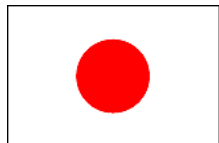


The progress of EST in Japan towards achieving the goals under the Bangkok 2020 Declaration

December 4, 2011

Ministry of the Environment and
Ministry of Land, Infrastructure, Transport and Tourism
Japan



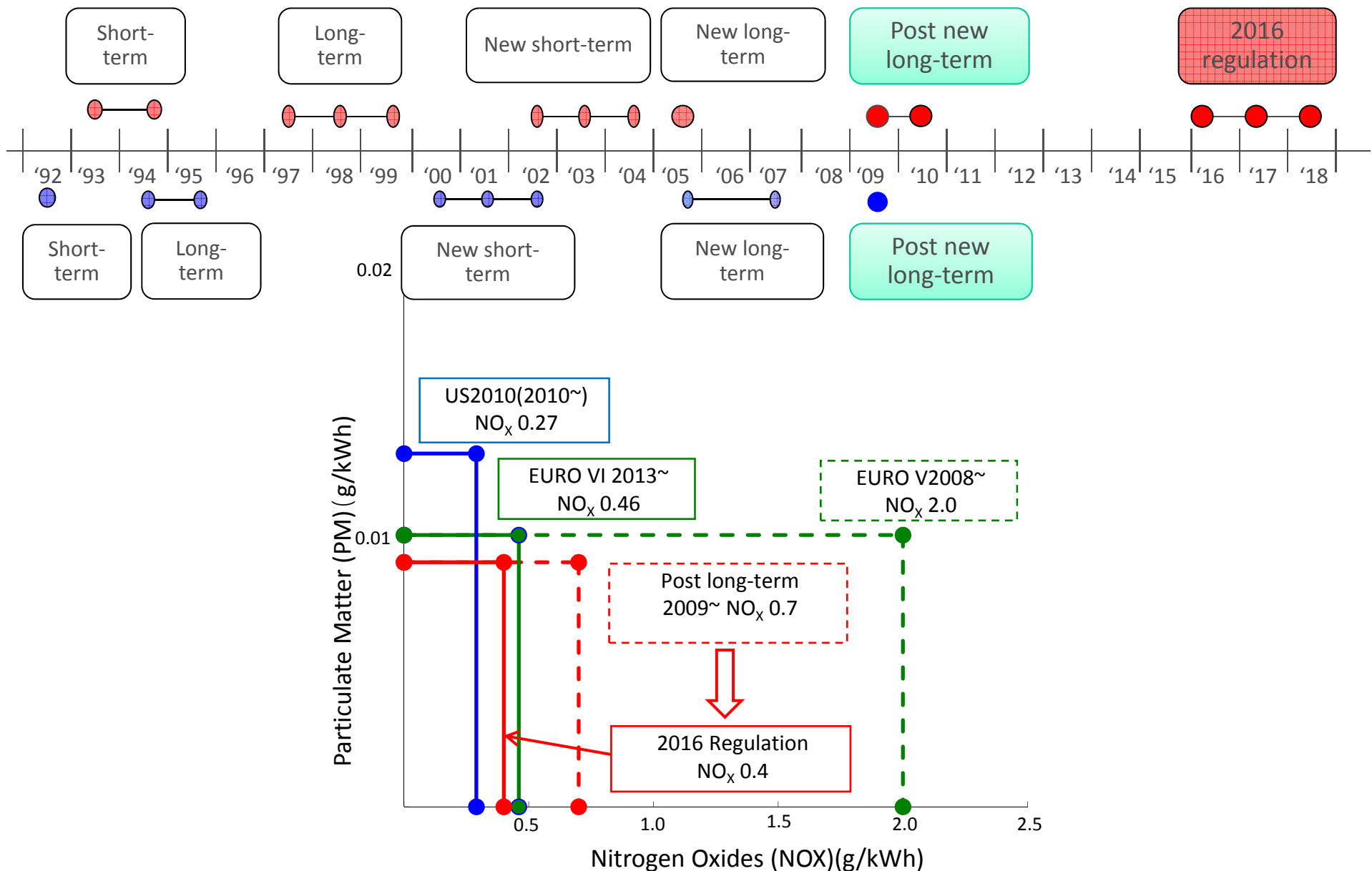
Structure

1. The recent progress of EST policy, measures and projects
2. EST policy, measures and projects towards 2012 and after
3. Recommendation of the Japanese government towards green economy

1. The recent progress of EST policy, measures and projects

- ❑ Strengthening of exhaust gas regulation for motor vehicles; Goal 9, 14
 - ❑ Introduction of regulation in 2016
 - ❑ Exhaust gas regulation for off-road special vehicles
- ❑ Promotion of the next generation vehicles ; Goal 8, 16
 - ❑ Release of next generation vehicles
 - ❑ Install of battery charging facilities for electric vehicles
- ❑ Upgrade of public transport system; Goal 2, 5
 - ❑ Upgrade of public transport interchange
- ❑ ITS Spots ; Goal 11

Strengthening of exhaust gas regulation for motor vehicles



Diesel heavy cars (e.g. trucks or buses exceeding the gross vehicle mass of 3.5 tons)

Exhaust gas regulation for off-road special vehicles

- ❑ Special motor vehicles account for the significant portion of NO_x and PM emissions although the number represents only a few percent of all vehicles.
- ❑ Designation of engine models started in 2006. Emission regulations will be tightened in 2011 and 2014.



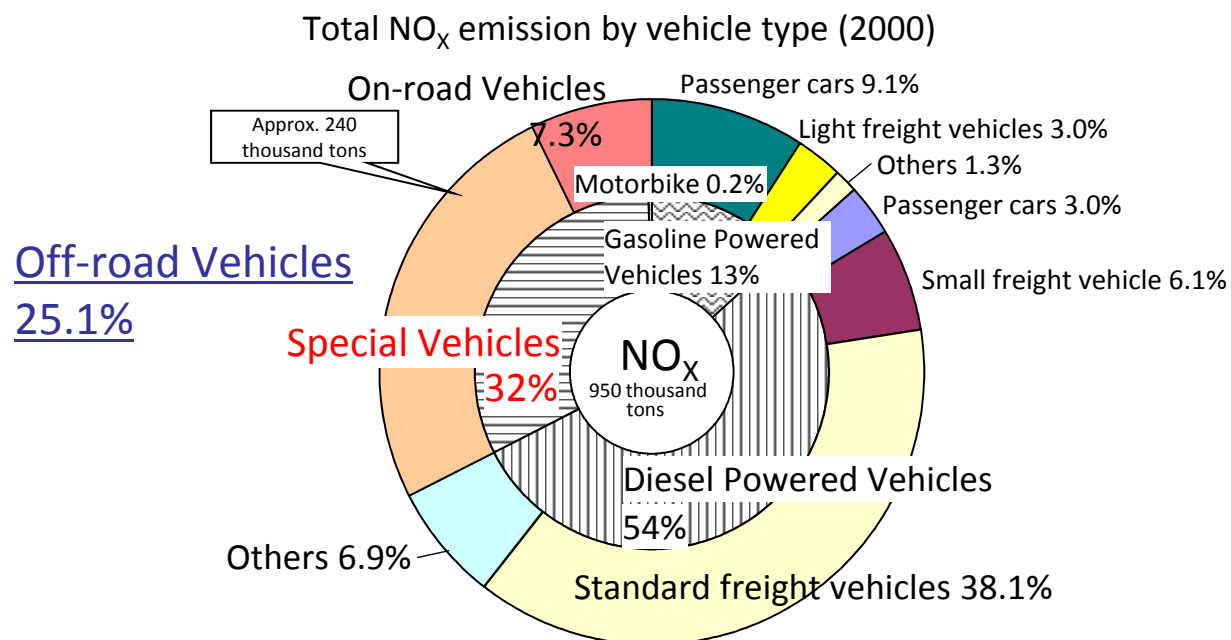
Construction vehicles



Industrial vehicles



Agricultural vehicles



Example of 2014 regulations [in g/kWh]

Rated output	NMHC		NO _x		PM	
	Before revision	After revision	Before revision	After revision	Before revision	After revision
130kW or more but less than 560kW	0.40	0.19 (-53%)	3.60	2.0 (-44%)	0.17	0.02 (-88%)

Promotion of the next generation vehicles (released to the market)

- Along with hybrid vehicles, natural gas (CNG) vehicles and clean diesel vehicles, electric vehicles and plug in hybrid vehicles were released in the Japanese market. Japanese government is aimed to spread these vehicles by providing subsidies for the introduction.



iMiEV
【Mitsubishi Motors】



Plug-in Stella
【Fuji Heavy Industries】



Leaf
【Nissan】



Prius Plug-in Hybrid
【Toyota】



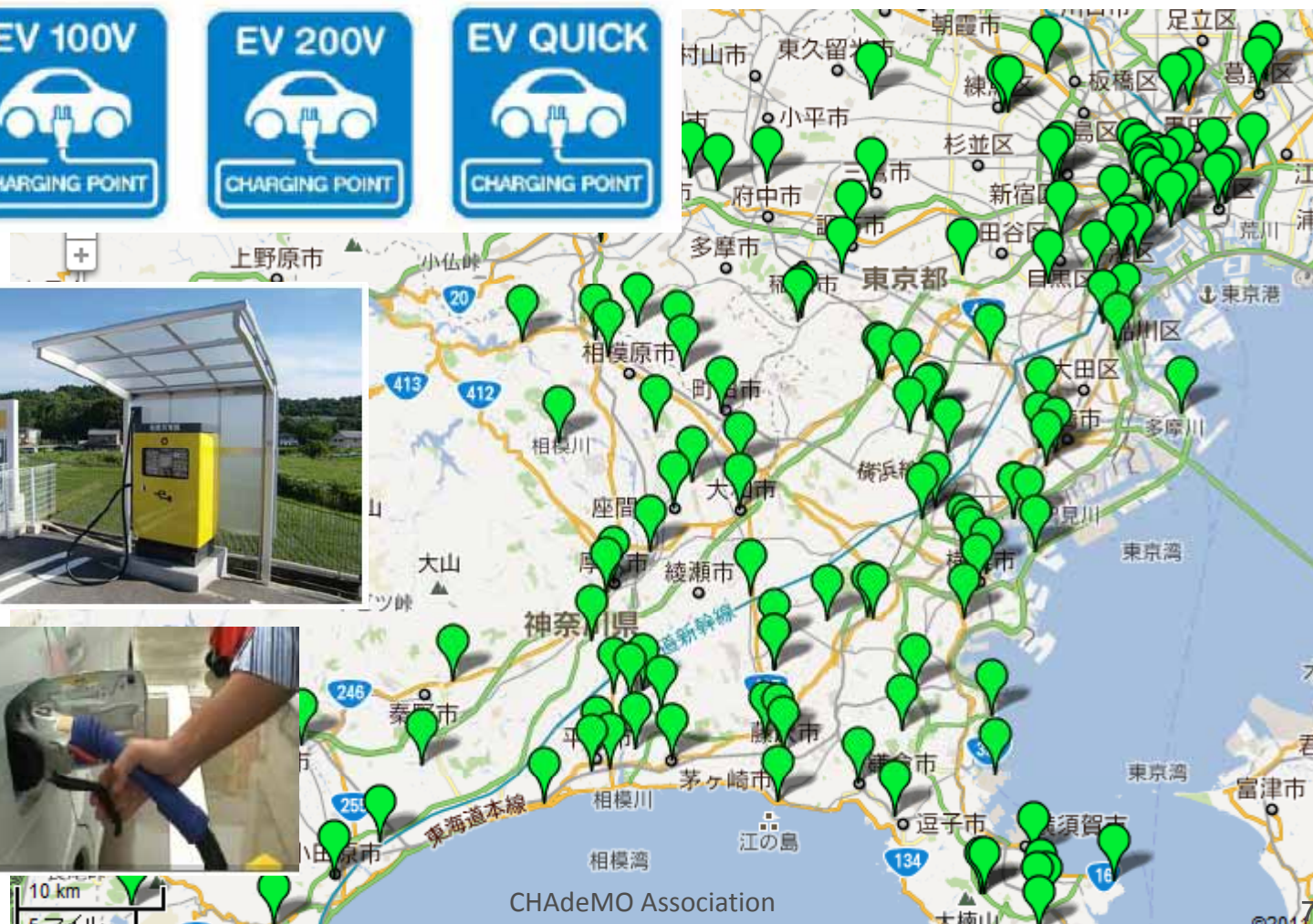
Swift Plug-in Hybrid
【Suzuki】



FCX Clarity (Fuel battery)
【Honda】

Promotion of the next generation vehicles (Install of battery charging facilities)

- ❑ A quick charger charges the capacity of about 80% in 30 minutes.
- ❑ Quick chargers have been installed in 947 sites in Japan (as of Nov. 2011).
- ❑ Subsidies for quick chargers are available.

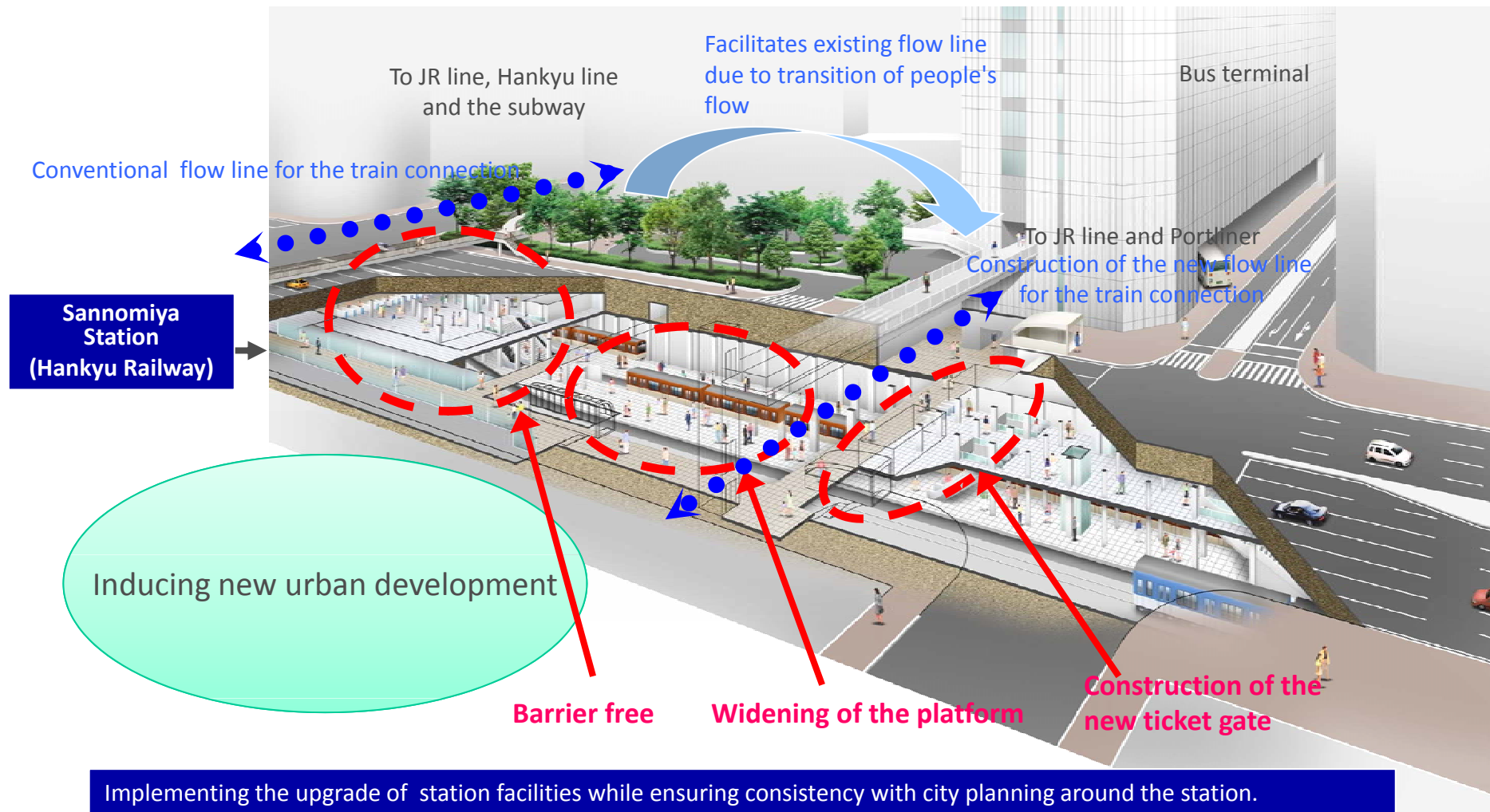


Photos Provided by MLIT

CHAdeMO Association

Upgrade of public transport system (Upgrade of public transport interchange)

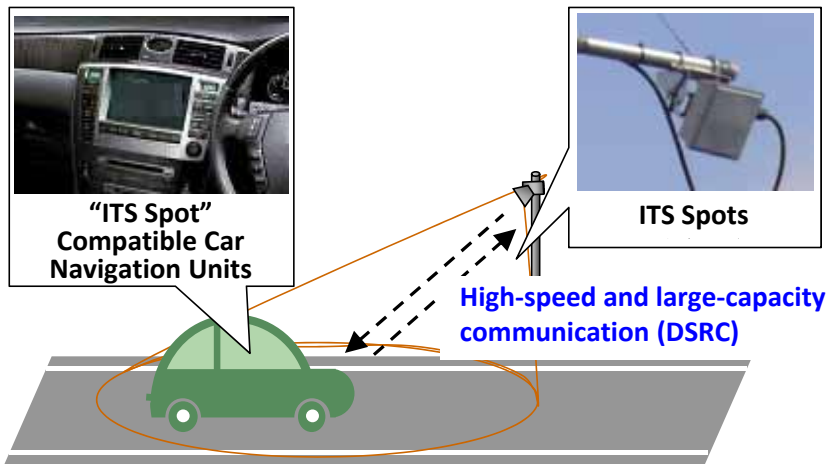
- ❑ The convenience of public transport will improve by installing barrier free and facilitating the flow of people.
- ❑ The access to surrounding commercial facilities will become easier and create bustling community by upgrading public transport interchange in the city, while ensuring consistency with city planning.



ITS Spots

- ❑ “ITS Spots”, which are a cooperative vehicle-highway system used on Smartways have been installed at about 1,600 locations throughout Japan, reaching the practical application stage nationwide in August 2011.
- ❑ Two-way high volume communications by DSRC provide a variety of services including wide-area road traffic information, driving safety support, and probe information collection.

“ITS Spot” compatible car navigation systems went on sale in the fall of 2009



3 Basic Services

- Dynamic Route Guidance
- Safety Driving Support
- ETC

“ITS Spots” have been installed at about 1,600 locations, mainly on expressways.



2. EST policy, measures and projects towards 2012 and after

- ❑ New objectives for the reduction of NO_x and PM emission ; Goal 9, 14
- ❑ New objectives for the barrier-free transportation ; Goal 17
- ❑ Reconstruction from the Great East Japan Earthquake and Tsunami ; Goal 1, 2

New objectives for the reduction of NO_x and PM emission

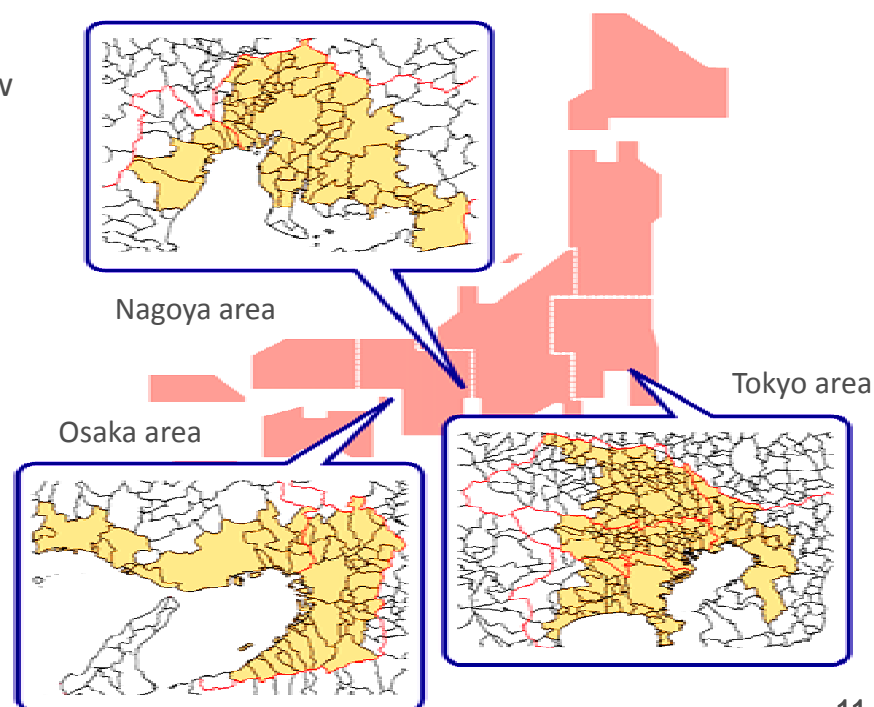
□ The exhaust gas from vehicles became serious after 1980's due to rapid spread of vehicles.

- ✓ Intensive measures were required especially in the big city with developed urbanization.
- ✓ Based on Law Concerning Special Measures for Total Emission Reduction of NO_x and PM set in 2000, the objectives for NO₂ and SPM were set to achieve environmental quality standard until 2010.

• Achievement rate of EQS for NO ₂ (FY1999)	APMSs ^{*1}	95%	*1) Ambient air pollution monitoring stations
	RAPMS ^{*2}	<u>59%</u>	*2) Roadside air pollution monitoring stations
• Achievement rate of EQS for SPM (FY1999)	APMSs	90%	
	RAPMS	<u>76%</u>	

□ Major provisions implemented for vehicle emission until now

- ✓ Regulations for vehicle categories in specified areas
- ✓ Local pollution measure
- ✓ Measures against influx of vehicles
- ✓ Tighter control on vehicle emission
- ✓ Promotion of low-emission vehicles
- ✓ Traffic flow measures such as TDM
- ✓ Expansion of the road capacity
- ✓ Promotion of Eco Driving



New objectives for the reduction of NO_x and PM emission

- The environmental quality standard for NO₂ and SPM were almost achieved by 2010.

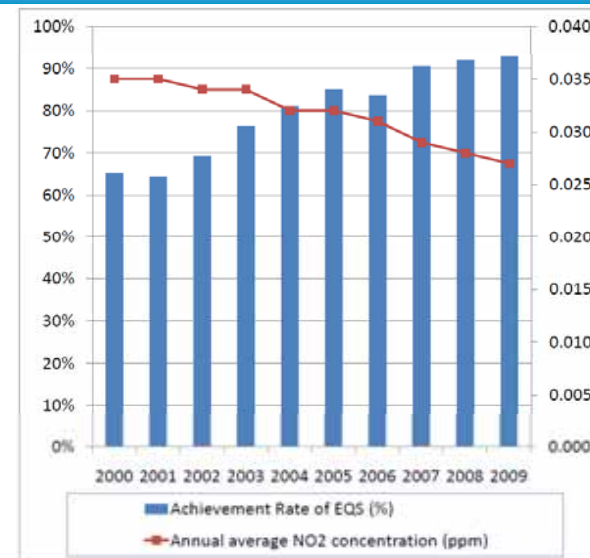
✓ Achievement rate of EQS for NO ₂	APMSs	100%
(FY2009)	RAPMs	93%
✓ Achievement rate of EQS for SPM	APMSs	100%
(FY2009)	RAPMs	100%

- New objectives towards 2020

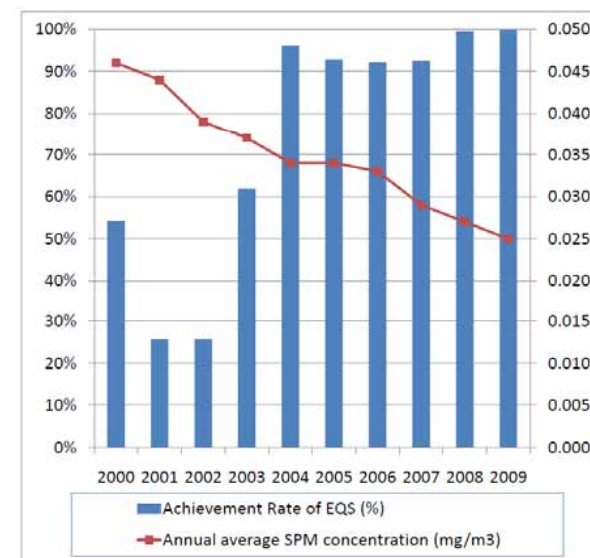
- ✓ Achieve EQS for NO₂ and SPM in all monitoring stations by 2015,
and ensure EQS in all area needing measures by 2020.

- Major provisions for the new objectives

- ✓ Ensure consistency with various plans for the development by cooperating with city planning departments and agencies.
- ✓ Promote local pollution measure.
- ✓ Improve cooperation between national government, local governments and private companies.



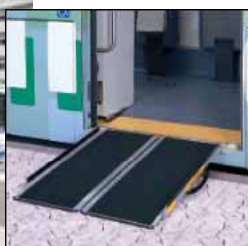
Achievement rate and annual average regarding NO₂ in specific area



Achievement rate and annual average regarding SPM in specific area

New objectives for the barrier-free transportation

- ❑ Objectives for the barrier-free in the transport facilities were set in 2000 and promoting installation of barrier-free in railway, bus and the roads.
- ❑ New objectives to 2020 were set at higher level to deal with change of social conditions surrounding elderly and people with disabilities.
- ❑ Recommend various supports to people with disabilities including support to sight restricted people and people with developmental disabilities who have disabilities for information.



Objectives for the barrier-free in major transport facilities

		Current status (FY2010)	Goals(2020)
Railway	Eliminating level difference in the stations	78%	100% ^{*1}
	Eliminating level difference of the train	50%	70%
Bus	Eliminating level difference in the bus terminals	83%	100% ^{*2}
	Introduction rate of non step buses	36%	70%
Taxi	Number of welfare taxis to be introduced	12,256	28,000
Road	Eliminating level difference in major community roads	77%	100%

*1) Stations with more than 3,000 users. *2) Terminals with more than 3,000 users

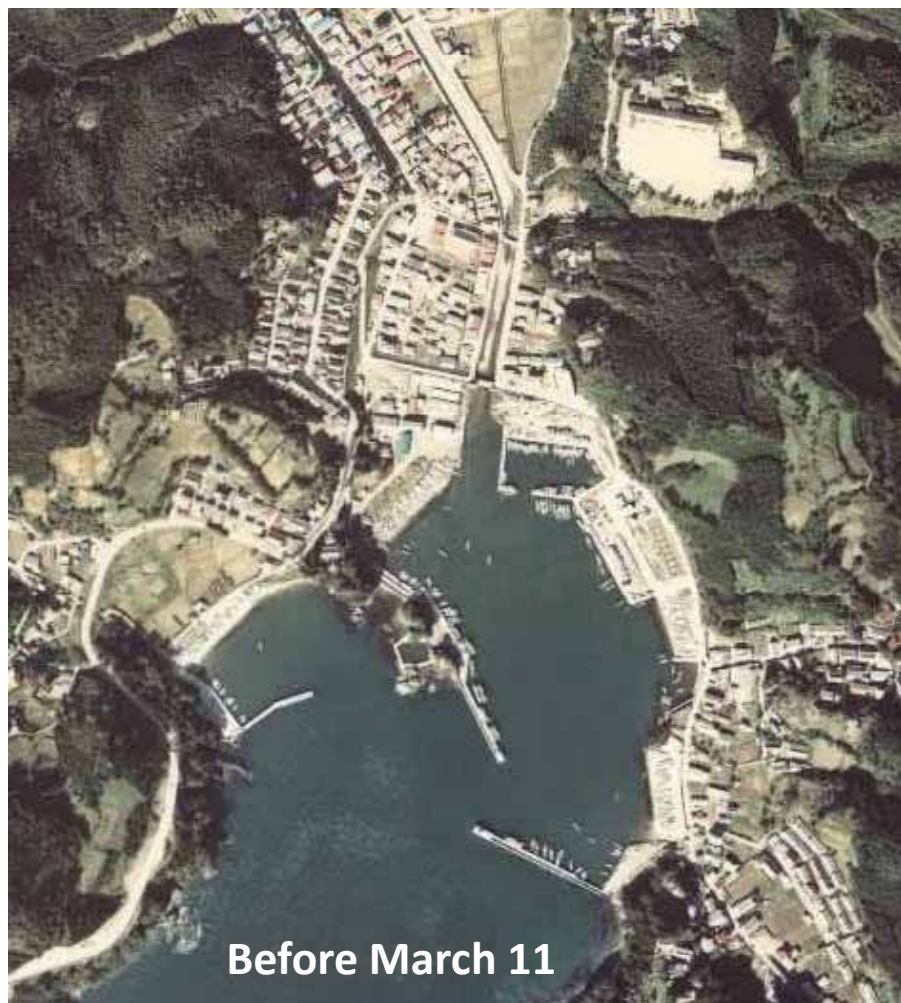
Reconstruction from the Great East Japan Earthquake and Tsunami

Reconstruction from the Great East Japan Earthquake (Status of devastated area)

- ❑ Great East Japan Earthquake
 - ❑ March 11, 2011 2:46 p.m. Magnitude 9.0
 - ❑ Numbers of people killed or missing 19,486 (As of November 11 2011)



Reconstruction from the Great East Japan Earthquake (Status of devastated area)



Reconstruction from the Great East Japan Earthquake (Damage caused by tsunami)



Photo: Website of Miyagi Prefectural Government

Reconstruction from the Great East Japan Earthquake (Transport infrastructure damage)



Photo: Website of Miyagi Prefectural Government



Photo: Website of Miyagi Prefectural Government



Photo: Website of Miyagi Prefectural Government



Photo: Website of Kesennuma City

Reconstruction from the Great East Japan Earthquake (Emergency reconstruction)

Status of devastated area



Emergency reconstruction



Status of devastated area



Emergency reconstruction



Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake

□ Summary

- ✓ Formulated in July 2011 after 5 month since the earthquake by national government.
- ✓ Contribute preparation of reconstruction plan by local governments.
- ✓ Set 10 years for reconstruction period and designate first 5 years as ,“period of intense reconstruction.

□ Major efforts on transport and logistics

- ✓ Recovery of railways in an integrated manner with community development and effectively utilizing existing facilities.
- ✓ Development of road network such as construction of express way.
- ✓ Addition of disaster prevention functions to transport and logistics facilities.
- ✓ Development of facilities to ensure traffic safety prepared for disaster, such as traffic signals that does not shut down in case of disaster.

□ Major efforts on city planning

- ✓ Promote a new concept of building towns utilizing compact public transportation which gives due consideration to the elderly, children, women and disabled person etc.
- ✓ Utilize road and rail lord structures with set back levees.
- ✓ Secure access to arterial traffic network which is essential for rescue activities in the time of disaster.
- ✓ Develop urban areas and mass relocation for recovery of central functions of disaster-afflicted cities.

□ Major efforts on key source of recovery project.

- Not only injecting public funds but also use private fund, PPP and PFI method.

3. Recommendation of the Japanese government towards green economy

Recommendation of the Japanese government towards green economy

❑ Input to the Rio+20 Outcome Document

- ✓ Submitted to the United Nations Secretariat on October 31.
- ✓ Propose a path towards the transition to a Green Economy.
- ✓ Propose nine major sectors that Japan has strong expertise.



❑ Green Economy

Input to the Rio+20 Outcome Document

- ✓ An economic system which promotes sustainable growth while improving human well-being, by pursuing economic growth and the environmental conservation in tandem, properly utilizing and conserving natural resources and ecosystem service.
- ✓ All stakeholders should take part and play roles depending on their capabilities.
 - From the dichotomy of developed and developing countries to the division of role by emerging economies and private sectors
- ✓ Position human security as the main guiding principle.
 - Each individual fully exercises their rich potential and take part in building a better society.

The Government of Japan
October 2011

❑ Sharing Policy Toolbox

- ✓ Various means and experiences shared by each country.
- ✓ Establishing a framework to form a green economy strategy by each country.
 - Green Innovation is important
 - Furthermore, Market-Based Instruments, Green Procurement, Utilizing private funds, Awareness raising and education, Consolidating knowledge and technology

Recommendation of the Japanese government towards green economy

□ Promotion of EST in the context of Green Economy

◆ Climate Change and Energy (To achieve a low-carbon society)

- In addition to UN negotiations, promotion of cooperation to build a low-carbon society at global, regional, national and lower levels, as being steadily implemented, as well as steady assistance to developing countries for this purpose.
 - ✓ “Ministerial Conference on Global Environment and Energy in Transport”
- Sharing expertise within regions, exchange of opinions with wide-ranging stakeholders, and the promotion of co-benefit approach .
- Implementation of adaptation and mitigation measures and assistance to vulnerable countries.
- Quick dissemination of environment-friendly technologies and products, and the promotion of Green Innovation.
 - ✓ Japan’s advanced environmental technologies such as bullet train and urban transportation.
 - ✓ Support the introduction of related environmental regulations in developing countries.

◆ Sustainable City Planning

- To realize a compact urban structure.
 - ✓ The concept of “Future City” to tackle the environment challenges and aging society.
- To promote the use of public transport.
 - ✓ To build low-carbon transportation system.
- To build partnerships between local authorities and promote technology transfer and capacity building appropriately.

Thank you for your attention.

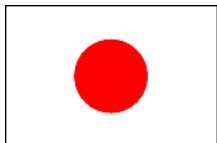
For more information, please visit our Web site at

Ministry of the Environment Japan

<http://www.env.go.jp/en/>

Ministry of Land, Infrastructure, Transport and Tourism Japan

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