Traffic Safety and Policy in Japan

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Contents

Background

Accident Analysis and Countermeasure

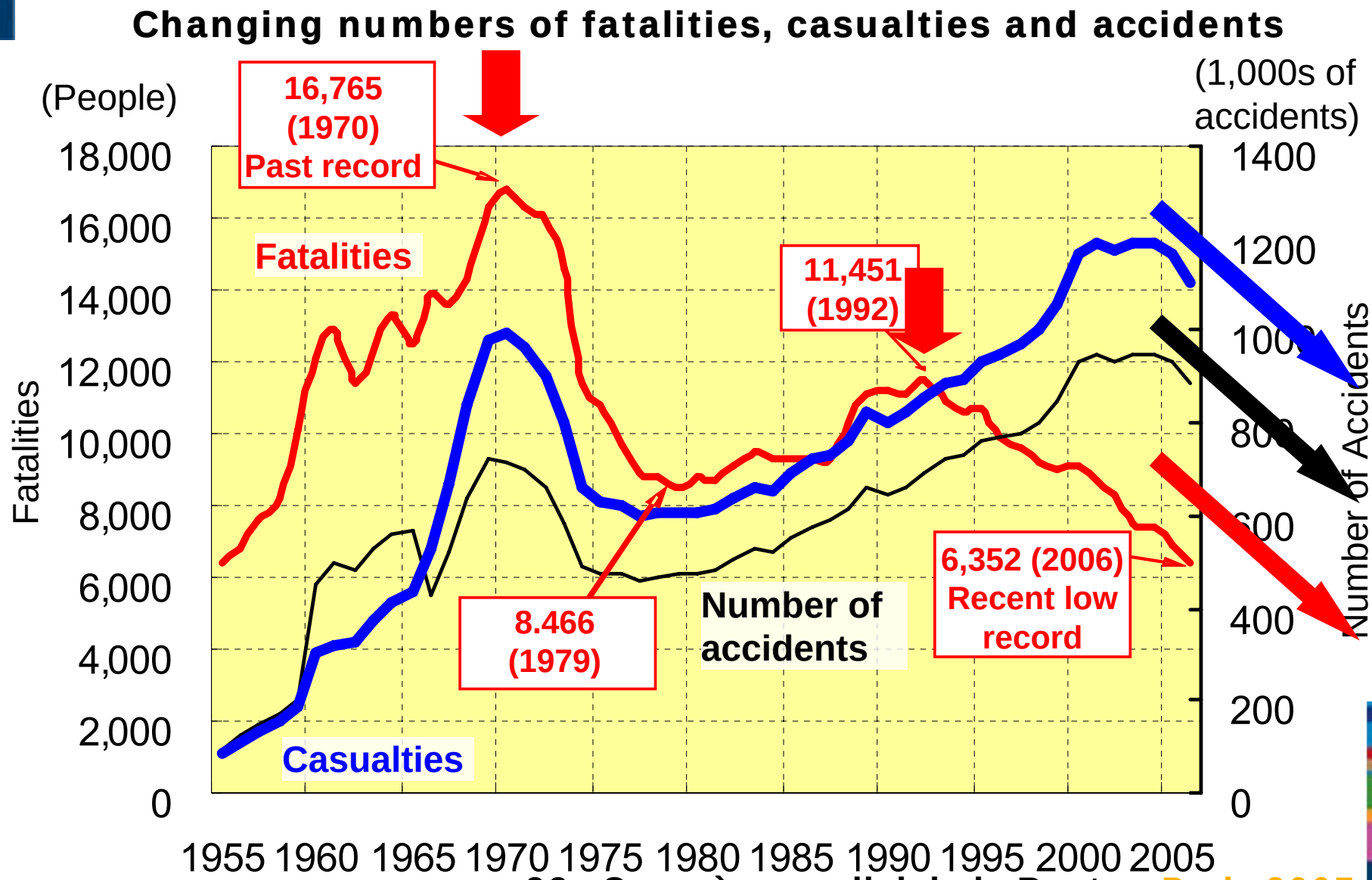
Traffic Calming

Bicycle Policy

Smartway (ITS)

Background

Present state of accident in Japan



Road Safety Policy

- **The target of Basic Traffic Safety Plan (2006-2010)**

  - **Number of fatalities**
    less than 5,500 by 2010 (6,352(2006))

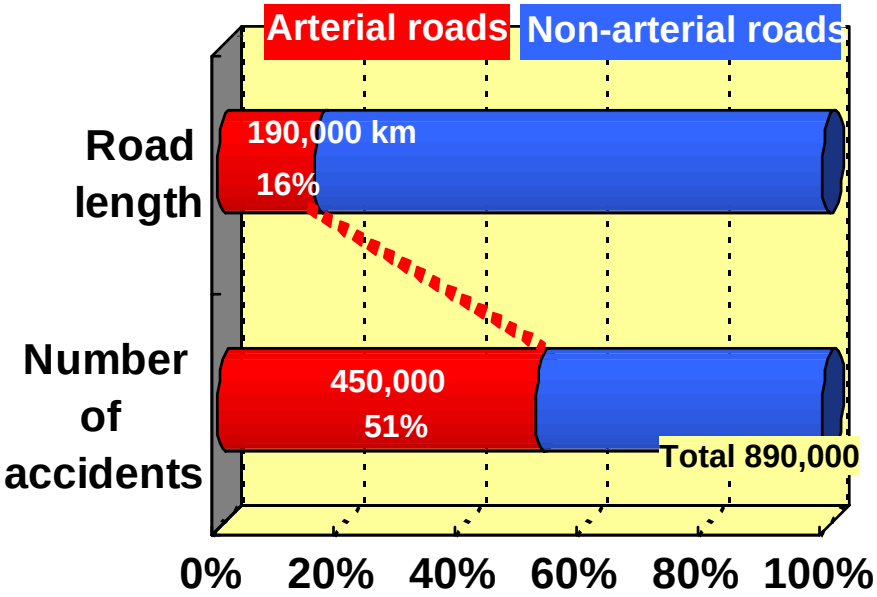
  - **Number of casualties**
    less than 1,000,000 by 2010 (1,104,551(2006))

Accident Analysis and Countermeasure

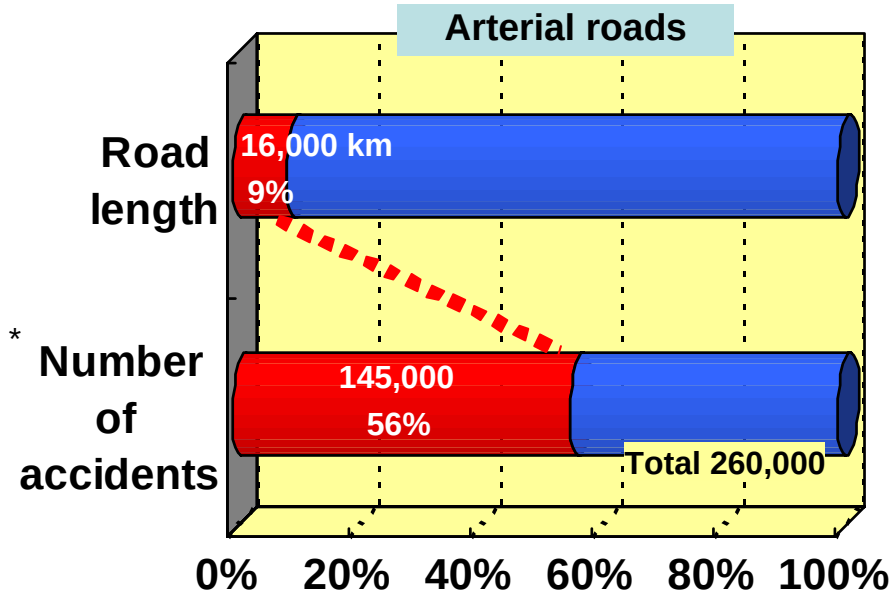
Present state of accident in Japan

Concentration of Road Accident Locations

- More than half of accidents occur on arterial roads.
- 56% of all accidents on arterial roads are concentrated on 9% of all the length.



(Source: Traffic statistics in 2006)

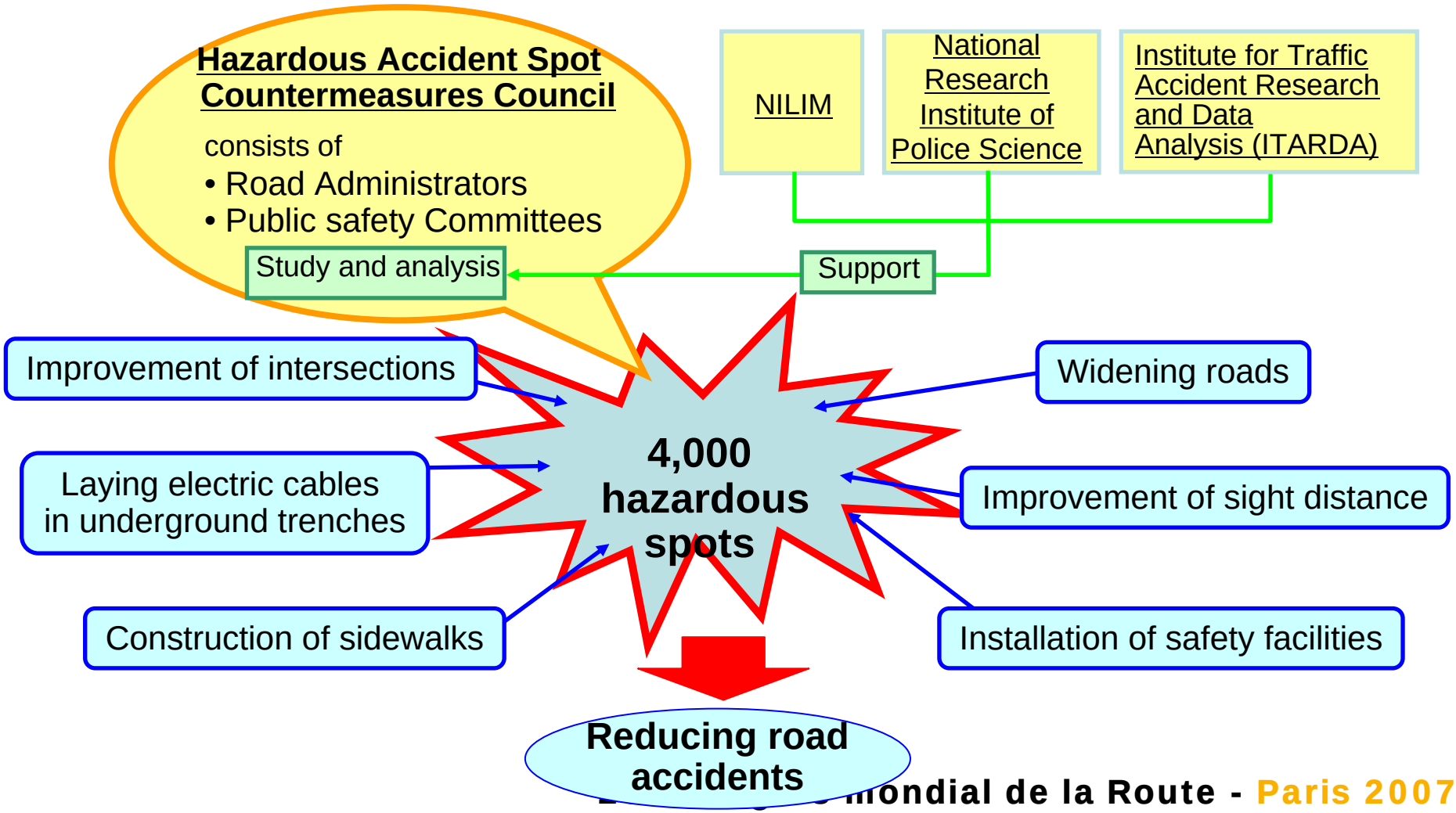


(Source: Integrated data base of traffic accidents)

*Annual Average 2001~2004

Countermeasures of Hazardous Spots

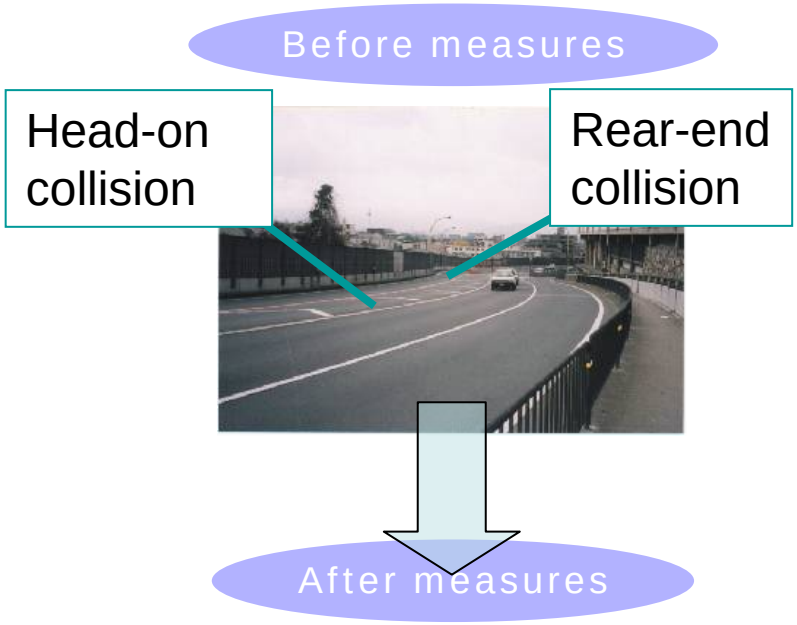
Hazardous Spot Project(2003-)



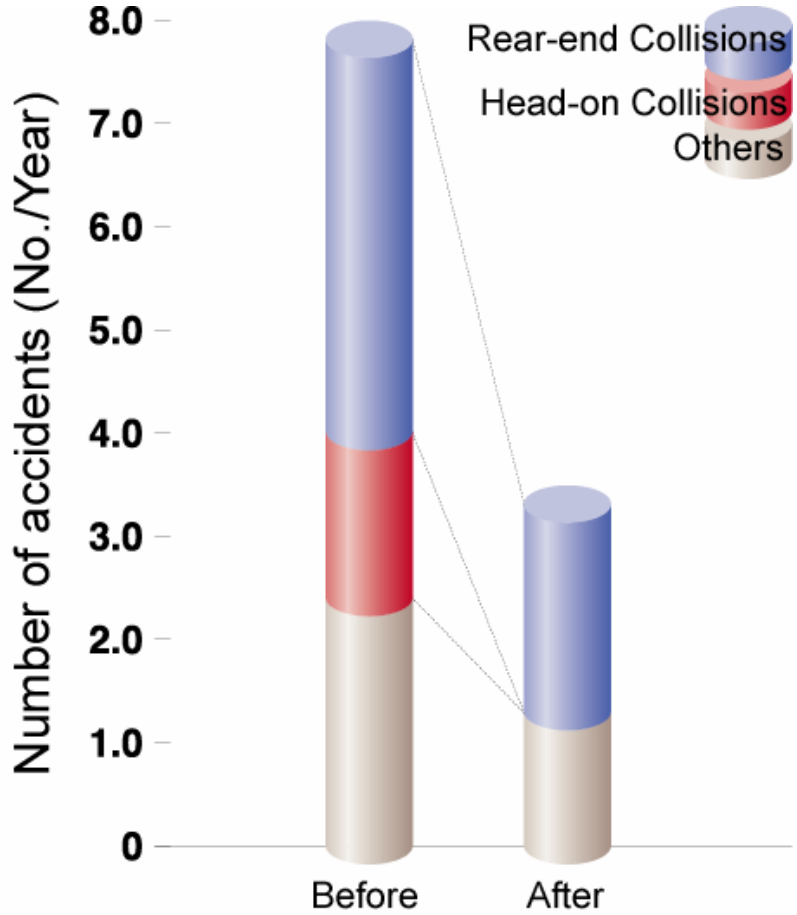
Example of evaluation of measures' effectiveness

Example at Seikanji, Kyoto city

- Accident and measures



- Effects of measures taken



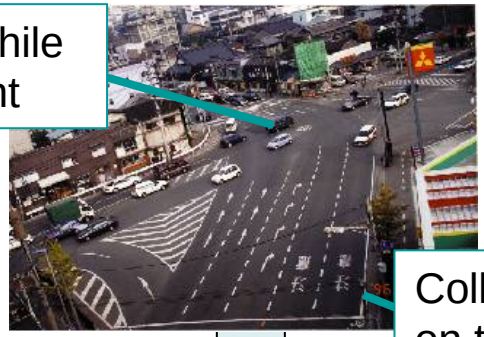
Example of evaluation of measures' effectiveness

Example at an intersection in Mukae-machi, Kumamoto city

- Accident and measures

Before measures

Collision while turning right

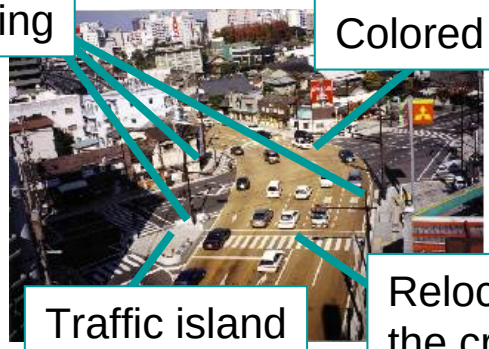


Collision on the crossway

After measures

Road lighting

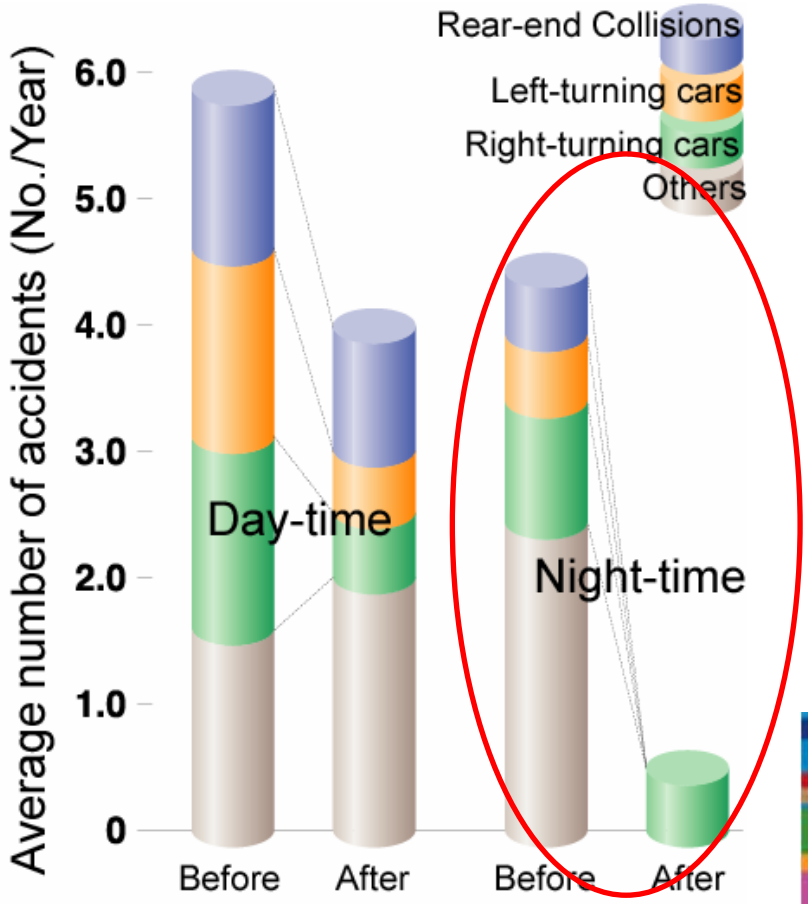
Colored pavement



Traffic island

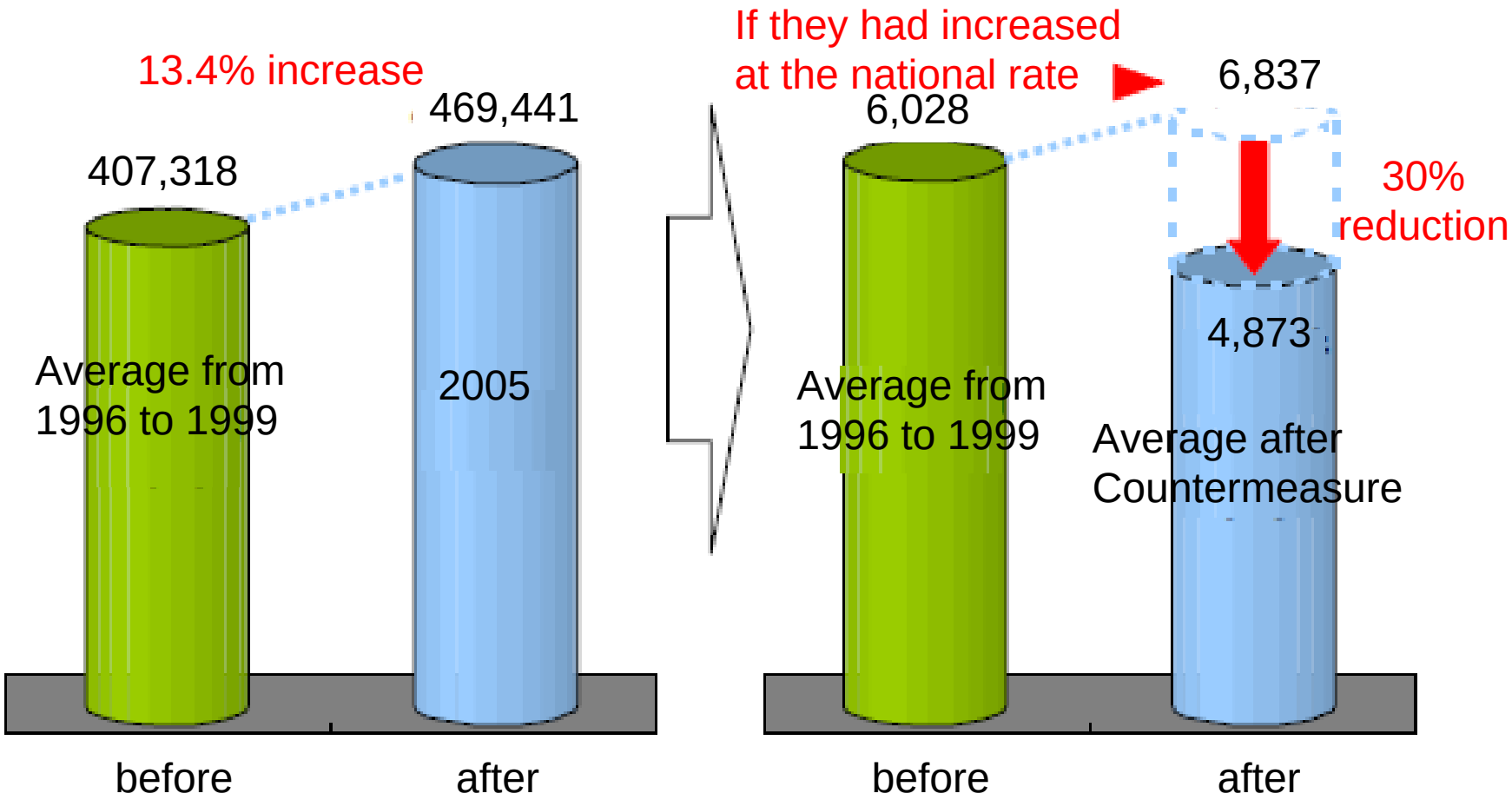
Relocation of the crosswalk

- Effects of measures taken



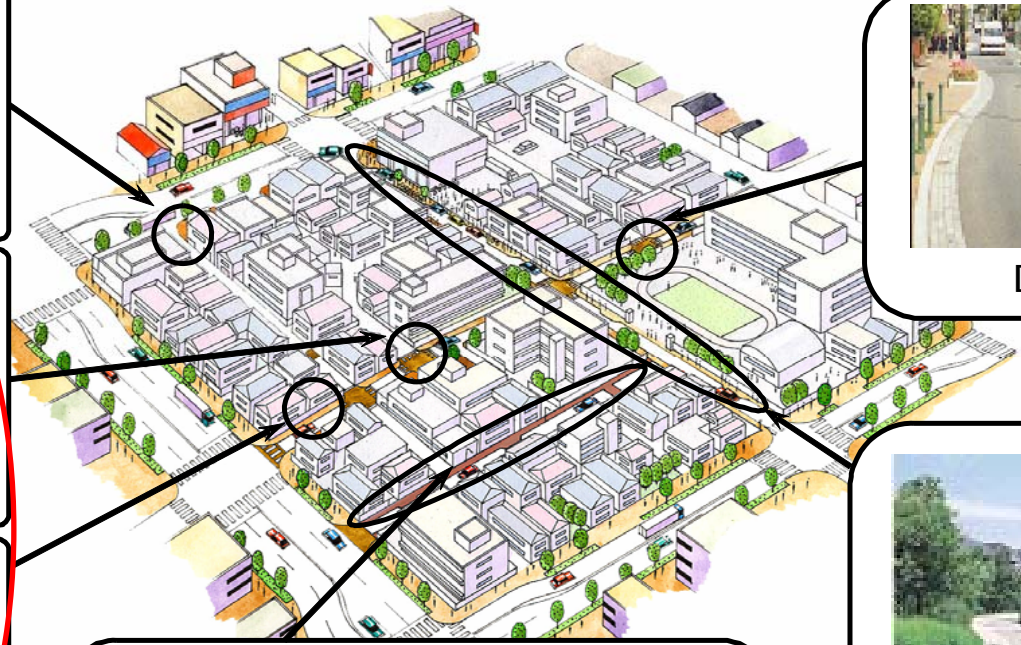
Effect of the Hazardous Spot Project

30% reduction in road accidents



Traffic Calming

Traffic calming zone for daily life



[Speed limit]
Signs installed at zone exits/entrances

[Humps]
Installed to form bumps on road paving

[Cranks]
Forms a zigzag lane on streets

[Rest areas]

[Improving scenery by removing power poles and planting vegetation]

[Removing barriers from pedestrian space]

- Improvement of level differences, slopes, and gradients of sidewalks
- Installation of sidewalk surface guide blocks for visually impaired pedestrians
- Provision of pervious pavement and water retaining pavement

Target and System of Traffic Calming

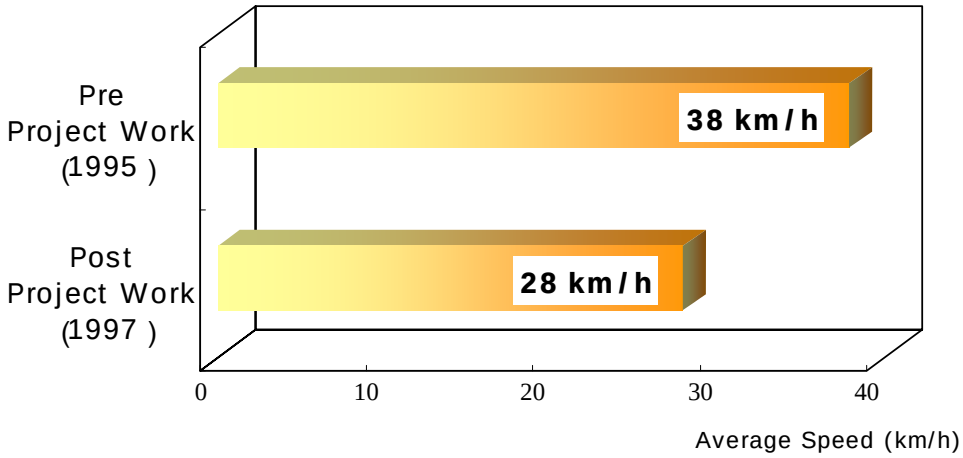
➢Target of the Projects:
•20% reduction of accidents causing death and injury.
•30% reduction of accidents causing death or injury of pedestrians and cyclists.

Zone boundary road measures	**Smoothing traffic on zone boundary roads and restraining through traffic in the areas**	**R.A.**	**Improvement of intersections**
		P.S.C.	**Improvement of traffic light pattern**
Zoning measures	**Creating zones with priority on the movement of pedestrians and cyclists**	**R.A.**	**Road Structures for Speed Reduction**
		P.S.C.	**Posted Speed limit in the zones**
Route measures	**Creating a network of pedestrian spaces where people can move without fear**	**R.A.**	**Improvement of pedestrian space, removing barriers**

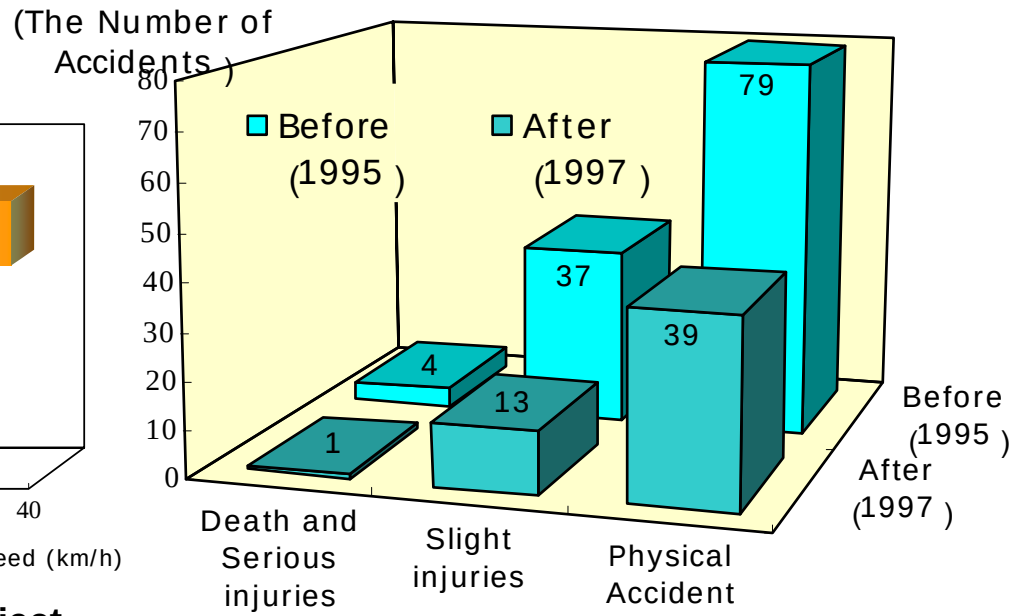
R.A. : Road Administrator P.S.C. : Public Safety Committee

Example of Effect of Traffic Calming

<Example of the effects of zoning measures>



Change in driving speed after the project

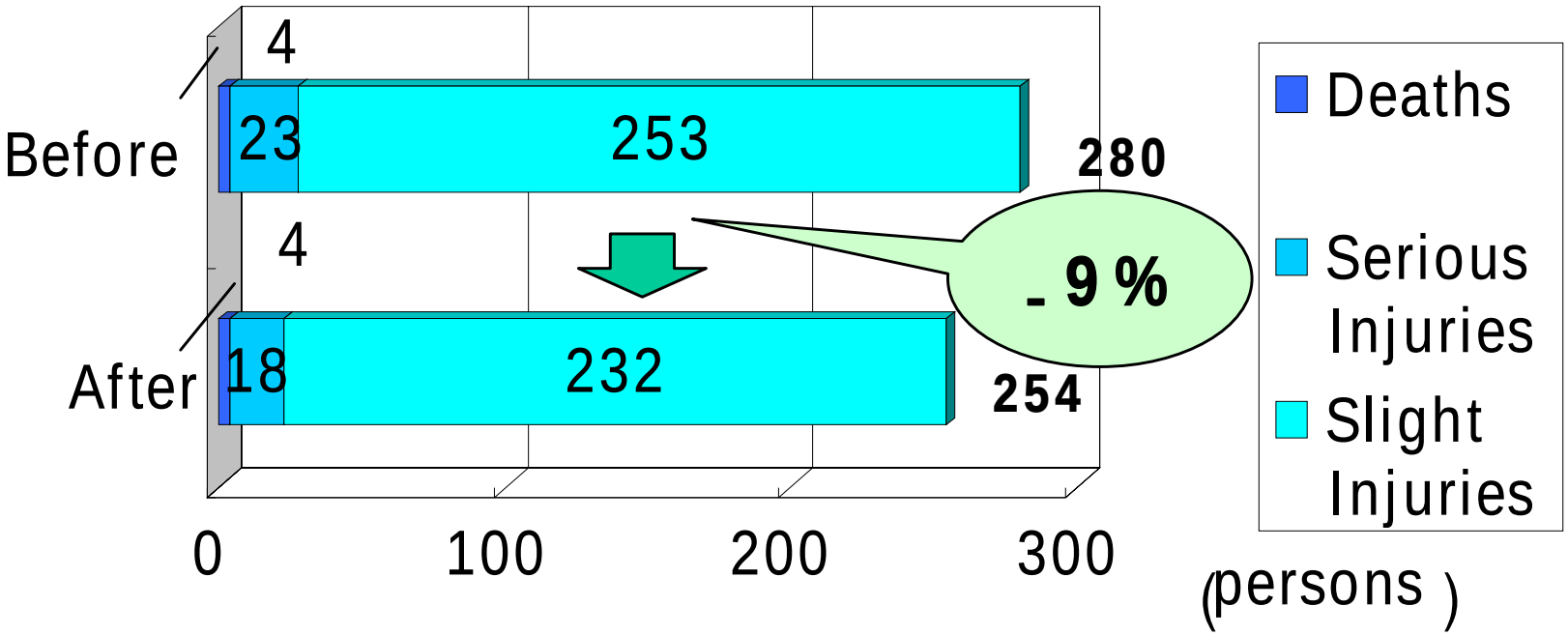


Change in the number of accidents in the zone

[Source: Ministry of Land, Infrastructure and Transport]

Example of Effect of Traffic Calming (2)

<Reduction in traffic accidents achieved by zoning measures>

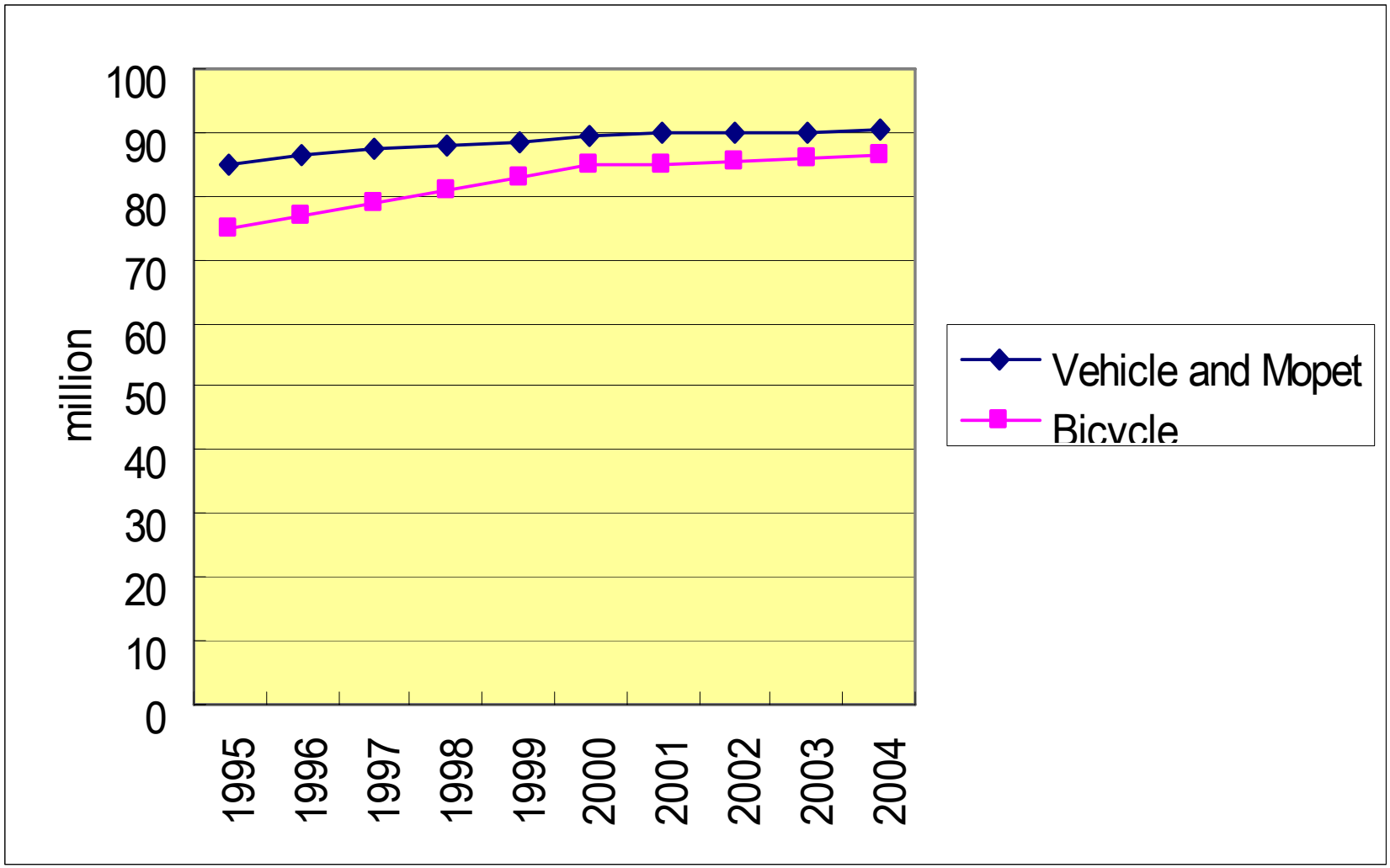


[Source: Ministry of Land, Infrastructure and Transport]

Bicycle Policy

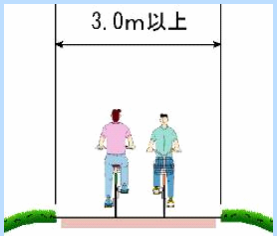
Present State of bicycle environment

Bicycle and Vehicle Number



State of Cycling Space

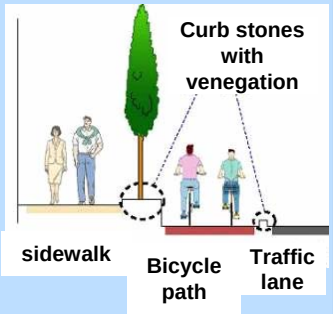
Bicycle-only lane



Bicycle-only lane

475km

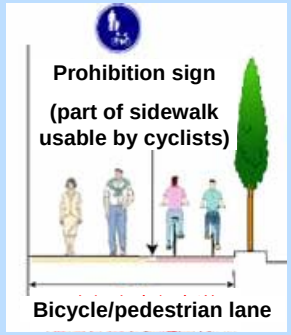
Bicycle path



1,273km

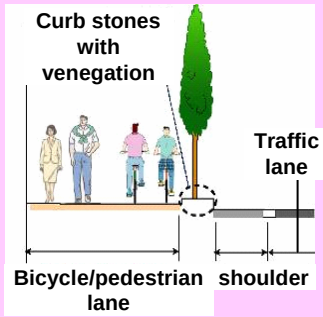
Bicycle/pedestrian lane

Separated by white lines/colored paving



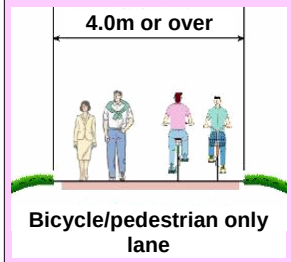
782km

(Non separated)



71,337km

Bicycle/pedestrian only lane



4,771km※3

Sidewalk Without sidewalk

Ensures bicycle only space
2,530km ※1

Shared by Cyclists and pedestrians
76,108km ※2

Travel on traffic lanes and shoulders
About 1 million km

※Length as of April 1,2006

※1 + ※2 = 78,638km
※1 + ※3 = 7,301km

Source: Ministry of Land, Infrastructure and Transport documents

Promoting Measures to Control Bicycle Use

Present

- Diverse users cycle for a variety of purposes
- Not enough bicycle-only space is provided
- Rising accidents involving bicycles
- Uncontrolled bicycle traffic (free use of sidewalks)

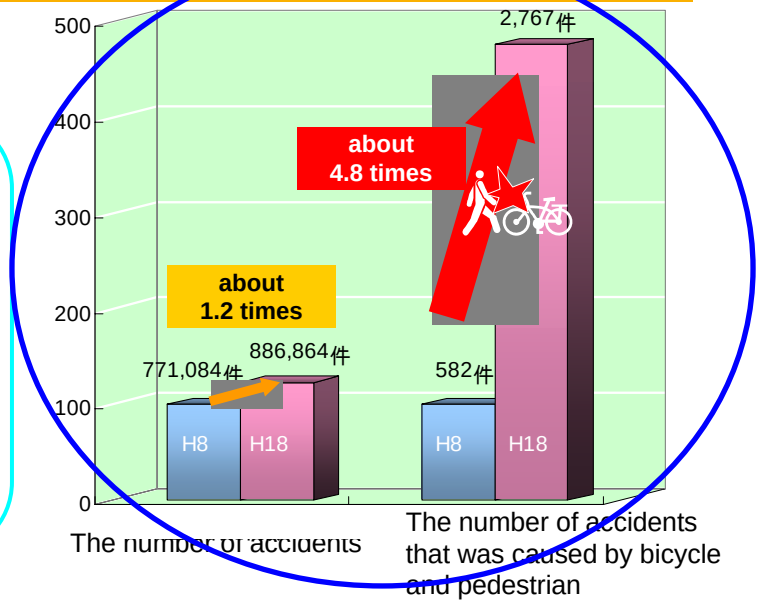


Fig. Rising accidents in past 10 years

Measures

- Force cyclists to comply fully with cycling rules.

- Improvement of cycling environment
  - ■Taking emergency measures
  - ■Establishing promotion system
  - ■ Promoting systematic improvements

Road Traffic Law Revision (June 2007)

- **Stimulating street activities by revising contents of activities of district traffic safety promotion committee members**
- While maintaining principal of traffic lane use, clarifying conditions under which a standard bicycle can be used on a sidewalk.
- Introduction of law requiring wearing of cycling helmets at all times by children riding while cycling
- Stipulating that cyclists must follow instructions of police officers to ensure the safety of pedestrians.

Taking Emergency Measures

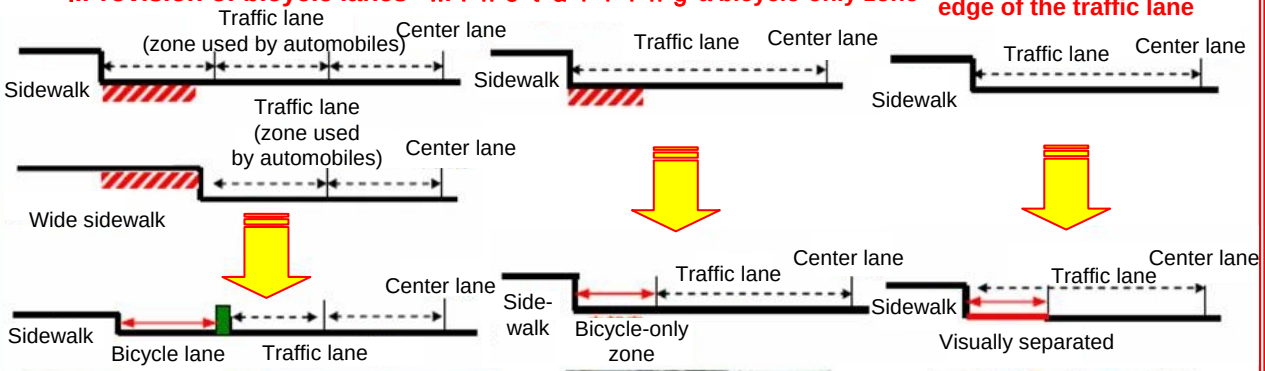
Road managers and police cooperatively selected locations requiring emergency measures in 2007

Dangerous by cycling on a traffic lane

Interference occurrence between cyclists and pedestrians on sidewalks

Examples of measures for traffic lanes

I.Provision of bicycle lanes **II. Installing a bicycle-only zone** **III.Paving colored on the left edge of the traffic lane**



Using traffic lane

Using wide sidewalk

Case where it is difficult to install a bicycle lane/bicycle only zone

Bicycle pass at the left edge of traffic lane

4 . Ensuring space by lowering traffic
volume
Sturdy of regulations stipulating one-way traffic

5 . Other measures
・ Promoting parking measures
・ Adjusting on-road construction work

Examples of measures for sidewalks

1 . Case where sidewalk capacity is sufficient

Designates parts of sidewalks that may be used by ordinary bicycles

・ Visual demarcations
Colored paving and interlocking etc.

2 . Case where sidewalk capacity is insufficient

Restrictions on the use of sidewalk by ordinary bicycles

Case with a restriction

Case without a restriction

Guidance and Consciousness raising

Priority for pedestrians on the side closest to traffic lanes

Bicycle alighting measures

3 . Other measures
・ Measures to prevent illegal parking
・ Strengthening guidance concerning illegal exclusive use

Examine of the removal of restrictions on use of sidewalks

Source: Ministry of Land, Infrastructure and Transport documents

Smartway (ITS)

Smartway 2007

Features of services

[1] Timely services

Safety information will be provided in a timely manner, based on road traffic conditions on the route where the vehicle is traveling.

[2] Services that are reliable and understandable

Drivers will be provided with prompt, reliable information regarding safety and so on by means of 5.8 GHz DSRC, which supports highly reliable communications for the instantaneous supply of large volumes of information.

[3] Services that are easily noticed by drivers

Audio and visual information will be provided using on-board units, which have a higher driver recognition rate than roadside signs and the like.

Smartway 2007

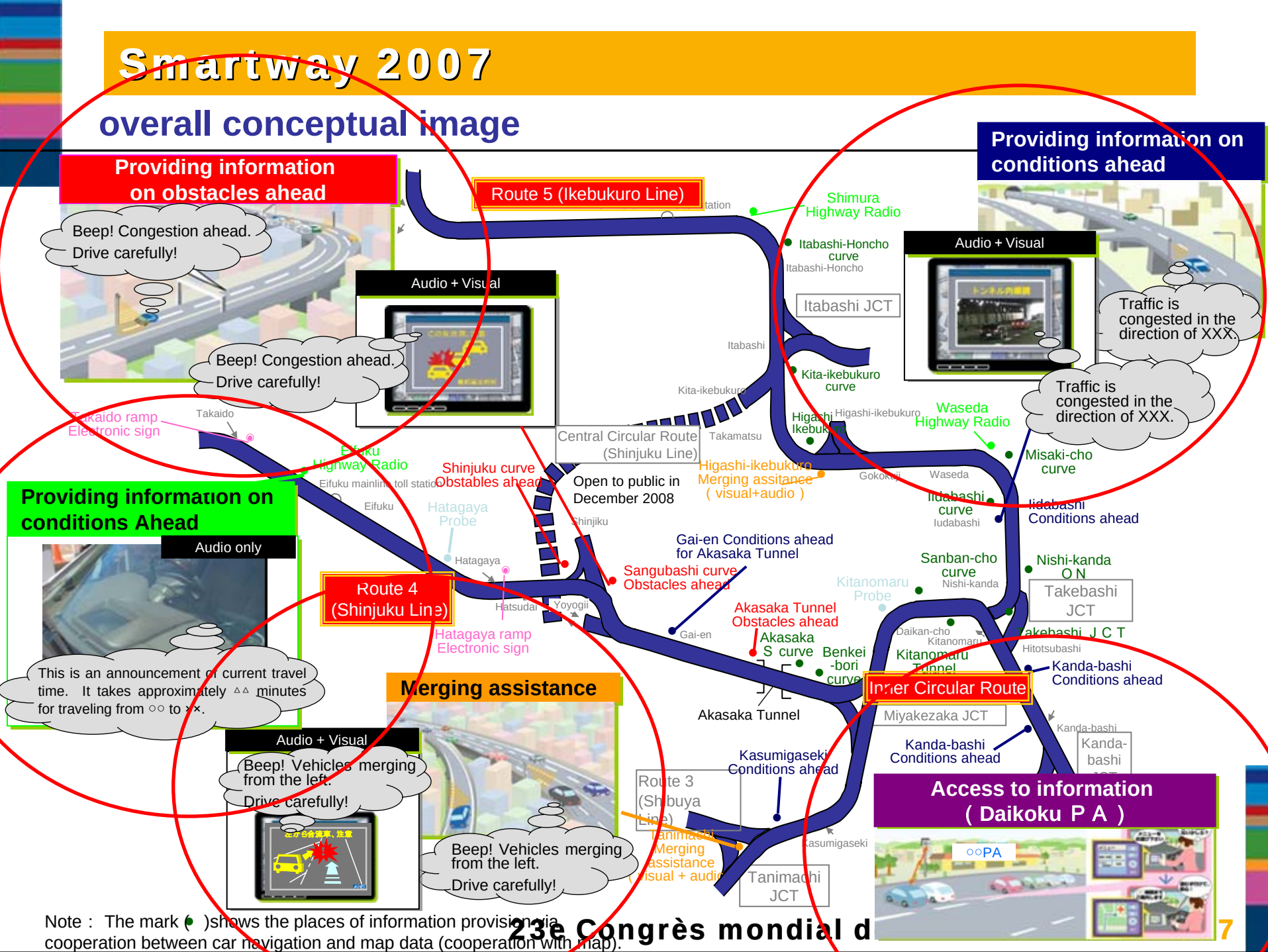
On-board units (OBU)

Voice ITS OBU

Car Navigation Correlated ITS OBU

Smartway 2007

overall conceptual image

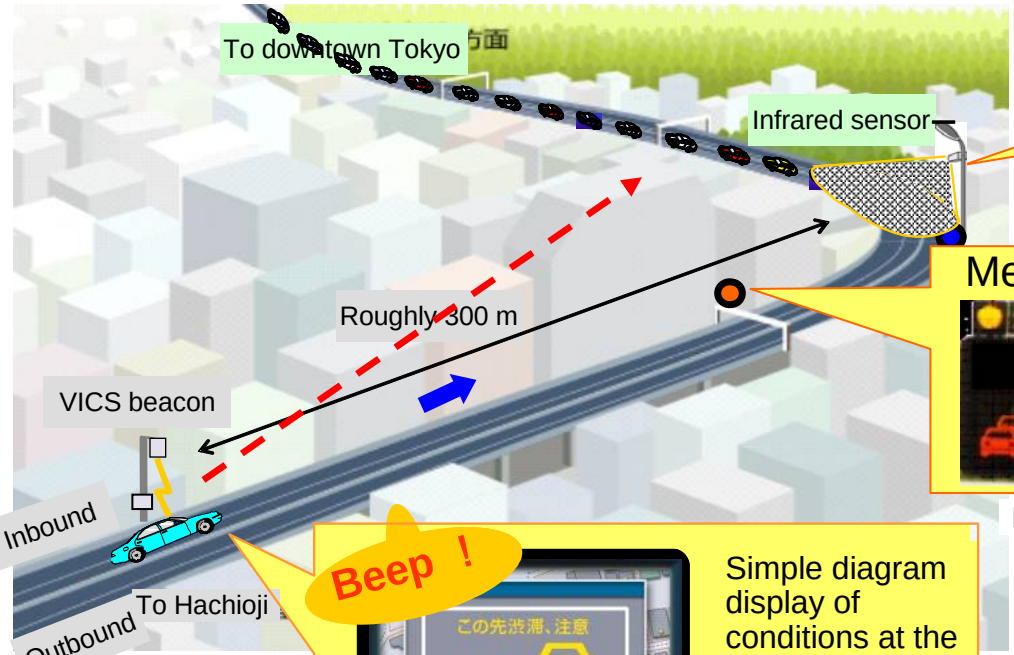


Note : The mark (●)shows the places of information provision via cooperation between car navigation and map data (cooperation with map).

Smartway 2007 (Example of Sangubashi)

Overview of Field test at Sangubashi

[Test Summary]



Sensors detect traffic congestion, standing vehicles and slow-traveling vehicles

Message sign

Beep !

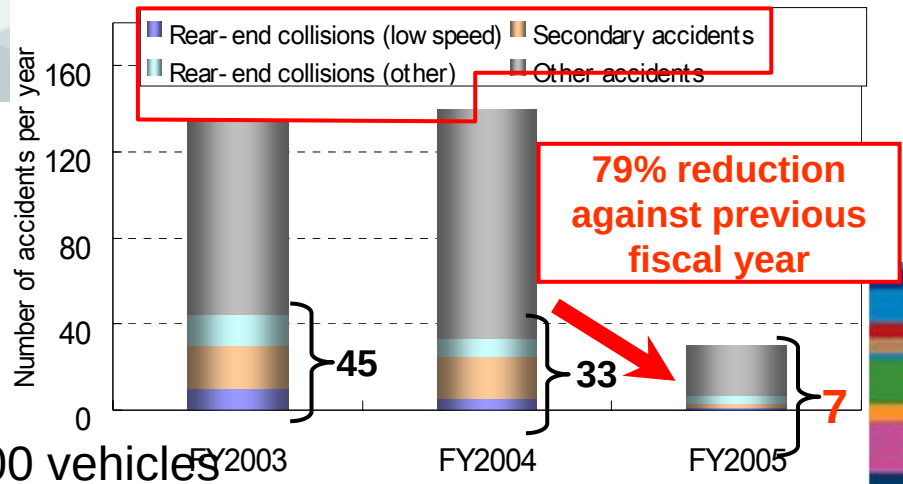
Simple diagram display of conditions at the start of a curve

Car navigation display

Curve zone
- -Curve radius: 88 meters
- -Traffic volume (toward Tokyo): About 460,000 vehicles

Installed on April 27

Accidents covered by the service



Smartway 2007 Demo

1 . Outline

The test operation of Smartway will start from October 2007, and with this opportunity, a demonstration called ‘Smartway 2007’ will be held, in which participates can experience Japan’s cutting-edge ITS services.

2 . Schedule

Sunday, October 14 to Wednesday, October 17, 2007

at Tokyo International Forum

3 . Contents

On-board ITS experience, exhibition, symposiums etc.

Visit http://www .smartway2007.jp/en/index.htm

Thank you!