

Guidelines for Call for Participants in the Tokyo Waterfront Area Field  
Operational Test in the Second Phase of the Cross-Ministerial Strategic  
Innovation Promotion Program—Innovation of Automated Driving for  
Universal Services (SIP-adus)  
(revised)

March 2021

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Appendix: Participation Rules for the Tokyo Waterfront Area Field Operational Test

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## **1. Background and purposes of the Tokyo Waterfront Area Field Operational Test**

The second phase of the Cross-Ministerial Strategic Innovation Promotion Program—Automated Driving for Universal Services (SIP-adus) seeks to contribute to the solving of societal problems, such as reducing the number of traffic accidents and the amount of traffic congestion, securing mobility for those with restricted transportation access, alleviating driver shortages and reducing costs for logistics and mobility services, by commercializing and promoting the greater adoption of automated driving. By doing so, it aims to create a society in which all people can enjoy high quality lives. To accomplish this, it promotes research and development on common issues (cooperative areas) by industry, academia, and government.

Notably, in the second phase of SIP-adus, the Tokyo Waterfront Area Field Operational Test was conducted from October 2019 by involving participants, such as Japanese and foreign automakers, component manufacturers, universities, venture companies, etc., in order to achieve advanced vehicle-infrastructure cooperative automated driving using traffic environment information. In the Field Operational Test, infrastructure equipment for distributing traffic signal information on general roads and information for supporting passage through ETC gates and merging with the main lane on highways (i.e., dynamic information of dynamic maps), as well as magnetic markers and Public Transportation Priority Systems (PTPS), which contribute to achieving the next-generation transport system equivalent to Level 4, were installed on public roads in the Tokyo waterfront area. A project to the end of FY2020 is underway to analyze and verify the effectiveness of providing information from transport infrastructure for automated driving, the requirements, including the deployment of transport infrastructure required for automated driving, the impact of automated driving vehicles on road traffic, etc. by using data collected from both test participants and infrastructure equipment.

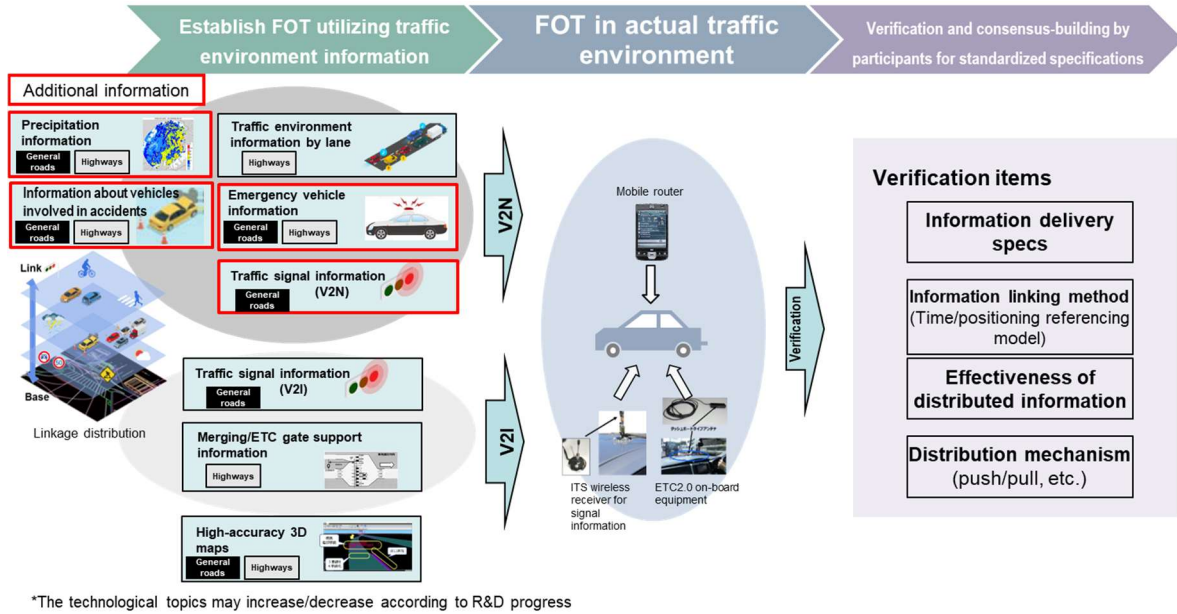
In FY2021, a Field Operational Test will be conducted in an actual traffic environment related to the use of more diverse traffic environment information by adding new traffic environment information, in addition to the improvements based on the accomplishments of the Field Operational Test and R&D by FY2020, to further expand the scope of building and using a mechanism for distributing traffic environment information.

## **2. Field Operational Test implementation overview**

### **2.1. Implementation overview**

In addition to the distribution of high-accuracy 3D map information as well as traffic signal information and merging support information, etc. by means of dedicated short range communications (DSRC) (by V2I), which was accomplished in SIP-adus, efforts will be made to create a test environment where various kinds of traffic environment information can be distributed and used by means of network communication (by V2N) in order to work on themes to achieve smooth and advanced automated driving in more diverse use cases. Opportunities for an internationally open field operational test will be created to verify issues and

build consensus regarding standardization of specifications of technologies in the cooperative areas and thereby promote practical application and standardization as well as international cooperation/coordination, etc. (Fig. 1)



**Fig. 1 Field Operational Test implementation overview**

## 2.2. Implementation period and schedule (plan)

This call for participants targets the Field Operational Test that is scheduled to start in the latter half of FY2021. The following schedule is being studied. (Fig. 2)

On-board devices for tests capable of receiving traffic environment information, which are indicated in “2.7 Overview of test equipment” (Fig. 4), will be lent to participants in the FY2021 Field Operational Test from June 2021 based on their requests. Based on submission of a driving plan in advance and safety management using dynamic management systems, etc., participants shall be entitled to participate in the Follow-up FOT 21, where test driving is possible by using the environment where information is provided by infrastructure. Participants are required to consent to cooperate in test driving and submission of data during the period of the Follow-up FOT 21 as well if they are requested to do so by the Cabinet Office, NEDO, or Field Operational Test Contractor.

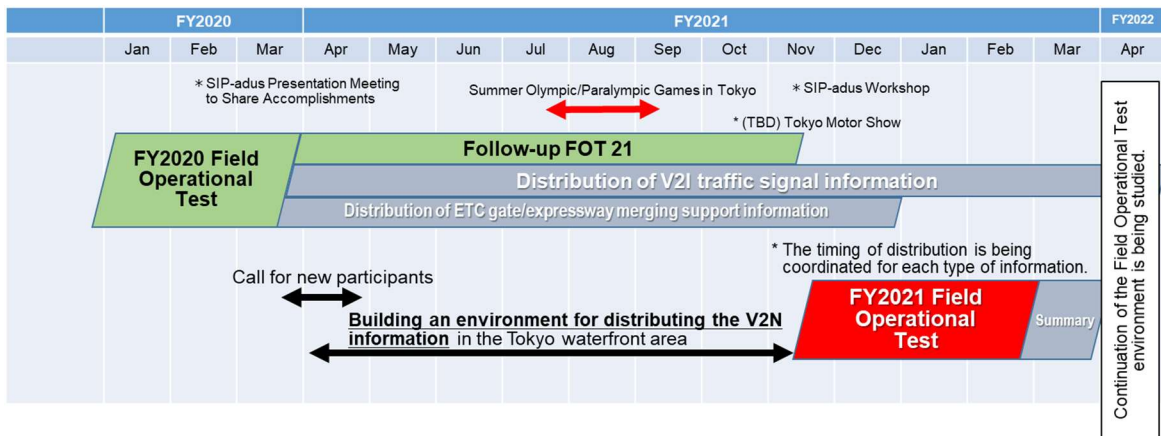


Fig. 2 Schedule

### 2.3. Test participants

Japanese and foreign automakers, component manufacturers, venture companies, universities, and other corporations and research institutions performing automated driving technology research and development are eligible to apply as test participants.

### 2.4. Implementation areas

- Waterfront City area
- Haneda Airport area
- Metropolitan Expressway routes connecting Haneda Airport and the Waterfront City area, etc. (including general roads)

\* The Field Operational Test area is subject to change depending on the progress of R&D.



Fig. 3 Implementation areas

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## **2.5. Verification contents**

### **(1) FY2021 Field Operational Test**

Efforts will be made to collect and generate information in larger areas, to distribute and receive information by V2N, and to validate, use, and verify information using on-board devices, in addition to distributing the small-area and lookahead information by V2I, which is difficult to detect using on-board sensors. The following items will be demonstrated.

Effectiveness of use of information due to differences in the information distribution protocol:

Regarding traffic signal information distributed by V2I in the Field Operational Test in FY2020, the effectiveness of the traffic signal phase and timing information, which is distributed by V2N, for determination of the displayed traffic signal color and lookahead judgement of the traffic signal color transition timing will be demonstrated.

Effectiveness of large-area information distribution for lookahead, route planning, and cautions:

To contribute to judging route planning with a margin for advanced automated driving vehicles, determining ODD, providing effective information to the driver, and giving cautions, traffic environment information for medium-sized and large areas will be generated and distributed by V2N to demonstrate its effectiveness for smooth, reliable, and safe driving.

### **(2) Information provided in the Follow-up FOT 21 and the target area**

- Traffic signal color information and traffic signal information about the number of remaining seconds provided by ITS wireless roadside equipment  
(Waterfront City area and Haneda Airport area)
- ETC gate open/close information and merging support information using ETC2.0  
(Metropolitan Expressway routes connecting Haneda Airport and the Waterfront City area, etc. [including general roads])
- High-accuracy 3D map information

## **2.6. Roles of test participants**

Participants will prepare autonomous vehicles or vehicles equipped with advanced driver assistance systems, etc., verify the use of cooperative automated driving systems, traffic environment information, etc. using loaned test equipment, and report test results and data. Participants will also help decide on cooperative area technology specifications in working group meetings for Field Operational Test participants held by Contractors and conduct analysis, hold discussions for verification, and compile opinions toward standardized specifications, including the model of traffic environment information.

## 2.7. Overview of test equipment

The Contractor will lend out the equipment to receive information distributed via the cooperative automated driving systems in this test. Participants will provide their own test vehicles. Refer to the “Participation Rules for the Tokyo Waterfront Area Field Operational Test” regarding the division of duties involved in preparing test equipment.

Details regarding the information supplied by the cooperative automated driving systems (output formats, information provision locations, etc.) and details regarding test equipment will be provided as necessary by the Operation Executive Secretariat or the Contractor at participant briefings, working group meetings for Field Operational Test participants, information-sharing sessions, etc. (Fig. 4)

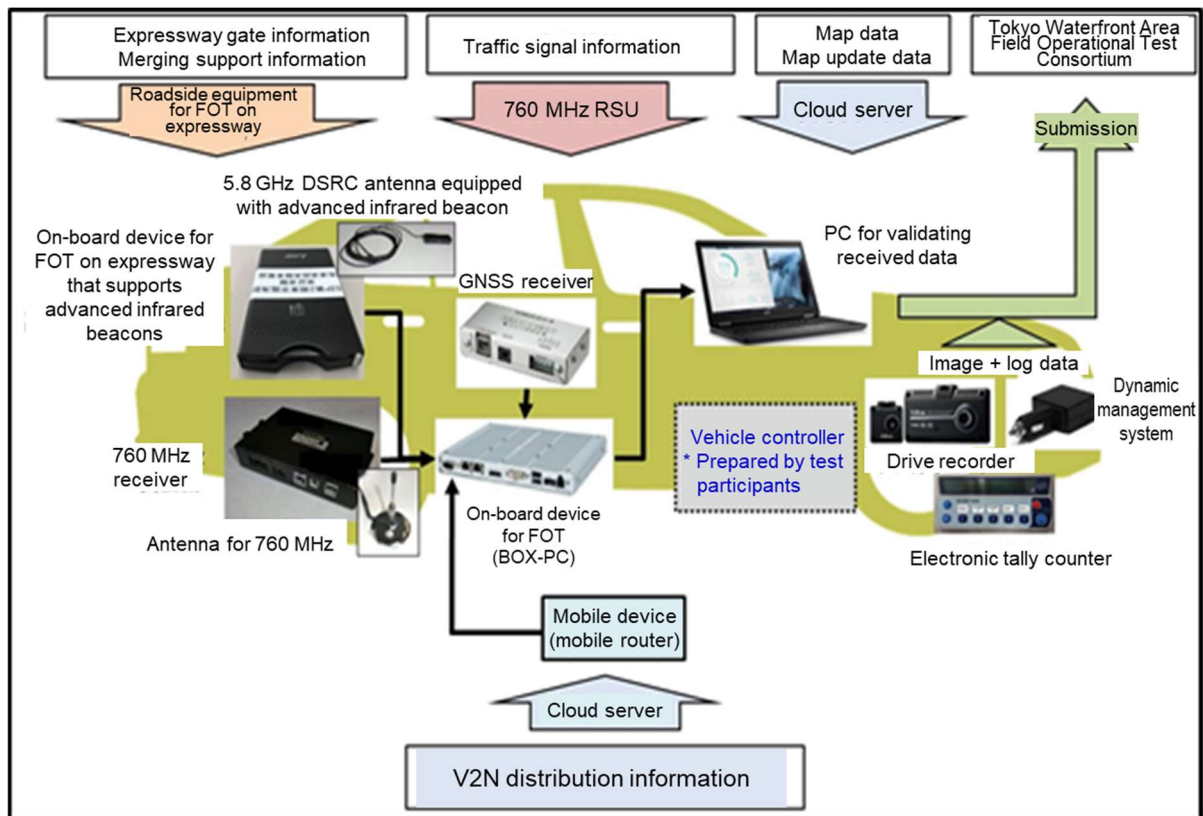


Fig. 4 Overview of equipment for the FY2021 Field Operational Test

## 2.8. Test scheme

The test scheme for this Field Operational Test will be as indicated below.

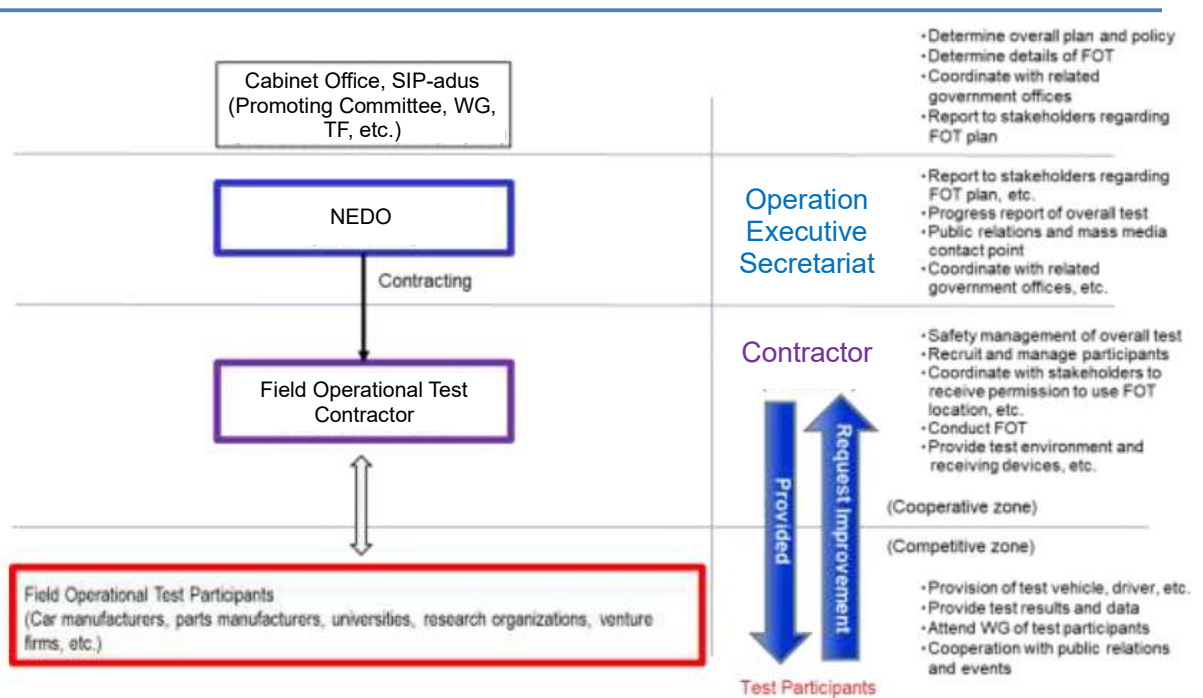


Fig. 5 Test scheme

## 2.9. Other

Test participants will report their driving plans, test plans, safety management systems, amount paid by the private sector, etc. that are necessary for implementing the Field Operational Test at the request of the Operation Executive Secretariat or the Contractor.

## 3. Requirements for participation, application documents, and qualification

### 3.1. Conditions related to test participants

A test participant must be a company or organization other than a local government. It must have legal personality, and it must be possible to confirm the name of its representative, business description, method of property management, etc. based on its Articles of Incorporation, etc. It must be engaged in research and development related to automated driving vehicles and be capable of effectively using the demonstration data obtained through the Tokyo Waterfront Area Field Operational Test. It must also consent to the Participation Rules for the Tokyo Waterfront Area Field Operational Test attached separately.

### 3.2. Application procedure

- 1) Submission of application documents to the Operation Executive Secretariat
- 2) Screening by the Operation Executive Secretariat
- 3) Notification of screening results
- 4) Decision of official participants



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5) Organization of a meeting to explain the Field Operational Test

**3.3. Application documents**

- (1) Application form (Form 1)
  - Name of corporation, representative, and address
- (2) Applicant's profile (Appendix 1)
  - Name of corporation, name of person in charge, and contact information (telephone number, email address)
  - Corporate profile
  - Details of vehicles to be used for participation
- (3) Participation plan (Appendix 2)
  - Purpose of participation, systems for implementation, information management, and safety management
  - Implementation schedule
- (4) Other documents to be attached
  - Corporate profile
  - Track record of development related to advanced driver assistance and automated driving technologies
  - Commercialization plan
  - Documents that prove the track record of commercialization (development of commercial products), etc. (track record of research presentations/papers, product catalog, etc.)

**3.4. Documents to be submitted after test participants are selected**

- Test plan form
- Driving plan form  
(vehicle information, implementation period, implementation system, details of measures to ensure safety, etc.)
- Participant's documents  
(applications for use, letter of consent, etc.)
- Notification of the person responsible for/person in charge of coping with accidents

**3.5. Notes on application documents**

- 1) Submitted application documents that are not completely filled out may not be accepted.
- 2) When applying to be a test participant, submit one copy each of the specified forms.
- 3) If many applicants apply, test participants will be qualified based on the "screening criteria" described in Section 3.6.

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- 4) Submit your vehicle information and driving plan after your company or organization has been selected to participate in the test.
  - 5) During the screening process, you may be asked to submit other documents in addition to those listed above. As a rule, submitted documents will not be returned.
  - 6) As a rule, test participant selection will be based on submitted application documents. Therefore, application documents (all documents including attachments) must clearly describe the details to be implemented.
  - 7) Submitted documents must be written in Japanese.
  - 8) The set of participation application documents will be shared with the Field Operational Test Contractor which serves as the secretariat.

### **3.6. Qualification of test participants**

Based on the submitted documents, the Operation Executive Secretariat or the Contractor will screen and qualify test participants.

Participants who may not meet the screening criteria will be interviewed as necessary.

The following screening criteria are defined with the purpose of recruiting participants.

Screening criteria

- 1) The applicant shall have a commercialization plan for practical implementation of automated driving. This does not apply to universities or public research institutes, etc.
- 2) The applicant shall possess superior technologies related to automated driving.
- 3) The applicant shall have implementation and information management systems capable of carrying out testing.
- 4) The applicant shall be fully capable of establishing the safety management system required for tests.
- 5) The applicant shall consent to make contributions, such as offering the driving data obtained in the Field Operational Test.
- 6) The applicant has not participated in the Tokyo Waterfront Area Field Operational Test before.
- 7) The applicant shall recognize that even if it satisfies criteria 1) to 6) above, the Operation Executive Secretariat may possibly limit its participation due to a request from Cabinet Office, and test management and control policies.

### **3.7. Schedule to accept applications**

The application period begins on March 25 (Thursday), 2021.

The deadline for submitting application documents is May 6 (Thursday), 2021 (all documents must arrive by this date).

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### **3.8. Notification**

Applicants will be notified of qualification results in mid-May 2021.

### **3.9. Participant briefing**

A participant briefing is planned for late May 2021.

## **4. Where to submit applications and inquiries**

[Inquiries]            Operation Executive Secretariat for the Tokyo Waterfront Area Field Operational Test in the Second Phase of the Cross-Ministerial Strategic Innovation Promotion Program—Innovation of Automated Driving for Universal Services (SIP-adus)

New Energy and Industrial Technology Development Organization (NEDO) Robot and Artificial Intelligence Technology Department

Group responsible: SIP Group

Address: MUZA Kawasaki Central Tower, 19F, 1310 Omiya-cho, Saiwai-ku, Kawasaki City, Kanagawa 212-8554 Japan

Email: [nedo-sip2-rinkai-fot@nedo.go.jp](mailto:nedo-sip2-rinkai-fot@nedo.go.jp)