



# ITS Policy in Japan and Smartway

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3. Deployment of safety driving support system.
  - Deployment of safety driving support system using the platform

# 1. Smartway as national policy



## 1) Overall image of ITS

- Adoption of a Comprehensive plan for ITS in July 1996
- Research, development, and practical implementation in nine development areas

1. Advances in navigation systems

2. Electronic toll Collection systems

3. Assistance for safe driving

4. Optimization of traffic management

5. Increasing efficiency in road management

6. Support for public transport

7. Increasing efficiency in commercial vehicle operations

8. Support for pedestrians

9. Support for emergency vehicle operations

# 1. Smartway as national policy



## 2) Strong promotion of ITS as national policy

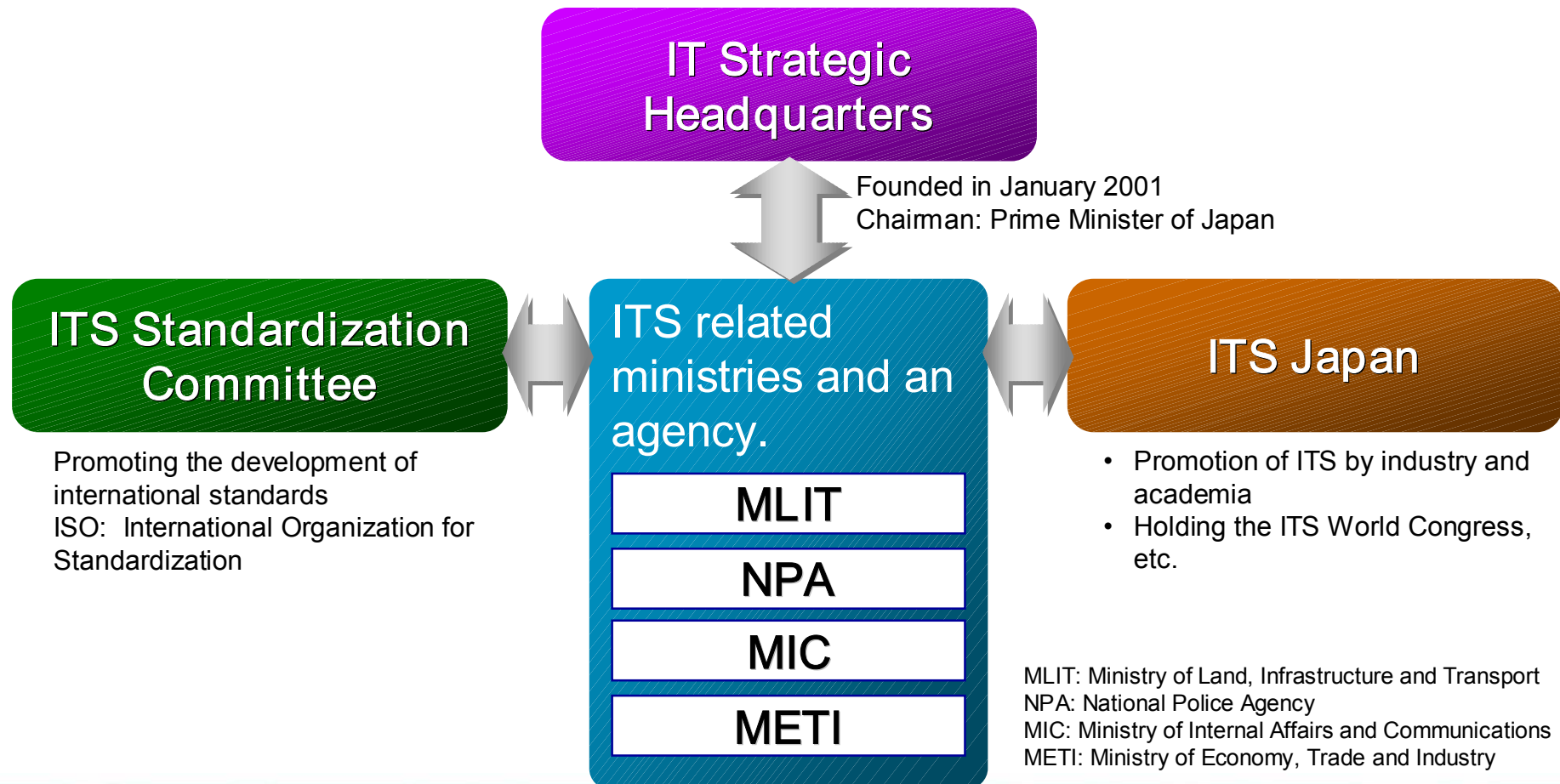
1996	Comprehensive plan for ITS
1996	VICS begun
2001	ETC begun
2004	Smartway proposal “ITS, Second Stage”
2005	IT policy package
2006	New IT Reform Strategy
2007	Smartway 2007
2008	Trials of safety driving support systems throughout Japan
2010	Nationwide deployment

# 1. Smartway as national policy



## 3) Promotion of ITS by industry, academia, and government

- The four ITS-related ministries and agencies are cooperatively promoting ITS, based on the IT Strategic Headquarters.
- ITS Japan and the ITS Standardization Committee are also cooperating in the promotion of ITS.



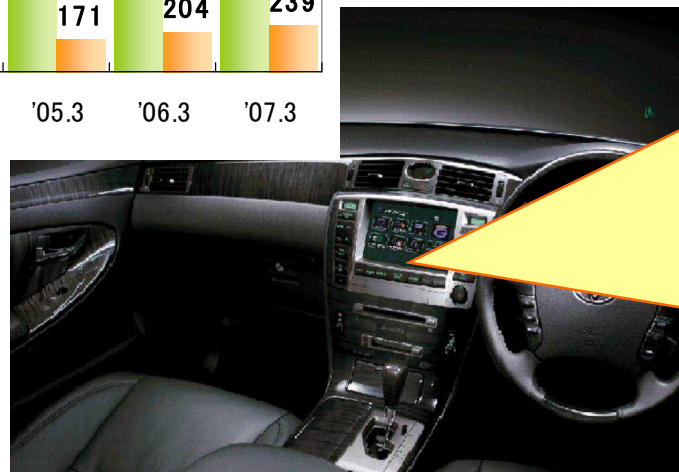
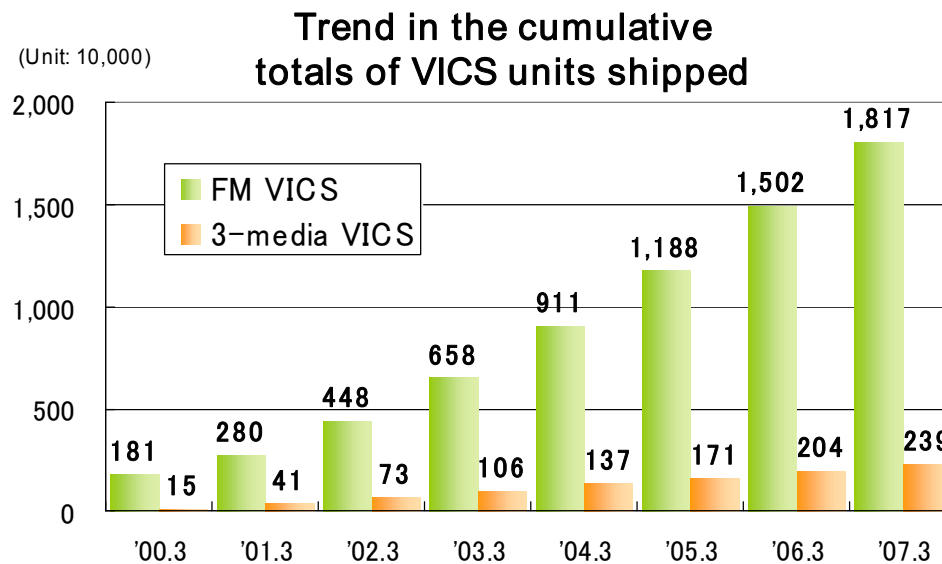


# 1. Smartway as national policy

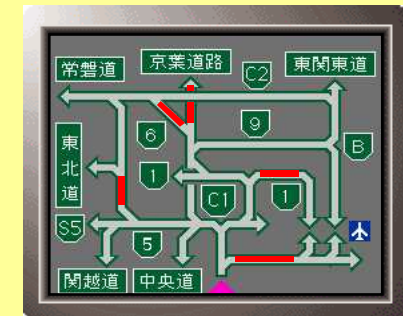


## 4) Spread of VICS

- Started in April 1996
- Provide real-time road traffic information on car-navigation system
- A cumulative total of over 18 million VICS units have been shipped



### Example of Display



Level 2 : Simple diagrams



Level 3 : Map Display

# 1. Smartway as national policy

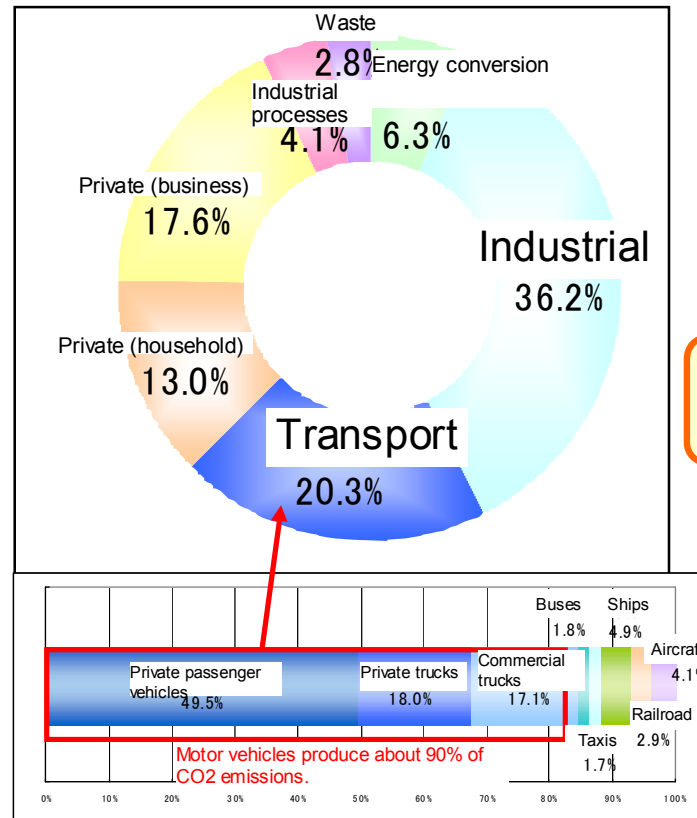


## 5) Effects of the spread of VICS

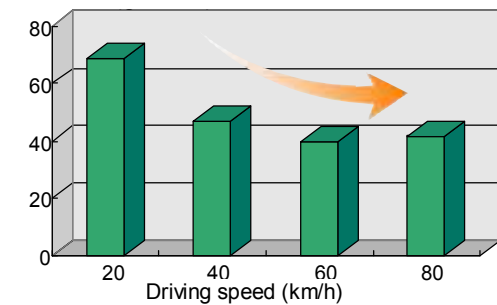
- VICS has reduced carbon dioxide emissions by 2.4 million tons.
- This contributes to attainment of the Kyoto Protocol targets.



### Carbon dioxide emissions of the transport sector



### CO2 emissions –Driving speed



VICS will produce a reduction of 2.4M tons in CO2 emissions by 2010

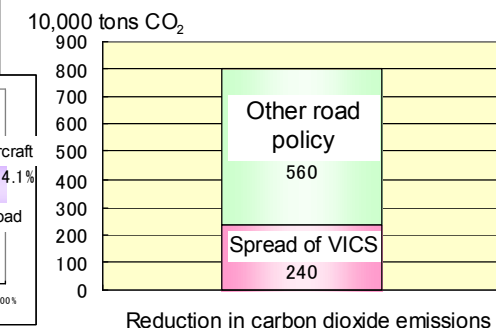


Fig. Reduction in carbon dioxide emissions under road policy

- As of August 30 2007, about 19 million ETC on-board units have been marked in.
- The nationwide utilization rate is 68%. ETC has been used to make highway toll payments totaling 15 billion US dollars.
- The target utilization rate is 80% by next spring





# 1. Smartway as national policy



## 7) Effects of the spread of ETC

- The economic effects are estimated to be annual savings of about 2.7 billion US dollars when the utilization rate reached 50%.
- ETC has had an effect in reducing the environmental burden.

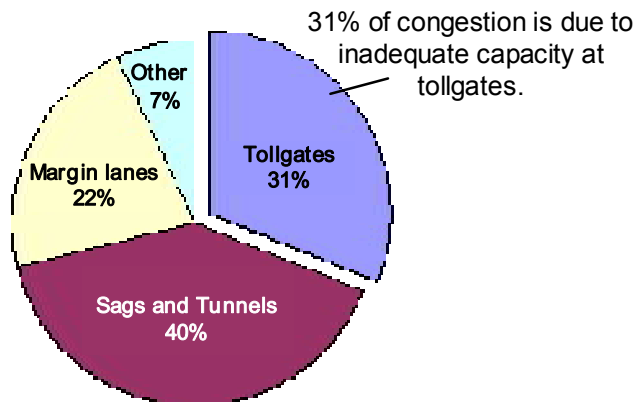


Fig. Causes of congestion on expressways

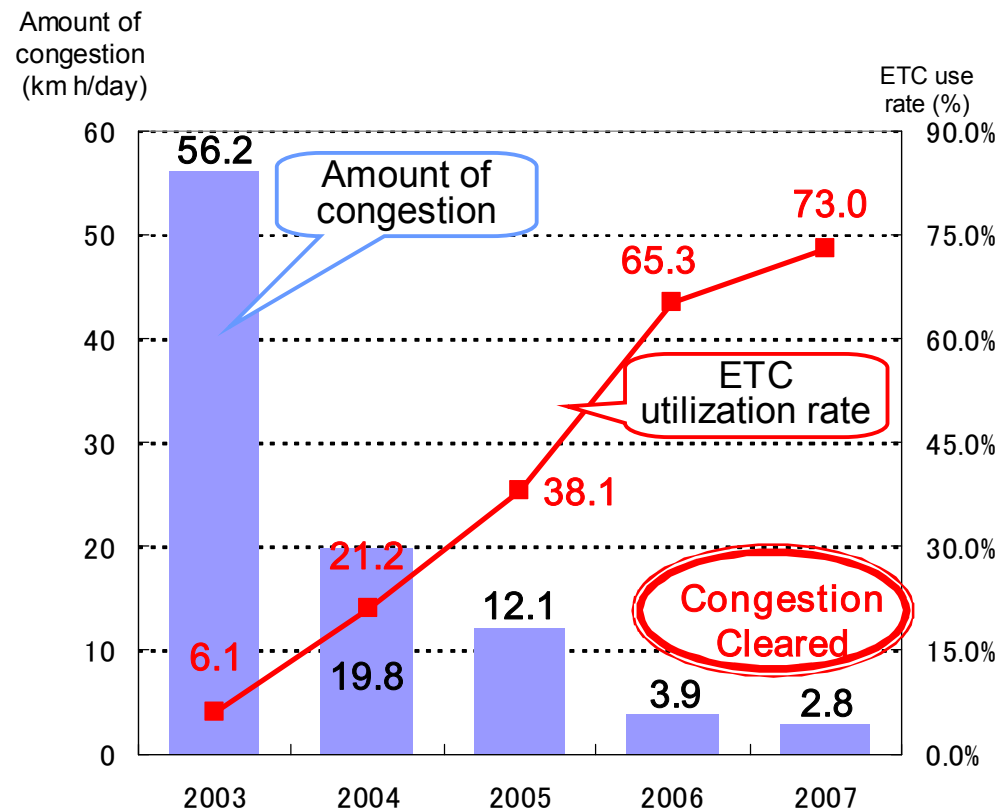


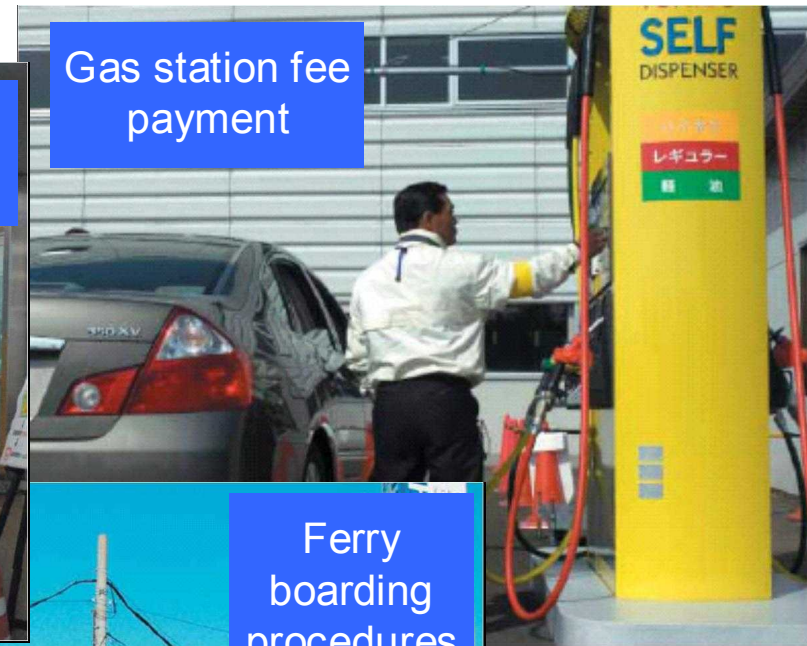
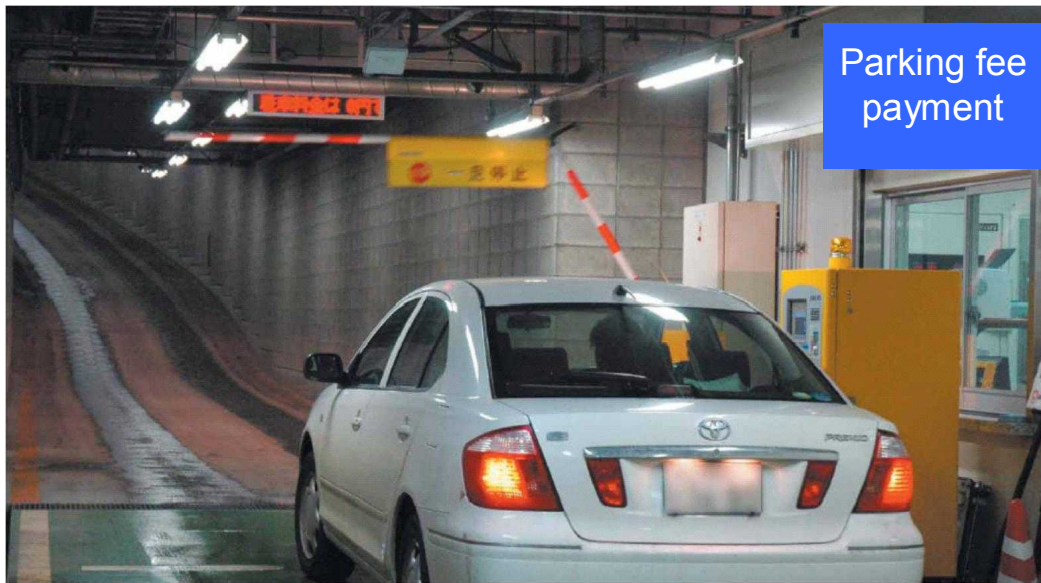
Fig. Status of traffic congestion

# 1. Smartway as national policy



## 8) Payment of public parking fees and private sector services

- Fee payment services in a variety business situations.



## 2. ITS in the second stage



### 1) Definition of Smartway

#### Definition of Smartway

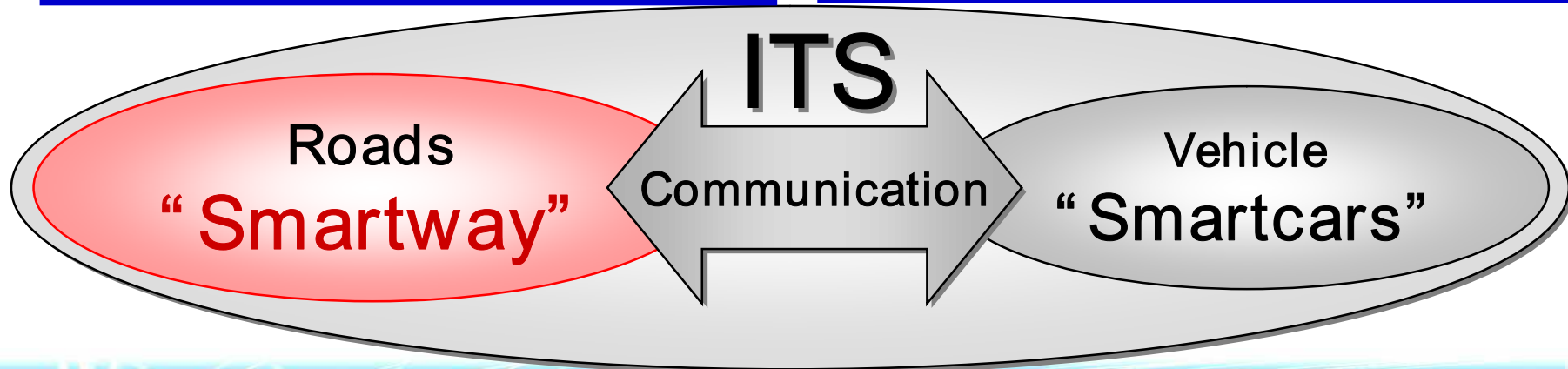
- Smartway refers to a road system that allows the exchange of various types of information among cars, drivers, pedestrians, and other users.

#### Foundation for the deployment of various ITS services

- Integrated realization of ITS to provide safe, smooth road transportation and a positive environment.

#### Foundation for affluence and comfort in life and society

- More efficient movement of people, goods, and information
- Realization of comfortable living spaces
- Building a national infrastructure that provides safety and peace of mind

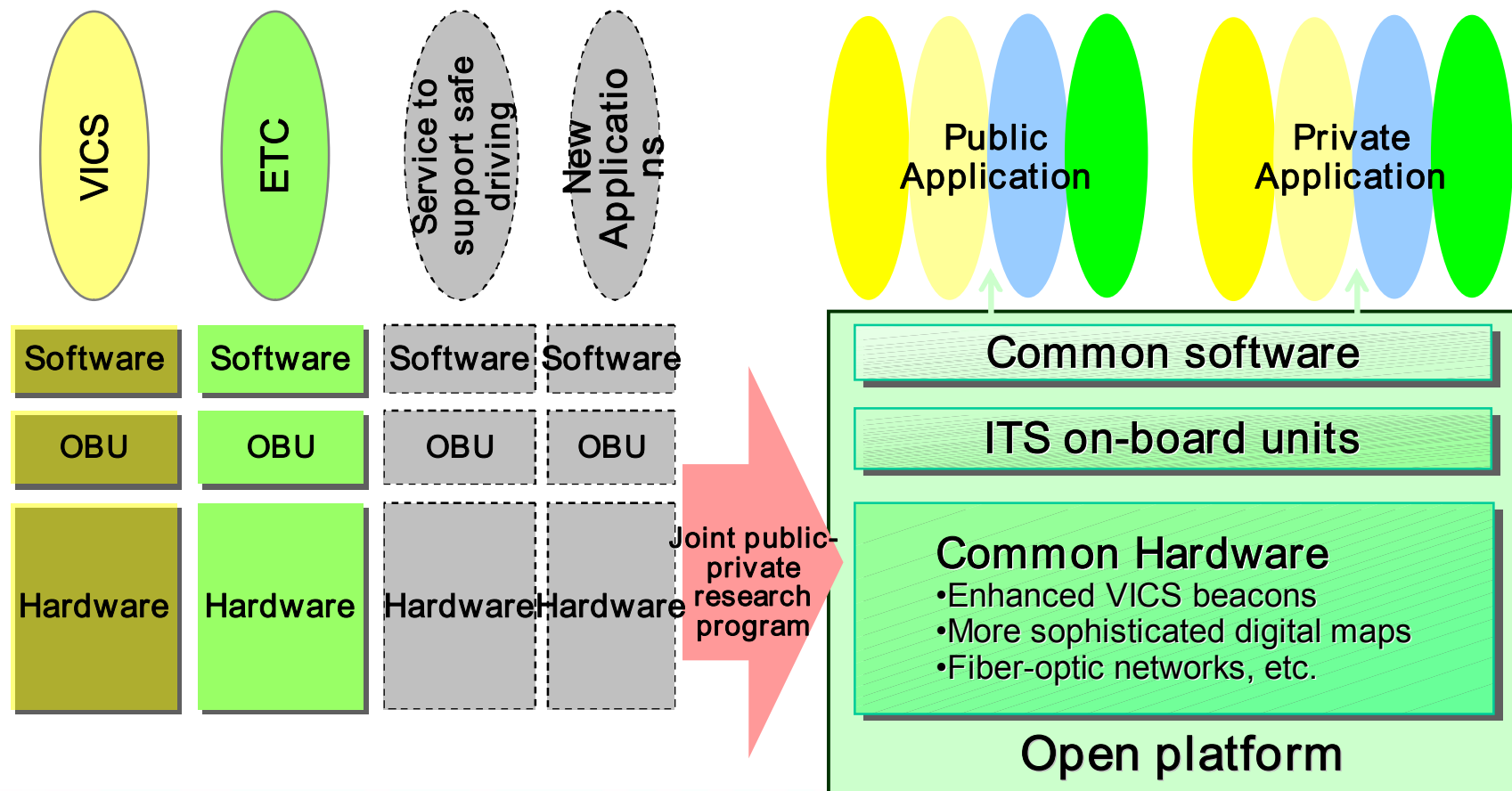




## 2. ITS in the second stage

### 2) Concept of the platform

- A common platform is needed in order to realize various services.





## 2. ITS in the second stage



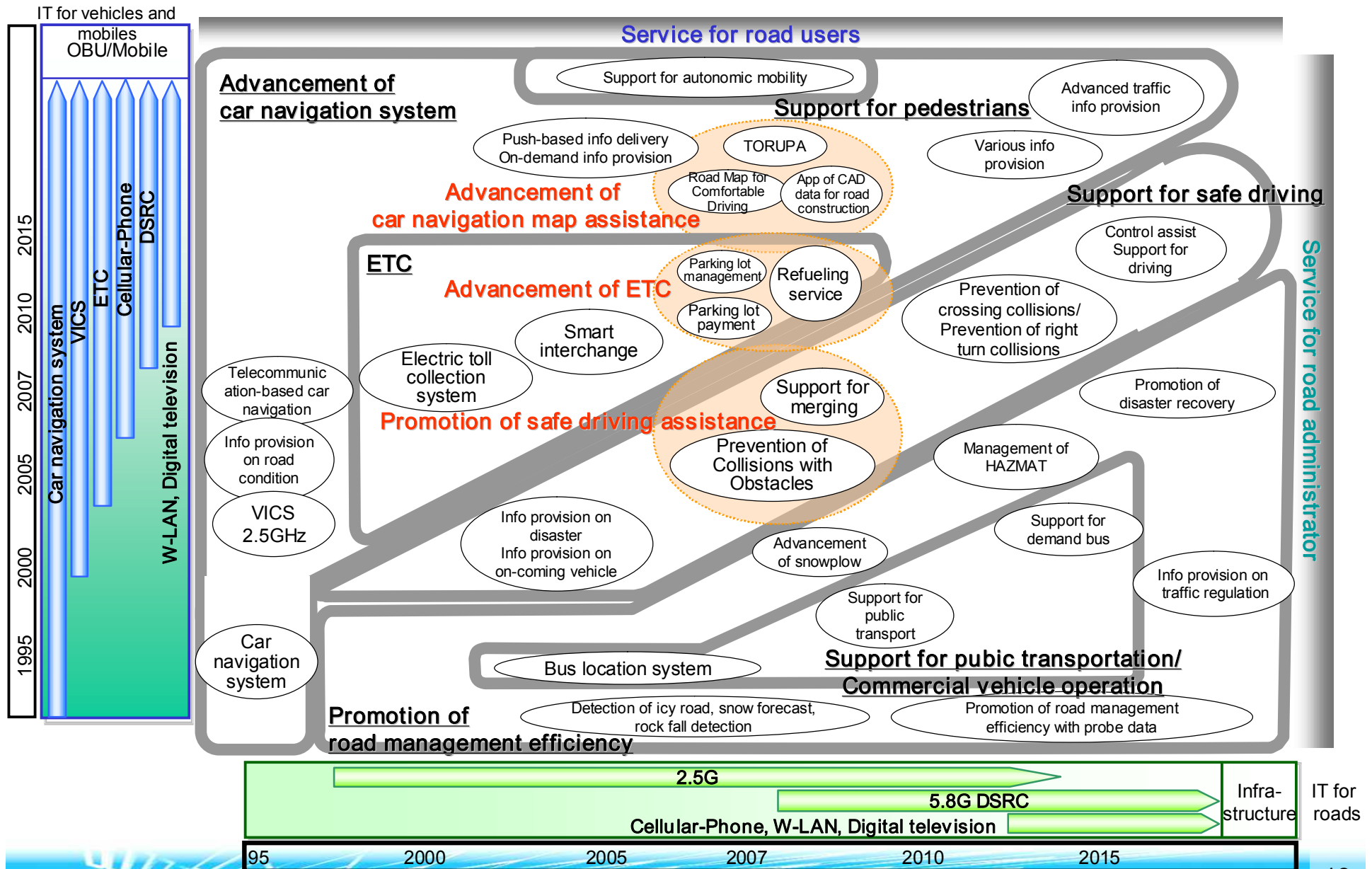
### 3) Smartway Project Advisory Committee

- In August 2004, the Smartway Project Advisory Committee issued a proposal entitled “The Second Stage of ITS” regarding the development of Smartway.
- To promote more rapid development of a variety of services, a common platform is established for ITS services.



## 2. ITS in the second stage

### 4) Directions for Smartway policy



## 2. ITS in the second stage



### 5) Public-private cooperation for platform development

- Public recruiting for joint studies.
- 23 companies are participating, and a cooperative research office has been established.
- A report on joint research for platform development was issued in March 2006.

DEC. 2004  
- Jan. 2005

Public recruiting for joint research



Feb. 2005

Starting joint research program



July 2005

Interim report



Feb. 2006

SMARTWAY DEMO2006



Mar. 2006

Final report



Mar. 2007

Development of standards and specifications



Oct. 2007

Smartway 2007



President Watanabe,  
DSRC Forum Japan

Bureau Manager Taniguchi,  
Road Bureau (past)



Companies participating in government-private joint research



### 3. Nationwide deployment of support for safe driving

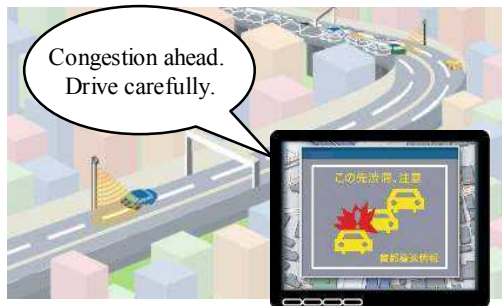


#### 1) Vehicle safety system enters the field operation phase

- Each service will be deployed after test confirming the public acceptance and effects.
- Safety information is also provided by audio data for the vehicle without car navigation system.

#### Services to be deployed

##### Providing information on obstacles ahead



##### Merging assistance

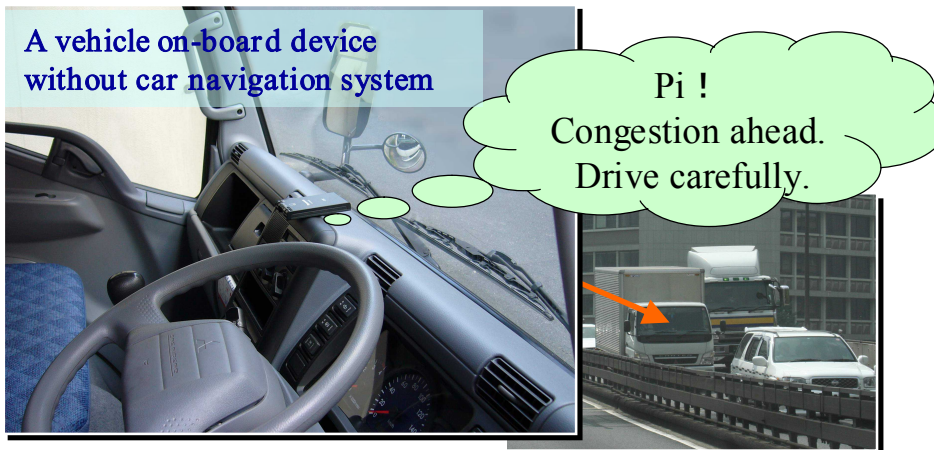


##### Providing information on conditions ahead



#### ITS on-board units

##### A vehicle on-board device without car navigation system



##### A vehicle on-board device with car navigation system





- Field test started on 14 May 2007 at Tokyo Metropolitan Expressway.
- 29 companies cooperate.



### 3. Nationwide deployment of support for safe driving



#### 2) Smartway 2007

- This technical tour will be held in Japan from October 15 to 17, 2007.



Thank you