Heart of Iowa Regional Transit Agency (HIRTA) Health Connector for the Most Vulnerable: An Inclusive Mobility Experience from Beginning to End

ITS4US Deployment Program – Phase 2

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Photo source: U.S. DOT

ITS4US DEPLOYMENT PROGRAM OVERVIEW

ITS4US Deployment Program is a $40 million multimodal effort, led by the Intelligent Transportation Systems (ITS) Joint Program Office (JPO) and supported by the Office of the Secretary, the Federal Highway Administration, and the Federal Transit Administration, to identify ways to provide more efficient, affordable, and accessible transportation options for underserved communities that often face greater challenges in accessing essential services.

The program aims to solve mobility challenges for all travelers with a specific focus on underserved communities, including people with disabilities, older adults, low-income individuals, rural residents, veterans, and travelers with limited English proficiency.

This program enables communities to build local partnerships and develop and deploy integrated and replicable mobility solutions to achieve complete trips for all travelers.

The U.S. Department of Transportation (U.S. DOT) launched Phase 1 of the program in January 2021 and, across 18 months, supported the concept development efforts of select sites. In June 2022, four projects were selected for Phases 2 and 3 deployment, which includes the design, testing, operation, and evaluation of their deployments.

Vision

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

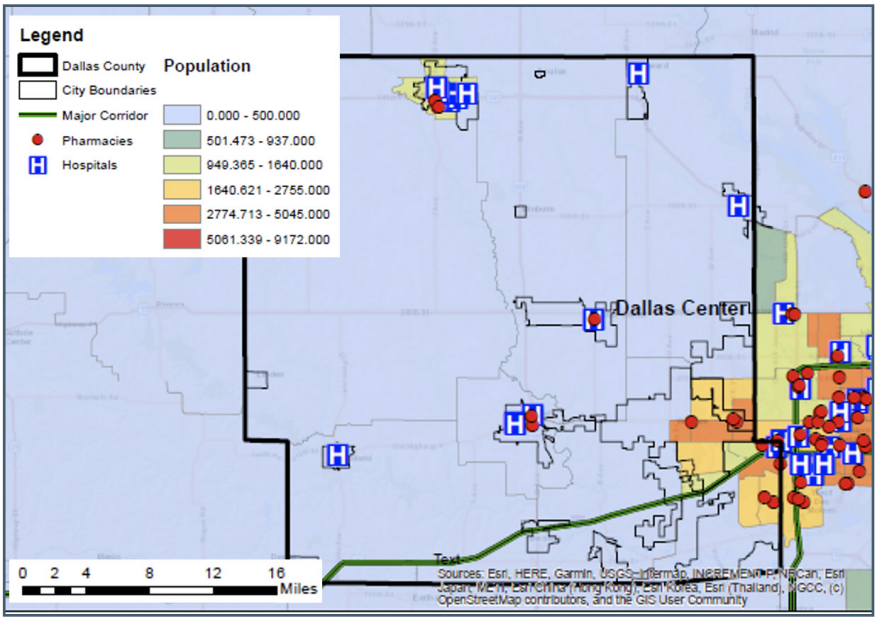
Goals

- Spur high-impact integrated complete trip deployments nationwide
- Identify needs and challenges by population
- Develop and deploy mobility solutions that meet user needs
- Measure impact of integrated deployments
- Identify replicable solutions and disseminate lessons learned

SITE DEPLOYMENT SUMMARY

Health Connector is an innovative solution that will address various bottlenecks associated with transportation access to healthcare for HIRTA communities. Some of these challenges are key reasons behind missed appointments or the unacceptable level of preventive or as-needed healthcare in the HIRTA service area. For this deployment, the HIRTA team plans to implement a scalable and replicable solution that enables inclusive, affordable access to transportation to healthcare for all underserved populations and their caregivers by resolving transportation access barriers with the use of advanced technologies. This solution will allow Dallas County residents without access to transportation who may be seeking a medical appointment to identify and book available transportation through a smart device (e.g., smartphone, smartwatch) application, and healthcare staff will have access to the same trip planning and booking features, allowing them to schedule a patient's transportation at the same time that a medical appointment is booked. Further, this solution will include information and wayfinding services to guide them at every step of their trip.

> *"This project aims to enhance convenience, availability, and reliability of healthcare transportation, improving healthcare access for the one-third of Dallas County residents who fall in at least one underserved group."*



HIRTA ITS4US Health Connector Site Deployment Map

U.S. Department of Transportation

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APPROACH – PROJECT CHALLENGES AND SOLUTIONS

Health Connector is an innovative solution that will utilize advanced transportation technologies to improve healthcare access for Dallas County residents. This solution is envisioned to address the following key issues:

- **Lack of Awareness About Available Transportation Options:** Travelers have limited information on options beyond personal (or arranged via family or friends) transportation for medical trips. Health Connector will provide a platform that will allow customers to explore the availability of HIRTA and its partner vehicles through a "trip planning and discovery" feature.
- **Lack of Integrated Booking and Trip Management Experience:** Health Connector will address a longstanding need to integrate transportation and healthcare services. Health Connector will allow travelers, caregivers, healthcare staff, and other authorized users to easily discover and book transportation services through the Health Connector app, online platform, or via phone, at the same time that they are scheduling a medical appointment, ensuring that access to transportation is not a barrier to accessing healthcare. Health Connector will allow HIRTA staff to monitor changes to healthcare appointment times to ensure that Health Connector transportation services are updated as needed.
- **Limited Capabilities with Current Transportation Modes:** Apart from HIRTA vehicles, there are limited modes that can meet the needs of underserved groups. HIRTA intends to partner with local third-party providers (e.g., taxi companies) for added capacity to address the travel needs of Dallas County residents, as required.
- **Limited Wayfinding Capabilities:** Another missing link in medical transportation has been wayfinding both for locating the vehicle on arrival or wayfinding/navigating to the correct destination inside a facility upon arrival. Health Connector will provide an accessible wayfinding experience for travelers.

MEASURING DEPLOYMENT IMPACT

Some of the key performance goals and targets for the Health Connector include:

- **Reducing medical appointment deferment due to lack of transportation:** The convenient access to transportation services provided by HIRTA, through Health Connector, will help Dallas County residents attend their medical appointments. One target for this performance goal is at least a 30-percent reduction in the number of missed medical appointments that are related to transportation access during the 18-month evaluation period. Another target is at least 80 percent of residents responding by indicating that transportation did not present a barrier to healthcare access 6 months after the launch of Health Connector, and at least 90 percent of residents responding by indicating that transportation did not present a barrier to healthcare access 12 months after the launch of Health Connector.
- **Reducing trips unfulfilled due to system unreliability:** Health Connector will help reduce the number of unfulfilled healthcare trip requests by improving system reliability through improved transportation management capabilities. Targets include at least a 30-percent reduction in the number of trips where HIRTA was unable to fulfill the traveler's request after Health Connector is in use, and at least a 20-percent reduction in the number of missed trip events by travelers after Health Connector deployment.
- **Improving travel-time prediction accuracy:** Health Connector will assist in calculating onboard (in-vehicle) travel time for a trip accurately and reliably at the time of scheduling. Travel time accuracy in this context refers to the number of minutes and seconds spent onboard, boarding, and alighting. The target for this goal is travel-time accuracy within 10 minutes of scheduled times 90 percent of the time, not counting delays due to external factors.
- **Improving coordination among HIRTA, healthcare providers:** Health Connector will automate tasks to minimize the number of person-minutes spent in coordinating a trip by HIRTA and partners. Healthcare partners will have access to the same trip booking and dispatching software as HIRTA dispatchers and will be able to register customers and book or modify trips, as authorized. It is expected that Health Connector will help achieve a target of 5 minutes or less in coordination time for customers calling in to book their transportation appointment for healthcare needs.

PROJECT PARTNERS

- HIRTA
- Arcadis IBI Group
- Community Transportation Association of America
- Dallas County Health Department
- Iowa State University (ISU)
- Capture Management Solutions
- NaviLens
- Via

Site Point of Contact

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Social Media and Website Links

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IT'S TRANSPORTATION FOR ALL OF US

Photo source: U.S. DOT

ITS JPO High-Priority Research Areas

- Automation
- Data Access and Exchanges
- Emerging and Enabling Technologies
- ITS Cybersecurity Research
- ITS4US Deployment
- Accelerating ITS Deployment

Alignment with U.S. DOT Strategic Goals

- Safety
- Economic Strength and Global Competitiveness
- Equity
- Climate and Sustainability
- Transformation
- Organizational Excellence

PHASE 2 | ITS4US DEPLOYMENT PROGRAM

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The program aims to solve mobility challenges for all travelers with a specific focus on underserved communities, including people with disabilities, older adults, low-income individuals, rural residents, veterans, and limited English proficiency travelers.

The ITS4US program will enable communities to build local partnerships and develop and deploy integrated, replicable mobility solutions to achieve complete trips for all travelers.

ITS4US DEPLOYMENT PROGRAM PHASES

ITS4US Deployment Program was designed to fund multiple, large-scale, replicable deployments in three phases:

- Phase 1: Develop Deployment Concept
- Phase 2: Design & Test (Current Phase)
- Phase 3: Operate & Evaluate.

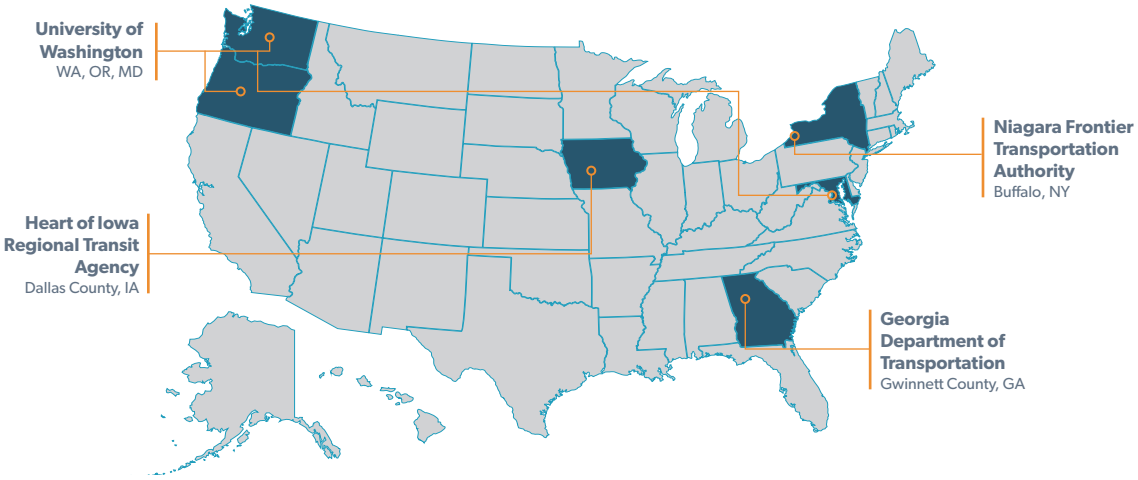
ITS4US Deployment sites that successfully completed Phase 1 were awarded Cooperative Agreements to conduct Phases 2 and 3 activities.

Current Phase

PHASE 1: Develop Deployment Concept	PHASE 2: Design & Test	PHASE 3: Operate & Evaluate	Operations & Maintenance
• Concept Development for Complete Trip Deployment • Establish Cohort Roundtables • Phase 2/3 Procurement Planning • Phase 2/3 Cooperative Agreement Awards	• Design, Test and Deploy Complete Trip Solutions • Evaluation Framework and Planning	• Demonstrate Multiple Large-Scale Deployments • Evaluate Deployments • Share Data and Lessons Learned	• Sustain operations for a minimum period of 5 years after the program is completed with no supplementary federal funds
	Deployment		**Post-Deployment**
Up to 18 months	**Up to 24 months**	**Minimum of 18 months**	**5 years**

ITS4US DEPLOYMENT PROGRAM PHASE 2 PROJECTS

Deployment Site	Project Description
 **Heart of Iowa Regional Transit Agency**	**Health Connector for the Most Vulnerable: An Inclusive Mobility Experience from Beginning to End** (Health Connector) deployment project in Dallas County, Iowa is led by the Heart of Iowa Regional Transit Agency (HIRTA). This project will implement a scalable and replicable solution that enables inclusive transportation access to healthcare for all underserved populations and their caregivers by resolving access to barriers with the use of advanced technologies. Further, this solution will include information and wayfinding services to guide users for every step of their trip. This deployment will provide enhanced access to healthcare options for all travelers in Dallas County.
 **Georgia Department of Transportation**	The **Safe Trips in a Connected Transportation Network** (ST-CTN) project is led by the Georgia Department of Transportation with support from the Atlanta Regional Commission in Gwinnett County, Georgia. The ST-CTN system will provide Gwinnett County travelers with detailed information and step-by-step navigation tailored for users' specific needs along with a range of other features geared to improve trip efficiency and safety. This concept is comprised of an integrated set of advanced transportation technology solutions including connected vehicles, transit signal priority, machine learning, and predictive analytics to support safe and complete trips, with a focus on accessibility for those with disabilities, older adults, and those with limited English proficiency. The ST-CTN system includes a mobile application (G-MAP) that will provide users with the ability to create a personalized trip plan with information on the navigation of physical infrastructure, provide users with safe alternative trip routes when encountering unexpected obstacles, and enhances user safety throughout the trip.
 **University of Washington**	The **Transportation Data Equity Initiative**, led by the University of Washington, will span three states—Washington, Oregon, and Maryland. The project aims to create the foundational data tools necessary for both public and private entities to collect, share, manage, and use transportation data that provide equitable outcomes to all travelers regardless of location, income, or disability. This effort includes: 1) working with existing standards committees to extend and update three existing, early-stage international data standards—OpenSidewalks, GTFS-Flex, and GTFS-Pathways; 2) developing a series of tools that help agencies, jurisdictions, and other stakeholders collect the data that can be stored with these refined data standards; and 3) using three unique accessible mobility applications to demonstrate the different uses of the data.
 **Niagara Frontier Transportation Authority**	The **Buffalo All Access project**, led by the Niagara Frontier Transportation Authority, will improve mobility to, from, and within the Buffalo Niagara Medical Campus (BNMC) by deploying new and advanced technologies focused on addressing existing mobility and accessibility challenges. The project integrates an accessible trip planning tool with current transit services, indoor/outdoor wayfinding, community-based on-demand shuttle services that include a fleet of fully autonomous shuttles, and intersection pedestrian safety technologies aimed at providing complete trip support to travelers with disabilities in BNMC and neighboring communities. Central to the project is a complete trip platform that can factor in travelers' preferences and accessibility-related needs in providing comprehensive trip planning and execution support to registered users. The platform, accessed both offline and online via multiple interfaces including an app, will integrate with multiple enabling technologies and services including fixed-route transit, community shuttles, smart intersections that use tactile and mobile technologies to assist travelers with disabilities in navigating intersections safely, and wayfinding infrastructure such as smart signs and information hubs to support outdoor and indoor navigation.



To learn more about this program, visit:
https://its.dot.gov/its4us

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