and potential new riders.

How: Leverage available technology, vehicles, and service models to enable on-demand, right-sized, flexible service.
## Impact on Riders

- LL75 riders will experience
  - higher on-time performance
  - shorter travel time
- Riders on microtransit will experience
  - shorter wait time and travel time
  - additional transfer for some
- LL75 improvements may attract new riders to core service

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<th>Saturday</th>
<th>Sunday</th>
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<td><strong>LocalLink 75</strong></td>
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<tr>
<td><strong>Microtransit</strong></td>
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<td><strong>Total Ridership</strong></td>
<td></td>
<td></td>
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<td><strong>Daytime (5am-12am)</strong></td>
<td>987</td>
<td>921</td>
<td>589</td>
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<tr>
<td><strong>Overnight (12am-5am)</strong></td>
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<td>149</td>
<td>394</td>
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<tr>
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<tr>
<td><strong>Overnight (9pm-10am)</strong></td>
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In Closing

- We learned a lot about planning and procuring a microtransit service
- We outlined a performance and service equity analysis methodology
- We have a grant-ready project in lieu of near-term budget recovery
- We can focus on COVID-19 recovery for our riders and operators
Thank you!

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