

This Agreement is dated 1 July 2017

PARTIES

- (1) **MASSACHUSETTS INSTITUTE OF TECHNOLOGY**, located at 77 Massachusetts Avenue, Cambridge, Massachusetts, 02139-4307 USA (“**M.I.T.**”); and
- (2) **TRANSPORT FOR LONDON**, a statutory corporation whose principal place of business is at Windsor House 50 Victoria Street, London, SW1H 0TL (the “**Sponsor**”).

BACKGROUND

- (A) M.I.T. and the Sponsor entered into a research agreement dated 1 July 2010 (as varied on 1 April 2011, 1 December 2012 and 1 July 2015) pursuant to which the Sponsor agreed to reimburse certain costs in relation to M.I.T. performing the Research (the “**Original Research Agreement**”)(as defined in the Original Research Agreement).
- (B) The parties have agreed to amend and restate the Original Research Agreement as set out in this Agreement.

AGREED TERMS

1. DEFINITIONS AND INTERPRETATION

- 1.1 Terms defined in the Original Research Agreement shall have the same meaning when used in this Agreement, unless defined below. In addition, the definitions below apply in this Agreement:

Original Research Agreement: has the meaning given in recital (A).

Restated Research Agreement: means the Original Research Agreement as amended and restated by this Agreement in the form set out in Schedule 1.

Restatement Date: means the date on which this Agreement is entered into.

Subaward Agreement: has the meaning given to it in Clause 3 of this Agreement.

- 1.2 The rules of interpretation of the Original Research Agreement shall apply to this Agreement as if set out in this Agreement save that references in the Original Research Agreement to “this Agreement” shall be construed as references to this Agreement.

- 1.3 In this Agreement:

1.3.1 any reference to a “clause” or “Schedule” is, unless the context otherwise requires, a reference to a clause or Schedule of this Agreement; and

1.4 clause and Schedule headings are for ease of reference only. Schedule 1 forms part of this Agreement and shall have effect as if

set out in full in the body of this Agreement. Any reference to this Agreement includes Schedule 1.

2 RESTATEMENT OF THE ORIGINAL RESEARCH AGREEMENT

2.1 With effect on and from the Restatement Date, the Original Research Agreement shall be amended and restated in the form set out in Schedule 1 so that the rights and obligations of the parties to the Restated Research Agreement shall, on and from that date, be governed by and construed in accordance with the provisions of the Restated Research Agreement.

3 SUBAWARD

3.1 The Sponsor acknowledges that M.I.T. and Northeastern University entered into a subaward agreement on 20 August 2015 ("**Subaward Agreement**") in respect of the Original Research Agreement.

3.2 The Sponsor agrees that the Subaward Agreement shall continue to apply and relate to the Restated Research Agreement.

4 MISCELLANEOUS

4.1 The provisions of Sections 15 and 16 of the Restated Research Agreement shall apply to this Agreement as if set out in full and so that references in those provisions to "this Agreement" shall be construed as references to this Agreement and references to "party" or "parties" shall be construed as references to the parties to this Agreement.

4.2 This Agreement may be executed in any number of counterparts, each of which when executed shall constitute a duplicate original, but all the counterparts together shall constitute one Agreement.

5 THIRD PARTY RIGHTS

5.1 Except as expressly provided elsewhere in this Agreement, a person who is not a party to this Agreement shall not have any rights under the Contracts (Rights of Third Parties) Act 1999 to enforce, or enjoy the benefit of, any term of this Agreement. This does not affect any right or remedy of a third party which exists, or is available, apart from that Act.

5.2 The rights of the parties to rescind or agree to any amendment or waiver under this Agreement are not subject to the consent of any other person.

6 GOVERNING LAW AND JURISDICTION

6.1 This Agreement and any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with it or its subject matter or formation shall be governed by and construed in accordance with the law of England and Wales.

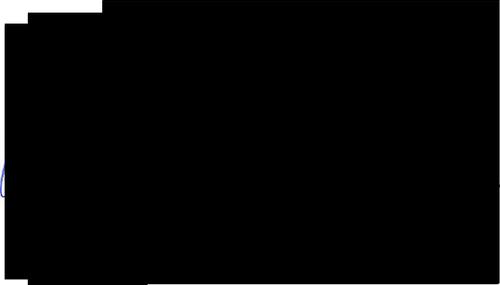
6.2 Each party irrevocably agrees that, subject as provided below, the courts of England and Wales shall have exclusive jurisdiction over any dispute or claim (including non-contractual disputes or claims) that arise out of or in connection with this Agreement or its subject matter or formation.

This Agreement has been entered into on the date stated at the beginning of it.

EXECUTION PAGE

Signed by 
Office of Sponsored Programs

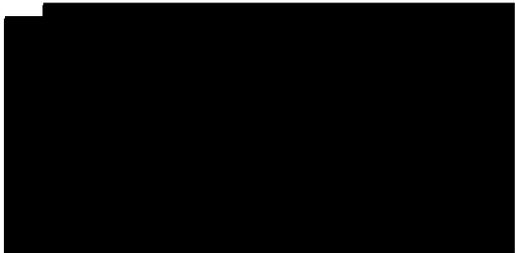
For and on behalf of
MASSACHUSETTS INSTITUTE OF TECHNOLOGY



Authorised signatory

Signed by Lauren Sager Weinstein

For and on behalf of **TRANSPORT FOR LONDON**



Authorised signatory

SCHEDULE 1

FORM OF AMENDED AND RESTATED RESEARCH AGREEMENT



**MASSACHUSETTS INSTITUTE OF TECHNOLOGY
OFFICE OF SPONSORED PROGRAMS
RESEARCH AGREEMENT**

RESEARCH AGREEMENT (the "Agreement") between the Massachusetts Institute of Technology, hereinafter referred to as "M.I.T.," and **TRANSPORT FOR LONDON** hereinafter referred to as the "Sponsor." M.I.T. and/or the Sponsor may be referred to herein (i) individually as a "Party" and (ii) collectively as "Parties".

This Agreement shall be deemed to take effect from July 1 2017 the "Effective Date."

WHEREAS:

the research program contemplated by this Agreement is of mutual interest and benefit to M.I.T. and to the Sponsor, and will further the instructional and research objectives of M.I.T. in a manner consistent with its status as a non-profit, tax exempt, educational institution, the Sponsor (which means Transport for London and all its subsidiaries (as defined in section 1159 of the Companies Act 2006) from time to time) is a functional body of the Greater London Authority, established by the Greater London Authority Act 1999 and, by virtue of that Act, has a general transport duty in respect of safe, integrated, efficient and economic transport facilities to, from and within Greater London, in carrying out its general transport duty, the Sponsor wishes certain matters to be the subject of academic research on a not-for-profit basis.

NOW, THEREFORE, the parties hereto agree as follows:

1. **STATEMENT OF WORK.** M.I.T. agrees to use reasonable efforts to perform the research program as set forth in Attachment A (the "Research").
2. [REDACTED] the "Principal Investigator." If, for any reason, he is unable to continue to serve as Principal Investigator and a successor acceptable to both M.I.T. and the Sponsor is not available, this Agreement shall be terminated as provided in Article 6.
3. **PERIOD OF PERFORMANCE.** The Research shall be conducted during the period July 1 2017 through June 30 2019 (the "Initial Term"), unless terminated earlier in accordance with Article 6, when it shall terminate automatically without notice unless, no later than three months before the end of the Initial Term, the parties agree in writing that the term shall be extended for a further year to November 30 2020 (the "Extended Term").

4. **REIMBURSEMENT OF COSTS.** Subject to Article 5D below, in consideration of the foregoing, the Sponsor will reimburse M.I.T. for all direct and F&A (Facilities & Administrative or indirect) costs incurred in the performance of the Research, which shall not exceed the total estimated project cost of [REDACTED] without written authorization from the Sponsor.

5. **PAYMENT.**

A. Payments shall be made to M.I.T. by the Sponsor in U.S. dollars, net of U.K. taxes or impost of any kind, as shown in the table below, following an invoice from MIT received by the Sponsor.

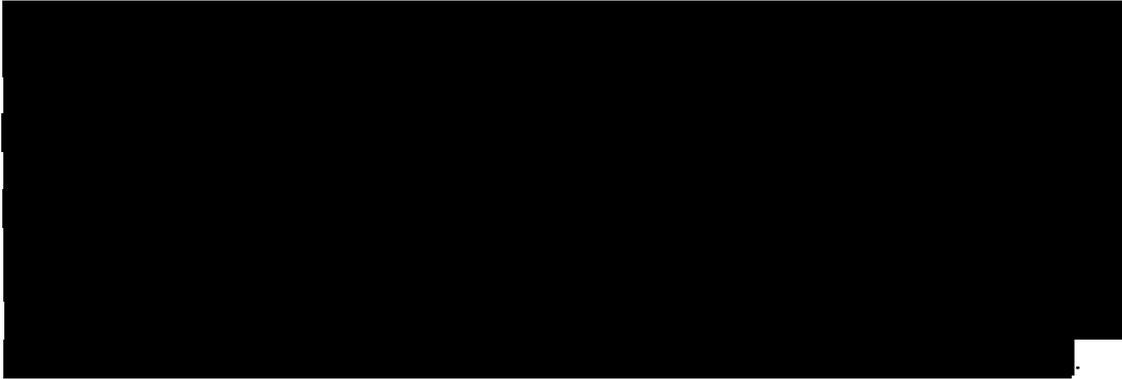
Amount (in USD)	Due Year 1
[REDACTED]	[REDACTED]

Amount (in USD)	Due Year 2
[REDACTED]	[REDACTED]

[REDACTED] by wire transfer in accordance with the wire instructions set forth on Attachment C, in immediately available funds, net of U.K. taxes, tariffs and/or imposts of any kind (which for the purposes of this Agreement, shall mean the full amount owed pursuant to this Agreement, without deduction for withholding or other taxes, or related penalties or interest).

C. **TAXES.**

1. [REDACTED]



2.



3. The obligations under this Subsection shall survive the expiration or termination of this Agreement.

D. TRAVEL AND FOOD EXPENSES.

In addition to those costs outlined in Article 4 above, the Sponsor may, at its sole discretion and on a case by case basis, reimburse any reasonable travel and food and beverage expenditure (i) incurred by such “mutually agreed individuals” referred to in paragraph 5(b) of Attachment B of this Agreement who are not in the employment of MIT and (ii) only where such travel expenditure is incurred in connection with MIT’s performance of this Agreement.



6. TERMINATION.

- A. Performance under this Agreement may be terminated by the Sponsor upon ninety (90) days' prior written notice. Performance may be terminated by M.I.T. (1) if the Sponsor fails to make payment to M.I.T. in accordance with the payment schedule stated in Article 5 above and does not remedy the non-payment within thirty (30) days' written notice from M.I.T. or (2) if circumstances beyond M.I.T.'s reasonable control preclude continuation of the Research. Upon termination by either party, M.I.T. will be reimbursed as specified in Article 4 for all costs and non-cancellable commitments incurred in the performance of the Research, such reimbursement not to exceed the total estimated project cost specified in Article 4.
- B. Neither the termination of this Agreement for any reason, nor the completion of the Research shall affect M.I.T.'s obligations or the Sponsor's rights under this Agreement.

7. REMEDIES FOR BREACH OF THIS AGREEMENT.

The parties agree that damages alone would not be an adequate remedy for the breach of any of the provisions of this Agreement and so despite any other rights and remedies available, the Sponsor shall be entitled to seek injunctive or other equitable relief to remedy or prevent any breach or threatened breach of this Agreement by M.I.T..

8. PUBLICATIONS.

- A. The Sponsor acknowledges that M.I.T. may wish to publish paper(s) (1) in an academic journal/periodical, (2) in respect of conference proceedings or (3) within the public domain (i) in respect of a dissertation for an academic degree or (ii) in any other disclosed form including but not limited to publication on a website or placement on an online portal/cloud ("Publication") or present at any conference, seminar or lecture ("Presentation") any results, text, graphics and tables from the Research carried out by M.I.T. pursuant to this Agreement (the "Research Output"). If M.I.T. wishes to publish the Research Output within a Publication or at a Presentation, before doing so, M.I.T. shall:
1. first remove all Proprietary Information from the Research Output or alternatively aggregate and/or anonymise all Proprietary Information in the Research Output; and
 2. at least 30 days before the intended date of submission of the Research Output to the publisher of the Publication, send the Research Output to the Sponsor; or
 3. at least 30 days before the intended Presentation of the Research Output, send the Presentation and Research Output to the Sponsor.
- B. Following review of the Research Output provided by M.I.T. under the above provisions, the Sponsor may, within 30 days of receipt of the Research Output to be included in a Publication or Presentation, inform M.I.T.:

1. of any Proprietary Information which needs to be removed or aggregated such that the Research Output no longer includes Proprietary Information;
2. of any information it regards to be inaccurate or misrepresenting of the position of the Sponsor and M.I.T.,

C. M.I.T. shall:

1. collaborate with the Sponsor to remove the Proprietary Information as requested by the Sponsor; and/or
2. if appropriate and after discussion with the Sponsor, M.I.T. shall include a disclaimer in any Publication or at the Presentation stipulating that the Sponsor does not agree with all or some of the conclusions expressed in such Publication or at the Presentation.

D. It is a condition of the Sponsor that M.I.T. shall acknowledge the support received from the Sponsor in all Publications and/or all Presentations, unless requested to the contrary by the Sponsor.

9. PROPRIETARY INFORMATION. If, in the performance of the Research, the Principal Investigator and members of the M.I.T. research team require and accept access to the Sponsor's information that the Sponsor considers proprietary, the rights and obligations of the parties with respect to such information shall be governed by the terms and conditions set forth in Attachment B.

10. SPONSOR INTELLECTUAL PROPERTY.

A. Title to any Invention made solely by the Sponsor's personnel without the use of MIT administered funds or facilities ("Sponsor Invention") shall remain with the Sponsor. Title to and the IPR (excluding Inventions) in any material first created, produced or composed in the performance of the Research solely by employees of the Sponsor without the use of MIT administered funds or facilities ("Sponsor IPR") shall remain with the Sponsor. Neither Sponsor Inventions nor Sponsor IPR shall be subject to the terms and conditions of this Agreement.

B. Any Invention or any IPR (excluding Inventions) in any material owned by the Sponsor as at the date of this Agreement shall remain the property of the Sponsor and shall not be subject to the terms and conditions of this Agreement.

C. DEFINITIONS:

"Invention" means any creation, discovery, process, new application, improvement, enhancement or modification that in the reasonable opinion of either party is (i) capable of being successfully granted patent protection anywhere in the world or (ii) has or is capable of benefiting from the protection of any other IPR.

"IPR" means any and all intellectual property rights including, without limitation, patent, know-how, service mark, rights in passing off, rights in commercial or technical information, any other rights in any invention, discovery or process, copyright, database rights, rights in software, formulae or algorithms, design rights or trade marks or names and any other intellectual property rights, in each case whether registered or unregistered and including applications for the grant of any such rights and all rights or forms of protection having equivalent or similar effect in each case in the United Kingdom, the United States and anywhere else in the world.

11. JOINT INTELLECTUAL PROPERTY.

- A. **JOINT INVENTIONS.** The Parties shall have joint title to (i) any Invention created jointly by employees and/or students of M.I.T. and employees of the Sponsor in the performance of the Research and (ii) any invention created by employees of the Sponsor in the performance of the Research with significant use of funds or facilities administered by M.I.T. (a "Joint Invention"). The Sponsor shall be notified of any Joint Invention promptly after an invention disclosure is received by M.I.T.'s Technology Licensing Office. M.I.T. shall have the first right to file a patent application on a Joint Invention in the names of both Parties. All expenses incurred in obtaining and maintaining any patent on such Joint Invention shall be equally shared except that, if one Party declines to share in such expenses, the other Party may take over the prosecution and maintenance thereof, at its own expense, provided that title to the patent remains in the names of both Parties.
- B. **LICENSES.** Each Party shall have the independent, unrestricted right to license to third parties any such Joint Invention without any further payment or otherwise accounting to the other Party, except that the Sponsor shall be entitled to request an exclusive license to M.I.T.'s interest in a Joint Invention as provided under paragraph 12.B below.
- C. **JOINTLY DEVELOPED MATERIALS.** The IPR (excluding Inventions) in materials (including for the avoidance of doubt, computer software) created, produced or composed in the performance of the Research (i) jointly by employees and/or students of M.I.T. and employees of the Sponsor, or (ii) by employees of the Sponsor with significant use of funds or facilities administered by M.I.T., shall be jointly owned by both Parties ("Joint IPR"). Both Parties shall each have the independent, unrestricted right to dispose of such materials and their share of the Joint IPR therein as they deem appropriate, without any obligation of accounting to the other Party.
- D. Each Party shall comply with any reasonable request by the other Party to execute any further documents necessary for that Party to give effect to this clause.

12. M.I.T. INTELLECTUAL PROPERTY.

- A. Any Invention or any IPR in any material owned by M.I.T. as at the date of this Agreement shall remain the property of M.I.T. and shall not be subject to the terms of this Agreement.

B. M.I.T. INVENTIONS.

It is not anticipated by the Parties that the results of the Research will yield any M.I.T. Invention. Nevertheless, the following shall govern if applicable:

M.I.T. shall have sole title to (i) any Invention created solely by employees and/or students of M.I.T. in the performance of the Research (each an "M.I.T. Invention") and (ii) any Invention created by employees of the Sponsor with significant use of funds or facilities administered by M.I.T., if the Invention is conceived or reduced to practice other than in the performance of the Research. The Sponsor shall be notified of any M.I.T. Invention promptly after a disclosure is received by M.I.T.'s Technology Licensing Office. M.I.T. may (a) file a patent application at its own discretion or (b) shall do so at the request of the Sponsor and at the Sponsor's expense.

LICENSING OPTIONS. For each M.I.T. Invention on which a patent application is filed by M.I.T., M.I.T. hereby grants the Sponsor a non-exclusive, transferable, royalty-free license for the Sponsor's internal purposes. The Sponsor shall further be entitled to elect to negotiate, by written notice to M.I.T. within six (6) months after M.I.T.'s notification to Sponsor of the filed patent application, a royalty-bearing, limited-term, exclusive license (subject to third party rights, if any, and in a designated field of use, where appropriate) to the Sponsor, including the right to sublicense, in the United States and/or any other country elected by the Sponsor pursuant to Section 12.C. below, to make, have made, use, lease, sell and import products embodying or produced through the use of such M.I.T. Invention, provided that this option to elect an exclusive license is (a) subject to M.I.T.'s concurrence and the negotiation of commercially reasonable terms and conditions and (b) conditioned upon Sponsor's agreement to reimburse M.I.T. for the costs of patent prosecution and maintenance in the United States and any elected foreign country and to cause any products produced pursuant to this license that will be used or sold in the United States to be substantially manufactured in the United States.

If the Sponsor and M.I.T. do not enter into a license agreement within three (3) months after Sponsor's election to proceed under paragraph 12.B above, the Sponsor's rights under paragraphs 12.B will expire.

- C. FOREIGN FILING ELECTION.** If the Sponsor elects a license under 12.B the Sponsor shall notify M.I.T. of those foreign countries in which it desires a license in sufficient time for M.I.T. to satisfy the patent law requirements of those countries. The Sponsor will reimburse M.I.T. for the out-of-pocket costs, including patent filing, prosecution and maintenance fees, related to those foreign filings.
- D. CONFIDENTIALITY OF INVENTION DISCLOSURES.** The Sponsor shall retain all invention disclosures submitted to the Sponsor by M.I.T. in confidence and use its best efforts to prevent their disclosure to third parties. The Sponsor shall be relieved of this obligation only when this information becomes publicly available through no fault of the Sponsor.

E. **COPYRIGHT OWNERSHIP AND LICENSES.** The IPR (excluding Inventions) in materials created, produced or composed in the performance of the Research solely by employees and/or students of M.I.T. shall remain with M.I.T..

1. For any IPR (excluding Inventions) in any material other than computer software and its documentation and/or informational databases required to be delivered in accordance with Attachment A, the Sponsor is hereby granted an irrevocable, royalty-free, non-transferable, non-exclusive right and license to use, reproduce, make derivative works, display, distribute and perform all such materials for the Sponsor's internal purposes (including, without limitation, for operational or research purposes and with the right to sublicense all the foregoing rights to sub-contractors in order that the Sponsor can exercise and benefit from such rights).

2. The Sponsor shall be entitled to elect, by notice to M.I.T. within six (6) months following M.I.T.'s notification or delivery to the Sponsor of computer software and its documentation and/or informational databases required to be delivered to the Sponsor in accordance with Attachment A, a royalty-free, non-transferable, non-exclusive right and license to use, reproduce, make derivative works based upon, display, and distribute to end users, such computer software and its documentation and/or databases for internal and/or commercial purposes (including, without limitation and for the avoidance of doubt, for operational or research purposes and with the right to sublicense all the foregoing rights to sub-contractors in order that the Sponsor can exercise and benefit from such rights). If the use of the software would infringe claims of a patent application filed pursuant to paragraph 12.B. above, then the Sponsor will need to elect license rights in such patent as set forth in 12.B. above in order to elect the license contemplated by this paragraph. If such computer software is a derivative of M.I.T. software existing prior to the start of the Research, then such license may not be royalty-free.

F. **RIGHTS IN TRP.** In the event that M.I.T. elects to establish property rights other than patents to any tangible research property (TRP), including but not limited to biological materials, developed during the course of the Research, M.I.T. and the Sponsor will determine the disposition of rights to such property by separate agreement. M.I.T. will, at a minimum, reserve the right to use and distribute TRP for non-commercial research purposes.

G. **LICENSE EFFECTIVE DATE.** All licenses elected by the Sponsor pursuant to Sections B., E. and F. of this Article 12 become effective as of the date the Parties sign a separate license agreement.

13. **USE OF NAMES.** Neither Party will use the name of the other in any advertising or other form of publicity without the written permission of the other. As an example for M.I.T., the Sponsor shall not use the name of "Massachusetts Institute of Technology," "Lincoln Laboratory" or any variation, adaptation or abbreviation

thereof, or that of any of its trustees, officers, faculty, students, employees or agents, or any trademark owned by M.I.T. For M.I.T., the Technology Licensing Office has authority to grant to the Sponsor any approved use of the M.I.T. name.

14. CARE OF PERSONAL INFORMATION

A. For the purposes of this Article 14., 'Data Protection Legislation' means;

- i. any legislation in force from time to time in the United Kingdom which implements the European Community's Directive 95/46/EC and Directive 2002/58/EC, including but not limited to the Data Protection Act 1998 and the Privacy and Electronic Communications (EC Directive) Regulations 2003;
- ii. from 25 May 2018 only, Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (the "General Data Protection Regulation");
- iii. any other legislation in force from time to time in the United Kingdom relating to privacy and/or the processing of personal data; and
- iv. any guidance or statutory codes of practice issued by the Information Commissioner or the European Data Protection Board set up under the General Data Protection Regulation in relation to such legislation

B. M.I.T. acknowledges that the Sponsor has a statutory duty as a data controller under the Data Protection Legislation if and to the extent that the Proprietary Information includes any personal data (as defined in Data Protection Legislation). MIT shall take appropriate technical and organizational security measures that are satisfactory to the Sponsor against any unauthorized or unlawful processing of such data and against accidental loss, destruction of, or damage to such data.

C. For the avoidance of doubt, personal data includes "pseudonymised" data, i.e. where a unique identifier is used to replace or substitute any personal data, but which can be reversed or 'reidentified' by the data controller or any other person. Notwithstanding the foregoing or anything to the contrary in this Agreement, Sponsor agrees to use reasonable efforts to use appropriate technical and organizational security measures to prevent disclosure to MIT of "sensitive" personal data (information on an individual's health, ethnicity, political affiliation, etc.) and/or any tool to reverse anonymized data, to minimize risk that data subjects could be re-identified by MIT.

D. In the case where Proprietary Information is disclosed or made available through means other than the Sponsor's cloud, M.I.T. (i) may not transfer or process Proprietary Information that includes personal data outside the European Economic Area (EEA) without the prior written consent from the Sponsor (as provided in Attachment D where requested prior to the execution of this Agreement); and (ii) acknowledges and agrees that it shall protect personal data outside the EEA so as to ensure compliance with Data Protection Legislation by maintaining the protections and safeguards described in Attachment E to this Agreement.

15. REPRESENTATIONS AND WARRANTIES. M.I.T. MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING THE RESEARCH OR ANY INTELLECTUAL PROPERTY RIGHTS, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, VALIDITY OF ANY INTELLECTUAL PROPERTY RIGHTS OR CLAIMS, WHETHER ISSUED OR PENDING, AND THE ABSENCE OF LATENT OR OTHER DEFECTS, WHETHER OR NOT DISCOVERABLE. Specifically, and not to limit the foregoing, M.I.T. makes no warranty or representation (i) regarding the validity or scope of the Research or any intellectual property rights optioned or granted hereunder and (ii) that the exploitation of the Research or any intellectual property rights will not infringe any patents or other intellectual property rights of M.I.T. or of a third party.

IN NO EVENT SHALL M.I.T., ITS TRUSTEES, DIRECTORS, OFFICERS, EMPLOYEES, STUDENTS AND AFFILIATES, BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING ECONOMIC DAMAGES OR INJURY TO PERSONS OR PROPERTY AND LOST PROFITS, REGARDLESS OF WHETHER M.I.T. SHALL BE ADVISED, SHALL HAVE OTHER REASON TO KNOW OR IN FACT SHALL KNOW OF THE POSSIBILITY OF THE FOREGOING. THIS ARTICLE 15 SHALL SURVIVE THE EXPIRATION OR ANY EARLIER TERMINATION OF THIS AGREEMENT.

16. NOTICES. Any notices required to be given or which shall be given under this Agreement shall be in writing and be addressed to the Parties as shown below. Notices shall be delivered by certified or registered first class mail (air mail if not domestic) or by commercial courier service and shall be deemed to have been given or made as of the date received.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY	SPONSOR
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17. ASSIGNMENT. This Agreement shall be binding upon and inure to the benefit of the parties hereto and the successors to substantially the entire business and assets of the respective parties hereto. This Agreement shall not be assignable by either party without the prior written consent of the other party; any attempted assignment in violation of this clause is void.

18. GOVERNING LAW AND DISPUTES.

- A. M.I.T. and the Sponsor shall use all reasonable endeavours to negotiate in good faith and settle any dispute or difference that may arise out of or relate to the Agreement before resorting to litigation.
- B. If any such dispute is not settled through discussion between the parties within a period of seven days of the date on which the dispute arose, the parties may refer the dispute in writing to a director or chief executive (or equivalent) ("Senior Personnel") of each of the parties for resolution.
- C. If the dispute is not resolved within 14 days of referral to the Senior Personnel, either party may propose by notice to the other party that a structured mediation or negotiation be entered into with the assistance of a mediator.

This Agreement shall be governed by and construed in accordance with the law of England and Wales; the courts of England will have exclusive jurisdiction to settle any dispute which may arise out of or in connection with the Agreement.

- 19. FORCE MAJEURE.** Neither party shall be responsible to the other for failure to perform any of the obligations imposed by this Agreement, provided such failure shall be occasioned by fire, flood, explosion, lightning, windstorm, earthquake, subsidence of soil, failure or destruction, in whole or in part, of machinery or equipment, or failure of supply" of materials, discontinuity in the supply of power, governmental interference, civil commotion, riot, war, strikes, labor disturbance, transportation difficulties, labor shortage or any cause beyond its reasonable control.
- 20. EXPORT CONTROLS.** It is understood that M.I.T. is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities, and that its obligations hereunder are contingent on compliance with applicable U.S. export laws and regulations (including the Arms Export Control Act, as amended, and the Export Administration Act of 1979). The transfer of certain technical data and commodities may require a license from the cognizant agency of the United States Government and/or written assurances by the Sponsor that the Sponsor will not re export data or commodities to certain foreign countries without prior approval of the cognizant government agency. While M.I.T. agrees to cooperate in securing any license which the cognizant agency deems necessary in connection with this Agreement, M.I.T. cannot guarantee that such licenses will be granted.
- 21. INDEMNIFICATION.** M.I.T. shall, to the extent of its liabilities under the laws of England and Wales, indemnify, defend and save harmless Sponsor (including but not limited to, its directors, trustees, officers, employees, and agents, as applicable) from any and all loss, damage, claims, actions and suits (except for infringement of any United States or foreign patent, copyright, trade secret or other proprietary interest of any third party), including all costs and expenses, including legal fees, arising out of M.I.T.'s performance under this Agreement, but only in proportion to and to the extent such liability, loss, damage or claims are caused by or result from M.I.T.'s negligence or wilful misconduct and only up to a maximum of [REDACTED]. Sponsor agrees to give M.I.T. immediate notice of any claim, action or suit in any way connected with activities under this Agreement and to cooperate in the defense thereof.

22. ENTIRE AGREEMENT. Unless otherwise specified, this Agreement and its Attachments embody the entire understanding between M.I.T. and the Sponsor for the Research, and any prior or contemporaneous representations, either oral or written, are hereby superseded. No amendments or changes to this Agreement, including without limitation, changes in the statement of work, total estimated cost and period of performance, shall be effective unless made in writing and signed by authorized representatives of the Parties.

ATTACHMENT A

M.I.T. STATEMENT OF WORK

MIT's Transit Research Program, led by Dr. Jinhua Zhao as Principal Investigator, will undertake independent academic research in a number of areas of relevance to the provision of safe, integrated, efficient, and economic transport facilities and service, including but not limited to:

- Service and Operations Planning, Management, and Control
- Fares and Ticketing Technology
- Public Transport Policy, Finance, and Strategy
- Transportation Modelling

This research program will be carried out over a two-year period ending] 30 June 2019, save where extended in accordance with the provisions of this Agreement. The products of this research will be documented in a series of technical memoranda and reports, policy briefings, electronic and on-site presentations, student academic theses (including accompanying research digests), and progress reports at least three times per year. Each year a more detailed MIT research plan, including specific research deliverables, will be developed and submitted for renewal and approval to TfL in August for the forthcoming academic year. This detailed research plan will address specific topics within the above-referenced areas and other priority areas identified jointly by MIT and TfL staff. Each progress report will be accompanied by an on-site or teleconference meeting, so that specific TfL feedback on the research progress can be received.]

For the initial contract year of 2017 - 2018, it is anticipated that the research program will include, among others to be jointly agreed upon, the following research topics:

- 1) Autonomous Vehicles (AV) (two Masters projects - Autumn 2016 to Summer 2018)
- 2) Bus Operations (new MSc Project following on from and building on ODX and impact of road construction research) (Timing TBC).
- 3) Surface Transport: improving delay estimation at road intersection (continuation of PhD Project at MIT/NEU to complete Summer 2018).
- 4) Predictive Analytics on the London Underground – Individual Mobility Prediction (continuation of current PhD Research to complete Summer 2018).
- 5) Disruption Management and Decision Support for London Underground (new MSc Project building on work completed in Summer 2016) (Timing TBC).

At the conclusion of the research, all technical memoranda and reports, as well as other documentation, will be compiled and submitted to TfL as a record of the academic research.

ATTACHMENT B

SPONSOR PROPRIETARY INFORMATION

If, in the performance of the Research, the Principal Investigator and members of the M.I.T. research team designated by him/her require and accept access offered by the Sponsor to certain information that the Sponsor considers proprietary and/or confidential, M.I.T. undertakes to the Sponsor that the rights and obligations of the parties with respect to such information are as follows:

1. PROPRIETARY INFORMATION. For the purposes of this Agreement, "Proprietary Information" refers to information of any kind (including but not limited to commercial, financial, technical, personal or otherwise and however recorded or preserved) which is disclosed by the Sponsor to M.I.T. for the purposes of this Agreement and which, by appropriate marking or designation, either expressly or by necessary implication, is identified as confidential and/or proprietary at the time of disclosure.
2. LIMITATIONS ON USE. M.I.T. shall use the Sponsor's Proprietary Information solely for the purposes of the Research. M.I.T. acknowledges and agrees that the Sponsor may at any time notify M.I.T. that certain sub-sets of the Proprietary Information may be used solely for the purpose of one or more specific projects forming part of the Research only. It is agreed by the Sponsor and M.I.T. that the disclosure of Proprietary Information shall not be construed as a grant of any right or license with respect to such information except as set forth herein or in a duly executed license agreement.
3. ACCESS TO PROPRIETARY INFORMATION. The Sponsor anticipates initially making the Proprietary Information available to M.I.T. via M.I.T.'s own local servers. When such password protected online portal is available for use, the Sponsor shall make the Proprietary Information available through a password protected online portal and will provide the Principal Investigator and members of the M.I.T. research team designated by him/her with usernames and temporary passwords to access the Proprietary Information. M.I.T. shall, and shall procure that the Principal Investigator and the designated members of the M.I.T. research team (i) keep the usernames and passwords confidential and (ii) do not share or disclose the usernames or passwords to any other third parties. M.I.T. shall ensure that the Proprietary Information is only accessed on computers and machines maintained by M.I.T., incorporating such levels of encryption and data security measures as M.I.T. uses for the protection of its own proprietary information.

4. SECURITY INCIDENTS AND DATA BREACHES. M.I.T. shall notify the Sponsor within 24 hours by written notice with all relevant details reasonably available of any actual or suspected breach of security in relation to the Proprietary Information including unauthorized or unlawful access or processing of, or accidental loss, destruction or damage of any Proprietary Information and shall keep the Sponsor properly and regularly informed consequently.¹

5. CARE OF PROPRIETARY INFORMATION. The Sponsor and M.I.T. agree that:
 - (a) all Proprietary Information communicated by the Sponsor and accepted by M.I.T. in connection with this Agreement shall be kept strictly confidential by M.I.T. as provided herein unless specific written release is obtained from the Sponsor in accordance with the terms of this Agreement;
 - (b) M.I.T. shall seek authorization in writing from the Sponsor in respect of any additional employees, students or other mutually agreed individuals who may require access to the Proprietary Information in the performance of this Agreement prior to disclosure to such individuals (the "Representative(s)") and, to the extent that any Representative is not already under an appropriate duty of confidentiality, impose upon such Representative obligations of confidentiality at least equivalent to those set out in this Agreement;
 - (c) M.I.T. shall promptly comply with any reasonable directions of the Sponsor which are given for the security protection of the Proprietary Information, including compliance with the DPA or any privacy legislation which may amend, replace or supersede the DPA from time to time.

6. When the Proprietary Information is no longer required for the purposes of this Agreement or at the written request of the Sponsor, save in respect of any Proprietary Information to which paragraph 7 below applies, M.I.T. shall (i) promptly destroy or return to the Sponsor all materials containing, incorporating or based on the Proprietary Information supplied by the Sponsor, (ii) erase all Proprietary Information from its computer systems or which is stored in electronic form (to the extent possible) and (iii) certify, in writing, within 14 days of such request or completion of the Research that it has fully complied with its obligations under this provision.

7. Where M.I.T. Proprietary Information is stored in electronic form and it is not

¹ NB data protection provisions in this Agreement reflect the requirements of the Data Protection Legislation.

possible to erase such Proprietary Information in accordance with paragraph 6 above, M.I.T. acknowledges and agrees that such Proprietary Information shall continue to be maintained in accordance with the terms of this Agreement.

8. M.I.T. shall exert reasonable efforts to maintain the Proprietary Information in confidence and shall be deemed to have discharged its obligations hereunder provided M.I.T. has exercised the foregoing degree of care and has adhered to the terms of this Agreement.
9. M.I.T.'s obligations of confidentiality with respect to Proprietary Information provided under this Agreement shall survive for a period of three (3) years after receipt of the information.
10. INFORMATION NOT COVERED. It is agreed by the Sponsor and M.I.T. that the above obligations of confidentiality shall not attach to information which:
 - (a) is publicly available prior to the date of this Agreement or becomes publicly available thereafter through no wrongful act of M.I.T.;
 - (b) was known to M.I.T. prior to the date of disclosure or becomes known to M.I.T. thereafter from a third party having an apparent bona fide right to disclose the information;
 - (c) is disclosed by M.I.T. in accordance with the terms of the Sponsor's prior written approval;
 - (d) is disclosed by the Sponsor without restriction on further disclosure;
 - (e) is independently developed by M.I.T.;
 - (f) M.I.T. is obligated to produce pursuant to an order of a court of competent jurisdiction or a valid administrative or Congressional subpoena, provided that M.I.T. (i) promptly notifies the Sponsor and (ii) cooperates reasonably with the Sponsor's efforts to contest or limit the scope of such order.

ATTACHMENT C

INSTRUCTIONS FOR MAKING WIRE TRANSFERS TO MIT

Instructions for Wire Transfers to MIT in U.S. Dollars only
(per Section 5.A of this agreement, payment shall be made in U.S. Dollars):

1. Provide the following bank information to the bank that will be wiring funds to MIT:

Bank to which funds will be wired:	[REDACTED]
Bank address:	[REDACTED]
Bank's ABA routing number:	[REDACTED]
DDA account number:	[REDACTED]
SWIFT:	
Wire Details: Please include name of MIT Program, MIT account number or MIT invoice number to credit.	

2. Provide as much information as possible to identify the objective of the wire transfer, such as Principal Investigator's name, MIT department, MIT account number, project title or descriptor. If there is limited space, the MIT department and account number are probably the minimum information needed to identify the objective for the wire transfer.

3. Notify [REDACTED] in MIT's Accounts Receivable at [REDACTED] or p [REDACTED], that you are making a wire transfer. Provide your company name, the amount of the wire, the MIT account number to which this money should be transferred, the Principal Investigator's name in case of questions and the date when the wire transfer is expected to be made.

Instructions for wire transfers in foreign currency (note that per Section 5.A of this agreement, payment shall be made in U.S. Dollars):

Wire transfers to be made in a foreign currency need specific instructions. Advance details are required in order for MIT to make appropriate arrangements with the bank to accept your payment. If you will be sending funds in foreign currency, please send email to [REDACTED] at [REDACTED] fax to [REDACTED] with the following information:

- Amount of wire transfer
- Specific Currency (i.e. Euros, Japanese yen, GBP etc.)
- Name and address of sending bank
- Date of expected transfer (exact date important for foreign currency wires)

ATTACHMENT D

Disclosure consent to process Proprietary Information outside the EEA

The Sponsor agrees that MIT may transfer or process Proprietary Information (that contains personal data) in the following destinations outside the EEA:

The United States of America.

ATTACHMENT E

Sponsor Proprietary Information Safeguarding by M.I.T. (as per Section 13A(D))

Summary: The attachment summarizes how MIT will protect the security and integrity of TfL data. This includes both cyber and physical security controls in place (as relevant) to protect the data.

1. Managing Access Permissions to the Data

Once any data set has been downloaded by MIT, it will be stored on one of two designated server computers for this project. All machines are password protected, and connections to the machines are protected with strong encryption based on TLS or SSH. Access rights to data originating from TfL will only be granted by the Principal Investigator, who will also be responsible for ensuring that access rights are terminated when a person has left their post or otherwise does not require access any longer.

2. Monitoring Access to the Data

MIT will keep a record of who and when any faculty, staff, or students access the TfL data servers. The server computers will be maintained in a locked office at all times. Staff and students will perform all analysis and aggregation of TfL data on the designated servers and will only be permitted to download highly aggregated data that contains no personally identifiable information.

3. Secure Data Transfer

MIT will not transfer any data to external parties. Any data required by its subcontractor, Northeastern University, will be provided directly to Northeastern University by TfL.

4. Encryption, Firewalls, Software Updates, Virus Scanning and/or penetration testing

MIT utilizes the Sophos Anti-Virus software on all enterprise and office machines for virus scanning. An internal WSUS Server manages all patches for enterprise machines as well. The designated machines all utilize BitLocker hard-drive encryption. Machines with Unix-based operating systems use other recognised, industry standard forms of encryption, firewalls, and software updates compatible with their operating system. MIT carries out penetration testing when significant security threats arise.

5. Client devices and remote access

Access to databases and files from mobile devices such as smartphones is prohibited. Access to files and databases is only allowed from devices (e.g. student and faculty laptops) owned by TfL or by [REDACTED] and equipped using MIT recommended anti-virus software, firewall, secure server connection, with device-specific certificates and cryptographic keys installed for authentication and encryption. Certificates expire periodically and must be renewed to resume access. Certificates can be revoked if a device is ever compromised.

6. Confirmation of the existence of an information security policy or data protection policy (or equivalents)

MIT has an appropriate use policy that all faculty, staff and students read and acknowledge prior to using the network. MIT maintains certain policies with regard to the use and security of its computer systems, networks, and information resources. All users of these facilities, including technology developers, end users, and resource administrators, are expected to be familiar with these policies. Further information can be found at:

<https://ist.mit.edu/about/it-policies> and <http://web.mit.edu/policies/13/13.2.html>

MIT also maintains a Written Information Security Policy (WISP) per Massachusetts State Law. <https://infoprotect.mit.edu/wisp>

7. Confirmation of any relevant information security accreditation (e.g. ISO/IEC 27001, ISO/IEC 27018,) would be helpful.

MIT currently does not have any of these security accreditations but is constantly actively working to improve our campus network security.

8. Any 'organisational' measures, such as training, vetting, misconduct policies that include misuse of data, confidentiality agreements

MIT provides policies and procedures information and training, including information security awareness to all faculty and staff upon their arrival to the University.

Incidents of student misconduct and/or policy violations are handled by the Office of Student Citizenship (OSC) and the Dean of Student Life. Any incidents of faculty/staff misconduct and/or policy violations are handled by the Office of the Vice President for Research, the Department of Human Resources or the Office of General Council as applicable. All faculty, staff and students are expected to abide by all University policies and procedures.

