
TRANSPORT, ROADS AND TRAFFIC

This article presents an overview of the main trends and outlook in Japan between January and December 2020, focusing on the Ministry of Land, Infrastructure Transport and Tourism (MLIT).

1 Promulgation of Special Amendment of Antimonopoly Act Pertaining to Transit Buses and Regional Banks —

To help maintain the services provided by transit bus operators and regional banks, the Cabinet Office of the Japanese government approved an exception to the act prohibiting private monopolies in March 2020. Promulgated in May of the same year, this bill described exceptions to the Act on Prohibition of Private Monopolization and Maintenance of Fair Trade to facilitate the continued provision of basic services related to general passenger vehicle transportation business operators and banking businesses. According to this special law, joint business agreements covered by the following definitions are regarded as exceptions to the Antimonopoly Act, thereby legalizing the necessary actions for pooled transit and the like. These definitions were: (1) the setting of fares and fees by which users can utilize regional public transportation within a range defined by certain conditions (unlimited travel for a fixed charge and the like), (2) the reorganization of networks consisting of joint or shared services involving lines or transportation systems within a network (the hub-and-spoke model), and (3) the setting of the number of services or service timetables for lines or transportation systems within a network (regularly spaced services, patterned schedules, or the like).

Accompanying the promulgation of this special law, other laws and regulations related to the vitalization of regeneration of local public transportation were partially revised in November 2020 to encourage efforts to improve public transportation and secure alternate means of transportation through cooperation between transportation business operators and other relevant parties in

local regions through the formulation of master plans (i.e., local public transportation plans) pertaining to regional transportation by all local public bodies, and to promote initiatives to secure the provision of sustainable transportation services. In addition, a project to enhance the convenience of local public transportation was launched with the aims of increasing the efficiency of transportation lines and promoting improvements such as the establishment of regularly spaced services (Fig. 1), unlimited travel schemes for a fixed charge (Fig. 2), and discounted fares for connections (lower fares for through journeys, and the like). The special amendment to the Antimonopoly Act described above created exceptions for cartels created by joint businesses between transit bus operators and the like.

2 Formulation of 2040 Vision for Roads in Japan

In February 2020, the Policy Subcommittee of the

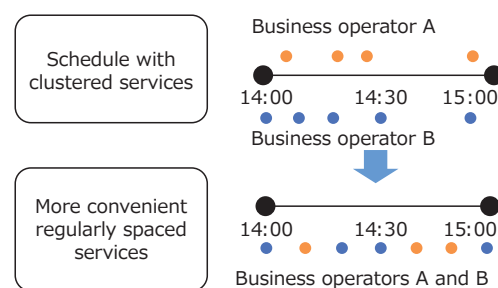


Fig. 1 Regularly Spaced Services

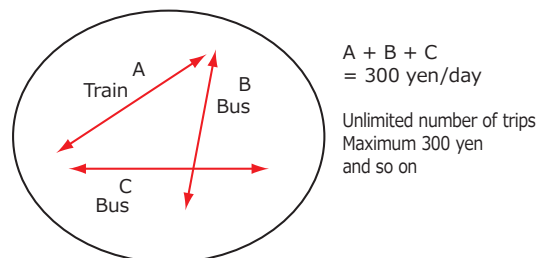


Fig. 2 Unlimited Travel Schemes for Fixed Charge

I. The changing scenery of roads

1. Reconsidering the role of roads: evolution and restoration

The role of roads to enable mobility and provide space will be reconsidered to realize services to help bring happiness to communities in the future.

- Help resolve the issues of modern society through technological innovation -
- Realize sustainable people-centric communities -

<ul style="list-style-type: none"> ◆ Mobility is facing a once-in-a-century transformation due to the progress of digital technologies such as AI, the IoT, big data, and so on. ◆ Congestion, accidents, vulnerable road users, declining workforce, natural disasters, climate change, aging, strengthening of international competitiveness 	<ul style="list-style-type: none"> ◆ We feel fulfilled by family life, recreation, interests, sports, friends, and interaction with acquaintances ◆ "Good relationships keep us happier and healthier." (Source: research into happiness conducted at Harvard University)
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Roads need to evolve to facilitate safe and more efficient mobility. We need to restore the role of roads to spaces that enable people to mingle and interact.

2. How will the scenery of roads change? - Five images for the future -

(1) Drastic decrease in routine trips for commuting, shopping, etc. <small>The increasing prevalence of telework, virtual communication, and e-commerce will reduce the need for commuting, daily shopping trips, and the like. As the need to commute decreases, increasing numbers of people will move to suburban or rural areas.</small>	(2) Increase in use for leisure activities such as travel, walking, running, etc. <small>The use of roads for enjoyment (such as walking, running, or leisure trips) and as spaces to visit will increase. Roads account for approximately 3% of Japan's land area. This change will help roads fulfill their potential as amenity spaces and park-like roads will appear.</small>	(3) Automated and unmanned movement of people and goods <small>Unmanned automated services will spread to public transportation. As the car-owning lifestyle becomes a thing of the past, traffic accidents will drastically decrease and safer road spaces will be realized. Logistics patterns involving more frequent delivery of smaller numbers of items will emerge.</small>	(4) Mobile shops (services) <small>Fully automated driving will enable small shops to move while remaining in contact with customers. These shops will respond to demand and do business at the roadside.</small>	(5) Uninterrupted movement of people and goods after a natural disaster <small>Highly functional roads will enable uninterrupted transportation networks in both normal situations and after a natural disaster, and road spaces will become resistant to the risk of natural disasters.</small>
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The changing scenery of roads

Disappearance of rush-hour commuting	Emergence of park-like roads	Increasing prevalence of unmanned automated vehicles and compact mobility, leading to emergence of transportation and logistics hubs	Changes to urban areas due to more flexible use of roads	Change from roads affected by natural disasters to roads that provide relief after a natural disaster
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II. Target vision of sustainable society and direction of policies established by road administration in Japan

Predictions for Japanese society in 2040

A society with fewer children and more elderly people	Possible disappearance of towns in rural areas	Reduction in size of workforce	Internationally competitive urban areas	Occurrence of massive earthquake within next 30 years	Larger typhoons caused by climate change
Compact and network-oriented society	CASE/MaaS	Increasing role of the Internet in logistics	Increase in visitors and residents from outside Japan	Adoption of EVs and FCVs	Increase in maintenance costs

1. A society where everyone can move, interact, and participate in society freely, no matter where they are located in Japan (1) Full utilization of Japan's land resources <small>The arterial road network across the country and advanced traffic management will help to maximize utilization of Japan's land resources and enable greater interaction by people over wider ranges.</small> <ul style="list-style-type: none"> - Introduction of dedicated lanes for automated vehicles on arterial roads, which form the backbone of national and regional land resources - Optimized road guidance and strategic toll system for individual vehicles (2) Roads that enable convenient mobility without a privately owned car <small>Mobility services (MaaS) that enable convenient movement without a privately owned car will help to provide mobility for all.</small> <ul style="list-style-type: none"> - Provision of connection and mobility hubs for various modes of transportation - Unmanned automated driving services centered on <i>michi no eki</i> roadside stations (3) Zero traffic accidents <small>Universally designed roads that allow pedestrians and vehicles to share space safely and comfortably will help to create living spaces free from traffic accidents.</small> <ul style="list-style-type: none"> - Use of rising bollards or the like to restrict access and speed of traffic passing through communities - Encouragement of safer driving by telematics car insurance (4) Roads where people want to go and stay <small>Main streets in towns will be reborn as beautiful spaces that will attract people and make them want to stay, thereby creating vibrant community spaces.</small> <ul style="list-style-type: none"> - Creation of people-centric spaces by re-distributing space and introducing new technologies and designs - Increase in people moving to rural areas with <i>michi no eki</i> roadside stations acting as regional centers 	2. A society energized economically by interaction between people, goods, and the world (5) Development of internationally attractive cities <small>Road spaces that provide excellent mobility services and vibrant interaction will make cities more attractive to investment (in terms of both money and human resources).</small> <ul style="list-style-type: none"> - Provision of transportation hubs and reorganization of road networks for compatibility with MaaS - Integrated use of roadside land and road spaces by road and roadside management - Shift of roads underground, and the creation of vibrant and fresh businesses (6) Sustainable logistics systems <small>Trunk route haulage by automated trucks, labor saving logistics through last-mile robot delivery, and the like will help to realize a sustainable logistics as a service approach to logistics systems.</small> <ul style="list-style-type: none"> - Provision of dedicated lanes and relay points for automated trucks - Provision of road spaces/usage rules to enable robot delivery, etc. - Construction of platforms for logistical big data (7) Attracting tourists from around the world <small>The Japan Scenic Byways, National Cycle Routes, and <i>michi no eki</i> roadside stations, etc., will become destinations for domestic and international visitors, and sophisticated services such as multilingual road guidance will improve the convenience and satisfaction of both international visitors and residents.</small> <ul style="list-style-type: none"> - Communication of road-related history and culture - Enhancement of viewing spots, rest facilities, and multilingual guidance - Introduction of cashless payment for expressways, park lots, service areas, parking areas, <i>michi no eki</i> roadside stations, etc. 	3. A society where everyone can live safely and securely, eliminating vulnerability to disasters and infrastructure aging (8) Roads that protect people's lives and property from disasters and climate change <small>In the face of increasingly severe and widespread natural disasters, a disaster-resistant arterial road network will ensure the uninterrupted flow of people and goods to affected areas, minimizing loss of life and economic impacts.</small> <ul style="list-style-type: none"> - Enhancement of natural disaster resistance of arterial road network - Ensuring uninterrupted power supplies using utility pole-free roads - Application of natural disaster-based approach to arterial roads (emergency evacuation spaces, emergency entrances and exits, etc.) - Use of <i>michi no eki</i> roadside stations, service areas, parking areas, etc. as disaster-relief centers (9) Low-carbon roads <small>Low carbon road transport systems comprising the best mix of EVs, FCVs, public transportation, and bicycles will contribute to curbing global warming.</small> <ul style="list-style-type: none"> - Switch of roadside infrastructure power supplies to renewable energy - Optimum layout of non-contact power supply systems and hydrogen refueling stations for EVs and FCVs - Re-distribution of road spaces for bicycles and public transportation (10) Extending the life of the road network <small>Sustainable operation of the road network can be achieved through more efficient and sophisticated preventive maintenance through the introduction of new technologies.</small> <ul style="list-style-type: none"> - Labor-saving inspection and diagnostics using AI and measurement/monitoring technologies and the introduction of road structures with fewer locations requiring inspection - Automation of maintenance work such as road washing, weed cutting, snow removal, etc. - Consolidation of facilities and rationalizing of functions through coordination between road administrators
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Fig. 3 Road Policy Vision: "2040 Vision for Roads in Japan - To Shape a Better Future for People -"

Road Committee of the Panel on Infrastructure Development released a plan called the "2040 Vision for Roads in Japan - To shape a better future for people -." While looking ahead to new lifestyles and transformations in the social economy after the COVID-19 pandemic, this plan shows a future vision of Japanese society in 2040 achievable through road administration, and proposes mid- to long-term policy directions to realize this vision. The vision shows the changing face of roads through five images for the future, and presents three proposals for a sustainable society and ten policy directions that road administration in Japan is aiming to accomplish (Fig. 3).

3 Cabinet Decision to Promulgate Bills Partially Revising the Road Act, etc.

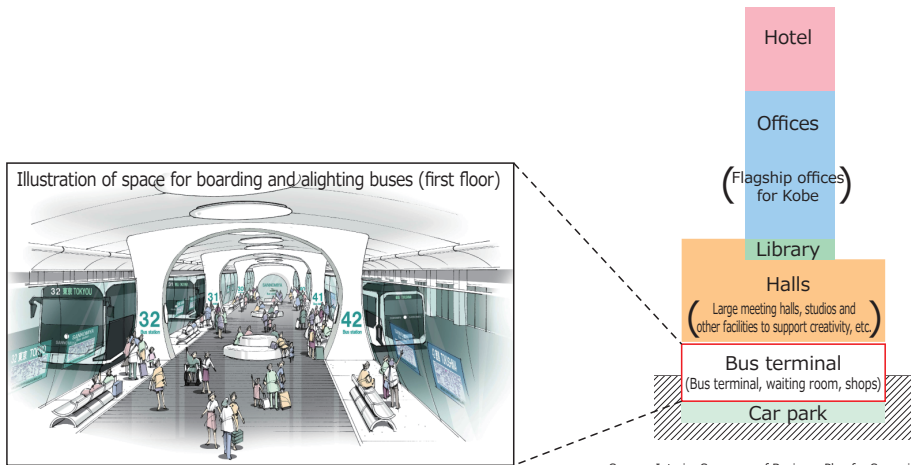
A bill to partially revise the Road Act and other regulations was decided by the Cabinet Office of the Japanese government in February 2020. This bill implements measures such as the rationalization of procedures related to

the passage of heavy-duty vehicles, the addition of roadside facilities for specific vehicles and supporting infrastructure for automated driving to the definition of road accessories, and the establishment of a designation system for roads to promote pedestrian usage. It also implements measures to enhance the system of proxy authorization exercised by the Minister of Land, Infrastructure, Transport and Tourism to carry out disaster recovery and the like for roads managed by local governments to reinforce actions in the event of more frequent natural disasters.

3. 1. Establishment of New Passage System for Special Vehicles to Enhance Productivity of Logistics

As digitalization progresses, a system has been established that enables immediate passage by registered special vehicles (e.g., vehicles that exceed set weight limits and the like). More specifically, this system allows business operators to register special vehicles in advance

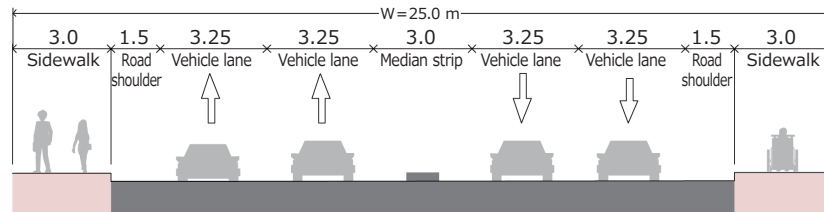
[Illustration of consolidated public transportation terminal:]



Source: Interim Summary of Business Plan for Space in Front Of Kobe-Sannomiya Station on Japan National Route 2, etc.

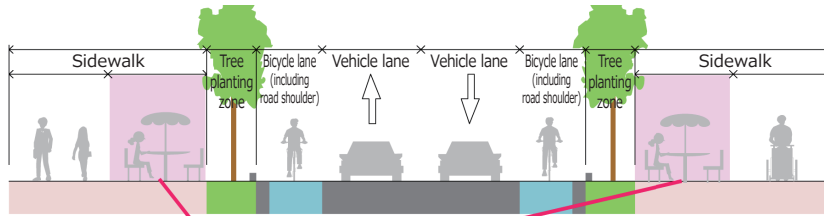
Fig. 4 Illustration of Roadside Facility for Specific Vehicles

[Before reconstruction:]



Reduce vehicle lanes from four to two and widen sidewalks.

[After reconstruction:]



Spaces for promoting pedestrian usage

Fig. 5 Illustration of Road Structure Standard to Promote Pedestrian Usage

with the Minister of Land, Infrastructure, Transport and Tourism, input the origin, destination, and cargo weight of the vehicle, and confirm via the Internet the routes that the vehicle may use. The Minister of Land, Infrastructure, Transport and Tourism identifies the route actually used by the vehicle using the ETC 2.0 system. In addition, the registration and other administrative work may be carried out by bodies that satisfy certain requirements. In this way, the registration of special vehicles eliminates the need to receive permission for the passage of such vehicles providing that confirmation from the Minister of Land, Infrastructure, Transport and Tourism

is obtained and the route received in response is followed. With the aim of achieving implementation in 2022, studies are currently under way into the procedures for operating the new system, and the necessary system design work is in progress.

3. 2. Promotion of New Transportation Nodes Linking the Public and Private Sectors

To help alleviate traffic congestion and simplify logistics, dedicated roadside facilities for business operators of buses, taxis, trucks, and the like (i.e., facilities that allow specific vehicles to stop during journeys) have been re-defined as road accessories (Fig. 4). One bill that came



Fig. 6 Approach for Encouraging Occupancy to Promote Usage

into force on November 25, 2020 allows the concession system (i.e., the rights to operate public facilities and the like) to be applied to the management of these facilities. This allows operators to collect usage fees for the facility and permits occupancy via agreement (the signing of contracts and the like). Using this as an opportunity, the provision of consolidated public transportation terminals that reinforce connections between various modes of transportation (by the so-called “bus terminal project”) is being rolled out as part of a nationwide strategy. Beginning with the opening of the Shinjuku Expressway Bus Terminal in April 2016, similar projects have been implemented at Shinagawa Station, Kobe-Sannomiya Station, Niigata Station, the Keikyu Oppama Station, the Kintetsu Yokkaichi Station, and Kure Station, with local studies under way at Sapporo Station and the west exit of Omiya Station.

3. 3. Creation of Pedestrian-Centered Road Spaces to Enhance Local Communities

A designation system for roads to promote pedestrian

usage was established and enacted on November 25, 2020, with the aim of creating more vibrant road spaces. Roads designated under this system can be used to provide spaces that allow the safe and comfortable passage and gathering of pedestrians by the application of new standards for road structures (Fig. 5). In addition, special zones can be set up on these designated roads with more relaxed standards for the occupancy of retail facilities, billboards, and so on, and the public tender system for occupancy was lengthened to a maximum of twenty years (Fig. 6). The system also allows no-interest loans by the national or local governments to remove utility poles.

3. 4. Creation of Road Spaces for Facilities to Support Automated Driving

Another bill that came into effect on November 25, 2020, defined facilities designed to assist automated vehicles (such as magnetic markers and the like) as road accessories (private businesses are defined as private property), and allows no-interest loans by the national or local governments to prepare these magnetic markers or other facilities.

3. 5. Enhancement of National Government Proxy System for Disaster Recovery etc. of Locally Managed Roads

In response to the growing frequency and severity of natural disasters, a bill was enacted on May 27, 2020, that expands the proxy authority of the Minister of Land, Infrastructure, Transport and Tourism to, upon request by a local government, remove road obstacles and carry out recovery work after a natural disaster.