NEW YORK CITY TAXI AND LIMOUSINE COMMISSION

RESOLUTION APPROVING A PILOT PROGRAM TO
EVALUATE GPS METERS AND ALTERNATIVE TECHNOLOGY SYSTEMS

Passed October 15, 2015 and Amended February 25, 2016

The New York City Taxi and Limousine Commission (the "Commission" or "TLC") hereby approves by resolution ("Resolution") a Pilot Program, pursuant to section 52-27(a) of the Commission's rules, to test and evaluate the feasibility of GPS Meters and streamlined Taxicab Technology System ("TPEP") solutions.

In 2005, the TLC issued a Request for Proposals ("RFP") seeking vendors to build, install, and maintain equipment that processes credit, debit, and prepaid card payments, enables taxicab drivers to receive text messages from the TLC, allows the TLC to collect electronic trip sheet data, and features what is formally referred to as a Passenger Information Monitor ("PIM") but is more widely known as a Taxi TV, which displays advertisements, PSAs, and other information regarding the trip to taxicab passengers. In 2006, the TLC selected vendors and began requiring the installation and use of TPEP systems in all taxicabs. Following the conclusion of the vendors' contracts, the TLC passed rules in 2013 establishing updated requirements for TPEPs and an "Authorized Provider" structure for TPEP Providers, whereby any technology provider who can meet TLC's requirements can become authorized to provide TPEPs and TPEP service for medallion taxicabs.

The benefits of equipping taxicabs with TPEPs have been enormous and widely acknowledged. However, meter and payment technology has advanced since the original TPEP RFP, and even since the more recently enacted TPEP requirements in 2013, and the continued utility of some of the required TPEP equipment has come into question after seven years' of experience using the equipment.

The TLC regularly receives complaints from passengers and drivers about the Taxi TV, the responsiveness of its screen, the noise it generates, and the repetitive media content it plays. Both drivers and passengers routinely report to the TLC that they find the default settings and volume on the Taxi TV distracting and that the "mute" and "off" buttons on the Taxi TV often do not work. Passengers are increasingly choosing for-hire transportation options that do not have Taxi TVs in the back seat, such as black cars or liveries.

Additionally, the TLC requires all taxis to be equipped with at least five pieces of technology and wheelchair accessible taxis to be equipped with at least five pieces of technology. All taxis must have a Taxi TV, a Driver Information Monitor ("DIM"), which is used to authenticate and relay messages to the driver, an Automatic Vehicle Location system (AVL), a taximeter, and a credit card reader. Wheelchair accessible taxis must have those five items plus an additional piece of technology for accepting dispatches through TLC's Accessible Dispatch program.

Often, each of these required items resides on a separate piece of hardware. The hardware is generally hard mounted in the vehicles, most often requiring extensive wiring and permanent modifications to the vehicles themselves.

Technology now exists that can provide most of the core services provided by a TPEP – credit card payment, driver authentication and text messaging, trip data collection and transmission, and vehicle location services – without a Taxi TV, allowing for a more streamlined taxi technology system. The For-Hire Vehicle ("FHV") industry, with fewer specific vehicle equipment requirements applicable to it, has been able to take advantage of these newer technologies, which require fewer modifications to vehicles, fewer pieces of hardware, and may be less expensive than the TPEP systems required in taxis today.

In order to provide passengers, drivers, and medallion owners with the most up-to-date service and technology, evaluate the continued necessity of a Taxi TV, and determine whether these technologies can lower the costs associated with taxi operation, the TLC will pilot the use of alternative taxicab technology systems that remove the Taxi TV, and may consolidate the taximeter, the credit card processing equipment, the trip sheet data collection equipment, and the DIM into fewer physical devices ("Alternative Technology Solution").

The Alternative Technology Solution must provide the same fare, rate, and toll notifications to passengers currently provided by the PIM on a device that will be mounted in the front of the taxicab in a location clearly visible to passengers. If the Alternative Technology Solution uses an integral credit card swipe, the Alternative Technology Solution must be passed back to the passenger to complete payment. In order to ensure that all passengers receive the same level of security in their credit card payments, regardless of what taxi they enter, all Alternative Technology Solutions must meet applicable PCI standards, and drivers will still be prohibited from handling passengers' credit cards. Additionally, this Pilot will not interfere with the TLC's commitment to accessible service. All Alternative Technology Solutions will need to meet the accessibility requirements contained in the New York City Administrative Code and the Americans with Disabilities Act. If the Alternative Technology Solution is installed in wheelchair accessible vehicles, the Alternative Technology Solution must integrate with the required Accessible Dispatch equipment.

In connection with the Pilot, the TLC will test, and the New York State Department of Agriculture and Market's Division of Weights and Measures will evaluate, the use of software-based taximeters that utilize GPS in the calculation of time-and-distance fares, operating off of "locked-down," dedicated, and tamper-proof smartphones or tablets ("GPS Meters"). Pursuant to Parts 220.1 and 220.2 of Title 1 of the New York Codes, Rules, and Regulations, all taximeters used in New York must be type approved according to standards promulgated by the National Conference of Weights and Measures in the National Institute of Standards and Technology's ("NIST") Handbook 44. However, Handbook 44 currently does not contain any standards by which a GPS Meter can be approved, although promulgating such standards has been a topic for the National Conference of Weights and Measures Taximeter Working Group GPS Subcommittee since at least 2012.

Recognizing that such standards for evaluation do not currently exist, the California Department of Food and Agriculture's Division of Measurements and Standards recently approved a GPS Meter for use and testing under a twelve-month Temporary Use Permit. While the National Conference of Weights and Measures Taximeter Working Group contemplates standards for certifying GPS taximeters, TLC and the New York State Department of Agriculture and Market's Division of Weights and Measures, in line with California, seek to test the use of these types of taximeters in real world conditions in order to gather data that can help inform the GPS Subcommittee's work.

In this Pilot, the TLC will allow Participants to test and pilot either:

1. A GPS Meter used in conjunction with the existing TPEP equipment in vehicles;

2. An Alternative Technology Solution for use in taxicabs that meets the technical requirements for TPEP systems contained in Section 75-25 of TLC Rules, except as provided below, that incorporates, connects to, or integrates with a type approved taximeter; or,

3. A combination of 1 and 2 above.

As set forth more fully below, TLC Licensees including Medallion Owners, vehicle owners of yellow taxis ("Vehicle Owners"), and taxi fleets that have an interest in a Participating Vehicle, who choose to use a Participant's GPS Meter and/or Alternative Technology Solution during the term of the Pilot Program will be exempted from certain Commission rules.

Pursuant to Section 52-27 of TLC Rules, approval of this Resolution is subject to the following:

1. Commencement and Duration:

The Pilot Program will commence on the date on which the first Participant approved pursuant to this Pilot Program puts a GPS Meter and/or Alternative Technology Solution into service and will continue for twelve consecutive months thereafter.

2. Pre-Qualification Conditions

a. Pursuant to Section 52-28(a) of TLC Rules, each Participant in the Pilot Program must enter into a binding Memorandum of Understanding ("MOU") with the Chair on behalf of the Commission, which is approved as to form by the New York City Law Department, which obligates the Participant to adhere to all requirements of this Resolution and sets forth additional specifications for each requirement. This Resolution contains a summary of the major MOU terms but does not include each and every term. The MOU must not conflict with any provision of this Resolution.

b. Each Participant shall ensure that each participating TLC Licensee has signed an agreement with the Participant to have the Participant's GPS Meter and/or

Alternative Technology Solution installed in the TLC Licensee's Participating Vehicle(s). These agreements must be consistent with this Resolution. The costs of installation and de-installation shall not be borne by TLC licensed drivers who are not TLC licensed Vehicle or Medallion Owners.

c. If a participating Medallion Owner is not the owner or lessee of a Participating Vehicle, the Medallion Owner shall ensure that the owner or lessee of the Participating Vehicle agrees in writing to comply with the terms of this Resolution.

3. Means of Public Notice

Notice of opportunity to participate in the Pilot Program will be published in the City Record and on the Commission's website.

4. Proposal

a. The Commission will begin accepting proposals for participation in the Pilot Program immediately after a template MOU setting forth the specific terms of participation is published on the TLC website.

b. The Commission will accept proposals throughout the Pilot Program, with authorization to participate in the Pilot Program ending when either the Pilot Program is terminated in whole, or as to a particular Participant, or when the term of the Pilot Program has expired.

c. Each candidate applying must also:

i. Submit a statement of the purpose or value of the proposed GPS Meter and/or Alternative Technology Solution, including information regarding the use of the GPS Meter and/or Alternative Technology Solution in other jurisdictions or industries;

ii. Submit a description of its proposed GPS Meter and/or Alternative Technology Solution, including any engineering, quality, and/or manufacturing industry standards to which the GPS Meter and/or Alternative Technology Solution adheres, anticipated costs for Medallion Owners, Vehicle Owners, and user guides on how to activate and use the equipment. Such description must include, if applicable:

1. the manner in which the Alternative Technology Solution, if applicable, meets the technical specifications contained in the Resolution and MOU,

2. the manner in which the GPS Meter, if applicable, meets the technical specifications contained in the Resolution and MOU, including the specifications for the design of indicating and

recording elements contained in Subdivision S.1 of Section 5.54 of NIST Handbook 44, and any other TLC or Handbook 44 rule or rule section further specified or exempted in the MOU, and

3. the manner in which the device on which the GPS Meter and/or Alternative Technology Solution resides is locked-down and tamper-proof.

iii. Submit a detailed Security Policy that meets industry best practices governing the GPS Meter and/or Alternative Technology Solution that the Participant proposes to pilot with TLC's Licensees. The security policy must explain what safeguards ensure that collected trip data cannot be tampered with or accessed by unauthorized users at any point.

iv. Submit a detailed Privacy Policy that meets industry best practices governing the GPS Meter and/or Alternative Technology Solution that the Participant proposes to pilot with TLC's Licensees, taking into consideration the privacy of passengers and Drivers.

v. If applying to pilot an Alternative Technology Solution, submit proof that the Alternative Technology Solution complies with all applicable Payment Card Industry Data Security Standards ("PCI Standards").

vi. If applying to pilot a GPS Meter, submit proof that the GPS Meter meets the Tolerance Values contained in Subdivision T.1 of Section 5.54 of NIST's Handbook 44.

vii. Submit an estimate of any cost including vehicle-related cost and revenue impact of the proposed GPS Meter and/or Alternative Technology Solution on affected License groups such as drivers and vehicle owners, on the Commission and the City including, but not limited to information such as cashiering costs, credit card processing fees, and maintenance fees.

viii. Submit a description of the different ways in which the proposed GPS Meter and/or Alternative Technology Solution and its use in taxicabs could depart from otherwise applicable requirements not specifically exempted in this Resolution, including TLC Rules.

ix. Submit a description of any affect the GPS Meter and/or Alternative Technology Solution would have on the safety of operations.

x. Enter into a binding MOU with the Chair on behalf of the Commission which is approved as to form by the New York City Law Department.

xi. Submit to testing and evaluation and/or demonstration of the GPS Meter and/or Alternative Technology Solution to TLC staff.

5. Selection

   a. Selection of Participants will be made by the Chair.

   b. Criteria for selection will include testing, in collaboration with the New York State Department of Agriculture and Markets, for adherence to technical, security, data, accuracy, reporting, privacy, and, if applicable, Handbook 44 tolerance requirements as described in this Resolution, demonstrated capacity to deliver the proposed service, demonstrated interest from TLC Licensee partners, and ability to meet the requirements set forth in this Resolution and the MOU. The Chair reserves the right to reject proposals which do not adhere to the criteria set forth in Section 4 and in this section.

   c. The Chair may ask any candidate to supplement a proposal as necessary to complete the evaluation of proposals and selection of Participants.

   d. The minimum number of Participants in the Pilot Program is one (1) and the maximum number of Participants in the Pilot Program is limited to seven (7).

   e. Each participant may install its GPS Meter and/or Alternative Technology Solution in Participating Vehicles in a series of tranches to be further described in the MOU. During the initial tranche, a Participant may install its GPS Meter and/or Alternative Technology Solution in a maximum of ten (10) Vehicles. During the second tranche, a Participant may install its GPS Meter and/or Alternative Technology Solution in a maximum of ninety (90) additional Vehicles. During the third tranche, a Participant may install its GPS Meter and/or Alternative Technology Solution in a maximum of seventy-five (75) additional Vehicles, for a maximum amount of one hundred and seventy-five (175) Vehicles during the Pilot. Following the conclusion of each tranche, a Participant must meet reporting and evaluation benchmarks further described in the MOU before the TLC will permit a Participant to install its GPS Meter and/or Alternative Technology Solution in the next tranche of Vehicles.

   f. Participants may not install a GPS Meter and/or Alternative Technology Solution in wheelchair accessible taxis unless their system allows the City's Accessible Dispatch contractor to send dispatches to the taxi and gives the Accessible Dispatch contractor the same access provided by TPEP providers today.

   g. In addition to the initial functionality, security, accuracy, and safety evaluation and testing performed by the Commission prior to implementation of the Pilot, Participants must ensure that during implementation of the Pilot, their GPS Meter and/or Alternative Technology Solution can be inspected and accessed by the Commission, and shall cooperate with the Commission regarding any demonstration and testing of the GPS Meter and/or Alternative Technology Solution by TLC staff.

6. Privacy and Security

Participants must ensure that data cannot be tampered with or accessed by unauthorized parties at any point, and that they are adhering to the Privacy and Security policies filed with the TLC under Section 4.

7. Termination

   a. If the Chair determines a Participant has violated or not complied with any provision of this Resolution or the MOU it may immediately terminate approval to participate in the Pilot Program.

   b. The Chair can cancel the Pilot Program for any reason, including if it receives corroborated evidence that a GPS Meter and/or Alternative Technology Solution authorized for use in the Pilot Program creates a security, safety, privacy, or other unacceptable risk to Medallion or Vehicle Owners, passengers or Drivers.

   c. If the New York State Department of Agriculture and Markets informs the Chair that a Participant's GPS Meter is not acceptable for use in the Pilot, the Chair may immediately terminate the Participant's approval to participate in the Pilot Program.

8. Damages

   Participants shall be responsible to pay Vehicle Owners, Drivers, other participating TLC licensees, Passengers and the TLC, restitution, damages, and/or liquidated damages, as applicable, for any harm caused by use of the Participant's GPS Meter and/or Alternative Technology Solution during the duration of the Pilot Program, as specified in the MOU.

9. Insurance/Indemnification

   a. Each Participant must provide the Commission with proof of primary insurance as required by the MOU, including but not limited to Commercial General Liability Insurance; Professional Liability Insurance and Commercial Crime Insurance.

   b. Each Participant is responsible for the conduct of its employees, contractors, and agents, and must familiarize each with relevant regulatory rules and regulations.

   c. Participant must defend, indemnify and hold harmless the City of New York, its officers and employees from all claims arising from participation in the Pilot Program.

10. Data

   a. Participants will be required to provide machine-readable data necessary for the Commission's evaluation of the pilot program. This includes the payment and trip records data currently required of TPEP Providers by Chapters 75, as well as other

information collected by the Participant that may help the Commission's evaluation of the pilot program.

b. Participants must collect, transmit, and retain data to the Commission in accordance with the MOU and Section 75-25(c) of TLC Rules.

11. Reporting and Evaluation

a. Participants must submit a report to the Commission every month summarizing,
   i. Hardware and software malfunctions and repairs
   ii. System outages
   iii. GPS tracking errors, including failure to acquire GPS signal, "canyon effect" or other errors
   iv. Fare calculation errors
   v. Complaints received from passengers, drivers, or owners
   vi. GPS Meter and/or Alternative Technology Solution installations and de-installations
   vii. Driver trainings provided by the Participant
   viii. Troubleshooting inquiries received by the Participant

b. Such reporting must be in a format approved by the Commission, as further enumerated in the MOU.

c. The Commission requests that participants, including pilot Participants, Medallion Owners, and/or Vehicle Owners report their vehicle-related costs before and after the program so that the Commission can understand the financial costs and benefits associated with the use of GPS Meters and/or Alternative Technology Solutions.

d. Participants must submit an initial list prior to putting their GPS Meter and/or Alternative Technology Solution into service and updates to that list as additional TLC Licensees using the GPS Meter and/or Alternative Technology Solution permitted through this Pilot Program are added, including Participating Vehicle Owners, Medallion Owners, Drivers, and garages.

e. No later than two months after a Participant ceases to operate under the Pilot Program, it must submit to the Chair a program summary report including the data set forth in the MOU.

f. TLC staff shall prepare and transmit to TLC Commissioners a six month report and a one-year final report on the results of the pilot program. Such reports shall include data about the use of GPS Meters and Alternative Technology Solutions and shall evaluate:

   i. The reliability and accuracy of GPS Meters
   ii. Passenger and driver confidence in GPS Meters
   iii. Equipment costs and durability
   iv. User acceptability by passengers and drivers

v. Effects on overcharges, credit card refusals, and other driver behavior.

g. The final report, including data for the period up to and including the ending date of the Pilot Program, will include findings based on the entirety of the Pilot and a recommendation as to whether or not to continue the program or undertake rule-making for next steps for staff or Commission action. The final report will be provided to the Commission within 4 months of the conclusion of the Pilot Program. If the recommendation is to undertake rule-making, the Commission will initiate rule-making within 12 months following submission to the Commission of the final report.

12. Exemption

a. For the purposes of this Pilot, any and all rules governing the use or installation of a TPEP by a Vehicle Owner or Driver may be satisfied by the use or installation of a Alternative Technology Solution provided by an approved Participant pursuant to the terms of this resolution and the MOU.

b. For the purposes of this Pilot, any and all rules governing the use or installation of a Taximeter by a Vehicle Owner or Driver may be satisfied by the use or installation of a GPS Meter provided by an approved Participant pursuant to the terms of this resolution and the MOU.

13. Existing Contracts

Installing a GPS Meter and/or Alternative Technology Solution pursuant to the terms of this resolution and the MOU does not terminate, absolve, or otherwise adjust a Vehicle Owner's obligations under any existing contract with a TPEP Provider or any other party.

14. Compliance

a. Participant and the GPS Meter and/or Alternative Technology Solution installed for this pilot must comply with all applicable state and federal and local laws, including but not limited to Occupational Safety and Health Administration (OSHA) standards and requirements and, unless otherwise provided herein, TLC rules, all laws regarding workers compensation, disability benefits and tax withholding, and must pay all fees and fines owed to state, federal or local government jurisdictions when they are due. Section 12, above, provides the only exemption pertaining to this compliance section.

b. Participant and the GPS Meter and/or Alternative Technology Solution installed for this pilot must comply with Section 19-538 of the New York City Administrative Code.

c. Participant must not file with the Commission any statements that he or she knows or reasonably should know to be false, misleading, deceptive or materially incomplete.

d. Participant must not accept, request, give or offer gifts or gratuities to or from a licensee for the purpose of violating any of the requirements of the Pilot Program or applicable provisions of state, federal and local law, and must report to the TLC and the New York City Department of Investigations request or offers for the same.

e. Participant must not commit fraud, misrepresentation and/or larceny, willful acts of omission and/or commission; and must not act against the best interests of the public, including but not limited to acts of threats, harassment, abuse, use or threat of physical force, or failure to cooperate with law enforcement or the Commission.

f. Participant must notify the TLC in writing of any suspension or revocation of any license granted to the Participant by any local, state or federal agency.

g. Participant must inform the TLC if it is required to make disclosures under State or federal law regarding security breaches, including the New York State Information Security Breach and Notification Act (General Business Law section 899-aa).

h. Participant must notify the TLC before making any material modifications to its TLC-authorized GPS Meter and/or Alternative Technology Solution and cannot use the modified technology in the Pilot Program until such modification has been approved by the TLC.