MTA Business Service Center
333 W. 34th Street
New York, NY 10001-2402
646-376-0123

Metropolitan Transportation Authority
Business Service Center

PROCUREMENT REVIEW DRAFT — TITLE AND WORKFORCE-LANGUAGE ALIGNMENT

November 13, 2026

Re: Request for Information (RFI) No. 0000030091

Dispatcher Decision Support System - Service Management Solution

Dear Prospective Participants:

The Metropolitan Transportation Authority ("MTA") is issuing this (RFI) to seek innovative ML/AI (Machine Learning and Artificial Intelligence) assisted solutions to enhance real-time service disruption management and improve overall bus service reliability. The proposed solution should continuously analyze real-time telematics and operational data to detect service anomalies, predict potential issues, and proactively recommend mitigation strategies.

Key capabilities include real-time analytical decision support for dispatchers (e.g., continue service, swap vehicles, or return to depot), and seamless integration with existing in-house dispatch and service management systems. Additionally, solutions should provide actionable alerts to both dispatchers and operators, including guidance to address service gaps and maintain headways.

This Request for Information (RFI) is not a solicitation of proposals, which may or may not be formally solicited later. Instead, this RFI seeks to identify the most appropriate option(s) (if any) to meet the needs of the agency. DoB is open to both newly developed and commercial off-the-shelf (COTS) systems.

Those firms interested in participating in this RFI should submit relevant product and other information in the form of a Proposal as set forth herein. Proposals will be evaluated by the MTA based on the evaluation as per the requirements set forth in the Scope document attached.

Please provide your proposal by **December 10, 2026 @ 2:30PM**, via email to mark.davis@mtabsc.org

Sincerely,

Mark Davis
Sr. Sourcing Specialist
MTA Procurement

Scope of Work

Overview

The MTA's Department of Buses (DoB) is seeking information from qualified contractors regarding the state-of-industry and / or state-of-art for leveraging Machine Learning (ML) and Artificial Intelligence (AI) to enhance real-time service management to manage and oversee its bus operations more efficiently.

This Request for Information (RFI) seeks innovative ML/AI assisted solutions to enhance real-time service disruption management and improve overall bus service reliability. The proposed solution should continuously analyze real-time telematics and operational data to detect service anomalies, predict potential issues, and proactively recommend mitigation strategies.

Key capabilities include real-time analytical decision support for dispatchers (e.g., continue service, swap vehicles, or return to depot), and seamless integration with existing in-house dispatch and service management systems. Additionally, solutions should provide actionable alerts to both dispatchers and operators, including guidance to address service gaps and maintain headways.

Operational authority and workforce role: The proposed system is intended to support—not replace—experienced dispatchers, bus operators, and existing decision-making procedures. Recommendations are advisory; authorized MTA personnel retain responsibility for operational decisions. Automated vehicle control or direct instructions outside approved workflows are not contemplated by this RFI.

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Background Information

DoB, comprising both NYCT and MTA Bus Company, provides bus service in all five boroughs of the City of New York and has a combined fleet of approximately 6,000 buses operating out of 28 bus depots throughout the City. NYCT and MTA Bus Company operate 252 local and 72 express bus routes in the five boroughs. Buses run 24 hours a day, seven days a week with bus operators making more than 58,750 trips daily; buses travel approximately 120 million miles annually.

The MTA operating environment is characterized by high service complexity, tight headways, and significant variability driven by traffic, passenger demand, and vehicle performance. Current service management practices rely heavily on reactive decision-making, fragmented data sources, and limited predictive insight. Existing telematics and CAD/AVL systems provide

substantial data; however, they often lack advanced analytics to translate this data into actionable, real-time operational guidance.

There is a critical need for intelligent, integrated solutions that can proactively identify risks, support dispatch decision-making, and improve coordination between operations, maintenance, and frontline staff to maintain reliable service.

Scope of Interest

DoB is more interested in an end-to-end solution comprising the below elements, but will entertain responses to this RFI that address one or more of the following:

The agency seeks information on advanced solutions that leverage ML and AI to proactively manage service disruptions and improve bus service reliability in real time. Proposed solutions should demonstrate the ability to ingest, process, and analyze high-volume telematics, operational, and historical performance data to generate predictive insights and actionable recommendations.

Contractors should address capabilities in four key areas:

1. AI-Driven Real-Time Monitoring: Continuous, ML-enabled monitoring of in-service buses leveraging telematics, roadway conditions, traffic feeds, and historical service patterns to detect anomalies, predict failures, and anticipate service disruptions. Solutions should dynamically generate risk scores for each vehicle and route segment, automatically flag at-risk conditions, and produce prioritized, AI-generated recommendations to maintain scheduled headways and minimize service gaps, presented through intuitive, real-time dashboards.

2. AI-Generated Decision Support and System Integration: Advanced ML models should generate proposed service management options for dispatcher review—such as holding, leapfrogging, short-turning, returning to depot, or bus swaps—based on real-time conditions and predicted network impacts. These recommendations should be seamlessly integrated into dispatch, CAD/AVL, and headway management systems, enabling dispatchers to assess recommendations and determine appropriate actions within established operational procedures.

3. Intelligent Operator-Facing Alerts: Operator-facing decision support may present timely, context-aware advisories, subject to agency policy and operational authorization (e.g., speed adjustments, dwell management, repositioning) to proactively correct deviations, maintain even headways, and mitigate downstream disruptions across the network.

4. AI-Enabled Driver–Vehicle–Service Interaction: ML models should continuously evaluate operator behavior, vehicle condition, and service performance to identify associations and

testable hypotheses relevant to service reliability, without presuming causality. The system should generate actionable insights and evidence-supported options for consideration by authorized operations personnel and the Bus Command Center to optimize service delivery and coordination.

Contractors should be able to address the following Service Quality Improvement Targets:

1. Reduction in on-route bunching incidents (target: ≥15% reduction)
2. Reduction in excess wait time (target: ≥10% reduction)
3. Reduction in headway on high-frequency routes (target: ≥12% improvement)
4. Reduction in mean time-to-intervention for identified service irregularities (target: ≥40% reduction vs. current baseline)
5. Dispatcher confidence and acceptance rate for system recommendations (target: ≥70% acceptance rate after 6 months of live operation)

Solutions should be scalable, interoperable, and designed for high-reliability transit environments. Incomplete responses will not be considered qualified, but respondents may include additional specific information they believe to be relevant and that targets the objectives. Response packages may include generic informational or promotional materials, but respondents should NOT assume such will be considered.

Responses shall include, at a minimum:

1. A detailed description of the proposed ML/AI solution, including system architecture (software, data pipelines, cloud/on-prem components), key subsystems, and a conceptual overview of operations, including any identified gaps, assumptions, or alternative approaches.
2. An assessment of technology maturity, including proven deployments in public transit, fleet management, or similar real-time operational environments, with demonstrated outcomes.
3. A description of the level of automation and autonomy, including the extent of human-in-the-loop decision-making, user override capabilities, and defined user roles (e.g., dispatchers, maintenance staff, operators).
4. A description of required integrations and supporting infrastructure, including telematics, CAD/AVL, GTFS-RT, APIs, communications networks, and data ingestion requirements.
5. A description of data requirements, model training approaches, and continuous learning capabilities, including how historical and real-time data are utilized.
6. Performance metrics, including prediction accuracy, false positive/negative rates, system latency, and demonstrated impacts on service reliability (e.g., MDBF, missed trips, headway adherence).

7. A description of system scalability, cybersecurity provisions, and compliance with applicable data governance and regulatory requirements.
8. A description of data ownership, data rights, and intellectual property considerations, including openness of data formats and interoperability.
9. Modularity and configurability of the solution to support evolving operational needs.
10. Capacity to provide customization, implementation support, and ongoing professional services, with relevant examples.
11. A description of the vendor's business model, pricing structure, and support services.