

2040 Vision for Roads in Japan

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- To shape a better future for people -

To find out more about "2040 Vision for Roads in Japan" please visit our website.

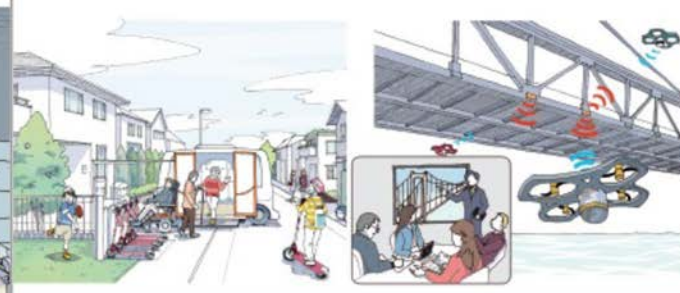


<https://www.mlit.go.jp/road/vision/pdf/03.pdf>

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(Summary)



2040 Vision for Roads in Japan

◆ Backgrounds and purpose



We propose a vision that creates a **Sustainable Society in 2040** and **Policy Directions** achieved through our road administration.

◆ Changing scenery - Five images for the future -

- 1. Rush-hour commuting disappears**
 - The prevalence of telework dramatically reduces mandatory trips such as job commuting
 - More people will migrate to and live in the countryside as restrictions due to distance from residence to work disappears
- 2. Many people on park-like roads**
 - More leisure trips and visits such as discretionary travel and pedestrian strolls
 - Roads fulfill their potential as amenity spaces
- 3. Movement of people and goods automated and unmanned**
 - Automated driving services make the car-owning lifestyle a thing of the past
 - The penetration of e-commerce leads to the increase of small-lot distribution and the spread of unmanned logistics
- 4. Cities keep changing as shops keep moving**
 - In response to customer demand, restaurants, supermarkets etc. locate along the roads
 - In hilly and mountainous areas, Michi-no-Eki stations and small mobile shops provide services to residents
- 5. From "Road to be Affected" to "Road to Relief"**
 - Disaster-resistance road networks ensure uninterrupted traffic, communication and power, helping to save lives and restore affected areas



- To shape a better future for people -

◆ Basic concept

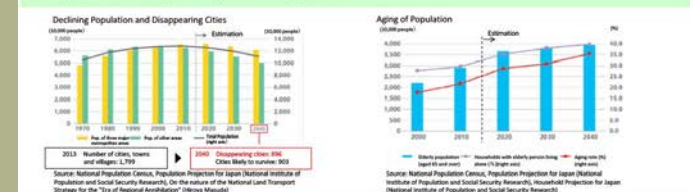
- "SDGs" and "Society 5.0" aim for a "human-centered society"
- ➡ **The starting point of road policy is "achieving people's happiness"**
- Social issues such as efficiency, safety, and environmental impact of travel
- ➡ **Full use of digital technology to "evolve" roads and solve problems**
- Since ancient times, roads have been a place where people interact, where they chat, and where children play
- ➡ **"Restore" the function of roads as communication spaces**



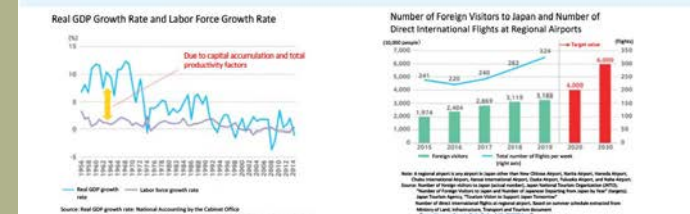
◆ "Sustainable Society" and "Policy Directions" aimed for by road administrations

<Backgrounds & Issues>

Although the populations of both urban and mountainous areas will decrease in the future, it is necessary to create local communities where residents' lives and livelihoods are sustainable. The goal should be to build a society where, by using new technologies to enhance services, everyone can move around freely without worrying about modes of transport or traffic accidents, where they can interact and participate in society, and where they can experience happiness.



Economic growth is essential to enhance the sustainability of society. Economic vitality must be generated by attracting people and goods from abroad to the domestic market, as well as by having Japan actively promote the flow of people and goods overseas. A vibrant society where people and goods are exchanged globally should be built by transforming the services provided by roads and contributing to increased productivity.



Disasters have the power to disrupt the growth path of a nation or region instantly, and it is no exaggeration to say that they are the biggest challenge to Japan's quest for sustainable growth. We should overcome challenges such as vulnerability to disaster, climate change and aging infrastructure, and should aim to build a society where everyone can live safely and securely.

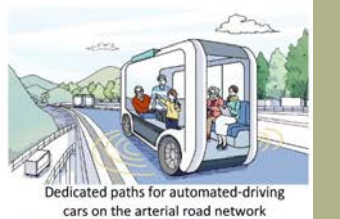


1 A society where everyone can move, interact and participate in society freely, no matter where they are located in Japan

1. Road energizes the land, people utilize the road

The arterial roads network across the country and advanced traffic management enable people to live, move and work freely everywhere in Japan

- Road network for automated-driving
- Cashless toll system



2. Get around conveniently without a privately-owned car

Mobility as a service (MaaS) provides a convenient way for everyone to get around without a privately-owned car

- Mobility hub
- Unmanned, automated ride sharing services at Michi-no-Eki stations



3. Zero road accidents

Universal-design roads that allow people and vehicles to share space safely and comfortably, creating a living space free of road accidents

- Rising bollards restricting access to community roads
- Roads where pedestrians and cars coexist



4. Roads where people want to go and linger

Main streets in towns will be reborn as beautiful spaces that make people want to go and linger, creating lively community spaces

- Main streets and Michi-no-Eki stations that serve as regional cores
- Road design reform: Removing utility poles, lighting in harmony with roadside buildings, etc.



◆ "Sustainable Society" and "Policy Directions" aimed for by road administrations

2 A society energized by the interaction of people, goods, and services that can be enjoyed around the world

5. Attractive international cities

Road spaces for excellent mobility and public interaction significantly enhance the investment attractiveness as international cities

- Urban transportation systems that are adapted for automated driving and MaaS
- Road shoulders that change functions depending on the time of day



6. Sustainable logistics systems

Trunk-route haulage by automated-driving trucks, and autonomous and labor-saving logistics through robot delivery etc. in the last mile can function as a sustainable system both in normal times and during disasters

- Haulage by automated trucks
- Last-mile unmanned transportation by robots and drones



7. Attracting tourists from around the world

The Japan Scenic Byways, National Cycle Routes, and Michi-no-Eki stations, etc., will be tourist destinations for domestic and foreign visitors, and sophisticated services such as multilingual road guidance will improve convenience and satisfaction for international visitors and foreign residents

- Going cashless
- Multi-lingual road guidance using smartphone applications, etc.

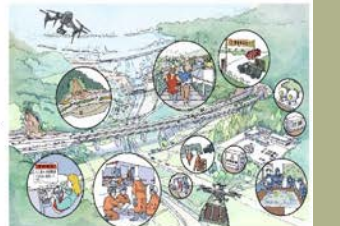


3 A society where everyone can live safely and securely, eliminating vulnerability to disaster and ageing infrastructure

8. Roads that protect people's lives and property from disasters

In the face of increasingly severe and widespread disasters, a disaster-resistance road network will ensure uninterrupted flow of people and goods to the affected areas, minimizing loss of life and economic losses

- Expressways in disaster mode
- Making Michi-no-Eki stations and SA/PAs disaster prevention centers



9. Low-carbon road transport

Low-carbon road transport systems, comprising the best mix of electric vehicles, fuel cell vehicles, public transport and bicycles, will contribute to curbing global warming

- Contactless power supply system
- Shared cycle system



10. Extending the life of the road network

The road network is operated sustainably through more efficient and sophisticated preventive maintenance due to the introduction of new technologies

- Automation and labor-saving methods for inspection and diagnosis using AI and measurement/monitoring technologies
- Automation of maintenance work such as snow removal and cleaning

