

JAPAN GOVERNMENT STATUS REPORT

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ABSTRACT

The situation regarding the occurrence of road traffic accidents in Japan remains serious. In order to manage the situation, Japan is actively implementing initiatives to improve motor vehicle safety such as Cycle of Motor Vehicle Traffic Safety Measures, System of Survey/Study of Road traffic accidents, Establishment/Revision of Safety Regulations, Development of New Technology and Encouragement of Practical Application and NCAP, and promoting the international harmonization of motor vehicle regulations and the mutual recognition of certification.

The Occurrence of Road Traffic Accidents in Japan

A total of 931,034 road traffic accidents occurred in Japan in the year 2000, with 9,066 persons killed (on a 24-hour basis) and 1,155,697 persons injured. The number of road traffic accidents and injuries in the year were at record highs, and the number of fatalities increased for the first time in five years. These figures indicate that the situation of the road traffic accident remains serious.

Initiatives To Improve Motor Vehicle Safety

- Basic Approach (Cycle of Motor Vehicle Traffic Safety Measures)

In view of the situation mentioned above regarding the occurrence of road traffic accidents in Japan, the Ministry of Land, Infrastructure and Transport (MLIT), based on a report of The Council for Transport Technology (June, 1999), decided to undertake both comprehensive and repeated area-focused implementations of the vehicle traffic safety measure cycle (the setting of targets for reduction, implementation of measures, evaluation of results, and the setting of targets for reduction ...) so as to further expand its portfolio of road traffic accident countermeasures, based on a scientific methodology centered on gaining an understanding of the accident situation. The targets of these implementations are a reduction of 1,500 in the number of fatalities (30-day basis) by 2010 (including a reduction of 1,200 fatalities by means of vehicle safety-related measures, a reduction of 170 fatalities by means of safety policy measures for commercial vehicles, and a reduction of 130 fatalities by means of other measures).

- System of Survey/Study of Road traffic accidents

The ministry asks the Institute for Traffic Accident Research and Data Analysis (ITARDA) to collect and analyze all necessary data on accidents, including vehicle-related safety measures for the formulation of safety regulations. The Institute carries out comprehensive surveys and analyses of road traffic accidents from the perspective of the

people, roads, and vehicles in accidents so as to identify the factors which caused the accident, including not only those factors attributable to the fault of the driver but also those factors related to vehicle structure and the driving environment. In addition, branch offices of the Land Transport Bureau of MLIT are used to gather data on accidents caused by commercial vehicles and accidents caused by vehicle structure in the "Measures Against Vehicle Accidents Pilot Project." The data obtained by these means undergo wide-ranging analyses, and the results are used effectively in accident countermeasures.

- Establishment/Revision of Safety Regulations

Recently, MLIT strengthened brake regulations for commercial vehicles as well as passenger vehicle regulations related to efficiency of passenger protection in case of side impact. In addition, the Ministry formulated regulations for the mandatory installation in spring 2001 of speed limitation devices in large trucks, and the requirement is to be implemented in September 2003. In view of the results of deliberations of the "Comprehensive Board on Vehicle Safety Countermeasures," which was established in September 1999, the Ministry established a schedule for the future. Under this schedule, a number of safety regulations will be expanded and strengthened. These will include the formulation of offset frontal impact regulations for passenger vehicles, the formulation of pedestrian protection regulations for passenger vehicles, the mandatory installation of high-mount stop lamps on passenger vehicles, the expansion of the scope of the mandatory

installation of ABS in trucks, and the formulation of field-of-vision regulations for passenger vehicles. In addition, the process of formulating safety regulations will undergo evaluation of the effectiveness of the measures to the extent feasible.

- Development of New Technology and Encouragement of Practical Application

The Advanced Safety Vehicle (ASV) features highly intelligent functions using the new technology such as electronics technologies to substantially enhance vehicle safety. Based on a second-phase five-year plan that commenced in FY 1996, the ASV project is aimed at putting the ASVs into practical use around the beginning of this century. Research and development under the project was conducted by a promotion board composed of representatives of industrial, governmental, and academic sectors.

FY 2000 was the last year of the plan. A public demonstration of the ASV was carried out, and joint testing was undertaken with Advanced Cruise-Assist Highway Systems (AHS), which is conducting research from the viewpoint of road infrastructure. In addition, a comprehensive report of results was put together, presenting an orderly account of the Design Principles that was established in the second phase of the project, formulation of the Design Guideline, and estimation of the accident-reduction effectiveness attributable to ASV technology.

The ASV, in keeping with its concept, has come to feature a variety of sensors to gather information on the vehicle's surroundings,

generate an alert or warning, and control the vehicle if needed.

In view of the importance of the human interface, research is proceeding on finding the best way to provide information and warnings, and control the vehicle. In addition, a variety of studies are being carried out on the standardization of the new technologies in anticipation of their widespread use.

With respect to the research framework for the development and practical application of the new technologies and their international harmonization, the World Forum for the Harmonization of Vehicle Regulations, IHRA, ISO, and APEC/RTHP are to be used.

- NCAP (NEW CAR ASSESSMENT PROGRAM)

Since 1996, the Ministry has been undertaking evaluation and testing of vehicle safety in collaboration with National Organization for Automotive Safety & Victim's Aid. More specifically, brake performance tests have been undertaken since 1996, full frontal crash tests since 1996, side impact tests since 1999, and offset frontal impact tests since 2000.

An evaluation of counting the total of points scored in three tests -- full frontal crash test, side impact test, and offset frontal crash test -- and of using a six-stage rating of the driver's seat and passenger's front seat, with scores ranging from five to zero stars was made. The findings have recently been made public to vehicle users as a vehicle assessment.

The International Harmonization of Motor Vehicle Regulations and Promotion of the Mutual Recognition of Certification

A variety of efforts related to the motor vehicle regulations and certification have been undertaken as part of market-opening policies. These efforts have been intended to harmonize the regulations and simplify the procedures for certification. As a result of these efforts, Japan's regulatory framework related to regulations and certification has been simplified to the level of other countries.

On the other hand, there have in recent years been great changes in the international situation regarding motor vehicles due to the growth of international distribution of motor vehicles and parts as well as the globalization of the manufacturers of vehicles and parts and rapid advances in the common specifications and modularization of parts.

In response, the following measures are being undertaken.

- Encouragement of IHRA

Japan, the United States, the EU, Australia, and Canada have been co-operating from the research stage on international harmonization. At the 15th ESV meeting in May of 1996, agreement was reached between these parties on launching the International Harmonized Research Activities (IHRA), a program for coordinated research. This program's objectives aim at the integration of the testing methods that form the basis of regulations. The program carries out deliberations on six criteria: Biomechanics, Frontal Impacts, Protection of Pedestrians, ITS, Vehicle Compatibility, and

Side Impact. Japan is actively participating in the project as the manager of the section on the protection of pedestrians.

- Full Participation in the World Forum for the Harmonization of Vehicle Regulations (UN/ECE/WP29)

Japan has been contributing actively to the United Nations Economic Commission for Europe, the world forum for the harmonization of vehicles regulations (ECE/WP29), which is carrying out activities leading to the harmonization and integration of regulations. Participating in the ECE/WP29 on a continuing basis, Japan contributes to international harmonization by supplying technical data and other information.

- Encouragement of the Mutual Recognition of Certification

In November 1998, Japan became the first non-European country to join the 1958 Agreement. This step was taken in the interest of introducing a framework for the mutual recognition of certification for vehicle equipment. At present, Japan has adopted 17 of 112 Agreement Regulations.

Having established a target of adopting approximately 30 regulations by the end of FY 2003, the Ministry has scheduled the adoption of 5-6 regulations per year.

- Encouragement of the Formulation of "GTR"s

The Global Agreement went into effect on August 25th, 2000. The Agreement, which is intended to enhance the safety and

environmental friendliness of vehicles and parts and to expand their international distribution, seeks to achieve international harmonization of technical regulations on vehicle safety and the environment, which now differ from country to country.

Recognizing the need to formulate Global Technical Regulations in accordance with the Agreement, Japan has been actively making contributions by chairing an expert meeting that was established to seek common definitions of vehicle mass, vehicle dimensions and vehicle categories.

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JUNE 4, 2001

TAKURO MIYAZAKI

DIRECTOR-GENERAL

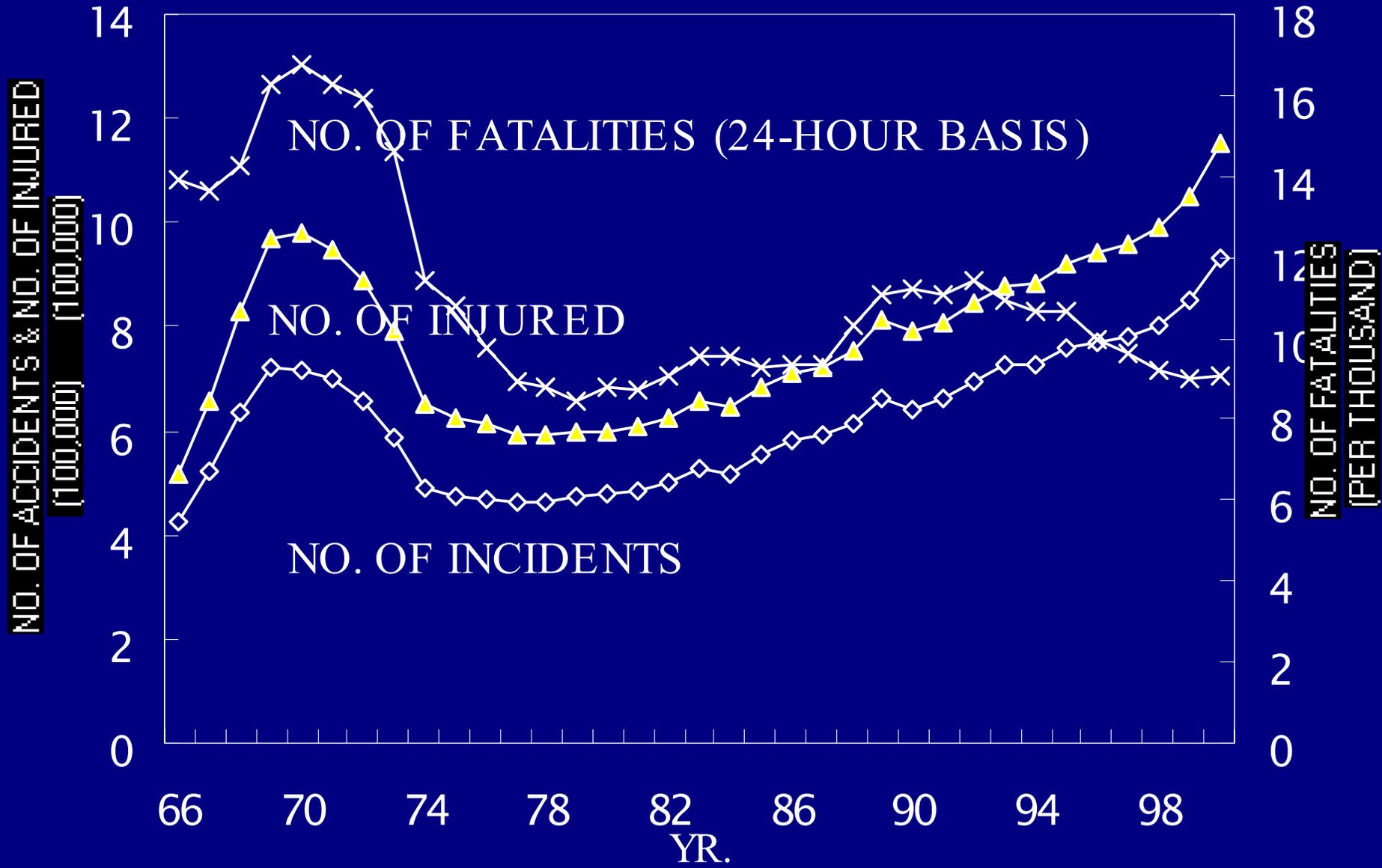
ENGINEERING AND SAFETY DEPARTMENT ROAD

TRANSPORT BUREAU

MINISTRY OF LAND, INFRASTRUCTURE AND TRANSPORT

STATUS REPORT

- 1. THE OCCURRENCE OF ROAD TRAFFIC ACCIDENTS IN JAPAN**
- 2. INITIATIVES TO IMPROVE MOTOR VEHICLE SAFETY**
- 3. THE INTERNATIONAL HARMONISATION OF MOTOR VEHICLE REGULATIONS AND PROMOTION OF MUTUAL RECOGNITION OF CERTIFICATION**



STATUS REPORT

1. THE OCCURRENCE OF ROAD TRAFFIC ACCIDENTS IN JAPAN
2. INITIATIVES TO IMPROVE MOTOR VEHICLE SAFETY
3. THE INTERNATIONAL HARMONISATION OF MOTOR VEHICLE REGULATIONS AND PROMOTION OF MUTUAL RECOGNITION OF CERTIFICATION

2. INITIATIVES TO IMPROVE MOTOR VEHICLE SAFETY

**(1) BASIC APPROACH (CYCLE OF MOTOR
VEHICLE TRAFFIC SAFETY MEASURES)**

**(2) SYSTEM OF SURVEY/STUDY OF ROAD
TRAFFIC ACCIDENTS**

**(3) ESTABLISHMENT/REVISION OF SAFETY
REGULATIONS**

**(4) DEVELOPMENT OF NEW TECHNOLOGY AND
ENCOURAGEMENT OF PRACTICAL
APPLICATION**

(5) NCAP (NEW CAR ASSESSMENT PROGRAM)

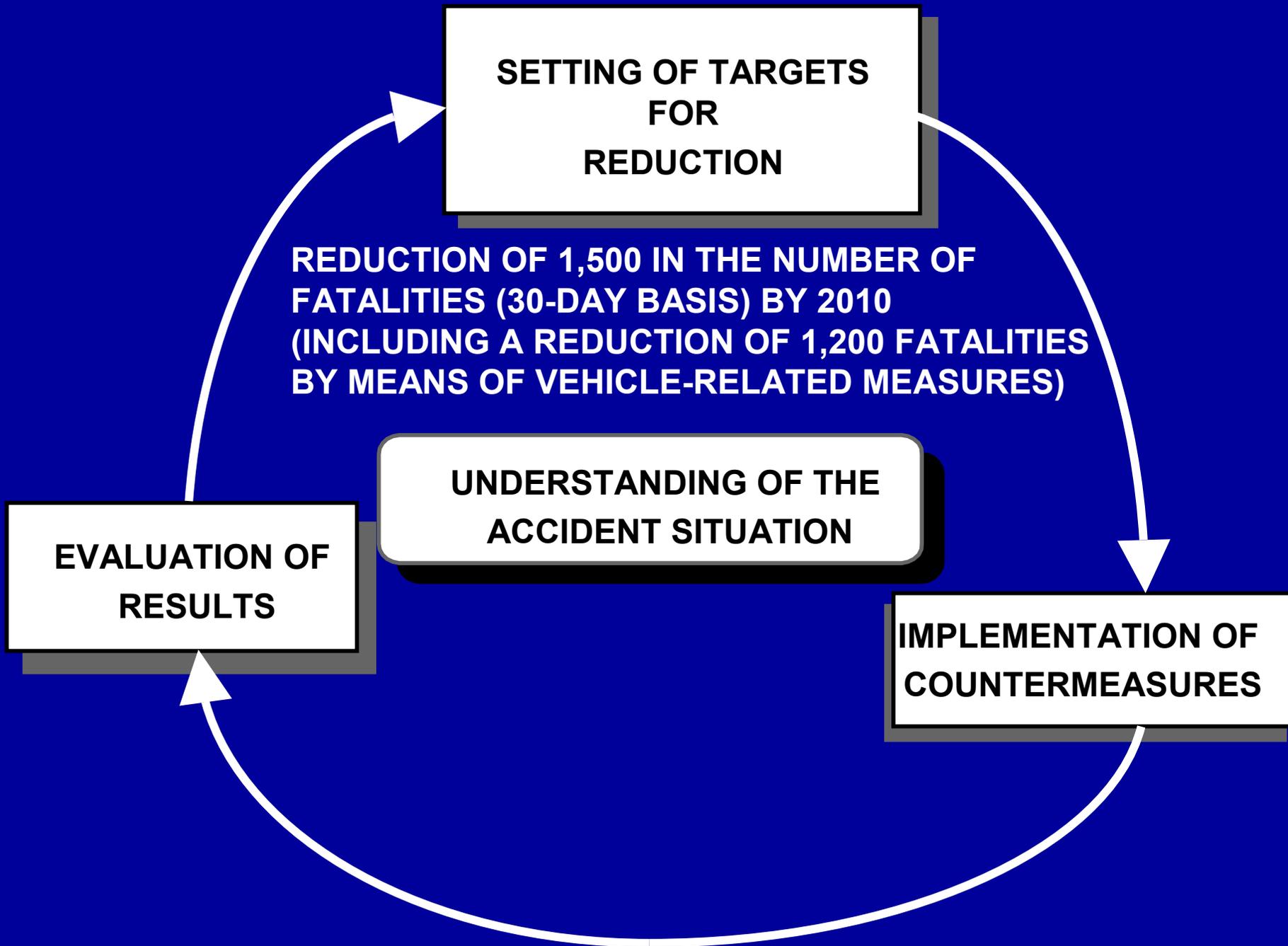
**SETTING OF TARGETS
FOR
REDUCTION**

**REDUCTION OF 1,500 IN THE NUMBER OF
FATALITIES (30-DAY BASIS) BY 2010
(INCLUDING A REDUCTION OF 1,200 FATALITIES
BY MEANS OF VEHICLE-RELATED MEASURES)**

**UNDERSTANDING OF THE
ACCIDENT SITUATION**

**EVALUATION OF
RESULTS**

**IMPLEMENTATION OF
COUNTERMEASURES**



2. INITIATIVES TO IMPROVE MOTOR VEHICLE SAFETY

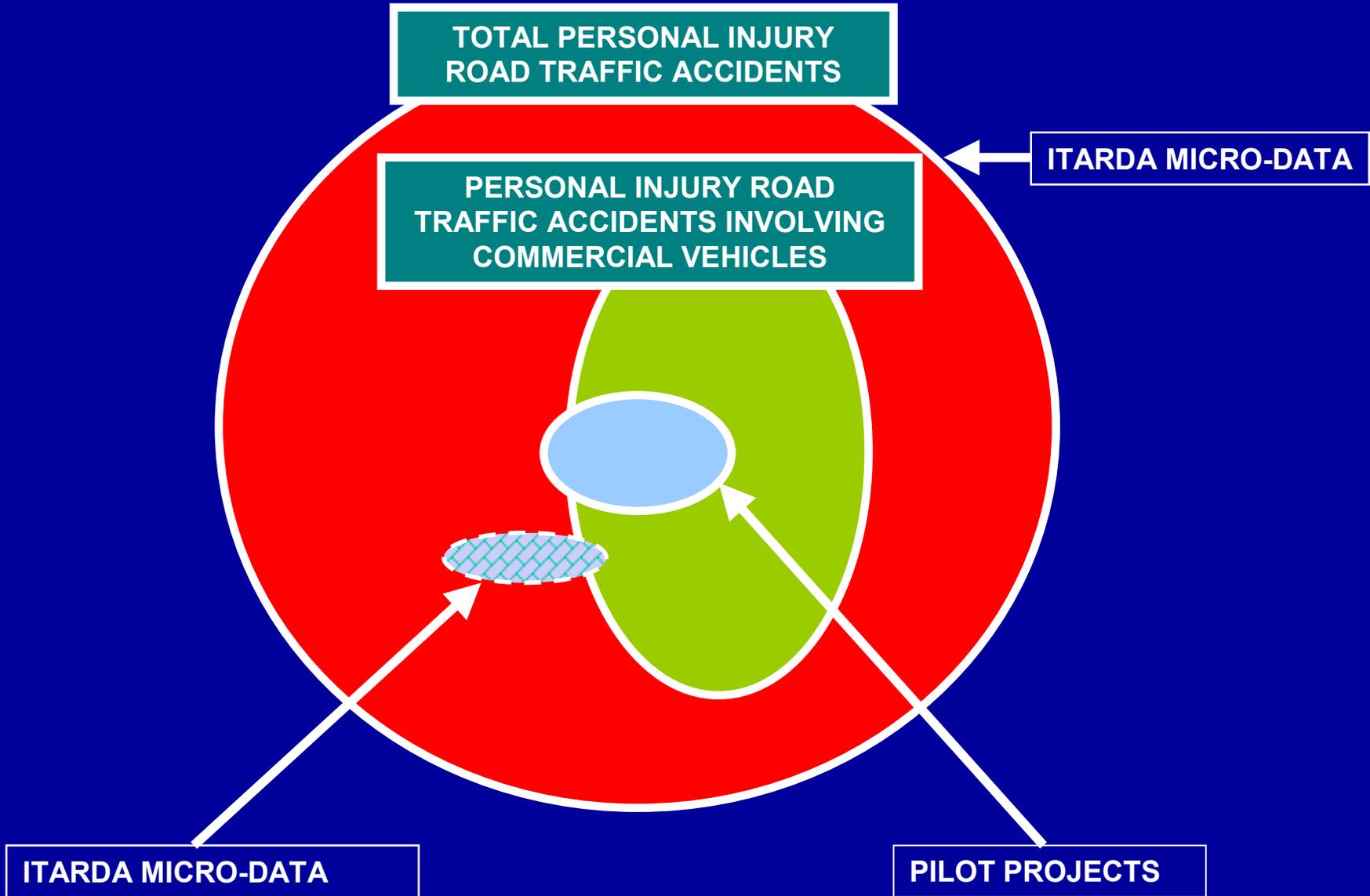
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RECENT CASES OF ESTABLISHMENT/REVISION OF SAFETY REGULATIONS

- ADDITIONAL REGULATIONS TO TRUCK/BUS BRAKE REGULATIONS COVERING PERFORMANCE UNDER HIGH-SPEED BRAKING (SEPTEMBER 1996)
- FORMULATION OF REGULATIONS FOR PASSENGER VEHICLES RELATED TO EFFICIENCY OF PASSENGER PROTECTION IN CASES OF SIDE IMPACT (SEPTEMBER 1996)
- MANDATORY INSTALLATION OF SPEED LIMITATION DEVICES IN LARGE TRUCKS (SPRING 2001)

FUTURE SCHEDULE

- FORMULATION OF REGULATIONS FOR PASSENGER VEHICLES COVERING OFFSET FRONTAL IMPACT
- FORMULATION OF REGULATIONS FOR PASSENGER VEHICLES COVERING PROTECTION OF PEDESTRIANS
- MANDATORY INSTALLATION OF HIGH-MOUNT STOP LAMPS ON PASSENGER VEHICLES
- EXPANSION OF SCOPE OF MANDATORY PRESENCE OF ABS IN TRUCKS
- FORMULATION OF REGULATIONS FOR PASSENGER VEHICLES COVERING DRIVER'S FIELD OF VISION

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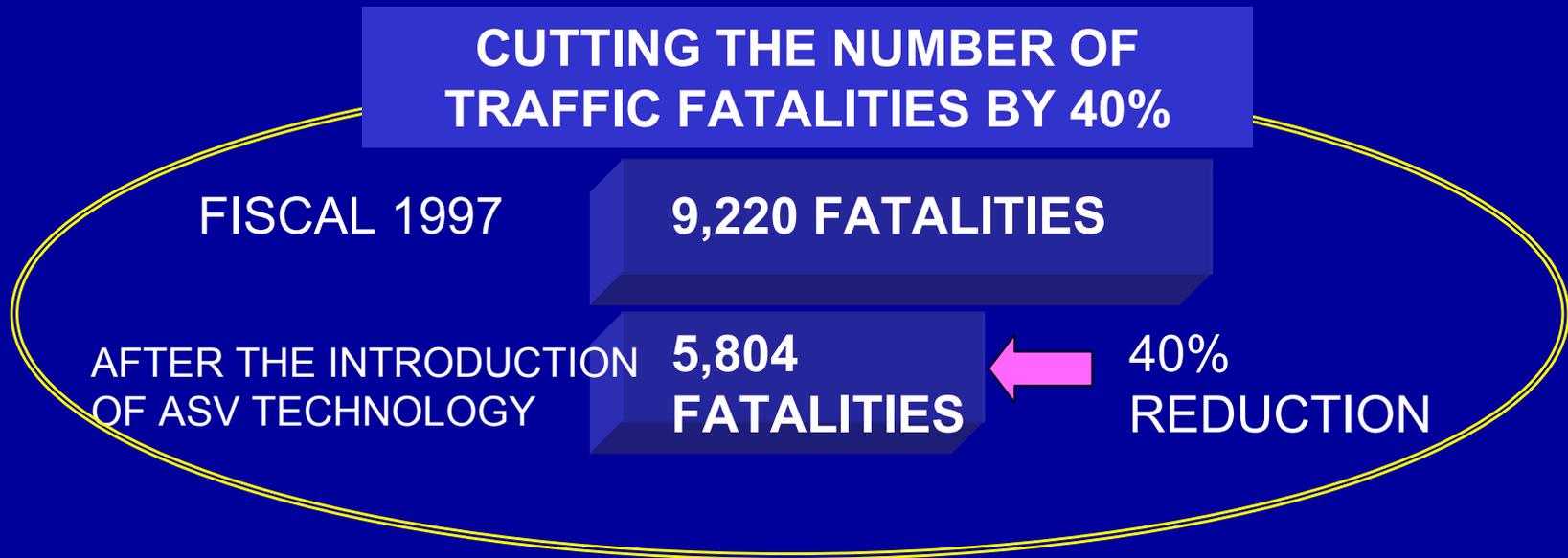
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THE ADVANCED SAFETY VEHICLE (ASV) PROGRAM

- ASV (ADVANCED SAFETY VEHICLE) MEANS TAKING ADVANTAGE OF ADVANCED TECHNOLOGY TO MAKE SAFE VEHICLES WITH HIGHLY INTELLIGENT CAPABILITIES.
- IT IS A PROJECT WITH THE JOINT PARTICIPATION OF INDUSTRY, ACADEMIA, AND THE GOVERNMENT



OUTLINE OF THE PHASE 2 PROGRAM (1996-2000)

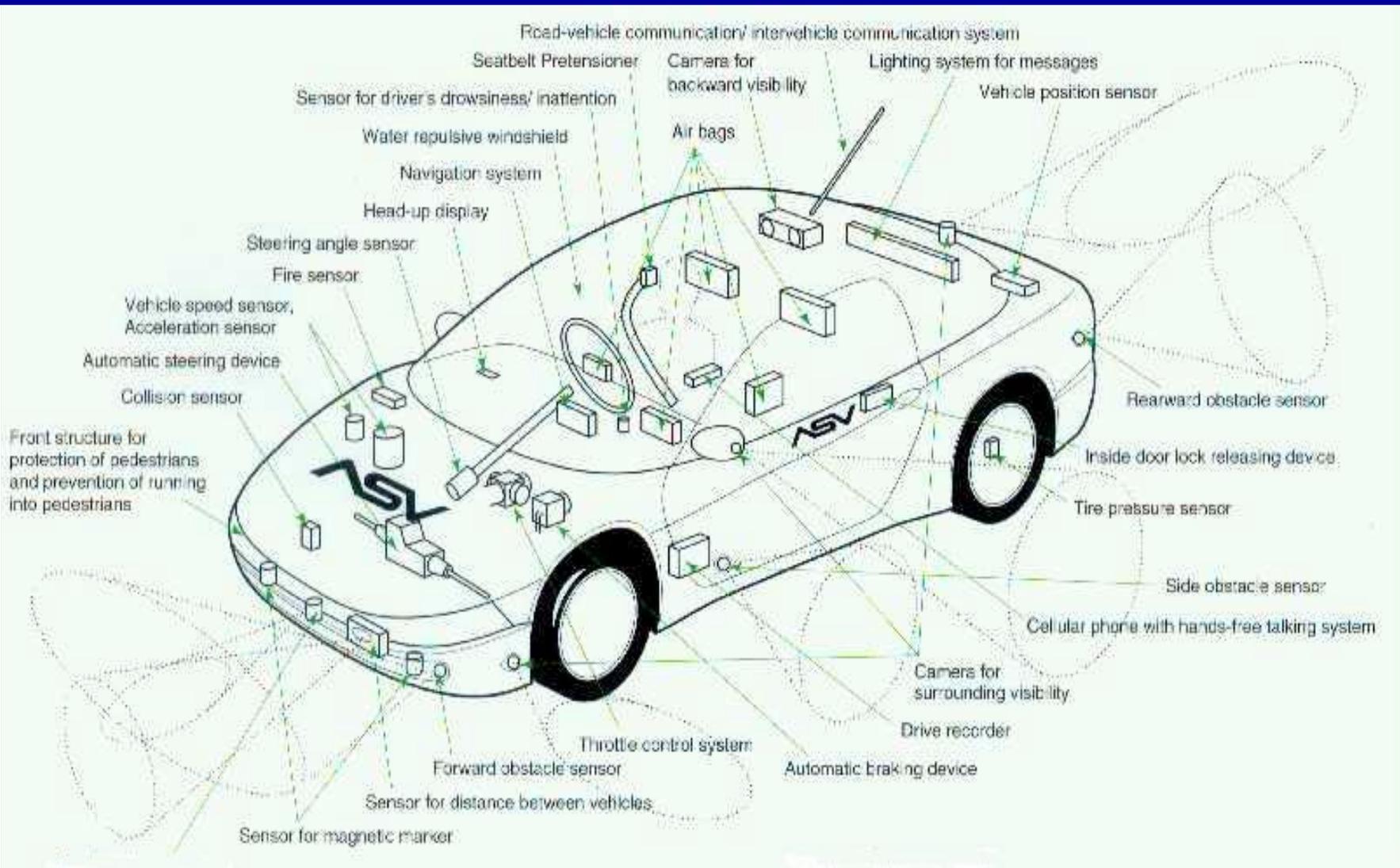
PREPARATION OF A SUITABLE ENVIRONMENT FOR THE PRACTICAL APPLICATION OF ASV TECHNOLOGY

- **BASIC PHILOSOPHY: FORMULATION OF THREE
FUNDAMENTAL PRINCIPLES**
- **FORMULATION OF DEVELOPMENT GUIDELINES
(REGULATIONS COVERING REQUIRED FUNCTIONS)**
- **COORDINATION WITH ROAD INFRASTRUCTURE
(IMPLEMENTATION OF JOINT ASV-AHS TESTING)**

THREE FUNDAMENTAL PRINCIPLES OF THE BASIC PHILOSOPHY

- **PRINCIPLE OF ASSISTING THE DRIVER**
PROVIDE THE MINIMUM NECESSARY
ASSISTANCE WHILE RESPECTING THE DRIVER'S
WISHES.
- **DRIVER ACCEPTANCE**
BE DRIVER-FRIENDLY
- **SOCIETY ACCEPTANCE**
SECURE SOCIAL CONSENSUS

ASV SCHEME



DRIVER ACCEPTANCE

- Human Machine Interface -

- **RESEARCH FOR REALIZATION**

- INFORMATION PRESENTATION

- WARNING

- CONTROL

- **RESEARCH FOR STANDARDIZATION**

- INTEGRATION

- ADAPTATION

- WORKLOAD

- NATURALISTIC BEHAVIOR

ACTIVITIES FOR INTERNATIONAL HARMONIZATION

RESEARCH
ACTIVITIES FOR
REALIZATION

RESEARCH
ACTIVITIES FOR
STANDARDIZATION

International
Harmonization

THE WORLD
FORUM FOR THE
HARMONIZATION
OF VEHICLE
REGULATIONS
(UN/ECE/MP29)

IHRA

ISO

APEC/RTHP

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- **PASSIVE SAFETY**

- FULL FRONTAL CRASH TEST**

- SIDE IMPACT TEST**

- OFFSET FRONTAL CRASH TEST**



OVERALL SAFETY EVALUATION

- **ACTIVE SAFETY**

- BRAKE PERFORMANCE TEST**



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(1) ENCOURAGEMENT OF IHRA

→ IN CHARGE OF THE PROTECTION OF PEDESTRIANS

(2) FULL PARTICIPATION IN THE WORLD FORUM FOR THE HARMONIZATION OF VEHICLES REGULATIONS (UN/ECE/WP29)

(3) ENCOURAGEMENT OF THE MUTUAL RECOGNITION OF CERTIFICATION

→ CURRENTLY APPLYING 17 ECE RULES

**5-6 RULES WILL BE ADOPTED EVERY YEAR
ABOUT 30 RULES BY THE END OF FY 2003**

(4) ENCOURAGEMENT OF THE FORMULATION OF “GTR”S

**→ AIMING TO RESOLVE COMMON ISSUES BY FY 2003
OF DEFINING MOTOR VEHICLE CLASSIFICATION ETC.**