Final Report on
Federal Transit Administration (FTA)
FAST Act Section 3006(b) Pilot Program for
Innovative Coordinated Access & Mobility
2020 – 2021

Manage Trips Online

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EXECUTIVE SUMMARY

Prairie Hills Transit (PHT) appreciates the Federal Transit Administration (FTA) award of this Innovative Coordinated Access and Mobility (ICAM) Program Grant that made this project possible. In addition, PHT appreciates the grant administration assistance provided by the National Aging and Disability Transportation Center (NADTC).

ABOUT PRAIRIE HILLS TRANSIT

Since 1989, Prairie Hills Transit (PHT) has been dedicated to providing cost-effective, reliable transportation in the rural western region of South Dakota which encompasses a service area including 9 counties and 15 communities in a 16,500 sq. mile area. With 7 bus facilities, PHT has a fleet size of 55 vehicles consisting of cutaway buses for wheelchairs and 5-point child seats, ADA minivans, one trolley, and Ford Transit vans. This vehicle diversity allows PHT to provide the best transportation experience for all riders.

"Efficient, accessible, and dependable transportation contributes significantly to the prosperity and quality of life in the Black Hills. A reliable transit system, especially service, is crucial to connect people to medical services, family, and jobs." ~ Former South Dakota U.S. Senator Tim Johnson

PROJECT PROPOSAL

PHT is the largest rural transportation operation in our service area and for most, the only source of public transportation. Due to service hour restrictions, the residents of the region did not have access to booking and checking on rides outside of these hours. Providing customer access 24 hours a day, 7 days a week through a smartphone app was sought for ride-booking, confirmations or cancellations. Additionally, a web portal was needed by facilities such as nursing homes to book rides for residents.

GOALS AND OUTCOMES

The project goals are to enhance the technology base with a smartphone app and customer portal for consumers and facilities. Short-term, mid-term, and long-term goals are discussed in this report. Performance measures

include app utilization, customer portal utilization, vehicle utilization, and stakeholder involvement. These efforts are in sync with the FAST Act to implement non-emergency medical transportation and coordination efforts.

INTRODUCTION

Prairie Hills Transit is the only source of public transportation in the western region of South Dakota. Service hours and days vary in each community and the only way to request a ride is by calling the Call Center. The one-call center takes the requests Monday thru Friday from 7:00 am to 4:30 pm for all communities. The call center averages 225 phone calls a day. Any after-hours requests are left on the answering machine. A technology upgrade of a smartphone app and web portal by clients 24x7 resolved the challenge faced by our local communities in rural areas.

PHT riders use a unique username associated with the PHT database system and the passwords are unique for the rider. The smartphone app offers travel planning, incorporation of rider mobility needs and preferences, payment for rides, and see ride history.

This report presents an assessment of the PHT expansion of service over the 24-month Manage Trips Online pilot period. This includes a summary of the program development and launch, and performance measures from the developer HBSS using their product solution called QRyde.

PROJECT DESCRIPTION

Prairie Hills Transit was notified in May 2019 by FTA of the ICAM federal grant award for $275,000 to develop and implement a smartphone app and a consumer web portal. These would be used to expand transportation access to residents in the service area by giving 24x7 access to book rides. The project goals are to promote public transportation use, increase utilization of all tax-funded assets on the road, and reduce carbon footprint as a lesser number of vehicles will be on the road. The healthcare benefits include increased access to healthcare, easy access via the app and web

portal reducing procrastination and improving care, and improved opportunity to live independently in communities. The executed agreement, managed by South Dakota DOT, was not available until March 11, 2020.

KEY PARTNERSHIPS

This project is technology-driven. PHT has been fortunate to be a customer of HB Software Solutions (HBSS) for the past 14 years using an automated scheduling and dispatch software program. HBSS and PHT discussed the potential technology development before applying for the Innovative Access and Mobility grant.

After FTA awarded the grant, HBSS created a product called QRyde Solution. The product is the industry's first transactional transportation management system. Aligned with the ICAM grant, this product integrates Government-subsidized transportation (e.g. public and fees for service and purchased services).

Dr. Himanshu Bhatnager, HBSS founder and owner, has over 20 years of extensive experience in software development in transportation applications. He agreed to personally oversee, develop and implement the project. Dr. Bhatnager committed $37,120 for the local match from HBSS.

PHT's other key partnerships are with healthcare centers, nursing homes, and local communities. Following are the names of institutions involved with the web portal. Each facility had its portal and login credentials, trained by Lisa Johnson, to access only residents living in their facility. Each facility is able to book, cancel, and see reports of their residents' trips. Figure 1 shows the portal for Spearfish Canyon Nursing Home.

- Spearfish Canyon Nursing Home – Spearfish, SD
- Rolling Hills Nursing Home – Belle Fourche, SD
- Seven Sisters Assisted Living – Hot Springs, SD
- Five Counties Nursing Home - Lemmon, SD

Figure 1
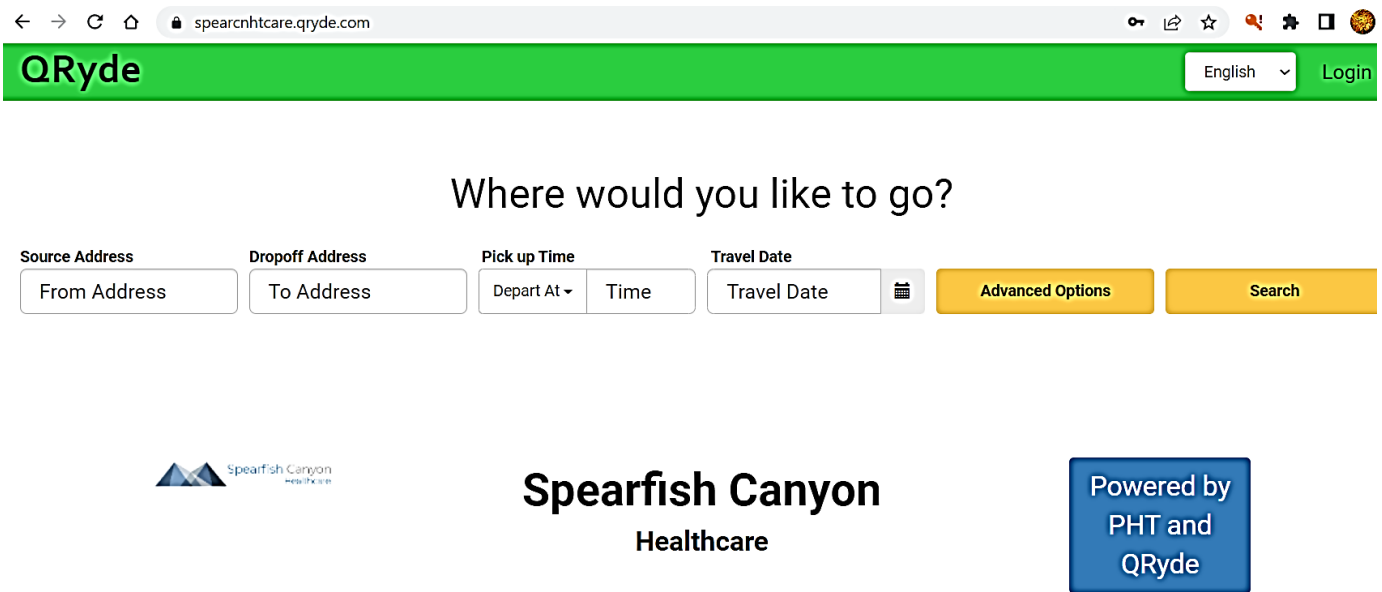
IMPLEMENTATION

The HBSS team used its comprehensive Agile methodology to develop the QRyde Cloud Web Portal and Mobile Apps. Agile allowed HBSS to manage a project by breaking it up into several phases. Each phase has a cross-functional team with HBSS and PHT that includes planning, requirements analysis, design, coding, unit testing, and acceptance testing. This process will deliver a turn-key solution for the project.

Agile methodology is a unique method of generating realistic requirements. Because of this approach, 99% of HBSS software features are utilized by the users. The methods are as follows:

1. **Scope Identification** - preliminary discussion with stakeholders on identifying operational/functional challenges, development of initial requirements by whiteboarding, screen sketching, and PowerPoint animation.
2. **Interactive Modeling and Model Storming** - firming up on user interface screens and business rules by drilling down into functional details, finally developing a work plan and sharing a high-level

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architectural vision, so stakeholders can conceptualize the solution strategy.

3. **Test First Approach** by rapid prototyping and allowing stakeholders and beta testers to click through and type in, develop a final requirement which is tested again with stakeholders and beta testers.
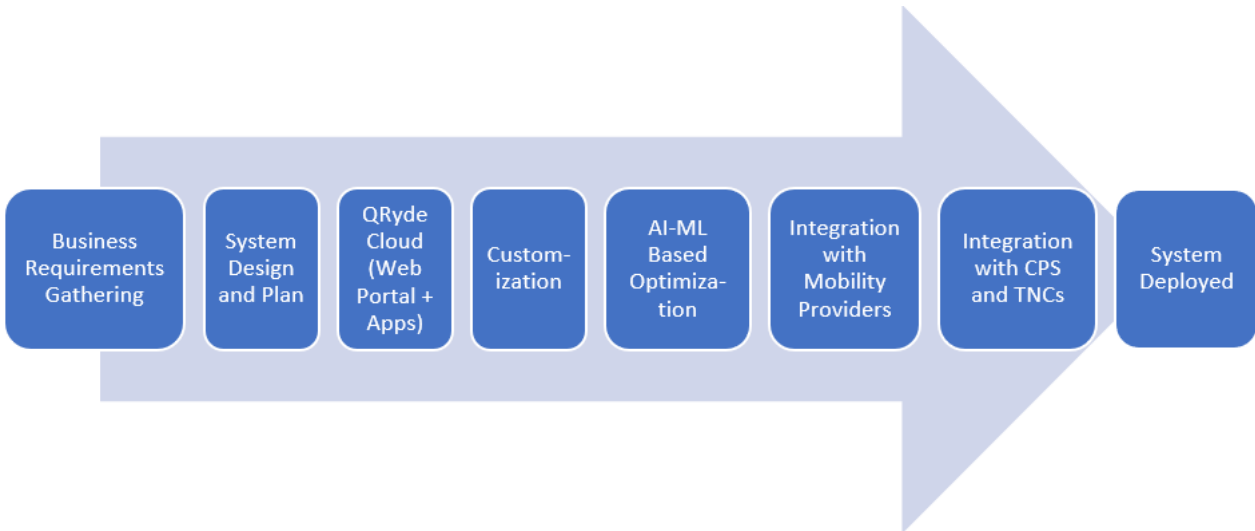
PERFORMANCE MEASURES

The performance measures were determined in the application that was submitted to FTA in 2018. The HBSS team developed the methodology until the actual date the project funds became available in March 2020. The following is the list of performance measures are to be developed.
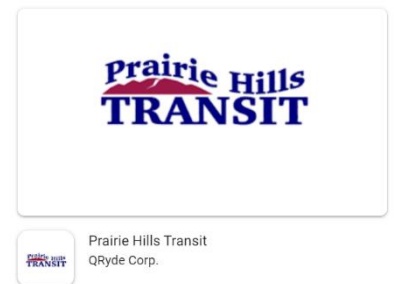
- **Customer Portal Utilization**
  On June 22, 2020, Lisa Johnson, Operations & Information Director with Prairie Hills Transit introduced the live website portal to Spearfish Canyon Nursing Home. She trained staff on how to use the portal: https://spearcnhtcare.qryde.com. Along with the training, she provided a user manual that was created by Dr. Mital Parikh with HBSS. The facility can select specific residents and submit ride requests to specific locations. From June 2020 to Sept 30 2021, 1,517 confirmed trips were provided. The facility can create reports for trips provided in the past and scheduled in the future.

In July 2020, the Customer Portal was introduced to three more facilities. Rolling Hills Nursing Home in Belle Fourche, SD https://rollhillhtcare.qryde.com had 363 confirmed trips from July 2020 to Sept, 30. 2021. Seven Sisters Assisted Living in Hot Springs, SD https://ssl_center.qryde.com/Reports.html had 48 confirmed trips during the same period. Five Counties Nursing Home in Lemmon, SD https://fivecntynrshm.qryde.com/Reports.html had 112 confirmed trips.

a. 2040 trips were requested that month - 22% of the total trips performed

b. Trips canceled or changed – 750

c. Complaints – all facilities reported missing destination addresses that should have been available in the portal. This was resolved by contacting dispatch to add the address on the portal.

- **App Utilization**
The smartphone app was made available to download from the App Store and Google Play Store in June 2020. Over 75 riders have downloaded the app from the App Store and over 50 downloads on Google Play Store. To date, the app has 120 active passengers scheduling and canceling trips and tracking their rides.

Prairie Hills Transit
QRyde Corp.

- **Vehicle Utilization Data**
This performance measure is intended to compare monthly vehicle use with past data, correlating with app and customer portal usage data. On average during the 19 months of the project, 61 vehicles used to perform 9,436 trips. Monthly data is charted on the next page.

- **Stakeholder Involvement**
The pilot community was launched in the City of Spearfish with a bulk mailing for postcards to every resident within city limits. As portal and app use increased, the project expanded to all eight counties.

IMPACTS OF PANDEMIC

The pandemic impact on ridership is shown in the following charts (pre-pandemic and during the pandemic). Clearly, trying to implement an innovative mobility project to increase ridership was near impossible during the pandemic. Even though Prairie Hills Transit never shut down service during the pandemic, we were forced to reduce hours. The pandemic impact has been a struggle. We were unable to meet targets including consumer usage of the app because of the dramatic decrease in ridership.

PRE-PANDEMIC

**DURING PANDEMIC AND IMPLEMENTATION OF GRANT**
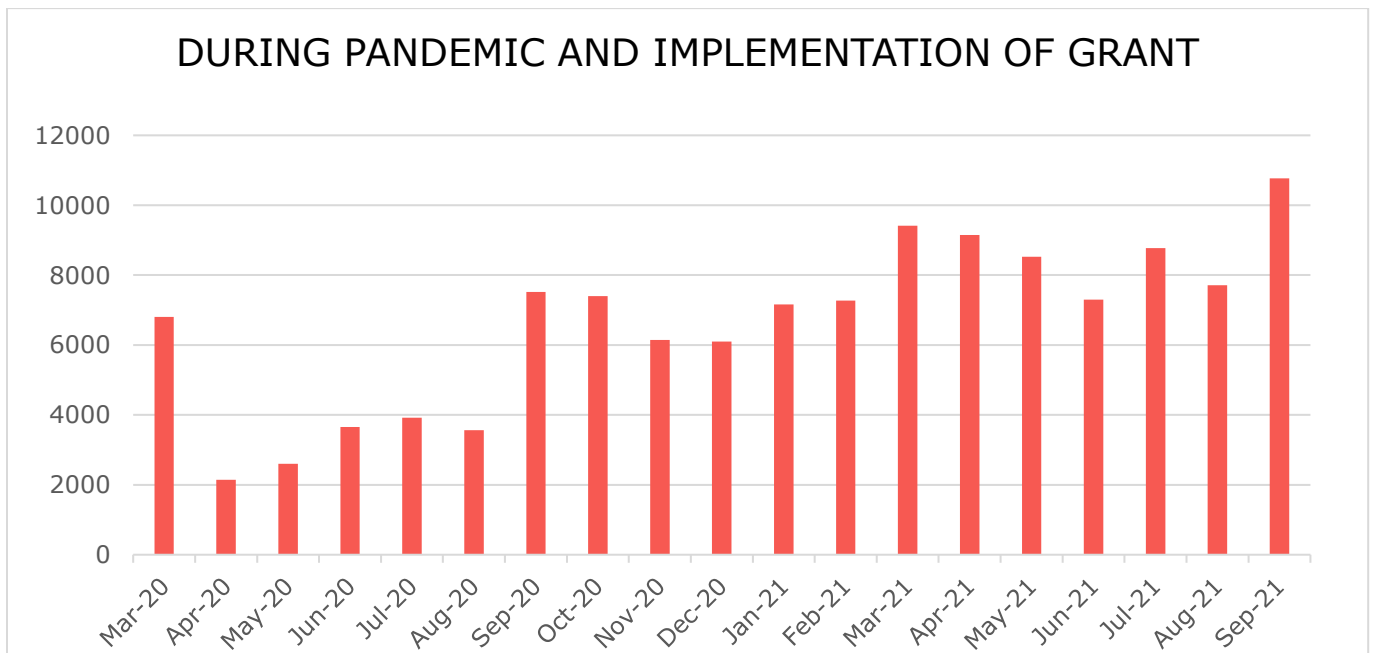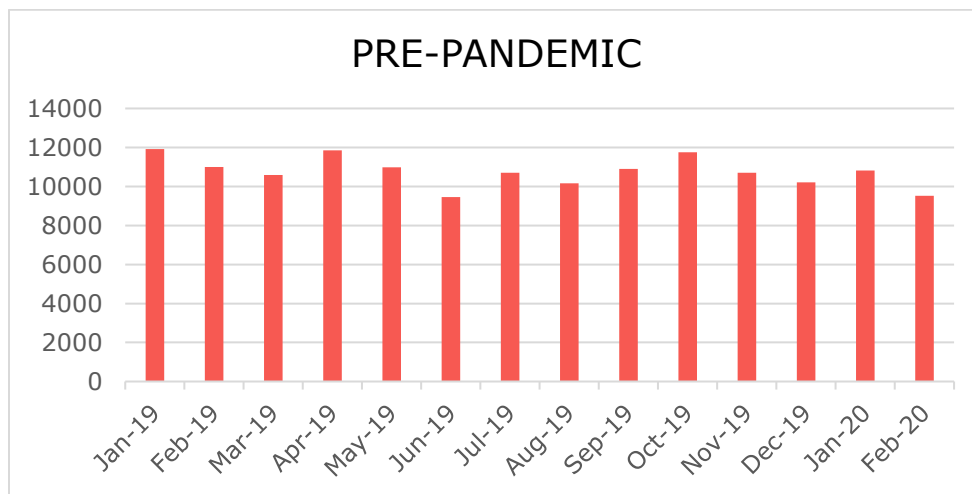
LESSONS LEARNED

Customization to local needs is necessary. Throughout the project, PHT communicated with HBSS to customize the technical infrastructure and user testing. The app and website portals had to be synchronized with the dispatch software. The process to confirm trips received through the app was improved. Without the pandemic, we believe this project would have produced an increase in ridership. This project has been proven to be a valuable technology infrastructure for other rural agencies using the QRyde Solution. Currently, 32% of PHT passengers use the technology.

SUSTAINABILITY

Continuing project marketing efforts and promoting the technology when talking with customers will maintain and sustain the project. Marketing included the initial postcard promoting the smartphone app and a short video posted on social media and at http://www.prairiehillstransit.com.

VIDEO CAPTIONS
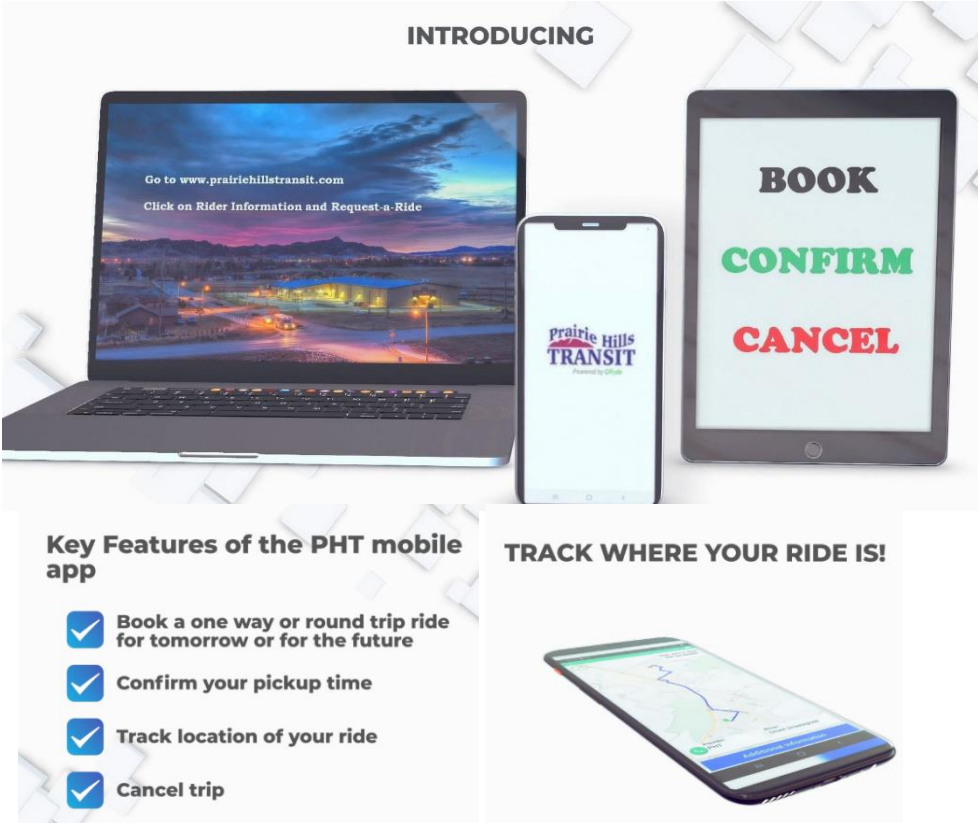
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