Findings and Lessons Learned from the MOD Sandbox Trip Planning and Fare Payment Deployments

ITS AMERICA

February 4, 2021
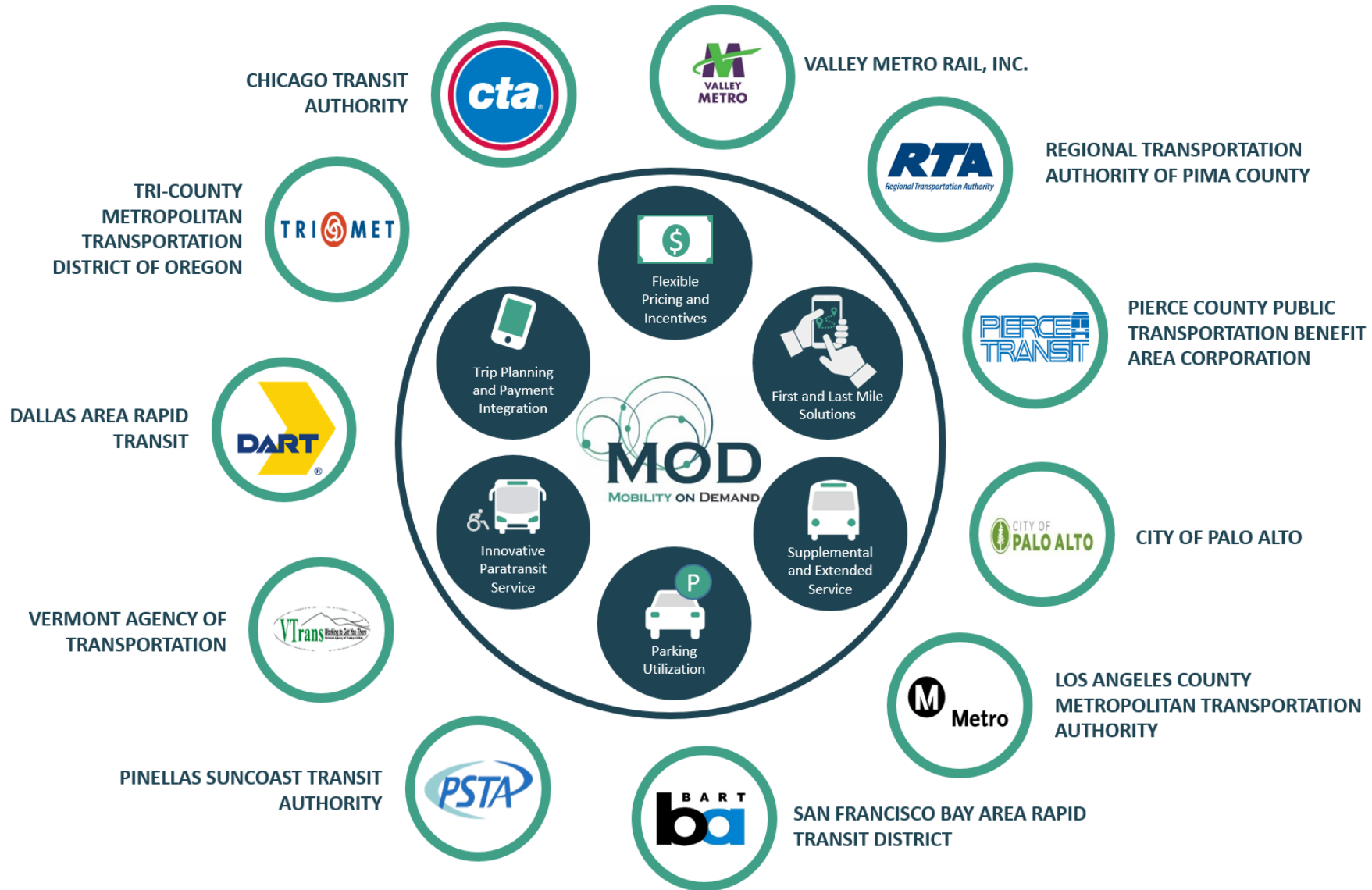
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February 4, 2021

Independent Evaluation Team:

ICF

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RESEARCH CENTER
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Mobility on Demand Alliance

The MOD Alliance brings together public, private, and academic sector stakeholders to promote the potential benefits of leveraging emerging mobility technologies and services together with existing mobility options and provide a forum to advance MOD and tackle associated challenges and opportunities. The Alliance's focus is:

- ✔ MOD policy
- ✔ MOD education and partnerships
- ✔ MOD framework and standards
- ✔ MOD issues such as: automation, payment integration, accessibility, equity, data sharing, rural/suburban mobility, insurance, congestion pricing, and trip planning, supporting the backbone of mobility, public transit.

Members Include:
Central Ohio Transit Authority, Audi, CalTrans,
Regional Transportation Commission of Southern Nevada,
AWS, City of Los Angeles, New York City, Cubic,
Washington DOT, Kapsch, Spin, Ford, GM,
San Francisco County Transportation Authority
(and many others)

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Focus Areas & Select Activities

POLICY

- Federal Reauthorization and Recovery
  - MOD eligibility and amendments
  - MOD definitions (re: micromobility, microtransit, ridesourcing, etc.)

PARTNERSHIPS

- MOD/MaaS Alliance Partnership
  - MOD/MaaS Markets – examining key MOD/MaaS issues, such as:
    - Insurance
    - Infrastructure Services
- National Operations Center of Excellence (NOCoE): Peer Exchange

PROGRAMS

- Universal Basic Mobility/Mobility Wallet
- State of MOD Study
  - National Practitioners Survey (with UC Berkley, ITE, PTV, AASHTO)
  - National Public Survey (with AAA, Cubic)

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Agenda

- Introductions

- Evaluation Objectives and Approach

- Evaluation Findings and Lessons Learned
  - Valley Metro Pass2Go App
  - TriMet OpenTripPlanner project
  - VTrans Flexible Trip Planner
  - Cross Cutting Findings

- Demonstration Deployment: Agency Perspectives
  - Valley Metro Pass2Go App
  - TriMet OpenTripPlanner project
  - VTrans Flexible Trip Planner

- Panel Discussion

Introductions

Independent Evaluation Team

Les Brown, ICF

Adam Cohen, TSRC

Panel Moderator

Sara Davidson, ITSA

Panelists: MOD Sandbox Demonstration Awardees

Angie Devore, Valley Metro

Tyler Olson, Valley Metro

Bibiana McHugh, TriMet

Ross MacDonald, VTrans

Independent Evaluations: Objectives & Approach

Independent Evaluation: Goals / Objectives

▸ A rigorous, comprehensive evaluation of the MOD demonstrations will deliver a keen understanding of:

- Lessons learned and best practices
- Successful business & partnership models
- Innovations and strategies

- Public policy
- Scaling innovations
- Identifying additional use cases for other contexts

> Prepare for and conduct a comprehensive independent evaluation (IE) of the MOD Sandbox Demonstrations

> Examine issues and explore opportunities and challenges for public transportation as they relate to technology-enabled mobility services
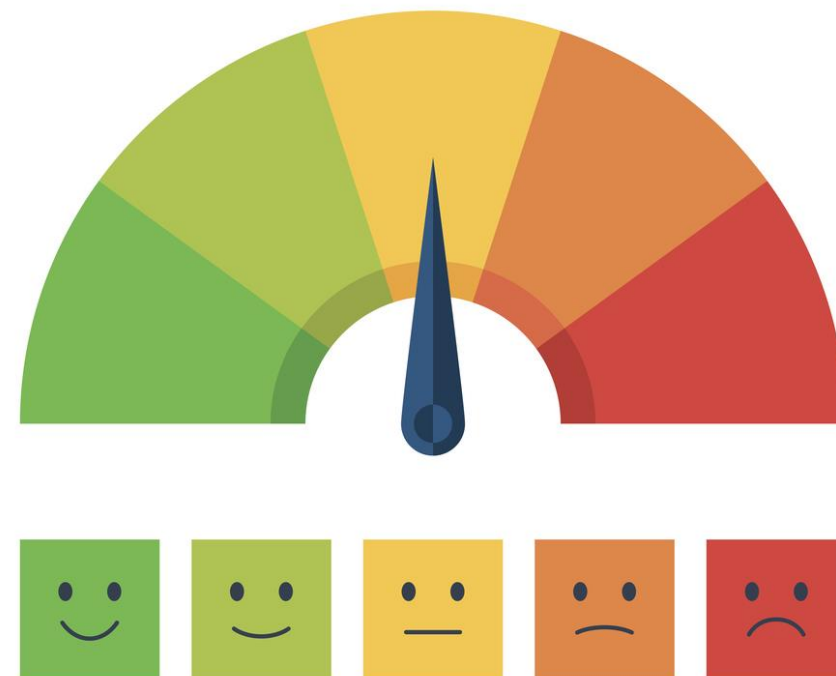
> Evaluate achievement of MOD Sandbox demonstration objectives by testing preestablished hypotheses

Independent Evaluation: Performance Factors

Performance of MOD Sandbox Demonstrations are evaluated by their effects on variables such as the following:

- Transit ridership
- Vehicle Miles Traveled (VMT)
- Wait times
- Travel times
- Costs
- Access to opportunity
- Accessibility for persons with disabilities
- Equity
- User satisfaction

Independent Evaluation: Methodology

Step 1. Preparing for Pilots and Implementation

Step 2. Define Project Objectives

Step 3. Identify Project Hypotheses

Step 4. Develop Evaluation Metrics

Step 5. Identify Data Sources

Step 6. Define Methods of Analysis (e.g., surveys, interviews, activity data analysis, etc.)

Step 7. Evaluation

Shaheen, Martin, Cohen

2/4/2021

Valley Metro

Pass2Go App

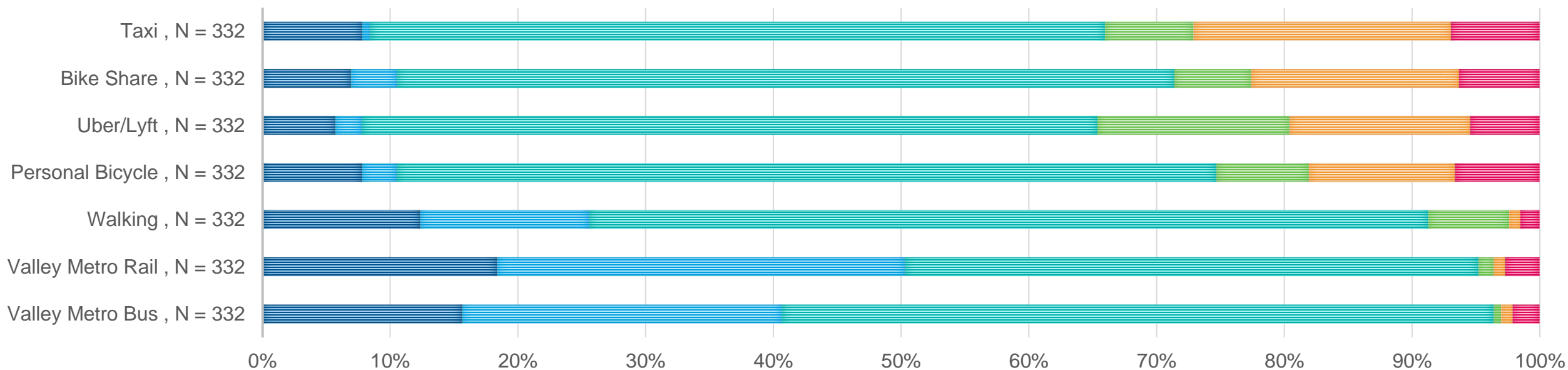# Valley Metro: Pass2Go App

PROJECT OBJECTIVES

- Reduce the travel, wait, and trip planning times of users with Pass2Go

- Improve adoption and accessibility of mobile technologies

- Provide a single payment system for public/private transportation modes

- Incorporate real-time travel information

- Enhance customer experience

PASS2GO TICKET

OVERALL, AS A RESULT OF USING THE NEW PASS 2 GO PILOT APP, I HAVE TRAVELED BY...

Much more often ▪ More often ▪ About the same ▪ Less often ▪ Much less often ▪ Changed, but not because of the PASS 2 GO PILOT app

2/4/2021

Valley Metro: Pass2Go App

KEY FINDINGS

- Approximately 2/3 of respondents reported no change in travel and wait times; approximately 1/3 reported shorter wait and travel times

- Sample size too small to develop conclusions about improved ADA accessibility

- 74% reported improved access to public transit due to Pass2Go

- 55% said trip planning somewhat or greatly improved

LESSONS LEARNED

- Direct user engagement and targeted marketing was identified as a best practice for encouraging app use and conducting a longitudinal study

- Internal and external stakeholders training is key to educate stakeholders about the pilot

- Third-party digital accessibility beta testing is needed

- Public agencies need staff with technical expertise to work with vendors

- Public agencies should "right-size" project teams and engage all stakeholders early

- Grantees should establish reasonable project timelines given the lead time required for stakeholder engagement and app development

# Tri-County Metropolitan Transportation District (TriMet)

OpenTripPlanner

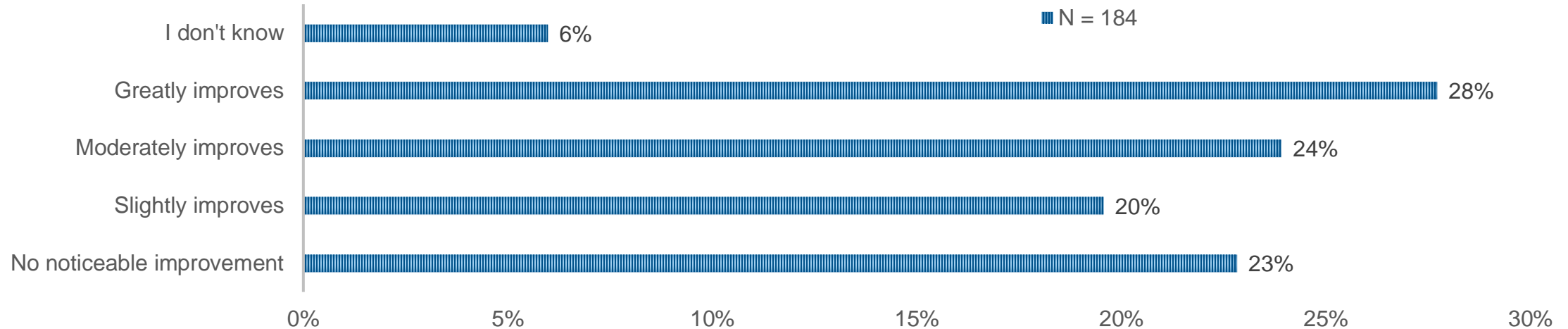# TriMet: OpenTripPlanner

PROJECT OBJECTIVES

- Expand the OpenTripPlanner with shared mobility

- Help TriMet customers make informed mobility decisions

  - Bridge first- and last- mile gaps

  - Prioritize lower stress routing for active transportation

  - Provide enhanced accessibility information to travelers
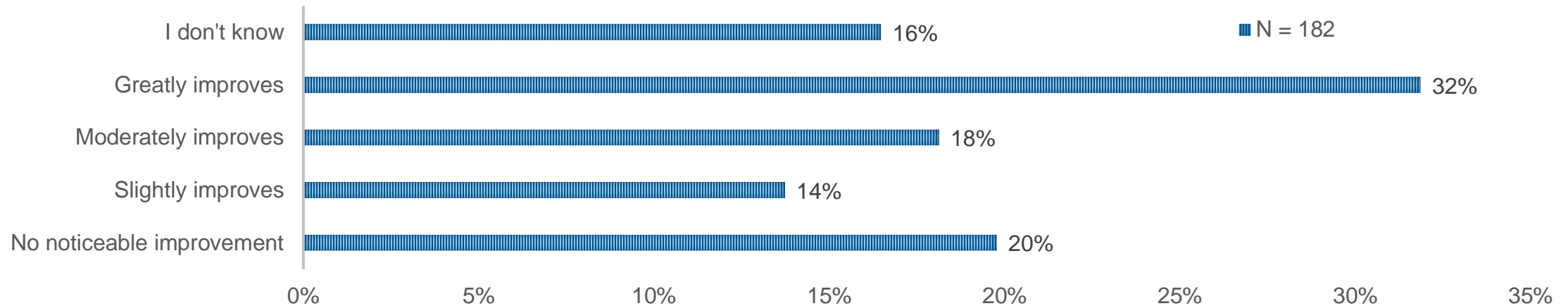
- Implement an improved geocoder

TRIP PLANNER
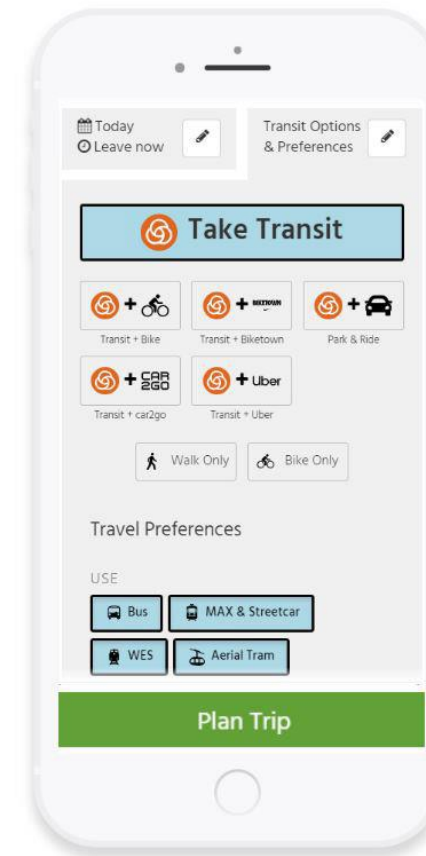
TO WHAT EXTENT DOES THE TRIP PLANNER IMPROVE YOUR ABILITY TO GET TO AND FROM PUBLIC TRANSIT IN THE PORTLAND REGION?

■ N = 184

Category	Value
I don't know	6%
Greatly improves	28%
Moderately improves	24%
Slightly improves	20%
No noticeable improvement	23%

TO WHAT EXTENT DOES THE TRIP PLANNER IMPROVE YOUR ABILITY TO MAKE MULTIMODAL TRIPS?

■ N = 182

Category	Value
I don't know	16%
Greatly improves	32%
Moderately improves	18%
Slightly improves	14%
No noticeable improvement	20%

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2/4/2021

TriMet: OpenTripPlanner

FINDINGS

- 40% believed the addition of shared mobility options moderately or greatly improved their mobility

- 55% said that the real-time information provided was very useful

- A majority of respondents believed that the trip planner improved first- and last- mile connections to transit and the ability to make multimodal trips

- TriMet considering a MaaS platform with integrated trip planning, ticketing, and bundled service options

LESSONS LEARNED

- Importance of clear and consistent visual symbology

- Agencies should narrowly tailor their data request
  - Agencies should know what data they want to ask for and how they will use it

- A local policy requiring wheelchair accessible TNCs does not necessarily result in a user being able to request one

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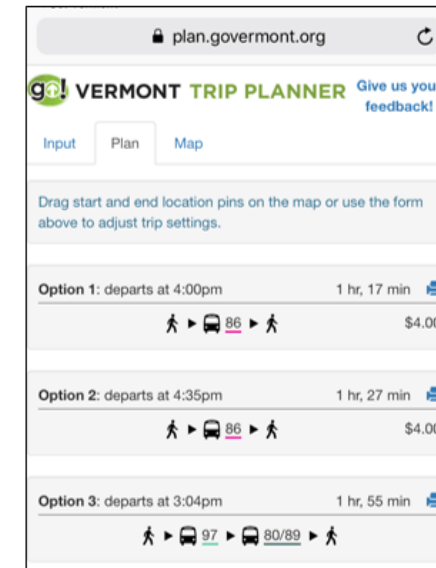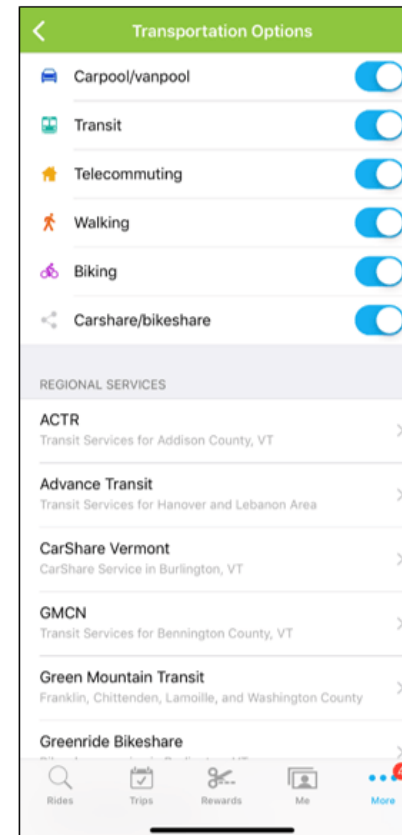# Vermont Agency of Transportation (VTrans)

Flexible Trip Planner

VTrans: Flexible Trip Planner

PROJECT OBJECTIVES

- Develop an online trip planner for both "fixed" and "flexible" services
- Enhance public transportation use and information for riders
- Reduce call/response time on trip planning inquiries

TRIP PLANNER

VTrans: Flexible Trip Planner

FINDINGS

- Trip planner provided more flexible trip planning options

- Trip planner was an instrumental tool used by call center dispatchers and case workers to more efficiently provide mobility information to callers and clients

- Web traffic did increase during the evaluation period, but neither the average nor moving average exceeded 10 users per day

LESSONS LEARNED

- Importance of naming partners prior to applying for the MOD Sandbox

- Only project partners with funding can be counted on to follow through with actual performance commitments. Partners who lack a specific funding commitment should not be relied upon

- Challenges related to procurement policies and intellectual property of open software; more flexibility needed for contracting for open-source software development

- Handling data is expensive and requires institutional support; most public agencies lack the institutional capability and/or financial resources to properly invest in data management

Crosscutting Findings from the MOD Sandbox Trip Planning and Fare Payment Deployments

Crosscutting Findings

Emerging Lessons Learned

- Public agencies and private sector partners were ambitious in project designs, resulting in delays, rescoping, and down-sizing projects

- Some agencies like the ability to name partners without a traditional procurement method, while others would have preferred to issue a request for proposal to solicit prospective vendors

- Several public agencies noted challenges in working with private vendors (e.g., contracting, data agreements, etc.)

- A number of public agencies expressed ongoing concerns about the reliability of private sector partners (e.g., overpromising, changing business models, etc.)

- Agencies experienced post-demonstration challenges (e.g., financial sustainability, COVID-19, and regulatory requirements (i.e., drug/alcohol testing)

Thank You!

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Independent Evaluation Reports Available at:
https://www.transit.dot.gov/research-innovation/fta-reports-and-publications
and http://www.innovativemobility.org

FTA Mobility on Demand (MOD) Sandbox Program:
https://www.transit.dot.gov/research-innovation/mobility-demand-mod-sandbox-program