

**ITS World Congress**

**Building the Ecosystem: coordination efforts across the world  
supporting the development and deployment of CCAM**



# **Coordination of AV research and pilots in Japan (SIP-adus)**

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**11 October 2021**

SIP ; Strategic Innovation Promotion Program    adus ; Automated driving system for universal service



# SIP-adus Initiative

## ADS (Automated Driving Systems)

Safe and secure mobility for all



**Competition**



**Cooperation**



## Realization of **S**ociety 5.0



### ➤ Technology

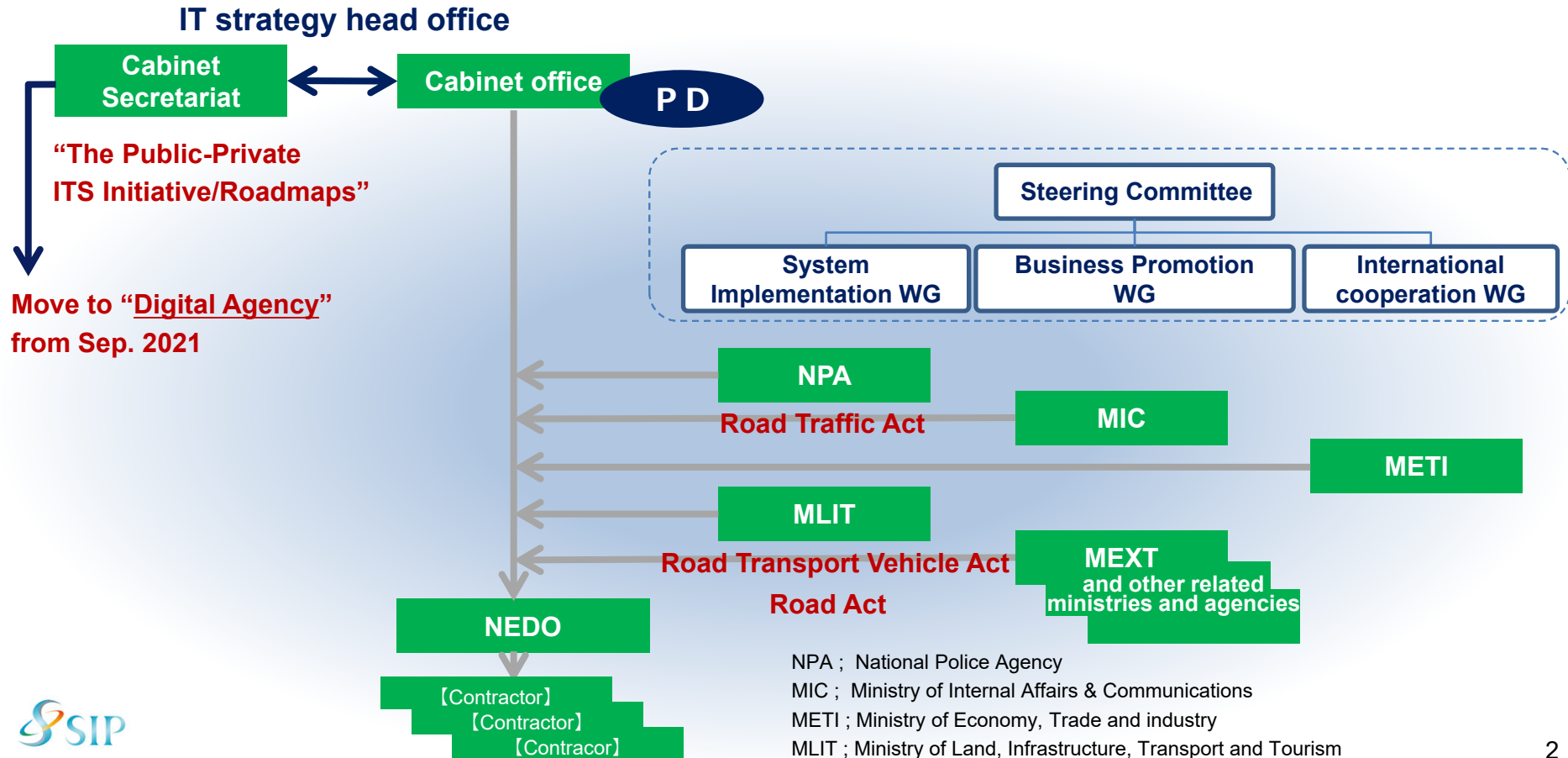
- 1) Dynamic Map
- 2) Safety Assurance
- 3) Cybersecurity
- 4) Geospatial dynamic data utilization  
etc.

### ➤ Int. cooperation/Standardization

### ➤ Public acceptance

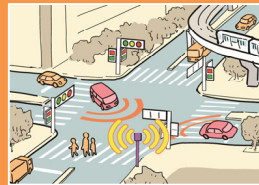
### ➤ Deregulation/Regulatory reform

# Framework to promote SIP-adus



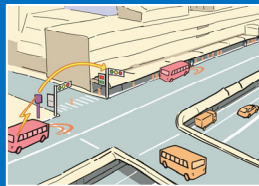
# Field Operational Test in Tokyo Waterfront area

- Promoting standardization in an internationally **open test environment** under **public roads and mixed traffic**
- Promoting R&D by drawing out private investment through a **matching funds scheme** with **industry-academia-government collaboration**
- Improving measures to **foster public acceptance** with planning test drive events, etc.



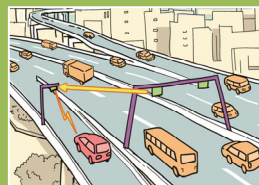
## Tokyo Waterfront City area

- Signal display and change timing information via ITS infrastructure
- HD 3D map linked with signal info. etc



## Haneda Airport area

- Signal display and change timing information via ITS infrastructure
- Magnetic marker
- Bus stop, designated lane for bus service



## Metropolitan Expressway

- Merging assistance at main lanes of expressway
- ETC gate open/close info.
- Lane level traffic flow regulation info. Etc.

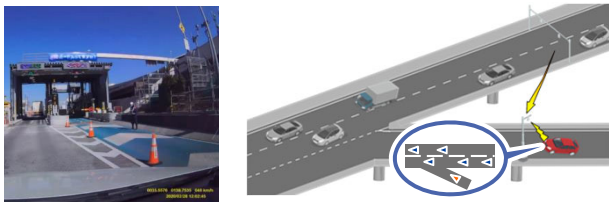
# Field Operational Test in Tokyo Waterfront area

## ◆ FOT period ; Oct. 2019 ~ Mar. 2021

- Signal display and change timing information via ITS infrastructure



- Merging assistance on the main lane of highways



- HD 3D map linked with traffic info. etc.

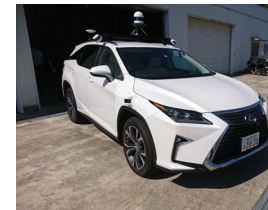


## ◆ FOT ; 1 year extension with new traffic environmental data via V2N

## ◆ Participants ; Total 29 (in FY2020)

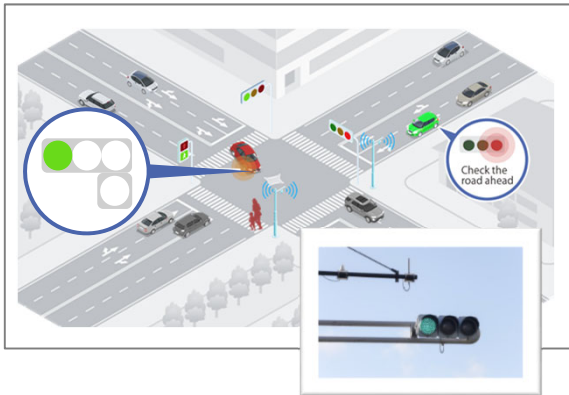


Alphabetical order. A total of 29 institutions



# Field Operational Test in Tokyo Waterfront area

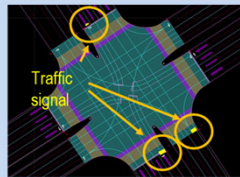
Demonstrated the effectiveness of providing **signal information** via V2I



Installed V2I (760MHz) equipment at 33 intersections in Odaiba



Confirmed that **signal recognition** can be performed stably under various conditions based on **V2I information**.



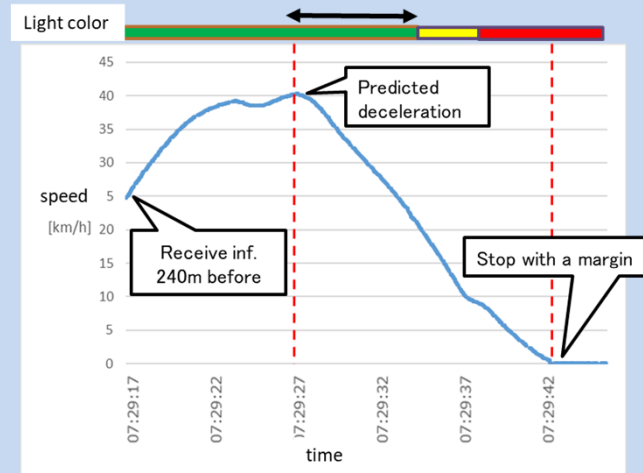
Superimpose display of the received V2I information on a high-precision 3D map



Ex.)Traffic signal color (green/yellow/red)



Confirmed that the **dilemma zone\*** can be avoided by V2I remaining seconds information



\* It is the timing which the vehicle cannot pass the stopping line and stop without sudden braking in yellow light.

## Social Implementation of Mobility and Logistics Services in Local Regions, etc.

### Objective

- **Gathering and deployment of the expertise of operation services, etc.** through accumulation of knowledge in FOTs and **amend the legal system, etc.** required for implementation and promote social implementation **to secure the means of mobility in underpopulated areas**

Since November 30,  
2019 at Michi-no-Eki  
“**Kamikoani**” (Akita  
Prefecture)



**Commencement of automated driving  
mobility services**

### Amendment of the legal system

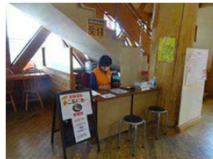
[Partial revision of the Road Act] (promulgated in May 2020)

Facilities that assist the operation of automated driving vehicles (e.g., magnetic markers) were regarded as accessories to roads.

# Social Implementation of Mobility and Logistics Services in Local Regions, etc.

## Measures to cope with Issues in operation

- ◇ Establishment of new routes based on local needs
- ◇ Cost reduction Management operation combined with “Michi-no-Eki” operation
- ◇ Method of maintaining and managing infrastructure (electromagnetic induction wires)



## Operation management systems

- ◇ Development and deployment of general-purpose operation & reservation management systems
- ◇ Cooperation with partners  
Cooperation with partners has been promoted by using the above tools and through communication with citizens.



Expand the projects to implement mobility services by FY2022 (at several locations) to help achieve the government's goal (100 locations in 2030)



# International Cooperation

## (1) Promotion of cooperation activities between Japan and Germany



“Human Factors”



“Impact Assessment”



“Safety Assurance”



“Cybersecurity”

## (2) Promotion of cooperation activities between Japan and EU



- i) Online meeting with the European Commission at working-level
- ii) Information exchange with respective projects in EU



**HADRIAN**

 **HEADSTART**

## (3) SIP-adus Workshop 2020

Total participants ; 1,030 (overseas participants ; 140)

In the plenary session, 28 speakers from overseas and 33 speakers from Japan



# SIP-adus Workshop 2021



**Registration is open!**

- **Plenary Sessions :**  
November 09-10, 2021 (Virtual conference)
- **Breakout workshops :**  
Schedule to be announced for each theme

For further information, please visit our website

**<https://en.sip-adus.go.jp/evt/workshop2021/>**



**Thank you**

**SIP-adus web site**  
<https://en.sip-adus.go.jp>