



IFB# 2025-03
Business Intelligence, Data Analytics & Reporting Software

ADDENDUM # 4
Date of Addendum: March 20, 2025

NOTICE TO ALL PROPOSERS

The Request for Proposal (RFP) is modified as set forth in this Addendum. The original RFP and any previously issued addenda remain in full force and effect, except as modified by this Addendum. Proposers shall consider this Addendum when preparing and submitting a proposal and shall acknowledge receipt of this Addendum in their proposal.

PROPOSALS SUBMITTAL DEADLINE

**The proposal submittal deadline has changed as of Addendum #3.
Proposals are now due Friday March 28th, 2024 by 3:00 PM (EDT).**

ADDENDUM

The RFP is modified as set forth below:

REQUEST FOR CLARIFICATION/INFORMATION:

1. For the ETL process in Section 2.3, does MTA mandate a commercial solution such as Talend or Informatica with features like native metadata management, error handling, and data lineage tracking OR is a vendor-developed pipeline acceptable using Python frameworks like Apache Airflow for orchestration, Pandas/Dask for in-memory processing, and PySpark for scalable distributed handling of diverse transit data sources?

Answer: As long as it is a packaged based solution, all options will be considered.

2. In Section 2.3 regarding the executive dashboard, should key transit KPIs such as Vehicle Revenue Miles, Vehicle Revenue Hours, Passenger Miles Traveled, Unlinked Passenger Trips, and Operating Expenses be rendered using fully interactive drill-down charts with dynamic filtering, zooming, and real-time data aggregation (for example, via Power BI or Tableau), or is

a static, pre-generated visualization acceptable, and are ad hoc query capabilities expected for customized views?

Answer: Drill down would be preferred but all would be considered. Ad hoc query would be a plus

3.Regarding dashboard data refresh requirements, should the solution implement a streaming data architecture with sub-minute latency (for instance, leveraging Apache Kafka or AWS Kinesis for real-time ingestion) to support continuous operational decision-making, or is a fixed-interval batch update (e.g., every 60 minutes) sufficient given the cadence of NTD reporting?

Answer: At this time, a fixed-interval would suffice, but all options will be considered

4.In Section 2.3, regarding predictive analytics, should the platform natively incorporate pre-built machine learning models (such as ARIMA, LSTM, or Prophet) for time series forecasting of transit KPIs, or is a modular architecture acceptable that allows integration of an external analytics engine via standardized APIs?

Answer: We'll consider all options offered in this area

5.In Section 2.3, for the automatic generation of NTD forms such as FFA-10, A-30, A-35, A-90, and S-10, does MTA require a templated export engine that directly produces both PDF and CSV outputs with standardized layouts, embedded metadata (e.g., digital timestamps, unique form identifiers), and secure digital signatures for FTA compliance, or can vendors propose alternative export workflows such as XSLT-based XML transformations that guarantee interoperability and adherence to FTA reporting standards??

Answer: Vendors can propose alternatives. All options will be considered.

6.. For the scheduled report exports, should the system rely exclusively on fixed time-based triggers (e.g., cron jobs executing weekly or monthly) or also incorporate event-driven triggers that automatically initiate exports when critical transit metrics (such as VRM, VRH, or UPT) exceed predefined thresholds?

Answer: The option for both would be preferred, but all options will be considered.

- 7. For role-based access control, does MTA provide an explicit list of pre-defined user roles with granular, field-level permissions that must be replicated, or is there flexibility for vendors to propose an advanced RBAC model with dynamic role assignments, hierarchical delegation, and potential integration with attribute-based access control (ABAC)?**

Answer: A standard role based control should suffice.

- 8. Does MTA require that the platform implement a tamper-evident audit trail using cryptographically secured, append-only logs that capture details such as user ID, timestamp, operation type, and pre- and post-modification values with secure retention for at least three years, and must these logs adhere to a specific schema (for example, a defined JSON structure or CEF format) for integration with MTA's compliance monitoring systems?**

Answer: No, this is not required.

- 9. For the demonstration requirement, should vendors use a standardized, MTA-approved test dataset that accurately replicates transit operational data, including metrics such as VRM, VRH, PMT, and UPT, and adhere to NTD reporting formats or may vendors utilize proprietary demo data, provided it simulates the scale, variability, and data integrity of live MTA operations?**

Answer: For the demonstration, you can use any dataset as long as it demonstrates your solutions capabilities.

- 10. Should the system employ an advanced, domain-specific 3 anomaly detection framework during data ingestion one that integrates time series decomposition to adjust for seasonality and cyclic patterns with model-based outlier detection (e.g., using seasonal ARIMA residual analysis or LSTM-based techniques) to flag anomalous VRM or UPT values as per MTA's defined thresholds or is a hybrid approach that couples rule-based alerts with manual validation acceptable, and are there specific statistical parameters or seasonal adjustments mandated by MTA?**

Answer: Either would be acceptable. All options will be considered.

- 11. For the data ingestion pipeline in Section 2.3, does MTA require that the platform natively incorporate advanced data cleansing and transformation functionalities automatically standardizing, normalizing, and validating raw data from CSV and Trapeze sources using established schema-mapping, error-correction, and possibly AI-enhanced techniques or is it acceptable**

for vendors to implement external pre-processing pipelines, provided that the final dataset meets MTA's rigorous quality and regulatory standards?

Answer: It is not required and all options will be considered.

- 12. For the comparative statistical analyses outlined in Section 2.3, does MTA mandate that visualization types for transit performance metrics such as using box plots for outlier detection, histograms for distribution analysis, or even violin plots for inferential insights should adhere to specific styling and layout standards, or is there flexibility to propose alternative visualization methods that effectively communicate both descriptive and inferential analyses while satisfying FTA reporting guidelines?**

Answer: We are flexible on the visualizations.

- 13. Does the RFP mandate that the platform includes a prescriptive analytics module capable of running detailed scenario simulations for example, simulating changes in service frequency, resource allocation, or fare adjustments to generate actionable, optimized recommendations in real time using methods such as linear programming or agent-based modeling, or is this functionality considered an optional enhancement beyond the core requirements?**

Answer: Having this ability would be a plus, however, all options will be considered.

- 14. Does the RFP require the platform to include native, AI-enhanced modules for causal inference and mechanistic analysis such as advanced correlation matrices, Granger causality tests, and Bayesian network modeling to uncover relationships among key transit metrics like VRM, VRH, and UPT, or may this functionality be provided via integrated third-party analytical tools through standardized APIs?**

Answer: Either option would be acceptable and all options will be considered.

- 15. In Section 2.3, is an interactive what-if scenario analysis mandated to simulate changes in transit service parameters such as service frequency, headway, fare adjustments, and revenue allocation ratios and if so, which specific parameters (e.g., fare elasticity coefficients, load factors, schedule offsets, 4 and variable cost multipliers) must be configurable by end users to accurately forecast impacts on KPIs like VRM, VRH, PMT, and UPT?**

Answer: This is not mandated, but all options will be considered.

- 16. For the ETL and data processing workflows, does MTA require a centralized, structured logging system that captures errors with standardized fields (e.g., timestamp, error codes, source identifiers) and supports real-time alerting through integrations with platforms like AWS CloudWatch, ELK, or Splunk? Should the system differentiate between transient and persistent failures with automated escalation protocols (via email, SMS, or webhooks) and enforce specific SLAs for error resolution?**

Answer: This is not a requirement but all options will be considered. The ability to differentiate between the two would be a plus.

- 17. Should the solution be architected to support concurrent real-time access for multiple analysts and executives by leveraging auto-scaling, load balancing, and optimized caching strategies, and are there explicit performance benchmarks such as supporting 200 simultaneous sessions with sub-second response times for interactive dashboards and ad-hoc queries during peak hours that must be validated through standardized load testing protocols?**

Answer: The solution should support around 25-40 simultaneous sessions during peak hours which means if every person at MTA who has access were to get on all at one time, that would be the largest number needed at this point.

- 18. Does MTA require the platform to support comprehensive end-user personalization for example, enabling analysts and executives to save custom dashboard layouts, tailored filters, and export settings that persist across sessions and integrate with MTA's enterprise identity management (e.g., Active Directory)?**

Answer: End-user personalization is not required but could be a plus, however, different departments may ask for their own departmental dashboard to which the end user should have the option to choose which dashboard they would like to see.

- 19. Should the system allow granular adjustments, such as modifying widget configurations, data aggregation levels, and visualization parameters, or are users restricted to pre-defined templates with limited personalization?**

Answer: End-user personalization is not required but could be a plus, however, different departments may ask for their own departmental dashboard to which the end user should have the option to choose which dashboard they would like to see.

20. Does MTA require that the platform natively implement robust, automated data validation and reconciliation capabilities such as statistical cross-checks (e.g., moving averages, standard deviation thresholds) and machine learning based anomaly detection (e.g., clustering or LSTM models) that compare incoming transit data against historical trends to ensure data accuracy across sources like Excel, CSV, and Trapeze Reports, or is a hybrid model with periodic manual audits acceptable, and are there specific error tolerance thresholds defined by MTA?

Answer: A hybrid model may be acceptable. All options will be considered.

21. What will be the total no. of admin users for each solution? What is the expected year-on-year increase in the no. of admins?

Answer: 5-10 administrative users at the most depending on the solution. We would not anticipate an increase in admins year by year.

22. As mentioned in the RFP – “MTA will not accept customized solutions in response to this RFP.” Is MTA looking for a COTS product (Commercial-Off-the-Shelf)?

Answer: Ideally, yes, an off-the-shelf product. We are not looking for something custom built just for MTA.

23. As mentioned in the RFP – “Work on all Tasks shall be completed by November 30th, 2025, including any punch list items.” Is this a hard stop for the completion of the project?

Answer: No, not a hard stop, but we would like to try to have it completed by then.

24. Is there an existing solution? If yes, can you please share the name of the incumbent vendor and the product that is being used currently?

Answer: No, MTA does not currently have a BI solution.

25. What is the volume (in GB) and time period of the data that needs to be migrated to the new solution?

Answer: Unfortunately, our data is very scattered amongst different platforms and manual spreadsheets. It is hard to determine the amount of data that is currently being stored. MTA will discuss this topic more once an award is made. MTA is looking to migrate around a year or two of historical data, if any at all. Being a new solution, MTA may chose to start fresh with its fiscal year. (October)

26. How many years of data need to be retained and maintained by the new solution?

Answer: 5 to 7 years would be preferred for historical analysis.

27. Kindly share the list of all the 3rd party systems of the MTA that need to be integrated?

Answer: Known systems (subject to change):
Trapeze Pass, Trapeze EAM, Transtuitive, Genfare Network Manager, Genfare Link, Intellex, Sage Intacct, Optibus, UKG/Workforce Management, Moovit, APC pilot with AngelTrax

28. Our solution will provide all the standard dashboards and reports. However, we would like to know how many custom dashboards and reports MTA expects?

Answer: There could be 10 to 15 customized dashboards depending on which departments would like one setup. Custom reports are to be determined, best guess would be around 20-30 customized reports, if that.

29. Please share the list of data sources (source application/ source DB/ API/ files/ any other data source) that need to be integrated with the new solution to build dashboards and reports?

Answer: Known systems (subject to change):
Trapeze Pass, Trapeze EAM, Transtuitive, Genfare Network Manager, Genfare Link, Intellex, Sage Intacct, Optibus, UKG/Workforce Management, Moovit, APC pilot with AngelTrax, there are also several spreadsheets that are used.

30. We are assuming that all the 3rd party systems have APIs built. The vendor does not need to build APIs. Is our understanding correct?

Answer: To our knowledge, yes, our 3rd party systems should have API's already.

31. Requesting MTA to accept digital signatures on all the required documents?

Answer: Yes. MTA will accept Digital Signatures on all documents pertaining to the RFP.

32. We provide 8x5, 16x5, and 24x7 support to our clients. Is there a preferred or planned support model that the County prefers? What would be the preferred support timings?

Answer: Either 8 x 5, or 16 x 5 should suffice.

33. Is the work required to be performed on-site or can it be performed remotely from the US, offshore (India), or in a hybrid model?

Answer: Please see Section 2.3 of the RFP document.

34. Can references be provided for companies with a global experience in the same domain?

Answer: Yes.

35. Please confirm that the payment milestones shall be provided by the bidder as per the techno commercial submission?

Answer: Payment milestones are to be provided by the proposer.

36. What is the rate & cap on this? Can you clarify the process for determining the amount to be withheld in cases of unpaid wages or liquidated damages?

Answer: MTA intends to include retainage in the contract language. MTA does not intend to include liquidated damages in the contract language. Rate & Cap amounts will be shared and discussed with the awardee of the RFP.

37. Kindly confirm that the limitation of liability for the project to the bidder is maximum of 100 % of the contract value?

Answer: Vendors are required to carry liability insurance in accordance with Section 9 in the MTA General Terms and Conditions.

38. Please confirm if real-time data integration is required and specify the expected refresh intervals?

Answer: Some data may be available for real-time data integration, but some are manual spreadsheets. For refresh intervals we'll lean on the proposer's expertise, but would not need to necessarily be every 60 seconds. It could be hourly or daily depending on what the proposer and MTA decides is best.

39. Can minor customizations be performed for data integration, reports, and dashboards without violating the condition on Page 5?

Answer: Yes that is acceptable. All we are asking in that condition, that the solution not be created new specifically for MTA, rather an off-the-shelf product.

40. Please specify the mandatory KPIs and data visualization elements expected in the executive dash board?

Answer: Visual elements include charts, graphs, plots, maps, etc.
KPI's include but are not limited to: On-time performance, Passenger per vehicle revenue hour, average number of daily passenger trips, Incident rate, Cost per passenger, Farebox recovery ratio, Operating cost per vehicle mile, Operating costs per vehicle hour, budget vs. actual, complaints, Hiring/Employee separation status, Current staffing levels, Purchasing costs vs. previous year/month, Supplier defect rate, miles between failures, pulloff rate, etc.

41. Are there specific algorithms or AI/ML models preferred for predictive analysis?

Answer: No preference at this time.

42. Please confirm that reports should be distributed via email, internal dashboards, or both?

Answer: Both. Email can be optional.

43. What level of self-service analytics is expected—drag-and-drop visualization, SQL query builder, or scripting support?

Answer: Of those listed, probably drag-and-drop visualizations or the SQL query builder.

44. Please provide details on API availability, preferred integration protocols (REST, SOAP, ODBC, etc.), and data formats?

Answer: REST is preferred although we are open to other protocols and formats.

45. Please confirm that the system should support real-time alerting mechanisms such as email/SMS notifications based on predefined thresholds?

Answer: All options will be considered for alerting.

46. Please confirm that the system should support customizable KPIs, or is there a predefined set that must be followed?

Answer: Customizable KPIs are preferred however, a predefined set can also be included if available.

47. Are there any restrictions on third-party API usage or licensing constraints?

Answer: No restrictions.

48. What is the expected historical data retention period for analytical processing?

Answer: 5 to 7 years would be preferred for historical analysis.

49. How many concurrent users are expected, and should the system support multi-tenancy?

Answer: If everyone who needs to use the solution used it at the same time, it would be somewhere in the 25-40 range. Highly unlikely that happens.

50. Please confirm that the dedicated mobile application required?

Answer: Mobile application is a plus but not necessarily required.

51. Please confirm that the system should support automated incident tracking and resolution workflows?

Answer: That would be fantastic as incident rate would be something we would be monitoring.

52. Is multilingual support required for user interface and reporting? If yes, which languages should be supported?

Answer: Not at this time, however the most likely second language if it's needed would be Spanish.

53. Should reports be accessible via email, web dashboards, or third-party integrations?

Answer: Yes, ideally, reports would be available via multiple options.

54. Please confirm that the access should be restricted to specific departments, or is cross-departmental data sharing required?

Answer: Cross-departmental data sharing would be preferred as an option, but not necessarily used by all departments.

55. Please confirm that the vendor should provide hands-on training, video tutorials, or self-service documentation?

Answer: Yes, the vendor should provide training as outlined in section 2.3.

56. What is the expected volume of data to be stored, and what are the retention policies?

Answer: The volume of data to be stored is unknown. We don't have anything like this today. 5 to 7 years of data would be preferred for historical analysis.

57. Please provide details on the required security compliance standards (e.g., ISO 27001, SOC 2)?

Answer: SOC 2

58. What is the required retention period for audit logs?

Answer: Per section 2.3, 3 years minimum including account creating and password resets.

59. Please confirm that the system should support end-to-end encryption for data at rest and in transit?

Answer: Yes, the data should be encrypted at rest and in transit.

60. Are there minimum response time requirements for data processing and report generation?

Answer: No response time requirements. This will be evaluated during demonstrations.

61. What are the RTO (Recovery Time Objective) and RPO (Recovery Point Objective) expectations?

Answer: Within 24 hrs.

62. Are there specific data templates or format specifications required for export?

Answer: No templates at this time, the ability to export to an Excel spreadsheet of some type such as .csv, .xlsx or .xls

63. Can the customer provide GenFare API documentation and integration guidelines?

Answer: Unfortunately, we are unable to answer this question at this time. This question has been raised to Genfare and we are waiting for their feedback.

64. Please confirm that historical data should be migrated into the new system? If yes, please provide details on the existing database structure?

Answer: Once a solution is determined, we will talk with the provider about the best course of action, no more than a year or two max of data would be migrated, if any at all. Being a new solution, we may start fresh with the current fiscal year as our data is scattered across many systems and spreadsheets.

65. What is the expected data growth rate, and should the system support horizontal or vertical scaling?

Answer: The growth rate is unknown and we have no way to measure.

66. What is the expected turnaround time for generating standard and ad-hoc reports?

Answer: We do not have an expected turnaround time for generating reports, however, reports when pulled should be available in a timely manner.

67. Are there specific local/state regulatory requirements that must be addressed?

Answer: We are regulated by the FTA, including financial, ADA and Title VI, and State of Michigan Department of Transportation's (MDOT) Office of Passenger Transportation

68. Provide a list of relevant compliance standards or regulations?

Answer: We are regulated by the FTA, including ADA and Title VI, and State of Michigan Department of Transportation's Office of Passenger Transportation

69. Please confirm that all rates in the price schedule shall be basic value without sales and use tax?

Answer: Can confirm. All rates in the price schedule are basic value and do not include sales or use tax.

70. Can a consortium be established where two or more bidders can jointly bid for the opportunity?

Answer: No.

71. What is the estimated budget of this project?

Answer: MTA will not offer its budgeted amount publicly for this project. Please see Section 5 of the RFP document for proposal selection criterion.

72. Request you to kindly define timelines for each phase of the project, bidder is required to take into consideration?

Answer: Please see section 2.4 for the schedule of events. A timeline for implementation of the solution should be given by the proposer.

73. Kindly confirm the duration/timelines during which the proposer is required to complete the scope of work?

Answer: Please see section 2.4 of the RFP document.

74. We kindly request an extension for 3 weeks from the current date of the bid submission?

Answer: Request Denied. Please see the preface of this addenda for the current submission deadline for RFP 2025-03.

75. Request you to kindly change the dispute resolution clause as provided below: "Any dispute or difference whatsoever arising between parties out of or relating to the construction, meaning or operation or effect of this Agreement shall, unless resolved amicably, be settled by Arbitration, conducted in English Language, under the Rules of International Chamber of Commerce."?

Answer: Request Denied.

76. What criteria will be used to determine whether an extension in contract term will be exercised?

Answer: Criteria used to determine future contract extensions will be discussed with the awardee of the RFP.

77. We kindly request an extension for 3 weeks from the current date of the bid submission?

Answer: Request Denied. Please see the preface of this addenda for the current submission deadline for RFP 2025-03.

*****BID SUBMITTORS MUST INDICATE ON THE EXTERIOR OF THEIR BID PACKAGE "ADDENDUM #1, #2, #3, #4 RECEIVED"*****

END OF ADDENDUM #4