

SIP-adus Workshop 2019

NPA Initiatives Regarding Automated Driving

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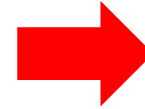
Traffic accidents in Japan (1)

Objectives Set for Road Traffic Safety

<The Ninth Fundamental Traffic Safety Program>

By 2015

- Reduce the number of fatalities within 24 hours to **3,000 or fewer**



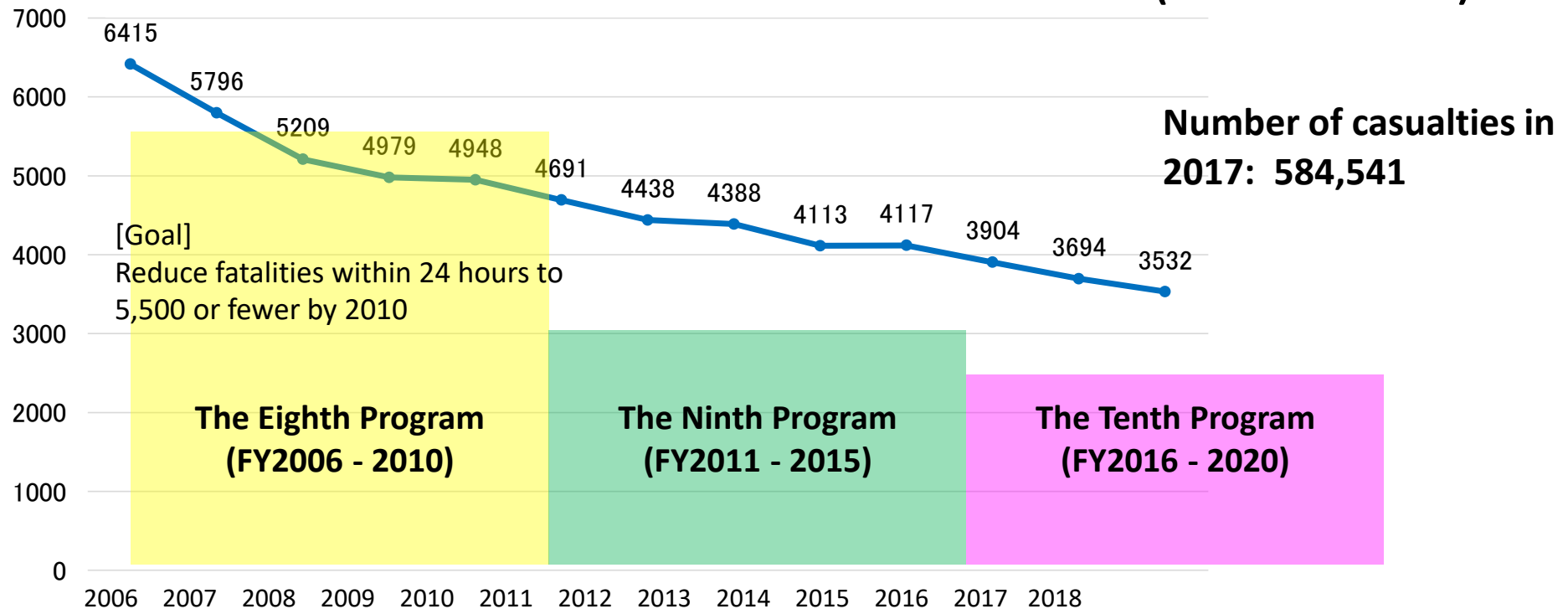
<The Tenth Program>

By 2020

- Reduce the number of fatalities within 24 hours to **2,500 or fewer**

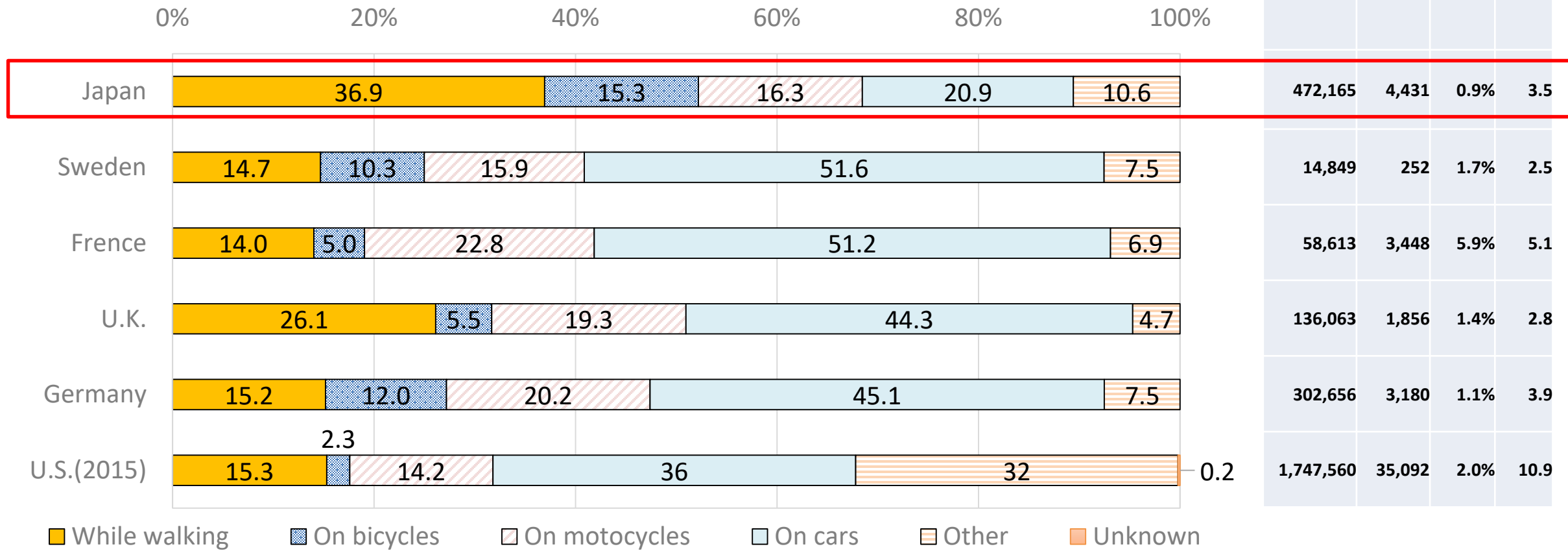
(No. of persons)

Transition of the number of traffic accident deaths (within 24 hours)



Traffic accidents in Japan (2)

Traffic fatality rates by situation (in 2017)



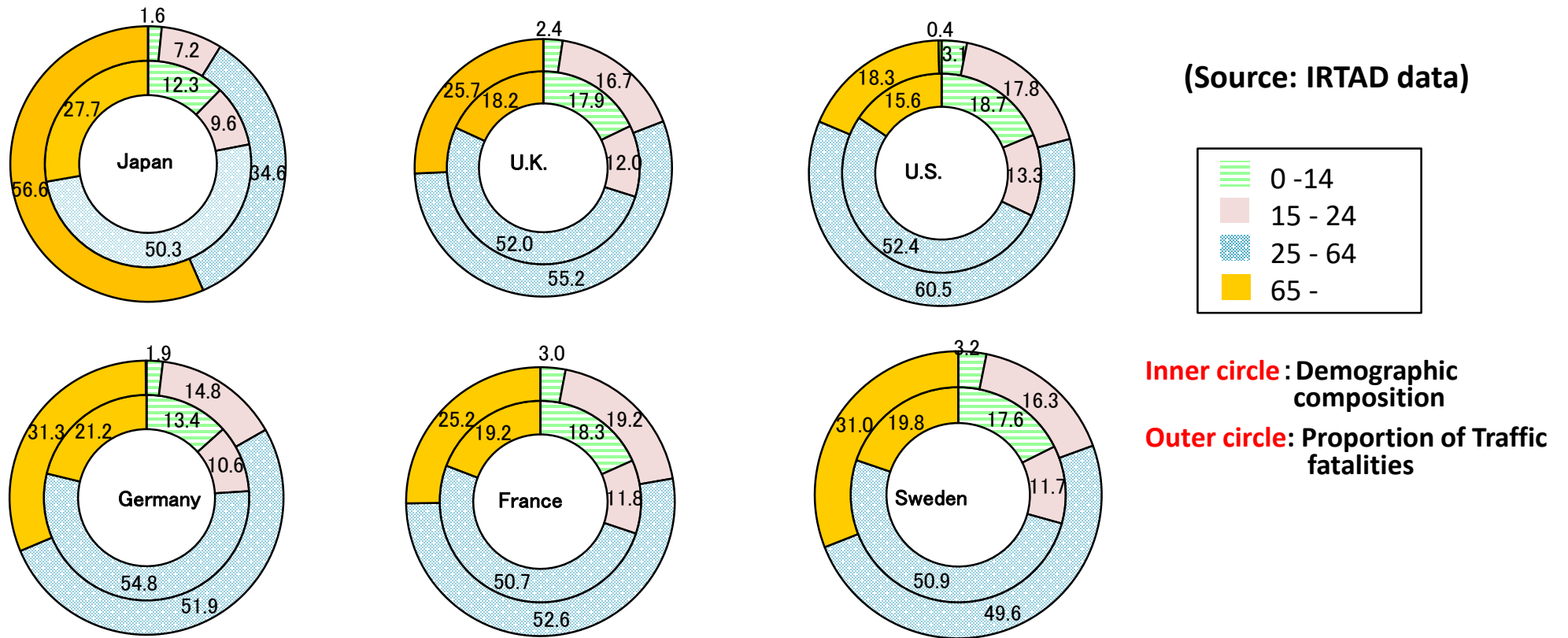
Number of fatal accidents	Number of fatalities	Proportion fatalities /100,000 people	Number of fatalities /100,000 people
472,165	4,431	0.9%	3.5
14,849	252	1.7%	2.5
58,613	3,448	5.9%	5.1
136,063	1,856	1.4%	2.8
302,656	3,180	1.1%	3.9
1,747,560	35,092	2.0%	10.9

■ While walking
 ■ On bicycles
 ■ On motorcycles
 ■ On cars
 ■ Other
 ■ Unknown

※ Fatalities are the number of deaths within 30 days of the accident

(Source: IRTAD data)

Traffic fatality rates by age group and demographic composition (2017)



※ Fatalities are the number of deaths within 30 days of the accident

In Japanese Government

NPA

(National Police Agency)

Road Traffic Act:

providing traffic regulations

MLIT

(Ministry of Land, Infrastructure, Transport and Tourism)

Road Transport Vehicle Act:

providing safety standards of vehicles

NPA's Specific efforts

- Review of road traffic rules
- Preparation of the environments for public road demonstration
- Participation in international discussion
- Promotion of R&D and building of infrastructure

Amendment to the Road Traffic Act

Definition of “driving”

“Driving” defined in the Road Traffic Act includes the case of using automatic operation devices (AOD).



Driver responsibilities when using AOD

- ◆ The driver of a motor vehicle equipped with AOD must not drive the vehicle using such devices when use conditions of the AOD are not satisfied.
- ◆ Prohibition against holding and using a wireless telephone and focusing attention on the screen of a device shall not apply to the driver using AOD when any of the following items are applicable.
 - (i) The vehicle does not qualify as an improperly maintained vehicle.
 - (ii) The use conditions of the AOD are satisfied.
 - (iii) The driver is in a state of readiness to take over the operation of the vehicle when (i) or (ii) becomes inapplicable.



Recording by Operational State Recording Devices (OSRD)

(※) OSRD: Devices for recording information necessary to confirm operational state of AOD

- ◆ The user of a motor vehicle equipped with AOD must record necessary information by OSRD and keep the recorded data.
- ◆ When a vehicle is being driven that could be found to constitute an improperly maintained vehicle, a police officer may ask the driver of the vehicle to present data recorded by OSRD.

Amendment to the Road Traffic Act

Drivers Responsibilities

【Drivers driving a motor vehicle not employing AOD】

【 Drivers driving a monitor vehicle employing AOD】

A Responsibilities connected to driving operation

- Safe Driving Obligation
- Obligation to
 - obey traffic lights and other signals
 - obey the speed limit
 - maintain distance between vehicles etc.

B Responsibilities not connected to driving operation

B-1) Responsibilities to ensure stable implementation of A

- Prohibition against holding and using a wireless telephone such as a cellular telephone
- Prohibition against focusing attention on the screen of an image display device such as a car navigation system

Prohibition against drunk driving etc.

B-2) Other responsibilities

- Obligation to
 - aid injured persons in case of a traffic accident
 - carry and present a driver's license etc.

The system automatically implements Responsibilities A within ODD.

The driver can implement Responsibilities A by employing the system appropriately. (The driver remains under Responsibilities A.)

Withdrawal of both of the prohibition becomes possible because the driver no longer needs to pay attention constantly and to drive manually when employing the system appropriately.

The prohibition must remain because the driver can always be required to drive manually.

The responsibilities must remain because the system cannot implement them.

※ It is necessary to limit the use of the system within ODD.

※ Driver employing the system within ODD must at least pay enough attention to recognize “warning” and remain sufficiently alert to stop using the system and takeover driving operation.

Guidelines for public road demonstration experiments of automated driving systems

■ May 2016

The guidelines clarified the details of the experiments that can be carried out without any special permission or reporting, including instructions stating that the driver operates the vehicle in the event of an emergency as necessary.

<Points to be noted>

- **The vehicle complies with the requirements of the Safety Regulations for Road Vehicles**
- **The driver is seated in the driver's seat, monitors the surrounding traffic at all times, and operates the vehicle in the event of an emergency in order to ensure safety.**



Public road demonstration experiments in various areas of the country

Criteria for the permission for public road testing of automated driving

■ September 2019

- ✓ For the permission by the police, essential for the test of automated driving with
 - remote control technology
 - unconventional vehicle with special controlling device (different from steering wheel and accelerator / brake pedal)



Public road tests of automated driving have been implemented

- in 5 prefectures (with remote control technology)
- in 4 prefectures (with unconventional vehicle)

Examples of driving support systems

- Adaptive Cruise Control (ACC)
 - Lane Keeping Assist System (LKAS)
 - Parking Assist System
- ✘ In response to **the occurrence of traffic accidents caused by too much reliance on technologies**, the National Police Agency and the Ministry of Land, Infrastructure, Transport and Tourism issued **an alert to automobile users and dealers**.

Awareness was raised that the driving support systems currently in use assume that the driver is responsible for safe driving and are not AD systems in which the car autonomously performs safe driving operation on behalf of the driver.



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2019**

Thank you