REQUEST FOR INFORMATION FOR

TRANSIT WORKFORCE MANAGEMENT/AUTOMATION APPLICATIONS

Date Released: June 07, 2022

TEHAMA COUNTY TRANSIT AGENCY BOARD

9380 SAN BENITO AVENUE

GERBER, CA 96035

Responses are due prior to 4:00 P.M., July 11, 2022.

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TRANSIT WORKFORCE MANAGEMENT/AUTOMATION APPLICATION

INTRODUCTION

The Tehama County Transit Agency Board (TCTAB) is requesting information (RFI) for Transit Workforce Management/Automation (TWM-A) applications.

THIS IS A REQUEST FOR INFORMATION (RFI) ONLY. This RFI is issued solely for information and planning purposes – it does not constitute a Request for Proposal (RFP) or a promise to issue an RFP in the future. This RFI does not commit the TCTAB to contract for any supply or service. Further, the TCTAB is not at this time seeking proposals and will not accept unsolicited proposals. Responders are advised that the County of Tehama will not pay for any information or administrative costs incurred in the preparation of responses to this RFI; all costs associated with responding to this RFI will be solely at the interested party's expense. Not responding to this RFI does not preclude participation in any future RFP, if any is issued. If a solicitation is released, it will be posted on the TCTC website at: https://tehamartpa.org/request-for-proposals/.

Addenda to this RFI, if issued, will be sent to all Proposers that the TCTAB staff has specifically received written questions regarding the RFI and will be posted at https://tehamartpa.org/request-for-proposals/.

It shall be the proposer's responsibility to check above listed website to obtain any addenda that may be issued.

Proposers shall submit responses this RFI electronically as one combined PDF files to be delivered by email prior to 4:00 P.M., on the due date shown on the cover of this document. Responses shall be sent to jriskegomez@tehamartpa.org and with the subject line of "*(Your Firm's Name)* Response to TCTAB RFI for TWM-A". The size of the attached file must be less than 5MB.

Responses received after the time and date specified above will be considered nonresponsive and will not be opened or considered.

Any responses received prior to the time and date specified above may be withdrawn or modified by written request of the Proposer.

All responses submitted toward this RFI will remain in the public domain.

Any questions related to this RFI shall be submitted in writing to the attention of TCTAB via email at jriskegomez@tehamartpa.org before 5:00 PM on June 21, 2022.

No oral question or inquiry about this RFI shall be accepted.

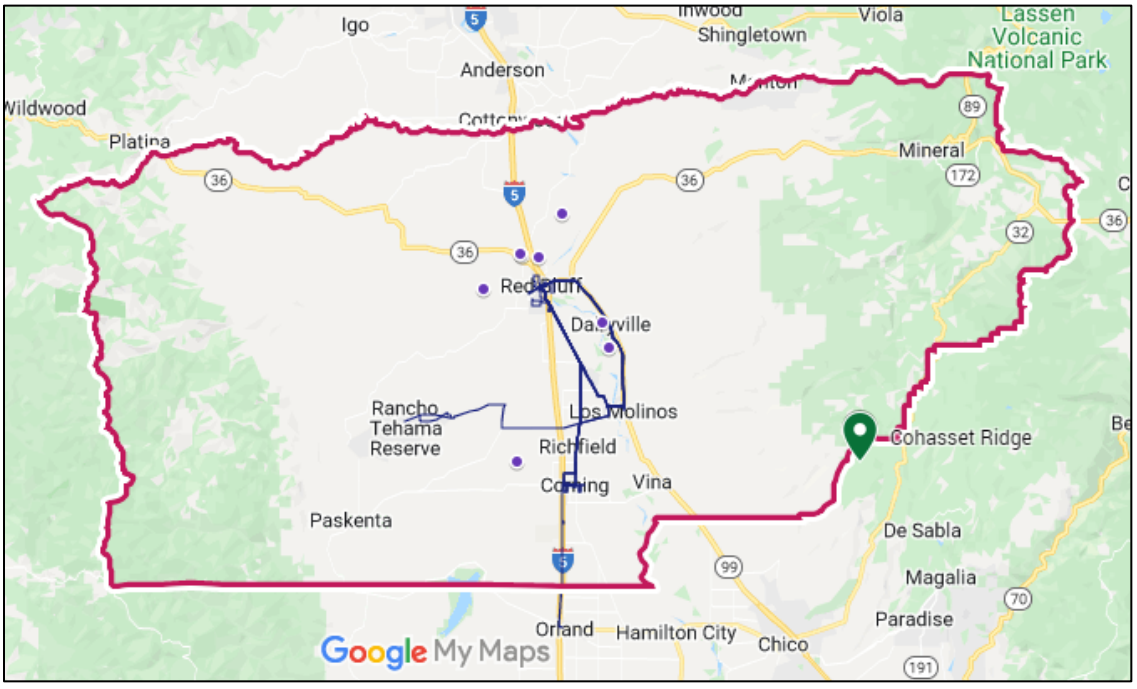
PROJECT BACKGROUND AND GOALS

BACKGROUND – ORGANIZATION & OPERATIONS

The Tehama Rural Area Express (TRAX) is a fixed route bus service operating in and around Tehama County, California. TRAX's routes connect Red Bluff, Corning, Los Molinos, Gerber, Tehama and places in between. City routes are available in Red Bluff and Corning, and regional routes are available along the Highway 99E & 99W corridors which connect to city routes and the Diamond Express to Shasta College Tehama Campus.

TRAX also offers ParaTRAX curb-to-curb service in Tehama County for seniors (65+) and people with disabilities. The service is available 10 miles from the fixed TRAX bus route within Tehama County which includes Red Bluff, Corning, Tehama, and a connection to Glenn County (providing connection to Chico or Willows).

The following map shows the boundary of Tehama County (in dark red), the routes of TRAX (Routes 1, 2, 3, 5, and 6 as well as the RTR and Glenn/Tehama Connect route are in purple; not shown is the Glenn Ride route), and selected points served by ParaTRAX in the months of July and August 2021 that are not near TRAX's fixed routes (as purple points). Also shown as a green pinpoint is the location of TRAX's current radio site, Cohasset Ridge.



Providing assistance to TRAX are the Tehama County Transportation Commission and the Transit Agency Board. The mission and vision of both the Commission and Transit Agency

Board are to maintain and improve mobility, provide access to goods and services, and to promote a reliable, flexible, efficient, and safe transportation system throughout Tehama County.

The Commission is intended to be the lead planning and administrative agency for transportation projects and programs in Tehama County. The duty of the Commission is to establish rules and regulations to provide for administrating transportation planning and allocating the local transportation fund and other funding sources in accordance with State and Federal codes and regulations.

Policy and funding for TRAX & ParaTRAX is determined by the Tehama County Transit Agency Board (TCTAB) which is an Advisory Board to the Board of Supervisors, and which was created pursuant to state law and designated in the enabling legislation as a transit development board. The Transit Agency Board's sole purpose is for the submission of claims, receipt of funds, separate annual reporting to the State Controller's Office, and provision of service as an operator under Chapter 4, Article 1, ("any non-profit corporation or other legal entity wholly owned or controlled by the transit development board which operates a public transportation system").

Furthermore, the Tehama County Public Works Department, under TCTAB direction, oversees the day-to-to operations of TRAX and ParaTRAX and, for the latter, administers the agreement with the contractor, Paratransit Services.

BACKGROUND – TWO WAY RADIO CAPABILITIES

Currently, TRAX purchases two-way voice radio service from a commercial provider of radio communications. That provider, Day Wireless, operates a multi-channel, digital, trunked radio system that operates in the Ultra High Frequency band (450-470MHz) with repeaters at the Cohasset Ridge location (approximately 25 miles east of Corning, CA in Butte County). TRAX owns the subscriber radios that are in its vehicles and used by its personnel and they have access to one talkgroup (which can be thought of as a virtual channel) for all TRAX operations. For the use of this one talkgroup, TRAX pays a monthly fee. The technology of this channel is Digital Mobile Radio (DMR) which is an open digital radio standard (i.e., it allows equipment from multiple vendors to work together in one system) that was developed to be a low-complexity, low-cost radio solution for business and industrial radio users. TRAX owns the subscriber radios it uses but pays a monthly subscription/usage fee to Day Wireless for use of the system.

TRAX has one control station that is tuned to their main voice radio channel – the TRAX talkgroup. The TRAX coordinators/supervisors simply transmit and receive through those control stations to communicate with field users. These control stations do not provide features beyond transmission and reception of voice calls.

TRAX operates approximately 16 total vehicles for their transit and paratransit operations. The voice mobile radios installed in those vehicles are Motorola XPR 4550 radios. At present, neither TRAX nor ParaTRAX use any radio system for the mobile exchange of data to/from vehicles.

Based on recommendations from a contacted consultant, TRAX is investigating deploying its own UHF DMR radio system, with a site at Inskip Butte, to improve radio coverage and provide a direct connection from its dispatch control stations to the system. By continuing use of the current radio technology (UHF DMR), TRAX could continue to use it's existing in-vehicle radios or it could replace them with newer models that have a higher level of support from their manufacturer. TRAX has not, however, firmly decided on a plan for new radio capabilities and is interested in learning about alternatives that may better fit their needs.

BACKGROUND – PARATRANSIT SCHEDULING APPLICATION

TRAX uses a relatively simple application for the scheduling of its ParaTRAX dial-a-ride rideshare program. The application is Rides Unlimited, and it is used to:

- Collect information about requests for paratransit rides (information such as the name, phone number, and address of the rider as well as the location of their requested destination)
- Place those requests into a queue to be assigned to a paratransit vehicle/driver (i.e., marking the request as "in queue")
- Manage the queue by assigning rides to a paratransit vehicle/driver (i.e., marking the request as "assigned")
- Upon completion of the ride, further manage the queue by clearing the ride as "completed" (i.e., marking the ride as "done", thereby removing it from the queue).

The Rides Unlimited program is used only by TRAX's ParaTRAX scheduler/dispatcher – it does not have the capabilities to exchange information about rides between that dispatcher and drivers. Such exchanges of information are conducted via other methods including the two-way radio system used by TRAX and/or cellular phone calls. Also, the program does not provide any convenient/automated method of producing reports or statistics on rideshare use. Inquiries into past rides, either at the individual or group levels, must be completed by manually viewing/sorting all request records.

According to input from dispatchers at TRAX, the Rides Unlimited program is adequate for its purpose but there is concern about the overall stability, serviceability, and longevity of its platform.

PURPOSE OF THIS RFI

Neither TRAX nor ParaTRAX currently use what is referred to as a transit workforce management/automation (TWM-A) application. For the purpose of this RFI, a TWM-A application is a program that provides features to improve driver and rider satisfaction, efficiency, and safety. At the core of a TWM-A application is dispatch program that uses a radio link (which can be of the two-way land mobile radio system currently used by TRAX or which can be a cellular phone system) to exchange information between drivers and dispatchers. The information can be voice-based and/or message-based, the latter using short, pre-established messages that drivers or dispatchers can send with just a few button pushes.

Some TWM-A applications do not allow a driver to begin a radio call at will, they must first send a message to dispatch asking for the opportunity to begin a call. Once the dispatcher approves the request, the TWM-A application establishes the radio link, and the call occurs between the dispatcher and only the driver that requested the conversation. This method of establishing calls is called "Request to Talk" or "RTT" and it can be of value in very large transit systems as the volume of calls between drivers and dispatchers can be large and potentially distracting to drivers. Drivers at TRAX currently do not use a method similar to RTT – they can call dispatcher without first receiving permission and all drivers can hear all conversations between any driver and dispatch. TRAX drivers have stated that they prefer the current method to RTT as it allows them to be aware of situations that may be occurring with other TRAX drivers and that the overall amount of radio traffic for TRAX is not high enough to cause distraction.

An ITMS can also use the radio link to exchange other data between buses and dispatchers including some or all of the following:

- Automatic Vehicle Location information in which the bus is equipped with a Global Positioning System receiver, and it sends its latitude and longitude on an established cadence to a dispatcher and/or other geographic information system (GIS) application
- Bus Equipment information in which basic diagnostic data from the bus's engine, transmission, tire, wheelchair lift, or other parts is collected and sent to track, in real time, their performance and status
- Automatic Passenger Counters in which sensors count the number of riders entering and leaving the bus and provide that information to dispatchers
- Emergency Message in which a driver can notify dispatchers of an urgent situation and potentially active cameras or microphones on the bus to collect and share additional information

- Task Lists in which a dispatcher can build and send list of actions to be completed (including rides to be provided) to drivers or other field-based staff
- Logging/Recording of voice calls

TRAX has prepared and released this RFI for the purposes of:

1) Identifying vendors capable of providing a TWM-A application that can meet the objectives of improving driver and rider satisfaction, efficiency, and safety while being affordable; for deployment, support, and maintenance; for the scale of TRAX's operations.
2) Gathering information about features and benefits of a TWM-A application beyond those listed directly above.
3) Identifying options/alternatives for radio systems, including privately-owned and/or public/subscription-based, that vendors of TWM-A applications support.
4) Identifying expectations that vendors of TWM-A applications would have on a potential customer like TRAX (what equipment, resources, and/or personnel are typically provided by customers of TWM-A applications).
5) Likewise, identifying expectations for a project deployment plan and schedule for a TWM-A application for a customer of the scale of TRAX.
6) Gathering information and budgetary pricing estimates for a TWM-A application including expected on-time/capital costs and ongoing/operational costs.

Also, the Tehama County Transportation Commission has begun planning for improvements to its bus management systems by entering into a non-binding agreement with California Integrated Mobility Program (Cal-ITP) to leverage the Cal-ITP's planning and resources and to begin updating TRAX's planning information system to the real time General Transit Feed Specifications and to upgrade its fare system to allow for the acceptance of EMV contactless payments. By this agreement, Cal-ITP will provide technical assistance to support the implementation of both initiatives.

QUESTIONS TO BE ANSWERED / INFORMATION TO BE PROVIDED

For each of the following questions or requests, please provide a response in narrative, tables, figures, or other formats that best informs TRAX on the benefits, detriments, expectations, and costs of TWM-A application.

1) Firm – Please provide a short overview of your firm and your specific history and capabilities regarding TWM-A applications.
2) Vision for TWM-A applications
   a) Is TRAX's general understanding of a TWM-A application's benefits, as described in the Background statements above, correct?
   b) If not, how should TRAX adjust its understanding?

3) Features
   a) Please describe the features provided by your firm's TWM-A applications, especially those that are applicable to transit operations.
   b) Please describe how they are used by, and what benefits they provide to, dispatchers, drivers, and riders.
4) Underlying Standards / Compliance to Standards
   a) What, if any, involvement does your firm have with initiatives to develop or deploy products that meet General Transit Feed Specifications or GTFS (https://gtfs.org/background/)?
   b) What does your firm see, if any, as the possible benefits or drawbacks to the GTFS?
   c) Other than GTFS, are there standards within the TWM-A application industry that promote the interchange of TWM-A information between products or systems of different vendors?
   d) If so, what are those standards and to what extent does your firm's TWM-A applications comply with those standards?
5) Caltrans California Integrated Travel Project
   a) What, if any, involvement does your firm have with the Cal-ITP (https://dot.ca.gov/cal-itp)?
   b) What, if any, support does your firm's TWM-A applications support the Cal-ITP?
6) Fixed Network Equipment and Expectations
   a) What fixed network (Local Area Network or Wide Area Network) equipment is involved in the deployment of a TWM-A applications?
   b) Where is that equipment deployed and can any of it be virtualized?
   c) What expectations or assumptions does your firm have for network equipment or interfaces that are to be provided by a customer?
7) In-Vehicle Equipment and Expectations
   a) What in-vehicle equipment is involved in the deployment of a TWM-A applications?
   b) What expectations or assumptions does your firm have for in-vehicle equipment or interfaces that are to be provided by a customer?
8) Radio System Equipment and Expectations
   a) Does your firm support an interface to the UHF DMR system and in-vehicle radios used by TRAX?
   b) What other radio systems (by technology or vendor/brand name) are supported by your firm's TWM-A applications?
   c) Are there any benefits to using one type of radio system over others and, if so, please list the preferred system(s) and the benefits they provide?
   d) How does your firm's TWM-A application address loss of coverage or reduction of wireless-system service (such as roaming from an area of 5G to an area of 4G speeds)?
9) Scalability

a) How does your firm's TWM-A applications adjust to meet the scale of TRAX's operations?
b) Are there any limits for the scale of a customer's operations at which your firm's TWM-A applications become unviable?
c) What mechanisms are included in your firm's TWM-A applications to scale up or down as the scale of a customer's operations changes including:
    i) As additional vehicles are deployed?
    ii) As additional features are required?

10) Preliminary Deployment Schedule
a) What are the typical phases involved in deploying a TWM-A applications?
b) What is the typical duration such a deployment project?
c) What resources (other than funds to purchase or otherwise procure) does your firm expect a client to provide for such a deployment project?

11) Procurement Options
a) What procurement options (e.g., capital purchase, financed purchase, lease, etc.) does your firm offer?
b) If capital financing is offered, how is the cost of the capital finance calculated (as a percentage of the capital purchase)?

12) Budgetary Cost Estimates
a) Please provide a budgetary pricing estimate for a TWM-A application that provides the functions of voice communications, real-time automatic unit (vehicle or person) location, emergency notification, tasks/assignment lists, and user-to-user messaging that meets the scale and scope of TRAX's operations, as described above. Please scope your estimate for 16 vehicles, 10 separate personnel (managers or maintenance staff that require communications but are not in transit vehicles), and one dispatch position. For the 16 vehicles, please chose and include user equipment that best fits the operations of a transit driver. For the 10 separate personnel, please chose and include user equipment that best fits the operations of a mobile worker in an office environment. For the dispatch position, please chose and include all typical computer, screen, mouse, keyboard, microphone, speaker, and push-to-talk (e.g., foot pedal) equipment. Please provide a short narrative that describes what is included in your budgetary pricing estimate.
b) Please identify what, if any equipment or resources (e.g., in-vehicle mobile radios, fixed location workstations, etc.) your firm has assumed would be provided by TRAX. Please also describe the wireless network(s) that would be supported by (and that you assume would be available for) the TWM-A application included in your budgetary pricing estimate.
c) Please provide a budgetary pricing estimate for the annual, on-going services to support and maintain the TWM-A application included in your response to the above request.

d) Please provide optional/incremental budgetary pricing estimates for other TWM-A application features or capabilities available from your firm.
e) Budgetary pricing estimates are to be inclusive of all equipment, software, and services (other than those expressly noted/assumed to be the responsibility of TRAX) required to deploy your firm's TWM-A application. Budgetary pricing estimates are to be conservative (e.g., based on current list prices or some other pricing method that is not to be less than the expected sales price nor to exceed the expected sales price by 25%).

13) Funding Options – What, if any, creative sources has your firm seen customers use to fund the purchase of a TWM-A application?

SUBMITTAL INCLUSIONS

In your firm's response to this RFI, please provide the following information in the following order:

1. Company name and address.
2. Contact information for qualified firm representative capable of answering system and product questions.
3. An overview of firm's capabilities and experience in providing systems and products similar to those being contemplated in this RFI (no longer than five pages).
4. An overview of no more than three similar projects the firm has completed for transit/paratransit agencies and involving systems and products similar to those being contemplated in this RFI (no longer than three pages).
5. Answers to questions or requests #1 through #13. This should include narrative/descriptive answers, diagrams, figures, tables, maps, and product details, as appropriate.
    a. Answers or responses can be kept as short as is necessary to provide the requested information. If a question or request is stated in such a way that responding to it as stated would not provide TRAX will all information related to its subject, please do your best to respond to it as stated and then provide additional, relevant information.
    b. Please respond to each question or request separately and individually – please order and number your responses as they are listed above.
6. Any other information your firm feels is relevant to TRAX as it plans for deployment of a TWM-A application (no longer than five pages).
7. Product specification/catalog sheets for products or services included in firm's response.