COMPLETE TRIP

ITS4US

Heart of Iowa Regional Transit Agency
Phase 1 Integrated Complete Trip
Deployment Plan Webinar

April 12, 2022
**Agenda**

- **Purpose of this Webinar**
  - To share the submitted Integrated Complete Trip Deployment Plan from Heart of Iowa Regional Transit Agency (HIRTA) with the stakeholders of the project and ITS4US community.

- **Webinar Content**
  - Complete Trip – ITS4US Deployment Program Overview (*Fred Bowers*)
  - Site Orientation & Deployment Concept Overview (*Brooke Ramsey, Steve Wilks*)
  - Integrated Complete Trip Deployment Plan (*Santosh Mishra*)
  - Stakeholder Q&A
  - How to Stay Connected (*Fred Bowers*)

- **Webinar Protocol**
  - You are welcome to ask questions via chatbox.
  - The webinar recording and the presentation material will be posted on the ITS4US website.
Program Overview

Fred Bowers, Site COR
ITS4US Deployment 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
Summary of Phase 1 Deployment Concept

Brooke Ramsey, Project Management Lead
Steve Wilks, Concept Development Lead
Phase 2/3 Team: Key Staff

- Brooke Ramsey from HIRTA, Project Management Lead (PML)
- Santosh Mishra from IBI Group, Systems Engineering Lead (SEL)
- Chris Zeilinger from CTAA, Deployment Lead (DL)
HIRTA and Dallas County Overview

- HIRTA provides demand response services to population in 7 county areas, including Dallas County
- Dallas County grew 36% in the last decade
- Coordination of medical transportation services for underserved a major challenge
Stakeholders

**Government Agencies**
- FTA Region 7
- Iowa DOT
- Dallas County
- City of Perry
- City of Waukee
- City of Adel

**Community Partners**
- Community Members part of Transportation Advisory Group (TAG)

**HIRTA Staff**

**HIRTA Customers**

**Healthcare Providers**
- Iowa Total Care (MCO for IME)
- Mercy One Hospital
- Unity Point Health
- Broadlawns Clinics
- Dallas County Hospital

**Human/Social Service Agencies**
- United Way of Central Iowa
- Waukee Area Christian Services
- American Cancer Society
- Aging Resources of Central Iowa
- Disability Rights Iowa
- New Opportunities
High-Level Findings from Stakeholders

- Lack of awareness on transportation options
- Lack of integrated booking and trip management experience
- Limited capabilities in current modes to meet the needs of underserved
- Limited wayfinding capabilities
- Service management challenges with return trips
- Same day and after hour service issues
- Limited data sharing and reporting to measure the performance of healthcare transportation
Project Overview

2. Vehicle Dispatched and Arrives
3. Wayfinding and Boarding the Correct Vehicle
4. In-vehicle Information
5. Arrival at Healthcare Center
6. Wayfinding at the Healthcare Center
7. Guidance on Intake and Wait-time
8. As-needed Wayfinding/Customer Information
9. Appointment Complete
10. Return Ride Requested

Source: HIRTA Team
Goals

- G1-Improved Health outcomes for Dallas County Residents
- G2-Self-reliance and Spontaneity for Underserved Groups
- G3-Efficient Transportation Management Capabilities for Medical Transportation Services
- G4-Financial Sustainability of Medical Transportation Programs
- G5-Safe Medical Transportation Services
Summary of Phase 2 and 3
Technical Approach

Santosh Mishra, System Development Lead
Architecture and Design

- **Architecture Development**
  - System Architecture Document
  - Interface Control Document

- **System Design**
  - Preliminary Design Review
  - Draft System Design Document (SDD) and Design Walkthrough
  - Final Design Review
  - Final SDD
Data Management Planning

- **Data Privacy Plan**
  - PII, ePHI and sensitive data
  - IRB Review

- **Phase 2 Data Management Plan**
  - Finalization of Data Needs
  - Data Sharing Framework
  - Data Storage and Security
  - Privacy Policy

- **Privacy Management Plan**
Procurement

- MOD Vendor
  - Traveler app
  - Central application
  - Vehicle application

- Wayfinding Solution
  - Visual marker
  - Central solution
  - App

- Indoor Kiosks at Healthcare Facility
Middleware Development (MOD-Medicaid)

Transportation Management System (MOD vendor) API

Open-source Health Connector Middleware

Service request
Service confirmation
Trip performance

API output translation to generate message (JSON or similar)

Medicaid Broker (Access2Care)

A2C/ Medicaid App
Traveler

Care Staff
# System Testing

<table>
<thead>
<tr>
<th>Stage</th>
<th>Activity</th>
<th>Plan</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Testing</td>
<td>• Verify component units per requirements and design</td>
<td>STP</td>
<td>Components are ready for integration</td>
</tr>
<tr>
<td>Functional Testing</td>
<td>• Verify integrated subsystems</td>
<td>STP</td>
<td>Subsystems are ready for installation</td>
</tr>
<tr>
<td></td>
<td>• Use simulated environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use test database</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installation Testing</td>
<td>• Install equipment</td>
<td>STP</td>
<td>Integrated system is ready for use</td>
</tr>
<tr>
<td></td>
<td>• Verify integrated subsystems</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use actual database and vehicles</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use HIRTA, and partners for testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UA Testing</td>
<td>• Verify installed and integrated system with actual participants</td>
<td>STP</td>
<td>Integrated system is ready for live operation</td>
</tr>
<tr>
<td></td>
<td>• Provide training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue Testing</td>
<td>• System run in live operation with actual users</td>
<td>ORTP</td>
<td>System is ready for all real world use cases</td>
</tr>
<tr>
<td>Operational Readiness Demo</td>
<td>• Validate that the integrated system meets use case needs</td>
<td>ORDP</td>
<td>System is ready for at least 20% at-scale deployment</td>
</tr>
</tbody>
</table>
Maintenance and Operations Planning

- System Maintenance
- Standard Operating Procedures (SOP)
Participant and Staff Training

- Participant Group 1 - Health Connector Traveler
- Participant Group 2 - Family Members and Caregivers
- Participant Group 3 - Third Party Health Connector Users
- Participant Group 4 - Transportation Providers
- Participant Group 5 - Technology Developer / Technology Staff
- Participant Group 6 - Other Core Stakeholders
Outreach Plan

- Phase 2 Outreach Plan
- Outreach Implementation Schedule (OIS)
- Monthly OIS Updates
Performance Measurement Approach

- Identification of Categories and MPM measures as Initial List
  - Core Measures
  - Tier 1 Measures
  - Tier 2 Measures
  - Tier 3 Measures
- Mapping to Goals and Objectives
- Mapping to Use Cases
- Data Sufficiency Check

Source: Transit Center, “Mobility Performance Metrics (MPM),” February 2020, Federal Transit Administration, Report No.: 0150
Performance Measurement and IE Support

- Performance Measurement and Evaluation Support Plan (PMESP) Update
- Data Collection
- Performance Measurement and Evaluation Support Schedule (PMESS)
- Monthly PMESS Updates
- Independent Evaluation (IE) Team Support
### At-Scale Deployment

<table>
<thead>
<tr>
<th>Line Item</th>
<th>20% At-Scale Deployment</th>
<th>50% At-Scale Deployment</th>
<th>100% At-Scale Deployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area</td>
<td>Within 5 miles of City of Perry, Dallas County</td>
<td>Cities of Waukee, Adel and Perry, Dallas County</td>
<td>Entire Dallas County</td>
</tr>
<tr>
<td>Number of healthcare facilities</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Max number of HIRTA vehicles</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Number of contractor vehicles</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Max number of trips (HIRTA vehicles)</td>
<td>20</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Max number of trips (contractor vehicles)</td>
<td>5</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Vehicle devices</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Number of kiosks</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Visual markers for wayfinding</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vehicles (inside and outside)</td>
<td>4</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Healthcare facility (indoor and outdoor)</td>
<td>20</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>Fixed pickup spots</td>
<td>5</td>
<td>15</td>
<td>30</td>
</tr>
</tbody>
</table>
Phase 3 Operation and Longer-Term O&M

- Phase 3 System Operation and Maintenance Schedule (SOMS)
- Comprehensive Transition Plan (CTP)
Phase 3 and Post-Deployment Governance

Executive Oversight

HIRTA
Site Lead

HIRTA Operations/Maint. & Customer care

Letters of Support [1]
Contract [2]
Advisory only [3]
MOU-software use/data sharing [4]
MOU-Funding Support [5]

Vendor Agreements (TBD in Phase 2)

Technical Services
CMS (marketing/outreach)
InTrans/ISU (performance management)

Business Partners

Vendors
Mobility on Demand Vendor (TBD)
NaviLens (wayfinding provider)
IBI Group (open-source middleware)
Third-party service provider (TBD)

Local Partners

United Way of Central Iowa
Waukee Christian Services
American Cancer Society
Disability Rights Iowa
Iowa Developmental Disabilities Council
Aging Resources of Central Iowa

Dallas County VA (veterans group rep)
Iowa Department of Refugee Services
Heart of Iowa (Dallas Co Mental Health Region)

Government Partners
FTA Region 7 [3]
Iowa DOT [2]
Iowa Dept. of Public Health [3]
City of Perry [5]
City of Waukee [5]
City of Adel [5]
Central Iowa RPA/MPO [5]
Dallas County Health Department [4]
Iowa State University-IRB [2]
New: County Health Department [4]

Institutional Partners
Dallas County Hospital [1]
Broadswns Clinic [1]
Mercy Medical Center [1]
Unity Point Health [1]
Access2Care [2]
New: healthcare facility [1]

Healthcare Partners

Subcontracts

MOU – Software Use/Data Sharing [1]
Contract [2]

Letters of Support
Phase 2 and 3 Outreach

Carl Lingen, Outreach Lead
Phase 1 Outreach Plan

• Development of Communication and Marketing Plan
  • Mapping Session(s)
  • Engagement Spectrum
  • Communication Plan
  • Media Strategy

<table>
<thead>
<tr>
<th>Spectrum</th>
<th>How overall message is customized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audience Type A</td>
<td></td>
</tr>
<tr>
<td>Audience Type B</td>
<td></td>
</tr>
<tr>
<td>Audience Type C</td>
<td></td>
</tr>
</tbody>
</table>
Phase 1 Outreach Plan (continued)

- Public Relations and Marketing Plan
- Public Meetings

Source: HIRTA team
Task 2-J: Phase 1 Outreach Plan

- Phase 2 Outreach Plan
- Outreach Implementation Schedule (OIS)
- Public Relations and Marketing Plan
  - Social media
    - Facebook
    - WhatsApp
    - Twitter
  - On-site events
  - Local Community Outreach
- Monthly OIS Updates
Task 3-C Stakeholder Outreach

- Monthly OIS Update
- Outreach Materials
- Outreach Activities
  - Two public meetings or press conference
  - Three articles
  - Three conferences
- Deployment Showcase
- Outreach Effectiveness
Task 3-C Stakeholder Outreach (continued)

<table>
<thead>
<tr>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Number of attendees participating in outreach activities</td>
<td>• Survey results from outreach events</td>
</tr>
<tr>
<td>• Number of project video views</td>
<td>• Track and record types of questions, comments, and feedback on various outreach activities</td>
</tr>
<tr>
<td>• Number of new followers on social media</td>
<td>• Comments left within WhatsApp, Facebook, and Twitter posts and inquiries</td>
</tr>
<tr>
<td>• Number of click throughs from social media blasts</td>
<td></td>
</tr>
</tbody>
</table>
Phase 2 and Phase 3 Deployment Schedule

Santosh Mishra, System Development Lead
Phase 2 Deployment Schedule (18 months)
Phase 3 Deployment Schedule (18 months)

Operations and Maintenance
- 20% at-scale
- 50% at-scale
- 100% at-scale

Performance Measurement and Evaluation Support
- Perf. Reporting
- Dashboard Setup
- Reporting and Data Sharing

Software Development Documentation
- Agile Software Dev, Release and Launch

Performance Measurement and Evaluation Support

Showcase
- Transition Planning
Phase 2 and Phase 3 Cost Estimate

Santosh Mishra, System Development Lead
## Cost Estimate

<table>
<thead>
<tr>
<th>Category</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 2 and 3 SE Deliverables (Labor + ODC)</td>
<td>$1,371,261</td>
<td>$1,003,011</td>
</tr>
<tr>
<td>Labor</td>
<td>$1,331,261</td>
<td>$903,011</td>
</tr>
<tr>
<td>ODC (materials and tools)</td>
<td>$40,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Vendor Cost (Hardware, Software, Services)</td>
<td>$185,000</td>
<td>$140,000</td>
</tr>
<tr>
<td>Extended Phase 3 Operation Cost - 6 months (Optional, if needed)</td>
<td></td>
<td>$122,839</td>
</tr>
<tr>
<td>Software Development Labor Budget</td>
<td>$675,000</td>
<td></td>
</tr>
<tr>
<td>Travel Budget (not assigned to partner)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Needs</td>
<td>$33,200</td>
<td>$8,400</td>
</tr>
<tr>
<td>Conferences</td>
<td>$17,325</td>
<td>$34,650</td>
</tr>
<tr>
<td>Total</td>
<td>$2,281,786</td>
<td>$1,308,899</td>
</tr>
<tr>
<td>Federal Share</td>
<td>$1,825,428</td>
<td>$1,047,120</td>
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<tr>
<td>Non-federal Cost-share</td>
<td>$456,357</td>
<td>$261,780</td>
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</tbody>
</table>
## Cost Risks

<table>
<thead>
<tr>
<th>Risk</th>
<th>Probability</th>
<th>Impact</th>
<th>Mitigation Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vendors may request additional funds to meet requirements as intended after selection</td>
<td>Medium</td>
<td>Medium</td>
<td>Procurement process will be designed to avoid such issues. Vendor contracts will be fixed price and contract terms and conditions will be defined such that cost overruns are not allowed.</td>
</tr>
<tr>
<td>Planned budget not sufficient for making required updates to documents</td>
<td>Low</td>
<td>Low</td>
<td>Based on lessons learned from Phase 1, the team has identified required hours for meeting deliverable needs.</td>
</tr>
<tr>
<td>Outreach materials may need more funds</td>
<td>Low</td>
<td>Low</td>
<td>Non-federal funds may be pursued.</td>
</tr>
</tbody>
</table>
Stakeholder Q&A

- Please keep your microphone 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:

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Brooke Ramsey, HIRTA
Project Management Lead
BRamsey@ridehirta.com

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