COMPLETE TRIP

ITS4US

CALACT Phase 1 Performance Measurement and Evaluation Support Plan Webinar

November 17, 2021
Agenda

▪ Purpose of this Webinar
  □ To share the submitted Performance Measurement Plan from (<Site Name>) with the stakeholders of the project and ITS4US community.

▪ Webinar Content
  □ Complete Trip – ITS4US Deployment Program Overview (<COR Name>)
  □ Site Orientation & Deployment Concept Overview (<Site Presenter>)
  □ Performance Measurement and Evaluation Support Plan (<Site Presenter>)
  □ Stakeholder Q&A
  □ How to Stay Connected (<COR Name>)

▪ Webinar Protocol
  □ Please mute your phone during the entire webinar
  □ You are welcome to ask questions via chatbox at the Q&A Section
  □ The webinar recording and the presentation material will be posted on the ITS4US website
Program Overview

Robert Sheehan, Site COR
Program Overview

- A USDOT Multimodal Deployment effort, led by ITS JPO and supported by OST, FHWA and FTA

- Supports multiple large-scale replicable deployments to address the challenges of planning and executing all segments of a complete trip

Vision

Innovative and integrated complete trip deployments to support seamless travel for all users across all modes, regardless of location, income, or disability
The Complete Trip Concept

**Complete Trip:** An individual’s ability to go from origin to destination reliably, spontaneously, confidently, independently, safely, and efficiently without gaps in the travel chain.
Program Goals

- Spur high-impact integrated Complete Trip deployments nationwide
- Identify needs and challenges by populations
- Develop and deploy mobility solutions that meet user needs
- Measure impact of integrated deployments
- Identify replicable solutions and disseminate lessons learned
Deployment Phases

**PHASE 1: Concept Development**
- Concept Development for Complete Trip Deployment
- Establish Cohort Roundtables

**PHASE 2: Design & Test**
- Design, Test and Deploy Complete Trip Solutions
- Evaluation Framework and Planning

**PHASE 3: Operate & Evaluate**
- Demonstrate Multiple Large-Scale Deployments
- Evaluate Deployments
- Share Data & Lessons Learned

**Operations Maintenance**
- Sustain operations for a minimum period of five years after the program is completed with no supplementary federal funds

**Deployment**
- Up to 12 months
- Up to 24 months
- Minimum of 18 months

**Post-Deployment**
- 5 years
CALACT ITS4US Project Overview

Thomas Craig, System Development Lead
Project Overview

A coordinated effort to
- improve the user experience and cost efficiency of demand-responsive and fixed-route transit for underserved riders, and
- foster a market in which riders can easily plan, book, and pay for trips throughout Washington, Oregon, and California.

The project will support agencies around the 3-state region by helping them select interoperable software vendors which publish open data.

Source: Google Maps, Trillium
## Final list of required needs

- RID-01 - Discover DR
- RID-01-1 - Book in advance
- RID-01-4 - DR wait time
- RID-02 - Various trips
- RID-03 - Eligibility process
- RID-04 - Hear text annunciation
- RID-04-1 - Audio option
- RID-13 - App guidance
- RID-14 - Cost of service
- RID-14-1 - Standard payment media
- RID-15 - Customer service
- RID-17 - No internet
- RID-19 - Device accessible
- RID-19-1 - Space for mobility device
- RID-19-2 - Pathways in advance
- RID-20-1 - Preferred language
- RID-20-2 - Plain language
- RID-20-3 - Visual or text
- OP-01 - Integrated trip planning
- OP-02 - Booking through rider apps
- OP-03 - Tech sophistication not required
- OP-04 - Phone reservations
- MUL-01 - See full network
- MUL-02 - Clear governance
- MUL-03 - Contact information
Examples of final user needs

- "Required" needs:
  - Discover DR: “The rider needs to discover and book demand responsive trips within online/mobile trip planners so that these services are as easily accessed as fixed-route services.” *RID-01*
  - Device accessible: “The rider needs to be able to know whether each part of their trip is accessible to mobility devices and bikes so they can plan for a safe and multimodal trip.” *RID-19*
  - See full network: “All users need to see list and map interfaces of agencies, routes, stops, and transit connections within a region to fully understand and access the transit network.” *MUL-01*
# Proposed Deployment Sites

## Centralized Data
- 3-state region
- Guidelines and APIs

## Community Transit
- Puget Sound, Washington
- Website built on APIs, eligibility

## Rural Demand Response
- Southern Oregon
- DRT booking, support desk

## Multimodal Connections
- San Bernardino, California
- Digital infrastructure, wayfinding

Source: CALACT
Performance Measurement Plan
Overview

Site Presenter, Role
Project Goals

- Increase breadth, depth, and quality of transit data standardization and publication
- Improve transit experience for riders of disadvantaged groups
- Provide tools to help planners, advocates, DOTs and other stakeholders access data
- Increase technology collaboration between state DOTs and agencies
Performance Measurement Plan Overview

- Performance Measurement Plan Team
  - Joshua Meng, California PATH
    - Formal evaluation
  - Tamika Butler, TLB Consulting
    - Rider representation
  - Mark Wall, MWA Associates
    - Agency representation
  - Thomas Craig, CALACT
    - Project Management

- Overall approach
  - Identify a small number of key performance metrics the successful measurement of which is guaranteed
Deployment site 1

Centralized Data

- Performance measure 1.1
  - 2 open-data based DRT booking apps at 50 agencies
- Performance measure 1.2
  - 80% of all agencies following data guidelines
- Performance measure 1.3
  - Increase in average data quality without increase in variance of quality

- 3-state region
- Guidelines and APIs
### Deployment site 2

**Community Transit**
- Puget Sound, Washington
- Website built on APIs, eligibility

- **Performance measure 2.1**
  - Rider satisfaction with trip planning

- **Performance measure 2.2**
  - Rider satisfaction with wayfinding

- **Target measures**
  - Likert scale survey average increase of 0.3 across general public, riders with disabilities, users with devices in non-English languages
Deployment site 3

Rural Demand Response  
- Southern Oregon
- DRT booking, support desk

- Performance measure 3.1
  - 100% increase of trips booked through mobile app

- Performance measure 3.2
  - 10% increase of demand response trips with either an origin or a destination near a fixed-route transfer location
Deployment site 4

Multimodal Connections

- San Bernardino, California
- Digital infrastructure, wayfinding

- Performance measure 4.1
  - Rider satisfaction with trip planning

- Performance measure 4.2
  - Rider satisfaction with wayfinding

- Target measures
  - Likert scale survey average increase of 0.3 across general public, riders with disabilities, users with devices in non-English languages
Confounding factors & Constraints

- Agencies adopt data standards other than those promoted by the project, or through other programs
  - Management strategy – ignore (or adopt alternative)

- Infrastructure changes
  - Management strategy – mitigate (advance monitoring)

- System design changes
  - Management strategy – mitigate (advance monitoring)

- Subjectivity of rider satisfaction
  - Management strategy – mitigate (question design)

- Primary constraints: budget and vendor partnerships
Data Collection, Sharing and Reporting Plan

Site Presenter, Role
Data Collection Plan – Data sources

- Deployment site 1
  - Data APIs
  - Data quality review process
  - App partnerships and review
- Deployment sites 2 and 4
  - Surveys
- Deployment site 3
  - Scheduling software vendor partnerships
  - Agency partnerships
Deployment site 1 data collection

- Data APIs
  - Functional component of the system ingests GTFS data sets and provides API end points including data elements
  - Software process to be designed using API endpoints
  - Publish data process and resulting metrics

- Data quality
  - Start from GTFS grading scheme
  - Adapt to include flex and other extensions
  - Mix of automation and manual grading

- App partnerships and review
Deployment sites 2 and 4 data collection

- Surveys
  - Linked from app
  - 3-6 simple Likert-scale questions
  - Discrete questions regarding satisfaction with particular aspects of trip planning or wayfinding
  - Annual collection beginning during Phase 2
  - Tabulation and publication of both average satisfaction and distribution
  - Figures published for general public, people with disabilities, people using devices in language other than English
Deployment site 3 data collection

- Scheduling software vendor partnerships
  - Aggregate statistics collected
    - Number of trips booked from mobile apps
- Agency partnerships
  - Total number of booked trips
  - Aggregate numbers for origin/destination locations as a percentage of total locations
Data quality verification

- Data APIs
  - Integrated with software QA
- Data quality review process & App partnerships
  - Internal QA by multiple staff members
- Surveys
  - Scientific approach and procedures
- Scheduling software vendor partnerships
  - Limited quality review process, limited need
- Agency partnerships
  - Exposure of agency process, limited need
Data Sharing and Reporting

- Data to be shared
  - To USDOT
  - To all interested parties through public website
  - To project partners and potential partners through proactive outreach activities
- Data sharing updates monthly, quarterly, or annually depending on specific performance measure
- Evaluation team contractors providing all labor, software, and tools necessary to support project evaluation
Next Steps

Site Presenter, Role
Next Steps

 Defining precise timeline and processes for evaluation will be focus of evaluation and deployment team during first year of Phase 2
  □ in collaboration with Independent Evaluator
 Baseline for performance measures to be collected between month 9 and month 15 of Phase 2
 Reporting and publication to begin during year 2 of Phase 2 and continue through project
 Evaluation program for deployment site 1 intended to be sustainable on an ongoing basis. Other deployment sites should provide replicable model for agencies.
Stakeholder Q&A

- Please keep your phone muted
- Please use chat box to ask questions
- Questions will be answered in the order in which they were received
Stay Connected

For more information please contact:

Elina Zlotchenko, ITS JPO
ITS4US Program Manager
Elina.Zlotchenko@dot.gov

Robert Sheehan, ITS JPO
Site COR
Robert.Sheehan@dot.gov

Thomas Craig, CALACT
System Development Lead
thomas@calact.org

Visit the Complete Trip - ITS4US Deployment Program Website and FAQs:
https://its.dot.gov/its4us/
https://www.its.dot.gov/its4us/its4us_faq.htm