



CENTRAL TEXAS REGIONAL  
**MOBILITY AUTHORITY**

Questions and Answers Submitted regarding the:

**Request for Proposals**  
to provide Enhanced  
Traffic Information  
and Management  
Services

June 15, 2020

## RFP QUESTIONS

The following forty-eight (48) questions, with answers, were received regarding the Request for Proposals to provide Enhanced Traffic Information and Management Services:

1. For predictive analytics for traffic flow, is the state looking for 'next best action' recommendations? For example: providing an optimized routing option as opposed to alerts to drivers and/or operations centers.

*Answer: MOBILITY AUTHORITY envisions using predictive analytics as a support tool for the decision-making process of the staff operating the Traffic Incident Management Center (TIMC). That is, to help anticipate critical traffic events to enable the TIMC staff to readily implement safety and traffic management measures such as posting specific messages to DMS, sending automatic alerts to Connected Vehicles or to social media (i.e. twitter) and navigation platforms (i.e. Google Map, Waze). MOBILITY AUTHORITY does not envision suggesting routing options since that service is already provided by existing navigation platforms.*

2. Based on the holistic nature of the solution and its components (platform architecture, predictive analytics, GIS mapping, end user features/reporting, etc.), can the MOBILITY AUTHORITY provide prioritization across the 21 requirements listed?

*Answer: MOBILITY AUTHORITY has no specific prioritization of the requirements. Respondents should consider that during the Initial Term, MOBILITY AUTHORITY wants to conduct a Proof of Concept with a not-to-exceed budget of \$150,000. MOBILITY AUTHORITY understands that a firm may want to leverage an existing platform or COTS solution, with minimum customization, and that solution may not initially meet all requirements. However, respondents should demonstrate an ability to meet all 21 requirements as part of any subsequent deployment.*

3. Does the state anticipate that the analytics and ML portions will be developed in one large phase (waterfall) or smaller Proofs of Concepts (POCs) phases (Agile) that will later integrate into a comprehensive system? If built out in phases, is there a prioritized list of specific analytics/ML capabilities that the state has already identified?

*Answer: MOBILITY AUTHORITY is open to work under both approaches: the waterfall or the Agile approach. In terms of ML capabilities, MOBILITY AUTHORITY would like to initially focus on anything that helps identify hazardous road conditions, hazardous traffic conditions or traffic behaviors that can lead to traffic incidents or safety issues.*

4. Is there an aggregation/scaling mechanism for data ingestion or does the vendor need to provide the platform?

*Answer: The respondent needs to provide the cloud-based platform necessary to aggregate and digest data.*

5. Across the various sources of data (in-vehicle data, Mobility Authority, Texas Department of Transportation (TxDOT), City of Austin (COA), other agencies) mentioned in the RFP, is any additional context available regarding data set contents/format, historical universe, or volume of data? How much historic data for the various sources is available, if any?

*Answer: During the Initial Term, MOBILITY AUTHORITY only plans to use its historical traffic data from its selected corridors (Mopac, SW45 and 290 Toll) and any in-vehicle data available from third-party platforms such as Wejo, Waze, InRIX or Weather data that the respondent has an API or partnership with. With regard to MOBILITY AUTHORITY traffic data there is different data availability ranging from 1 to 3 years.*

6. Are any image or video datasets available and/or envisioned for use for developing the ML models or is the expectation that this will be primarily telemetry and other structured/semi-structured data sources?

*Answer: There are no video datasets available for ML models. However, MOBILITY AUTHORITY has an existing network of CCTV camera and video streams that could be used by the respondent in the future if needed.*

7. Does the state already utilize a preferred GIS vendor/platform or does the vendor need to propose an appropriate platform? If there's a preferred vendor, can the state provide the name?

*Answer: Currently MOBILITY AUTHORITY does not utilize any specific GIS platform and has no specific preference or recommendation for any existing platforms.*

8. Does MOBILITY AUTHORITY prefer any platform or technology choices for this Enhanced Traffic Information Services implementation (Azure, AWS, GCP)?

*Answer: No, MOBILITY AUTHORITY is looking for a cloud-based platform. The respondent can provide the hosting service of its choice.*

9. Could you share the modes of current integration options for CCTV, MVDS, DSRC and other systems? What technologies are used for integrating data with these systems?

*Answer: All MOBILITY AUTHORITY road sensors, including CCTV, MVDS, DSRC, are currently integrated into the TIMC System which is the EcoTrafIX platform developed by Kapsch. MOBILITY AUTHORITY is in the process of deploying the Lonestar ATMS software platform as a future integration point of all these sensors.*

10. Does MOBILITY AUTHORITY have historical data of Traffic flow and other details to create better analytics? How much of historical data is available for Analytics development?

*Answer: With regard to MOBILITY AUTHORITY traffic data, there is different data availability ranging from 1 to 3 years.*

11. Has the MOBILITY AUTHORITY evaluated any Cloud-based systems hosted off-site for this implementation? If YES, could you share the details?

*Answer: No, MOBILITY AUTHORITY has not evaluated any cloud based solution for this system.*

12. Does TRMA already have an AI or ML learning model in place for traffic patterns?

*Answer: No, MOBILITY AUTHORITY does not have any AI / ML model in place.*

13. What is the integration method with CCTV, MVDS, DSRC, DMS etc.? Is it real time APIs, queues etc.?

*Answer: All road sensors and devices are integrated into the TIMC platform (see response to question #9) All device uses standard NTCIP interfaces.*

14. There is a need to de-duplicate information coming from various sensors. Is there a priority/hierarchy on which can be considered "System of record", do they have a current algorithm for deduplication and also for data quality?

*Answer: No, there are no such mechanisms in place.*

15. Can they provide information on volume of data coming from the various sensors? Devices, partners?

*Answer: All MOBILITY AUTHORITY road sensors are connected and interchange data with the TIMC in real time. There is no experience with using third party data such as Connected Vehicle data, Traffic Data or Weather Data from partners.*

16. Do the drivers have to register for the push notification service, or this will be sent to all users with WAZE and Google Maps in the area?

*Answer: MOBILITY AUTHORITY envisions that notifications can be pushed to all users in a certain area but both options are acceptable.*

17. There is a requirement for multi- channel – Browser, Workstation, mobile etc. - what is the information that will be sent to each channel – will it be all the analytics or specific information on specific channels.

*Answer: MOBILITY AUTHORITY envisions to push alerts and notifications to these channels to reach out to drivers, end-users, first responders and regional partners. There is no need to share all the analytics which will be exclusively used by MOBILITY AUTHORITY operation staff.*

18. Does the CCTV provider have the ability to provide a clip or a GIF given a time-stamp or a time range via an API query?

*Answer: No*

19. What are the types of bidirectional data feeds that need to flow between different stakeholders, the volume of data will be huge, so specificity would be helpful.

*Answer: Type and quantity of data to be exchanged among stakeholders is to be defined as part of the project.*

20. Items 10 and 11 require a significant UI/UX design that would be a large effort. Does TRMA already have a sample UI/UX design for this? Does it have to be modeled like WAZE, etc.?

*Answer: No, MOBILITY AUTHORITY does not have a sample UI/UX design for this application. MOBILITY AUTHORITY would be looking for any pre-existing or COTS platform the respondent can leverage where such development already exists.*

21. For item 13, how will the unified data aggregation take place? Does TRMA have a data model already?

*Answer: The respondent needs to provide the cloud-based platform necessary to aggregate and digest data.*

22. For integrating data from connected cars etc. does TRMA have existing contracts with data providers and a list of data attributes available?

*Answer: No, MOBILITY AUTHORITY currently does not have any contract with CV data providers and the respondent is expected to provide CV information. MOBILITY AUTHORITY only has an agreement for data sharing with Waze. MOBILITY AUTHORITY is also implementing Roadside Units (RSU) to support CV services in the near future.*

23. For 20, does any system already exist that provides most of the information?

*Answer: No, this is to be provided by the respondent as part of the project.*

24. Item 21 appears to be a huge effort, and it is not yet clear how all that can be normalized. Does TRMA have a mechanism for defining unique ID for a data set?

*Answer: No, this is to be provided by the respondent as part of the project.*

25. The scope of the initial set of services is not very clear?

*Answer: The general scope of services is as described on Exhibit A of the RFP documents.*

26. Does TRMA have preferred technology stack for the system?

*Answer: No, there is no preference for any specific technology stack.*

27. Does the business & IT experienced in Agile process or any preferred process for Software development /Implementation?

*Answer: MOBILITY AUTHORITY staff is more accustomed to the traditional Waterfall approach. However, MOBILITY AUTHORITY staff is open to use of the Agile method.*

28. Will there be customer data used, profiled or personas developed/maintained as system of record?

*Answer: No, MOBILITY AUTHORITY does not anticipate making use of customer data.*

29. Can we assume a Sr. level sponsor from the State IT to be assigned to the project to remove blockers /clarify questions or confirm requirements from State system's perspective?

*Answer: MOBILITY AUTHORITY is an independent entity from the State (of Texas). MOBILITY AUTHORITY operates toll roads in Travis and Williamson County. MOBILITY AUTHORITY has its own IT staff and an Executive level project Sponsor is assigned to this project.*

30. Can TRMA provide the entire list of systems that needs to be integrated with along with the integration mechanism and the data that is exchanged?

*Answer: MOBILITY AUTHORITY provides historical and real-time traffic data collected through its roadside subsystem including but not limited to CCTV Cameras, Microwave Traffic Detectors, Toll system, Wrong Way Traffic Detectors. Data from such subsystems are available at the TIMC.*

31. Section 11 states "The initial term of the agreement shall provide Services for MoPac Express Lane, 290 Toll, and 45SW Toll for an amount not to exceed \$150,000." What vendor scope (as defined in Exhibit A) is included in that figure? Is that dollar figure accurate? Is it negotiable?

*Answer: The proposed dollar figure (e.g., \$150,000) is accurate and not negotiable. The respondent should determine all the requirements and RFP scope that can be addressed within that budget during the Initial Term.*

32. As to Item #2: Who are MOBILITY AUTHORITY's current providers for each of the capabilities listed? Does integration mean "read" or also "control" – should the vendor dynamically alter traffic signaling? Does MOBILITY AUTHORITY's signaling systems have this capability?

*Answer: In the case of MOBILITY AUTHORITY road sensors, all of them are already integrated into the TIMC software platform and the traffic data collected are stored in the TIMC database. By integrating with traffic operations infrastructure, MOBILITY AUTHORITY means to be able to "read" data coming from such sensors and stored in the TIMC database to feed the AI/ML algorithms. MOBILITY AUTHORITY is already using Kapsch EcoTrafIX TIMC Platform and is in the process of implementing the Lonestar TIMC platform as the platform to "control" traffic sensors and does not intend*

*to replace such platforms. MOBILITY AUTHORITY does not have any traffic signals currently connected to its TIMC.*

33. As to Item #21.C.iii: Exactly which agencies are involved? What similar capabilities (technical and process/staffing) does each agency already have?

*Answer: MOBILITY AUTHORITY envisions to involve the Texas DOT, the City of Austin, and Capital Metro as regional partners in the future. None of them have similar capabilities already implemented and will be looking at MOBILITY AUTHORITY as proofs of concept to define any future collaboration.*

34. Could you share a bit about the main goals or problems that you are facing and would like to see addressed as part of this RFP?

*Answer: MOBILITY AUTHORITY envisions using predictive analytics as a support tool for the decision making process of the staff operating the Traffic Incident Management Center (TIMC). That is, to help anticipate critical traffic events to enable the TIMC staff to readily implement safety and traffic management measures such as posting specific messages to DMS, sending automatic alerts to Connected Vehicles or to social media (i.e. twitter) and navigation platforms (Google Map, Waze). MOBILITY AUTHORITY does not envision suggesting routing options since that service is already provided by existing navigation platforms.*

35. Could you share information on what interfaces or interface formats are available for CCTV, traffic signal, MVDS, DSRC and DMS (page 9, item 2)?

*Answer: All road sensors and devices are integrated into the TIMC platform (see response to question #9) All device uses standard NTCIP interfaces.*

a. Is it intended that the new system connect to and control the listed field devices, or just ingest data from them or their associated subsystems?

*Answer: In the case of MOBILITY AUTHORITY road sensors, all of them are already integrated into the TIMC software platform and the traffic data collected are stored in the TIMC database. By integrating with traffic operations infrastructure, MOBILITY AUTHORITY means to be able to “read” data coming from such sensors and stored in the TIMC database to feed the AI/ML algorithms. MOBILITY AUTHORITY is already using Kapsch EcoTrafiX TIMC Platform and is in the process of implementing the Lonestar TIMC platform as the platform to “control” traffic sensors and does not intend to replace such platforms. MOBILITY AUTHORITY does not have any traffic signals currently connected to its TIMC.*

36. Could you expand on Exhibit A Requirement 3 regarding the ability to filter duplicate information? What is the expected input information and how is this function to be used by the agency?

*Answer: In addition to MOBILITY AUTHORITY traffic data, respondent would be expected to obtain and incorporate data from additional third-party commercial data providers. If data obtained from third-parties is duplicative, respondent should be*

*capable of filtering out duplicative or inaccurate data to provide reliable results in terms of predicting traffic incidents or hazardous traffic behaviors.*

37. Can you please clarify what networking security arrangements are available from the agency side in order to meet Exhibit A Requirement 6? Are VPN tunnels set up between the agency and third party suppliers?

*Answer: MOBILITY AUTHORITY does not currently have any third-party commercial data providers. It is anticipated the respondent would provide third-party data. If during subsequent phases of the project the respondent needs to incorporate data from other public agencies, MOBILITY AUTHORITY will provide VPN tunnels or other secure transmission methods necessary to provide the data to the respondent.*

38. Can the agency specify the data feeds mentioned in Exhibit A Requirement 9 and what are the formats? Are there existing interfaces for this?

*Answer: In addition to MOBILITY AUTHORITY, data feeds would come from TxDOT and City of Austin (COA) who, like MOBILITY AUTHORITY, collect and process traffic data in the region and possibly from other regional partners such as CapMetro and first responders services HERO. There is no established format or interface with these regional agencies.*

39. Is the system expected to allow incidents to be processed automatically or do they require user intervention to be processed?

*Answer: Yes, with user confirmation. The system is primarily expected to identify and predict roads with a high likelihood of problematic traffic flow, traffic crashes, or incidents to strategically allocate resources and take actions in advance of possible incidents.*

*To help the TIMC staff to manage incidents, MOBILITY AUTHORITY is looking for the system to be capable of generating incident reports with an edit feature enabling the users to change the location of the incident, update the incident information and description, share incident information with external systems such as Waze, and the ability to select a principal camera and create an image to be attached to the incident.*

40. How will CCTV data be shared with third-party suppliers? Is this through a standard interface?

*Answer: There is no need to directly share CCTV data with any third-party. In case of an incident, MOBILITY AUTHORITY is looking for the ability to select a principal camera and create a GIF file to be attached to the incident report which is what will be shared with third-party users.*

41. Is CCTV video imagery recorded and stored historically by the Agency?

*Answer: Yes, but the archival period is limited to 24 hours.*

42. Would the Agency be providing 911 data to the supplier selected? If so, in what format?

*Answer: No, MOBILITY AUTHORITY would not be providing 911 data or interface. However, MOBILITY AUTHORITY could provide 911 services with a list of confirmed accidents.*

43. With regards to Exhibit A – Requirement 21, item C, can the Agency confirm how many concurrent users are expected for the system to support?

*Answer: Respondent should assume all 100 user accounts could be concurrent.*

44. With regards to Exhibit A – Requirement 21, item D, can the Agency specify what alerts are expected from the system? Who is expected to receive those alerts?

*Answer: Respondent is expected to provide and manage the cloud-based system, monitor the performance of the hosted system as a service to MOBILITY AUTHORITY and its regional partner agencies.*

45. Could you elaborate on Section 11, page 7 of the RFP which states the initial term of the agreement shall be for one year and not to exceed \$150,000. What scope does this cover?

- b. Is there a budget specified for annual renewals?

*Answer: MOBILITY AUTHORITY has established a not-to-exceed budget expenditure of \$150,000 for the Initial Term when the Respondent shall stand up the initial services as Proof of Concept for the three selected corridors: the Mopac, the SW45 and the 290 Toll. There is no established budget for Year 2 and Year 3, when the services could be extended to the entire MOBILITY AUTHORITY service area. Respondents should submit competitive pricing for licensing and maintenance of the system in subsequent years.*

46. Requirement 17 – Which systems are required to be integrated and what data is to be exchanged?

*Answer: Requirement 17 should read: Integrate disparate data sources into a streamlined intuitive GIS based interface. MOBILITY AUTHORITY expects respondent to integrate into a GIS interface MOBILITY AUTHORITY traffic data and traffic data the respondent acquires using third-party commercial services such as Waze, Wejo or others.*

47. What additional platforms will integrate with this system (e.g., Transtar)

*Answer: MOBILITY AUTHORITY has not specified any platforms or data sources to integrate beyond its own internal data. Respondent should propose platforms or data source that will be integrated by the respondent to conduct the predictive analysis in a reliable manner. That could include TxDOT Lonestar system or City of Austin traffic management platform.*

48. If the agency is unable to provide the answers in a reasonable time, would the agency consider an extension to the deadline of this RFP so that we can address all possible solutions?

*Answer: MOBILITY AUTHORITY is not considering changing the established RFP response deadline and project schedule.*