

# **Recent progress of dynamic map in Japan**

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# 0. Overview of SIP-adus

## SIP: Cross-ministerial Strategic Innovation Promotion Program

- ✓ Start from FY2013.
- ✓ The Council for Science, Technology and Innovation selects 11 projects.
- ✓ Cross-ministerial Initiatives.
- ✓ Promote focused, end-to-end research and development, from basic research to practical application and commercialization.
- ✓ Total budget for FY2016 was ¥50 billion (around 500 million dollars).



Innovative Combustion  
Technology



Energy Carriers



Infrastructure  
Maintenance,  
Renovation, and  
Management



Innovative  
Design/Manufacturing  
Technologies



Next-Generation  
Power Electronics



Next-Generation  
Technology  
for Ocean Resources  
Exploration



Enhancement of Societal  
Resiliency against  
Natural Disasters

Cyber-Security for  
Critical Infrastructures  
were added from  
FY2015



Structural Materials  
for Innovation (SMI)



Automated  
Driving System



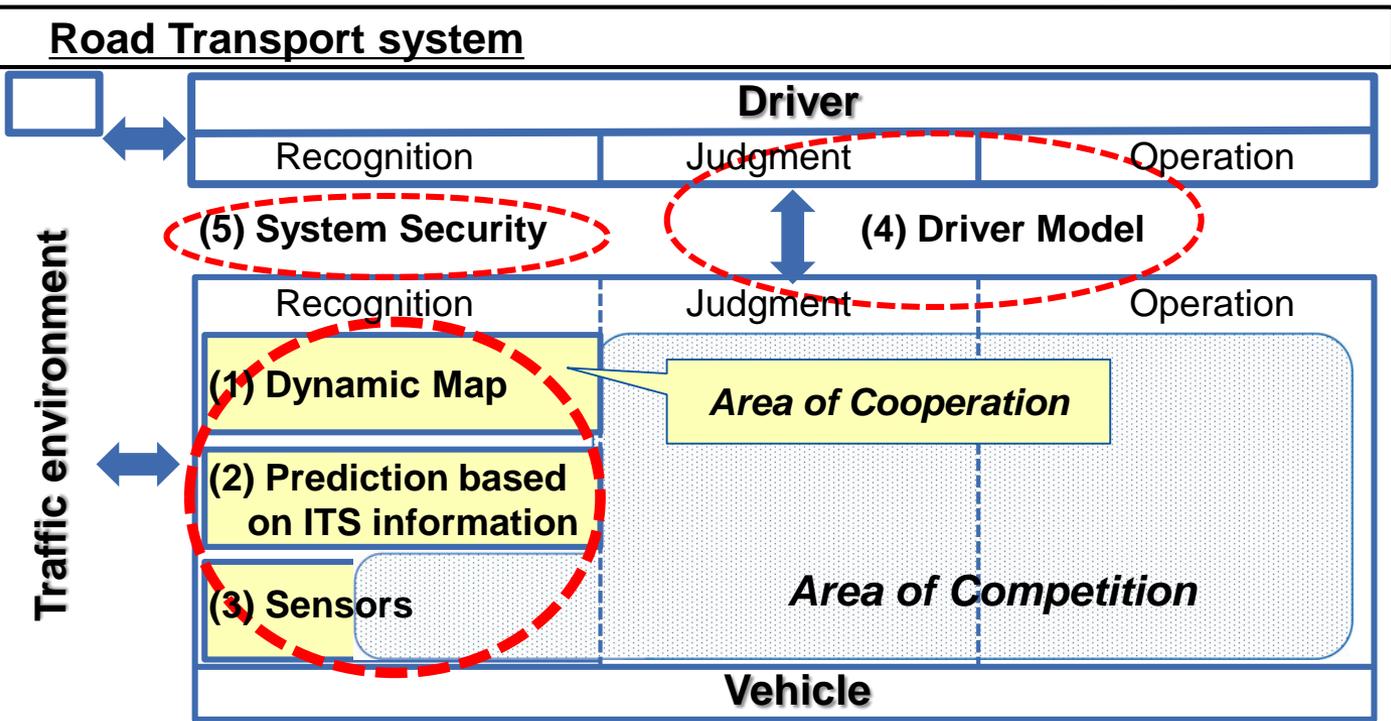
Technologies for Creating  
Next-Generation  
Agriculture, Forestry and  
Fisheries

adus:  
Automated  
Driving for  
Universal  
Services

¥2.7 billion (FY2016) (around 27 million dollars)

# 0. Overview of SIP-adus

## (I) Development and verification of automated driving system



## (III) International cooperation

- (1) Open research facility
- (2) Social acceptance
- (3) Technology transfer

- (1) Enhanced local traffic management
- (2) Next generation transport system

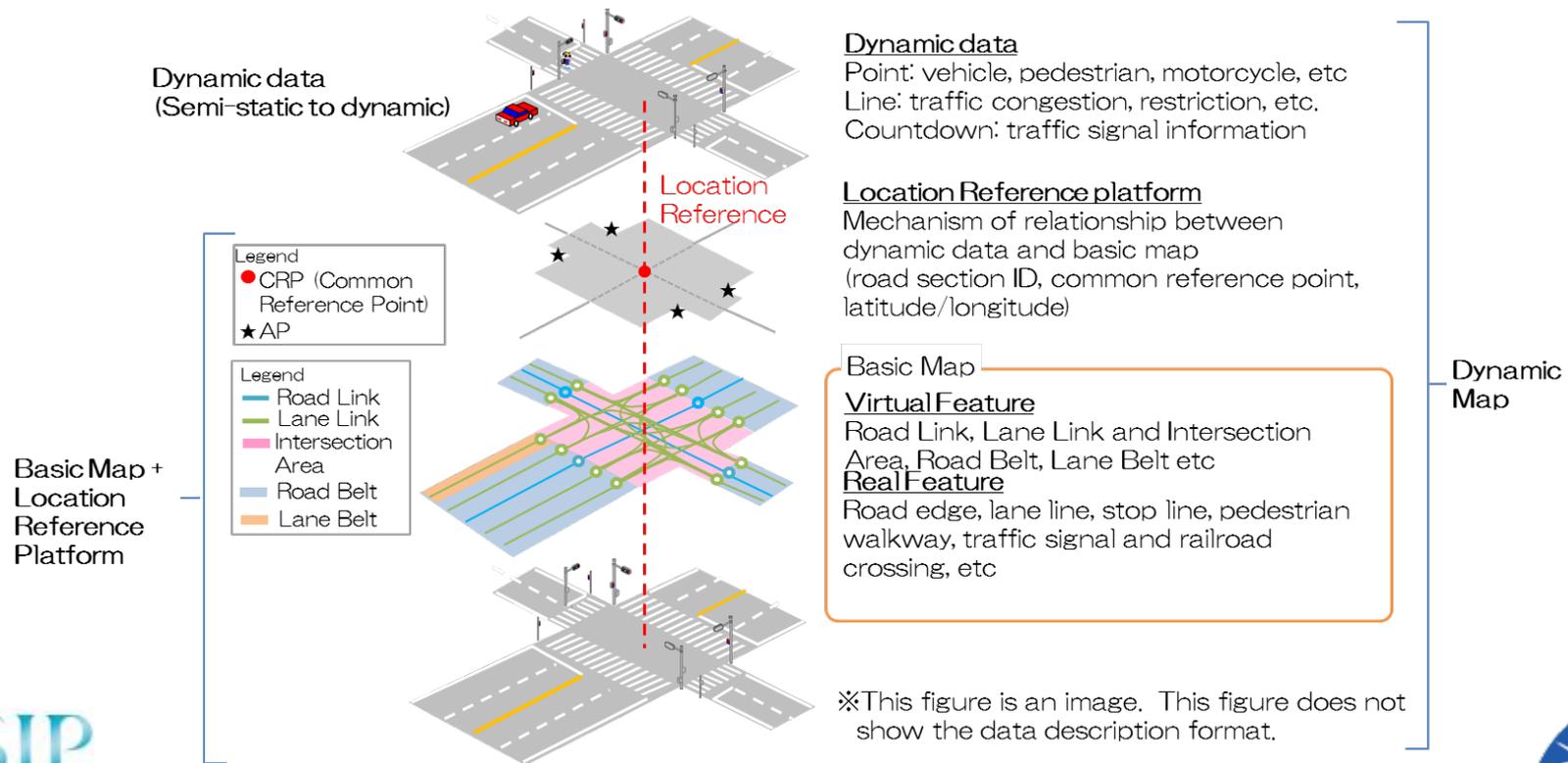
## (IV) Development for next generation urban transport

- (1) Traffic fatality reduction effect estimation method & national shared database
- (2) Macro and micro data analysis and simulation technology
- (3) Local traffic CO<sub>2</sub> emission visualization technology

## (II) Basic technologies to reduce traffic fatalities and congestion

# 0. Overview of SIP-adus

- ✓ Research results by SIP-adus  
<http://en.sip-adus.jp/> (results of FY2014-FY2016 are available)
- ✓ Specification on map features and attributes for ADS by JAMA  
[http://www.jama.or.jp/safe/automated\\_driving/pdf/recommended\\_spec.pdf](http://www.jama.or.jp/safe/automated_driving/pdf/recommended_spec.pdf)  
(Japanese) JAMA: Japan Automobile Manufacturers Association Inc.
- ✓ A company "Dynamic Map Platform Inc. (DMP)" had established in June 2017



# 1. FOT 2017-2018

- **SIP-adus is planning FOTs for 5 technological fields.**

- ✓ Dynamic map
- ✓ HMI
- ✓ Information Security
- ✓ Pedestrian Accidents Reduction
- ✓ Advanced Urban Transit

- **Call for Participants (first call) was completed.**

- ✓ Call for participants (First call) by each technological fields including Dynamic Map
- ✓ Sample Distribution of the map before the test would be available
- ✓ Entry (in English) was possible from following HP

[http://www.nedo.go.jp/english/sip\\_ai2017.html](http://www.nedo.go.jp/english/sip_ai2017.html)

(you can also access from <http://en.sip-adus.jp/>)

# 1. FOT 2017-2018

## ■ Overview of Dynamic Map FOT

### Expressway



### Ordinary roads



### Test course



Expressway: — and —

Total 300km length routes where begins at newly developed test course of Japan Automobile Research Institute (JARI) and includes part of Metropolitan expressway, TOMEI expressway, SHIN-TOMEI expressway, and JOBAN expressway.



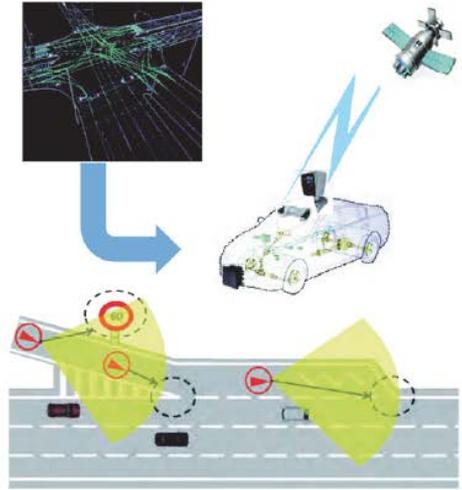
\*Test sites (routes and location) are tentative

# 1. FOT 2017-2018

## ■ Overview of Dynamic Map FOT

### Dynamic Map

- ❑ 3-D high resolution map data validation such as road geometry, environment and civil structures
- ❑ Verification of semi dynamic information such as traffic congestion and construction information
- ❑ Validation of collecting, generating, and distributing dynamic map information



## Outline of FOT

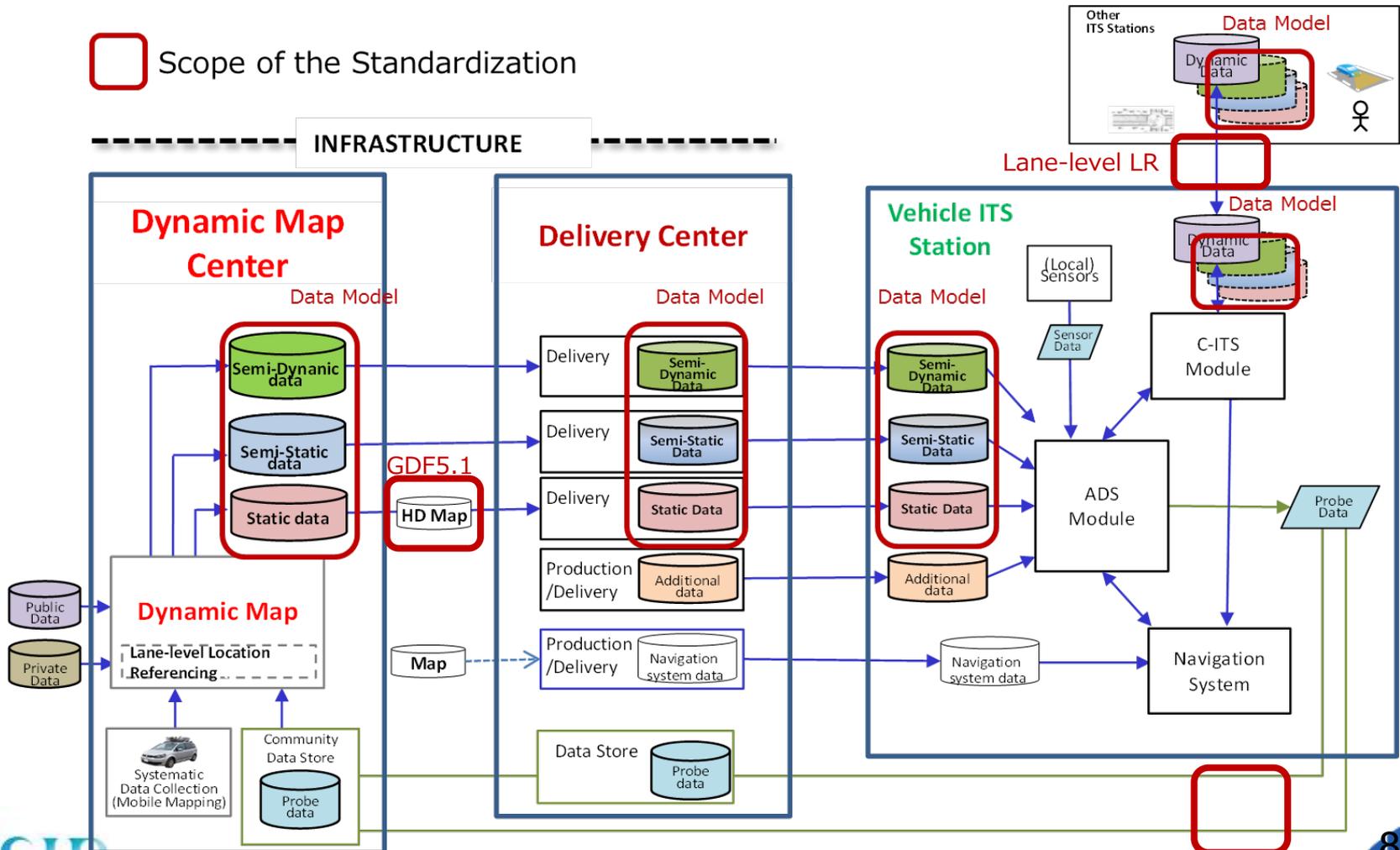
- **Mid. of November 2016 – May 2017**
  - FOT detailed planning / Coordination with relevant agencies
- **June 2017 –**
  - Participants recruitment / Site preparation
- **September 2017 –**
  - Commencement of FOT
- **March 2018**
  - Interim report
- **March 2019**
  - Final report

## Schedule

# 2. Standardization activities

- ✓ Promote standardization activities at ISO/TC204
- ✓ Discussion for the importance of industrial specifications

  Scope of the Standardization

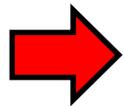


Scopes are ONLY a PERSONAL VIEW

Lane-level LR

### 3. Challenges we are facing (personal view)

- ✓ **Connection between static and dynamic (inc. semi.) data**
- ✓ **Map updates (before actual changes)**
- ✓ **Map definition for various roads including local streets**
- ✓ **Relationship between Dynamic Map and Navigation data**
- ✓ **Balance between Map and other key elements such as sensing devices, AI algorithm**

 Try to go forward by FOTs (real experiments) and discussions

# Ref. Workshop in Tokyo

## ● Workshop 2017 will be held on **14<sup>th</sup> to 16<sup>th</sup> Nov. in Tokyo**

- ✓ Just after the 8<sup>th</sup> OADF meeting (13<sup>th</sup> Nov.) in Tokyo
- ✓ (almost of) all presentations will be done by or translated in English
- ✓ Dynamic Map will be one of the main topic
- ✓ Last day of the workshop will be only available for invited person  
(around 20 people for each topic, mainly for discussion)
- ✓ Further details will be released at the following website

<http://en.sip-adus.jp/>



**END**

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