



U.S. Department of Transportation

COMPLETE TRIP

ITS4US

The logo for ITS4US, where the number '4' is stylized as a blue and white graphic with a dashed orange line and two red location pins, one at the top and one at the bottom, suggesting a route or journey.

**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

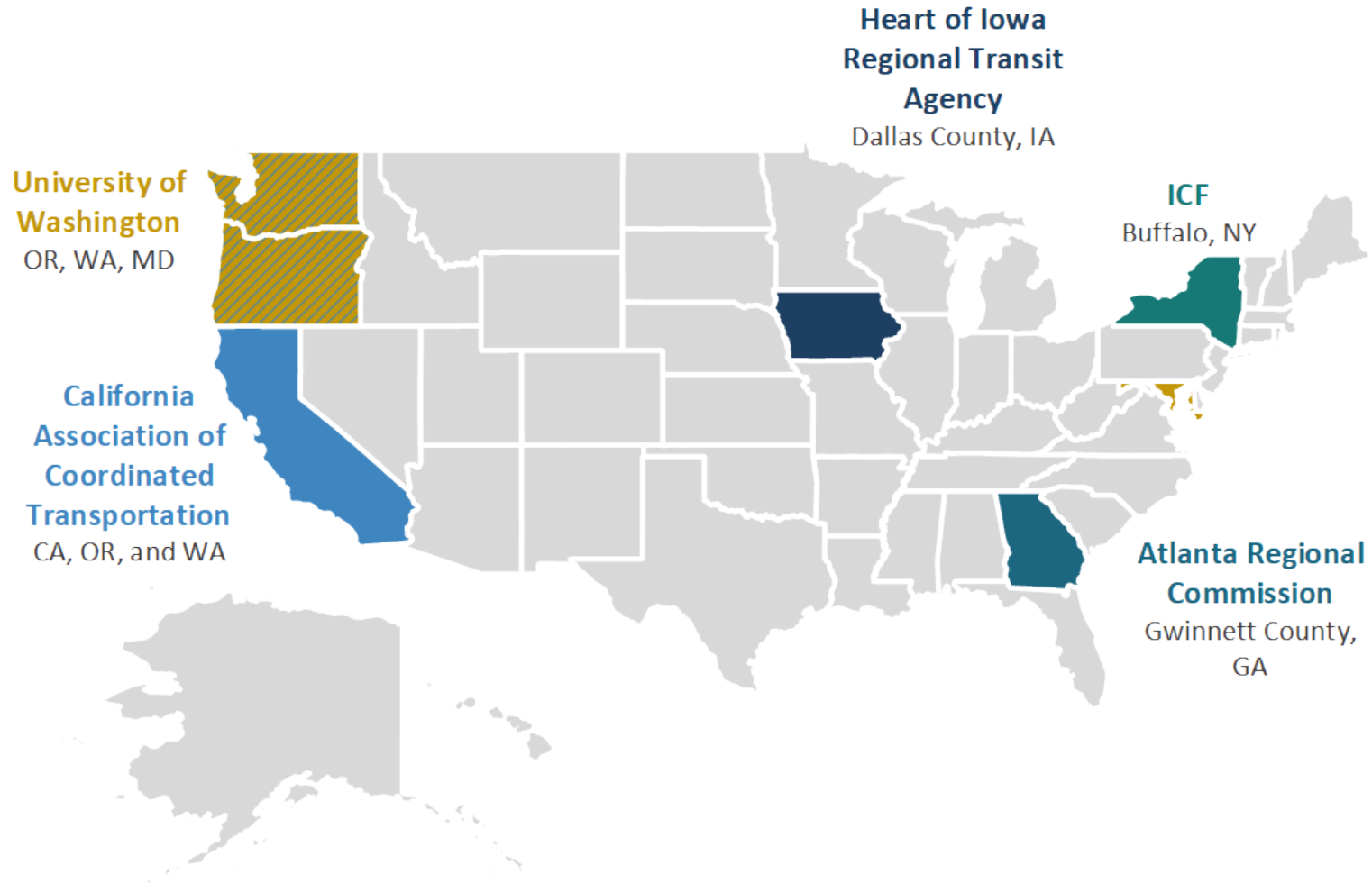


Measure impact of integrated deployments

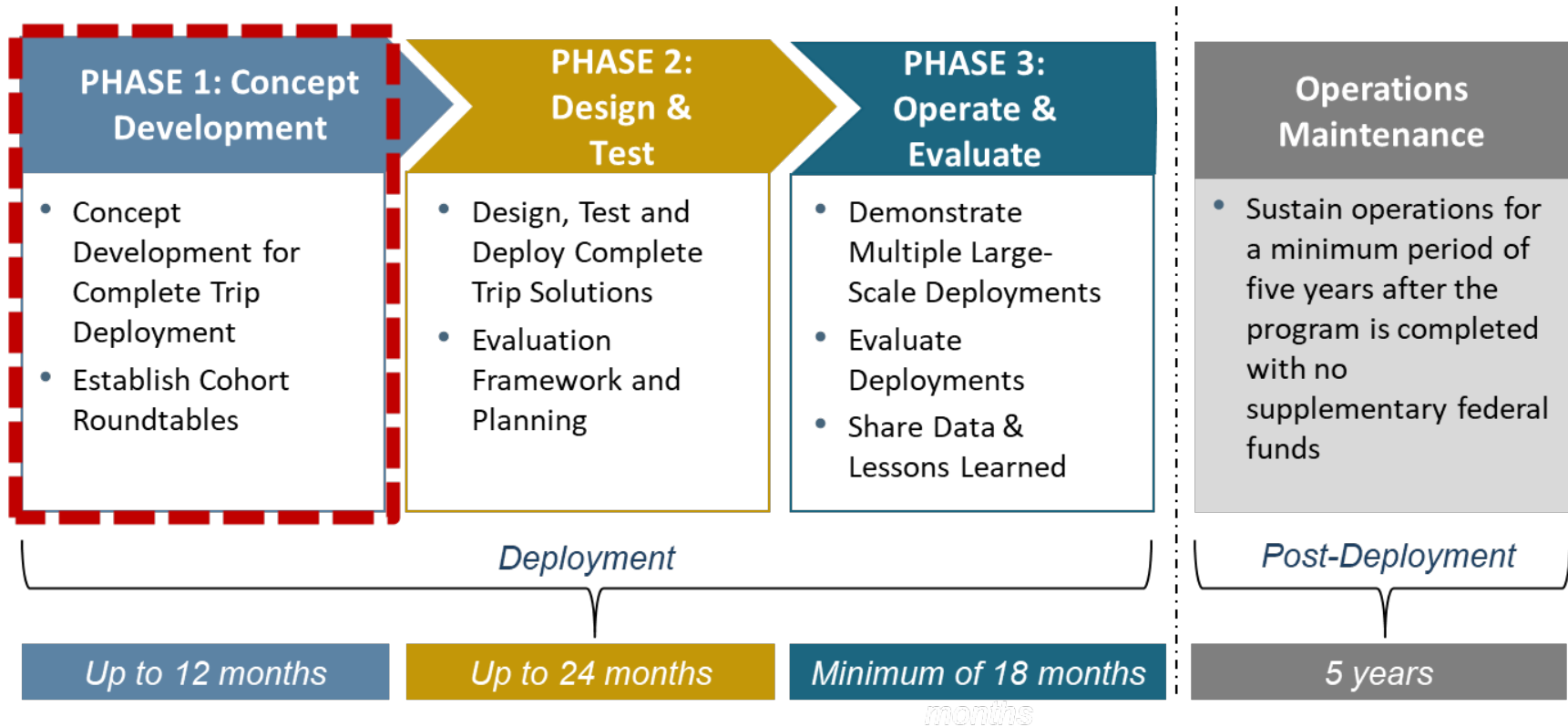


Identify replicable solutions and disseminate lessons learned

Complete Trip Phase 1 Awardees



Deployment Phases



CALACT ITS4US Project Overview

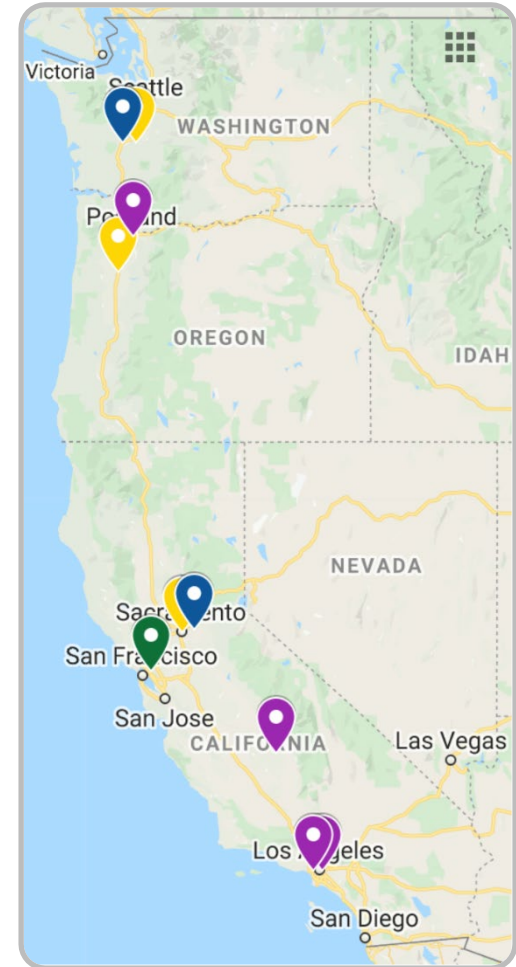
Thomas Craig, System Development Lead

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

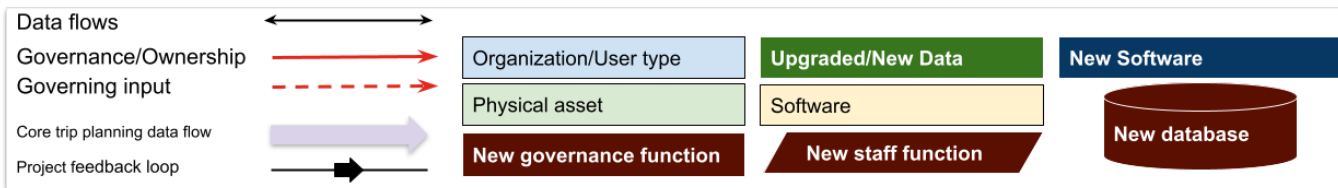
Final list of *required* needs

- 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

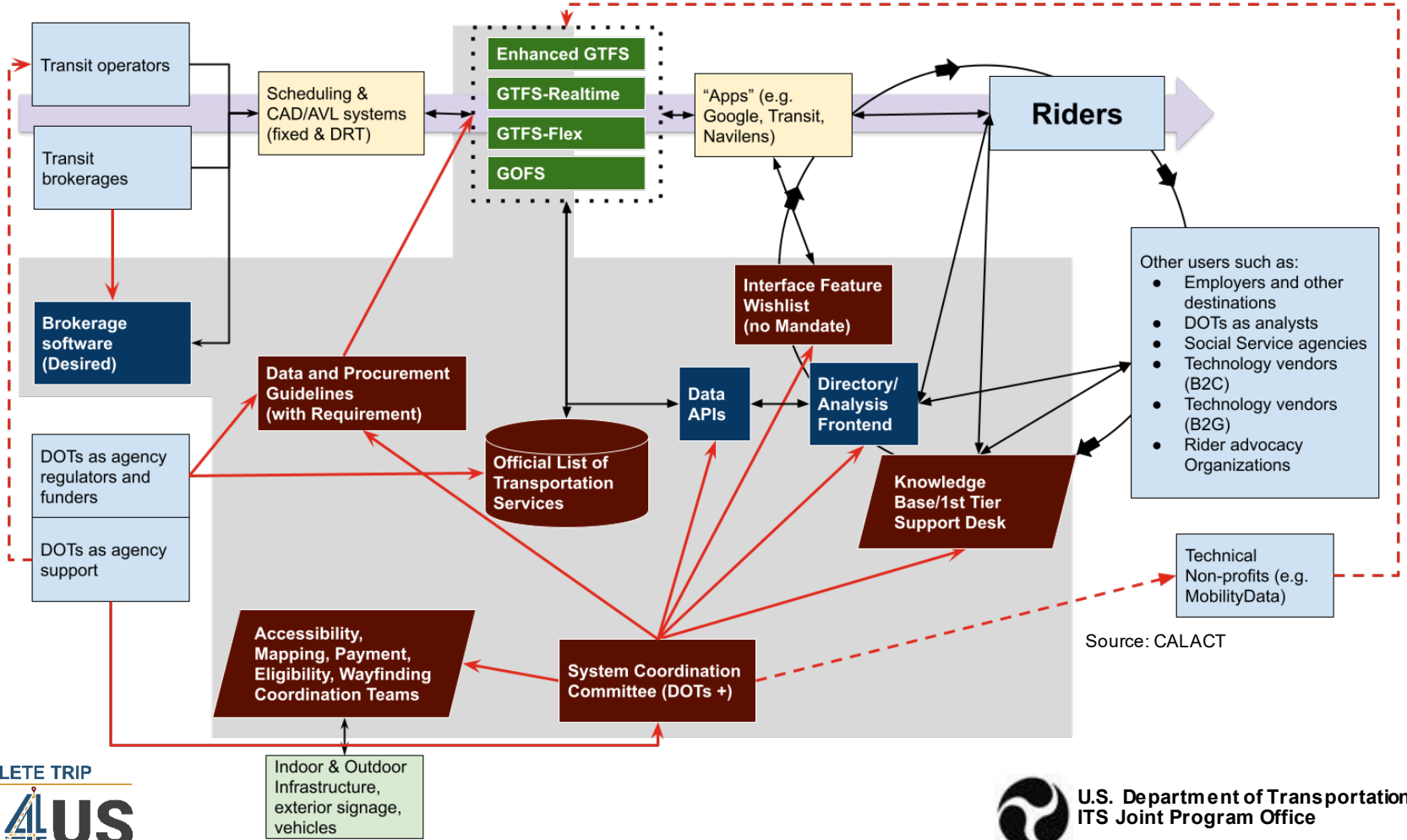
Examples of final user needs

- "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 System



The System
Denotes data flows and components directly engaged by the project.



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

- 3-state region
- Guidelines and APIs

- 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

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