

# EU wide ITS deployment

*Cooperation with  
stakeholders:  
can EasyWay learn from  
Japan?*

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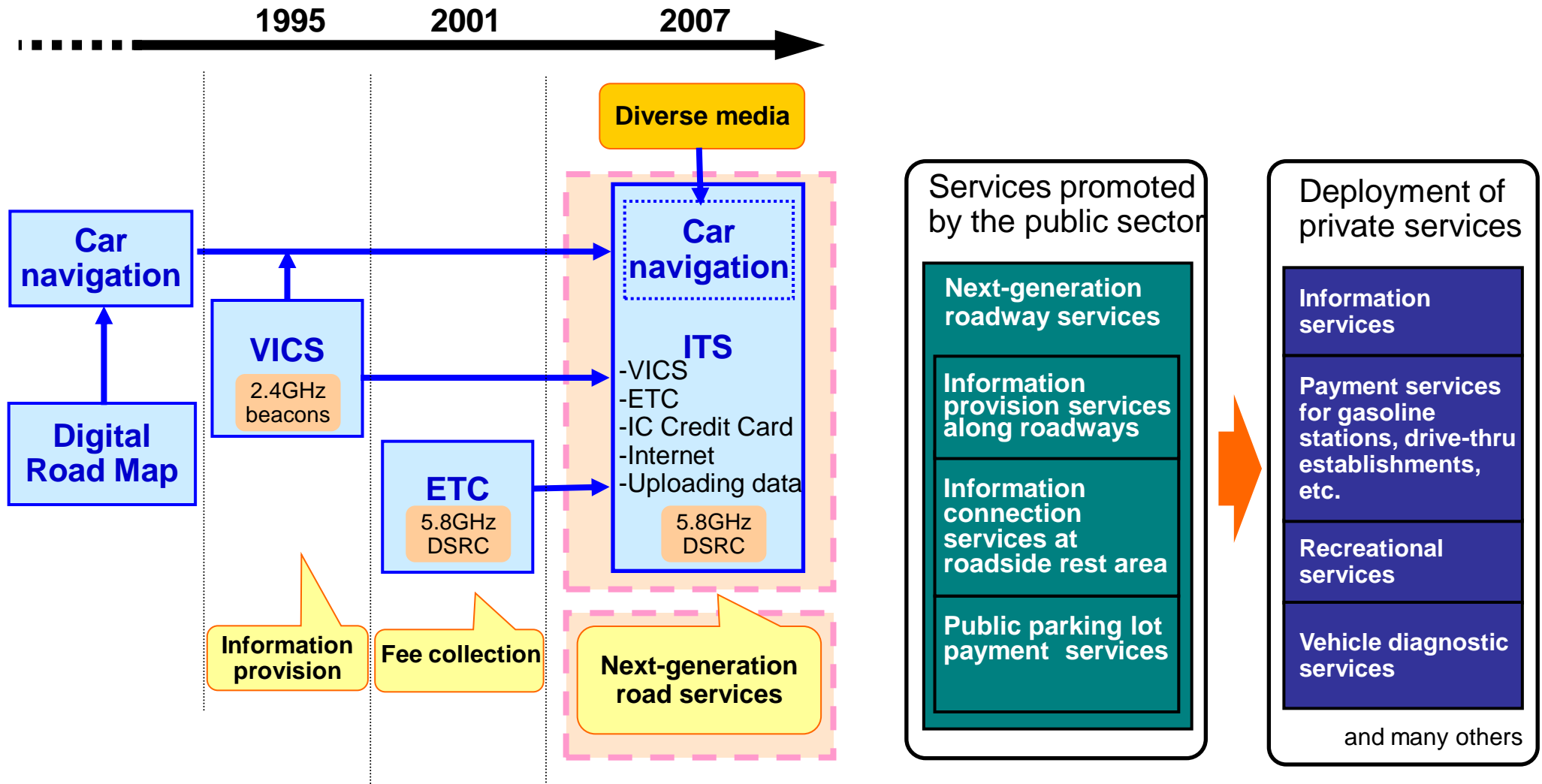
## Overall framework for ITS in Japan

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<b>1996</b>	Overall framework for ITS
<b>1996</b>	VICS service begun
<b>2001</b>	ETC service begun
<b>2004</b>	Smartway Proposal
<b>2005</b>	IT policy package
<b>2006</b>	New IT Reform Strategy
<b>2007</b>	Smartway 2007
<b>2008</b>	Large Scale Trial Verification Test
<b>2010</b>	Nationwide deployment

# Government-Private Sector Joint Research

Research Purpose: Common Platform Development  
Public private partnership

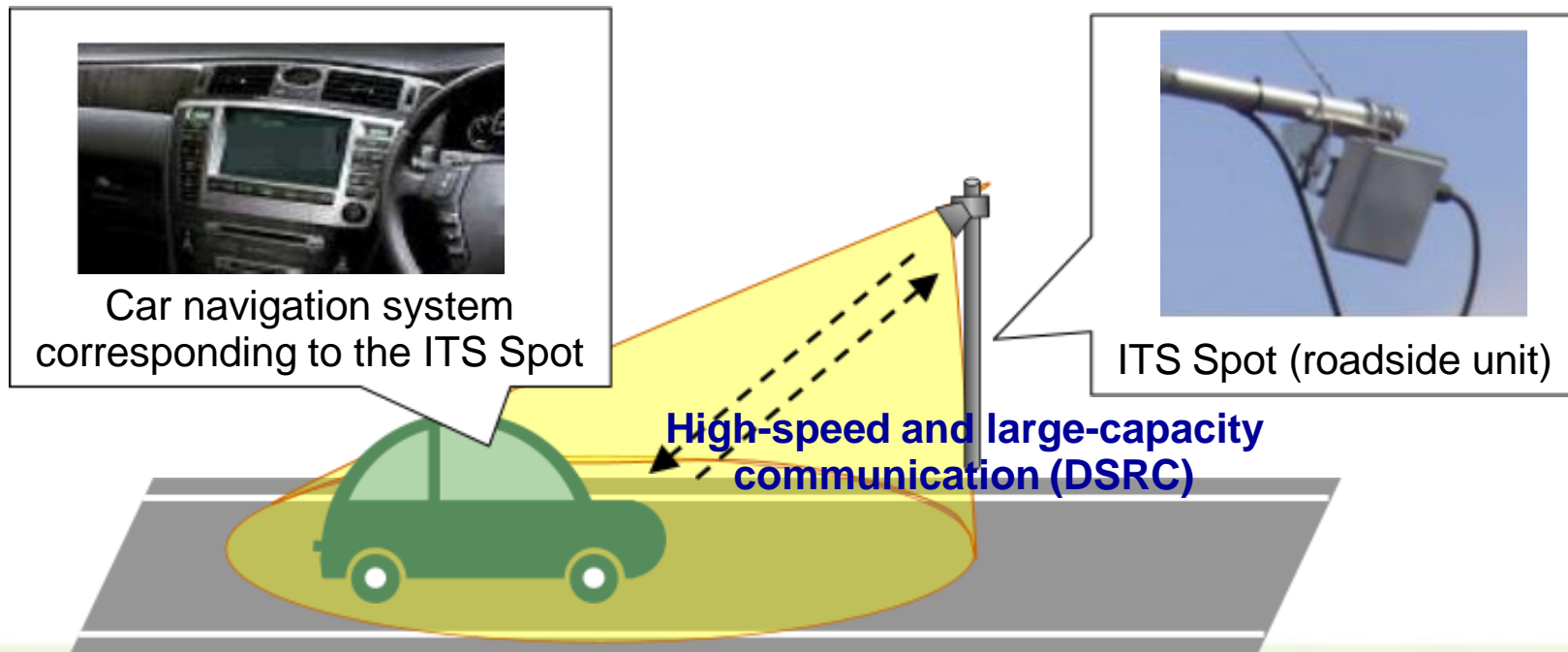


# Expansion of Next-Generation ITS

- Car Navigation system and ETC evolve and integrate, then various services will be realized all in one.
- These services are realized by the high-speed and large-capacity communication (5.8GHz DSRC) between the “ITS Spot” installed on the roadside and the in-vehicle car navigation system corresponding to the ITS spot services
- Various services such as providing wide-area traffic information or image are realized by the high-speed and large-capacity communication

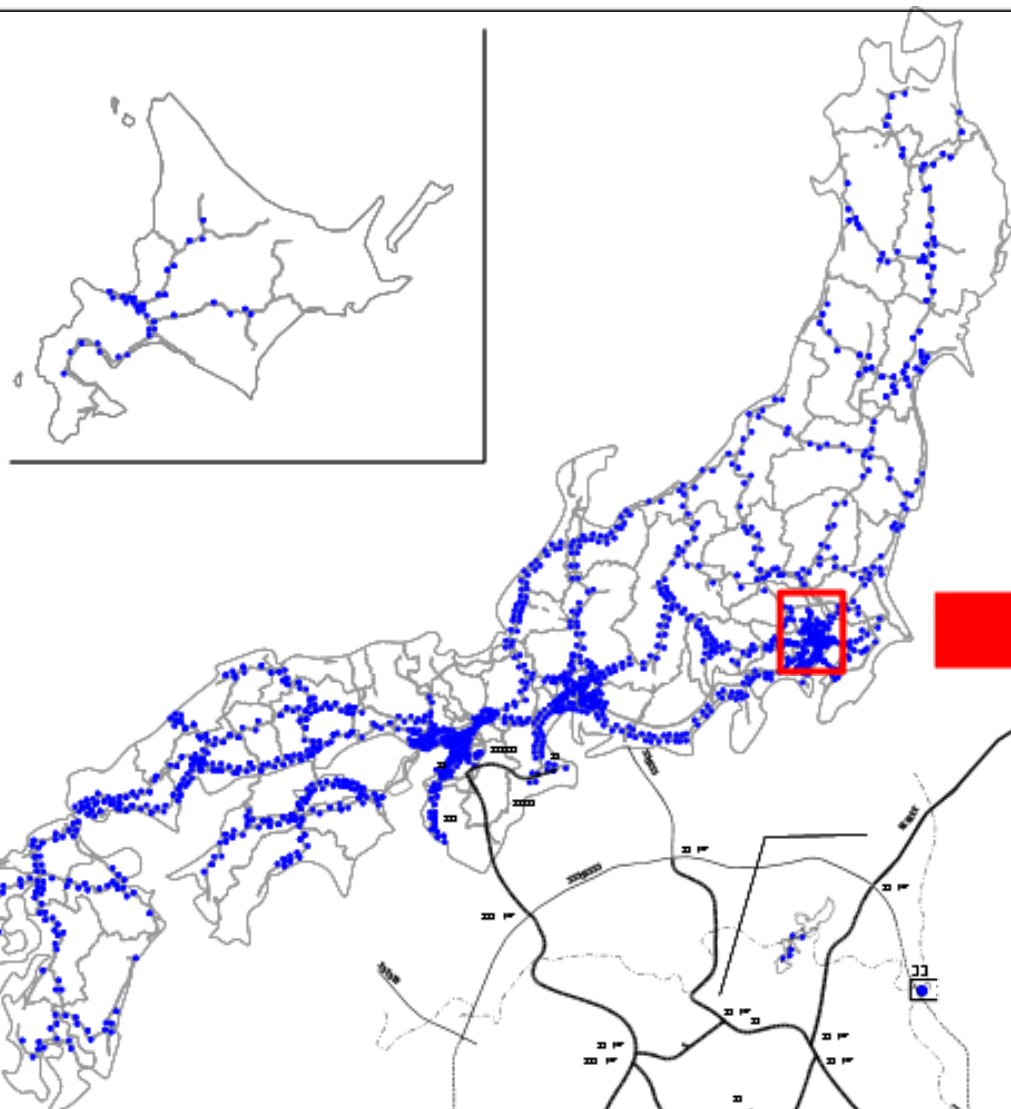
Car navigation system corresponding to ITS spot services have been released on October 2009

ITS spots are deployed nationwide (around 1,600 units are installed mainly on expressways)

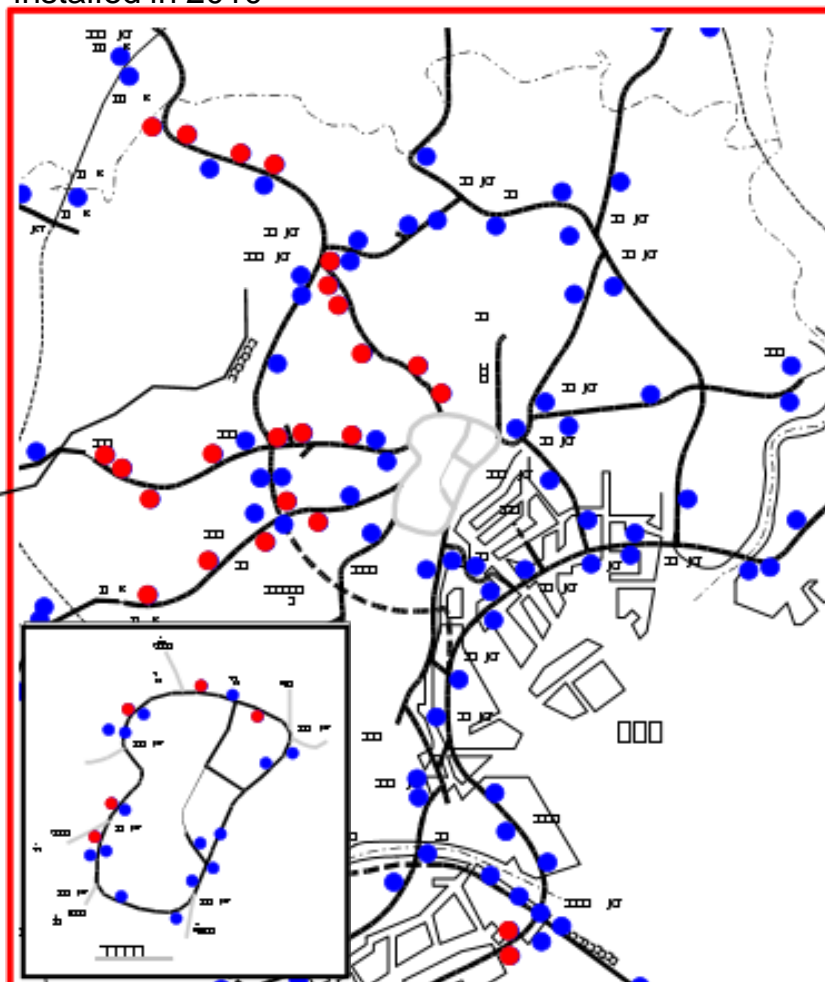


# Deployment of ITS Spots

- Around 1,600 ITS spots are installed mainly on the expressways nationwide
- Around 50 ITS spots are installed at the expressway rest areas including Tomei and Meishin Expressway and Michi-no-Eki (highway rest areas).



For example, on the Tokyo Metropolitan Expressway, 32 ITS spots are installed in FY2009, and 166 ITS spots are installed in 2010



ITS Spot will be installed around every 10 -15 km including the points of before Junction (around 90 points) on the intercity expressways and around every 4 km on the urban expressways

● : in service ● : service will start on the winter in FY2010

# State of Release of Car Navigation System Corresponding to ITS Spot

- 5 manufacturers release car navigation system corresponding to ITS Spot (as of June 2010)
- Around 10 million units will be shipped in 5 years (estimated by ITS Japan)

**Toyota** [released on October 2009]



**Pioneer** [released on October 2009]



**Panasonic** [released on March 2010]



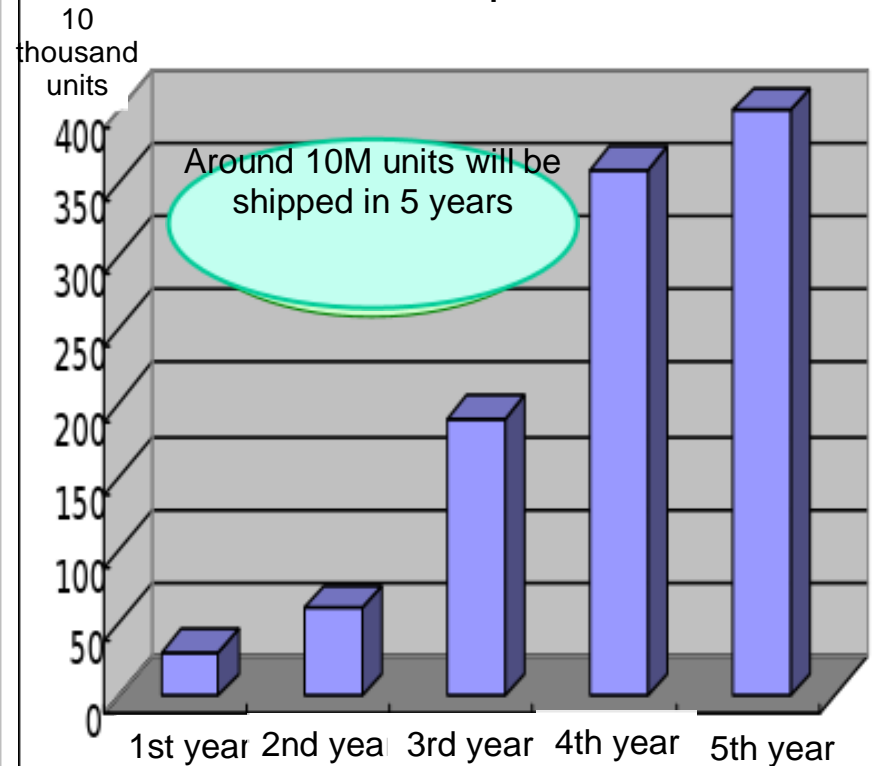
**Mitsubishi Electric Co.** [released on October 2009]



**Mitsubishi Heavy Industries** [released on March 2010]



Popularization Estimate of Car Navigation System Corresponding to ITS Spot



Source: ITS Japan

# New Smartway services (ITS Spot Services) will be launched for comfortable and safety driving.



## ITS Spot Services will be launched after winter of 2010.

- ITS Spot services include three basic services.

### Three basic services

**【Dynamic route guidance】** Smarter route guidance considering wide area road traffic data

**【Safety driving support】** Preventing from scaring drivers by previous cautions

**【ETC】** Electronic Toll Collection

### Other services

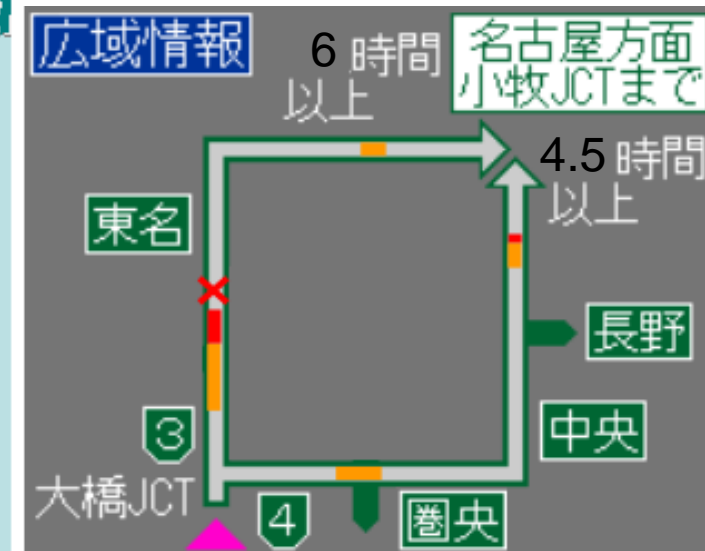
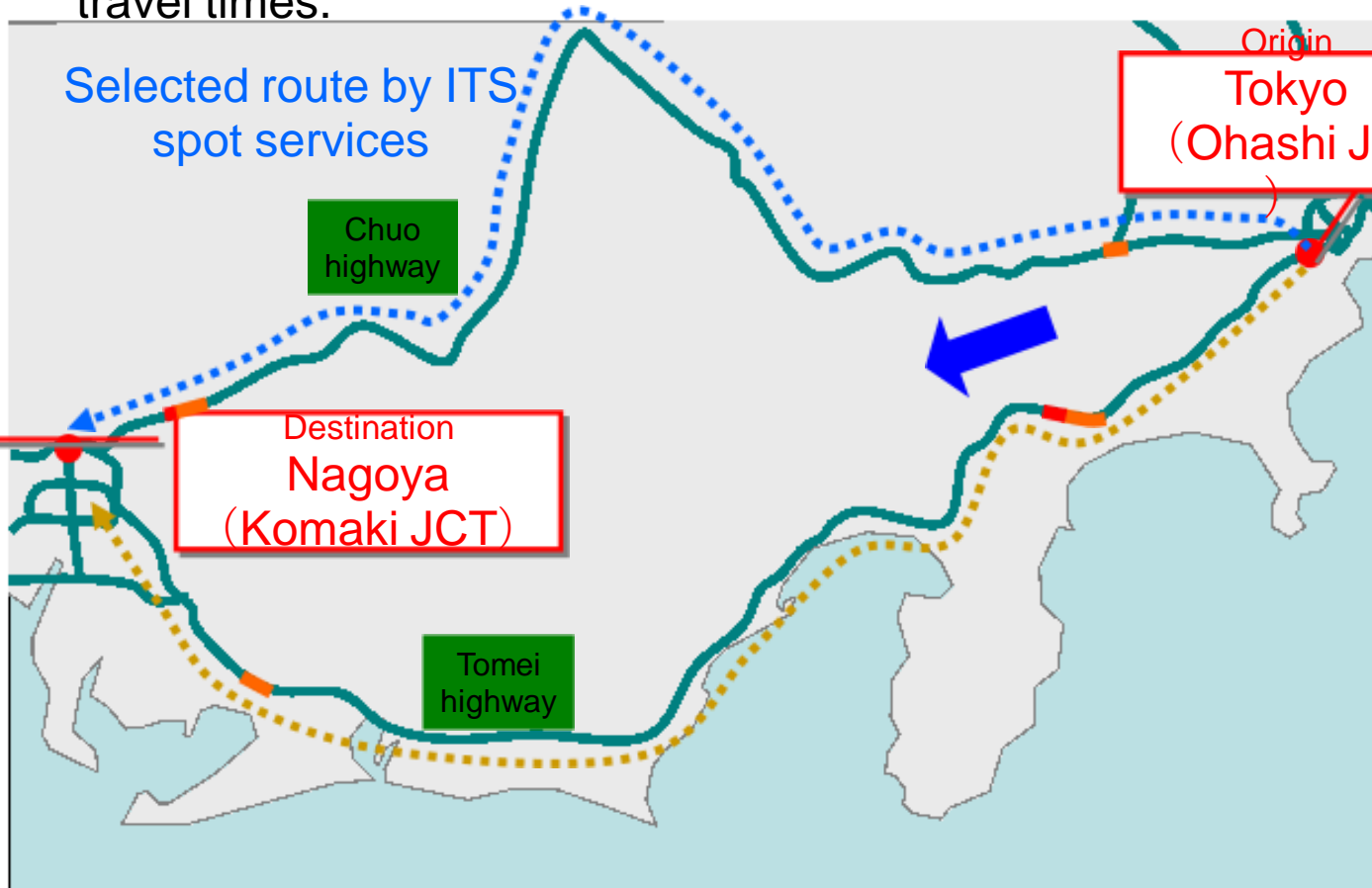
- Access to the Internet at highway rest areas (accepted by some car navigation products)
- Update digital road map database in car navigation system
- **More additional services including fee settlement, sightseeing guidance and commercial vehicle support will be deployed in the future.**

# 【Dynamic Route Guidance】 Smarter Route Guidance Considering Wide Area Road Traffic Data



- Wide area road traffic data beyond the prefectural bounds is provided to car navigation systems by ITS spots (roadside equipments). Car navigation systems enable to select the fastest route considering provided data. Road traffic data will be also provided to drivers by simplified map.

eg. Long distance driving from Tokyo to Nagoya (200 miles), ITS spot provides two alternative highway routes (Tomei and Chuo) and car navigation system shows faster route by both routes' travel times.



Example of Simplified map

Total distance of Tomei and Chuo is about 500 miles.

# 【Safety Driving Support】 Preventing from Scaring Drivers by Previous Caution

- Preventing from scaring drivers by previous cautions to notify obstacles on road, traffic jams beyond curve and so on.
- Traffic jams in tunnels and weather information like snow and fog are also provided by real time picture.

## Cautions of obstacle on road

- ★ In Metropolitan expressway, the number of obstacles is 50,000 in a year. (140 daily, one obstacle every 10 minutes)
- ★ TMC broadcasts caution simultaneously



(Cautions are provided previously)

## Caution to notify traffic jam beyond curve

- ★ 60% of rear-end type collisions have been reduced at Sangubashi Curve.



Traffic jams in tunnels and weather information like snow and fog are provided by real time picture.

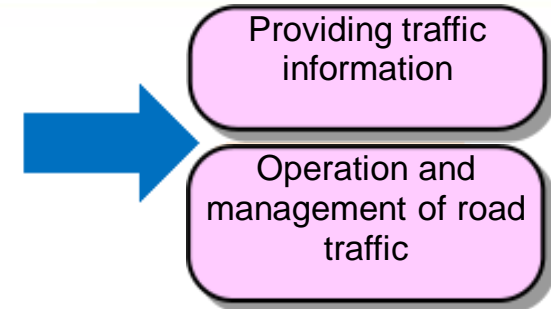


# Collecting and Utilizing Probe Data

## 【Collecting probe data】

Collecting probe data\* from vehicles will enable to get grip on and provide detailed and high accurate traffic information

\*Probe data: vehicle position and speed data which were acquired when each vehicle travelled



## 【existing observation methods】

[travel speed] sectioned vehicle travel speed

[traffic volume] surveyed by manpower – observing once every five years



## 【always and high accurate observation methods using ITS】

[travel speed] collecting actual vehicle travelling time of the observation sections

[traffic volume] observation on 365 days, 24 hours – using traffic count equipment

- Transparency of highly accurate level of service on highways
- Getting grip on the local traffic issues accurately and utilizing it for the low cost and effective countermeasures

# Conclusions and topics for the discussion

- Deploymentstrategie
- Time
- Public Private Partnerships
- Standards and architecture
- Network/member states
- Services and Goals
- Added value for the user
- Data, monitoring and evaluation



**Thank you for your  
attention**