

1/30/25 Transit Tech Lab Info Session FAQ

Info Session Video

<https://pfnyc.zoom.us/rec/share/fGChMstBR14NFi6z0nFqw21PInu4vk8KCrsvcsA68rLa7dVsUjNiiqaGx1cx-M8P.ogUqwqay4Jd8fHX1>

Passcode: TTL2025!

Table of Contents

Administrative & Programmatic FAQ.....	2
Success	2
Application	3
Eligibility	4
Funding.....	5
Miscellaneous.....	5
Technical (Agency Specific) FAQ	5
Inspection & Maintenance Challenge	5
Ridership Improvement Challenge.....	8
Data Access/Integration	10
Cybersecurity.....	10
DBE & Small Business Opportunities	11
Miscellaneous.....	11

Administrative & Programmatic FAQ

Success

1. What does success look like? Is purchase/acquisition guaranteed with success?
 - a. You can effectively demonstrate the value of your technology by solving a pressing agency challenge.
 - b. Through the Transit Tech Lab program, you get access to decision makers and VCs, a timely go/no-go decision, mentorship, and the ability to refine technology in partnership with the largest transit agencies in North America. Purchase/acquisition is not guaranteed; it is up to each agency to decide if/how they will commercialize the technology.
2. In general, which have been the characteristics of companies that made it to the program in the past? Speaking in terms of size, growth and profitability.
 - a. Companies that have found product-market fit, have paying customers, are looking to scale into government, and can successfully demonstrate how their technology saves money, time, or improves customer experience.
3. What are the main aspects companies should focus on in order to have a strong case when applying?
 - a. Demonstrate how your technology can save time, money, or improve experience. Highlight how you did this with another customer and tailor your application to explain how you can do this for the MTA, PANYNJ, or NYC DOT. Also, please keep in mind the evaluation criteria that your technology will be evaluated on:
 - i. 25% Impact: Technology is workable in the transit agency's environment, presents a viable solution relevant to the chosen challenge, and has the potential to positively impact performance and/or customer experience
 - ii. 25% Product: Technology is in prototype or later phase and available for live demonstration and the applicant can present metrics illustrating market fit and use by paying customers
 - iii. 25% Team: The company has a qualified team and is available for participation in person in New York City throughout the Transit Tech Lab program
 - iv. 25% Value: The technology presents a new way of deriving more value from existing transit agency assets, presents a potential new revenue source or cost savings for the transit agency and/or offers an opportunity to more efficiently manage infrastructure, operations or customer service

4. We have a few ideas for proposals using our system but want to maximize value for our application. Should focused ideas be selected prior to application or is there an opportunity for refinement with the TTL team, prior to pitch?
 - a. If you'd like to submit multiple proposals, you are welcome to do so by submitting separate applications for each proposal (please note, you'll need to register with a new F6S profile for each new application you submit). We encourage you to share your most compelling use case in each application by explaining how your technology can solve one/many of the participating agency challenges, and sharing specific examples of how this technology helped other similar customers.
5. If we have experience with transit pilots in other cities is there a way to explore applying those learnings to nyc through this program?
 - a. We encourage companies to bring whatever expertise they have gained from their previous projects to the table. This program is a great opportunity to tailor your solution to the NY regional transit ecosystem.
6. Are govtech specific companies less desirable than companies "looking to scale" into government?
 - a. No, any company that can solve one of the two open agency challenges is encouraged to apply.

Application

7. Is the hope to accomplish all use cases?
 - a. The Transit Tech Lab puts out a wide call for applications and encourages any eligible company with a potential solution to apply. The use cases below each of the challenges are shared as examples of technologies that the agencies are interested in.
8. Can we focus on one specific mode of transport, or do we need to cover all?
 - a. Yes. If you have a proven solution for one specific mode of transportation, we encourage you to apply and demonstrate how you can solve a pressing challenge for at least one of the operating departments with the MTA, PANYNJ or NYC DOT.
9. Are you open to multiple partner technologies applying together (prime/sub or multiple contracts)? Is it possible to participate as a distributor of solutions or only as a manufacturer of solutions?
 - a. Yes, however, please ensure the company who will be doing the majority of the work applies as the prime. The manufacturer should not be a subsidiary of a large company (e.g., this should not be seen as a way to get around the eligibility requirements). We also request that you list all subcontractors or potential partners in the application.
10. Are two different companies able to submit as partners a joint solution proposal?

- a. Please share only one application per proposal. The company who will be doing the majority of the work should submit the application.
11. Is it possible to submit our list of shareholders and corresponding investments in a document offline?
- a. You can mention you'll share this upon request if you do not feel comfortable answering this question in the application.

Eligibility

12. Is a US legal entity required? Can non-US companies participate?
- a. International companies that meet the eligibility criteria are encouraged to apply. However, international companies must be registered to do business in New York.
 - i. You can visit NY DOS website for more information to apply for an Application for Authority: <https://dos.ny.gov/application-authority-foreign-business-corporation>
13. If we are a Delaware C Corp or based in NYC, do we need to register with the State of NY?
- a. Before the proof of concepts begin (and work commences with the MTA), companies must be registered with the NY Department of State to do business. You can look up and see if you already have a NYS DOS ID here: <https://apps.dos.ny.gov/publicInquiry/>. If not, you will need to file an application for authority: <https://dos.ny.gov/system/files/documents/2018/11/1335-f.pdf>
14. Would it still be possible to apply if our startup addresses a challenge in inspections that was not specifically mentioned by industry professionals?
- a. Yes
15. What revenue requirements do companies need to meet to be selected?
- a. There are no revenue requirements. However, companies must have a proven track record of successfully integrating with customers.
16. How many people do you need to have on your team to qualify?
- a. There are no size requirements. The “team” portion of the evaluation criteria (25% of the total criteria) is judged as follows: The company has a qualified team and is available for participation in person in New York City throughout the Transit Tech Lab program.
17. If a company does not work in transportation and does not have a specific solution for the challenges, is it acceptable to create a solution from scratch?
- a. Please refer to our eligibility criteria. Solutions should already be in a beta version (i.e., working prototype with active users) and should have a proven track record of successfully integrating with customers.
18. Is the program only for new technology solutions, or would a consulting firm using existing technology (IE. Tableau + Alteryx) still be encouraged to apply?

- a. The program is intended for growth stage startups to demonstrate new solutions to pressing challenges. The program is not intended for large consulting firms.
19. If you are selected to solve the problem, does my company have to be in NYC physically, barring any hands-on work that requires presence.
- a. No, we just request you attend key in-person events listed on each of the challenge pages.

Funding

20. Do companies receive compensation for participating in the Transit Tech Lab?
- a. There is no compensation for participation in the Transit Tech Lab, and POCs and pilots are unpaid. There may be limited grant funding available from NYSERDA for the pilot phase for select companies that meet NYSERDA's funding objectives.

Miscellaneous

21. Considering some of these requirements can be addressed by technology and systems currently available on the market, what is the reason agencies are going through the TTL instead of issuing an RFP to the industry?
- a. The Transit Tech Lab provides an opportunity for participating agencies to pose a problem and have innovators suggest solutions (instead of prescriptive RFP where a solution is known). In addition, the structure of iterative testing allows the agencies to understand how new technologies could be incorporated into their workflows before engaging in lengthy RFP processes. Learnings generated through the Transit Tech Lab can often inform future RFPs and technology commercialization strategies.
22. Would gamification be valuable for NYC transit tech initiatives?
- a. Any solution that can solve one of the open challenges would be valuable.
23. Do the use cases discussed during the info session include the full list of projects happening in 2025?
- a. No, the presenters during the info session shared a small portion of the projects occurring at the MTA and PANYNJ. If you have a solution that can solve one of the overarching challenge questions, we encourage you to apply.

Technical (Agency Specific) FAQ

Inspection & Maintenance Challenge

24. How does TCO modeling affect the Capital Plan? How does TCO modeling and/or Capital Plan processes impact discussions with Federal, State, and City funding sources?

- a. (MTA) TCO modeling and costing decisions would allow us to have holistic trade-off/data to take to MTA finance/HQ to see if we should self-fund (agency) or capital fund, as we are always reprioritizing based upon real world situational constraints and environmental shifts (start/stops etc.). TCO modeling could and should also help with grant applications at city/state/federal levels.
- 25.** Can you share existing data reviews or reports we could review to aid in the predictive maintenance use cases?
- a. (MTA) Please refer to the [MTA 20 year needs assessment](#) broad EAM categories. If selected for a POC, you will be paired with a project manager to receive access to necessary data to demonstrate your technology.
- 26.** As part of your predictive maintenance initiatives, do you also monitor HVAC systems on trains for performance, efficiency, and potential failures?
- a. (PANYNJ) PATH does not currently monitor railcar HVAC performance or efficiency, only healthy or alarmed state. PATH does not have a high rate of failure of onboard HVAC units.
- 27.** Do you plan to use any preventive maintenance models or anomaly detection models to extend maintenance further?
- a. (MNR) We could use ideas on predictive models for maintenance, getting ahead through robotics, AI, etc. As part of daily inspections before large regulatory inspection schedules or failure responses. We have a need for telematics in work equipment, asset tracking and inventory management. Point cloud data is also key for change detection and asset management
 - b. (PANYNJ) We currently use manufacture recommendations for preventative maintenance as well as field data on failures. We have limited technologies that detect issues and allow us to attack before it impacts service.
- 28.** Is log data and failure data available to validate our predictive maintenance AI application?
- a. (MTA) In general, the answer depends on whether the application saves log and failure data. Next, depending on how it's stored and whether it's on prem or with a vendor, etc., it may take more or less effort on the part of MTA D&A to ingest it to the data lake. But, overall, yes, this is doable to ingest on the data lake. We can then work with the participating company to figure out a good way to share that information with them from the data lake.
 - b. (PANYNJ) Most PATH assets have diagnostic data logs that would be used to verify if failures actually happened.
- 29.** How do New York's regional transit agencies plan to incorporate innovative technologies like RFID, GPS, or Microtagged systems to enhance operational efficiency and reduce costs?

- a. (MNR): GPS data is essential to GIS systems but point cloud data is also key for change detection and asset management. Tracking is being looked at in material management. We need to consider more telematics in the work equipment. Locations, anomaly indicators (weight, capacity, track signatures, etc.), and real time data allow for better-informed decisions to ensure operational efficiency, customer experience and reduced costs.
30. On digitization of manual inspections, do the operators have devices that can capture pictures and video? If so, does the device have NLP capabilities so operators with big thumbs can talk?
- a. (MNR): We are undergoing standardizing our work at MNR across our agency over the next 5 years. We are starting our standardization and digitization of our ICC (required FRA inspections) for our entire fleet in 2025. Our Hexagon /EAM rollout schedule is digitizing, which will allow for reference materials, schematics, pictures, parts selection, etc.
 - b. (PANYNJ): PATH Maintenance personnel have shared devices by tour of duty that can be used to capture asset related information in the field
31. Can you speak more about the predictive maintenance use cases you're interested in?
- a. (MTA) We'd like to highlight the most common failure modes (switches, signals, etc.)
32. Do you plan to optimize maintenance schedules (based on wear and tear of the specific asset/component) and timelines (the schedule, manufacturing component, utilization, load etc. input to an ML model).
- a. (MTA) Our goal is to optimize performance and/or timing based on the appropriate strategy for each asset. We would be looking for help on the assets we can / could optimize on performance to understand what triggers (e.g. environment, usage, etc.) could be used to predict future failures.
 - b. (PANYNJ) PATH would like to optimize maintenance routines based on data collection to extend life or maintain based on condition versus arbitrary time intervals.
33. Are you using digital inspection or maintenance technology now or only paper?
- a. (MTA) We are currently transitioning from Paper / Excel to digital inspections through mobile device data collection which is input into Hexagon EAM.
 - b. (MNR) we are using both paper and technology as we are in the process of multi-year digitization strategy at the railroad. We have already moved a percentage of our fleet, for ICC lines, to digital handhelds with Hexagon/EAM. We are aligned with the MTA EAM program to digitize our railroad and move to paperless inspections (where feasible).
34. What CMMS do you use? SAP/ JD Edwards / Maximo etc?

- a. (MTA) We use Hexagon EAM as our CMMS and core asset management software.
 - b. (PANYNJ) PATH uses Trapeze; other PANYNJ departments use Maximo
35. Are the agencies interested in inspection and maintenance innovation in regard to bridges?
- a. (PANYNJ) PATH would be interested in technology to inspect the PATH Hackensack River Lift Bridge.

Ridership Improvement Challenge

36. Does the transit system have sensors installed (entry and exit of station) to measure footfall? How about the trains to capture live video? Can we integrate with any of these sensors?
- a. (PANYNJ) PATH has a few sensors at fare gates to quantify fare evasion. Sensor data is produced by the manufacturer.
37. Have there been challenges using OMNY data internally (i.e. does it include card number, vehicle ID, or subway gate ID) - would there be interest in farecard/APC data analysis software proposals, or are you looking more for obtaining new data (e.g. Bluetooth trackers placed in stations/train cars)?
- a. (MTA) There have been no issues using OMNY data internally, but we'd be open to additional tools for data analysis in addition to collecting more data. Specifically:
 - i. We have good data on where/ when paid customers enter the system through OMNY and Metrocard.
 - ii. We have to estimate where they end their trip because we don't get 'tap out' info, but we think that estimate is pretty good.
 - iii. We have to further estimate what trip they took between O and D.
 - iv. From all of the above we can infer things like how many people boarded each train or were waiting on a given platform, but we don't have data on that.
 - v. If we actually had some counts of live in-system/ paid-zone passengers, that might help us refine our models.
 - vi. We have scatter-shot estimates of the ultimate origins and destinations of riders before or after they use our system, the different trip making patterns of unpaid riders, and the demographic characteristics and trip purposes of our customers. Any technological means of better capturing that sort of data, which has long been the realm of surveys and models, would improve our planning processes.
38. For Ridership Improvement, use case 2:

- a. Does a messaging tool need to be intended for both customers and internal staff? Or can it just be intended for internal staff?
 - i. Can just be for internal staff*
 - b. Does the messaging tool need to be exclusively about planned and unplanned service changes? Or can it be a versatile messaging platform capable of completely customizable messages?
 - i. Can be both*
 - c. What would be an example of a message regarding planned or unplanned service changes that would be messaged out to customers? What about an example of a message to internal staff?
 - i. External communication examples:*
 - 1. Sharing real-time passenger information directly to customers' phones to reduce need of overhead announcements*
 - 2. AI-assistant for a call center that integrates with existing systems (Salesforce CRM + Genesys Cloud) to aid in customer feedback/communication*
 - ii. Internal communication example: Automate communications (alerts, delays, etc.) to internal managers from existing information systems*
39. How is accessibility for people with disabilities considered in ridership improvements?
- a. (PANYNJ) The Port Authority focuses on improving the customer experience as a key factor and initiative at the airports, bus terminals, PATH rail system, and bridges & tunnels. The Port Authority's major transit hubs are inspected and evaluated to meet ADA requirements to improve ridership for all its customers with the commitment and collaboration with the U.S. DOT administrations (i.e., FTA, FAA, FRA, FHWA, etc.) For more information, please visit: <https://www.panynj.gov/port-authority/en/Accessibility.html>
 - b. (MTA) Accessibility is a cornerstone of what we do at the MTA - it is incorporated in everything we do. This includes ensuring that the mission of Accessibility for All reaches every customer.
 - i. Our focus on increasing ridership improvements are spread across the MTA: from our Subway station modernization projects, adding step-free travel access across our railroads and subways through capital improvements, to new bus and subway car design with enhanced accessibility features, to customer outreach on finding areas of improvement - accessibility is on the forefront of all MTA projects.



Data Access/Integration

40. How is the data from the LiDAR, Drones, Sensors and Cameras from the previous tech lab pilots being stored and utilized?
 - a. On an MTA owned cloud service, in coordination with our enterprise architecture and cybersecurity teams.
41. Can we have access to the raw sensor, LiDAR, video, etc from the previous pilots to use to train AI models?
 - a. If selected for a POC, you will be paired with an agency project manager to define data needs and discuss how to best share data to train AI models.
42. Is it acceptable to have a solution that uses Enterprise Software packages (e.g. Esri ArcGIS)?
 - a. Any GIS data classified as sensitive must reside exclusively within the MTA-managed Esri system. (The MTA already has Enterprise Esri that runs on MTA's secure cloud environment)
43. Have you looked at systems and sensors using Kafka streams to provide real time data for data capture and platforms that automatically clean the data to make it Ai/ML ready.
 - a. (MNR): we are not yet using Kafka streams corporately (in the infancy stage). Thus we have more work to do before we are providing a mature client library for building applications and microservices; where the input and output data are stored in Kafka clusters, to make Ai/ML readiness/maturity.
44. Is the challenge with getting data from the field a hardware or software problem? Is the data gathering process currently automated, but put into disparate systems?
 - a. (MTA) We are always looking for ways to make it easier for folks in the field to focus on the task at hand and quickly / easily document the work completed. Currently data is collected in the field using mobile devices and most of that information goes into the same database (Hexagon EAM). We're looking for tools to help make it easier to get data from the field into the EAM information system.

Cybersecurity

45. How does the MTA think about cybersecurity as it relates to Transit Tech Lab projects? What cybersecurity requirements do we need to adhere to in order to participate in the Transit Tech Lab?
 - a. The MTA follows a Risk-Based Approach to cybersecurity, ensuring conformance with regulatory mandates while balancing robust security controls, operational efficiency, and user experience. The following guiding principles outline MTA's expectations for vendor solutions:

- b. Vendor solutions must strictly conform to MTA cybersecurity policies, TSA regulations, and all applicable government security mandates.
- c. Compliance with the National Defense Authorization Act (NDAA) and Department of Treasury OFAC restrictions is mandatory. Vendors must also adhere to any restrictions imposed by the New York State on IT and telecommunications technologies.
- d. All proposed vendor solutions, including Proof of Concept (POC) or Proof of Value (POV), must align with MTA's enterprise vision, technology roadmap, and scalability standards to ensure seamless integration.
- e. In addition to cybersecurity and technology standards, vendors must adhere to MTA's procurement policies and contractual requirements, ensuring compliance with sourcing, financial, and regulatory obligations.
- f. Any GIS data classified as sensitive must reside exclusively within the MTA-managed Esri system. (we already have Enterprise Esri runs on MTA's secure cloud environment)
- g. Third-party vendors processing MTA data must conform to all applicable data privacy regulations, ensuring encryption, restricted access, and minimal data exposure.
- h. A formal Data Protection Agreement (DPA) is required, along with regular security audits and continuous monitoring. Approval from MTA compliance and security teams is mandatory before proceeding.
- i. Any exception requests to MTA's guidelines must be formally submitted for review and consideration. These will be evaluated by MTA stakeholders, including the Office of Physical Security and Safety, with responses provided accordingly.
- j. All vendor solutions must demonstrate full conformance with these guiding principles, not only in cybersecurity and technology standards but also in procurement, regulatory, and contractual compliance.

DBE & Small Business Opportunities

46. What opportunities exist for small businesses or DBEs to partner in implementing these technological advancements?
- a. See here for resources from our agency partners:
 - i. <https://www.panynj.gov/port-authority/en/business-opportunities/supplier-diversity.html#intro>
 - ii. <https://www.mta.info/doing-business-with-us/opportunities-for-certified-M-WBE-DBE-SDVOB>
 - iii. <https://www.nyc.gov/html/dot/html/about/dbe-program.shtml>

Miscellaneous

47. Are you seeing success with early AI pilots with transit organizations? If so, what are these arrangements/what has driven that success?
- a. (PANYNJ) There has been success with 1 - detection and quantifying of fare evasion via AI and 2- real time monitoring of assets to identify indicators of failure.