

# Government Status Report of Japan

June 18, 2007

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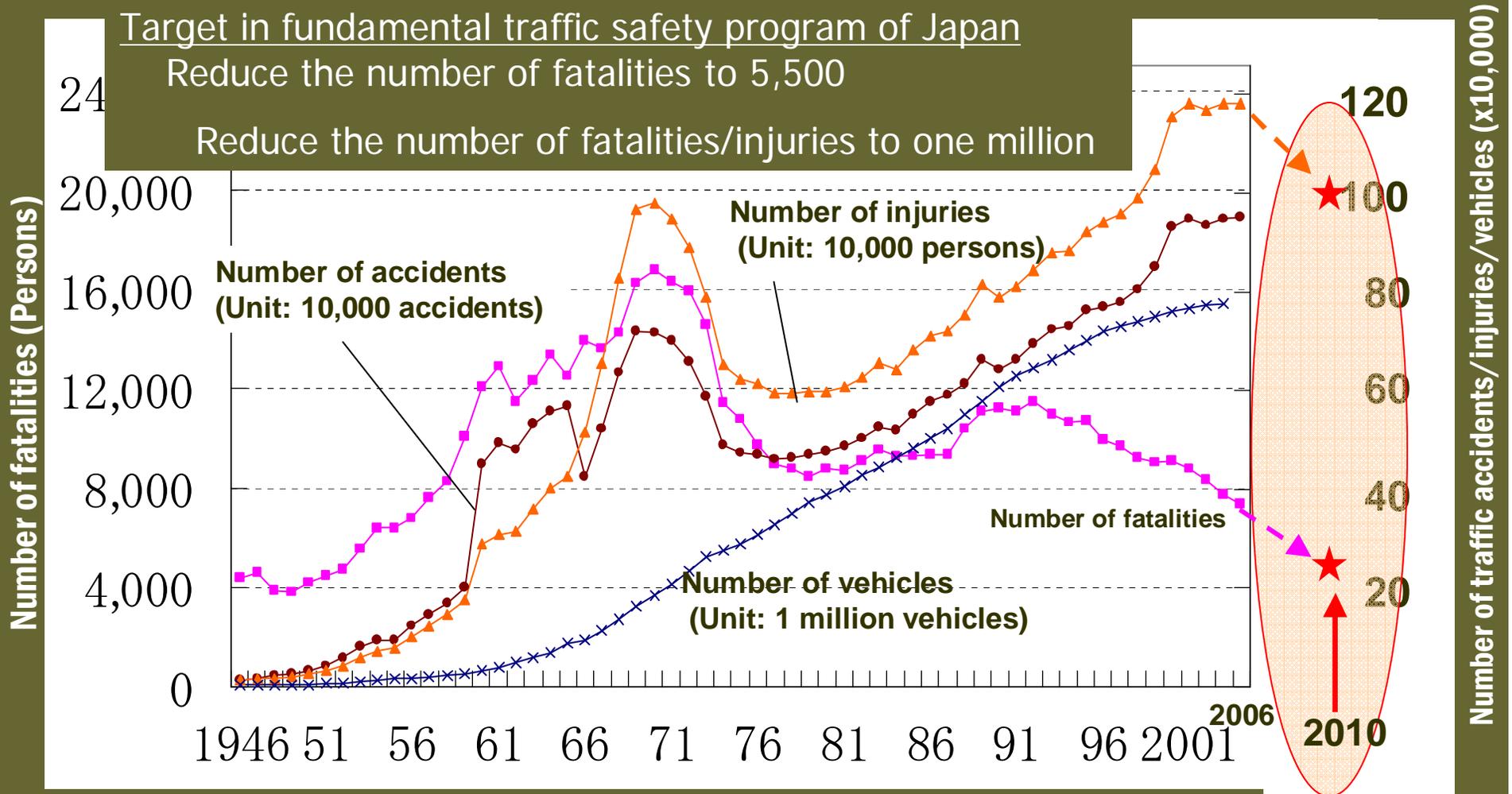
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Engineering Planning Division  
Engineering and Safety Department  
Road Transport Bureau



*Ministry of Land, Infrastructure and Transport*

# Situation of traffic accident in Japan and Target of traffic safety measures

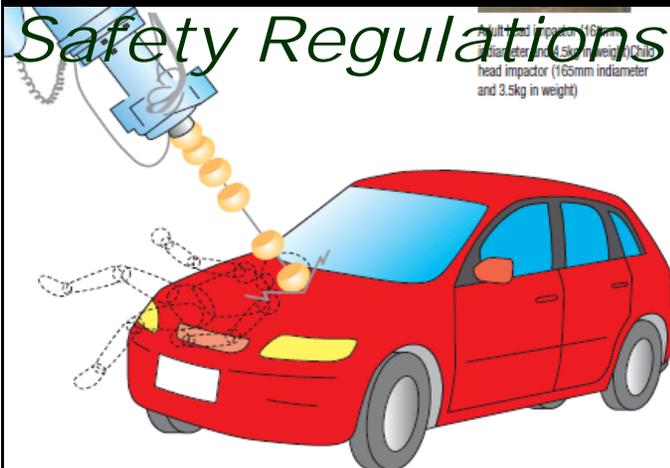


[Based on Traffic Accident Occurrence Conditions (National Police Agency Traffic Bureau)]

# Policy of Vehicle safety measures

MLIT Transport Technology Counsel Report 1999

- ◆ Target of reduction of fatalities by vehicle safety measures (within-30-day fatalities) set in 1999
  - 2010 : 1,200 reduction from 1999 baseline



J-NCAP



ASV Project



# Cycle of Vehicle Safety Measures

- Study process before & after rulemaking procedure -

## Accident Analysis Expert Group

[Subjects]

- Overview Analysis
- Specific Analysis

### Analysis of Accidents

## Safety Regulation Expert Group

[Subjects]

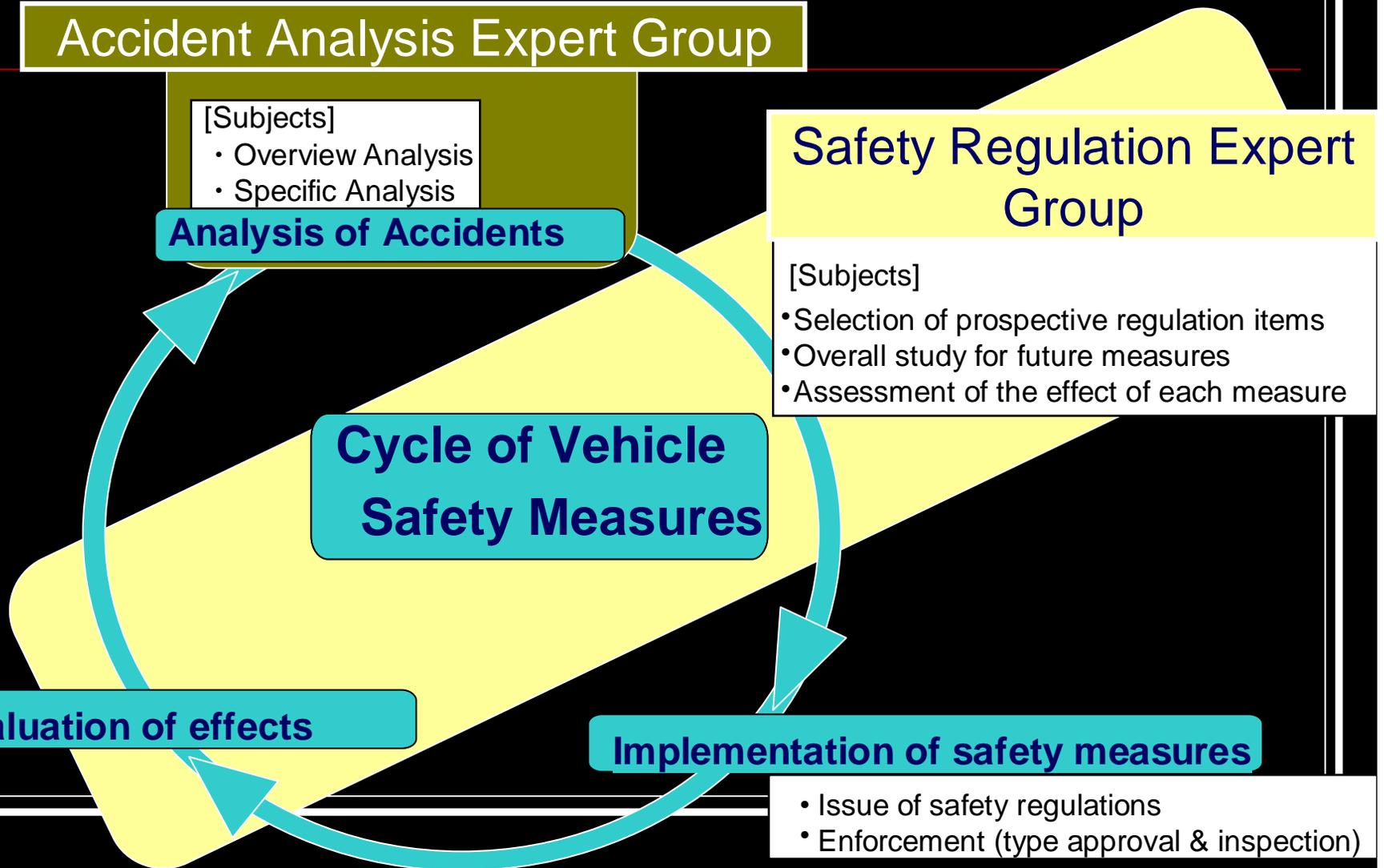
- Selection of prospective regulation items
- Overall study for future measures
- Assessment of the effect of each measure

### Cycle of Vehicle Safety Measures

### Evaluation of effects

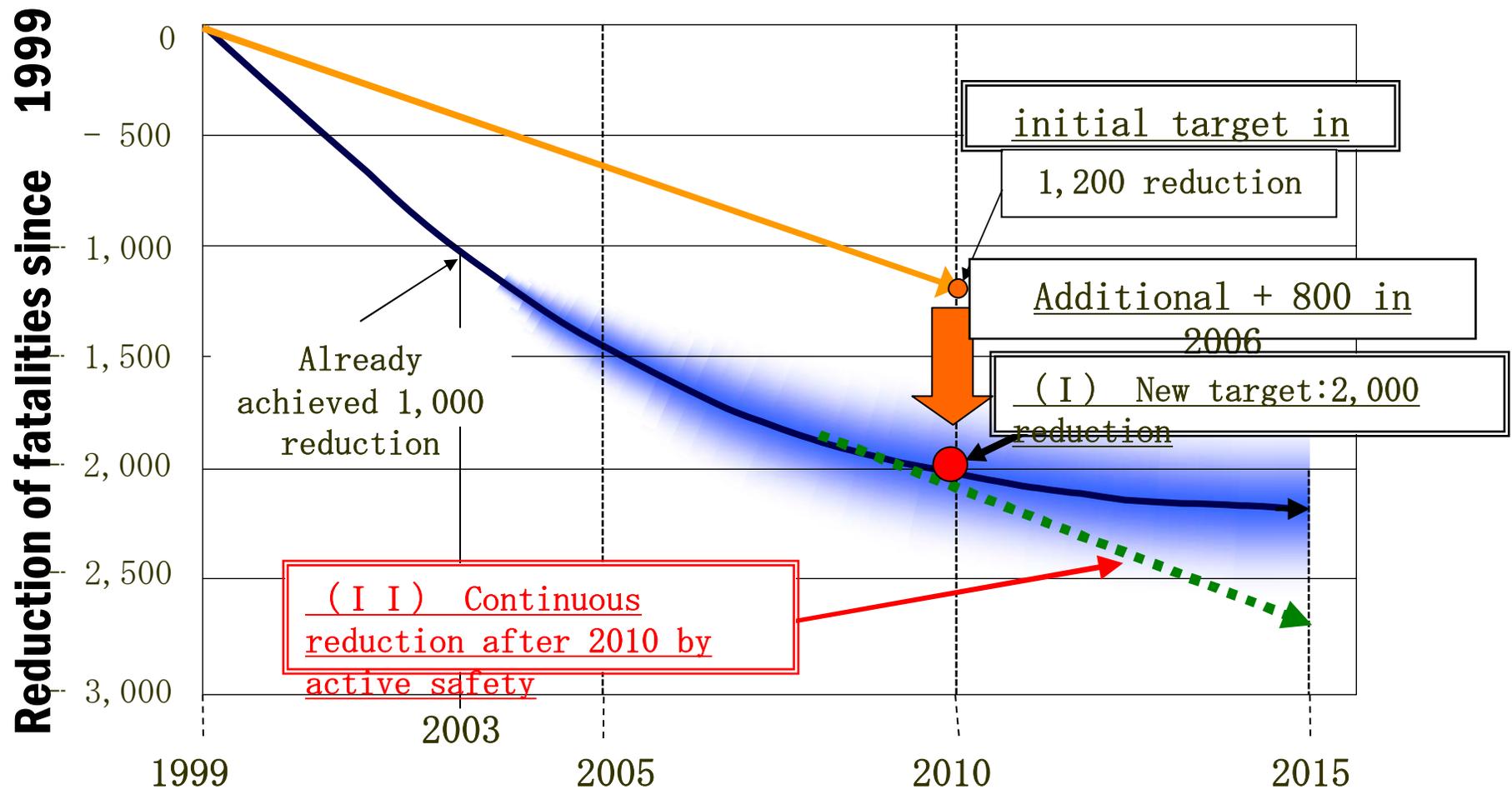
### Implementation of safety measures

- Issue of safety regulations
- Enforcement (type approval & inspection)



# Reviewed target by vehicle safety measures

MLIT Transport Policy Counsel Report 2006



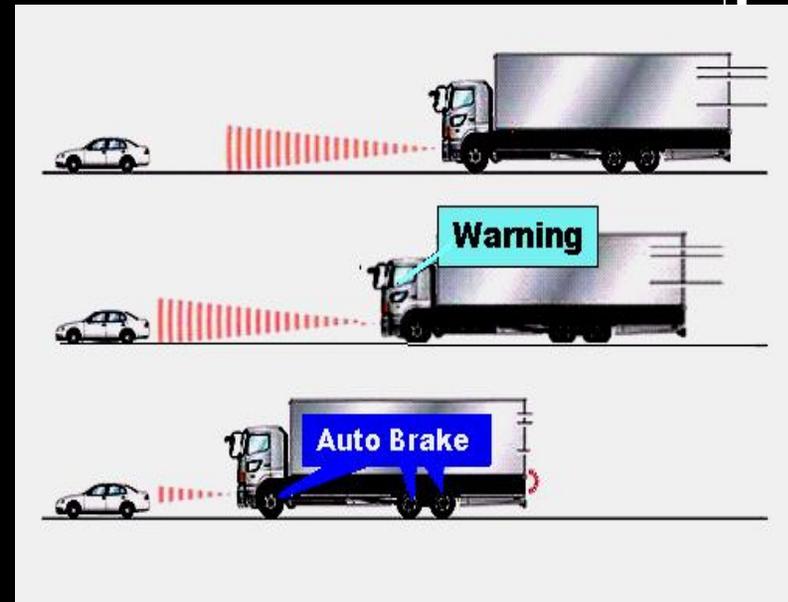
# Strategies for active safety measures

After success of passive safety measures, prompt action should be taken now to expand utilization of active safety for continuous reduction after 2010 .

- **Short term : incentives for priority technologies**
- **Middle term : development of accident analysis using driving recorder**
- **Future measures: driving assistance system for safety using communication technologies**

# Countermeasures for rear end collision

- It is necessary to strongly encourage popularization of Crash Mitigation Braking system using sensor devices like radars, especially for heavy duty trucks.
- Incentive measures has been introduced since April 2007. It is also necessary to set the standard of such systems for continuous promotion.
- The study for developing technical standard will be start aiming to arrange the contents by the end of FY2007.



Collision mitigation braking system on the heavy duty trucks can reduce around 90% of fatal rear end collision.

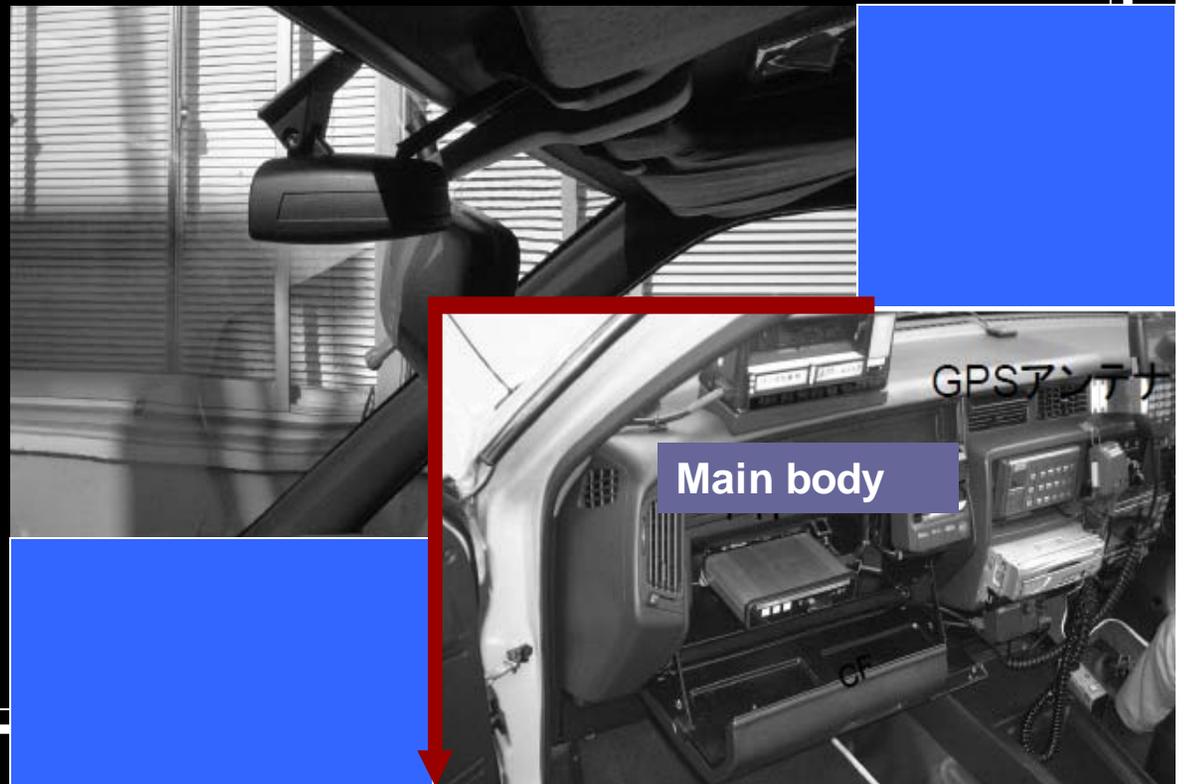
More than 55% of accidents are rear end collision

Damage to other vehicles is 12 times more severe than collision with a passenger vehicle

⇒ Incentive measure has been introduced : 50% subsidy for purchase

# Utilization of Driving Recorders for evaluation of the effectiveness of active safety technologies

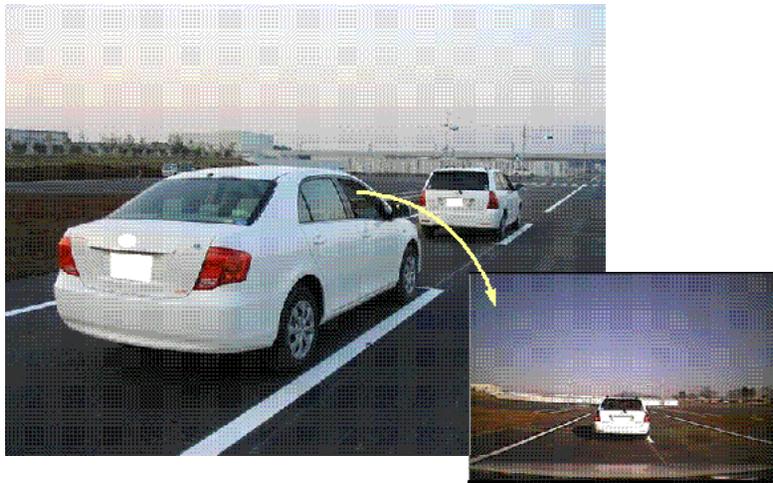
- Evaluation of effectiveness of safety technologies can be a base for every kind of market introduction measures.
- Pre-accident data are necessary for more accurate studies of effect of active safety technologies.
- Driving recorders might be utilized for such purpose.



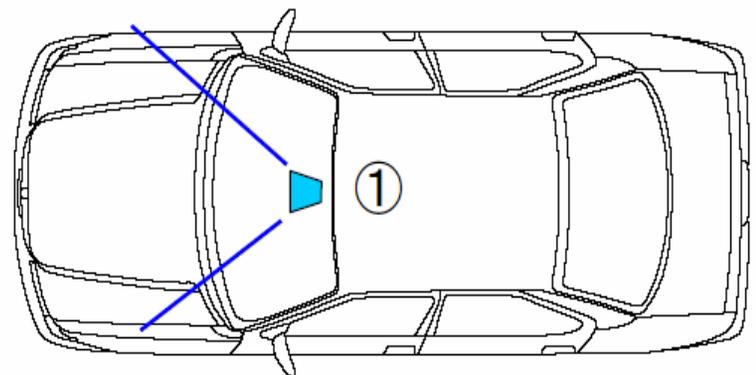
# DRs with video (VDRs) in Japan

- In Japan, many taxis are voluntarily installing VDRs for certain purposes like driver education, simplifying procedure after traffic accidents and so on.
- VDRs are attached to cars and record driving data like speed, acceleration rate and also vehicle's forward vision by video camera at the time of accident or near miss.
- From the view point of accident analysis, video image can be used for analyzing the behavior of the car before accident including distance to a car in front.

Experiments at the test fields



Forward view Image recorded by the visual drive recorders (VDRs).



# Other Safety Measures

(from the report by the MLIT Transport Policy Council 2006)

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## Further development of passive safety measures

- Head injury mitigation
- Studies on vehicle compatibility
- Promoting correct use of safety devices  
(ex. Seatbelt use in rear seats)

## Safety measures for heavy duty vehicles

- Studies for reducing aggressibility
- Studies for passenger protection

## Safety Measures for Pedestrians and Elders

- Pedestrian safety measures, Brake assist systems
- Studies for future measures

# Future Rulemaking Plan of MLIT Japan

published on February 2007

Area	Items Decided to Undertake Rulemaking Proceeding	Candidates for Future Vehicle Safety Regulation
Crash Worthiness	<ul style="list-style-type: none"> <li>• Neck Injury Mitigation</li> <li>• Crash Worthiness of HV and EV</li> </ul>	<ul style="list-style-type: none"> <li>• Vehicle Compatibility</li> <li>• Improvement of side impact test</li> </ul>
Heavy-Duty Vehicles		<ul style="list-style-type: none"> <li>• Vehicle Stability</li> </ul>
Safety for Vulnerable Road-Users		<ul style="list-style-type: none"> <li>• Braking Assist</li> <li>• Approaching Warning Device for HV and EV</li> </ul>
Active Safety	<ul style="list-style-type: none"> <li>• EDR and Driving Recorder for Accident Analysis*</li> </ul>	<ul style="list-style-type: none"> <li>• ESC/ABS</li> <li>• Countermeasures for Rear-end Collision</li> </ul>
Other Safety Measures	<ul style="list-style-type: none"> <li>• Alcohol Interlock Device*</li> </ul>	<ul style="list-style-type: none"> <li>• Tyre Safety for Passenger Vehicle</li> <li>• Daytime Running Light</li> </ul>

\*) Non-Regulatory Measures

# Future Rulemaking Plan of MLIT Japan

Decision to undertake rulemaking has made by MLIT based on recommendation from “Safety Regulation Expert Group.” . It is planned to adopt relevant gtr and/or revised ECE regulation for these two Items.

These items are under consideration by “Safety Regulation Expert Group.” . It is still open question whether any measures should be taken or not.

Area	Items Decided to Undertake Rulemaking Proceeding	Candidates for Future Vehicle Safety Regulation
Crash Worthiness	<ul style="list-style-type: none"> <li>• Neck Injury Mitigation</li> <li>• Crash Worthiness of HV and EV</li> </ul>	<ul style="list-style-type: none"> <li>• Vehicle Compatibility</li> <li>• Improvement of side impact test</li> </ul>
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	*) Non-Regulatory Measures	

These two items are special cases. MLIT has decided to take some kind of actions for these but not by regulations

# Advanced Safety Vehicle Project



## Phase 3:2001-2005



*Crash mitigation brake  
Lane keep assistance  
ACC, etc have been  
introduced in the market*



**System verification tests  
were done on the test  
course of Tomakomai**

## Phase 2:1996-2000



**Demo2000**

## Phase 1:1991-1995

- *Cooperation among academia,  
industries and government*
- *Study of technical feasibility*

**Design Principle  
Driver Assistance  
Driver Acceptance  
Social Acceptance**

# Driver Assistance System using tele-communication technology

- trials are planned by government & industries -

## Schedule

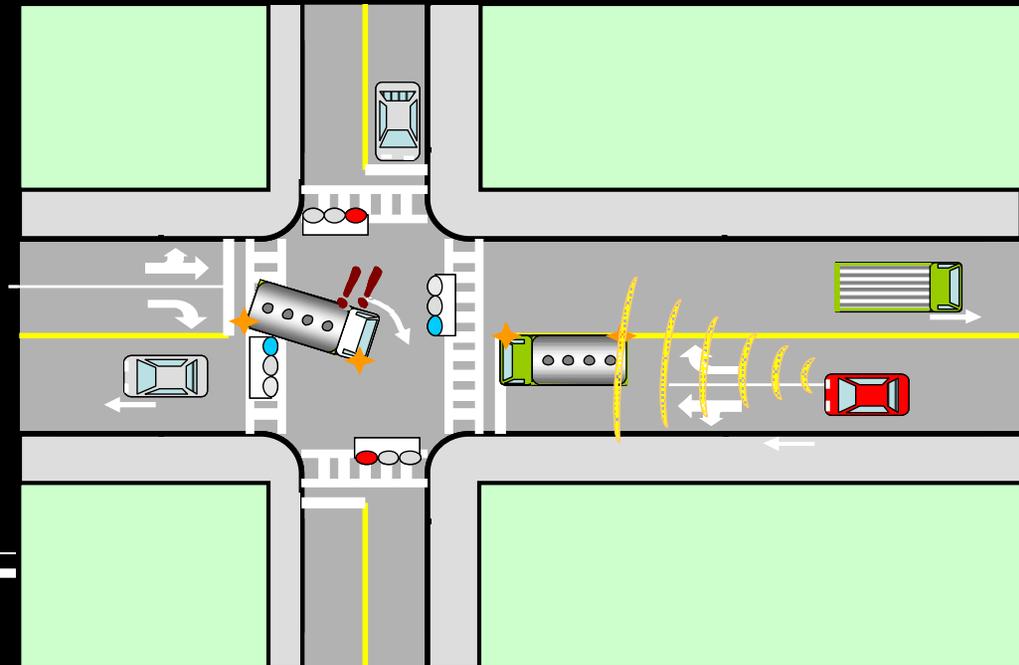
April 2006 Establishment  
of liaison group  
(government / industry)

FY 2007 pre-trial

FY 2008 large-scale trial

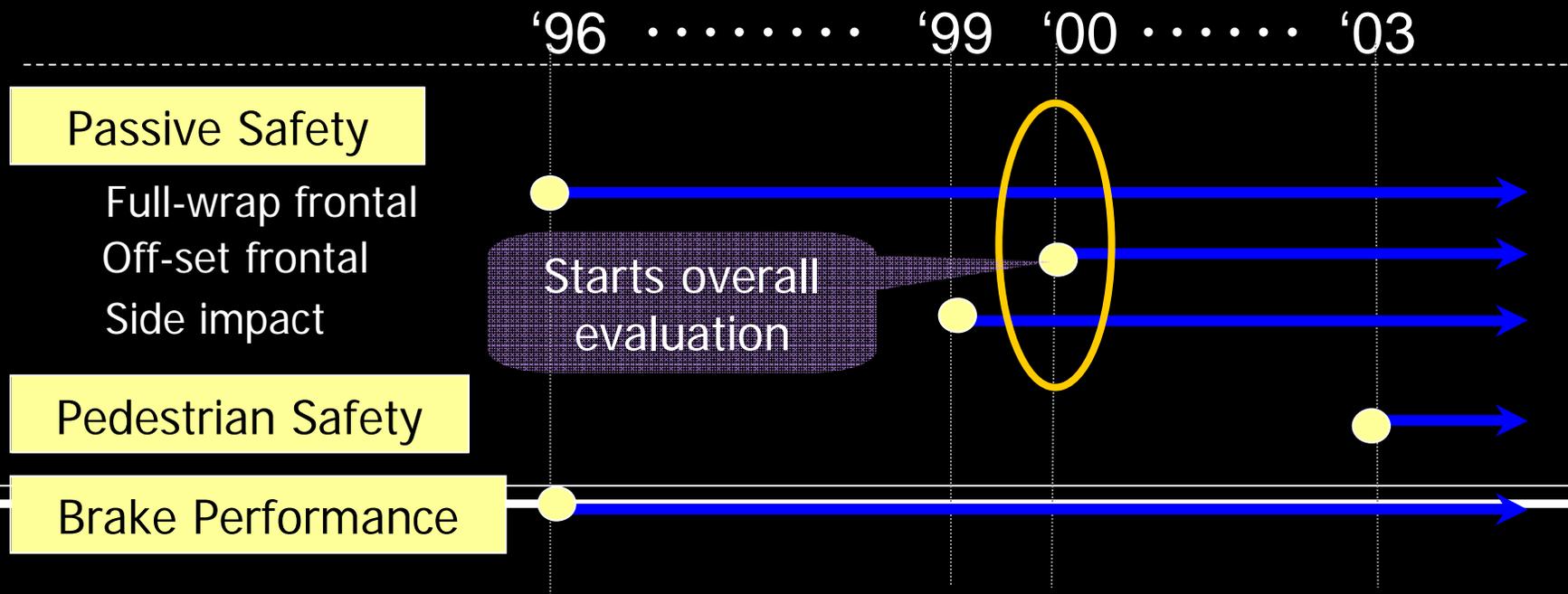
FY 2010 practical  
application of the  
system

ex. car-to-car communication technology  
utilized for the accident in right turn



# New Car Assessment Program (NCAP)

- Japan has been conducting the NCAP tests of vehicle safety and its evaluation since 1996
- The results are open to the public by brochures, websites, etc.; the availability of ASV technologies is also included
- NCAP supports users' choice of safer car



# Good linkage among Safety Measures

## Safety Regulations

The safety regulation Exert Group  
The accident analysis Expert Group

- Accident analysis
- International activities (IHRA, WP29)
- Effect evaluation

○ **Direction of Safety Policy**

Linking of safety regulations and new technologies

Linkage to promote safety technologies

## ASV project

Study Group for ASV

- Promotion of ASV technologies by industry, academia and government
- Development of next generation ASV technologies

Linkage to increase user's knowledge about new technologies

## NCAP

NCAP study group

- Comparative safety performance testing & information supply
- Information on the correct use of safety devices, their availability, effectiveness ratings

# Measures against drunk driving

## Possible utilization methods and necessary technical solutions

- (1) Utilization as a part of sanction on drunk-driving offenders  
Maintenance service and system for supplying parts are necessary
- (2) Discretionary installation  
For promotion, evaluation of effectiveness is necessary
- (3) Compulsory installation on all vehicles  
Need for technological development  
(maintenance-free, function at emergency, modification prevention, etc.)
- (4) Compulsory installation on commercial vehicles  
Need for technological development, taking into account specific usages

## Future schedule (review session)

- Review session was organized in January 2007 consisting of academia, industries and related ministries.
- Aim to create draft technical policy of the Alcohol Interlock Device during 2007, while keeping in mind the utilization methods (Example: as a measure against repeat offenders) of the device.

# Growing importance of international partnership

There is a growing importance for taking into account the ongoing world-wide efforts in responding with the need to provide higher levels of vehicle safety, environmental protection, energy efficiency, etc.



• • • • and many other relationships for global vehicle safety

Thanks for your  
attention

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*Ministry of Land, Infrastructure and Transport*