ITS4US Update:

How Engagement and Training Help Your Tech Projects Succeed

Source: iStock

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U.S. Department of Transportation

Intelligent Transportation Systems (ITS) Joint Program Office (JPO)

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Where do you work?

Overview

The ITS JPO's mission is to lead collaborative and innovative intelligent transportation systems (ITS) research and development (R&D), and to advance the implementation of ITS to improve the ***safety*** *and* ***mobility*** *of people and goods.*

Source: USDOT

U.S. DOT's ITS Joint Program Office

The ITS Joint Program Office's (ITS JPO's) role is to coordinate the U.S. DOT's ITS research/development and deployment portfolio with multimodal involvement and support.

Visit the ITS JPO Website: https://its.dot.gov/

Source: USDOT

How We Deliver Value: Full ITS Lifecycle Leadership

Identify Emerging Technologies

- Communications/Spectrum
- Climate Change and Environment
- Artificial Intelligence
- Blockchain & Quantum Computing
- Modeling and Simulation

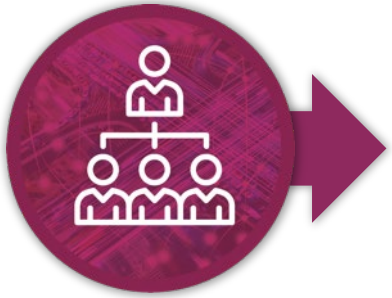
Coordinate and Lead Research

- V2X / Interoperable Connectivity
- Roadway Safety
- Automation
- Cybersecurity
- Data Access/Exchanges

Demonstrate Value

- ITS4US Deployments
- Benefit & Cost Data
- ATTAIN & SMART Grants
- Intersection Safety Challenge
- Decision Support & Analytics

Accelerate Implementation



- Deployment Evaluation
- Professional Capacity Building
- Architecture & Standards
- Communications & Outreach

Leverage Knowledge

Source: USDOT

- Deployment Tracking
- Smart Communities Resource Center
- Technical Assistance
- Cohort Support
- Knowledge Transfer
- Training

Intelligent Transportation Systems (ITS)

“You can’t build your way out of congestion”

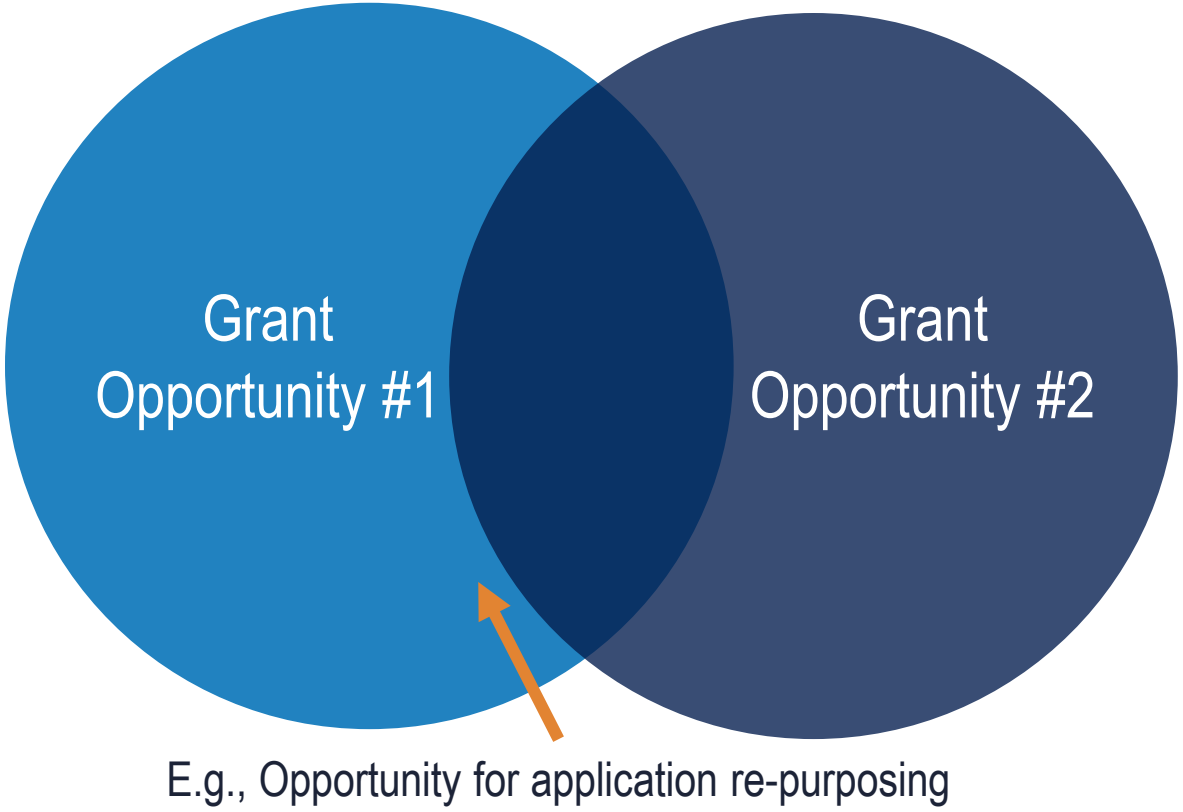
. . .

But you can improve the capabilities of the overall transportation system.

Annual Federal ITS Grants

Grant	Description	Annual Funding
Strengthening Mobility and Revolutionizing Transportation (SMART)	Provides grants to eligible public sector agencies to conduct demonstration projects focused on advanced smart community technologies and systems in order to improve transportation efficiency and safety.	$100 million appropriated annually for fiscal years 2022-2026
Advanced Transportation Technology and Innovation (ATTAIN)	Provides funding to deploy, install, and operate advanced transportation technologies to improve safety, mobility, efficiency, system performance, intermodal connectivity, and infrastructure return on investment.	$60 million annually
Safe Streets for All (SS4A)	Focuses on comprehensive safety action planning and implementing those plans and is inclusive of all types of roadway safety interventions across the Safe System Approach (SSA).	$1 billion/year over 5 years

Reminder: Go for the Grant (or Other Funding Opportunity)



ITS Grants, Challenges, & Deployment Programs

INTERSECTION SAFETY CHALLENGE

SMART

ATTAIN

ITS4US

IT'S TRANSPORTATION FOR ALL OF US

S | S 4 | A

V2X Accelerator

Source: USDOT

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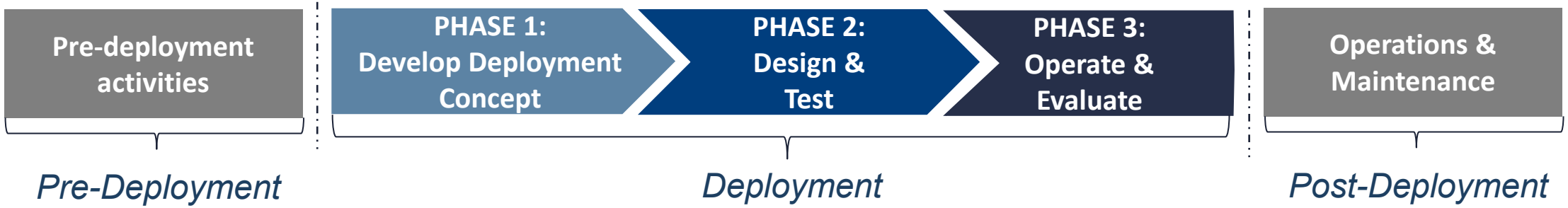
Have you ever applied for a Fed Challenge, or Deployment?

JPO Deployment Program Fundamental Elements

- Apply research to real-world operations
- Spur high-impact integrated ITS deployments nationwide
- Deploy solutions that meet local needs
- Measure impacts
- Disseminate resources to future deployers

ITS JPO Deployment Program Design & Fundamental Elements

- Multiple awards supports diversity in geography and technology implementation
- Phased design with decision gates ensures successful deployments
- Collaborative design fosters cooperation between deployment sites



Source: USDOT

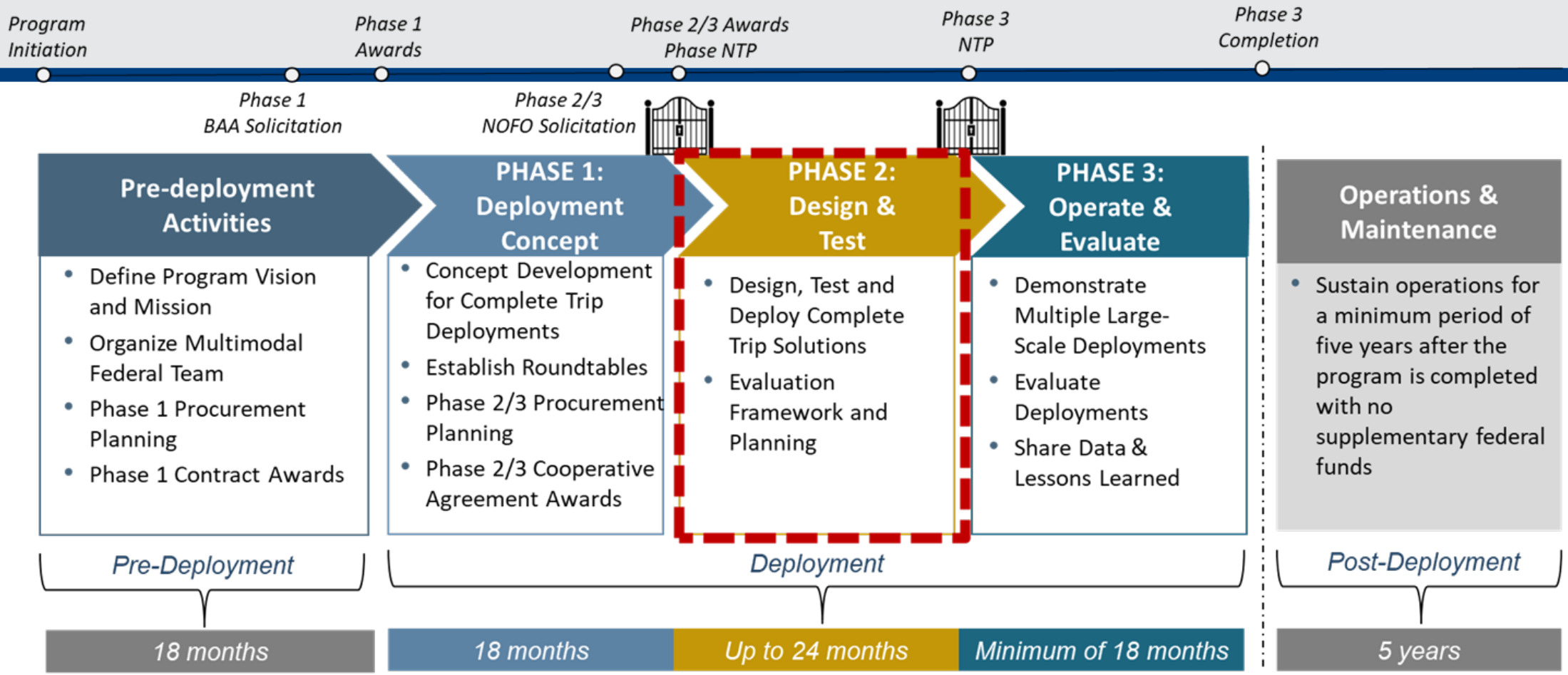
ITS4US Program Overview

- 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

ITS4US
IT'S TRANSPORTATION FOR ALL OF US

Vision: Innovative and integrated complete trip deployments to support seamless travel for all users across all modes, regardless of location, income, or disability

Deployment Phases



ITS4US Deployment Program

Heart of Iowa Regional Transit Agency (HIRTA) – Dallas County, IA

Integrated health appointment and mobility service system

Georgia Department of Transportation (GDOT) – Gwinnett County, GA

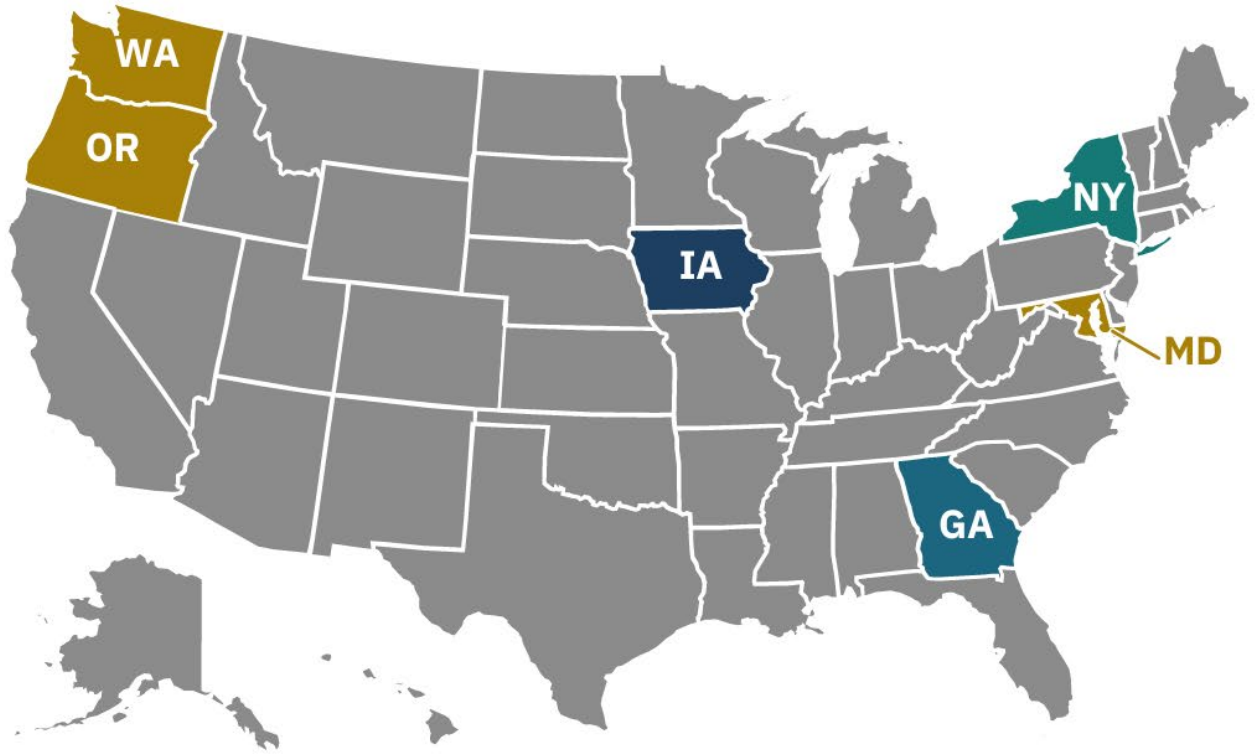
Safe trips in a connected transportation network

University of Washington (UW) – OR, WA, MD

Data and software promoting equitable travel opportunities

Niagara Frontier Transportation Authority (NFTA) – Buffalo, NY

Personalized, multi-modal trip planning, on-demand transportation and wayfinding



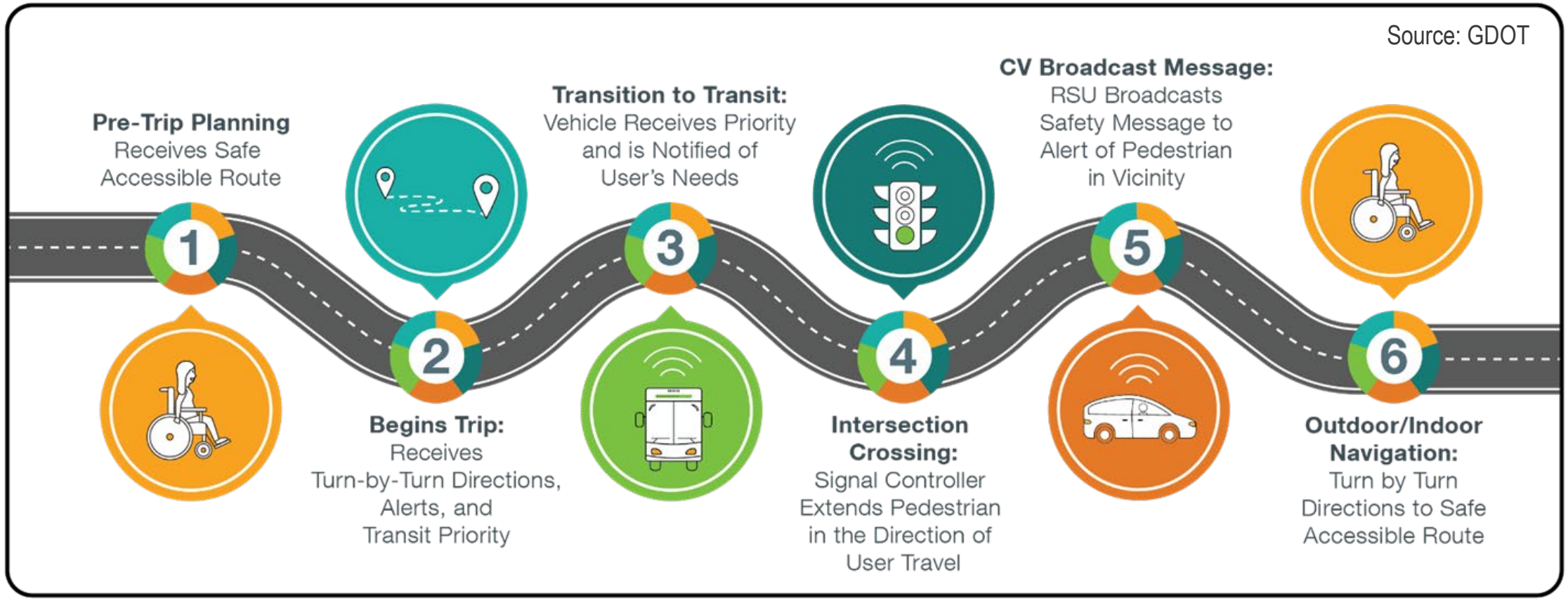
Source: USDOT

Safe Trips in a Connected Transportation Network (ST-CTN)

- Gwinnett County, GA
- Key Technologies:
  - Connected Vehicle Messaging
  - Transit Signal Priority
  - Machine Learning
  - Predictive Analytics
  - Mobile Application (G-MAP)

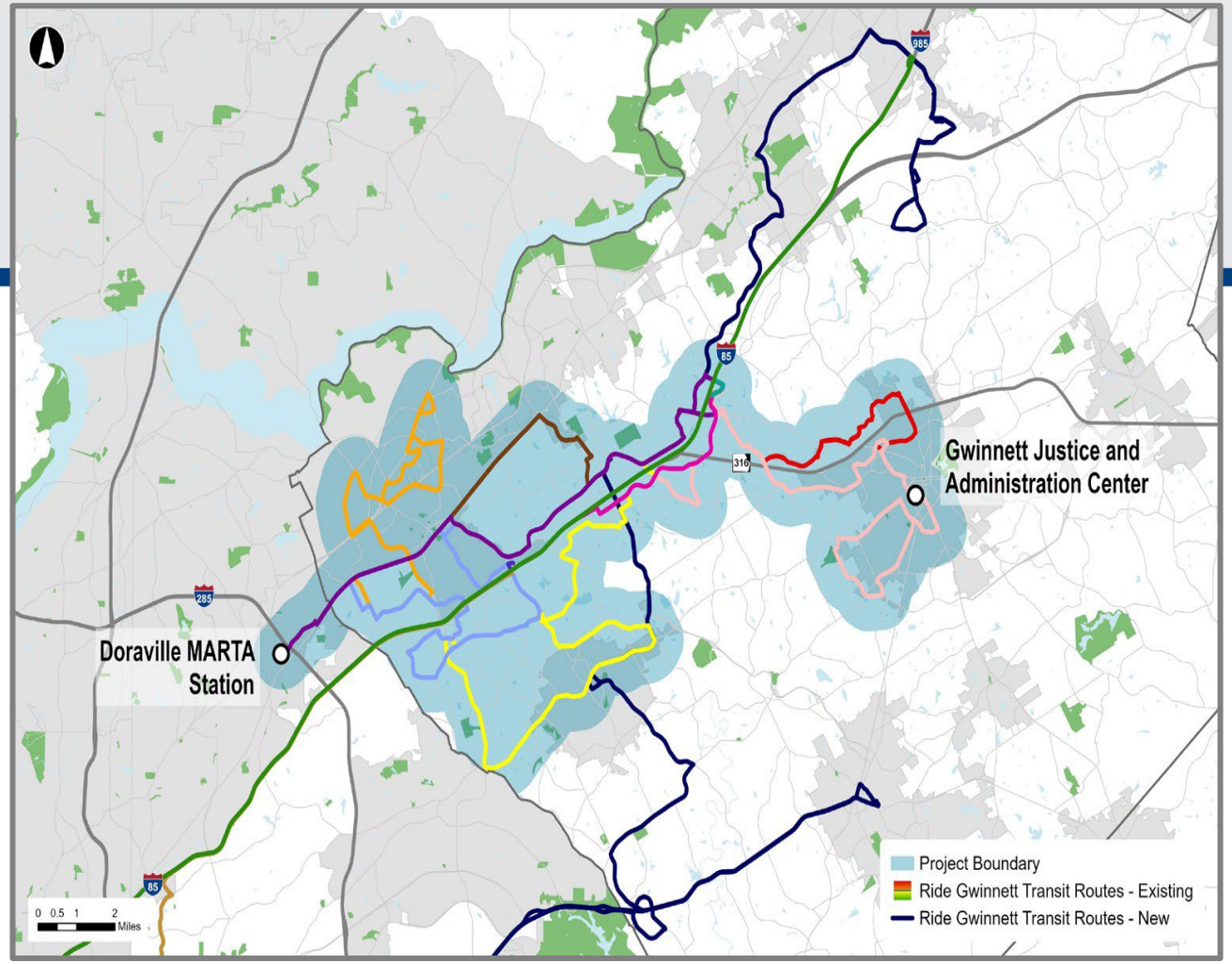
Source: iStock

Georgia Mobility and Accessibility Planner (G-MAP)



ST-CTN Current Status

- **G-MAP development**
  - Completed Release 2 (of 5)
  - Continue to work with Stakeholders to gain feedback on product design
- **Gwinnett County deployment**
  - Enhanced pedestrian inventory 95% complete



Source: GDOT

ST-CTN Outreach & Engagement

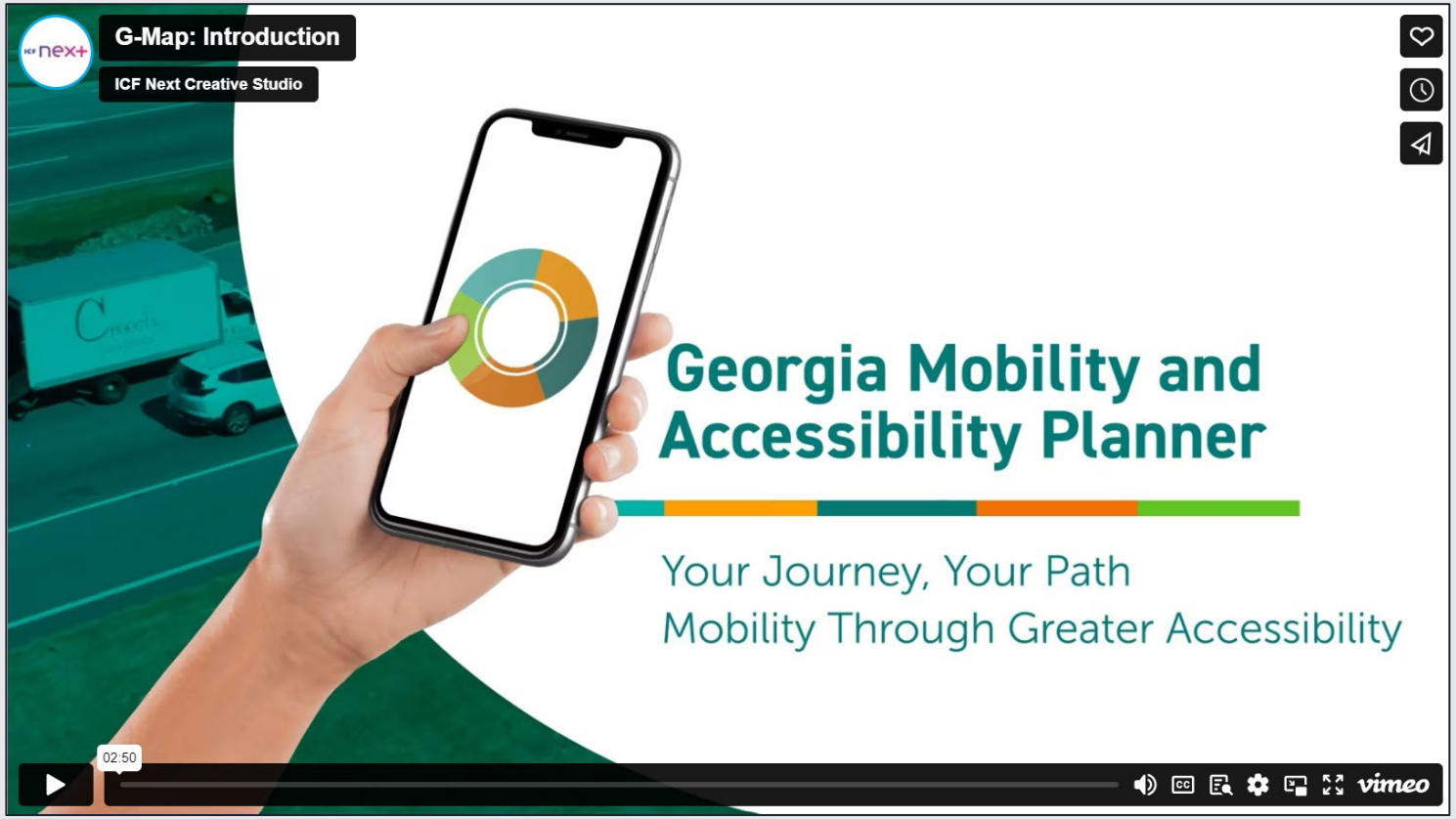
Stakeholders

- ARC Aging & Independence Services
- Georgia Tech Office of Disability Services
- Gwinnett Place CID
- GA Department of Education
- MARTA Accessibility Council Board
- Verida (formerly Southeastrans)
- Vocational Rehab Gwinnett County Schools
- Bobby Dodd Institute
- The Exceptional Foundation of Atlanta
- Spectrum Autism Support Group
- GA Council on Developmental Disabilities
- Bennett's Place
- The Arc Georgia
- Creative Enterprises
- GA Department of Behavioral Health and Developmental Disabilities

Training Partners

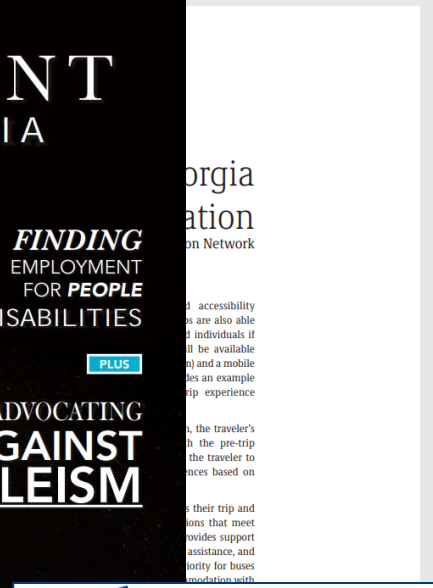
- Tools for Life
- disABILITY Link
- GA Vocational Rehab
- GA Department of Health
- Center for Pan Asian Community Services

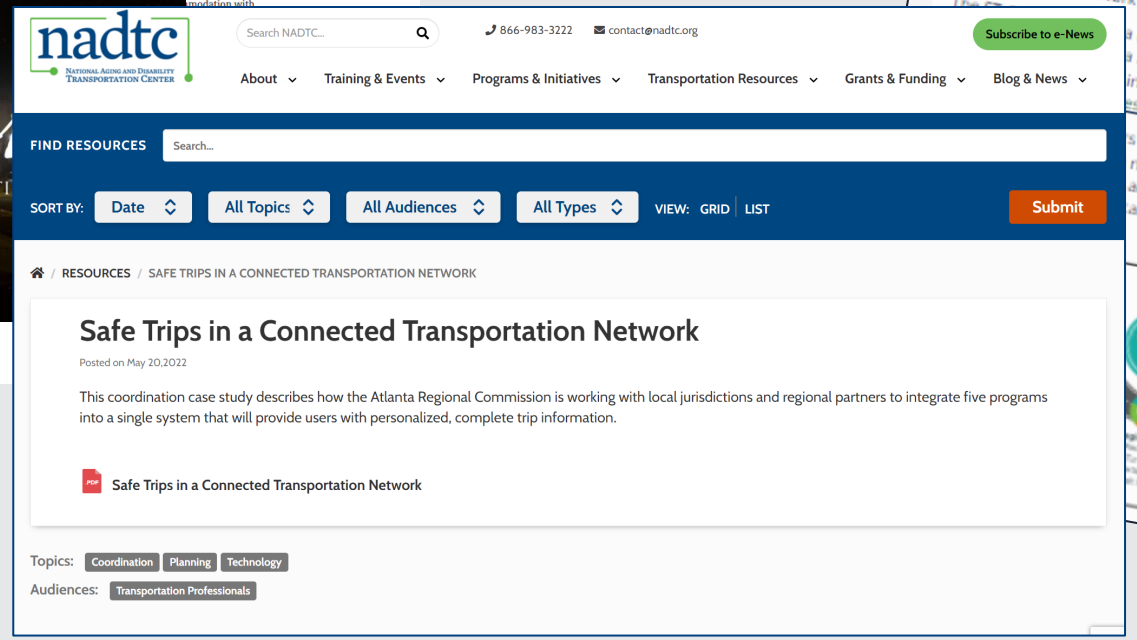
Deployment Website: https://georgia-map.com/



G-MAP Video

Articles & Newsletters





ST-CN Lessons Learned and Challenges

- **Challenges Faced**
  - Contractual Review Time
  - Integration Dependencies
- **Lessons Learned**
  - Hybrid Systems Engineering / Agile Process
  - Configuration Management and Traceability
  - Contracting and legal review of non-traditional deployments takes more time

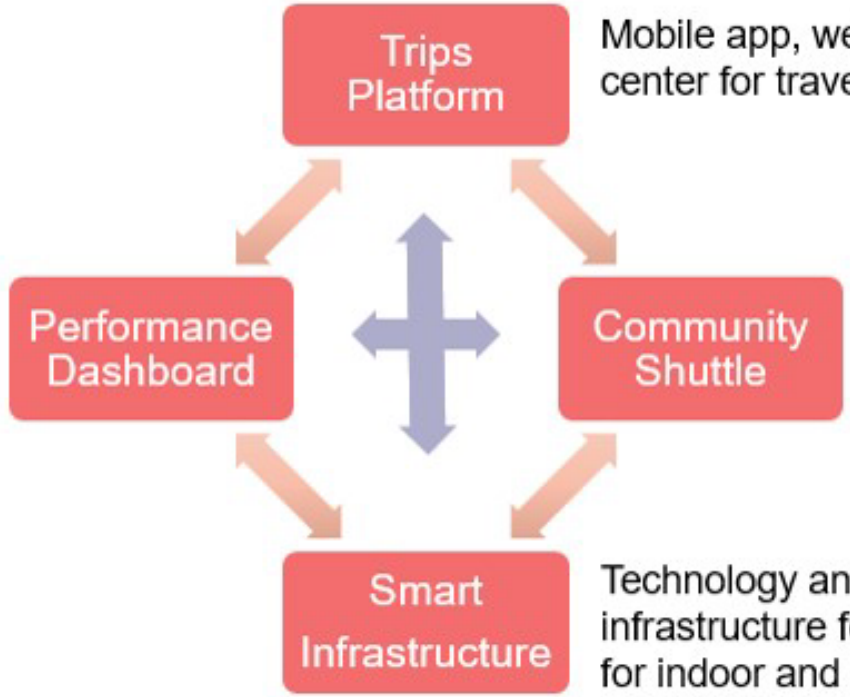
Buffalo All Access

- Buffalo, NY
- Key Technologies:
  - Indoor/Outdoor Wayfinding
  - Smart Signalized Intersections
  - On-Demand Shuttles, including autonomous
  - Door-to-Door travel planning app (Buffalo All Access App)

BUFFALLO ACCESS
IN AND AROUND BNMC

Buffalo All Access Overview

BUFFALLO ACCESS
IN AND AROUND BNMC



Mobile app, website, and call center for travelers to plan trips.

Measures and presents the performance of the system.

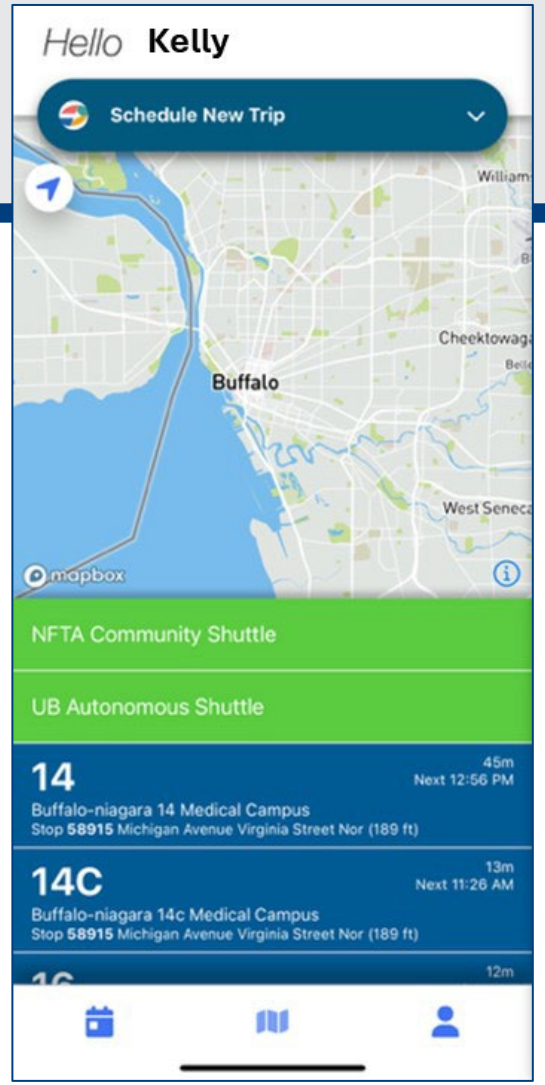
Shuttle system providing scheduled and on-demand connections to Metro Rail, BNMC, and surrounding neighborhoods.

Technology and supporting infrastructure for wayfinding for indoor and outdoor orientation, navigation and destination confirmation.

Source: Buffalo

Buffalo Project Status

- Team has recently completed Release 3 of the All Access App
- Smart Infrastructure installations to support outdoor and indoor navigation nearing completion
- Began Beta testing in May 2024



BUFFALLO ACCESS
IN AND AROUND BNMC

Source: Buffalo

Buffalo All Access Outreach - Engagement

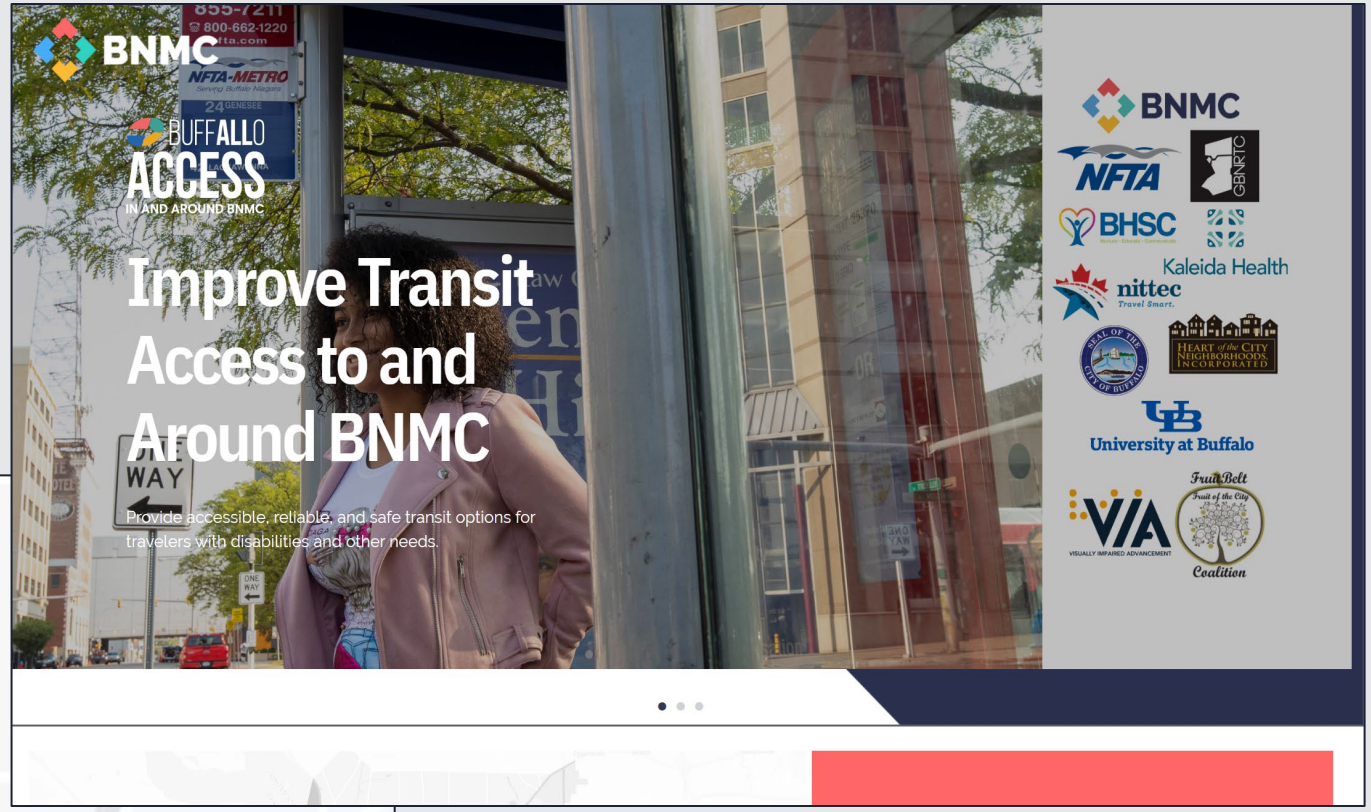
Local Partners

- BNMC
- Greater Buffalo Niagara Regional Transportation Council (GBNRTC)
- NITTEC
- University at Buffalo (UB),
- City of Buffalo
- Kaleida Health
- Buffalo Hearing and Speech Center
- Visually Impaired Advancement (VIA)
- Heart of the City Neighborhoods Inc.
- FruitBelt Coalition, Inc. aka Fruit of the City
- Consultant partners on the project include ICF, RSG, ETCH, and the Open Doors Organization

Potential System Users

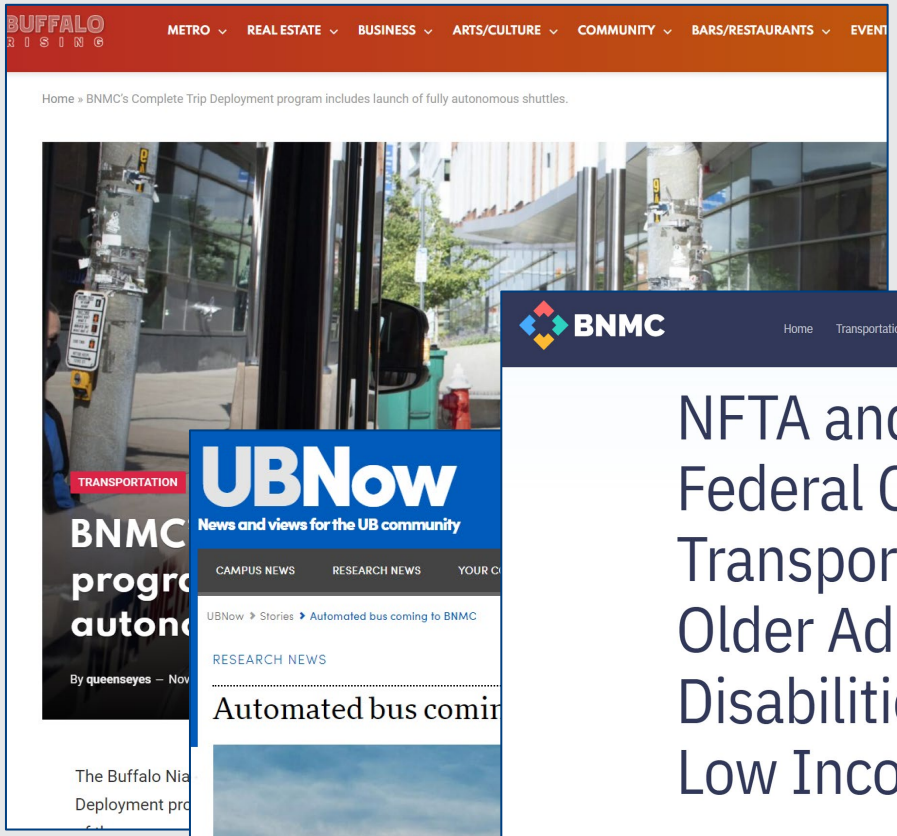
- Persons with Disability (PWD)
- Low Income
- Older Adults
- Low English Proficiency (LEP)
- Neighborhood Residents
- BNMC Employees, Visitors, & Patients
- Caregivers

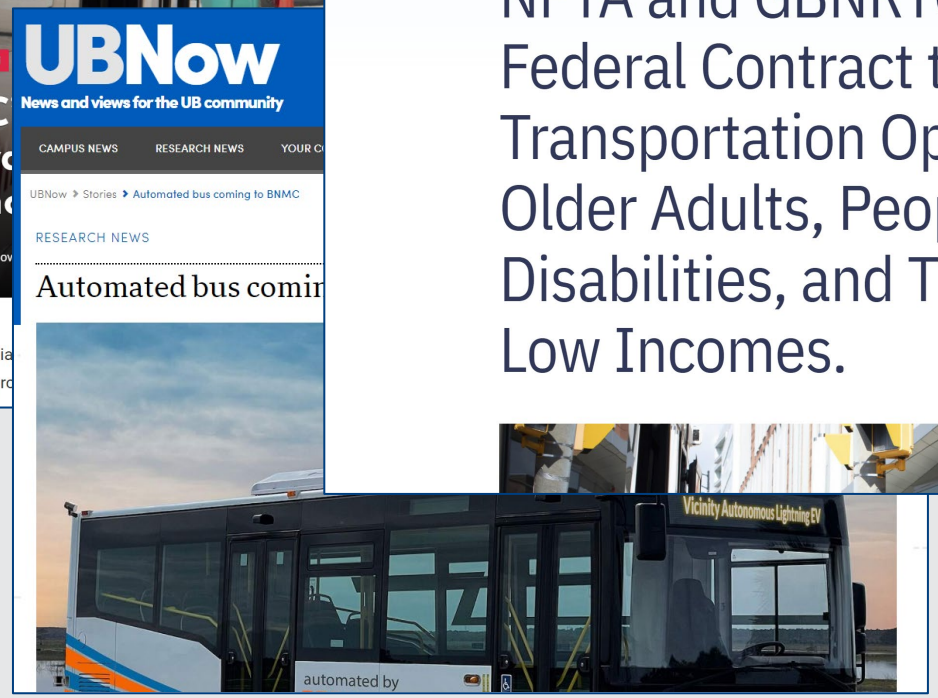
Deployment Website:
https://bnmc.org/allaccess/

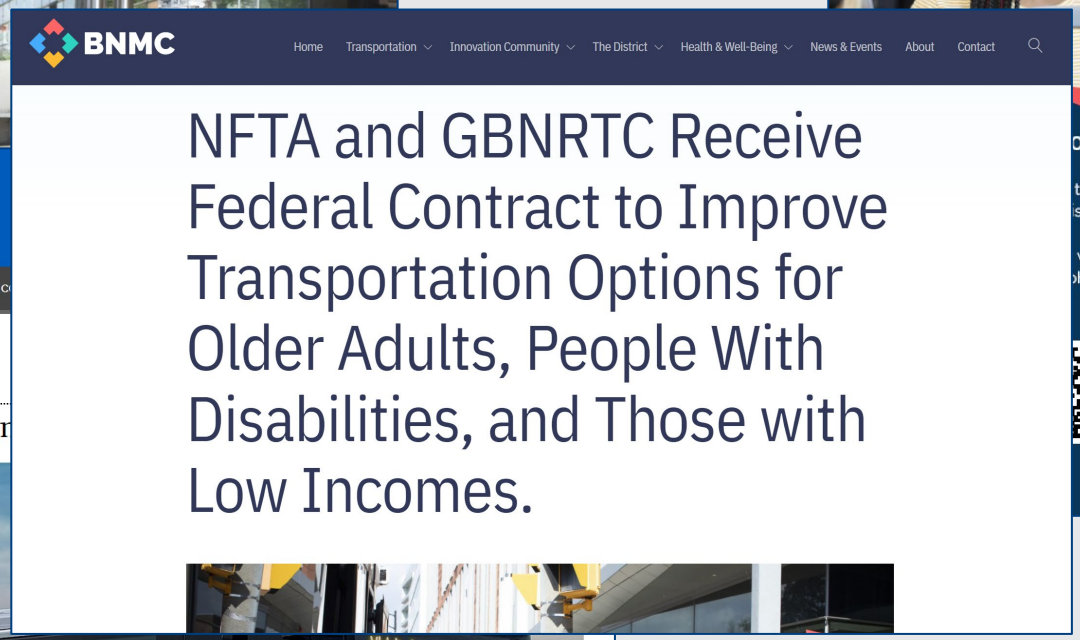


◀ Buffalo All Access Video

Articles & Newsletters







Informational Materials

Buffalo All Access Lessons Learned and Challenges

- **Challenges:**
  - Lengthy onboarding and procurement timelines
  - Procurement requirements for qualified vendors
  - Multi-projects (multi-phase, multi-system and multi-modal) projects take time!
- **Lessons Learned:**
  - Early and regular stakeholder engagement is needed in developing and deploying a multi-system, multi-modal system.
  - Hybrid System Engineering/ Agile is helpful to accommodate active stakeholder engagement.
  - A balanced engagement approach with stakeholders

Transportation Data Equity Initiative

- King & Snohomish County, WA
- Multnomah & Colombia County, OR
- Harford & Baltimore County, MD
- Key Technologies:
  - Data Standards (OpenSidewalks, GTFS-Flex, GTFS-Pathways)
  - Open-Source Data Collection
  - Data Sharing System

TDEI Overview

Coordinate collaborative releases of data standards

- OpenSidewalks
- GTFS-Pathways
- GTFS-Flex

Publish and maintain interoperable data infrastructure

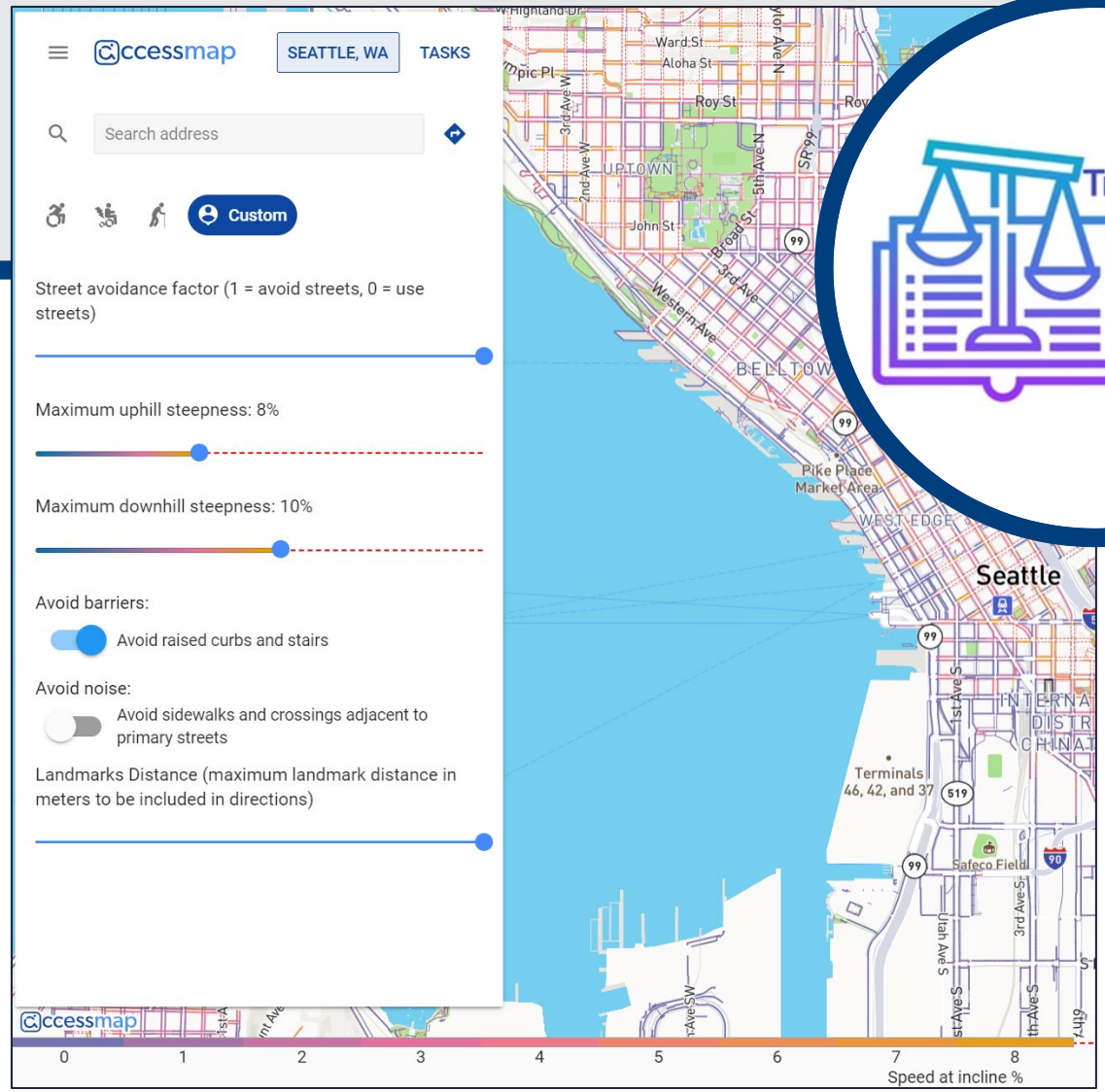
- Data Collection
- Data Vetting
- Data Provisioning Services

Deploy and sustain three accessible mobility applications

- Multimodal AccessMap
- Audiom
- Walksheds

TDEI Status

- TDEI operational staging system, ready for logins
- Deployments of AccessMap.app and OpenSidewalks collection tools
- Tool Ecosystem supports full data life cycle, including collection, vetting, releases, & community edits



Transportation Data Equity
an initiative by TCAT & UW TRAC

TDEI Outreach - Engagement

Local Partners

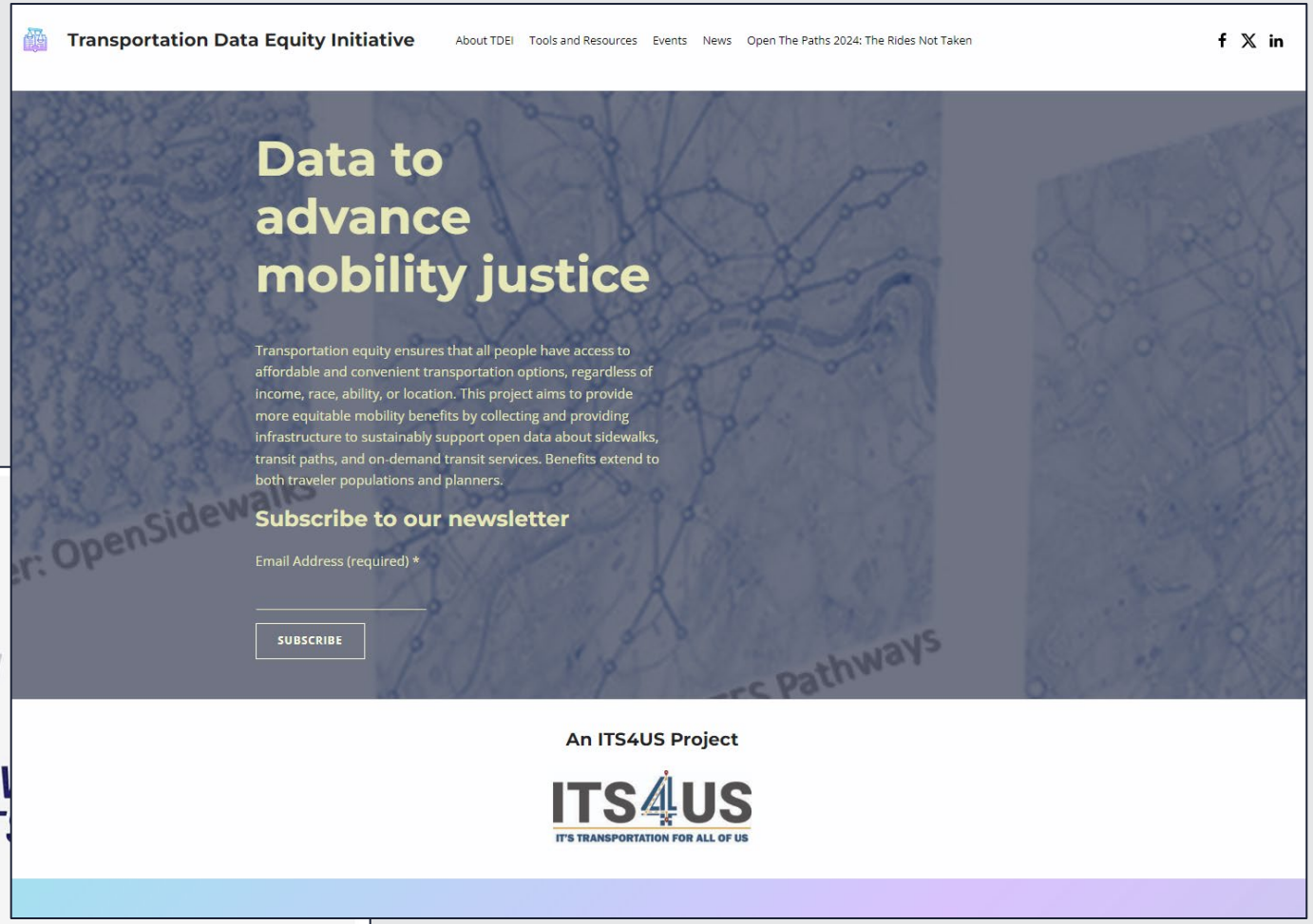
- Taskar Center for Accessible Technology
- Maryland DOT
- Oregon DOT
- Washington DOT
- Sound Transit
- Hopelink
- Access Transportation
- Studiopacifica
- Mobility Data
- Meta
- Google
- Microsoft

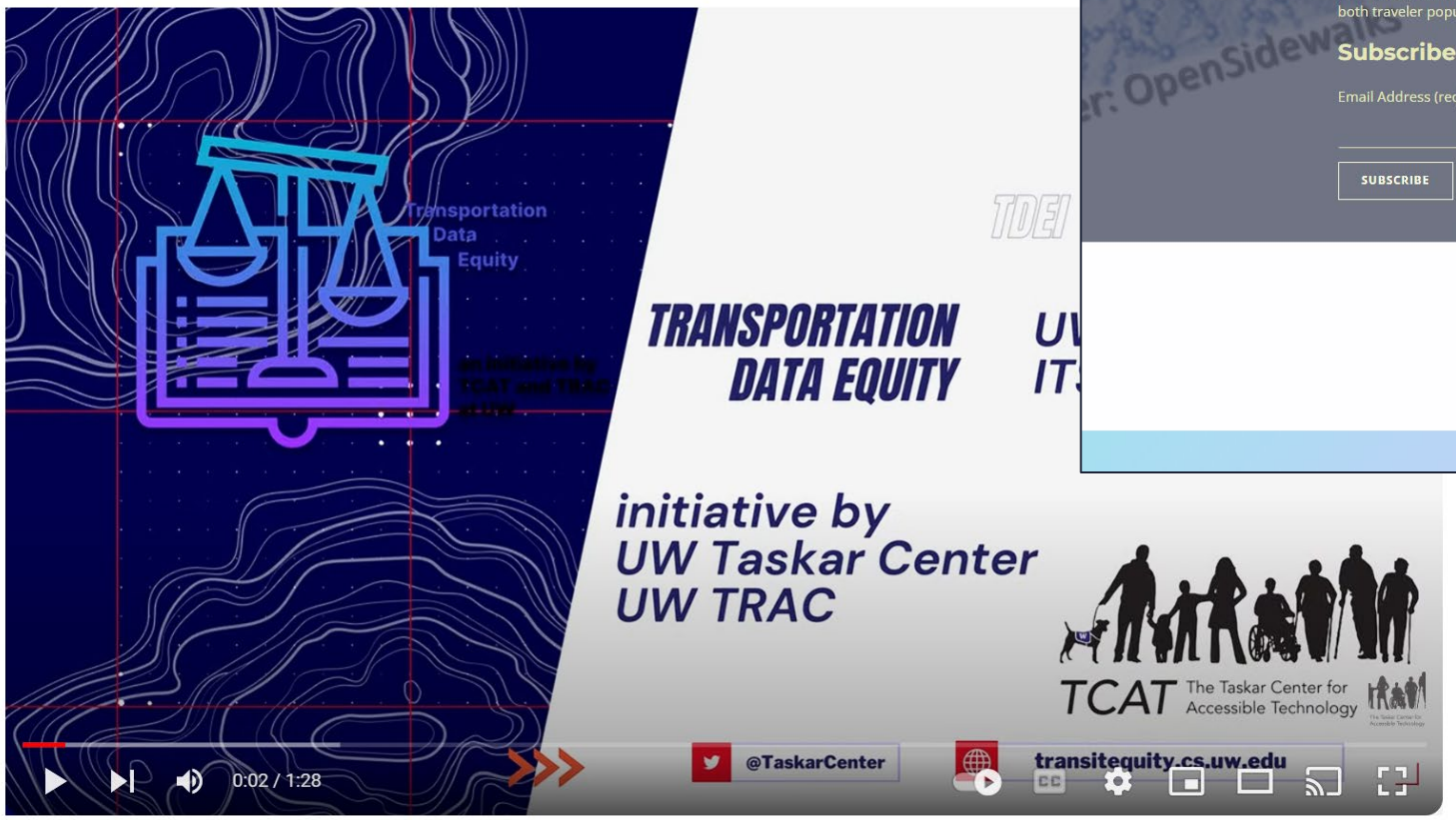
Stakeholder Groups

- Local community group to collect neighborhood or city data
- Data Specification Advisory Group 1: Transit stations, pathways and sidewalks
- Data Specification Advisory Group 2: on-demand transportation data standard
- Participatory design, testing, evaluation, and validation groups
- Ethical data science special interest group

Deployment Website:

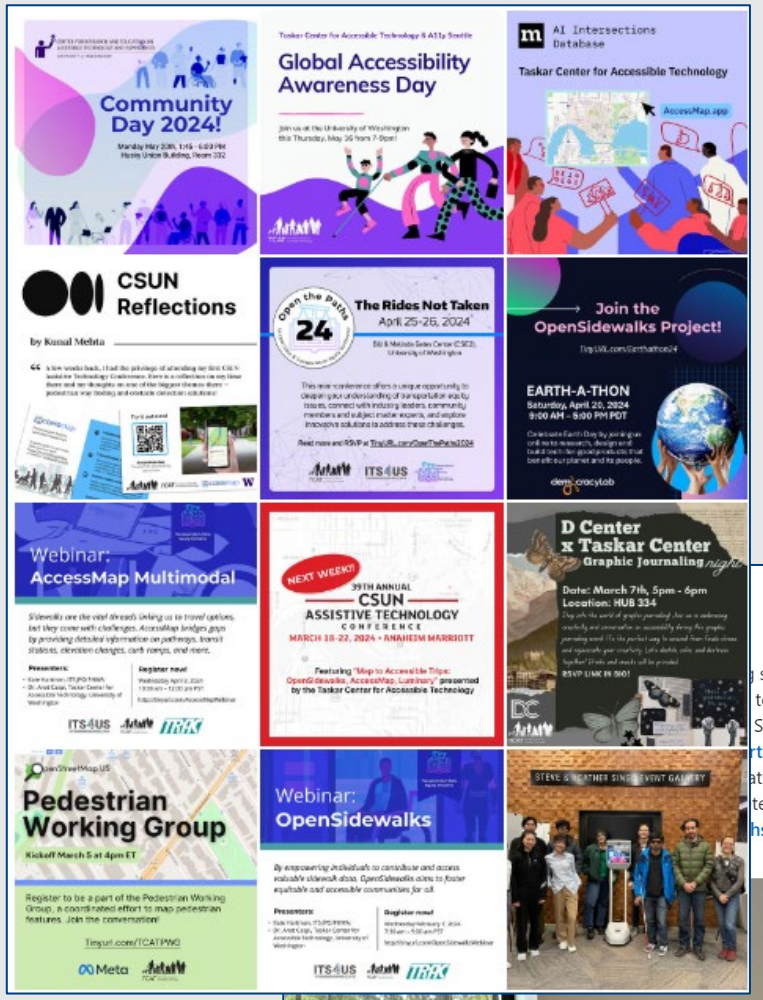
https://transitequity.cs.washington.edu/

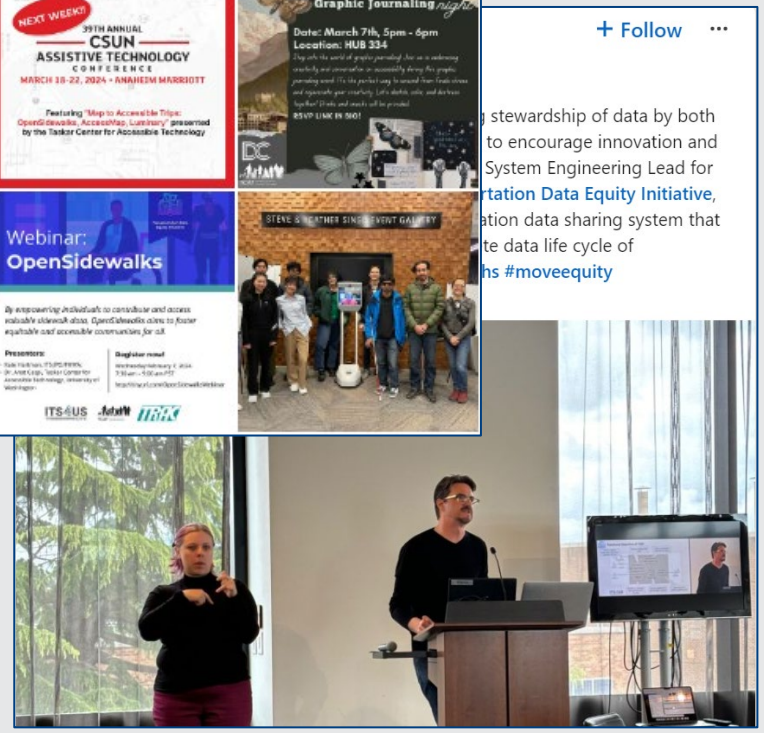


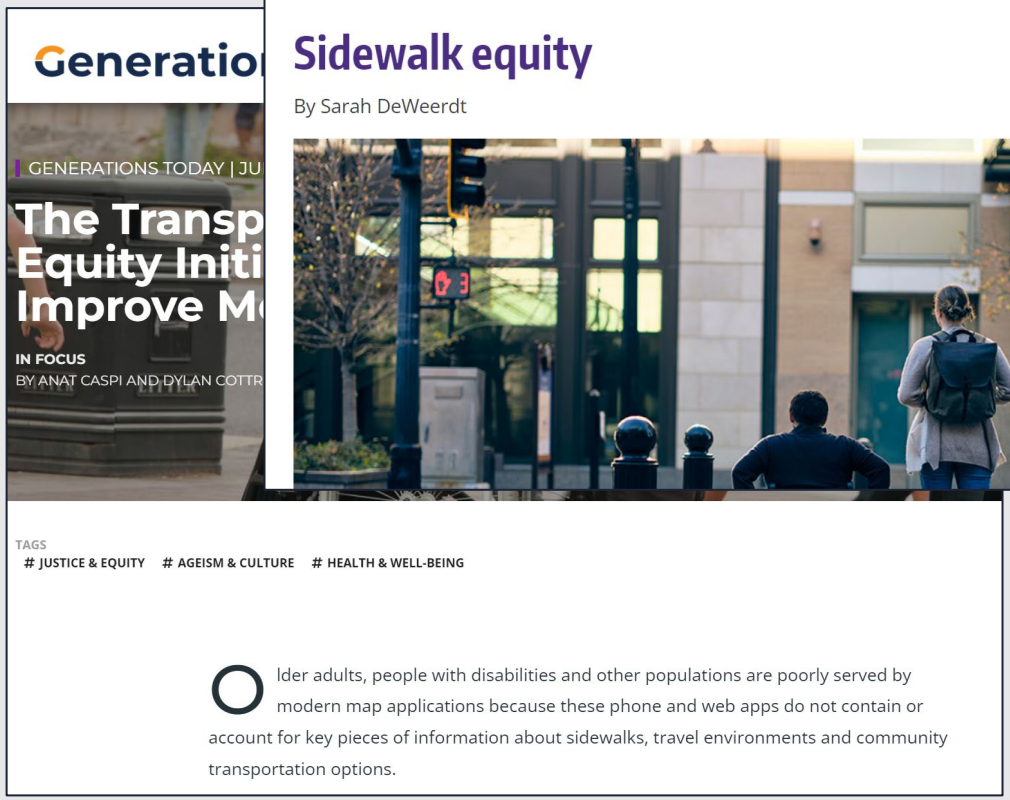


◀ TDEI Video

Social Media







Articles & Newsletters

TDEI Lessons Learned and Challenges

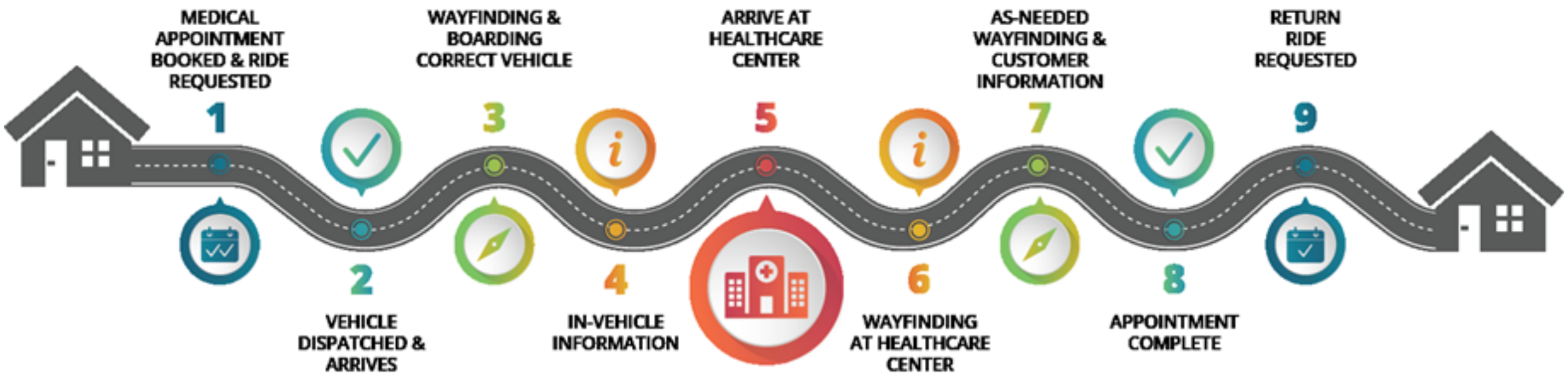
- **Challenges:**
  - Community vetting is laborious and expensive
  - Never underestimate institutional hurdles!
  - No universal definition of data quality
- **Lessons Learned:**
  - Community engagement drives and motivates progress
  - Start contract negotiants early
  - Technology innovation can be driven through data standards and single data endpoints

Health Connector for the Most Vulnerable

- Dallas County, Iowa
- Key Technologies:
  - Trip planning, booking and management
  - Middleware for coordination with healthcare providers and Medicaid brokers
  - Information and wayfinding

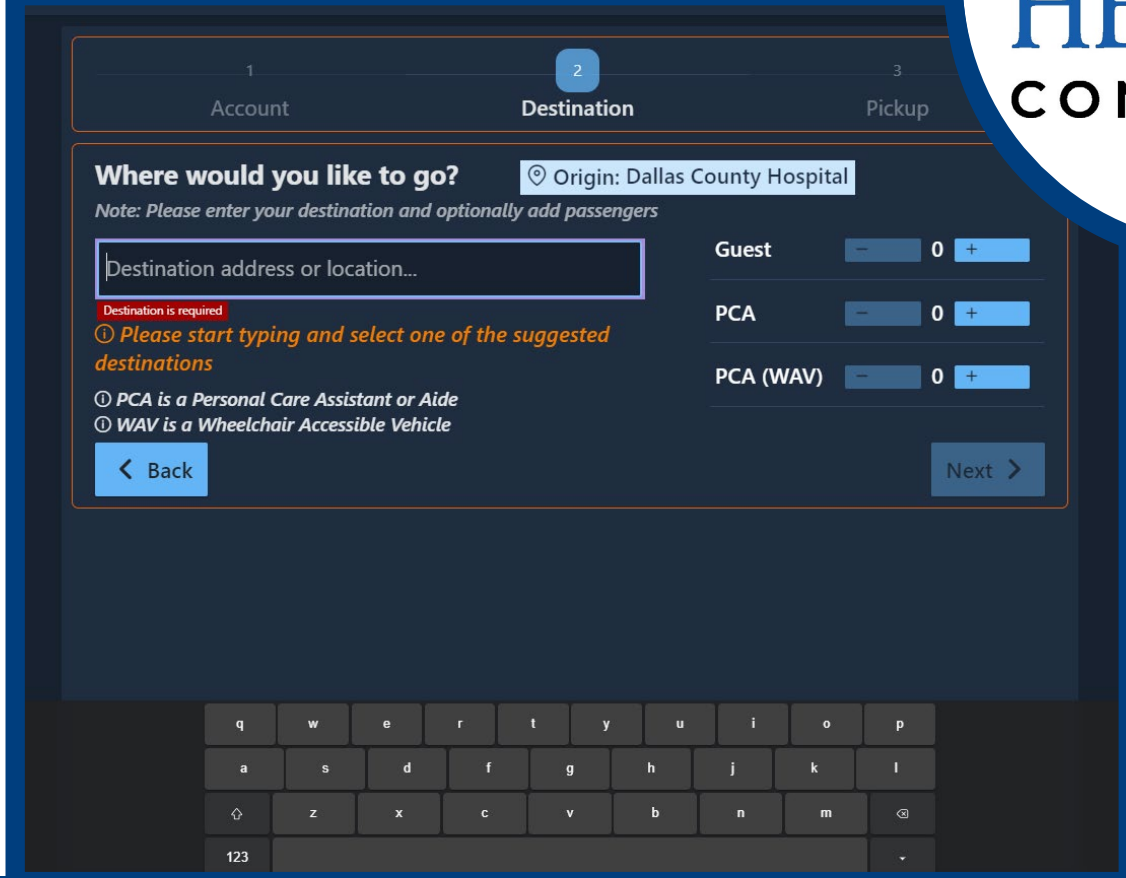
Source: iStock

Health Connector Overview



Health Connector Current Status

- Entering User Acceptance Testing
- Finalizing recruitment materials and training resources
- Finalizing as-built documentation



Source: HIRTA

Health Connector Outreach - Engagement

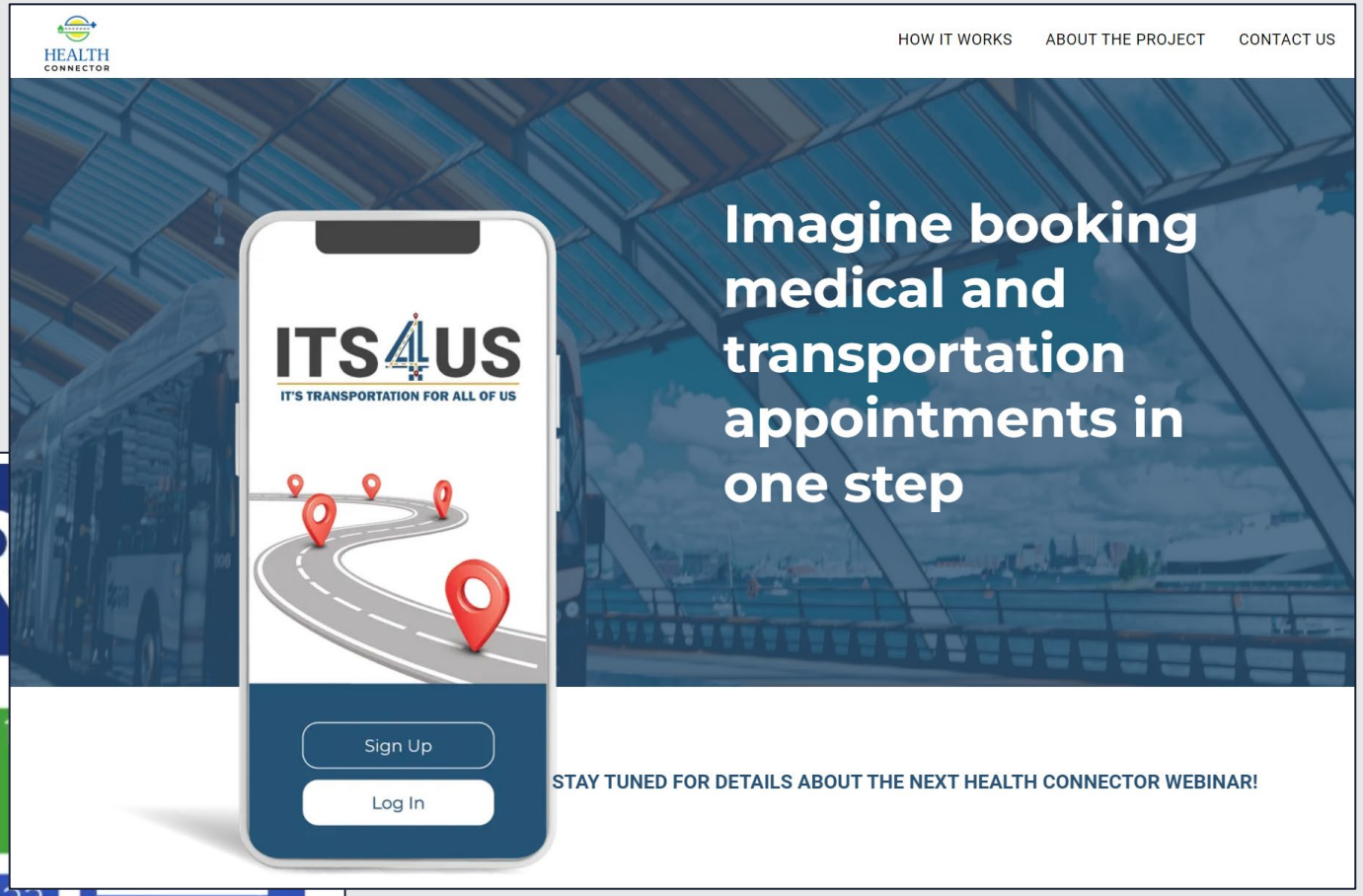
Local Partners

- Dallas County Health Department
- Community Transportation Association of America (CTAA)
- Arcadis IBI Group
- Capture Management Solutions
- flexlynqs

Local Stakeholders

- Dallas County Hospital
- Cancer Action Network
- VA
- Iowa's Developmental Disabilities Council
- Healthcare systems
- Iowa Refugee Services
- Aging Resources
- Epilepsy Foundation of Iowa
- Iowa Transportation Coordination Committee

Deployment Website:
https://transithealthconnector.org/



◀ **Health Connector Video**

Stakeholder Partnership Packets

HIRTA's Health Connector

AN INCLUSIVE MOBILITY EXPERIENCE FROM BEGINNING TO END

What is Health Connector?

Heart of Iowa Regional Transit Agency (HIRTA), in partnership with Arcadis IBI Group, Community Transportation Association of America, Dallas County Health Department, and Capture Management Solutions were successful in securing funding from the U.S. Department of Transportation to develop mobility solutions for our residents to access health services in Dallas County.

This will enable users to:
Schedule and manage medical appointments and transportation services at the same time.

This will provide the following:
Enhanced access to healthcare options for all travelers in Dallas County, Iowa with a specific **focus on people with disabilities and other underserved communities**.

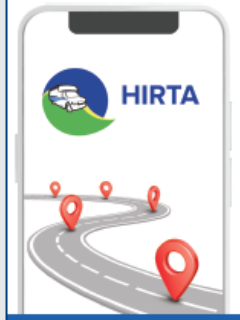
IMAGINE IF YOU COULD BOOK YOUR
MEDICAL APPOINTMENT + TRANSPORTATION
AT THE SAME TIME

No smartphone? No problem!

You can phone one number to do the same thing.

39% of survey respondents cited missing at least one healthcare appointment due to the lack of available transportation options.

Underserved populations face barriers such as a lack of information on transportation options to access healthcare, clinical services, or accommodations available at the facility being visited, information in accessible formats, the ability to locate the vehicle or destination facility, and other issues.



STEP 1 Book medical appointment. Request ride.

STEP 2 Board correct vehicle.

STEP 3 Arrive at healthcare center and easily navigate to correct area.

STEP 4 Complete appointment and request return ride, including stops needed along the way.

STEP 5 Board the correct vehicle and complete return trip.

The Health Connector solution seeks to engage a broad coalition of community stakeholders and industry partners to understand transportation barriers to healthcare in Dallas County and explore how emerging technologies can address those.

HIRTA HEALTH CONNECTO

ITS4US Project

Prepared for:
UnityPoint

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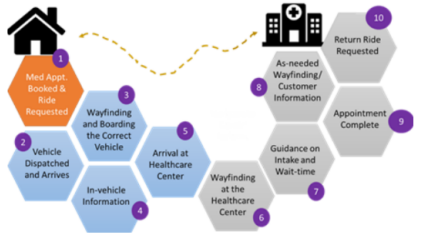
Partnership with UnityPoint

This figure provides an overview of how Health Connector will work generally, but the specific experience at UnityPoint will depend on how involved UnityPoint wants to be in the pilot project. At a minimum, UnityPoint patients will be able to register to use Health Connector and will benefit from having access to the Health Connector trip planning & booking app, extended hours of transportation service for healthcare related trips, and on-demand service for return trips and discharge.



If UnityPoint staff are interested in integrating transportation planning into their workflow, staff can book transportation at the same time that the appointment is booked, can order rides for return trips or discharges, can make sure that ordered rides include stops to fill prescriptions, and more.

If UnityPoint is interested in working with NaviLens, our wayfinding partner, patients will have extra support in navigating to and through the facility, reducing appointment delays and improving patient experience navigating UnityPoint. These benefits will be available to all UnityPoint patients, even those who do not use Health Connector for their transportation.

Next Steps

We would value the chance to talk with you to:

- Better understand some of your key pain points related to patient transportation, including patient demographic factors that stand out as particularly relevant.
- Discuss the level of interest you have in UnityPoint participating in the different components of Health Connector.
- Discuss opportunities for measuring the impact of Health Connector for your facility and your patients – to help improve the program and support future efforts to sustain funding.

HIRTA expects to have the Health Connector software vendor selected by the beginning of November 2022. Health Connector is planned to be launched in early 2023.

If UnityPoint is interested in actively using Health Connector, the HIRTA team is committed to providing training and support for UnityPoint staff and to providing on-going updates about program progress and evaluation.

Informational Materials

Health Connector Challenges and Lessons Learned

- **Challenges Faced:**
  - Stakeholder coordination
    - Securing partners with limited prior knowledge of this type of solution
    - Ensuring partners understand the systems engineering/implementation process
  - Internal coordination
  - Timelines
- **Lessons Learned:**
  - Plan for longer procurement timelines
  - Engagement strategies – multi-touchpoint approach is necessary to reach audience

Overall Program Key Lessons Learned

1. Identify the challenges facing your community and incorporate them into long range planning.
2. Prepare for challenges in deploying maturing technologies.
3. Use non-technical language and tailor your materials to the stakeholders.
4. Leverage existing relationships and networks.
5. Engage early and often in the design/planning process.

ITS4US (Anticipated Benefits)

- Save ~2 hours/day for dispatch team. Save ~2 days/month for accounting team. (HIRTA)
- Improved access to new destination types. (GDOT)
- Increased availability of detailed, vetted sidewalk data in OpenStreetMap. (UW)
- ≥ 90% of users can book a pick-up time within 30 minutes of request. (NFTA)

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What performance measures does your agency typically use for ITS project?

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▲ ITS4US Program Video

ITS4US Postcard and Site-Specific Rack Cards ▶

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ITS4US Deployment Program Video
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Upcoming Activities

- **CATE 2024**
  July 15-18, 2024
  Baltimore, MD
- **ITE Session and Rural Workshop**
  July 21-24, 2024
  Philadelphia, PA

ITE Annual Meeting 2024 | National Rural ITS Conference 2024

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Grand Ballroom Salon A
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July 21 - 24, 2024 | Philadelphia, PA

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