## Digitization of administrative procedures and improvement of convenience for road users

To improve productivity and convenience, we will promote streamlining of administrative procedures, cashless operation by making expressways ETC-only, and various types of payment inside and outside of expressways by using ETC.

#### Background / data

<Number of permits for oversized and/or overweight vehicles>
Approx. 390,000 (2017) -> Approx. 520,000 (2022) [approx. 1.3 times]
<Road Occupancy Permit (aggregated results by Regional Development Bureau)>
Number of permits: Approx. 40,000 (average annual number of permits for national highways under jurisdiction of MLIT: 2018 to 2022)

#### **Expediting procedures for oversize and overweight vehicles**

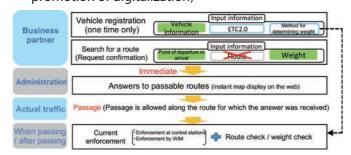
Promote the computerization of road information, and expand the use of the Vehicle Passage Confirmation System for oversized and/or overweight vehicles, which allows registered special vehicles to pass through immediately.

### Digitization of road ledgers

Digitize road ledgers and make them available on the website.

## Digitization of procedures for permitting utilization at specified vehicle stopping facilities

Oversize and overweight Vehicle Passage Confirmation System (New system through promotion of digitalization)



Establish an environment where bus and other operators can apply online for stop permit procedures.

## Establish an environment where bus and other operators can apply online for stop permit procedures

Digitize location information of occupied properties to promote proper road management and prevent road construction accidents.

Centralized online procedures for road occupancy permits, including those from local governments.

Information on optical fiber capacity will be consolidated and disclosed to the public and local governments, and the format of licensing procedures will be standardized and made available online.

## Improving convenience of Expressways

Systematic promotion of cashless payment through the conversion of tollgates on expressways to ETC-only, to improve operational efficiency and reduce tollgate congestion.

Promote introduction of ETC multi-purpose use service (Ref. 1) on public toll roads and parking lots. ■ Examples of ETC-only tollgates



Metropolitan Expressway Inner Circular Route
Kasumigaseki (clockwise direction) entrance

Example of ETC multipurpose use system application



November 2023
Introduced at Misato-Naga

troduced in private parking lots July, 2017

#### Ref. 1: A system that enables the use of ETC technology outside of expressways while realizing cost reductions through the centralized processing of payment information

# Improvement of safety, security and liveliness in road space

- Improve comfort of regions and towns -

To realize a society in which all people can live safely, securely, and comfortably, we will promote traffic safety measures, universal design, the elimination of utility poles, and the creation of space for bicycle traffic. We will also promote initiatives to meet diverse needs for road space, including new mobility such as e-scooters and the creation of lively communities.

### Creating safe and secure road space

Necessary to promote traffic safety measures, as many accidents still occur even though the number of traffic accidents is on the decrease

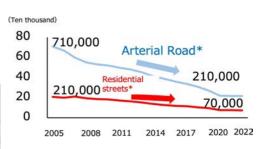
- Necessary to promote the conversion of automobile traffic to motor vehicle-only roads and arterial roads, and to promote functional differentiation from residential streets.

As Japan faces an aging society with a declining birthrate, it is necessary to develop spaces that are safe, secure, and designed with consideration for the Universal Design.

## ■ Walking space with Universal Design



Number of fatal and injury accidents by road type



\*Arterial roads: counted as roadway width of 5.5m or more

\*Residential streets: counted as roadway width of less than 5.5m

Source: based on appual report of traffic socident statistics.

## Secure space for passage of bicycles



73

Bicycle lane (Musashino City, Tokyo

## Realization of diverse needs for road space

Diverse needs for road space, including the installation of open cafes and parklets on sidewalks\* to create liveliness and improve the attractiveness of the city.

\* Efforts to create stagnant space mainly by utilizing shoulders and stopping lane

#### Open cafe on the sidewalk



National Route 8: Tsuruga City, Fukul Prefectur

■Installation of parklets



Minami Ise-machi Dori parklet: Nagoya City, Aichi Prefecture

## Road policies diversify in response to the needs of the society



72

## Developing a safe and secure road space

Promote the development of safe and secure road space by further improving the safety of arterial roads, shifting automobile traffic, taking wide range of measures to control the speed of traffic on residential streets, and prevent passing traffic from entering.

#### Background / data

- The number of road accident fatalities in 2023 was 2,678.
- •The fatality and injury accident rate on residential streets(Ref. 1) is much higher than on other roads (about twice as high as on arterial roads and about 18 times as high as on roads for exclusive use of motor vehicles).
- •As a result of the joint inspection of school routes(Ref. 2), of the 39,000 locations where measures were required, as of September 30, 2023, they have been completed at about 31,000 locations, with provisional safety measures at 35,000 locations. We aim to take measures at all locations by the end of FY2023, including provisional measures.
- "Zone 30 Plus" (Ref.3) development plans have been established in 122 districts nationwide. (as of March 31, 2023)

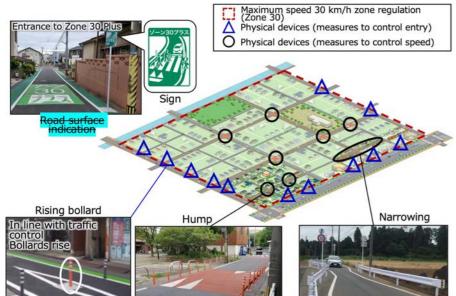
Promote intensive countermeasures in areas at risk(Ref. 4) of accidents.

Promote "Zone 30 Plus" maintenance on residential streets through the traffic safety measure subsidy system (coordination within the district).

Promote measures such as the construction of sidewalks and protective fences based on the results of joint inspections of school routes through the Traffic Safety Measures Subsidy System (Emergency Measures for School Routes).

Promote the use of big data for efficient and effective traffic safety planning and community consensus building.

#### ■ Image of "Zone 30 Plus"



- Improvement rate of sidewalks on school routes (2019 to 2025): 53% -> 57%
- Reduction rate of fatal and injury accidents in accident-prone spots on arterial roads (2025): about 30% reduction compared to 2019
- Reduction rate of fatal and injury accidents on ommunity roads (2025) by measures combining 30km/h speed limit in Zone 30 and maintenance of umps and narrow strips: about 30% reduction

#### Ref. 1: Arterial roads (national highways, major regional roads, prefectural roads (excluding overlaps with roads with access control)) and residential streets (roads other than those with access control) and arterial roads (including roads other than those under the Road Act)) Ref. 2: Implemented in response to a traffic accident that occurred on a school road in Yachimata City, Chiba Prefecture, in June 2021.

## **Promotion of railway crossing countermeasures**

In accordance with the Act on Promotion of Railway Crossings, crossings to be improved are designated, and measures such as multi-level and barrier-free crossings are promoted through systematic and intensive support by utilizing the subsidy for improvement planning project of level crossings.

### Measures to improve railway crossings

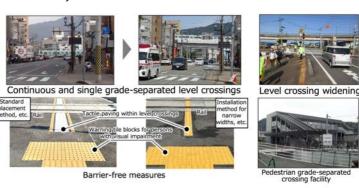
#### Background / data (As of January 2024)

- Crossings requiring urgent countermeasures (charted crossings): 1,336 crossings
- Ministerial designation of level crossing roads to be improved: 649 location

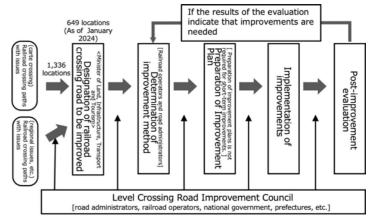
Promote transparency of the consultation process by opening railroad crossing improvement council meetings to the public, and visualization of countermeasure status by publicizing the "level crossing road safety passage chart for 1,336 locations".

Based on the guidelines(Ref. 1) revised in response to accidents involving persons with visual impairment at railroad crossings, railroad crossings on specified roads (Ref. 2) were designated by the Minister of Land, Infrastructure, Transport and Tourism to promote barrier-free measures.

#### Case study



#### Flow of measures based on the Act on Promotion of Railway Crossings



• Number of railroad 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

### Disaster response

#### Background / data

(As of January 2024)

• Ministerial designation of level crossing roads with disaster management methods: 469 locations

Promote measures such as periodic trainings to ensure that priority is given to avoiding long periods of blockage in the event of a disaster by designating level crossing roads with disaster management methods.



conditions to establish disaster

Ref. 1: Universal Design Guidelines for Road Transportation (revised January 2024)

Ref. 2: Roads designated by the Minister of Land, Infrastructure, Transport and Tourism, such as roads that comprise the lifestyle-related routes positioned in the Barrier-Free Basic Concept

Ref. 3: Cooperative measures to ensure traffic safety for pedestrians and others through close cooperation between the police and road administrators from the study stage, through an appropriate combination of zone regulations (Zone 30) with a maximum speed of 30 km/h and physical devices

Ref. 4: Areas of high accident risk on arterial roads (e.g., areas with high accident frequency and potential hazards) jointly designated by the Ministry of Land, Infrastructure, Transport and Tourism and the National Police Agency as areas where countermeasures are to be intensively implemented.

## Improving the safety and reliability of expressways

To prevent head-on collisions, the earthwork section and small and medium-sized bridges were mostly completed in 2022, and new technology will be installed on long-span bridges and tunnel sections on a trial basis on actual roads to verify its effectiveness.

To achieve zero serious accidents due to wrong-way driving on expressways by 2029, we will promote measures to prevent wrong-way driving on expressways, as well as countermeasures against accidental wrong-way entry of mopeds and pedestrians.

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

#### Background / data

- The fatal road accident rate on provisional two-lane expressways is about twice as the rate on expressway segments with four or more lanes. (Ref. 1)
- · As of December 2023, out of 9,710 accidents involving contact with wire ropes nationwide, there were 17 accidents involving a vehicle veering into oncoming traffic, none of which were fatal. (Ref. 2)

New technology that meets the performance requirements for preventing vehicles from deviating from the road is being installed on a trial basis at 13 locations (approx. 3 km) on actual roads nationwide to verify its effectiveness in long span bridges and tunnel sections.

Plans are in place to expand the trial locations by approximately 11 km to verify effectiveness.

New technologies to be installed on actual roads on a trial basis, awarded in an open competition.



Selection of two technologies for long-span bridge and tunnel section

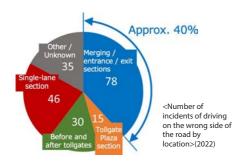
### Countermeasures against wrong-way driving and wrong-way entry

#### Background / data

- The number of serious accidents due to wrong-way driving on expressways decreased by approximately 20 per year before 2016, and has been decreasing by approximately 13 per year since 2017(Ref. 3).
- Of the 3,828 incidents (FY2022) of pedestrians and vehicles entering highways by mistake, 56% were mopeds, 30% were pedestrians, and 13% were bicycles.

Promote color pavement of public roads as a countermeasure for the merging and entrance/exit areas, which account for approximately 40%(Ref4) of the locations where wrong-way driving incidents occur, and the practical application of road-vehicle coordination systems using image recognition technology.

Promote countermeasures against wrong-entry of mopeds and pedestrians as well as countermeasures against wrong-way driving at highway entrances and exits.







Wrong-way driving

warning signs

Roadside-to-vehicle technology

Ref. 1: Expressway (toll) (2013 - 2021)

Ref. 2: Wire rope installed: approx. 1,524 km (as of December 2023) [Earthwork section approx. 1,502 km, small and medium bridges approx. 22 km]

Ref. 3: Before 2016: 2011 to 2016 data; after 2017: 2017 to 2022 data

Ref. 4: 2022 data

76

## **Promotion of universal design**

We promote universal design of roads around major railroad stations and other areas throughout Japan in order to realize communities and towns where people with all mobility levels, including the elderly and disabled, can move around safely, securely, and smoothly.

In order to realize "Building Child-Centered Towns", promote the development of child-rearing support facilities at Michi-no-Eki roadside rest areas throughout Japan.

#### 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 Michi-no-Eki.

Maintenance rate (as of April 2023)	Baby Corner available 24 hours a day	Covered priority parking spaces for pregnant women
<ul> <li>Major child-rearing support facilities at service areas and Michi- no-Eki (1,204 facilities)</li> </ul>	20% (245 facilities)	29% (350 facilities)

<sup>\*</sup>Completed at 220 SAs with commercial facilities on expressways

## Promotion of barrier-free accessibility of specified roads

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

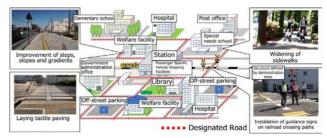
· Rate of creating barrier-free specified roads (2018 -> 2025); approx. 63% -> approx. 70%

## Road space development that takes universal design into consideration

Promotion of the guideline which shows barrier-free standards and universal design for roads.

### Driving support for a variety of mobile entities

Verify the feasibility of utilizing 3D point cloud data of walking space for road management, and study driving support for various mobile entities such as automatic delivery robots.





Inspection by the

Edge structure of pedestrian crossing with nsideration for persons with visua



### Development of childcare support facilities at "Michi-no-Eki"

Promoting the development of childcare support facilities at "Michi-no-Eki" nationwide.





Covered priority parking

Targets for development of child-rearing support facilities at "Roadside Stations" nationwide (2019 to 2025); approx. 4% -> over 509

Ref. 1: Roads designated by the Minister of Land, Infrastructure, Transport and Tourism, such as roads that comprise major residential streets positioned in the Barrier-Free Basic Concept

## Create vibrant, people-centric street spaces

Responding to various needs, we create vibrant road spaces, and improve the attractiveness and vitality of local communities. We also work to realize "road spaces focused on people" through the utilization of sidewalks and shoulders, and the safe coexistence of pedestrians and vehicles.

#### Promoting the renovation of street space

#### Background / data

- Increasingly diverse needs for road space, such as liveliness, safety, and new mobility.
- With the increasing need for street spaces where people can stay and interact with each other, realization of "road spaces focused on people" is expected.
- Number of designated pedestrian-friendly roads (HOKOMICHI): 119 roads in 44 cities, wards, and towns (as of May 31, 2023)

#### Flexible use of sidewalks, shoulders, etc.

Promote the expansion of pedestrian and other spaces by reallocating street space.

Promote street vibrancy initiatives in each area using the HOKOMICHI system.

Promote the development of the road cooperative organization system and cooperation with the HOKOMICHI system to enhance road maintenance and management.

Prepare a collection of examples of parklets and guidelines for flexible use of shoulders and other facilities.



Example of HOKOMICHI (Himeji City, Hyogo Prefecture)



Example case of parklet (Yokohama City)



Example of HOKOMICHI (Ogaki City, Gifu Prefecture)



Example of car sharing using shoulders (Chiyoda Ward, Tokyo)

## Creating streets where pedestrians can coexist with vehicles

Study to create a busy street space where pedestrians and vehicles can safely coexist by controlling the speed and flow of vehicles.



Example of a road where pedestrians and vehicles coexist



Example of a road where pedestrians and vehicles coexist (Izumo City)

## Improve the environment for and promote bicycle use

Based on the Second Plan for the Promotion of Bicycle Use, we will promote the creation of a safe and comfortable environment for bicycle use by encouraging local governments to formulate bicycle use promotion plans.

### Improvement of safe and comfortable environment for use of bicycles

#### Background / data

• The number of bicycle and pedestrian separated spaces is approximately 4,686 km. (as of the end of FY2021)

Accelerate the development of appropriately separated spaces for cyclists through the revision of the Guidelines (Ref.1).

Establish a regional promotion system to strengthen cooperation among related parties, and promote the development of the local Bicycle Use Promotion Plans (Ref.2) by providing new know-how.

Number of municipalities that have formulated plans (Ref. 3) (2020 -> 2025): 89 -> 400

Conducting surveys of advanced overseas bicycle policies. (e.g., Plan Vélo in France)

#### ■Bicycle path



(Takatsuki City, Osaka)



Itami City, Hyogo Prefecture

City of Paris

### Promote the use of shared bicycles

Further promote the spread of shared bicycles by providing know-how to local governments and visualizing the effects of their introduction through guidelines (Ref. 4).

### Promoting the introduction of bicycle commuting

Strengthened promotion of bicycle commuting through the "Certified Bicycle Commuting Company" Declaration Project system(Ref. 5) and guidance.

 $\bullet$  Share of bicycles used for commuting (2015 -> 2025): 15.2% -> 18.2%

### Promotion of cycle tourism

Creating a world-class cycling environment by improving the riding environment(Ref. 6).

 $\bullet \text{ Number of model routes for the development of advanced cycling environment (2019 -> 2025): 56 -> 100 \text{ routes} \quad (R1 \rightarrow R7) = 100 \text{ routes} \quad (R1 \rightarrow R7)$ 

## Promote the acquisition of liability insurance for cycling



Shared cycles(Shizuoka City, Shizuoka



Promote th

79

#### Background / data

• Mandatory membership by ordinance: mandatory in 32 prefectures, effort required in 10 prefectures (as of April 2023)

Support for the enactment of ordinances by prefectures and provision of information on the necessity of insurance coverage.

Bicycle insurance coverage (2020 -> 2025): 59.7% -> 75%

Ref. 1: "Guidelines for Creating a Safe and Comfortable Bicycle Use Environment" (July 2016) Ref. 2: According to the Act on Promotion of the Use of Bicycle, prefectures and municipalities must endeavor to establish local Bicycle Use Promotion Plans Ref. 3: Number of local Bicycle Use Promotion Plans that include a plan for bicycle networks Ref. 4: "Guidelines for the Introduction and Operation of Shared Cycle Businesses" (September 2023) Ref. 5: Number of declared companies: 60 (as of November 2023) Ref. 6: Creation of a world-class cycling environment

78

## Promoting the removal of utility poles

To improve road accident prevention, ensure safe and comfortable traffic spaces, create favorable scenery, and promote tourism, we will promote the removal of utility poles in accordance with the plan for promoting pole-free roads. (Ref. 1)

#### Background / data

- · Japan is behind other major cities in other countries in terms of removing utility poles.
- ♦ Tokyo 23 wards: 8%, Osaka City: 6% \*Based on road extension (2020) ♦ London, Paris, Hong Kong: 100% \*Based on cable extension (2004)
- Based on the plan to promote the elimination of utility poles, elimination of 4,000 km of utility poles over a five-year period was started in FY2021.
- The number of utility poles nationwide is approximately 36 million, and the number of new poles increased by 48,000 in FY2021.
- 98% of emergency transportation roads have been designated as prohibited for new utility poles.

### Thorough cost reduction

Revision of the "Guide to Cost-Effective Methods" is planned to promote the use of low-cost methods such as direct burial of pipelines, various maintenance methods, new technologies and new materials, to promote cost reduction.

Cost reduction of approximately 20% on average by FY2025(Ref. 1).

## Conventional method

the road administator

Delegate all coordination to line managers

Comprehensive outsourcing

### Speeding up the operation

Improve the speed of the joint conduit project through the use of PFI methods, the introduction of comprehensive outsourcing and other ordering methods.

Target to halve the project period by FY2025 (from an average of 7 years to 4 years) (Ref. 2).

## Dealing with new and existing poles

Promote measures to control new utility poles in cooperation with related ministries and agencies

- In principle, install no utility poles when implementing road projects.
- Promote efforts to improve conduits at the same time as road construction when future demand for electricity is expected.
- Expand occupancy restrictions for narrow roads and traffic safety.

Start procedures to restrict utility poles by prioritizing sections where the elimination of utility poles is underway

In areas where poles have not been removed, we will promote the removal of poles in cooperation with the cable managers.

## Maintenance that takes into consideration the importance of the route

In the future, the sections to be developed will be prioritized in DID (Densely Inhabited Districts) areas that are important for disaster prevention and will be developed in consideration of tourist attractions.

Ref. 1: Ministerial Decision, May 25, 2021 Ref. 2: Covers joint cable ducts to be started within the period of the promotion plan





## Promotion of the third stage of Michi-no-Eki (Roadside rest areas)

In order for "Michi-no-Eki" to become a "base for accelerating regional development and tourism" and to contribute to vibrant regional design through road networking, we will comprehensively promote the initiatives of the third stage of "Michi-no-Eki" roadside stations.

#### Background / data

- 1,209 stations installed nationwide (August 2023).
- 39 "Michi-no-Eki for Disaster Prevention" were selected (as of June 2021) and 354 Michi-no-Eki were designated as "Disaster Prevention Base Car Parking" (as of March 2023).

#### Efforts to strengthen disaster prevention functions

Promoting the enhancement of disaster prevention functions of "Michi-no-Eki for Disaster Prevention" (Ref. 1) centering on "Disaster Prevention Base Car Parking".

BCP formulation rate at "Michi-no-Eki" positioned in regional disaster prevention plans (2019 -> 2025): 3% → 100%

Establishment of disaster prevention warehouses and emergency power supply facilities, and formulation and dissemination of guidelines to promote the introduction of high value-added containers (Ref. 2) that can be used even in times of disaster.

#### Efforts to create a disaster prevention center





Reinforcement of Disaster Prevention Functions of

"Inawashiro", a Michi-no-Eki for Disaster Preventio

### Implementation of model projects

Exploit local values and increase the number of people involved through workshops with the local community and the use of data on the actual usage of "Michi-no-Eki" roadside stations.

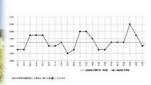
### **Strengthening tourism functions**

Strengthening on-site support

shopping support.

## Promote efforts to improve sanitation, cashless payment, and online

# Michi-no-Eki "Tomiura



Data utilization





Michi-no-Eki "Motegi

Strengthen on-site support for aging facilities by introducing a menu of support services that can be utilized for renewal and establishing a consultation servic.

#### Example of renewal (Michi-no-Eki "Otofuke" (Natsuzora no Furusato))









Relocation of facilities and construction of an agricultural and livestock products sales center (Natsuzora Market) and a lawn area

Ref. 1: Requirements for selection as a "Michi-no-Eki for Disaster Prevention

①Positioning as a wide-area disaster prevention center in prefectural wide-area disaster prevention plans and new wide-area road transportation plans
②The facility must have a BCP (Business Continuity Plan) in place (or a concrete plan to establish facilities and systems within about 3 years after selection), with facilities that can conduct business even in

the event of a disaster by making the building earthquake-resistant, ensuring uninterrupted power, securing communications and water, and a parking area of 2,500 m2 or more.

Ref. 2: Movable containers that can provide services such as rest and regional promotion are to be installed at "roadside stations" and transported to disaster-stricken areas for wide-area utilization in the

## **Creating sustainable tourism regions**

In order to realize the creation of sustainable tourism regions, we will strengthen our response to inbound visitors, stimulate domestic travel demand by expanding domestic exchanges, and promote environmental improvements to prevent and curb overtourism.

#### Background / data

- Japan ranks first in the world as the country/region where people would like to take their next sightseeing trip (Ref. 1).
- Total domestic overnight stays have recovered to beyond pre-Covid levels (Sep. 2019 -> Sep. 2023: +3.2%) (Ref. 2).

### **Environmental provision for strengthening inbound reception**

Promoting easy-to-understand directions for everyone by using multilingual signage and map signs.

Create a world-class cycling environment such as the National Cycle Routes and promote it both domestically and internationally.

## Provide an environment for the expansion of domestic exchanges

Support for the creation of attractive tourist areas through activities such as road beautification and landscaping along the routes of Scenic Byway Japan.

Improvement of expressway excursion pass products for regional revitalization and promotion of tourism.

## **Environmental improvements for overtourism measures**

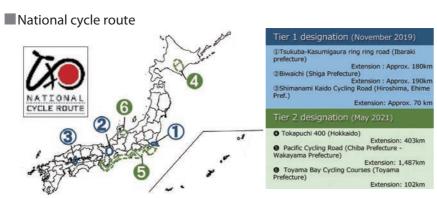
Promote the removal of utility poles to contribute to the expansion of walking space in tourist areas and the development of bicycle pathways that promote the use of bicycles.

Conduct social experiments to address traffic congestion in tourist areas through the use of parking lot reservation services and park-and-ride services in areas with tourism congestion problems.

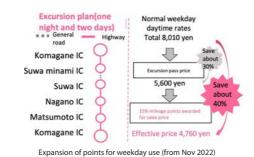
Review expressway toll discounts to disperse and equalize tourism demand, including a review of the balance between holidays and weekdays.

 $\label{lem:multilingualization} \textbf{Multilingualization of disaster information.}$ 

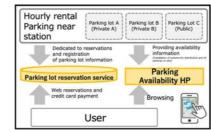




#### Promoting weekday use of the excursion pass



#### Parking Reservation Service



## User

Ref.1 : Development Bank of Japan and the Japan Travel Bureau Foundation, "Survey on Tourist Travel to Japan from Asia, Europe, the United States, and Australia (October 2021)

## Appendix

- -History of Roads in Japan
- -Technical Standards
- -2040 Vision for Roads in Japan
- -Statistics









Ref.2: Compiled by the Road Bureau from the Japan Tourism Agency's "Survey of Travel and Tourism Consumption Trends"

82