HBSS Connect Corp response to #RTSX-240002-DS

Mobility-On-Demand Software App (Rebid)

JUNE 2023

Proposal
for
City of Gainesville, Fl

"REDACTED CONFIDENTIAL"

Prepared for:

City of Gainesville
City of Gainesville
200 E University Avenue
Gainesville, FL 32601

Submitted by:

HBSS Connect Corp.
1075 Westford Street, Suite 304
Lowell, MA 01851

1 BID COVER

BID COVER

City of **Gainesville**

Procurement Division
(352) 334-5021 (main)

Issue Date: April 3, 2023

REQUEST FOR PROPOSAL: #RTSX-240002-DS
Mobility-On-Demand Software App (Rebid)

PRE-PROPOSAL MEETING: ☐ Non-Mandatory ☐ Mandatory ☒ N/A ☐ Includes Site Visit
DATE: **TIME:**
LOCATION:

QUESTION SUBMITTAL DUE DATE: May 2, 2023

All meetings and submittal deadlines are Eastern Time (ET).

DUE DATE FOR UPLOADING PROPOSAL: May 22, 2023, 3:00pm

SUMMARY OF SCOPE OF WORK:
Mobility-On-Demand software app solution for microtransit service to include scheduling, dispatching, and capability for system reservation for bus passenger services. App to be live and in service no later than January 1, 2024.

For questions relating to this solicitation, contact: Daphyne Sesco, Procurement Specialist 3, sescoda@gainesvillefl.gov

Bidder is not in arrears to City upon any debt, fee, tax or contract: ☑ Bidder is NOT in arrears ☐ Bidder IS in arrears
Bidder is not a defaulter, as surety or otherwise, upon any obligation to City: ☑ Bidder is NOT in default ☐ Bidder IS in default

Bidders who receive this bid from sources other than City of Gainesville Procurement Division or DemandStar.com MUST contact the Procurement Division prior to the due date to ensure any addenda are received in order to submit a responsible and responsive offer. Uploading an incomplete document may deem the offer non-responsive, causing rejection.

ADDENDA ACKNOWLEDGMENT: Prior to submitting my offer, I have verified that all addenda issued to date are considered as part of my offer: Addenda received (list all) # 1, 2 & 3

Legal Name of Bidder: HBSS Connect Corp.

DBA: HBSS Connect Corp

Authorized Representative Name/Title: Dr. Himanshu Bhatnagar , Chief Executive Officer

E-mail Address: aasthac@qryde.com FEIN: 46-5277876

Street Address: 1075 Westford Street, Suite 304,Lowell ,MA , 01851

Mailing Address (if different):

Telephone: (978) 379-0010 Fax: (978) 379-0014

By signing this form, I acknowledge I have read and understand, and my business complies with all General Conditions and requirements set forth herein; and,

☑ Proposal is in full compliance with the Specifications.

☑ Proposal is in full compliance with the Specifications except as specifically stated and attached hereto.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: [redacted]

SIGNER'S PRINTED NAME: Dr.Himanshu Bhatnagar **DATE:** 06/01/2023

This page must be completed and uploaded to DemandStar.com with your Submittal.

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3 COVER LETTER

Ms. Daphyne Sesco
Procurement Specialist 3
City of Gainesville
200 E University Avenue
Gainesville, FL 32601

June 8, 2023

Dear Ms. Sesco:

HBSS Connect Corp. is pleased to submit this proposal in response to the "RFP No.RTSX-240002-DS, Mobility-On-Demand Software App (Rebid)."
Established in 1997, HBSS is a leading provider of Microtransit, Demand response/paratransit, NEMT, and Fixed-route transit technology systems. HBSS resolves the unique challenges that different demographic regions present for the transportation industry, and excels at responding to these differences with efficient, customized solutions. Our systems help customers manage more than 100,000 passenger trips per day for 700 organizations in 34 states throughout the country.

Built on over two decades of scheduling and dispatch experience, HBSS and its QRyde cloud-based software platform offer a proprietary, global scheduling solution for maximizing the efficiency of on-demand microtransit operations. QRyde's integrated platform enables automated dispatching as well. In addition, HBSS is a Minority Business Enterprise (MBE), and a certified Disadvantaged Business Enterprise (DBE) in several states.

This proposal describes the full array of software products offered by HBSS for the project as per the requirements set forth in the RFP including dispatching and scheduling capabilities, rider and driver interfaces, reporting, training, and other important features that will allow the City of Gainesville to improve the quality of the door-to-door, geo-fenced, and fare-free mobility on demand service. It will provide the information needed for City officials to determine our qualifications to perform the microtransit project and understand our commitment to our partners and the communities we serve. Additionally, we will describe our extensive experience within the transportation space, highlighting current on-demand microtransit scheduling and dispatch services that we provide to similar size transportation agencies. We will show how other HBSS partners have used our solutions to improve efficiencies and reduce costs.

For questions regarding this proposal or to request a detailed presentation and/or demonstration of the proposed transportation management solutions, please contact me at 978-379-0010 x222 or by email at: aasthac@qryde.com.

By signing this cover letter, I attest that all information submitted with the proposal is true and correct as well as acknowledge the addendum. We would welcome the opportunity to work with the City of Gainesville on this important project and look forward to talking with you soon.

Sincerely,

Aastha Chaturvedi

Aastha Chaturvedi
Director, RFP Team
HBSS Connect Corp.

4 TECHNICAL PROPOSAL

4.1 BACK-OFFICE ADMINISTRATOR DASHBOARD

4.1.1 MICROTRANSIT DEVELOPMENT

Microtransit provides an alternative to fixed route/flex route/deviated fixed route services, especially when starting a new service or when planning an upgrade of current services. QRyde helps transit systems to evaluate their on-demand/microtransit options. QRyde utilizes GIS tools to analyze existing demand data, develop models from analysis of microtransit services, and determine fleet requirements for a shared, on-demand transportation network that is both compelling for customers and operationally efficient.

QRyde helps transit agencies understand how shared, on-demand microtransit and a new concept - 'universal mobility' - can play a role in its future transportation offerings. QRyde provides planning tools to identify inefficiencies in the existing fixed-route bus and demand response networks, explores opportunities for strategic deployment of microtransit technologies, and provides recommendations to improve operations. Some of the data considered as initial inputs include the following:

- OpenStreetMap and Census data including road layout, traffic speeds, and turn restrictions.
- Existing demand-response, fixed route, and flex route ridership data to determine and understand base demand and travel patterns.
- Quality of service assumptions assessed from customer expectations in QRyde's other projects.

The data points are analyzed and converted into inputs for QRyde's analytics tools (QGIS/ArcGIS/R/Google). QRyde evaluates permutations of several scenarios, considering that microtransit could replace and upgrade the demand-response service, the fixed route, the flex routes, or both. In addition to simulating base demand, QRyde also models high-demand scenarios, given that a high-quality microtransit service will effectively result in a significant increase in ridership.

4.1.2 PLANNING AND FEASIBILITY STUDY METHODOLOGY

QRyde' s feasibility study methodology consists of the following three steps:

1) Identifying opportunities for increasing ridership through innovative models,
2) Analyzing and projecting demand, and
3) Simulating scenarios where possible to determine an innovative microtransit configuration that meets our partner's goals.

4.1.2.1 IDENTIFYING OPPORTUNITIES FOR INCREASING RIDERSHIP THROUGH MICRO TRANSIT

Microtransit can achieve several goals for transit agencies, including:

[redacted]

4.1.2.2 ANALYZING AND PROJECTING DEMAND

For QRyde analysis, demand is modeled as the volume and distribution of ride requests over a given period. Historic ridership is typically used to project demand. Real-world ridership will depend on a wide range of factors, some specific to the region, others dependent on operational elements like marketing budget or quality of service goals. These factors include:

- Census Track Data
    - Demographics (e.g., age, income, access to vehicles, mobility characteristics, mode choice)

[redacted] analysis of the demand is based on service at different times of the day including peak hours, when demand is highest, to accurately guide fleet size requirements. During off-peak hours, the full fleet would not be required.

4.1.2.3 DEMOGRAPHIC SPECIFIC TRAVEL DEMAND

As the day progresses, the ridership demand changes based on 'active' demography in play: Commuters, students, seniors, and those out socializing need transportation. The direction of flow will also change during the day. To maximize the utilization of vehicles the routes have to 'change' during the day to be more predictive about the locations where demand will be maximum during the day. The figure below describes the distribution of demand by the time of day. Using this model, we would analyze the demand for the agency.

Building Virtual Routes and Stops using Recurring/Subscription Rides

The second element of a microtransit model is the pre-setting of routes for 3-4 weeks at a time, using recurring/subscription trips pickups and drop-offs that remain on the routes for 3-4 weeks which act as quasi-stops. The routes can also make stops at virtual stops if there are pickup requests. However, the recurring rides provide templates for future bookings as well as on-demand rides.

4.1.2.4 EVALUATING AN INCENTIVE ENGINE: FARE REDUCTION VIA INCENTIVES

The current state of the art in microtransit is restricted to a) Riders; b) Routes; and c) Destinations. The entire operation is built around these three elements. QRyde model adds a fourth component: Community Driven Incentive Modeling. In this component, riders are offered digital currency - QRCoins as reward for using public transit, paying city bills online, visiting local businesses and using county provided amenities.

4.1.3 SIMULATION OVERVIEW

QRyde uses the QGIS/ArcGIS analysis engine, to shape at-scale services in international markets. The tool was developed by world-class algorithm experts, many of whom have years of experience in transport planning and operations management. Shown below is a screenshot of QGIS analytical engine.

QGIS Analytical Engine

The following components make up the QRyde simulation process:

- **Identify the Geographic Area to Serve (Microtransit zone(s)):** This geographic boundary shown in the above figure as dashed region is the service zone. All origins and destinations of all trips are confined to this zone with a few exceptions.
- **Determination of the Road Network:** Using QGIS, we display the data which includes all roads categorized by type, turn restrictions, and street walkability and drivability information.
- **Determination/Calibration of time sensitive Travel Speeds using Maps:** OSRM/Google APIs are used to generate average traffic speeds, specific to the time range of the service hours. This ensures that the ETAs and trip times of the proposed service will be more accurate as they will change by time of the day to real-world traffic.
- **Driver Break/Transfer Points Analysis:** Based on current demand distribution, setting of "break/transfer points," where the drivers park the vehicles to wait for the next request. This ensures that each vehicle is used efficiently, and riders will benefit from the shortest possible ETAs. Also, some locations will be evaluated for serving as future transfer points for long-distance travel. These points will be determined also by predicted demand hotspots.
- **Identify Popular Stops (Pickup and Drop-off Points):** By default, QRyde generates virtual bus stops throughout a service zone at intersections, at points where vehicles can safely park, and people have a place to wait and board the vehicle. Also called 'Virtual' stops, their identification helps not only in allowing multiple people to congregate at those locations by walking a small distance but also enables predictive analysis to determine virtual routes. These can be as simple as the origin and destination of subscription trips during different times of the day, or popular places like grocery stores or local libraries.
- **Set Assessment Factors:** Parameters, which are configured to set service levels and customer expectations and rider clustering targets. These are only a few of the many algorithm parameters configurable for live services.

4.1.4 DYNAMIC ROUTING

QRyde adapts and automates the routing using its Global Scheduling Engine (GSE). It provides seamless communication through its tools (Rider App, Driver App, and Dispatch Module) so that all stakeholders have the information they need when they need it. Its AI-based innovative algorithms are built for schedules that are dynamic and require that the routes be more adaptive to the changing demands during the day. QRyde adapts and automates the routing using its GSE. It also optimizes same day trip orders with advance trip orders and automatically sends updates to the Tablets. The scheduling process is completely automated with a proven capability to function without a scheduler initiating the scheduling. The automated scheduling process continuously runs to improve schedules based on real-time operating factors such as cancellations, no-shows, vehicles positions, driver performance, etc.

4.1.5 SCHEDULING

The system can perform fully automated scheduling, either in batch mode or for individual trips. The system provides dispatchers with web-based tools to proactively manage OTP, no-shows, cancellations, subscriptions, and late trips. The system also automatically sends updates of the dispatched trips to the MDTs. The web-based tools provided allow managers/supervisors to monitor driver performance in real time.

It also optimizes same day trip orders with advance trip orders and automatically sends updates to the MDTs. The scheduling process is completely automated and has a proven capability to function without a scheduling position initiating the scheduling. The automated scheduling process continuously runs to improve schedules based on real-time operating factors such as cancellations, no-shows, vehicle positions, driver performance, etc.

Automated Scheduling using GSE

4.1.5.1 GLOBAL SCHEDULING ENGINE

The QRyde GSE operates like the Airline Sabre reservation system. In these operations, existing routes are encoded, and new ride matching requests are algorithmically placed in the route where it is the best fit, meets all constraints, and there is available capacity. If the ride cannot be placed on an existing route, it is put on a new route.

The business strategy behind this approach is also similar to Sabre-like systems involving massive optimization by asset sharing. For example, if you must travel from A to B at time T, and if a vehicle

has an available seat to take you there, then what is the incremental cost? If this can be determined quickly, then planned and unplanned travel can become economical and transportation providers will be able to maximize the utilization of their vehicles.

Like airline reservation systems, the routes of all the drivers and third-party transportation providers must be encoded in the scheduling system for today and all future dates. So, when a trip is booked for any date or time (of course with some reasonableness), a ride assignment can be found. In addition, if at a future date, there is a modification due to a resource issue or a client's changed plans, the information is communicated instantly.

The biggest benefit is massive utilization of available capacity that exists in daily commutes. The continuously running GSE will respond immediately to any ride request in the most suitable way. GSE simplifies dispatching by creating optimized routes and enables fully automated scheduling. As additional trips are added throughout the day AskSAM™ (Find Best Route) can make recommendations for dispatchers. The system can optimize same-day-trip orders with advance trip orders and automatically send updates to the MDTs. In the auto pilot mode, the scheduling process provides continuous automation without requiring human intervention.

Using QRyde/ePAD™ drivers will have the same tablet-based manifest used by Dial-a-Ride. As trips are added and cancelled, drivers see color coded updates. Drivers have the option of using turn-by-turn directions between stops (with optional automatic screen dimming to reduce distracted driving). The tablets also provide real-time GPS vehicle location information so dispatchers and customers know where the vehicle is and when it will arrive. Depending on your needs, the ePAD™ Driver App/Portal will also collect trip fares and track ride demographics.

Simultaneous Automated Trip Schedule and Dispatch

4.1.5.2 AUTOMATED BATCH SCHEDULING

QRyde offers automated scheduling, in batch mode, on a next-day basis, and all reservations for a designated travel day. Scheduling is based on the actual street network in the service area (e.g., actual x- and y- coordinates, not zones), parameters associated with network segments as established in the GIS system, physical barriers, speed parameters, time of day, and appropriate dwell times for the boarding and alighting of passengers.

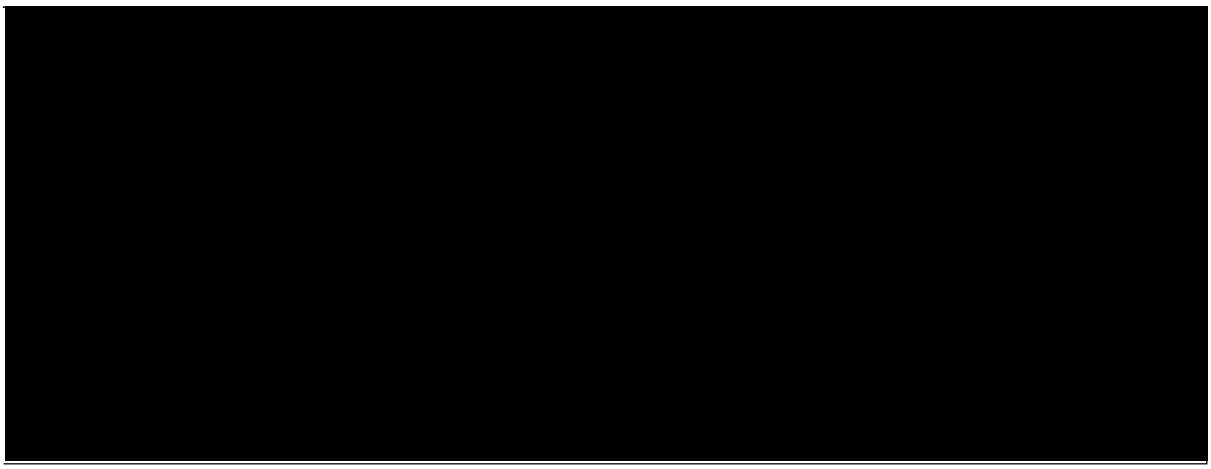
QRyde solves a larger problem by breaking it into smaller problems which are solved individually using an integrated Self Organizing Map (SOM) and simulated annealing (SA) methods.

QRyde Batch Scheduling

The agencies call takers, schedulers, dispatchers, and administrative staff have web-based access to a powerful set of integrated tools to book, schedule, dispatch, and report on trips. GSE, designed by several PhDs in Computer Science/AI/ITS and maintained by a large engineering department (75+), is a variation on the famed Traveling Salesman Problem (TSP) and is similar to algorithms used by FedEx, UPS, and others. It simplifies dispatching by creating optimized routes. As additional trips are included throughout the day, AskSAM™ will make best-route recommendations for dispatchers.

As noted, the GSE is a Self-Organizing Network scheduling engine like the Sabre system, where the rides are already scheduled. As field data arrives, the routes reorganize by interacting with each other and exchanging rides. New trips are simply 'thrown' in and the best route grabs it. QRyde has an extensive zone-based scheduling capability and can assign vehicles within zones or counties.

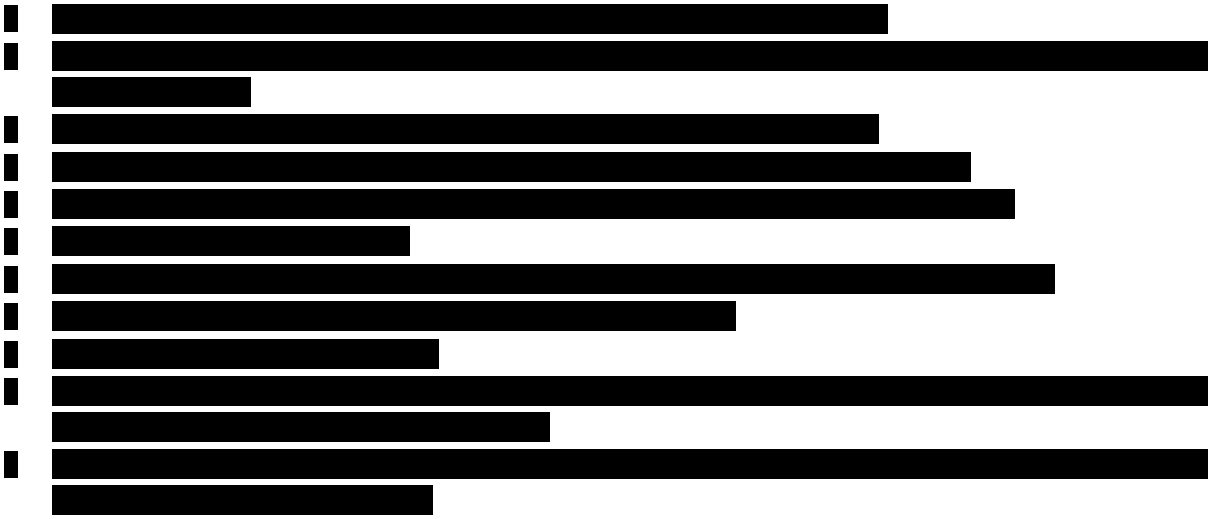
QRyde GSE optimizes the routes by extracting a) every minute of slack time and dead heading, b) every possibility of a shared ride, c) optimizing driver breaks by intelligently placing them during the lunch hours, and d) shrink-wrapping segments to ensure drivers are only allotted the time it takes to travel back after last drop off and from garage to first pick up.



Manual Scheduling with Smart Suggestions

Note: In QRyde the Route is called a Segment and we will use the terms inter-changeably. GSE scheduling uses a complex cost function to determine the best trip assignment using different criteria

such as a) shared ride coefficient, b) vehicle miles, c) deadheading, d) customer service, e) seniority, and f) driver wait. The algorithm builds routes starting with random trips self-organized into groups and placed on segments, with more trips added using minimum distortion (SA – lowering the temperature of the equation). The algorithm assigns trips on segments that best fit and reduces the total 'energy' of the system



QRyde allows users to configure scheduling parameters. Some of the parameters that can be adjusted are at the system level which include load/unload times, pickup/drop-off-time windows, and maximum travel times allowed. These parameters can be setup for different funding sources based on the rules associated with the funding sources or for the system. Any trip assigned to a run will adhere to these rules.

4.1.5.3 SAME DAY TRIP ORDERS

QRyde allows taking trip orders on a same-day basis and dynamically scheduling the trip into the existing schedule. QRyde considers existing-path of route travel, existing-customer assigned trips, system policies on travel, and pick up time windows when making scheduling assignments.

The agency users can find a best fit assignment for a trip just booked by clicking on AskSAM™ or the Scheduling Assistant Manager button. The system determines which routes are most suitable using the minimum-deviation (cost) methodology based on the actual street network for finding the best routes. This method attempts to fit trips into existing routes by determining those routes which are in the proximity of the pickup and drop-off locations thereby causing minimum deviation to the current route and minimum disruption to the entropy off the system.

QRyde performs a complete assignment impact analysis whether one or more solutions are found. The system provides the suggested assignments in reverse order of time and scores each assignment based on the operational metrics. In the Autopilot mode, the trip is placed on the route with the best score if the remainder of the route is not late (aka Route Impact is "On-Time.")

4.1.5.4 SUBSCRIPTION TRIPS

QRyde fully supports the creation, editing, and termination of subscription trips (aka standing orders, repeat trips, or recurring trips) by authorized QRyde users. A single subscription trip can be created to handle every day of the week, even with different times for different days, without needing to create multiple standing orders for each day of the week. There is also an "every other week" option if needed. Transportation suspensions can be applied to prevent trips from being generated during the suspension period.

4.1.6 PASSENGER MANAGEMENT

QRyde offers a rich suite of capabilities for agencies to develop, implement and manage a variety of microtransit, or on demand services utilizing the provided software. All from the same QRyde Cloud platform, and all from the same QRyde App and Web Portal. Riders without smartphones may access the QRyde website or call the QRyde Call Center. Call Center staff or facilities (employers, schools) that partner with the city may book rides for those without access to on-line technologies though the QRyde web interface. QRyde offers a simple to use community-based transportation model where different communities can utilize the portal to manage rides for their members.

QRyde is easy and fast and permits trip booking while personnel are on the phone with the client/customer. QRyde processes both subscription (standing-order) and demand response trips in this manner as well as same-day trip bookings. Users can access client records using last name, phone, or client ID. By a simple click on the client record, all trips and subscriptions are displayed.

Users can access client records using last name, phone, or client ID. By a simple click on the client record, all trips and subscriptions are displayed. The capabilities available include copying an existing trip from the clients' past trips to create a new trip, creating a new trip or a subscription trip. When the user books a new trip by selecting a client record, all pertinent information from the client automatically populates in the trip record. This includes the commonly used locations, mobility device, eligibility, PCA, etc. The detailed screen shows the information automatically highlighted.

4.1.6.1 RESTRICT NUMBER OF RIDES

QRyde provides a wide range of services including public and on-demand (e.g., TNCs, private providers, volunteers, microtransit) to allow a registered group of drivers and riders to share a ride within short notice. QRyde's client management window allows to restrict the number of rides a passenger may take within a day, week or month. The list of options offered can be restricted to a community as per the agency's discretion.

4.1.6.2 PASSENGER DUPLICATION ALERTS

QRyde assigns a Client Id to a client when a record is first created. Subsequently all trips in the system refer to this Client ID. System alerts will be generated when there is a potential duplicate passenger. Duplication may be identified through passenger or client name, address, phone number, birth date, or another identifier. QRyde/Call Center's Client Tab allows the user to enter a client's last and first name and middle initial. The system warns users regarding client duplications.

4.1.7 TRIP BOOKING

Each trip is allocated a Trip ID (up to 20 digits) which can be used to access data directly and for all references.

4.1.7.1 ADDITIONAL CAPABILITIES OFFERED

- Type ahead capability for addresses minimizing spelling mistakes of addresses.
- Velocities given the time of the day used for vehicles (via a calibration matrix).
- Optional traffic delay estimate (interface with Waze/Google possible).
- Street network for calculation of travel time (using map-based street speeds).
- Avoids physical obstacles and accounts for the delays due to detours.
- Grouping based on geographic location of origin and destination of trips a) Avoidance of street segments with detours/road closures b) Accessibility needs/mobility aids.
- Trip priorities are attached to trip types (ADA, wheelchairs, etc.) and the users will be allowed to specify the priorities in the user interface.
- User can override on each trip relative to the client's default mobility, sponsor, class, ADA, additional passengers, and fare.

- Allows for will-call orders.
- Tracks any denied trip requests (by recording the reason and then printing a denial report).
- Fills all appropriate fields with the client's default information.
- Displays lists of all the client's standing orders, trips and past trips when entering a call order.
- Provides alerts to user when violating user-specified policies on travel times.
- Uses default first leg of a trip as home address with ability to set alternate default. Allows for multiple extra riders and adjustment of fare price based on types of extra riders accompanying the client (i.e., personal care attendant (PCA) not charged a fare, friend charged a fare).

QRyde also records the name of the person making the reservation if the reservation via phone

4.1.8 TRIP RESERVATION

QRyde Cloud offers a unified reservation system for client and trip management for all funding sources including ADA, paratransit, demand-response, Medicaid (NEMT), on-demand and Microtransit ride. The web-based application allows personnel to access existing trip reservations easily and quickly for the client to edit travel destination, trip dates, and/or travel times.

QRyde allows passengers the option to pick-up and drop-off by either entering a street address into the search bar, searching for a Point of Interest, directly selecting locations displayed on the map, or selecting based on the user's current location. The features offered by HBSS are:

- **Default and Common Pick-Up Address:** QRyde/CallCenterTM system automatically fills in the client's home address or an alternate address for pickup and from a list of most recently used addresses selects a popular address for a drop off.
- **Client Trip Destinations:** Selecting from a client's most recent 10-15 destinations showing up on the map allows for copying an existing client's information when needed. The software can be configured to allow a rider to save up to 10 favorite locations.
- **Trip Reversals:** QRyde automatically generates trip reversals or booking the return trip from the originating trip destination to the trip origin. QRyde allows users to book multi-legged trips at one go. The return time populated on the outbound leg of the trip auto-populates as the pickup time on the inbound leg of the trip.
- **Pick-Up Time, Appointment Time, and Allowances:** Every trip booked in the system is geocoded. QRyde allows a pickup time negotiation. The system allows multiple policies to be incorporated for the pickup times based on the funding source. When the trips are scheduled on a run, the system accounts for the pickup time negotiations and the maximum allowed travel time for the funding source. Any violations in these rules are flagged and the user is notified.
- **Advance Reservations:** QRyde allows agencies to book, accept, and schedule trip reservations for a period of at least up to 365 days in advance of the requested trip date. QRyde does not impose any restriction on when a trip can be reserved if the client is eligible for the funding source for the trip booked.

- **Suspended Service:** QRyde/CallCenterTM allows a client's services to be suspended by allowing the user either to suspend them by individual funding sources or all of them, by simply pulling up client's registration screen and making all eligibilities inactive. If a user books a trip for a client with expired or suspended eligibility, the user is notified via a popup alert. The user cannot book the trip until the eligibility is active for the client.
- **Personal Care Attendants, Companions, and Escorts:** QRyde allows trips for individual passengers to be booked /scheduled and fully supports additional riders who may need to accompany the passenger including, but not limited to, "Companion," "Escort," "Personal Care Attendant (PCA)," and "Monitor." All additional riders are considered when calculating the capacity of the vehicle and can be considered for specific reporting requirements.
- **Location:** QRyde provides an option to select locations without a street address based on XY coordinates. QRyde also allows the Agency to establish specified parameter boundaries for reservations based on factors such as operational hours and geographic boundaries.
- **Duplication Alert:** System alerts will be generated when there is a potential duplicate passenger. Duplication may be identified with passenger or client name, address, phone number, birth date or another identifier. The system warns users regarding client duplications.

4.1.9 FREE-FORM SEARCH

Another advanced capability QRyde offers is the ability to do a free-form search in the search block. Currently, by typing in partial words one can search for a client or trip record easily. It can also be done by entering a phone number, travel date, a client ID, or trip ID. By eliminating the need for creating field-based search, which limits the information that can be retrieved, HBSS has created a unique and effective decision support system.

4.1.10 SERVICE AREA

QRyde is a highly scalable and replicable solution that enables inclusive access to the transit agencies and provides user-friendly support and the customer service needs of the Agency. QRyde lets users specify service-area limits by drawing polygons on the map and saves them. When a trip request comes up, the system can automatically assess whether the origin and destination are located inside a specific service region.

Zone Customization for Operating Area

Using the batch scheduling function, trips within a service area can be optimally scheduled to routes assigned to that service region. The QRyde mapping system is fully modifiable and enables authorized users to add new streets, change municipal boundaries, and define any incomplete address ranges,

etc. QRyde also provides import of polygon into the software and overlay it over existing base map. It allows the user to assign a specific service characteristic to a polygon layer. These characteristics shall include but are not limited to the following:

- Agency service area for demand response and other services.
- Americans with Disabilities Act (ADA) complementary paratransit service area; and
- Fare zones.

4.1.10.1 GEOFENCING

QRyde lets users specify service-area limits by drawing polygons on the map and saves them. When a trip request comes up, the system can automatically assess whether the origin and destination are located inside a specific service region. Using the batch scheduling function, trips within a service area can be optimally scheduled to routes assigned to that service region.

Geofencing of Service Area in QRyde

GIS capabilities are built into QRyde allowing users to explore maps of the service region and individual travel patterns at user-defined zoom settings. Each map includes a +/- indicator to change zoom levels as needed. The mapping and GIS capabilities are fully integrated with the functioning of the PSDS system and the maps are always available. The HBSS mapping system easily satisfies the user's needs for map views of the service area, individual routes, or segments (runs), and/or bus stops, specific street addresses, and/or other user-defined zoom levels.

4.1.11 SERVICE PARAMETERS

QRyde allows users to configure scheduling parameters. Some of the parameters that can be adjusted are at the system level which include load/unload times, pickup-/drop-off-time windows, and maximum travel times allowed. These parameters can be set up for different funding sources based on the rules associated with the funding sources or for the system. Any trip assigned to a run will adhere to these rules.

4.1.12 ROLE BASED PERMISSIONS

No direct data access is provided at any user level to the entire system. Access to functional sub-portals will be controlled at the user portal level by a sophisticated User Role Management (URM) module accessible only by administration staff. Each user group has customized screens presenting only data authorized for view by that group and allows review or editing based on access authorization.

In QRyde, user roles control access to all module data, whether the user represents an agency coordinating rides, a provider managing schedules, or a funding source reviewing bill. Roles are assigned to each user and each sensitive module/screen/column. Project administrators maintain a QRyde Role Matrix to map users to accessible functions.

Role-Based Permission

4.1.13 USER MANAGEMENT CONSOLE AND USER SELF-MANAGEMENT

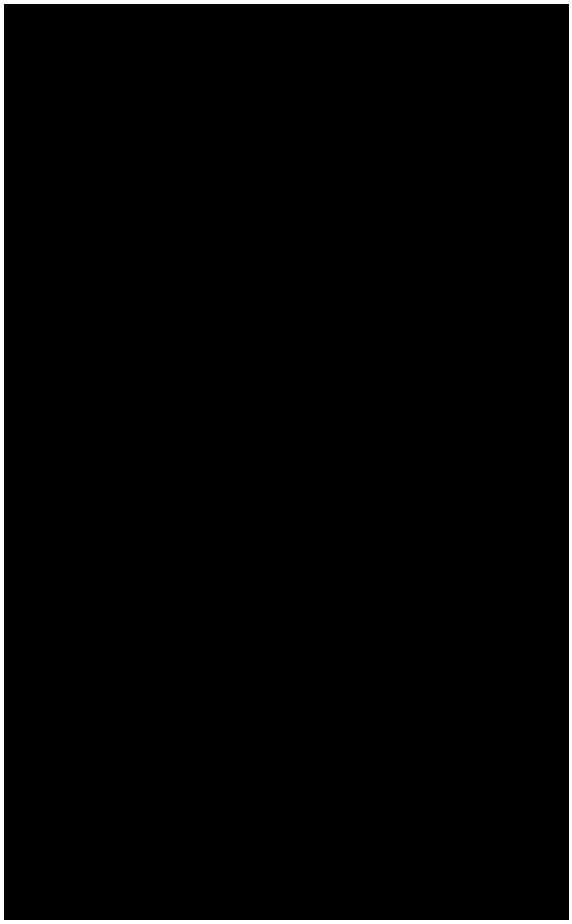
Agency can create the accounts for the multiple types of staff accounts and will be password protected. No direct data access is provided at any user level to the entire system. Further the authority to manage the user accounts will be given to the system administrator upon approval from the transit agency. The system has self-management options to allow users to update their own information, such as changing their password. The parameter list that is agency specific will be too long and cannot be listed in detail. It will suffice to specify the high-level modules (and all underlying data structures) that are agency specific.

New User Account Creation by Administrator

- Clients, Trips, Standing Orders
- Funding Sources, Eligibility, Agency, Operator information
- Volunteer Drivers, Driver, Vehicle, Route, Segment
- Rates, Billing, Fines
- Complaints, Incidents
- Vehicle Tracking data, Driver Messages, Dispatch Messages
- Other Transit Related Information.

4.1.14 PROMOTIONAL CODES

HBSS can provide promotional codes which are configurable. It will be provided through the passenger facing feature of the QRyde software. QRyde Rider Application. Riders can apply discounts on fare by using the promo code while booking the trip via QRyde Rider App.



Option for Applying Promo Code during Trip Booking in QRyde Rider App

4.2 BACK-OFFICE DISPATCHER FACING DASHBOARD

4.2.1 QRYDE DISPATCH 360

QRyde Dispatch integrates via APIs and bridges to the GSE QRyde Real Time Dispatch (RTD) module for vehicle tracking and communicating with drivers through text and voice. QRyde Dispatch 360 is an industries first cutting-edge technology for automatic dispatching of the scheduled trips. QRyde Dispatch integrates via APIs and bridges to the GSE QRyde Real Time Dispatch (RTD) module for vehicle tracking and communicating with drivers through text and voice.

QRyde offers a sophisticated web based Graphical Route Management capability that can be utilized by a dispatcher to effectively manage the route and determine the location of any vehicle in service.

QRyde Dispatch360 on an Ultra-Wide Screen

Dispatch360™

The system displays the time each bus arrives at each stop per route. The GUI real-time dispatch screen clearly displays the status with color coding. It also shows in different colors if the vehicles are off-route, off-schedule, in no-stop zones, or in other areas they may not be allowed to go.

A predictive estimator of arrival times at the designated stops is built upon a linear regression-based algorithm that learns to predict arrival times based on past history, current average speed, and soon with an interface with Google traffic data to factor in traffic congestions.

The graphical representation of vehicles is depicted through icons that can be color coded to represent different aspects including a) route color, b) late/early bus, c) bus with an issue, and d) type of bus. The size of the icon will indicate whether it is a big bus, a van, or a sedan. The displayable information for icons is accessed by tapping or clicking on them and includes Vehicle ID, Driver ID, Route#, Run#,

Directional Status, Arrival Time, Departure Time, and Date and Time of last GPS update. It can also carry last stop and next stop information (especially for long haul routes). The size of the icon will indicate whether it is a big bus, a van, or a sedan. The displayable information for icons is accessed by tapping or clicking on them and includes Vehicle ID, Driver ID, Route#, Run#, Directional Status, Arrival Time, Departure Time, and Date and Time of last GPS update. It can also carry last stop and next stop information (especially for long haul routes).

Fully Connected RTD with Driver Tablets/Smartphones, Traffic Updates, and Incident Management System

The RTD incorporates messaging capabilities between dispatch and drivers while keeping a log of specific events such as when the driver loaded the manifest or when they exited the application with unperformed stops.

QRyde Dispatch360 Displays Vehicle Locations for Transit Providers

QRyde Dispatch 360 is a sophisticated web-based GUI route management module allowing dispatchers to effectively manage the routes and determine the location of any vehicle in service. Interactive Voice Response (IVR) is integrated at both the driver and dispatch levels, simplifying communication to improve the customer experience, and limiting interaction between riders and drivers. Riders can be notified of any delays and be given an opportunity to cancel or reschedule their trip- changes that can be automatically re-optimized by Dispatch360.

4.2.1.1 DISPATCH360 AND CONTINUOUS OPTIMIZATION

The QRyde team platform offers Dispatch360™ an artificial intelligent agent technology that monitors the driver messages and updates from the field (in its real time caching system) and invokes various rules and algorithms to determine how to resolve the given issue. Any cancellations, will-calls and no-shows too are processed by Intelligent Agents of Dispatch360™. QRyde Dispatch360™ integrates with the GSE and can be operated in 'continuous optimization' mode GSE runs and re-optimizes the runs during the day.

QRyde Dispatch360 Auto Dispatch

AskSAM™ is the Intelligent Agent system within Dispatch360 that assists dispatchers in searching for best solutions to new and late trips as well as handling will calls and re-optimizing existing routes. It uses real time data from the cache and uses algorithms to determine the best options available. Once the solution is selected, the system automatically informs the drivers and clients via its notification engine.

Updating/managing Manifest using QRyde Dispatch360

Dispatchers can also optionally use the Dispatch360™ software to manually modify the manifests and once completed QRyde automatically notifies drivers and clients. QRyde also provides real-time

information to manage vehicle fleets whether they are on fixed shuttle routes, charters, in the yard, or on special on-demand events.

Realtime Ridership Analysis

4.2.1.2 DRIVER CONNECTIVITY AND REAL TIME LOCATION UPDATES

Dispatch360 is fully connected with Driver tablets (MDTs) and updates the vehicle locations at (configurable) time intervals. The tablets are connected via micro-services that update the Cache at frequency that can be set by users. The latency from the tablet to cache is in milliseconds and that between cache and the Dispatch360 is in milliseconds. This will create a near real time update environment, and hence the decisions can be made in near real time and will be more accurate than what is prevalent today.

4.2.1.3 LOCATION PLAYBACK

Real Time Dispatching has the capability for the dispatchers to review on the map display the chronological sequence of reported locations for a specified vehicle over a specified time. QRyde also provides controls to view the entire sequence of reported locations from the beginning of the trip or to step through the sequence incrementally forwards or backwards.

4.2.2 DRIVER MANAGEMENT/CREDENTIALING

QRyde permits editing information about drivers, such as name, address, phone, email, gender, date of birth, emergency contact, drug and alcohol testing information and a minimum of five custom fields. In addition, QRyde allows recording of the driver's workdays and employment details. QRyde users can easily create new driver records for drivers that are not in the system. All existing driver records can be searched and edited within seconds. Drivers that are no longer employed can be marked "Inactive" which will hide the driver but still be available for historic reasons such as reporting. "Inactive" drivers can be made "Active" in the future if required. Only drivers that have never been used can be deleted from the QRyde system due to data integrity and reporting. All actions are role based.

4.2.3 GIS MAPPING

QRyde is mapping agnostic and utilizes many mapping tools to provide the best mapping data and analytical tool combination to the users for the proposed Scheduling and Dispatching system. Each mapping tool (Google Maps, Bing Maps, MapPoint, Open Street Maps, MapQuest) offers routing capabilities that tend to provide the 'best' routes between 2 points. In QRyde the map is an integral part of the software, and it is displayed automatically in a popup or by clicking on a show-map button where appropriate. The base maps contain current attributes on street segments, addressing, etc. QRyde can export map layers in standard geographic file formats (e.g., Environmental Systems Research Institute's [ESRI] SHP file format or Keyhole Markup Language [KML] format). It can import location data (customer address or POI database) if available in standard "point" file format (SHP or KML) that consist of latitude and longitude data. The maps can be produced to peripheral devices (such as printers and plotters) directly connected to a workstation or made available through a LAN or wireless LAN. Users will be able to print and download a PDF version of the map view as well. Users can format the layout of maps before printing with the system.

4.2.3.1 GEOCODING

QRyde's Address Management module has a built-in auto-geocoder. It adds precision by allowing users to lift the geocodes directly by pointing on the location on the map if required. All mapping systems utilized in QRyde (Google, Bing, MapPoint, Open Streets, Map box, etc.) have elaborate capabilities to provide geocoding of addresses. The QRyde geocoding capability is seamlessly integrated with the entire system.

4.2.4 QRYDE DASHBOARD

QRyde is offering to bring greater transparency in the operations. Specifically, we propose to integrate the operations with a comprehensive data visualization toolkit called dashboards. With this ability to visualize graphically the performance and compliance elements of our operations, in near real time, the Agency has a unique opportunity, for the first time, to monitor the operations from the following perspectives: Customer centric, employee centric, operations management centric and predictive analysis etc. Dashboards are easy to read and show graphically the current value and historical trends and aggregated values of key performance indicators (KPIs). The dashboards can be organized based on strategic, analytical operational or informational objectives (see below a complete list of objectives).

Transit Driver/Vehicle Productivity Dashboard

Benefits: Dashboards enable various stakeholders – cities, towns, the Agency, managers, senior centers, client advocates and customers to monitor (where permissible) the operations at the Agency, and its various departments. Digital dashboards allow transit Agency to capture and report specific data points from each department to provide a snapshot of performance.

4.2.4.1 TRANSIT DRIVER/VEHICLE PRODUCTIVITY DASHBOARD:

- Visual presentation of performance measures
- Ability to identify and correct negative trends
- Measure efficiencies/inefficiencies
- Ability to generate detailed reports showing new trends
- Ability to make more informed decisions based on collected business intelligence
- Align strategies and organizational goals
- Saves time compared to running multiple reports
- Gain total visibility of all systems instantly
- Quick identification of data outliers and correlations

4.2.4.2 STRATEGIC DASHBOARDS:

These dashboards show operational characteristics in an aggregate form, such as daily, weekly, monthly, quarterly values of no-shows, cancellations, ridership, ridership by geography etc. These dashboards can also show trend analysis and other representations of aggregated data that collectively help the operations manager to better understand the behavior of the various components of the Agency's operations and then make smarter and strategic decisions.

4.2.4.3 BUSINESS INTELLIGENCE:

It is our belief that the pace and evolution of technology use in public transit industry requires all operations management services companies to incorporate business intelligence gathered from dashboards, at all four levels and use the data to drive business decisions at strategic and operational level. QRyde will provide a dashboard access to agency where agency can apply filters and categories and extract data, bar graphs, line graphs and other graphs based on various key performance index metric (KPIs). Moreover, an agency can also add KPI Metric to the list of options available which can be customized for each Agency. The reports can be generated and extracted in Jpg, pdf or excel as required.

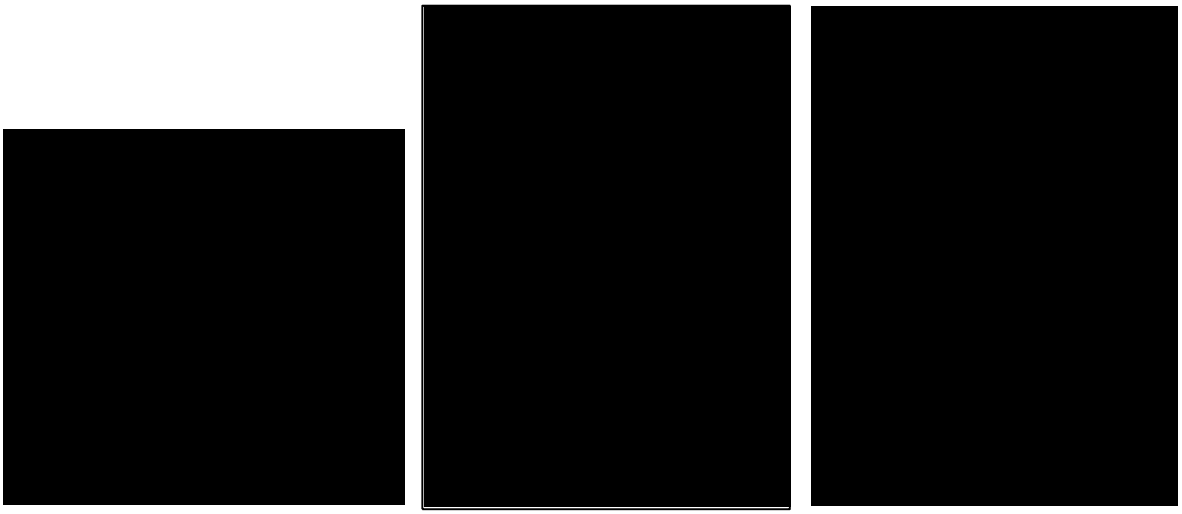
Extracting Report based on KPI Metric

Sample Bar Diagrams on Dashboard

4.3 PASSENGER FACING FEATURES OF THE APP

The QRyde Rider App allows a user to register in the system using basic information such as a first and last name, a user ID, a phone number, and an email ID. A rider may specify mobility requirements such as: elderly, wheelchair, and lift accessible vehicle in their profile.

The QRyde Rider App Interface



Rider Registration through QRyde Rider App

The system maintains a profile for each registered passenger and will categorize each passenger based on registration information. The app gives users the ability to update their profile information online. QRyde enables all forms of special needs to cater to people with disabilities, seniors, veterans, healthcare needs, and the public. This data is provided to the GSE which will determine the appropriate vehicle to meet the rider's needs.

4.3.1 FAVORITE LOCATIONS

The Rider App allows the rider the option to select from the most recently used addresses. The rider can mark an address as a favorite location from the list of the addresses previously used. The software can be configured to allow a rider to save up to 10 favorite locations.

Frequently Used Addresses

4.3.2 ADVANCE AND ON-DEMAND BOOKING

Riders using the QRyde Rider App can book trips in advance and on-demand. Trips can be booked in advance without any restrictions on the mobile app by selecting a date and time. QRyde provides a wide range of services including public and on-demand (e.g., TNCs, private providers, volunteers, microtransit) to allow a registered group of drivers and riders to share a ride within short notice. The list of options offered can be restricted to a community. To book a ride on these services, the rider inputs their destination and origin (defaults to current location), date and time for the trip, and advanced options (stored within a rider's profile) such as the requirement for wheelchair or lift accessible vehicles. The rider also has the option to book recurring trips on the app, the web portal, or by using the call center.

4.3.3 ADDITIONAL RIDERS/ESCORTS

A rider can specify additional riders on the Rider App at the time of trip booking. This option is available to the rider when selecting "advanced options." QRyde offers an option to waive the fare for additional riders in case of ADA trips.

4.3.4 SYSTEM RESPONSE TIME TO PROPOSE A TRIP

When a ride is requested and the rider has inputted the origin and destination address, the pickup or appointment time, and the date of travel, the rider is presented with the available options based on the service times and service area. The QRyde search engine finds an instant match in less than 1 second based on the service area and presents the options to the rider. The rider can select from the options presented and request a ride.

Once the ride is requested, the QRyde GSE searches the available routes within the service zone to ensure that the trip can be added to the route without impacting the existing appointments, pickups, or wait-times for passengers on-board. If the trip can be added to the route without violations, then

a route number (vehicle #) and the estimated pickup time is sent to the rider. This process to find a ride on an existing route and provide the information to the user typically takes less than 1 second.

4.3.5 RIDER TRIP CONFIRMATION

Trip Booking via QRyde Rider App

When the rider confirms the trip, the rider is provided the route number (vehicle #), the name of the assigned driver, and the estimated pickup time. The rider is presented with a time window for the pickup and the drop off time. The system ensures that the rider is dropped off to the destination on time. The rider is also provided with the location information of the driver and route on a periodic basis. This information is provided to the rider on the Rider App and via text.

4.3.6 RIDER CALL CENTER SUPPORT

Riders without smartphones may access the QRyde website or call the QRyde Call Center during normal operational hours. Call Center staff or facilities (employers, schools) that partner with the agency may book rides for those without access to on-line technologies though the QRyde web interface or through the QRyde Call Center. HBSS will use the QRyde Call Center system for maintaining telephone call-taking, reservation line, access, and availability for customers to coordinate transportation during the operational service hours stated in the RFP. The QRyde Rider App and QRyde Website are available 24/7/365.

4.3.7 RIDER TRIP RATING

Riders can rate a trip taken using the App and offer other comments. The App allows a rider to provide a 1 – 5-Star rating for every trip. The trip ratings and rider feedback provide important data about service performance and what may need improvement and modifications.

4.3.8 WEB-BASED AND CALL CENTER SUPPORT FOR RIDERS WITHOUT SMARTPHONES

Riders without smartphones may access the QRyde website or call the QRyde Call Center. Call Center staff or facilities (employers, schools) that partner with the Agency may book rides for those without access to on-line technologies though the QRyde web interface. QRyde offers a simple to use community-based transportation model where different communities can utilize the portal to manage rides for their members. QRyde also offers a Call Center for riders to book their rides

4.3.9 AGENCY-BRANDED APP

The QRyde Mobile Smartphone Application (App) supports Android and iOS phones (available for free in Android and iOS stores): These apps can send and receive information, and alerts. The smartphone app and web portal can be completely customized or white-labeled for the Agency to reflect a completely branded App, web-based portal complete with the Agency logo and contact information.

4.3.10 WEB PORTAL

Self-Service Responsive Web Application

QRyde, in addition to smartphone application, also provides its web portal which is very easy and fast. New members will be able to apply for membership online, recover their login credentials, add, or update their demographic and payment information, and see full history and statements of account. Members may register on the web portal. The portal also allows members to view the ride history, rate the rides and log complaints if required. The functionality is also available on the mobile app.

Add Funds in QRyde Web Application

QRyde's web portal can be used for medical facilities and caregivers to manage trip bookings, cancellations, and complaints via a web portal. The Facilities/Medical Providers/Case Managers can use the portal. Currently, several facilities use the portal accounting for almost 7,500 trips being managed directly via the web per month. QRyde plans to add soon a Vehicle Tracking and Performance dashboard for members.

4.3.11 TRIP UPDATES/PERSONAL MESSAGES

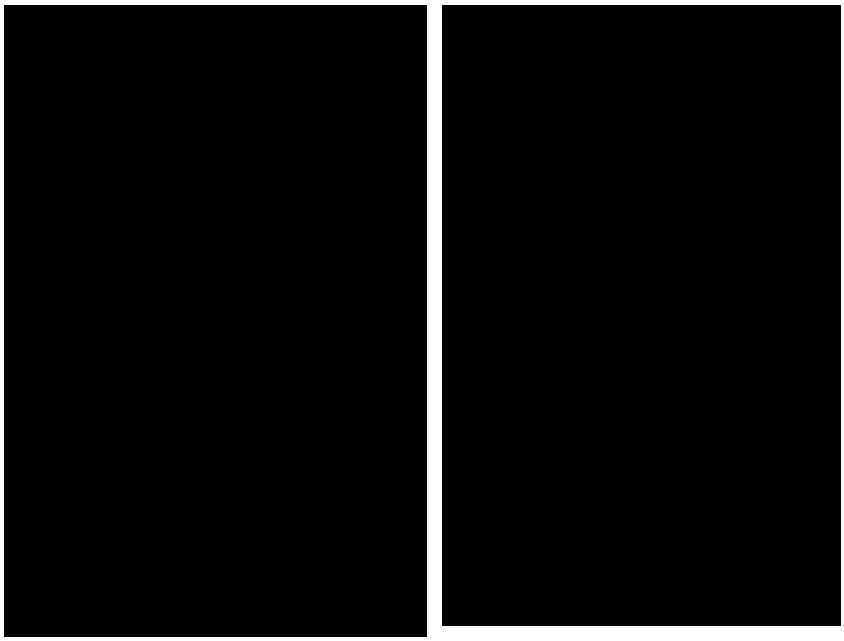
Callouts from the QRyde Call Center module gives call takers the ability to select a pre-canned message or type-in a message and call the client. The messages that are called can be logged daily. It reduces "wait time" for the driver when the driver arrives to pick the client and allows on-time pickups for the entire route; Reduces back and forth radio communication between the driver and the dispatch trying to locate the rider; Efficient management of resources (driver and vehicle) with a reduction in the percentage of no-shows and cancel on arrivals; Improved customer service.

Daily trip reminder calls out: This will be a trip reminder callout that goes out daily at a pre-set time (to be identified by the Agency) to remind riders of future trips. The callout will include the information about the scheduled pickup/appointment time and address. The system also provides customers the option to cancel the trip or reconfirm the scheduled trip during the callout. The trip is automatically taken off the driver's tablet when it is cancelled by the riders with a notification to dispatch of the available slack on the driver's manifest.

4.3.12 VEHICLE LOCATION

QRyde's rider app allows a rider to track the driver's location and estimated time of arrival. The rider can track the location of the driver on the map in real-time relative to the rider's trip. The ride management screen on the rider app allows the rider to view a picture of the driver if available and the vehicle information when the trip is assigned to a route/vehicle.

The ride management screen also permits the commuter or the rider to cancel the ride. When the rider confirms the trip, the rider is provided the route number (vehicle #), the assigned driver's name, and the estimated pickup time. The rider also receives the location information of the driver and route on a periodic basis. The information is provided to the rider on the app and via text and support via email and phone.



Ride Management (Trip Review and Cancellation) and Details Page, Driver location and Pickup ETA

4.3.13 COMMUNICATIONS WITH RIDERS

The Rider's phone number and the email ID are used for communication with the system for ride-booking and payment notifications, driver location notification, and other trips management-related functionality (cancellation, etc.), etc. QRyde also protects confidential information and notifies customers via email, SMS, and voice. The Rider is also notified via in-app push notifications of updates to the ETA/ride cancellation(s) by the transportation provider.

Driver Assignment: Drivers are assigned to Segments. QRyde recognizes the need to verify the drivers' schedules; qualifications, bid times, and other factors to ensure compliance with system policies before assigning trips on runs assigned to drivers. Some of the factors used are:

- Capability of the driver to handle wheelchair trips
- Client age-range that the driver is allowed to transport
- Gender restrictions
- Town Inclusion/Exclusions
- Client Inclusion/Exclusions

QRyde's GSE accounts for this complete matrix for each driver before trip assignment.

4.4 DRIVER FACING FEATURES OF THE APP

QRyde provides seamless communication through its tools (rider app, driver app, dispatch module) so that all your stakeholders have the information they need – when they need it. Our QRyde Rider and Driver apps are intuitive and well accepted by both young and old users. The QRyde ePAD™ Driver app is only compatible with Android.

The vehicle operator/driver app provides the driver with real-time trip details, including manifest and manifest changes, and navigation. Depending on your needs, the ePAD™ Driver app can also collect trip fares and track ride demographics. The QRyde ePAD™ Driver app interfaces with Google/Waze to give turn-by-turn driving directions. The driver has both audio and visual directions available to perform pickup and drop-off for riders.

Trip Detail Screen

To utilize this functionality, the driver can click on the stop and click on the "MAP TO" button to navigate to the destination. Drivers are not required to enter a destination address to use the map navigation. The navigation starts automatically after the stop selection on the manifest. The navigation module also provides an option to the operator to activate and deactivate the navigation map display and/or the audible instructions as desired. The navigation map is also updateable using WLAN for bulk data transfer.

For visual directions QRyde's Driver App provides a map showing the current location of the vehicle alongside routing directions to the next pick-up or drop-off location. It also has the ability to mark driver times such as sign-on and sign-off, standby and break times. It is capable of replaying the vehicle's trip assignment, routing and drop-off locations for a minimum of 30 days.

The QRyde Driver App is another powerful part of QRyde's arsenal of user-friendly tools. When drivers log in, they will be able to view Today's Trips as an electronic manifest. As they perform trips, the driver will enter performance information for each stop, all of which flows back to the QRyde platform. QRyde ePAD™ allows vehicle operators to update the system as it completes its pickups and drop-offs. In addition, drivers can use the QRyde Driver App to "Accept" trips offered by their dispatch. This means the system utilizes the inventory already in the field and creates efficiency by allowing it to self-organize newly offered trips around existing work. The driver portal also allows the driver to 'automatically call' via IVR the client or send the client a SMS, a capability that alerts passengers such as seniors/the elderly to be ready for their pickup.

QRyde vehicle operator interface provides dynamic routing capabilities to adjust vehicle allocation efficiently. If the platform adds a passenger pick-up mid-trip, then the directions will automatically update with minimal input from the operator with automated manifest updates.

A.1.1 ACCESSIBILITY ASSISTANCE

QRyde also has an advanced compatibility management capability where the users can mark drivers with specific restrictions, e.g., a driver can be assigned non-wheelchair trips only, or male-only trips, or restricted to operate within a particular polygonal region. Any violation of these rules can be flagged by the system. These violation checks are done in the batch scheduling process and during manual scheduling. The user has the option to override some violations if required. Using the same capability, ePAD™ also tracks the status of a vehicle's wheelchair lift. For example, it will report in real time if whether the wheelchair has been cycled.

4.4.1 COMMUNICATION AND CUSTOMER SERVICE

QRyde's platform has an efficient and proven notification and messaging reach between the drivers and the dispatchers. The driver and dispatcher can have radio communication between them trying to locate the rider; provides efficient management of resources (driver and vehicle) with a reduction in the percentage of no-shows and cancel on arrivals; and improves customer service. The QRyde ePAD can send automated update messages to the riders regarding the ETA, delays, and trip reminders.

4.4.2 VEHICLE LOCATION TRACKING (DRIVER SECTION)

QRyde allows for geo-fencing and the ability for changes to be made by the Agency. HBSS provides map updates which include at a minimum, all additions and changes to streets GIS Map Updates alignments, changes to direction of travel, changes to streets names, additions and deletions of landmarks, and changes to political boundaries. The system defines geo-triggers around pre-defined locations in the service area. The associated geo-triggers with specific actions can be allowed. The actions get activated when the vehicle enters the defined geo-trigger and deactivate as soon as the vehicle leaves the geo-trigger.

4.4.3 DRIVER OPERATOR COMMUNICATION

The QRyde ePAD™ allows the vehicle operator to send a canned data message to the central system by selecting from a set of pre-defined messages. All canned messages to dispatch include the date, time, location (latitude and longitude), and operator ID. When a canned data message is received from dispatch and available for viewing, the ePAD™ generates a distinct audible tone and visual alert. The QRyde system is equipped with a notification service where users can subscribe to various types of alerts and be notified when the alert conditions are met. The QRyde system can send alerts as SMS, emails, or by screen popups that can be easily viewed.

The ePAD™ allows the vehicle operator to view received messages that are longer than can fit on one line of the display. It lets the vehicle operator send an acknowledgement or Yes/No response to certain messages received from the central system. The ePAD™ periodically attempts to send a canned data message or response until it receives an acknowledgement message from the central system. QRyde ePAD™ maintains the status of communication between driver and dispatcher in its archives. It also highlights messages in the message list which require a response. The QRyde ePAD™ stores a configurable number of canned data messages received from dispatch, indicates to the vehicle operator when there are unread text messages, and allows stored messages to be viewed or deleted.

The ePAD™ utilizes built-in text-to-speech functionality to read the received canned messages aloud to the vehicle operator when prompted to do so vocally by the vehicle operator. QRyde ePAD™ maintains the status of communication between driver and dispatcher in its archives. It also highlights messages in the message list which require a response. The communication messages and responses have their own view on the message list and are not mixed with events. These messages follow the same path as events in that they are written to the bulletin board and then all concerned users are informed.

The responses received are tagged to the original messages and preserved across multiple sessions and user logins. QRyde ePAD™ supports the following messages:

- Driver log-on; log-off
- Pick-up location arrival
- Pick-up performed
- Drop-off location arrival
- Drop-off performed
- Additional passenger boarding
- Additional passenger alighting
- Rider no-show; cancels at the door
- Rider not ready within pick-up window.

4.5 DATA COLLECTION AND REPORTING

4.5.1 CUSTOMER DATA MANAGEMENT

QRyde/CallCenter™ has a Client Module (Vertical Pad) that offers users a capability for creating, managing, and purging client information. All the specific fields and the ensuing features requested in the RFP are available as is or can be fine-tuned further to meet the needs of the agencies.

Specifically, the following fields and the enabling functionality will be made available within this offering:

[redacted]

QRyde/CallCenter™ has a separate Authorized Trip Screen that allows the user to create an authorized trip which has a location of authorization, a start date, and end (expiration) date, and a frequency or authorization (e.g., 2 times a week, 4 times a month, etc.).

Client Data Management

4.5.2 TRIP DATA

HBSS brings a very Easy to Use tool to manage customer records and trip booking. It is a highly scalable architecture able to support upwards of 1000 call center staff simultaneously. It is purely web-based so deployment is nearly seamless with no or minimal versioning issues.

Vertical Tab Interface, Can Scroll Left Right, or by Clicking on the Dots at the Top

It also can be deployed in a distributed manner where one or more Call Centers can use the system given that the backend system is on the cloud. Keeping future dynamics in mind, the front end of the system is also designed with an ePAD™ type user interface that can be operated via touch screen.

4.5.3 VEHICLE OPERATIONS DATA

QRyde System can permit the editing of general information about a vehicle, such as make, model, year, VIN, accessibility, current odometer reading, and equipment (e.g., lift guards, emergency roof hatches, fire extinguishers).

Vehicle Management Portal

4.5.4 REPORTING

QRyde Reports module enables users to create, generate, and store reports on individual trips on a daily, weekly, monthly, quarterly, and annual basis, and on a selected days or series of day's performance. QRyde provides several different types of Reports in multiple formats like CSV, PDF, etc. QRyde provides the option of customization which allows the agency to customize PTN 128 reports in the way they need. It also can generate/create various billing reports and invoices.

Details contained in Trip Schedule Reports include pickup and drop-off locations, wait time, travel time, trip status (confirmed, cancels, no-shows, cancel-on-arrivals), booking method (app, web, call-center), payment method (fare card or credit card), rider profile, rider eligibility, passenger comments, complaints, ratings, and other information submitted through the App together with a breakdown of ratings and classification of written feedback.

4.5.4.1 EXPORTING REPORTS IN VARIOUS FORMATS

- Reports for standard National Transit Database (NTD) data
- Reports that include A-30, S-10, R-20, separated by MB and DR
- Operating Data Reports
- Third-party Reports
- Driver Performance Reports
- No Show Reports (in percentages)
- Ad-Hoc Reporting
- Custom reports
- Vehicle Preventive Maintenance notifications in pre-established intervals
- Percentage of passengers requiring assistance with mobility devices
- Percentage of passengers entering special requests with details on the types of requests
- Rideshare/share ride counts and percentage
- Single day passenger counts and trip counts.

HBSS provides comprehensive NTD reports that are compliant with NTD database-reporting requirements. QRyde Reports produce NTD reports that include all National Transit Database data sorted by weekdays and Saturdays and Sundays. Our software can generate a range of management and service reports necessary to permit sufficient oversight of the paratransit service and clients. The software also provides monthly, quarterly, and annual reports that meet NTD, ADA service oversight, and state requirements.

Required data by paratransit program includes ridership, revenue miles, deadhead miles, revenue hours, deadhead hours, missed trips, no-shows, late cancelations, trip denials, trip length (excessive trip lengths) and on time performance. This would require additional reporting for each program, including attributes by municipality, fare type, and county of origin.

Sample NTD Report

All tables and fields are available to be pulled into reports. QRyde Reports can be generated in multiple formats: CSV, PDF, and HTML Page. The reports are broken down into daily (detail) reports and date range-based summary reports (the date range allows weekly, monthly, and annual reports to be printed). Trip reconciliation forms allow the supervisor to verify that all information has been recorded and permits corrections as needed.

Data integrity is the most valuable return a software system can provide for an agency. We categorize the reports in a manner that makes them easy to locate and can be grouped by the departments that will access them. Different permission levels can be instituted so that users can only access the group of reports that is pertinent to their specific department.

The software can generate a range of management and service reports necessary to permit sufficient oversight of the Microtransit, Paratransit, and Non-Emergency Medical Transport services and clients.

4.5.4.2 TRIP MANIFESTS SYSTEM PERFORMANCE REPORT

These Reports provide the actuals based on field data, total passengers carried, total mileage, total trips, average daily passengers, average daily trips, average median and longest wait times, average daily miles driven, average median and longest ride times, passengers per clock hour (broken down into individual vehicles), and passenger boarding's per revenue hour.

4.5.4.3 STANDARD REPORTS

Standard Reports

QRyde has standard reports. However, historically each agency wants their reports structured differently. Consequently, the HBSS team would work with the transit Authorities to determine its report designs and then customize the standard reports (if necessary) and deliver them.

4.5.4.4 AD HOC REPORTS

QRyde Reports also have an Ad-Hoc reporting module that allows the users to create, format, and print their own reports based on any data element contained in the database.

All QRyde Reports can be exported into file formats viewable on a web browser or viewed and edited with standard office software (e.g., Word or Excel versions used by the participating agency). There are 23report options available in QRyde. These reports can be made available to the agency based on need. Below are examples of reports that HBSS has created for various clients. Sample reports are listed below. HBSS can customize reports based upon the agency's requirements.

Admin Reports:	
1	Active Funding Source
2	On Time Performance Report
3	Possible Bad Addresses
4	VUD Report (Vehicle Utilization Data)
Billing:	
1	Client Bill By Agency
2	Details Client Bill
Daily Operational:	
1	Daily Trip Log
2	Driver Schedule
Operational:	
1	Client List
2	Client No Show and Cancels on Arrival
3	Client/Eligibility ON-HOLD
4	Current Client count as of Today
5	Standing Orders / Eligibility End Date Report
6	Trip Audit Report
Statistical Report:	
1	Driver Productivity Report
2	Productivity by Segment
3	Productivity by Vehicle
4	Purpose Trip Count By Vehicle
5	Ridership by Destination
6	Ridership by Home Address
7	Ridership by Origin and Destination
8	Ridership by Residence
9	Vehicle Mileage Detail

4.6 TECHNICAL SUPPORT, SOFTWARE UPDATES AND RELEASES

HBSS offers several different support plans, and its premium plan includes Extended-hour Phone, Chat, and Email support. As part of the premium package, extended hours are available as follows:

Issue Type	Monday – Friday	Sat	Sun
*Mission Critical Issues	24x7	24x7	24x7
Support Calls	9:00AM-5:00PM EST	--	--
**Defining Mission Critical: It includes Server Downtime, Website is down, Data Loss, and trips cannot be booked*			

Severity	Criteria
Critical	• Customer's production system is down. • HBSS product is unusable resulting in total disruption of work or other critical business impact. • No workaround is available
High	• Major feature/function failure • Operations are severely restricted

	• A workaround is available
Medium	• Minor feature/function failure • Product does not operate as designed, minor impact on usage, acceptable workaround deployed
Low	• Minor issue • Documentation, general information, enhancement request, etc.

All servers, routers, switches, data center security and facility power shall be monitored electronically 24 hours a day, 365 days a year. In the event there are any out of tolerance conditions with any server components, technical support will be automatically notified. The technical support will respond to these issues using an SLA that will be agreed upon between HBSS and the transit providers.

Technical support will be available 24 hours a day, 365 days a year. All technical requests from the deploying agency must be addressed within one hour of the notification of a problem. HBSS will provide weekly tickets to the members of the agency. The Agency must be able to view the status of their support request(s) at any time through an online tracking system.

4.6.1 SUPPORT EXCEPTIONS

Covered products are eligible for support only so long as such products are unmodified and are covered by a software agreement. Support does not include installation or maintenance of applications or devices external to your covered products and services required due to your negligence, unauthorized modification, combination of covered products with other software, or other causes external to the covered product. Support does not include technical support for applications developed by the customer using the covered products.

4.6.2 WEB-BASED SUPPORT

Resources include a 24 x 7 Self-Service Support at our website, www.hbssonline.com in addition to:

- Chat, email, and telephone support (Business Hours, Weekdays).
- Remote access (Business Hours, Weekdays); 800# Telephone Support (Business Hours, Weekdays); software upgrades twice per year; minor upgrades to software and customizations delivered on a as needed basis (effort not to exceed 5 days per project).
- HBSS uses state-of-the-art Knowledge Management and Call-Tracking software to provide the highest quality of support. HBSS will provide remote (GOTO MY PC) support during operating hours which is very close to offering on-site support.

4.6.3 TECHNICAL SUPPORT

Support entitles the agency to receive HBSS technic al support which consists of unlimited telephone support during our Technical Support Hours listed below, and unlimited electronic support via our website listed below (electronic support requests can be made at any time and will be addressed during Standard Technical Support Hours). Customer may designate up to three individuals ("Designated Contacts") who will be the only persons authorized to contact HBSS Technical Support Desk on behalf of the Customer. The Customer can change the identity of its Designated Contacts at any time by notifying HBSS.

Standard Technical Support			
Location	HBSS Technical Help Desk, Lowell, MA		
Hours	Live Support 9:00 a.m. to 5:00 p.m., Eastern Time, Monday to Friday		
Telephone	978.379.0010	Facsimile	978.379.0014
Website	www.hbssonline.com		

4.6.4 SOFTWARE MAINTENANCE UPDATES/UPGRADES

The Customer is entitled to receive via electronic downloads all upgrades and new releases for the Covered Products which are made generally available during the Support Year, at no additional charge. Support does not entitle the Customer to receive upgrades or releases of any HBSS software products not covered by the Covered Products. HBSS software-version upgrades are typically released on a twice-yearly basis to clients. It is the intention of this twice-yearly upgrade to acknowledge the issues that may have arisen as well as provide the client with other enhancements designed to optimize the client's operations of the proposed system. HBSS will inform the deploying agency at least three months in advance of the installation when new software releases become available.

Customer can continue using the previous version till the time HBSS upgrades. We will ensure that all existing software configurations are protected after the system has been upgraded or updated for the entire duration of the time when the deploying agency uses the product. If issues arise in between software upgrade periods, HBSS technical support will work with the program to fix issues in a timely fashion. However, any enhancement to the software that is above and beyond the original contract contents with the deploying agency will be billed separately at $125.00 per hour. The timeline for completing the enhancement will be mutually agreed upon by the deploying agency and HBSS staff.

4.6.5 WARRANTY

HBSS's is committed to providing Quality of Service (QoS). Routine updates and upgrades are included in the price of the software and will be for the duration of The Agency's use of QRyde. Updates and upgrades will be automatic during the warranty period. HBSS will be a single point of contact for all warranty administration during the warranty period for its products.

Subject to Customer compliance with the terms of this License Agreement, HBSS warrants that the Licensed Software, as delivered by HBSS and when used in accordance with the Documentation, will substantially conform in all material respects to the specifications, functions, descriptions, standards, and criteria set forth in HBSS' proposal. If the Licensed Software does not comply with this warranty and such non-compliance is reported in writing by the Customer to HBSS within the ninety (90) day warranty period, HBSS will do one of the following, selected at HBSS' sole reasonable discretion: either (i) repair the Licensed Software, (ii) replace the Licensed Software with software of substantially the same functionality, or (iii) terminate this License Agreement and refund the relevant license fees paid for such non-compliant Licensed Software.

The above warranty specifically excludes defects resulting from accident, abuse, unauthorized repair, modifications or enhancements, or misapplication. The foregoing is your sole and exclusive remedy for HBSS breach of this warranty. The foregoing warranty will be void if the Customer fails to submit a completed Problem Report describing the condition that Customer believes constitutes. HBSS does not warrant that the Licensed Software will meet the Customer's requirements, be error free, or operate without interruptions. Customers acknowledge that the Licensed Software operates in an environment that includes software and hardware of 3rd-party vendors and that HBSS does not control the products of 3rd-party vendors.

4.7 PRIVACY AND SECURITY

QRyde is securely hosted on Oracle Cloud Infrastructure. It provides significant security layers against traditional network security issues such as distributed denial of service (DDoS) attacks, man-in-the-middle attacks, IP spoofing, and port scanning. The availability and reliability of transportation data is especially important. Protecting it is getting more complex – and meeting mandated compliance standards is getting more difficult and expensive. That is why more and more organizations trust QRyde. QRyde System accounts and user accounts both require multi-factor authentication for registered users who enter credentials. Our HIPAA compliant platforms are safeguarded 24/7/365 by

impregnable physical defenses and two-factor authenticated logical security. The customer information that is sensitive or protected (PII, PHI, PCI) can be completely safeguarded and retained with QRyde. Data encryption and strong authentication are key components of the defense-in-depth principle.

Our client installations are hosted within the Oracle Service Cloud, which includes multiple sites, almost-real-time continuous data backup for near-real-time recovery in the event of a system interruption. Data backups are always stored in more than one physical location to protect against site-related issues, across multiple physical and virtual machines. Oracle Service Cloud is architected with availability, maintainability, scalability, and customer security at the top of the list.

Every data center implementation meets or exceeds the following specifications:

- Redundant firewalls, F5 load balancers with SSL acceleration and Web farms.
- Multi-processor servers connected by multiple gigabit NICs
- Redundant database disk using real-time replication
- Redundant (failover) database servers
- Tape library for off-site data storage

In addition to the robust computing architecture, each data center supports the Oracle Service Cloud via:

- Dedicated substation on utility grid
- Four or more onsite diesel generators
- Independent rack power sources
- Dual entry network connectivity
- 3+ Internet backbone providers
- Less than 40% peak network utilization
- 99.99% availability of power and cooling.

HBSS understands that the confidentiality, integrity, and availability of your information are vital to your business operations. That is why HBSS uses Oracle Service Cloud which excels in trust and confidence as your service provider. HBSS/Oracle take this commitment seriously. Security is embedded in Oracle's "DNA" – within the product, the development cycle, and Cloud Operations practices – to ensure your information remains your information.

Networking/Hosting Architecture of HBSS/Oracle Cloud Deployment

QRyde is completely web-based application which is easily accessible via hypertext transport protocol secure (HTTPS) on standard web browsers (e.g., Microsoft Edge [preferred], Firefox, Google Chrome, and Apple Safari). HBSS will implement a test environment with all software components installed on parallel server hardware at the data center (hosted installation) where software updates and configuration changes can be tested prior to being implemented in the production system.

If there are any future updates or upgrades, HBSS will ensure that they will be tested in the test environment before being implemented on production servers. Moreover, all software upgrades or changes made by HBSS are made in the test environment and certified prior to moving into a production environment.

HBSS uses a hosted approach which ensures that at least two parallel data centers in two different geographic locations are utilized. By default, the QRyde Central system can be configured in a redundant configuration. As a result, if the primary program fails, the secondary application, which is configured to run in hot-standby mode, can take over as the primary application to ensure fail-safe operation.

HBSS' cloud hosting method already includes redundant setup, and it is included in the QRyde system for all our clients. The current strategy is well-designed to ensure that operation failures are kept to a minimal with a secondary application in place. HBSS will inform the deploying Agency at least three months in advance of the installation when new software releases become available. Should unscheduled downtime occur, HBSS will notify the client as soon as possible and provide a detailed explanation and the anticipated length of service interruption. HBSS anticipates a minimum of 99.99% up-time.

4.7.1 DATA BACKUP AND RETENTION

HBSS has the capability to automatically save and back-up all data in real-time and provide timely recovery of all data and files in the event that services are interrupted. HBSS has three policies for data retention:

a. Each night, all transactional data is archived e.g., daily trips are moved into an archive trips table. The day's data as well as archived data is available to users in the system.
b. Transactional data older than 2 years, is moved out of the Ryde log system into a backup location (whenever there is a need for {..site - name..} to access data older than 2 years, HBSS follows a process wherein the historical data is first restored it into a database copy and from there it is brought into where it is accessible for {..site-name..} users)/
c. All the auditable data is logged and the retention period for this data is three (3) months.

4.8 TRANSFER OF DATA AT CONTRACT TERMINATION OR EXPIRATION

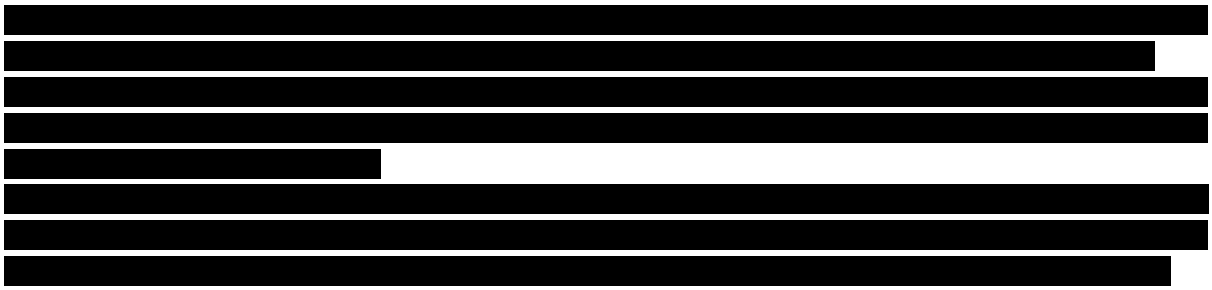
HBSS will provide Data Transfer as per the mutually agreed terms and conditions in the agreement. The Transactional Data for: Clients, Trips, Standing Order and Pertinent Billing Data will be transferred to the client. If our system is used for doing electronic billing then that will be transferred as well, this is typically as in the case of HIPAA Invoices. The Disposal upon contract termination is as per the policy by Oracle cloud and here is the snippet from "Oracle Cloud Infrastructure Documentation". "Customers release the hardware" = We initiate "terminate" an instance (aka hardware) on oracle cloud when our hosted client contract is terminated. Oracle cloud in turn initiates their "Secure host wipe and media destruction"

Secure host wipe and media destruction: Oracle Cloud Infrastructure instances are securely wiped after customers release the hardware. This secure wipe restores hardware to a pristine state. We have re-engineered the platform with proprietary hardware components that allow us to wipe and reinitialize the hardware in a secure manner. When the underlying hardware has reached the end-of-

life, it is securely destroyed. Before leaving our data centers, drives are rendered unusable by using industry-leading media destruction devices.

4.9 IMPORT OF EXISTING DATA

HBSS team provides a data template to collect client data from the current system. HBSS will verify and ensure that the files have migrated properly. We will establish the cutover procedure as a sequence of activities to successfully migrate the business operations from 3rd-party systems to the company's Integrated Transit Management System. The cutover will be implemented as per the cutover plan – a set of detailed, sequenced tasks created to build the new ITMS system, convert and migrate data, configure the system, and decommission legacy system(s). In general, HBSS plans to migrate client, standing order, and funding source data and does not plan to migrate trip data. However, if it is needed, one year of a client's trip history can be migrated. Future daily trips will be input as part of the training plan. After project initiation, HBSS will coordinate with the Agency Project Manager to develop a list of fields that need to be converted from the existing database to the new database based on the logic required to populate fields in the new database that have no match in the old database. HBSS has a comprehensive data migration and cut over process for replacing an existing scheduling system with QRyde. It can be explained in three simple steps:



QRyde uses Oracle which operates an advanced intrusion detection system (IDS) on the internal and customer facing networks to monitor network traffic for unauthorized or suspicious activity. All files sent to Oracle Cloud Service, regardless of the method used to transmit, are scanned for known attack signatures. Infected files are flagged and not permitted into the service.

Secure host wipe and media destruction: Oracle Cloud Infrastructure instances are securely wiped after customers release the hardware. This secure wipe restores hardware to a pristine state. We have re-engineered the platform with proprietary hardware components that allow us to wipe and reinitialize the hardware securely. When the underlying hardware has reached the end-of-life, it is securely destroyed. Before leaving our data centers, drives are rendered unusable by using industry-leading media destruction devices. Our default option is to export transactional data as flat text files in CSV(Comma Separated Values) format.

Client's data will be saved in cloud storage. Being a cloud-based service provider is one of the biggest advantages regarding data security. We ensure regular backups are taken which can be retrieved whenever required.

4.10 TRAINING

HBSS considers training one of the most key features of its QRyde solution. The comprehensive training provided to front-line staff who will use the software on a regular basis is critical to the successful installation of new transport systems. It is anticipated that HBSS' dedicated account manager will be on-site at least monthly and bi-monthly as needed to verify that the project is on track and that successful deployment has been accomplished. End-users and administrators will also have access to our HBSS support team 24 hours a day, seven days a week if they have any queries or issues.

Prior to system adoption, HBSS will provide training on all system functionalities. Technical employees, administrators, and trainers will receive ample information and experience to become familiar with all system functions, features, and operations relevant to their respective tasks.

HBSS will also obtain approval from the agency's IT Project Manager for training materials for technical employees, administrators, and trainers. Our system includes training materials which the agency can refer to or print as convenient. Following a conversation with the IT project manager, HBSS will also provide a schedule for technical employees, administrators, and trainers following the signing of the contract for this project.

HBSS believes a range of training, such as remote web-based training, on-site group training, train-the-trainer, and video-refresher training, will help to build a collaborative relationship with the agency staff. The training will include different methods for communicating and sharing information and materials as well as facilitating meetings.

4.10.1 TRAINING PLAN 1: MINIMUM REQUIREMENTS

HBSS will provide a two-step, on-site training program consisting of an initial and follow-up session. The trainer will be onsite during the installation period and when the system achieves 'Go Live.' 'Go Live' is defined as when the transit system no longer uses a dual system but relies solely on the software purchased in this RFP. HBSS will use project management software to delegate tasks, so the transit system is certain who is responsible for what task and when the task is expected to be completed.

4.10.2 TRAINING PLAN 2: PREMIUM OPTION (ADDITIONAL COST WILL APPLY)

HBSS will allocate 3 on-site training days

[redacted]

HBSS will furnish both paper and electronic copies of course materials for students and instructors. Notebooks and instructor manuals will become property of the agency. Disaster recovery documentation will also be provided to explain how the system can be used in the event of a natural disaster or other unexpected event. The manuals that will be provided to the agencies from HBSS include:

- [redacted]
- [redacted]

HBSS will provide User Manuals (UM) for the users of the system, documenting use of all functions of the software including a Systems Manuals (SM), documenting (1) the configuration of the PSD system hardware and software; (2) PSD system functions and operations; (3) scheduled maintenance required for the PSD system; and (4) database structure and data dictionary (5) listing of all hardware.

4.11 GENERAL SYTEM OVERVIEW

4.11.1 QRYDE CLOUD- NO ORDINARY CLOUD SOLUTION

HBSS understands clearly that a robust software platform is needed to deliver Microtransit and services. QRyde is the optimal option for offering a single, unified software solution that integrates all necessary software components and supporting equipment. Our expertise resides in both services (Microtransit and Paratransit) and the capacity to integrate both into a single platform. It is industry's only unified platform that offers Demand-Response/paratransit/ADA, fixed route, Microtransit, NEMT, ride share, carpool, regional coordination, and community-based transportation capabilities.

QRyde Cloud is implemented on industry's leading Infrastructure-as-a-Service (IaaS) platform that provides built-in enterprise class extreme performance: Oracle database engine – Oracle Cloud Infrastructure. Among other things it offers a) Multiple layers of data and access security, b) Highest

levels of encryption at rest and in use, c) Realtime backup and a Disaster Recovery solution with super-fast failover capability. HBSS is an IaaS partner of Oracle.

QRyde's Cloud Infrastructure Overview

QRyde Cloud offers industry's most comprehensive transit management system and is a complete solution for the agency to provide an Integrated Mobility Platform. Developed and deployed over the past 5 years, the QRyde Cloud system offers best-of-breed automation tools for microtransit, paratransit, dial-a-ride, Demand-Response NEMT brokerage, shared-ride, deviated fixed-route, regional coordination, fixed route, and volunteer transportation management. These capabilities are provided on one platform, without requiring integration between different software modules.

Oracle Cloud Infrastructure is the industry's only database-centric hosting environment in the world. QRyde Cloud is a completely web-based (HTTPS) solution representing a major advancement over other environments such as Citrix's independent computing architecture and Microsoft's remote desktop protocol over VPN.

With QRyde Cloud all transit operators can work on a single platform while maintaining their HIPAA compliance while being allowed permission-based data sharing and ride coordination among other services.

4.11.2 QRYDE REST APIS WITH OPEN STANDARDS FOR CONNECTING THIRD-PARTY SYSTEMS

QRyde offers unlimited openness regarding connectivity with third-party applications. QRyde's NODE is a REST-API library that allows connectivity with any system including that of competitors. QRyde's advanced caching system allows any external data to be stored in an intermediate form, and a subscription model that allows information to be 'dispatched' to any subscriber micro-service for further processing.

QRyde's External Data Interface (QEDI) also provides a highly distributed queuing system that can store data by categories, and hence offers enormous data bandwidth while maintaining the highest level of performance.

HBSS expertise in providing solutions for a variety of microtransit and fixed-route operations and delivering high-quality transportation management software solutions customized to meet the needs of our clients, coupled with unsurpassed service and support, sets us apart from our competition.

QRyde's REST API Solution for Integration with Third-Party Apps

We are large enough to manage all the participating agencies' transportation-management needs, yet small and agile enough to provide reliable and consistent account management practices with a personal touch for every provider.

4.11.3 OPEN ARCHITECTURE: SCALABLE, LATEST TECHNOLOGY, INTEGRATION AGNOSTIC

QRyde's Open Architecture Technology

Above the application engine sits third-party tools that enable high speed data-caching (REDIS), and a host of third-party commercial off-the-shelf (COTS) components: Leaflet/OSRM for mapping, Braintree, and others for internet banking, Twilio interface for notifications, and Rabbit MQ to implement the unified notification engine.

4.12 OPTIONAL SERVICES

4.12.1 QRYDE INTERACTIVE VOICE RESPONSE (IVR)

The QRyde IVR reduces "wait time" for the driver when the driver arrives to pick up the client and allows on-time pickups for the entire route. It reduces back and forth radio communication between the driver and the dispatch trying to locate the rider. Our IVR allows efficient management of resources (driver and vehicle) with a reduction in the percentage of no-shows and cancel on arrivals resulting in improved customer service.

In-bound Call Options

- **Trip Review:** The rider can call-in to review future trips. The review includes information about the scheduled pickup/appointment time and address.
- **Trip Cancellation:** The rider can call-in to cancel future trips. A future trip cancellation policy can be set.
- **Recurring Trip Renewal:** Riders with recurring trips can renew these over the IVR without having to contact the Call Center.
- **Where's My Ride:** Customers can call in and find out the location of their bus. The system provides the best estimate for arrival time of the vehicle using the current location of the vehicle. Note: Occasionally the vehicle may be in a dead spot, or the carrier communication may be broken. In that case the system uses the last known location of the vehicle and provides a best estimate of time of arrival to the customer.
- **No Show Management:** HBSS has pioneered a PFT (Persistent Follow Through) methodology that reduces the No Show occurrences for a transit agency.

Dispatch Notification of a Trip Cancelled via IVR Callout

Out-bound Call Options

- **Daily Trip Reminder Calls Out:** This is a trip reminder callout that goes out daily at a pre-set time (to be identified by the agency) to remind riders of future trips. The callout includes the information about the scheduled pickup/appointment time and address.

The system also provides customers the option to cancel the trip or reconfirm the scheduled trip during the callout. The trip is automatically taken off the driver's tablet if it is cancelled by the riders with a subsequent notification sent to dispatch about the available slack on the driver's manifest.

- **Call Center Callout:** Callouts from the QRyde Call Center module give call takers the ability to select a pre-canned message or type-in a message and call the client. The messages that are called can be logged daily.
- **Inclement Weather Callout:** Callout to all subscribing customers to inform them of service time changes due to inclement weather. The same callout can be used to send other broadcast messages, e.g., holiday closings.
- **Automated IVR Callout/Driver initiated IVR Call from Tablet:** QRyde IVR allows a driver to initiate an automated call for the next scheduled pickup (or 2 stops ahead – configurable) using the drivers manifest on the tablet/MDT. The driver can select a canned message (predefined by the agency) and can click on "OK" to initiate the call to the rider.

4.12.2 CONSUMER PORTAL

QRyde is a cloud-based system that has a consumer portal component that can allow members to directly schedule appointments for individual trips or recurring (subscription) trips and do other functions like checking trips, cancelling trips, and standing orders. QRyde enables a Consumer Portal that has built-in verification of consumer eligibility for transportation services, and it allows the consumer to select the timing and location of pickups. The eligibility verification is also done when a ride is requested on a smartphone. QRyde's consumer portal offers the opportunity for members to go online and determine if their PT1 has reached QRyde or not, and based on that, they can inquire from agency.

QRyde's consumers can book trips for their appointments by simply selecting the PT1 and then proceeding to enter date and time. The consumer portal keeps track of the trips completed and will prevent rides from being booked beyond what is authorized. Members can also edit rides, and any ride changed is immediately communicated to the TPs via a notification on their portal and the changes reflected to trips are displayed. QRyde's consumers can cancel previously booked rides. The rides canceled will automatically result in Transportation Providers being informed.

4.13 PROJECT MANAGEMENT APPROACH AND IMPLEMENTATION

4.13.1 PROJECT MANAGEMENT USING AGILE METHODOLOGY

The Agile Scrum Methodology

Scrum, the Agile method, deconstructs tasks into small increments so that with minimal planning, software can be designed and developed. The time periods typically last from one to four weeks. For each iteration a cross functional team works in all functions: a) planning, b) requirements analysis, c) design, d) configuring/coding, e) unit testing, and f) acceptance testing. At the end of the iteration a working product is demonstrated to the Agency. This approach will a) minimize overall risk, b) keep the Agency aware of the progress, c) modify and adapt the project to user feedback, and d) steer the project in a user requirement driven manner. Even though a single iteration may not result in a release it can be accumulated to meet the release milestones.

4.13.1.1 HBSS SCRUM ROLES – PRODUCT OWNER

The product owner will be the technical project manager who will represent the Agency and its partners. He or she will be the voice of the customer and will be accountable for ensuring that the team delivers value to the business.

4.13.1.2 DEPLOYMENT/DEVELOPMENT TEAM

The HBSS development team will be responsible for delivering stated subgoals in the deployment life cycle of QRyde website and the web portal at the end of each Sprint (the Sprint Goal). The HBSS team will comprise individuals with cross-functional skills who will do the actual work (analyze, design, develop, deploy, test, technical communication, document, etc.).

Scrum Master

The HBSS scrum master will be responsible for removing any impediments in the ability of the team to deliver the sprint goal/deliverables. This role is strictly to supervise the scrum process and will exclude people management which will be overseen by the project manager.

4.13.1.3 THE HBSS SCRUM PROCESS

Sprint

Each deployment unit in the scrum process is defined as scrum. For example, the design of routes for an Agency can be defined as a sprint, often one week. This concept is called time box and is restricted to a specific duration (minimum three days, maximum two weeks).

4.13.1.4 MEETINGS

Each sprint will be preceded by a planning meeting, where tasks for the sprint are identified and an estimated commitment for the sprint goal is made and followed by a review or retrospective meeting. Progress is reviewed and lessons for the next sprint are identified. The agile deployment methodology will streamline the project and allow the HBSS team to spend quality time on actions that add value to the website.

All Tasks are Broken into Sprints and Agile Methodology is followed to Speed up the Tasks. Software Modification Starts Early in the Form of Prototyping.

4.13.1.5 BETA TESTING AND STRATIFIED RELEASE

An important part of the HBSS' agile methodology is stratified feature release approach. The entire product is not released all at once, rather it is released in phases with features that have been developed, tested, and user verified released. This approach gives the users early access to the system and beta testing feedback is incorporated. These methods will ensure that the project is always under control.

4.13.2 IMPLEMENTATION SCHEDULE

HBSS will follow the installation procedures and schedule below. The schedule will be finalized during the System Review/Business Process Analysis. HBSS will work closely with the Agency contract operator and technology staff during the installation and deployment of the proposed solution(s).

HBSS follows the work plan and milestones listed in the Sample Project Plan shown below. However, the actual schedule will be finalized during the System and Business Process Review. Project timelines vary and depend on several variables. Timelines can range from a 12-week end-to-end cycle or could be longer, lasting a few months and in some cases up to a year for full implementation.

The numerous factors that influence the length of a project's timeline include the size of the project (e.g., town, county, city state-wide implementation), the volume and complexity of the historical data

that requires migration, fare structures, the complexity of the scheduling engine, number of vehicles, number of partners, etc.

Sample Project Plan.

5 PRICE PROPOSAL

All-Inclusive Implementation/Set-Up, Year 1 Maintenance and Support, etc.	
$	[redacted]
Maintenance and Support, updates, etc. costs for Years 2-3 and Optional Extension Year 4 and Year 5	
Year 2	$ [redacted]
Year 3	$ [redacted]
Optional Extension Year 4	$ [redacted]
Optional Extension Year 5	$ [redacted]

Optional Items	Costs
Interactive Voice Response (IVR) includes Outbound Trip Reminder Callout with Cancellation; Trip Reminder Callout from Driver Tablet; Inbound Trip Review/ETA; Inbound Trip Cancellation; On-demand trip callout with custom message to customers/drivers	$ [redacted]
Consumer Portal	$ [redacted]
Total	$ [redacted]

Grand Total for 1 year (With Optional Items)	$ [redacted]
Grand Total for 5 years (With Optional Items)	$ [redacted]

* [redacted]

** The total license fee includes price of regular Rider App.

6 QUALIFICATIONS

HBSS Connect Corp. is a transportation solutions provider. Its QRyde technology has been used and lauded by transit agencies, transportation providers, and on-demand transportation systems over the past 25 years.

Launched in 2015, QRyde Cloud provides on-demand micro-transit, paratransit, dial-a-ride, demand-response NEMT brokerage, shared-ride, deviated fixed-route, regional coordination, fixed route, and volunteer transportation management, all on one platform, without requiring integration between different software modules. HBSS is uniquely qualified to deliver success. Over the past several years, the company has deployed dozens of large systems across the United States while simultaneously maintaining a reputation for service and excellence.

QRyde Project Sites Across States

Our core software has scheduled, tracked, and reported on over 100-million trips, and has helped agencies and providers across the United States. HBSS experience includes working with state-wide organizations such as the Departments of Transportation, Health and Human Services, Developmental Services and Public Health, and School Districts. HBSS resolves the unique challenges that diverse types of demographics serviced by these departments pose for the transportation industry, and excels at responding to these differences with efficient, customized solutions.

Over 700 transportation companies have used our web-based solutions throughout the United States for trip management, routing, billing, tracking, complaint management, and reports. The company currently manages and maintains more than 100,000 trips daily for customers with disabilities, seniors, veterans, Medicaid, and Medicare recipients, students, children with special education needs, people with behavioral and mental health issues, and the general public in large urban, suburban, and rural areas. QRyde Cloud and its predecessor ITMS are used by organizations in the transportation industry to meet the objectives listed in this RFP.

Dr. Himanshu Bhatnagar, HBSS founder and CEO has pioneered Brokered Transportation Technology powering large call centers across the country managing coordinated transportation for varied government departments. HBSS and its partner agencies have numerous thought leaders, known and

respected throughout the transportation industry. Our leaders are prominent subject matter experts with in-depth knowledge and industry experience recognized by national organizations such as the Community Transportation Association of America (CTAA).

For example, in 2015, Dr. Bhatnagar was recognized as one of 15 “Transportation Innovators” by the CTAA. HBSS clients have also been the recipients of awards for services rendered. This includes the 2015 Federal Transit Administration (FTA) Region 1 Award for Best Software Innovation presented to the Montachusett Regional Transit Authority (MART) which used software technologies developed by HBSS.

Our core software has scheduled, tracked, and reported on over 100-million trips, and has helped agencies and providers across the country. HBSS ’experience includes working with statewide organizations such as the Departments of Transportation, Health and Human Services, Developmental Services, and Public Health as well as School Districts. HBSS resolves the unique challenges that different types of demographics serviced by these departments pose for the transportation industry, and excels at responding to these differences with efficient, customized solutions.

Established in 1997, with our international headquarters in Lowell, MA, HBSS is a leading provider of microtransit, demand response/paratransit, brokerage management, and fixed route transit technology systems. HBSS is a Minority Business Enterprise (MBE), and a certified Disadvantaged Business Enterprise (DBE) in several states.

6.1 PAST EXPERIENCE

HBSS has a comprehensive, professional understanding of how to develop scalable and replicable systems. The company handles large Web-based portal development and deployment projects, including:

- [redacted]

6.2 THE ORGANIZATIONAL STRUCTURE

HBSS Organizational Chart

[redacted]			
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

6.3 PROJECT TEAM

Led by an industry pioneer, Dr. Himanshu Bhatnagar, the HBSS team is comprised of industry experts with collective experience of more than 100 years in the transportation domain. Dr. Mital Parikh will be the project manager for this project.

Dr. Himanshu Bhatnagar, Founder and CEO/Subject Matter Expert: Dr. Bhatnagar has more than 20 years of experience developing turnkey systems in brokerage call centers, Medicaid billing systems, shared ride management systems, intelligent transportation systems, demand response scheduling, logistics, Internet, and intelligent agents. He pioneered Brokered Transportation Technology powering large call centers throughout the country for managing coordinated transportation across varied government departments. In partnership with Montachusett Regional Transit Authority (MART) and TMS Management Group (FL), Dr. Bhatnagar has developed a web-based Brokerage Management Portal for enabling hundreds of transportation providers to seek transportation contracts from brokers, perform daily work, and conduct all business activities online. He was contracted by the Panama Canal Commission to lead its EVTMS project, a 3000-user system used at the Panama Canal to schedule and control ship movement across the canal.

Mr. Shalabh Bhatnagar, Chief Technical Officer/Subject Matter Expert: Responsible for Overall Project Management QRyde Platform: Mr. Bhatnagar, chief architect of the proposed QRyde technology platform, has over 20 years of information technology and business management experience in both the public and private sectors, with key emphasis on transportation technology management, billing, and telecommunications, as well as vendor and program management. He is experienced in managing client solution implementations and is HBSS' Lead Technical Project Manager for the on-going, 20,000-trip-per-day brokerage management operation at the Montachusett Regional Transit Authority (MART) in Fitchburg, Massachusetts. Mr. Bhatnagar provides business consulting, in strategic performance management methodologies, process assessment work, and the application of technologies to business. He fosters customer

loyalty by ensuring HBSS clients benefit from the value of our solutions and services.

Dr. Mital Parikh, Subject Matter Expert/ Project Manager: Dr. Parikh has over 15 years of experience implementing HBSS technologies, specializing in integrating HBSS modules with third-party systems as well as integrating multiple agency HBSS systems. He was involved with implementing VTCLI projects across multiple states and the product management of electronic fare cards, consumer apps and portals, driver apps, and scheduling systems. Dr. Parikh earned his Ph.D. from the University of Massachusetts completing his thesis on "Availability and Connectivity for a Hybrid RF/FSO Airborne Network" while working on a project for MIT Lincoln Labs, and an MS in Electrical Engineering at the University of Massachusetts where his thesis was "Traffic Metrics for Adaptive Routing." Dr. Parikh gained valuable experience in data mining, analysis, and models during his research work in Internet traffic engineering.

Mr. Ryan Larsen, President, QRyde Transit: Mr. Larsen is a transit industry veteran with over 37 years of progressively responsible executive experience in transit, paratransit, transportation software, consulting, and executive transit management. Most recently, he was CEO of Ecolane USA, Inc., and served on the Ecolane Board of Directors prior to Ecolane's purchase by National Express. Before Ecolane, Mr. Larsen was President of IntelliRide, a division of Transdev. He credits his start as a bus washer and bus driver at the University of Iowa-Cambus as the building blocks of a very successful transit career. Mr. Larsen is very active and well-known in APTA/CTAA and every major state association.

Mr. Zachary Gruba, Tech Support Manager: Mr. Gruba is an Application Developer with 10+ years of experience managing infrastructure and application code for businesses with hundreds of users. His focus is on streamlining business processes, scalability, and performance. Mr. Gruba is responsible for delivering architecture guidelines for web, mobile, and desktop deliveries, designing new and innovative solutions to challenges in the company, and providing support and results in the On-Premises services to the cloud including infrastructure and networking design.

Ms. Aastha Chaturvedi, Director, HBSS RFP Team: Ms. Chaturvedi joined HBSS in May 2021. She has 23 years of work experience in diversified industries including Information Technology, IT Sales, project management, business development, and education. As Director of the HBSS RFP Team, her responsibilities include streamlining the Request for Proposal (RFP) submission process and managing client interactions post-RFP submission, and contract negotiations post award. Ms. Chaturvedi holds a double Master's Degree in Computer Science & Information Technology

from Sacred Heart University in Fairfield (CT) and a Master's in Business Administration.

Mr. Douglas Spears, Director of Engineering/Project Development Manager: Mr. Spears has over 20 years of senior-level executive experience. He has held both management and executive positions, responsible for strategic planning and business development growth, focusing on large scale opportunities in vertical and geographical markets within the public and private transit sectors. Previously, at Ecolane Mr. Spears held several positions including Vice President/Vice President of Products, Director of Professional Services, and Product Manager.

Ms. Patricia Slaughter, Support & Training Specialist: Ms. Slaughter represents HBBS in the best possible light through personal contact, correspondence, and telephone communication as a software support specialist and trainer. She actively collaborates with clients, team members, and vendors to assist with the daily operations of the project. She has prior expertise in assessing the mobility needs of people with disabilities, seniors, and those living in poverty, as well as developing methods to meet those needs. Ms. Slaughter also has previous professional experience as a transportation director, where she improved the efficacy, efficiency, and quality of transportation services provided.

Mr. Dan Barone, Lead Trainer: Mr. Barone is an experienced software technical trainer. Throughout his career in the transportation industry, he has collaborated closely with customers and development teams to ensure successful transition and user-acceptance. Mr. Barone leads both virtual and in-person training sessions for individuals and agencies concerning specific software procedures and implementations.

6.3.1 PROJECT MANAGER

The Project Manager will be the sole point of contact between the HBSS and the Agency for all business matters concerning the customization, installation, documentation, testing, and training phases of this project. The project manager will coordinate project resources and work so that milestones are met in an efficient manner.

7 PREREQUISITE VENDOR QUESTIONNAIRE

7.1 SUPPORT

1. What is your support model?

Ans: HBSS will set up a service desk for each client for status reporting, issue management and resolution, change management, and quality assurance. Through this service desk, our team will always stay in the loop with the dedicated project team from the agency for any issue, change, or status reporting.

HBSS service desk is a communications center that provides a single point of contact (SPOC) between a company and its customers and business partners. The purpose of a service desk is to ensure that users receive appropriate help on time. The software internal support teams use to organize, manage, and respond to questions and issues from employees/clients Service desks are based on a ticketing system in which the client submits a ticket containing the details of their request.

2. How do you facilitate onboarding?

Ans: HBSS believes a range of training, such as remote web-based training, on-site group training, train-the-trainer, and video-refresher training, will help build a collaborative relationship with the Agency's staff. The training will include different methods for communicating and sharing information and materials as well as facilitating meetings. HBSS will provide a two-step, on-site training program consisting of an initial and follow-up session.

HBSS allows the Agency to have access to our QRyde training modules or video library where we provide, the QRyde essentials and QRyde workflow. HBSS will furnish both paper and electronic copies of course materials for the instructors. The manuals that will be provided to the Agency from HBSS include our system manuals and user manuals.

3. Can you provide SLAs that guarantee a certain level of service?

Ans: Yes. HBSS' SLA is attached with this proposal as an appendix.

4. Is there a knowledge base available after GoLive?

Ans: Yes. There are Videos and pdf documents available. Release notes are provided from time to time

5. Are version upgrades, patches and security updates automatically handled by the vendor? If not, please describe.

Ans: HBSS software version upgrades are typically released on a twice-yearly basis to clients. It is the intention of a twice-yearly upgrade to acknowledge the issues that may have arisen, as well as provide the client with other enhancements to optimize the client's operations of the proposed system.
HBSS will notify the deploying agency at least three months in advance of the installation when new software releases become available. Release notes are sent out to all clients of any such updates/upgrades and their impact on the current system.

Customer can continue using the previous version till the time HBSS upgrades. We will ensure that all existing software configurations are protected after the system has been upgraded or updated for the entire duration of the time when the deploying agency uses the product. If issues arise in between software upgrade periods, HBSS technical support will work with the program to fix issues in a timely fashion. However, any enhancement to the software that is above and beyond the original contract contents with the deploying agency will be billed separately at $125.00 per hour. The timeline for completing the enhancement will be mutually agreed upon by the deploying agency and HBSS staff.

6. Would there be a testing environment available?

Ans: Yes. We will provide a testing environment for clients.

7.2 INFRASTRUCTURE AND BUSINESS CONTINUITY

1. Who owns the infrastructure upon which your SaaS product is built?

Ans: Oracle

2. How do you test your disaster recovery process and procedures?

Ans: Disaster recovery is simulated and tested quarterly.

3. How often do you test your recovery process and procedures?

Ans: Disaster recovery is simulated and tested quarterly. Data backup or redundancy mechanisms are done (tested) three times a year.

4. What is your recovery time objective (RTO)?

Ans: Typically, 15 ~ 60 minutes depending upon condition and situation.

5. Is your infrastructure dispersed; are your primary site and your disaster recovery site geographically separated?

Ans: Yes. The primary site is in Ashburn, Virginia, and the Clones area is in Phoenix, Arizona. All are part of the Oracle Cloud system. The entire Web Server machine is backed up in Oracle Cloud.

7.3 COMPLIANCE AND SECURITY

1. Is the vendor SAS 70, SSAE 16 & SOC 2 or SOC 3 compliant? Is there a SOC 3 report available for review/distribution?

Ans: [redacted]

2. If the product is processing credit card information, is the product PCI compliant?

Ans: No, we do not store Credit Card information and as such do not require PCI Compliance. Credit Cards are processed via Braintree an Online Payment Solutions and Global Payment Processor. However, Braintree is fully PCI Complaint.

3. What security guidelines and audits does the colocation or hosting provider follow?

Ans: Here is a brief security writeup from Oracle Cloud:

Oracle Service Cloud is designed and certified to meet many of the compliance requirements of the most demanding environments. The security landscape continues to evolve, and you can rely on the Oracle Service Cloud to stay ahead of threats. Note that some compliance offerings are unique to the Oracle Service Cloud, and not all regulatory frameworks listed below are applicable to all available Oracle Service Cloud environments. Also note that other pricing considerations may apply.

- [redacted]

4. What security is in place at the colocation or hosting provider's facilities?

Ans: Sites that are candidates for Oracle Cloud Infrastructure data centers and provider locations undergo an extensive risk-evaluation process. This process considers factors such as environmental threats, power availability and stability, vendor reputation and history, neighboring facility functions, and geopolitical considerations.

[redacted]

The data centers use perimeter barriers to secure site exteriors, and security guards and cameras monitor vehicle checks. Every person who enters a data center must pass through security checkpoints at the site entrances. Anyone who doesn't have a site-specific security badge must present government-issued identification and have an approved request that grants them access to the building. All employees and visitors must always wear visible official identification badges. All sites are staffed with security guards.

Additional security layers between the site entrance and the server rooms vary depending on the building and risk profile. Server rooms themselves are required to have more security layers, including cameras, two-factor access control, and intrusion-detection mechanisms. Physical barriers that span from the floor to the ceiling create isolated security zones around server and networking racks. These barriers extend below the raised floor and above the ceiling tiles, where applicable. All access to server rooms must be approved by authorized personnel and is granted only for the necessary time period. Access usage is audited, and access provisioned within the system is periodically reviewed and updated as required.

5. Who manages network connectivity, firewalls, log file management, web application firewalls and access and identity management?

Ans: Services provided by Oracle Cloud and managed by HBSS.

6. Does the vendor have a protocol for handling emerging threats, zero-day exploits and vulnerabilities and how does the vendor facilitate quick protection of the SaaS solution?

Ans: QRyde hosted solution has dual security layer. Infrastructure protected by Oracle Cloud security. Virtual machines protected by Industry leading product from Crowdstrike.

7. Is the connection to the SaaS product secured? How?

Ans: Connectivity between hosted QRyde web application is through SSL layer.

7.4 DATA

1. Is the data hosted within continental US?

Ans: Yes

2. Please define your data ownership model as it relates to data generated/collected during the usage of the application.

Ans: The data belongs to the client, even after the contract ends. But the schema is proprietary to HBSS.

3. Please define your data sharing policy with third parties.

Ans: Production data of Client/Site is never shared with any third parties.

8 REQUIRED FORMS

DRUG-FREE WORKPLACE FORM

The undersigned bidder in accordance with Florida Statute 287.087 hereby certifies that

HBSS Connect Corp. does:

(Name of Bidder)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for the drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this bidder complies fully with the above requirements.

[redacted]

Bidder's Signature

06/01/2023

Date

In the event of a tie bid, bidders with a Drug Free Workplace Program will be given preference. To be considered for the preference, this document must be completed and uploaded to DemandStar.com with your Submittal.

BIDDER VERIFICATION FORM

LOCAL PREFERENCE (Check one)
Local Preference requested: ☐ YES ☑ NO

A copy of your ***Business Tax Receipt*** must be included in your submission if you are requesting Local Preference:

QUALIFIED SMALL BUSINESS AND/OR SERVICE DISABLED VETERAN BUSINESS STATUS (Check one)
Is your business qualified, in accordance with the City of Gainesville's Small Business Procurement Program, as a local Small Business? ☐ YES ☐ NO

Is your business qualified, in accordance with the City of Gainesville's Small Business Procurement Program, as a local Service-Disabled Veteran Business? ☐ YES ☐ NO

REGISTERED TO DO BUSINESS IN THE STATE OF FLORIDA
Is Bidder registered with Florida Department of State's, Division of Corporations, to do business in the State of Florida?
☐ YES ☐ NO (refer to Part 1, 1.6, last paragraph)

If the answer is "YES", provide a copy of SunBiz registration or SunBiz Document Number (#_____)

If the answer is "NO", please state reason why: _____

_____

_____

HBSS Connect Corp
Bidder's Name

Dr. Himanshu Bhatnagar - Chief Executive Officer
Printed Name/Title of Authorized Representative

[redacted] \06/01/2023
Signature of Authorized Representative Date

This page must be completed and uploaded to DemandStar.com with your Submittal.

REFERENCE FORM

Name of Bidder: HBSS Connect Corp.

Provide information for three references of similar scope performed within the past five (5) years. You may include photos or other pertinent information. Minimum of three years' experience in developing and administering MOD Apps required.

#1 Year(s) services provided (i.e. 1/2015 to 12/2018): [redacted]

Company Name: [redacted]
Address:
City, State Zip:
Contact Name:
Phone Number:
Email Address (if available):

#2 Year(s) services provided (i.e. 1/2015 to 12/2018): [redacted]

Company Name: [redacted]
Address:
City, State Zip:
Contact Name:
Phone Number:
Email Address (if available):

#3 Year(s) services provided (i.e. 1/2015 to 12/2018): [redacted]

Company Name: [redacted]
Address:
City, State Zip:
Contact Name:
Phone Number:
Email Address (if available):

This page must be completed and uploaded to DemandStar.com with your Submittal.

CERTIFICATION REGARDING DEBARMENT

The Contractor shall comply and facilitate compliance with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 C.F.R. part 180. These provisions apply to each contract at any tier of $25,000 or more, and to each contract at any tier for a federally required audit (irrespective of the contract amount), and to each contract at any tier that must be approved by an FTA official irrespective of the contract amount. As such, the Contractor shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or agency to be:

a) Debarred from participation in any federally assisted Award;

b) Suspended from participation in any federally assisted Award;

c) Proposed for debarment from participation in any federally assisted Award;

d) Declared ineligible to participate in any federally assisted Award;

e) Voluntarily excluded from participation in any federally assisted Award; or

f) Disqualified from participation in ay federally assisted Award.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by CITY. If it is later determined by CITY that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to CITY, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. part 180, subpart C, as supplemented by 2 C.F.R. part 1200, while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

[redacted]

Signature of Bidder's Authorized Official

Dr. Himanshu Bhatnagar

Name of Bidder's Authorized Official

Chief Executive Officer

Title of Bidder's Authorized Official

06/01/2023

Date

This page must be completed and uploaded to DemandStar.com with your Submittal.

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

[redacted]

Signature of Bidder's Authorized Official

Dr.Himanshu Bhatnagar

Name of Bidder's Authorized Official

Chief Executive Officer

Title of Bidder's Authorized Official

06/01/2023

Date

This page must be completed and uploaded to DemandStar.com with your Submittal.

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

(See next page for public burden disclosure.)

1. Type of Federal Action:	2. Status of Federal Action:	3. Report Type:
☐ a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	☐ a. bid/offer/application b. initial award c. post-award	☐ a. initial filing b. material change **For Material Change Only:** year_____ quarter_____ date of last report_____

4. Name and Address of Reporting Entity:	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:
☐ Prime ☐ Subawardee Tier____, *if known :* **Congressional District,** *if known: 4c*	**Congressional District,** *if known:*
6. Federal Department/Agency:	**7. Federal Program Name/Description:** CFDA Number, *if applicable:*_____
8. Federal Action Number, *if known :*	**9. Award Amount,** *if known :* $
10. a. Name and Address of Lobbying Registrant *(if individual, last name, first name, MI):*	**b. Individuals Performing Services** *(including address if different from No. 10a)* *(last name, first name, MI):*

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature:_____

Print Name:_____

Title:_____

Telephone No.:_____ Date:_____

Federal Use Only:

Authorized for Local Reproduction
Standard Form LLL (Rev. 7-97)

This page must be completed and uploaded to DemandStar.com with your Submittal. If applicable mark "N/A", sign and upload.

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form; print his/her name, title, and telephone number.

SUBCONTRACTOR/SUBCONSULTANT LIST
and
BIDDER STATUS

The Proposer shall provide information on ALL prospective subcontractor(s)/subconsultant(s) who submit bids in support of this solicitation. Use additional sheets as necessary.

IDENTIFY EVERY SUBCONTRACTOR(S)/ SUBCONSULTANT(S)	SCOPE OF WORK TO BE PERFORMED	CERTIFIED D/M/WBE FIRM? (Check all that apply)	PERVIOUS YEAR'S ANNUAL GROSS RECEIPT'S	UTILIZING ON THIS PROJECT
NAME: _____ ADDRESS: _____ _____ PHONE: _____ FAX: _____ CONTACT PERSON: _____	SCOPE OF WORK: _____ _____ _____ AGE OF FIRM: _____	YES _____ NO: _____ IF YES, DBE _____ OR MBE _____ OR WBE _____	___ Less than $500K ___ $500K-$2 mil ___ $2 mil - $5 mil ___ more than $5 mil.	YES or NO
NAME: _____ ADDRESS: _____ _____ PHONE: _____ FAX: _____ CONTACT PERSON: _____	SCOPE OF WORK: _____ _____ _____ AGE OF FIRM: _____	YES _____ NO _____ IF YES, DBE _____ OR MBE _____ OR WBE _____	___ Less than $500K ___ $500K-$2 mil ___ $2 mil - $5 mil ___ more than $5 mil.	YES or NO
NAME: _____ ADDRESS: _____ _____ PHONE: _____ FAX: _____ CONTACT PERSON: _____	SCOPE OF WORK: _____ _____ _____ AGE OF FIRM: _____	YES _____ NO _____ IF YES, DBE _____ OR MBE _____ OR WBE _____	___ Less than $500K ___ $500K-$2 mil ___ $2 mil - $5 mil ___ more than $5 mil.	YES Or NO

Check here if use of subcontractor(s)/subconsultant(s) is/are not applicable for this project: ☑

Name of Proposer: HBSS Connect Corp.

Name/Title of person completing this form: Dr. Himanshu Bhatnagar, Chief Executive Officer

Is Proposer a DBE? ___ Yes ✓ No If No, is Proposer a M/WBE? ___ Yes ___ No

Signature: [redacted] Date: 06/01/2023

This page must be completed and uploaded to DemandStar.com with your Submittal.

CONTRACTOR RESPONSIBILITY CERTIFICATION

The Proposer is required to certify compliance with the following contractor responsibility standards by checking appropriate boxes. For purposes hereof, all relevant time periods are calculated from the date this Certification is executed.

	YES	NO
1. Has the firm been suspended and/or debarred by any federal, state or local government agency or authority in the past three years?		✓
2. Has any officer, director, or principal of the firm been convicted of a felony relating to your business industry?		✓
3. Has the firm defaulted on any project in the past three (3) years?		✓
4. Has the firm had any type of business, contracting or trade license revoked or suspended for cause by any government agency or authority in the past three (3) years?		✓
5. Has the firm been found in violation of any other law relating to its business, including, but not limited to antitrust laws, licensing laws, tax laws, wage or hour laws, environmental or safety laws, by a final unappealed decision of a court or government agency in the past three (3) years, where the result of such adjudicated violation was a payment of a fine, damages or penalty in excess of $1,000?		✓
6. Has the firm been the subject of voluntary or involuntary bankruptcy proceedings at any time in the past three (3) years?		✓
7. Has the firm successfully provided similar products or performed similar services in the past three (3) years with a satisfactory record of timely deliveries or on-time performance?	✓	
8. Does the firm currently possess all applicable business, contractor and/or trade licenses or other appropriate licenses or certifications required by applicable state or local laws to engage in the sale of products or services?	✓	
9. Does the firm have all the necessary experience, technical qualifications and resources, including but not limited to equipment, facilities, personnel and financial resources, to successfully provide the referenced product(s) or perform the referenced service(s), or will obtain same through the use of qualified, responsible subcontractors?	✓	
10. Does the firm meet all insurance requirements per applicable law or bid specifications including general liability insurance, workers' compensation insurance, and automobile liability insurance?	✓	
11. Firm acknowledges that it must provide appropriate documentation to support this Contractor Responsibility Certification if so requested by the City of Gainesville. The firm also understands that the City of Gainesville may request additional information or documents to evaluate the responsibility of firm. Firm agrees to provide such additional information or supporting documentation for this Certification.	✓	

Under the penalty of perjury, the Bidder's authorized representative hereby certifies that all responses marked in this form or otherwise submitted for purposes of determining the Bidder's status as a responsible contractor is true, complete and accurate and that he/she has knowledge and authority to verify the information in this certification or otherwise submitted on behalf of the Bidder by his or her signature below.

[redacted]

Signature of Bidder's Authorized Official

Chief Executive Officer

Title of Bidder's Authorized Official

Dr. Himanshu Bhatnagar

Name of Bidder's Authorized Official

06/01/2023

Date

This page must be completed and uploaded to DemandStar.com with your Submittal.

FEDERALLY FUNDED PURCHASE QUESTIONNAIRE

This is a federally assisted contract and your response to this questionnaire helps the City in setting *Disadvantaged Business Enterprise (DBE) goals with the federal government. Please complete and return this form with your bid response.

Bidder Name: HBSS Connect Corp.

Bidder Address: 1075 Westford Street, Suite 304, Lowell, MA , 01851

Is Bidder a DBE? ___ Yes ✓ No

Age of Firm: 25 years

Annual Gross Receipts of the Firm: (check one)

___ Less than $500,000

___ $500,000-$1 million

___ $1-2 million

✓ $2-5 million

___ More than $5 million

*To be able to claim DBE status referenced above the bidder must be currently listed in the **Florida Unified Certification Program (UCP) Disadvantaged Business Enterprise (DBE) Directory** maintained by the Florida Department of Transportation's (FDOT).

This page must be completed and uploaded to DemandStar.com with your Submittal.

ADDENDUM NO. 3

Date: May 4, 2023

Bid Due Date: June 9, 2023, 3:00 P.M. (Local Time)
~~May 22, 2023, 3:00 P.M. (Local Time)~~

Bid Name: Mobility-On-Demand Software App

Bid Number: RTSX-240002-DS

NOTE: This Addendum has been issued to the holders of record of the specifications.

The original Specifications remain in full force and effect except as revised by the following changes which shall take precedence over anything to the contrary:

1. CLARIFICATION: The Bid Due Date has changed to June 9, 2023, 3:00 p.m.

2. Find attached:

   - Prohibition of Lobbying in Procurement Matters

ACKNOWLEDGMENT: Each Proposer shall acknowledge receipt of this Addendum No. 3 by his or her signature below, **and shall attach a copy of this Addendum to its proposal.**

CERTIFICATION BY PROPOSER

The undersigned acknowledges receipt of this Addendum No. 3 and the Proposal submitted is in accordance with information, instructions, and stipulations set forth herein.

PROPOSER: HBSS Connect Corp

BY: [redacted]

DATE: 6/2/2023

ACKNOWLEDGMENT: Each Proposer shall acknowledge receipt of this Addendum No. 2 by his or her signature below, **and shall attach a copy of this Addendum to its proposal.**

CERTIFICATION BY PROPOSER

The undersigned acknowledges receipt of this Addendum No. 2 and the Proposal submitted is in accordance with information, instructions, and stipulations set forth herein.

PROPOSER: HBSS Connect Corp

BY: [redacted]

DATE: 6/2/2023

ACKNOWLEDGMENT: Each Proposer shall acknowledge receipt of this Addendum No. 1 by his or her signature below, **and shall attach a copy of this Addendum to its proposal.**

CERTIFICATION BY PROPOSER

The undersigned acknowledges receipt of this Addendum No. 1 and the Proposal submitted is in accordance with information, instructions, and stipulations set forth herein.

PROPOSER: HBSS Connect Corp

BY: [redacted]

DATE: 6/2/2023