Creating safety, security and activity in road space - Creating regions and towns -

In order to achieve a society in which all people can live in safety, security, and comfort, we will promote traffic safety measures, universal design, the removal of utility poles, and the development of spaces for bicycle traffic, as well as initiatives to meet the diverse needs of road space, such as the creation of new forms of mobility and regional activities.

Creating safe and secure road space

Although the number of traffic accidents is on the decline, the rate of decrease in the number of fatal and injury accidents on community road is small, many accidents still occur.

■Trends in the number of accidents resulting in death or injury by road type



width of less than 5.5m 5.5m or more report on traffic acciden



ipils walking on a

In Japan, with its declining birthrate and aging society, it is necessary to develop safe, secure, and universally designed spaces.

■Universally designed walking space



■Universally designed walking space



Diversification of needs for road space

Promote the utilization of spaces where diverse local needs can be addressed, such as open cafes on sidewalks.

Open cafe on the sidewalk



Open Cafe on the sidewalk

Social experiment on new mobility sharing on public roads



Road policies diversify in 1960 Por response to the needs of the world

2020 Ensuring the safety of roads close to home, etc. Creating liveliness in road space Increasing and Development of sharing services / diversifying needs Emergence of new forms of mobility, etc.

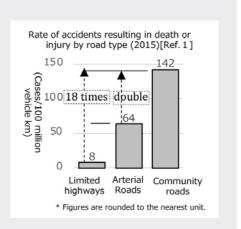
Development of a safe and secure road space

While further improving the safety of arterial roads, we will promote the creation of pedestrian- and bicycle-oriented spaces by diverting automobile traffic, and implementing comprehensive measures to control the speed of traffic and the entry of through-traffic on community roads.

Background / data

- The number of traffic fatalities in 2020 was 2,839, the lowest since the end of World War II for the fourth year in a row.
- The number of traffic fatalities per 100,000 people while riding in a car is the lowest in the G7 countries, but the second highest among pedestrians and
- · Casualty rates on daily roads are much higher than on limited highways and arterial roads.
- As a result of the Joint Inspection of School Routes [Ref. 2]" conducted in response to the accident that occurred on a school route in Yachimata City. Chiba Prefecture in June, 2021,

the number of locations where road managers need to take countermeasures is about 37,000 (as of October 31, 2021).



Promote intensive measures for accident risk areas (accident-prone areas, potentially dangerous areas etc.) on arterial roads.

Promote the conversion of automobile traffic to limited highways and arterial roads, and differentiate the functions of these roads from those of community roads.

Based on the Joint Inspection of School Routes, promote effective measures by combining the installation of sidewalks

and protective fences with soft measures taken by related organizations through the Traffic Safety Measures Subsidy System (emergency measures for school routes).

We will promote "Zone 30 Plus", a newly coordinated policy to ensure traffic safety for pedestrians and others through an appropriate combination of Zone 30 maintenance by the police (30km/h zone regulation) and physical devices such as speed bumps installed by road administrators.

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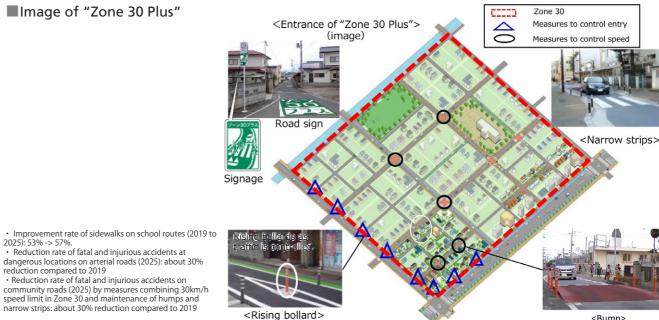


· Reduction rate of fatal and injurious accidents at

Reduction rate of fatal and injurious accidents on

2025): 53% -> 57%

reduction compared to 2019



Ref. 1: Limited highway (national expressways, automobile-only national highways, urban expressways, and other automobile-only roads), arterial roads (general national

Ref. 2: "Guidelines For Conducting Joint Inspections of School Routes" (dated July 9th, 2021, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Land, Infrastructure, Transport and Tourism, and the National Police Agency

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Promotion of railroad crossing countermeasures

In accordance with the revised Act on Promotion of Railway Crossings [Ref. 1], , crossings with problems will be designated in an expeditious manner, and measures such as the construction of multi-level crossings and sidewalks along railroad crossing roads will be implemented, while building up a PDCA cycle to conduct consistent follow-ups. We will promote efforts to ensure the implementation of measures such as prioritizing the opening of crossings so that they are not blocked for long periods of time in the event of disasters.

Background / data

- Crossing accidents occurred approximately every two days, and one person died every five days. (FY 2020)
- There are more than 500 railroad crossings across Japan that are closed at nearly all times. (FY 2020)
- In October 2021, 1,336 crossings were identified and announced as crossings which require urgent consideration of countermeasures (chart crossings).
- In accordance with the Act on Promotion of Railway Crossings
- In April, 2021, the first batch of 93 railroad crossings was designated for improvement.
- In June, 2021, the first round of designations was made for 181 railroad crossings to be managed in the event of disasters.

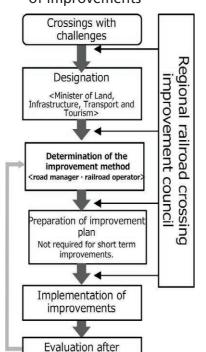
Systematic and intensive support for railroad crossing countermeaincluding multilevel crossings and installation of crossing sidewalks, through the use of the railroad crossing improvement planning project assistance scheme

In June, 2022, a management method will be formulated for the railroad crossings designated as level crossing roads where the method of disaster management should be specified, including a communication system with the police, fire department, and other relevant organizations, priority opening procedures, and periodic trainings

Steadily follow up on railroad crossing countermeasures using the PDCA cycle, and promote "visualization" of the implementation status by the "Railroad Crossing Road Safety Passage Chart.

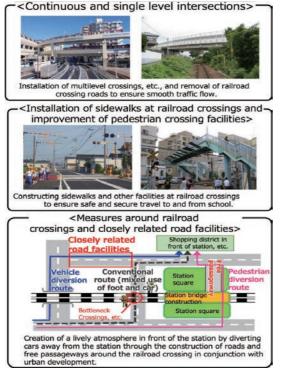
- Number of accidents (2025): Approx. 10% decrease from FY2020
 • Time lost due to railroad crossing blockage
- (2018 -> 2025): 1.03 million man-hours/day => 980,000 man-hours/day

Implementation scheme of improvements

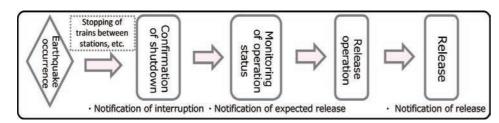


improvements

■Examples of improvement methods



■The process of opening a railroad crossing that has been closed for an extended period of time in the event of disasters



Improving the safety and reliability of expressways

With regard to measures to prevent head-on collisions, we will promote countermeasures such that installation of wire ropes will mostly be completed on earthwork sections and small and medium bridges by the end of FY 2022, while new technologies will be introduced on a trial basis to public roads starting in FY 2021 for long-span bridge and/or tunnel sections.

With the aim of achieving zero serious accidents due to wrong-way driving by 2029, we will promote measures to prevent wrong-way driving on expressways, as well as measures to prevent pedestrians and mopeds from entering expressways by mistake.

Measures to prevent head-on collisions in provisional two-lane sections

Background / data

- The rate of fatal accidents on temporary two-lane sections of expressways is about twice that of sections with four or more lanes.[Ref. 1]
- As of November 2021, approx. 1,243 km of wire ropes have been installed.

(Approx. 78% of the total 1,600 km of earthwork sections and small and medium bridges have been installed)

· As of November 2021, out of 3,589 contact cases, there were 14 accidents in which the driver ran into oncoming traffic [Ref. 2], of which there were no fatalities.

Outline of wire rope installation in FY 2022 for earthwork sections and small and medium bridges





technologies selected from the publicly solicited technologies that meet

the criteria for breakthrough prevention performance will begin at six locations nationwide.

For long-span bridge and tunnel sections, trial installation of two of the

Selected 2 technologies for long-span bridge and tunnel sections

Countermeasures to prevent wrong-way driving and wrong-way entry

Background / data

[Wrong-way driving]

- The average number of incidents of wrong-way driving on expressways has been approximately 190 per year for the past four years.
- Approximately 52% of all accidents involving wrong-way driving on the main line result in death or injury.
- 3,662 incidents involving pedestrians, bicycles, mopeds entering expressways by mistake occur annually. Of which, 57% mopeds, 28% pedestrians, and 15% bicycles.
- The number of incidents is on the rise. In recent years, the number of mopeds in particular has been on the rise.

Promote the practical application of color pavement on public roads as a countermeasure for expressway entrances and exits, which account for approx. 30% of reverse driving incidents, and communication technology vehicle to road infrastructure using image recognition technology.

At the entrance and exit of the expressway, measures to prevent pedestrians and mopeds from entering the expressway by mistake will be promoted in addition to measures to prevent wrong-way driving



Measures at the entrance and exit of



Ref. 1: Expressway (toll) (2013 - 2020)

Utilization of space to meet various needs

In order to respond to various needs for roads, including the need for local dynamism, we will promote the improvement and revitalization of regional attractions by dividing the functions of each road in the region and flexibly using different roads according to location and time of day.

Background / data

- While there are roads where automobile traffic is decreasing due to the development of the arterial road network, the needs for roads are becoming more diverse, such as "liveliness", "safety", and "support for new mobility", and the need to review the role of roads is increasing.
- In order to reduce the risk of COVID-19 infections and to create a lively community, the standards for road occupancy permits for roadside restaurants and other establishments were relaxed (special exception for road occupancy due to the COVID-19) (Until the end of FY2021).
- ♦ Number of applications: approx. 170 autonomies
- ♦ Number of permits nationwide: approx. 420 *As of July 2021
- · A system of Improving Pedestrian Convenience Road System(Hokomichi)[Ref. 1] was established as a system for building lively, dynamic roads. 49 routes were designated nationwide (as of December, 2021).

Promote Hokomichi system to create a lively community. (Transfer to Hokomichi if local governments wish to continue with the covid-19 occupancy exception)

Designing new standards and systems based on the Guidelines for the Development of Road Spaces to Meet Diverse Needs[Ref.2], to promote the reconstruction and re-use of roads in each region.

■Image of Hokomichi



Space for wheelchair users and strollers to use with a caregiver or companion.

Movable tables and chairs that can be used by those in wheelchairs.

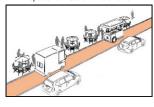
Width for safe and pedestrians.

Midnight - morning

guide blocks for the visually impaired

■flexible use of roads

Morning to night → space for rest and relaxation



(20:00~8:00) →Used as a cargo handling space

[Key points in the guideline]

Describes the concept of the division of functions and flexible use of roads, useful individual measures, points for consideration, and points to note.

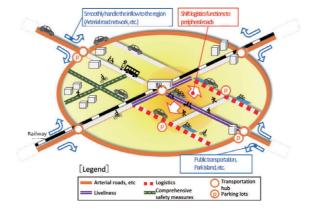
To further improve road maintenance and management, we are promoting the development of the Road Cooperation Group System [Ref.3] and cooperation with Hokomichi System.

■ Example of transition from COVID-19 occupancy exception to Hokomichi



Kobe City, Hyogo Prefecture

■The division of functions on each road



Ref. 1: Based on the implementation of the amended Road Act in November 2020

Ref. 2: Expected to be established in FY 2021

Ref. 3: A system for road management through cooperation between road administrators and private organizations that utilize roads

Improving the environment for bicycles and promoting their use

Based on the Second Bicycle Use Promotion Plan, which was formulated in May 2021, we will promote the creation of a safe and comfortable environment for bicycle use by promoting formulation of bicycle utilization promotion plans in local governments.

Background / data

- Extension of bicycle traffic space separated from pedestrians: approx. 2,930 km (as of the end of FY 2019)
- Established the "Certified Bicycle Commuting Company" Declaration Project system in April, 2020. The number of companies certified as "Declared company" was 47, of which two companies were certified as "Excellent company" (as November, 2021).
- One in four Tokyo bicycle commuters started biking after the COVID-19 pandemic. [Ref. 1]
- Status of obligation to obtain bicycle liability insurance. Mandatory: 23 prefectures, Effort obligation: 11 prefectures (as of October, 2021)

Creating a safe and comfortable bicycle user environment

Promote the formulation of local Bicycle Use Promotion Plan [Ref. 2] that include plans for bicycle networks.

• 89 municipalities developed the plans ⇒400 municipalities (2020→ 2025)

Promote the systematic development of bicycle traffic spaces with appropriate separation of pedestrians, cyclists and vehicles





Bicycle Path

Bicycle Lane

Promoting the introduction of bicycle commuting

Publicize the "Guide to Promoting Bicycle Commuting" and the "Certified Bicycle Commuting Company" Declaration Project. system.

Bicycle share for commuting (2015→ 202)

(2019→2025):56 routes ⇒ 100 route

Promotion of cycle tourism

On the National Cycle Route promote the improvement in the riding environment and the development of an environment for cycling, a welcoming environment in cooperation with commercial facilities including convenience stores, and public transportation, the creation of attractions along the route, and the dissemination of information.



• The number of model routes aiming to develop an advanced bicycle user environment

Establishment of receiving environment

Promote the purchase of bicycle liability insurance etc.

Support for the enactment of ordinances by prefectures and provision of information to promote the purchase of bicycle liability insurance.

Purchase rate of bicycle insurance (2020→ 2025):59.7% ⇒ 75%

Ref. 1: From a survey conducted by a u Insurance Company, Ltd. in July 2020

Ref. 2: According to the Bicycle Utilization Promotion Act, prefectures and municipalities are required to make efforts to establish local Bicycle Use Promotion Plans

Creating an environment for sharing service and new forms of mobility

In light of the change in usage patterns from ownership to sharing, we will promote the use of sharing of bicycles and light vehicles by strengthening cooperation with railroads, buses and other transportation modes.

In light of the emergence of personal mobility devices and other forms of mobility as well as the growing need for their use, we will promote the reconstruction and utilization of roads that will help in improving the convenience of new mobility services.

Promoting the use of sharing

Background / data

- •The number of cities with full-scale introduction of shared bicycles increased from 77 (as of March 31st, 2016) to 164 (as of March 31st, 2020) in five years. [Ref. 1]
- •Establishment of a special tax exemption on fixed asset for the installation of shared bicycle ports for projects described in the municipal bicycle utilization promotion plan. [Ref. 2]
- •The number of car-sharing users (members) in Japan increased by approx. 200,000 from approx. 2.05 million (in 2000) to approx. 2.25 million (in 2021). [Ref. 3]

Promotion of the spread of shared bicycles

Provide know-how to local governments by utilizing guidelines that contribute to the efficiency of business operations, securing locations for cycle ports, and improving convenience.

Promotion of car sharing

Verified the safety of the structure and operation of the social experiment program that uses road space as a car-sharing station by expanding the range of vehicle types to include mini vehicles, and formulated guidelines for nationwide deployment.

to include mini vehicles, and formulated guidelines for nationwide deployment. National Highway 15 Shinbashi Station The development of a new environment for the use of mobility

Background / data

Many new forms of mobility have emerged in recent years and traffic rules and regulations are under review by the relevant ministries.



Photo courtesy of the Advisory Committee on Otemachi, Marunouchi, and Yurakucho Area Development, Luup Inc. and MP Inc.



Electric kickboard Ultra-small mobility

Automated delivery robots

Conducting social experiments on the reconstruction and utilization of roads, including parking spaces, and verify the necessary facilities and functions.

Social Experiment of Parking spaces for new mobility services

Ref. 1: According to MLIT and the Urban Affairs Bureau



Locations for sharing services on roadside and pavement, small logistics, drones.

multi-functional next-generation mobility port on sidewalks



Ref. 5: We will set up and operate car-sharing stations on roads where there is a high level of convenience in transferring from public transport (near Otemachi Station on Highway 1 and near Shinbashi Station on Highway 15), to examine vehicle usage and the effects of increased convenience.

Support for the spread and promotion of autonomous driving

In addition to providing priority support for the efforts of local governments that aim to develop communities and regions using autonomous driving, we will promote joint research with private companies and other organizations for the realization of autonomous driving on expressways.

Background / data

A regional unmanned automated transport service on public roads in more than 40 locations by 2025 and in more than 100 locations nationwide by 2030.

Social implementation of automated driving services based at Roadside rest area (Michi-no-Eki).

• Full-scale implementation in

November, 2019 "Kamikoani" (Akita Prefecture)

April, 2021 "Oku-Eigenji Mountain Stream Village" (Shiga Prefecture)

July, 2021 full-scale introduction at the "Yamakawa Branch Office in Miyama City" (Fukuoka Prefecture)

October. 2021 at "Akagi Plateau" (Shimane Prefecture)

Focused support for the development of driving environments based on urban development plans that utilize automated driving, and technical support for the formulation of plans for driving spaces.

In order to further promote the spread of automated driving services, examine the ideal driving space in urban areas where pedestrians and bicycles are mixed.



Self-driving bus operation in Sakaimachi, Ibaraki Prefecture (Increase the number of bus stops and waiting areas to eliminate



Verification of support measures at complex intersections (image) (Maintenance of demarcation lines to be detected by in-vehicle sensors)

Improvement of the road environment necessary for automated vehicles

Background / data

 Level 4 automated driving on highways by 2025.

To achieve safe and smooth automated driving on express-ways promote joint research through public-private partnerships on the management guidelines for demarcation lines and methods for providing anticipatory information.

■IImage of Joint Research

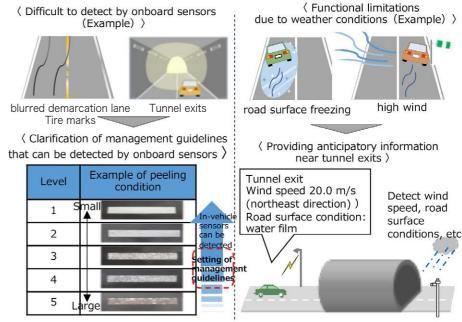


Image Source: Road Surface Marking Handbook (National Road Sign and Marking Industry Association)

Ref. 3: According to the Foundation for Promoting Personal Mobility and Ecological Transportation Ref. 4: Schedule to be determined in FY2021

Ref. 2: During the exception period of 2 years (April 1st, 2021. to March 31st, 2023)

Promotion of universal design

We will promote the universal design of roads around major railroad stations throughout Japan in order to achieve communities where all people can move around smoothly and safely.

Promote the development of child-rearing support facilities at expressway service areas and Roadside rest area (Michi-no-Eki) nationwide.

Background / data

- Expansion of the designation of specific roads [Ref. 1] based on the Barrier-Free Act (July, 2019) Expanded designation: approx. 1,700 km -> approx. 4,450 km
- Major child-rearing support facilities at service areas and Roadside rest area (Michi-no-Eki)

Rate of maintenance (July, 2021)	Baby corner available 24 hours a day.	Covered priority parking spaces for pregnant women
Roadside Rest Areas developed by the Government (284 facilities)	46% (130facilities)	71% (202 facilities)
Service areas (220 facilities*) *Currently, service areas with commercial facilities	100% (220 facilities)	100% (220 facilities)

Promotion of barrier-free access to specified roads designated under the Barrier-Free Act

• Rate of creating barrier-free specified roads (2018 -> 2025): approx. 63% -> approx. 70%

Promote the development of road space with consideration for universal design that is easy to use by all people, including the elderly and disabled.

· In addition to barrier-free road standards formulate and publicize guidelines that specifically show how road space

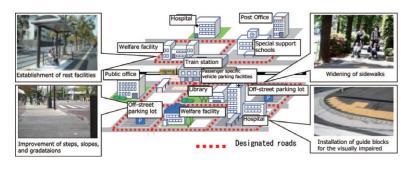
■Image of a child-rearing support facility

should be based on universal design and advanced cases.

• Consider measures to deal with the issues identified during the formulation of the guidelines (e.g., desirable specifications differ depending on the characteristics of the disability, it is difficult to set clear barrier-free standards.), based on interviews with the parties concerned.

Promote the development of child-rearing support facilities at expressway service areas and Roadside rest area (Michi-no-Eki)

■Image of barrier-free system



■ Development of road space with consideration for universal design



Inspection by



buses to stop at the stop without leaving



24 hours a day.

Covered priority parking spaces



considers for the visually impaired.

Acceleration of utility poles removal

From the perspective of improving the disaster-prevention capability of roads, ensuring safe and comfortable traffic space, creating a favorable landscape, and promoting tourism, we will promote the removal of utility poles in accordance with the Removal of Utility Poles Promotion Plan [Ref. 1] formulated in May, 2021.

Background / data

- Japan is behind other major cities in other countries in terms of removing utility poles.
- ♦ Tokyo 23 wards: 8%, Osaka City: 6% (2020) *Road extension base
 ♦ London, Paris, Hong Kong: 100% (2004), Taipei: 96% (2015), Tokyo 23 wards: 48%, Osaka City: 46% (2019) *Cable extension base
- •Approx. 2,000 utility poles collapsed and were broken, mainly in Chiba Prefecture due to the storm caused by Typhoon No. 15 in September, 2019.
- •The number of poles installed increased at a rate of about 70,000 per year from FY 2008 to FY 2018.
- Basic Policies of the Removal of Utility Poles Promotion Plan
- •Not to increase the number of new utility poles (reduce the number of poles, especially on emergency transport routes)
- •Thorough promotion of cost reduction (average cost reduction of about 20%)
- •Further accelerate the project (target to halve the project period (from 7 to 4 years on average))

4,000 km without utility poles, including 2,400 km of emergency transport routes in urban areas where there is a risk of road blockage due to collapsed utility poles, which will be launched as part of the 5-year acceleration plan

To reduce the number of newly established poles,

- · Collaboration of related parties to investigate and analyze the factors behind the increase in the number of new utility poles, and compile measures to reduce them.
- Begin operating a notification and recommendation system for the installation of utility poles in roadside areas to prevent blockage of emergency transportation roads.
- · When implementing road projects and urban development projects, in principle, no utility poles will be installed unless it is technically difficult to avoid their use.
- Expand the prohibition occupancy of new utility poles on emergency transportation routes and roads with extremely congested traffic, and begin early restrictions on existing

Promote further cost reduction thorough cost comparison at the time of design and introduction of new technologies and construction methods.

Introduce a comprehensive ordering system in cooperation with relevant ministries and agencies to facilitate simultaneous construction and coordination, and promote speedy project implementation.

Promote the removal of utility poles by reducing property tax on underground cables.

Road blockage due to collapsed utility poles



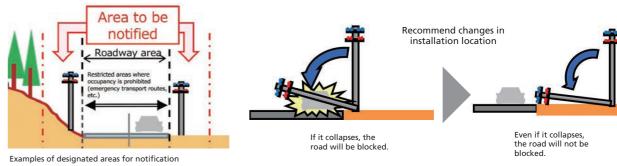
Tateyama City,

■Road where traffic is extremely congested



Example of the roads

■ Image of the operation of the notification and recommendation system



Ref. 1: the Removal of Utility Poles Promotion Plan decided by the cabinet on 25th, March, 202

Ref. 1: Roads that constitute major community routes in the priority development areas and that are designated by the Minister of Land, Infrastructure and Transportation.

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Third stage of "Michi-no-Eki (Roadside rest area)"

As a part of the third stage of "Roadside rest area (Michi-no-Eki)" initiative[Ref. 1], which started in 2020, we will promote full-scale efforts to make them disaster prevention, post-COVID-19, and regional centers.

Background / data

- Since the establishment of the system in 1993, 1,193 stations have been built nationwide (as of December 2021).
- In November 2019, the Review Council on new "Roadside rest area (Michi-no-Eki)" handed over its proposal, "To the Third Stage of 'Roadside rest area (Michi-no-Eki)'" to the Minister.
- In May, 2020, the national Roadside rest area liaison association (General Incorporated Associations) and others submitted an urgent proposal to the Minister, "The Evolution of Roadside rest area (Michi-no-Eki) in Japan with a View to the 'New
- 39 stations were selected for the first time as "Disaster Prevention Roadside rest areas" (June 2021)

Efforts to create a disaster prevention center

Roadside rest area (Michi-no-Eki) that are positioned as wide-area disaster prevention centers in the regional disaster prevention plans of prefectures are selected as "Disaster Prevention Roadside rest area (Michi-no-Eki)' and priority support is provided.

Image of "Disaster Prevention Roadside rest area"



Responding to the New Normal

Priority support for renovation of facilities to accommodate new lifestyles in post-Covid, including improvement of sanitation.

Strengthen cooperation to more effectively implement regional revitalization efforts based at Roadside rest area (Michi-no-Eki), and promote horizontal development of initiatives such as cashless payment and mail-order/EC support.

Efforts to make it a regional center

Contribute to the resolution of regional issues by promoting projects that match issues (needs) faced by individual Roadside rest area (Michi-no-Eki) with the technologies and products (seeds) of private companies that have the potential to solve them.

■Image of the Matching Project





Image Credit: Michi-no-Eki Association

Promotion of Tourism

We support the creation of tourism regions that contribute to regional development, such as the development of new tourism content for the region, countermeasures against traffic congestion in tourist areas, and environmental improvements in anticipation of a recovery in inbound demand.

Background / data

- 31.88 million foreign visitors to Japan in 2019 (3.8 times the number in 2012)[Ref. 1]
- · Many foreign visitors to Japan are dissatisfied with the lack of multilingual displays. [Ref. 2]
- Increase in the percentage of domestic travel by private car after the lapandemic [Ref. 3] (54% (July-September, 2019) -> 71% (July-September, 2021))

Development of new tourism content for the region

We will improve the riding environment along the national cycle route, create a welcoming environment, and promote the creation of attractions along the route and the dissemination of information.

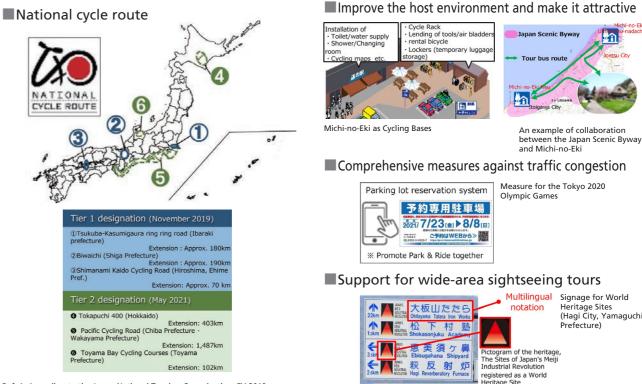
Promote sightseeing tours and PR activities that unite the Japan Scenic Byway and Roadside Rest Area (Michi-no-Eki).

Measures to prevent traffic congestion in tourist areas

Promote comprehensive parking management and other comprehensive measures to combat traffic congestion, based on initiatives for the Tokyo 2020 Olympic and Paralympic Games.

Environmental improvement in anticipation of recovery in inbound demand

Promote directions that are easy for everyone to understand, including multilingual signs, and use of map signs.



- - Ref. 2: According to the Japan Tourism Agency, FY 2019
 - Ref. 3: Prepared by the Road Bureau based on the "Survey on Travel and Tourism Consumption Trends" by the Japan Tourism Agency

Ref. 1: The first stage (1993-) promoted "a place to provide services for passing road users".

The second stage (2013-), promoted initiatives based on the concept that "themselves are destinations' The third stage (2020-2025), we will promote "bases for accelerating regional development and tourism