

# SIP-adus Workshop 2019

## Progress based on Charter for Improvement of Legal System and Environment for Automated Driving Systems

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Mr. Hiroshi Kakidachi

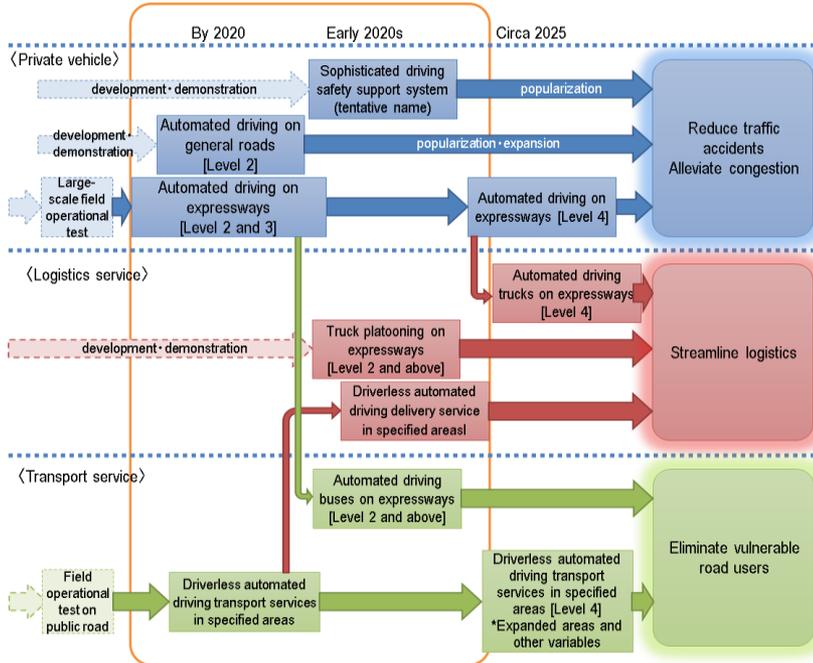
Deputy Director, National Strategy Office of ICT  
Cabinet Secretariat, Japanese Government



# Scope/Study items

- The Public-Private ITS Initiative/Roadmaps, formulated in 2014, have been updated by IT Strategic Headquarters each year based on the latest changes of circumstances affecting ITS and automated driving systems.
- The “Charter for Improvement of Legal System and Environment for Automated Driving Systems” was formulated in April 2018 to review the legal system necessary for realizing automated driving.

## <Public-Private ITS Initiative/Roadmaps 2019>



## <Main study items of Charter for Improvement of Legal System

### and Environment for Automated Driving Systems >

- Securing the safety of vehicles
- Traffic rules
- Securing safety on an integrated basis (setting of driving environments conditions)
- Liability for the accidents

# Charter for Improvement of Legal System and Environment for Automated Driving Systems: Overview

## ■ Basic thoughts on securing the safety of vehicles

- i. Safety-related requirements etc. established as guidelines around summer 2018
- ii. Formulation of international standards related to vehicle safety, with Japan leading discussions
- iii. We will investigate the ideal approach to be taken in formulating measures to ensure the safety of vehicles in current use;

## ■ Traffic rules

- iv. Study of measures required to ensure that automated driving systems comply with norms set forth in road traffic laws and regulations. Domestic legal and regulatory systems developed swiftly based on matters such as the progress of international discussions (Geneva Convention), in which Japan continued to demonstrate leadership in cooperation with related countries, and technological developments
- v. With respect to unmanned autonomous driving transport services, the current framework for field operational testing used for remote automated driving systems will also be rendered usable for commercialization for the time being.

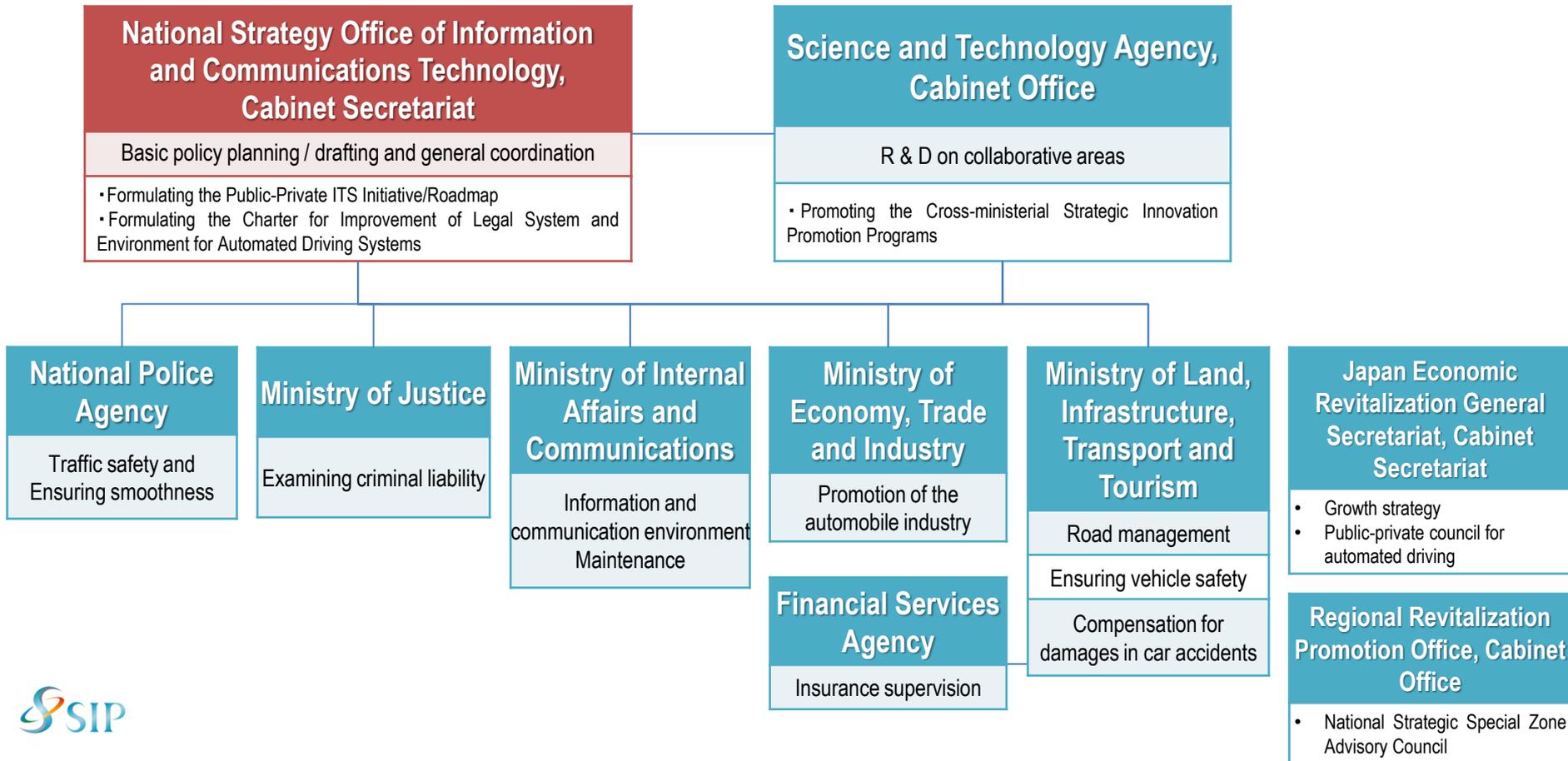
## ■ Ensuring safety on an integrated basis (through the setting of conditions applicable to driving environments)

- vi. Study and formulation of driving environmental conditions for ensuring the safety of automated driving (e.g., low speed, limited routes, daytime only)

## ■ Liability

- vii. Realizing swift aid to victims in the event of an accident
- viii. Clarification of the roles and obligations expected of related parties and considering criminal liability
- ix. Considering requirement of drive recording equipment

# Roles of ministries related to automated driving



# Progress based on Charter for Improvement of Legal System and Environment for Automated Driving Systems

## ■ Considerable progress on efforts to develop laws based on the outline of institution development related to automated driving moving toward 2020

- Partial revision to the Road Transport Vehicle Act passed in ordinary session of the Diet (May 17, 2019)
- Partial revision to the Road Traffic Act passed in ordinary session of the Diet (May 28, 2019)

### [Main initiative items based on the institution-development outline]

#### ■ Basic thoughts on securing the safety of vehicles

- Safety-related requirements etc. established as guidelines around summer 2018
- Formulation of international standards related to vehicle safety, with Japan leading discussions
- We will investigate the ideal approach to be taken in formulating measures to ensure the safety of vehicles in current use;

#### ■ Traffic rules

- Study of measures required to ensure that automated driving systems comply with norms set forth in road traffic laws and regulations. Domestic legal and regulatory systems developed swiftly based on matters such as the progress of international discussions (Geneva Convention), in which Japan continued to demonstrate leadership in cooperation with related countries, and technological developments
- With respect to driverless automated driving transport services, the current framework for field operational testing used for remote automated driving systems will also be rendered usable for commercialization for the time being.

#### ■ Ensuring safety on an integrated basis (through the setting of conditions applicable to driving environments)

- Study and formulation of driving environmental conditions for ensuring the safety of automated driving (e.g., low speed, limited routes, daytime only)

#### ■ Liability

- Realizing swift aid to victims in the event of an accident
- Clarification of the roles and obligations expected of related parties and considering criminal liability
- Considering requirement of drive recording equipment

### [Major Progress]

Regarding (i), **safety-technology guidelines for automated-driving vehicles were formulated and announced** in September 2018

Regarding (ii), (iii), (vi), and (ix), **Partial revision to the Road Transport Vehicle Act** to ensure safety uniformly from the design and manufacturing processes through the use processes of automated driving vehicles and other vehicles **passed in ordinary session of the Diet**.

Regarding (iv) and (ix), **Partial revision to the Road Traffic Act** to develop provisions related to driver obligations in response to practical implementation of automated driving technologies **passed in ordinary session of the Diet**.

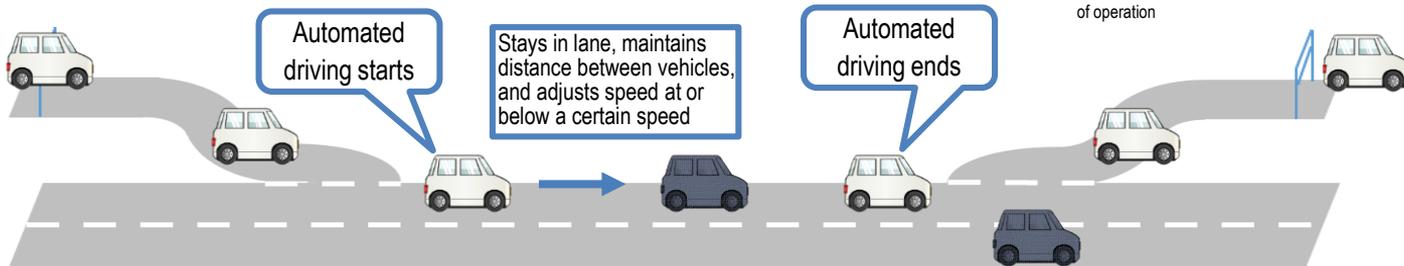
Regarding (v), it is confirmed that the current FOT framework can be used to commercialize driverless automated driving transport service.

With regard to (vii), **the existing concept** that a person that puts an automobile into operational use is liable to compensate for damage arising from the operation of the automobile if this results in the death or bodily injury of another person **in Act on Securing Compensation for Automobile Accidents has been maintained for automated driving vehicle**.

# Vision of automated driving for realization in 2020

## ■ Automated driving on expressways (level 3)<sup>\*1, \*2</sup>

- Automated driving is able to start on a main roadway
- Keeping lane, maintaining distance between vehicles, and adjusting speed, at or below certain speeds
- Automated driving ends on a main roadway



<sup>\*1</sup> This is a tentative vision reflecting current status, capable of being realized within a broad range through technological development efforts by automakers and others.

<sup>\*2</sup> Automated driving refers to driving in which the driver uses automated driving equipment.  
Automated driving equipment: Equipment capable of the necessary recognition, prediction, judgment, and control, using sensors and computers, under certain driving environmental conditions, and equipped with equipment for recording the state of operation

## ■ Automated-driving transportation service utilizing the Field Operational Test framework

- Relatively simple limited domain (ODD)<sup>\*3</sup>
- Remote monitoring and operation of one or multiple units by one person
- When the ODD is exceeded<sup>\*4</sup>, operation of the vehicle stops swiftly and the remote monitoring, controlling party, service provider inside the vehicle, or another party implements necessary measures.



Remote monitoring/operation



<sup>\*3</sup> Sample ODD configuration:

- Areas/roads with little contact with other transport participants, such as on abandoned rail lines or in remote locales
- Operation on specific routes at low speed, with passengers boarding and getting off at specific locations

<sup>\*4</sup> Examples of cases in which ODD is exceeded:

- Cases of illegal parking, in which it is impossible to pass without crossing a lane indicator
- When lanes are not visible due to snow



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**Thank you**