# SUMMARY OF THE WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN, 2021

## Policy Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT)



Ministry of Land, Infrastructure, Transport and Tourism



## **Part** Overcoming crisis to take firm steps towards a prosperous future

Chapter 1. The current crisis we face and the past crisis

Section 1. The current crisis we face

COVID-19
 Intensification/frequency of disasters

Section 2. Past crises and changes

Chapter 2. Acceleration of changes and emerging problems due to crises

Section 1. Difficulty of maintaining the foundation of social survival

Section 2. Increased disaster risks and aging infrastructure

Section 3. Delay in social changes that support diversification

Section 4. Delay of digital transformation (DX) and stagnation of growth

Section 5. Progress of global warming

Chapter 3. Taking firm steps towards "a prosperous future".

Section 1. Responding to changes and challenges due to crises

**Part II** Trends in MLIT Policies

~ Report on Trends in Each Field of Land, Infrastructure, Transport and Tourism Policies by Policy Issue ~

## Chapter 1. The current crisis we face and the past crisis



Section 1. The current crisis we face 1. COVID-19

<ul> <li>O The COVID-19 is a highly infectious disease the disease, resulting in many infections and</li> <li>O In order to control the COVID-19 pandemic, changes in socioeconomic conditions.</li> <li>O The impacts from the pandemic is sicnificant</li> <li>O The COVID-19 has also damaged economy COVID-19 as the current crisis we face.</li> </ul>	deaths. the state of emergency and as this is the first pandemic	quarantine measures have been i to hit Japan since the Spanish fl	mplemented, which caused s u (1918–1920), and thus ma	significant economic damage due to the rapid ny people have never experienced it before.
1. COVID-19				
(1) Impact on our lives and bodies				
April 7, 2020 8,000 8,000 7,000 6,000 4,000 2,000 3,000 2,000 0 2020/1/15 2020/2/15 2020/2/15 2020/2/15 2020/2/15 2020/3/15 2020/2/15 2020/3/15 2020/2/15 202	ionwide	January 7, 2021 State of emergency declared (Saitama Prefecture, Chiba P Metropolis, Kanagawa Prefec January 13, 2021 State of emergency expanded (Tochigi Prefecture, Aichi Pre Prefecture, Osaka Prefecture Hyogo Prefecture, Fukuoka P	refecture, Tokyo ture) d to 11 prefectures efecture, Gifu e, Kyoto Prefecture,	February 8, February 28, March 21,2021 Cancellation of the state of emergency
				the Ministry of Health, Labour and Welfare homepage
<ul> <li>(2) Impact on the Japanese economy OChanges in foot traffic</li> <li>Comparison with median by day of the week between January 3 to February 6, 2020 (%)</li> <li>40</li> <li>40</li></ul>	$ \begin{array}{c} \text{(Million people)} 97.7 & 99.1 \\ 10 & 99.3 \\ 9 & 99.1 \\ 8 \\ 7 \\ 6 \\ 5 \\ 4 \\ 3 \\ 2 \\ 1 \\ 0.5 \\ 1 \\ 1 \\ 0.9 \\ 0.5 \\ 1.0 \\ 0.9 \\ 0.5$	d immigrants year, preliminary decline was red	to the previous quarter, and June 2020, the worst corded since 1994. nges in real GDP growth rate 5.3 2.8 -1.3 -8.1	Number of births (by month, year-on-year) 90,000 96,0000 96,0000 96,0000 96,0000 96,0000 96,0000 96,0000 96,0000 9
Source) Prepared by the MLIT based on the Google Community Mot	Source) Prepared by the	MLIT based on Ministry of	Source) Cabinet Office	Source) Prepared by the MLIT based on the Ministry of Health, Labour and Welfare "Preliminary Report of Vital Statistics (March 2021)"

## Chapter 1. The current crisis we face and the past crisis Section 1. The current crisis we face 2. Intensification/frequency of disasters



O In recent years, heavy rainfall disasters are becoming more intense and frequent in Japan, causing massive damages in various areas. Heavy rain occurred in July 2020 again which brought massive floods and sediment disasters. In addition, it caused significant damages such as blocked roads and railways due to roads and bridges being washed away by floods as well as 14 human casualties in a special nursing home for the elderly.

O The probability of the large-scale earthquakes occurring such as a Nankai Trough Earthquake. Tokyo Inland Earthquake and Trench-type earthquakes in the Vicinity of the Japan and Chishima Trenches is becoming higher, and great damage is expected.

O In this way, natural disasters in Japan are becoming more intense, frequent or imminent in recent years, and thus we recognize this is the current crisis we face.

### Increased disaster risks

(1) Intensification/frequent occurrence of heavy rainfall disaster Major heavy rainfall disasters since 2018 Source) MLIT				
	The Heavy Rain Event of July 2018	Typhoon Hagibis in October 2019	The Heavy Rain Event of July 2020	
Date of occurrence	June 28 to July 8, 2018	October 6 to October 13, 2019	July 3 to July 31, 2020	
Number of points with the heaviest rainfall ever recorded	122 points (72 hours) 124 points (48 hours) 76 points (24 hours)	72 points (48 hours) 103 points (24 hours) 120 points (12 hours)	40 points (72 hours) 40 points (48 hours) 30 points (24 hours)	
Number of missing and/or dead	271	108	86	
Completely destroyed buildings	6,783 buildings	3,229 buildings	1,620 buildings	
Half-destroyed buildings	11,346 buildings	28,107 buildings	4,509 buildings	
Amount of damage	1.215 trillion yen	1.88 trillion yen	Unaggregated	

### Damage caused by the Heavy Rain Event of July 2020 Flood damage in Hitoyoshi, Kumamoto Prefecture



Levee damage restoration work (2021.4) work (2021.2)





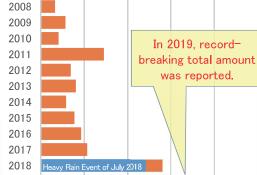
Recovery status from the Heavy Rain Event of July 2020 (Kuma River) Temporary bridge installation



Kamase Bridge Currently pile

driving temporary bridge

undatio



2005

2006

2007

2019

0

Changes in the amount of flood

damage other than tsunamis

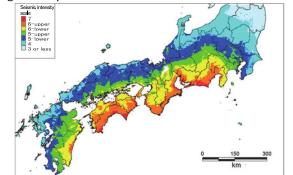
hoon Hagibis in October 201 20,000 25,000 5,000 10,000 15,000 (100 million ven) (2) Risk of large-scale earthquakes

- The probability of a Nankai Trough Earthquake occurring within the next 30 years is 70-80%.
- The probability of a Tokyo Inland Earthquake occurring within the next 30 years is around 70%.

earthquakes (Reference) The Nankai Trough Tokvo Inland in the Vicinity of Great East Japan Earthquake Earthquake the Japan and Earthquake Chishima Trenches M 9.0-9.1 M 7.3 M 8.0 M 9.0 Scale Maximum 7 7 7 seismic 6-upper intensity Number of Approx. 323,000 Approx. 23,000 Approx. 2,700 missing 22,000 people people people people and/or dead Completely

Comparison of estimated damage due to large-scale earthquakes Trench-type

destroyed buildings Destroyed by fire	Approx. 2.386 million buildings	Approx. 610,000 buildings	Approx. 35,000 buildings	122,000 buildings
Economic damage (Direct)	Approx. 169.5 tri <b>ll</b> ion yen	Approx. 47 tri <b>ll</b> ion yen	Approx. 1 trillion yen	16.9 tri <b>ll</b> ion yen
				Source) MLIT
Seismic	intensity (maxim	um value) dist	tribution map of	Nankai
Trough Earthquake				
So	ismo intensity de 7 - Dupor 9 - Dupor 5 - Dupor 5 - Jopor 3 or less			
		A CA	2	



## Chapter 1. The current crisis we face and the past crisis



### Section 2. Past crises and changes

Owhile Japan has been hit by serious crises in the past and has suffered from great damage, the country has been able to realize a better society by taking measures against the accelerated and actualized issues in the wake of the crises.

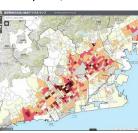
OAs with the past crises, we must take this opportunity of facing crisis for transforming our social system, in order to take firm steps towards a "prosperous future".

1. Damage, I	1. Damage, lessons learned from major past crises         Source) MLIT			3. Reform due to the Great East Japan Earthquake Urban development of Tamauranishi, Iwanuma City
	Great Kanto Earthquake	Great Hanshin-Awaji Earthquake	The Great East Japan Earthquake	OFormation of compact cities by reconstruction urban development
Date of occurrence	September 1, 1923	January 17, 1995	March 11, 2011	As the population continues to decline and aging progresses,     Ainokama District
Characteristics of damage	Although tsunamis and sediment disasters also occurred, the damage caused by fires was especially significant.	Collapse of buildings Large-scale fires occurred primarily in Nagata Ward.	Significant damage occurred in the coastal areas due to the large tsunami, and many districts were destroyed.	<ul> <li>important to ensure the sustainability of the region.</li> <li>Based on this, the six affected districts were collectively relocated to the central area in Iwanuma City, Miyagi Prefecture as part of the reconstruction</li> </ul>
Number of missing and/or dead	105,385	6,437	22,303	urban development. In addition to the recovery from the earthquake, a compact and comfortable area to live in was also realized.
Completely destroyed buildings	293,387 buildings	104,906 buildings	122,005 buildings	OStrengthening international competitiveness by strengthening the
Changes and lessons learned after a disaster		<ul> <li>Seismic retrofitting of houses and public buildings</li> <li>Shift from earthquake prediction to advance disaster prevention</li> <li>Formalization of GIS development</li> <li>Retention of disaster volunteers (first year of volunteers)</li> <li>Popularization of earthquake insurance</li> </ul>	<ul> <li>Promotion of tsunami disaster prevention area development</li> <li>Strengthening measures for people who have difficulty returning home</li> <li>Strengthening of road networks</li> <li>Increased awareness of disaster prevention</li> <li>Improvement of living environments at evacuation shelters</li> </ul>	<ul> <li>function of ports</li> <li>In order to strengthen the international competitiveness of the Japanese economy, strengthening the functions of ports, the gateway to imports and exports, is becoming more and more important.</li> <li>Based on this, in addition to the restoration of the damaged breakwaters, an international routes were opened at Kamaishi Port. Combined with the development of logistics routes through reconstruction support roads, the number of users and container handling volume has increased sharply.</li> <li>Changes in the number of users and container handling volume at Kamaishi Port.</li> </ul>

### 2. Reform due to the Great Hanshin-Awaii Earthquake

The GIS (Geographic Information System) was used to grasp the disaster situation, etc. during the Great Hanshin-Awaji Earthquake, but it

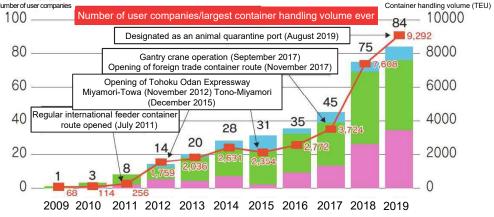
was not possible to provide effective relief activity support through mutual use of GIS between related organizations. Based on this lesson. the development of GIS gained momentum.



• The Great Hanshin-Awaji Earthquake served as an opportunity to recognize the importance of the "New Public", and 1995 became known as the "first year of volunteers" because many

volunteer organizations were established.





\*2015 was the value excluding the transportation of soil generated from reconstruction construction (2,066 TEU)



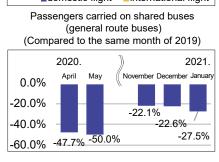
Section 1. Difficulty of maintaining the foundation of social survival

- ONew risks of drastic changes in the business environment due to COVID-19 have emerged, which have been caused by the reduced flow of people and the disappearance of inbound tourism due to the restrictions on international travel. The management of the public transportation (especially long-distance travel such as the airline industry) and tourism industries, which provide the fundamental network infrastructure of a nation and regions, is facing a serious situation.
- OLocal public transportation is in a difficult situation due to the population decline etc.. Maintaining local public transportation in rural areas is becoming difficult in particular, where the population is declining, and that sustainability of these areas is becoming an issue due to the decline in accessibility to medical care, welfare and shopping.
- 1. Serious impact on public transportation
- Public transport management is in a serious situation with the decrease in users due to restrictions on going out and international travel to prevent the spread of infections.
- O Impact on the airline industry, etc.
- The airline industry, which is important for creating convections and exchanges with foreign countries and domestic regions as a foundation of the tourism industry, is facing a significantly serious situation due to the decline in users as a result of COVID-19.
- Other long-distance transportation such as express buses are also in a serious situation.
- O Impact on local public transportation
- Local public transportation such as buses that support the everyday lives of local residents is facing an extremely difficult situation due to the decline in users as a result of COVID-19, in addition to the declining population.

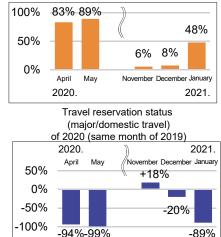
### 2. Serious impact on the tourism industry

- The tourism industry is facing an extremely serious situation due to a decrease in demand for domestic travel as a result of the restraints on going out to prevent the spread of infections and loss of inbound tourists due to restrictions on international travel. etc.
- Although the business environment had improved around the fall of 2020 due to the effects of the Go To Travel campaign, it became once again in a severe situation as a result of the spread of infections from the end of the year and the declaration of the state of emergency, etc.
- The tourism industry has a large impact on the Japanese economy, and because it is a foundation that creates convections and exchanges with foreign countries and regions, it is an important industry for Japan and the local regions.





Percentage of businesses that responded that the reservation status of accommodations in 2020 saw more than a 70% decrease in the same month of 2019.



### 3. Difficulty of maintaining local life services

- Population decline and aging are progressing mainly in rural areas.
- The population will be less than half in approximately 30% of all municipalities by 2050 (mountainous areas are most prominent).
- Although the management of local public transportation was becoming difficult even before the outbreak of COVID-19, the number of users has further declined due to the pandemic, which has led to face a serious situation.

ocal public transportation fore the outbreak of rs has further declined s led to face a serious ecessary for daily life

Distribution of municipalities

where the population will be less

than half by 2050

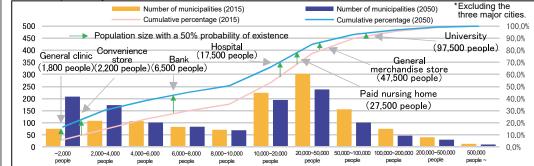
In order to maintain services necessary for daily life such as medical care, welfare, shopping and education etc., it is essential to assure a certain level of the population size and the public transport infrastructure for the access to local services, and that the decline in population size and difficulties in maintaining public transportation will lead to a challenge in maintaining services necessary for daily life.

The percentage of municipalities where the survival of hospitals, banks and convenience stores may be difficult has increased from 2015 to 2050 as follows.

Hospitals: 53%  $\rightarrow$  66% Banks: 26%  $\rightarrow$  42% Convenience stores: 7%  $\rightarrow$  20%

### The sustainability of the region itself becomes difficult

Number of municipalities by population size (2015 and 2050) and the population scale of municipalities where the existence probability is 50% or less





Section 2. Increased disaster risks and aging infrastructure

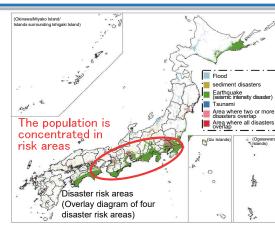
- O Due to land conditions such as topography, geology and weather, etc., Japan has been hit by a great deal of damage from natural disasters, and disaster risk reduction and mitigation are important issues.
- O Issues such as the decrease in disaster risk reduction capability due to a concentration of the population in disaster risk areas and increase of elderly single-person households and intensification and frequency of water disasters due to the effects of climate change are becoming apparent in recent years.
- O During the Heavy Rain Event of July 2020, issues became apparent such as the necessity of securing evacuation at welfare facilities for the elderly and the new risks of roadrelated disasters (roads and bridges being washed away by floods).
- O Infrastructure plays an important role in disaster risk reduction and mitigation. In the future, as infrastructure facilities that have exceeded over 50 years since they were built will increase at an accelerating rate, the maintenance, management and updating of such facilities is an issue.

1. Issues that have become apparent in recent vears

- O Concentration of population and functions in areas with high disaster risk.
- Approximately 70% of the overall population is living in the area with a high risk of disaster, which accounts for 21.5% of the entire risk area.

Area of risk area (Percentage of the national land area)	Approx. 80,000km (21.5%)
Population within the risk area (2015) (Percentage of the total population)	86.03 million people ( <mark>67.7%</mark> )

- O Decline in disaster prevention capabilities due to an increase in elderly single-person households.
- The number of single-person households over the age of 65 is showing an increasing trend toward 2040. In particular, the urban population over the age of 65 increases rapidly in the future, and there is concern that disaster prevention capabilities will decline such as a deterioration of community functions, delayed evacuations, etc.



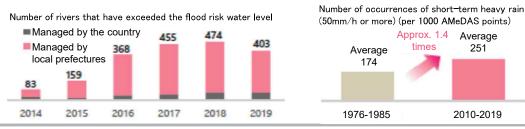
\* Regions included in any of the flood, sediment disasters, earthquake (seismic intensity disaster) and tsunami disaster risk areas are aggregated as "disaster risk areas"

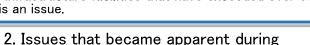
	number of elderly sing entage of single-person puseholds (left axis)	Number of single-person households over the age of 65 (right axis)	
2000	2005 2010 2015 20	20 2025 2030 2035 20	200 100 0 040 (yea

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 ${igodol}$  Intensification and frequency of water disasters due to the effects of climate change.

- The number of rivers that have exceeded the flood risk water level is on the increase.
- The frequency of occurrence of short term heavy rain has expanded about 1.4 times in the last 30-40 vears.
- It seems that global warming is contributing to the intensification and frequency of water disasters.





the Heavy Rain Event of July 2020

OSecuring evacuation in welfare facilities for the elderly.

 The human casualties caused at the special nursing home for the elderly revealed issues on securing evacuation at the welfare facilities for the elderly including problems related to evacuation destinations, evacuation timing, training, staff systems, equipment, etc..



ONew road disaster risks

 In addition to ten bridges washed away by floods along the Kuma River, road disaster risks with new characteristics occurred such as roads being washed away in sections adjacent

to the river and arge-scale landslides outside the road area.



# Road washed away (National Route 41)

### 3. Decline in social infrastructure

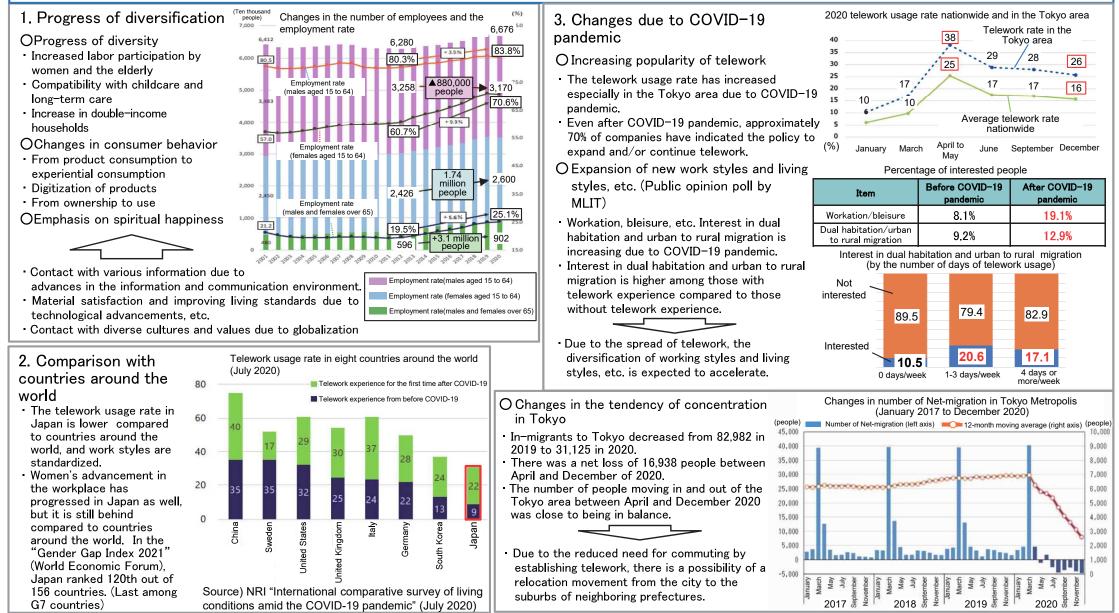
• In the future, the percentage of social infrastructure facilities that have exceeded over 50 years since being built will increase at an accelerating rate.





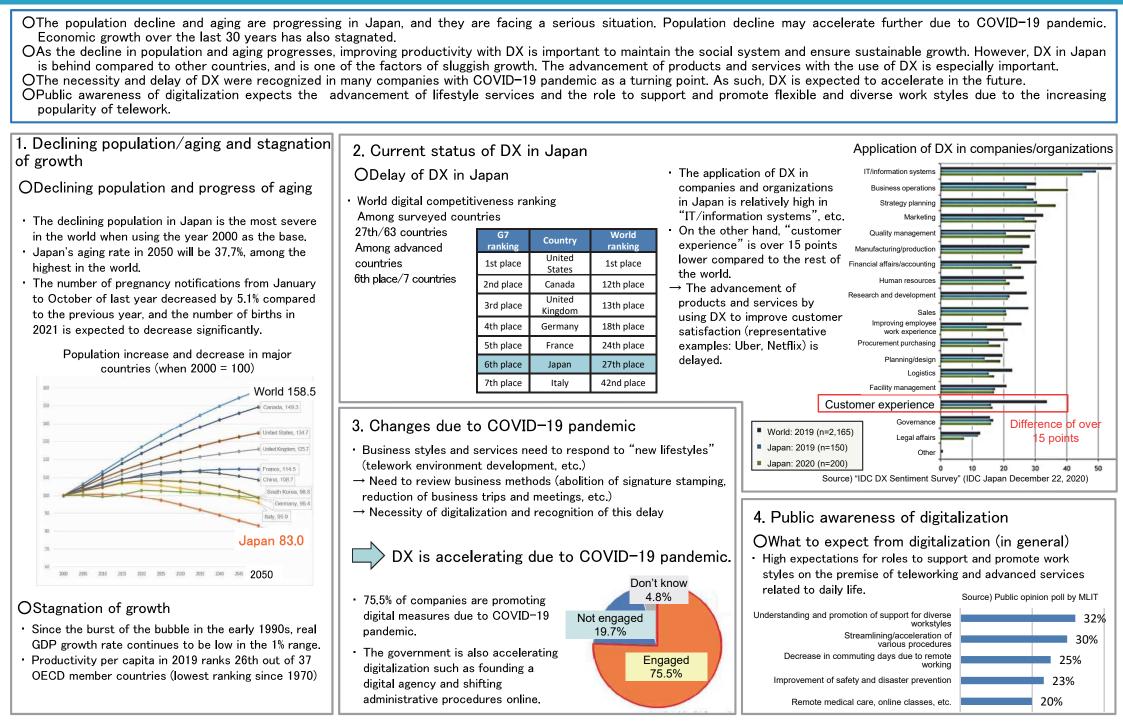
Section 3. Delay in social changes that support diversification

- OAlthough diversification was progressing in Japanese society against the backdrop of improving living standards, growth of the internet and globalization, etc., they still remained behind other countries in terms of flexible and diverse work styles and active participation by women, and it was not a society that fully supported and promoted diverse ways of working and living, etc.
- OTelework became more common due to COVID-19 pandemic. As a result, the diversification of work styles, ways of living and lifestyles, etc. is accelerating. OSince July 2020, the number of people moving in and out of Tokyo has remained a net loss. There is a change in the tendency of concentration in Tokyo.





Section 4. Delay of digital transformation (DX) and stagnation of growth





### Section 5. Progress of global warming

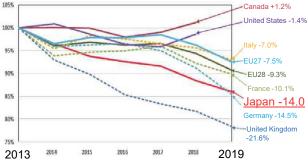
OAlthough each state has been steadily working to reduce CO<sub>2</sub> emissions so far, CO<sub>2</sub> emissions at global level are on the rise.

OWith each state's current target to reduce emissions at a country level, the goal of the Paris Agreement(the current goal on global warming countermeasure at global level) seem not to be achieved.

OVarious countries centered around Europe have declared the "green recovery" policy, in which global warming countermeasures are the key to economic growth as a strategy to recover the economy which has become stagnant due to the impact of COVID-19. Japan has pledged to be carbon neutral by 2050 as a long-term goal.

### 1. Past efforts and current situation

- **OPast efforts**
- The greenhouse gas emissions of major advanced countries including Japan are steadily decreasing.
  - Changes in greenhouse gas emissions of major countries (when 2013 = 100)



• Greenhouse gas emissions of Japan and the EU include indirect CO<sub>2</sub>. • The 2018 values of the United States and Canada have not been officially announced.

• Excerpt from the Ministry of Economy, Trade and Industry's "(1st) Study Group on Environmental Innovation Finance"

### OGoal of the Paris Agreement

• To keep the average temperature rise "well below 2°C" compared to before the Industrial Revolution + "pursuing efforts to keep the temperature at 1.5°C".

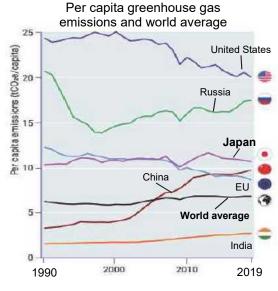
## OCurrent status of global warming countermeasures

- Global greenhouse gas emissions continued to increase, and in 2019, they increased to a new record high with 59.1 billion tons in terms of CO<sub>2</sub>.
- Japan's per capita greenhouse gas emissions is higher than the world average.

Western calendar	Main trend	s regarding global warming countermeasures	
1992	UNCED	Adoption of the United Nations Framework Convention on Climate Change	
1997	COP3	Adoption of the Kyoto Protocol	
1998	Japan	Enacted the Law Concerning the Promotion of the Measures to Cope with Global Warming	
		Fourth Basic Environment Plan	
2012 Japan		Declared long-term goal of reducing greenhouse gases by 2050 "80% reduction compared to 1990"	
2013	Japan	The Law Concerning the Promotion of the Measures to Cope with Global Warming was revised and the "Measures to Prevent Glob Warming" were established to replace the "Kyoto Protocol Target Achievement Plan".	
	G7 Elmau Summit	Japan declared that it would aim to reduce greenhouse gas from 40% to 70% compared to 2010 by 2050.	
2015	COP21	Japan declared that its reduction target for 2030 would be to cut emissions by 26% from	
	Paris Agreement	2013 levels (submission of Japan's Intended Nationally Determined Contributions)	

UNCED: United Nations Conference on Environment and Development COP: Conference of the Parties to the United Nations Framework Convention of Climate Change Intended Nationally Determined Contributions: Goals for global warming

untermeasures after 2020 submitted by each country prior to COP21



### 2. Recent changes and challenges

- OThe gap between the goal of the Paris Agreement (From the "UNEP Emissions Gap Report 2020")
- In the current reduction targets for each country, the average temperature in the world will rise by 3.2°C during this century.
- In order to achieve the goal of the Paris Agreement(2 °C), it is necessary to reduce greenhouse gas emissions by three times compared to the current goal, and to achieve 1.5°C, it is necessary to reduce greenhouse gas emissions by five times compared to the current goal.
- It is possible to achieve the goal of 1.5°C by taking strong and swift actions including the new pledge to get to net-zero emissions in addition to the current goals of each state.

#### OGreen recovery

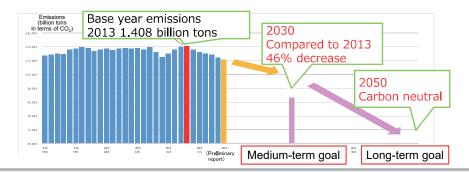
 Various countries centered around Europe have declared the "green recovery" policy that promotes the prevention of global warming in the midst of economic recovery and social change in anticipation of post COVID-19 pandemic.

#### Carbon neutral goals for each country

Source) Prepared by the MLIT based on the Ministry of the Environment "Mid-long Term Climate Change Countermeasures Review Subcommittee"

	Medium-term goal	Long-term goal
Japan	▲46% by 2030 (compared to 2013)	Zero carbon emissions by 2050, *Prime Minister Suga made a declaration in his general policy speech at the extraordinary session of the Diet on October 26 of last year.
United States	Former President Trump <u>withdrew from the Paris Agreement</u> - emissions by 2050 (Former NDC: ▲26 <sup>~</sup> 28% in 2025 (compared to 2005))	→ President Biden <u>announced to achieve zero carbon</u>
United Kingdom	At least ▲68% by 2030 (compared to 1990) *Equivalent to ▲55,2% compared to 2013	At least 100% by 2050 (compared to 1990) *Presented three scenarios with certain assumptions
EU (France/ Germany/Italy)	At least \$55% by 2030 (compared to 1990) *European Council (Last December 10-11) Agreement *Equivalent to \$44% compared to 2013	Zero carbon emissions in total by 2050, *Analyzed eight scenarios with multiple conditions
Canada	(▲30% by 2030 (compared to 2005)) *Equivalent to ▲29% compared to 2013 *Last December, Prime Minister Trudeau declared to make an effort toward ▲32~40% (equivalent to & 31'39% compared to 2013) compared to 2005.	Zero carbon emissions in total by 2050, *Submitted a related bill to the Diet last November
China	$CO_2$ per GDP $\bigstar$ emissions over $\bigstar$ 65% (compared to 2005) that would turn emissions into reductions by 2030 ePresident Xi Jinpin ande a declaration at the United Nations General Assembly last September and the Climate Ambition Summit in the last December.	Zero carbon emissions in total by 2060 (target gas unknown) *President Xi Jinping made a declaration at the United Nations General Assembly last September

OGoal of Japan's global warming countermeasures





### Section 1. Responding to changes and challenges due to crises (1)

- O Ensure the sustainability of public transportation which is the fundamental infrastructure in the Japanese society and communities, by providing management supports to JR Hokkaido, JR Shikoku, Japan Freight Railway Company and the airline industry as a response to the serious business environment due to COVID-19 pandemic and by promoting the formulation of the local public transport plan.
- O Aim to recover tourism demand, while thoroughly preventing the spread of COVID-19, with the extension and proper management of the Go To Travel campaign and by revitalizing hotels, inns and tourist facilities.
- O Maintain and improve the function and vitality of towns by promoting land development with mulitiple hubs, dual habitation and urban to rural migration, etc.

### 1. Ensuring the sustainability of the foundation for sustaining society

- (1) Maintaining public transportation and improving convenience
- Support the airline industry with the "Support measure package to strengthen the management base of airlines and airports in the COVID-19 era" that includes further reduction and exemption of landing fees, airport fees and aircraft fuel tax.
- Management support by securing operational profits for JR Hokkaido, JR Shikoku and Japan Freight Railway Company, extending the grant deadline, supporting the Seikan Tunnel and Honshu-Shikoku Bridge renewal costs, investing funds necessary for maintenance of railway facilities, etc. and taking over unnecessary land.



Repair of railway facilities



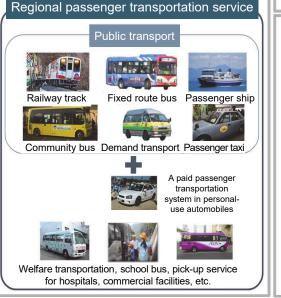
New limited express railcar

- Promotion of formulation of the local public transportation plan by all local governments by traffic area.
- Total mobilization of local transportation resources such as a paid passenger transportation system in personal-use automobiles and welfare transportation, etc. depending on the actual situation in the area.
- Service improvement in terms of routes, timetables, and fares utilizing special cases of joint management of the special exemptions of the Antimonopoly Act.

#### Local public transportation plan



Ensuring the provision of sustainable passenger transportation services by enhancing the menu and strengthening PDCA.



### (2) Support for the tourism industry

- · Implementation of local tourism business support and handling of Go To Travel campaign based on the infection status, etc.
- Thorough measures to prevent the spread of COVID-19  $\geq$ infection at accommodation facilities, sightseeing spots, etc.
- $\geq$ Implementation of local tourism business support
- Judge the handling of Go To Travel campaign based on the infection status, etc.
- $\geq$ Leveling travel demand by promoting workations and acquiring holidavs.
- Revitalize sightseeing bases and provide strong support with shortterm concentration for businesses that enhances attractiveness and profitability throughout the region.
- Enriched stay contents and accommodation facilities that will attract domestic and international tourists such as snow resorts, glamping, etc.
- Improve the acceptance environments of sightseeing spots such as providing multilingual support and maintaining free Wi-Fi.
- Gradual restoration of inbound tourism after determining infection status in Japan and overseas. etc.



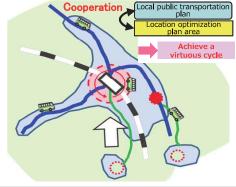
Revitalizing hotels, inns and tourist facilities, etc.

- (3) Maintaining and improving the functions and vitality of towns
- Multi-district cooperation land development with the promotion of Compact and Networked Structure.
- Compact, relaxed and lively walkable town development.
- Promotion of dual habitation and urban to rural migration, etc.





Establishment of promotion councils Collection of initiatives to promote dual such as nationwide dual habitation habitation



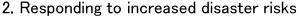






### Section 1. Responding to changes and challenges due to crises (2)

- O Work with the full force of various entities, on risk reduction and mitigation of disasters such as "River Basin Disaster Resilience and Sustainability by All" aiming towards the realization of a society where disaster risk reduction and mitigation will become mainstream.
- O Promote ways of living and land use for disaster risk reduction and mitigation and promote land use regulation and guidance to keep people from living in disaster-prone areas as much as possible.
- O Realize sustainable infrastructure maintenance by full-scale conversion to "preventive maintenance" to enable the infrastructure to perform its functions in the future.
- O Based on the lessons learned during the Heavy Rain Event of July 2020, we will promote measures to prevent outflow of bridges and roads and ensuring the effectiveness of evacuation in welfare facilities for the elderly.

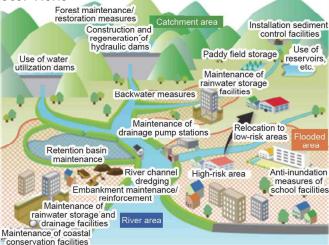


- O Promotion of "River Basin Disaster Resilience and Sustainability by All'
- Aim for a "society where disaster risk reduction and mitigation will become mainstream" in order to confront intensifying and frequent disasters.
- Promote "River Basin Disaster Resilience and Sustainability by All' that engages in hydraulic control measures throughout the basins with the cooperation of various affiliated parties related to the basins.

(1) Prevent and reduce flooding as much as possible.

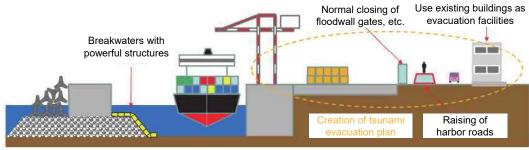
#### (2) Reduce the damage targets

(3) Damage reduction/early recovery and reconstruction



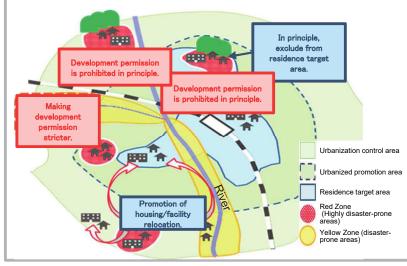
OComprehensive tsunami disaster prevention measures at ports

- · Promote retrofitting of public facilities, etc., high ground urban development, maintenance of city parks and strengthening of ports to reduce damage caused by imminent earthquakes. tsunamis. etc.
- Further accelerate comprehensive tsunami countermeasures that integrate hardware and software such as structuration of breakwaters and evacuation measures in ports.



O Promotion of ways of living and land use for disaster risk reduction and mitigation.

- Suppression of new developments in disaster-prone areas.
- Promotion of relocation from disaster-prone areas.

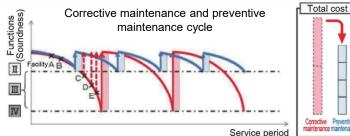


OSustainable infrastructure maintenance.

- Steady promotion of anti-aging measures is important so that infrastructure can be effective in disaster risk reduction.
- Reduce future maintenance and renewal costs by switching to "preventive maintenance" that takes measures before problems occur.

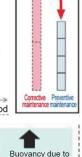
OMeasures based on lessons learned during the Heavy Rain Event of July 2020.

- Improvement of forecast accuracy of localized torrential rain and provision of information on localized torrential rain in stages.
- Receive a summary of measures to increase the effectiveness of evacuations at facilities for people with special needs and promote efforts to increase effectiveness of evacuations.
- Scouring and spillage countermeasures to prevent crossing bridges from getting washed away and roads in the river adjacent section from getting washed away.





Bridge washed away (Kumamoto Prefectural Road, Fukami Bridge)



submersion of airders

replacement

neasure

Image of measures against

bridge getting washed away

ridge scour prevention

(rooting work, etc.)

Bearing reinforcemer





O Form a living area that supports new work styles and ways of living by establishing a telework base in the suburbs and connecting them with a network in local cities, etc.
 O In the tourism sector, advance efforts to prepare for the full-scale recovery of inbound tourists with thorough measures to prevent the spread of infection as a major premise while strongly stimulating demand for Japanese domestic travel, which will be responsible for the recovery of tourism demand for the time being to meet diverse needs.
 O As urban policy in response to COVID-19 pandemic, enhancing city attractiveness and revitalizing local cites while meeting the increasing needs for open spaces and for close proximity to workplace and residence location, by creating compact, relaxed and lively walkable spaces in the town.

### 3. Responding to diversification

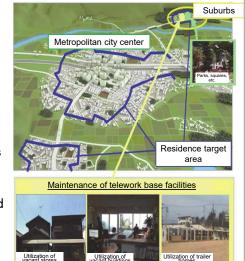
(1) Environmental maintenance that supports diverse

### work styles

### OSupport

development of telework bases in provincial cities.

Form a living area that supports new work styles and ways of living based on the premise of the initiatives of Compact and Networked Structure.



### (3) Activation of convections and exchanges

- OThe creating of towns that are "Comfortable and Walkable".
- Create spaces of human interaction for meeting people with different background in the town together with the public and private sectors.



Creation of a transit mall and square in front of the station (North Station Square of Himeji Station)

- OEnrichment of open spaces through the maintenance of park green spaces, etc.
- Convert to spaces that can be used in various ways by a diversity of people from young people to families with children.



Revitalizing parks by installing lawns and private cafes (Minami-Ikebukuro Park in

Toshima Ward)

- OConstruction of lively road spaces.
- Creating a lively atmosphere with roads that promote convenience for pedestrians and road cooperative body systems.



Examples of special exemptions for occupancy (Utsunomiya City, Tochigi Prefecture)

### (2) Responding to diverse needs

OPromotion of "new travel styles".

- Promote "workation" and "bleasure" as new travel style aiming to disperse vacations/diversification of vacations and travel demand.
- Promote understanding of implementation process and acceptance environment development by brochures and seminars.
- Lead to continuous relationship with a model program that matches regions/destinations and companies.

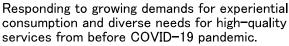


New travel styles Company brochures

OEfforts to increase travel consumption.

- Attracting world-class accommodation facilities
- Creation of high valued and long-stay contents such as snow resorts, adventure tourism, night time, etc.
- Maintenance of unique accommodation facilities such as castles, shrines, temples, traditional folk houses, glamping, etc.











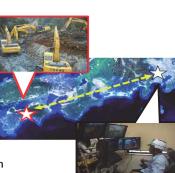
Snowshoe trekking

Glamping



### Section 1. Responding to changes and challenges due to crises (4)

- O Sophistication of business and services through DX and improvements in productivity as a result is important for the growth of Japan's economy. Therefore, MLIT promotes enhancements in productivity by DX in all fields of MLIT.
- O Innovation is a source of enhacements in productivity and competitiveness, and thus it is necessary to promote it. Therefore, MLIT promotes logistics optimization, etc. with the development and implementation of next-generation mobility such as smart cities, automated vehicles and automated ships and the use of robots, drones and unmanned platooning.
- O Capturing overseas demand, which is expected to grow in the future, is essential for the growth of the Japanese economy. Therefore, MLIT promotes the improvement of a smooth immigration and customs clearance environment towards the enhancement of competitiveness of international container ports and the recovery of inbound tourists.
- 4. Realization of growth with promotion of DX, etc.
- (1) Productivity improvement with DX
- OImproving productivity in the construction industry.
- Improve productivity of maintenance and development of social infrastructure through unmanned construction etc. using new technologies such as 5G.
- OStrengthening to highly functional and productive transportation network services.
- Promotion of nationwide social implementation with MaaS and building a foundation for dissemination of MaaS by data conversion and standardization, etc. of traffic-related information.
- Provision of congestion information and utilization of cashless payment, etc.



Unmanned construction image diagram

- OTransformation of tourism services and creation of tourism demand with DX
- Gather information on tourist spots and provide consumption opportunities, etc. through online tours, etc., and increase willingness to visit.
- Create new tourism content and value by using AR, MR, etc., and realize the improved experience value and an increase in tourism consumption.



Online space image

### OStrong promotion of logistics digitization.

- Optimization of the entire supply chain with digital environment maintenance thorough digitization of procedure documents, development of data infrastructure and promoting quicker special vehicle traffic procedures, etc.
- Promote improvement of productivity and international competitiveness at ports through the construction and use of cyberports that digitize port logistics procedures between private businesses.

### (2) Promotion of innovation

- ODevelopment and implementation of next-generation mobility
- Technology development, system development, etc. toward implementation of automated vehicles.
- Review of domestic laws and regulations and examination of revision of international standards toward implementation of automated ships by 2025.

OSocial implementation of smart cities.

- Building a model case that will be the driving force and promotion of dissemination nationwide.
- Develop and release the urban space information platform "PLATEAU" that can reproduce cities in 3D in cyberspace and adds city activity information (Example of business applications: Flight simulation of drone logistics, etc.)

OLogistics optimization with the use of new technologies.

- Last mile delivery streamlining with robots and drones.
- Implementation of high-performance trucks including platooning on the highway



Demonstration of automated driving services

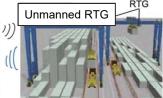




Realization of unmanned platooning of following vehicles (February 2020)

- (3) Capturing overseas demand
- OEnhancement of competitiveness of international container strategy ports.
- Realize "AI terminals that support people" and ensure a good working environment and the highest level of productivity in the world.
- Automation of imported trailers.
- Promotion of introduction of remote control RTG.
- \* RTG: Rubber tired gantry crane





Remote control of RTG from the administration building

OAcceptance environment improvement toward gradual recovery of inbound tourists.

Innovative immigration and customs clearance environment using new technologies such as facial recognition gates, etc.



Super-efficient

LNG-fueled ships

Hvdrogen-fueled

shins

### Section 1. Responding to changes and challenges due to crises (5)

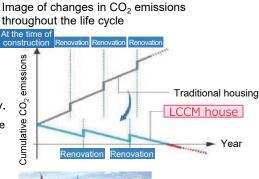
- O Strongly promote innovation in the areas of housing, buildings, logistics, flow of people, civil engineering infrastructure, marine vessels, hydrogen, automobiles, fuel cells, etc. toward the realization of a carbon neutral society by 2050. Recognizing measures against global warming as an opportunity for growth, transform the industrial structure and socio-economy in order to realize a "virtuous cycle of economy and environment" that will lead to growth.
- O Promote conversion to disaster risk reduction based on plans and standards considering the impact of climate change in order to respond to the effects of climate change and to maintain the safety and comfort of living.

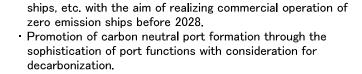
Higashi Kyushu Expressway

Saiki City. Oita Prefecture

### 5. Promotion of global warming countermeasures

- (1) Global warming countermeasures
- O LCCM (life cycle carbon minus) house
- Spread of LCCM houses that achieve negative  $CO_2$  emissions throughout the life cycle.
- OPromotion of introduction of renewable energy.
- Designate and develop ports that will become a base for maintenance and construction of offshore wind power in order to promote the introduction of offshore wind power.
- Promotion of installation of solar power generation equipment in road areas, etc.
- Promotion of introduction of small hydropower by simplifying and facilitating water utilization procedures, etc.





Promote efforts to develop and implement hydrogen-fueled

O Carbon neutrality in the port/maritime sector.



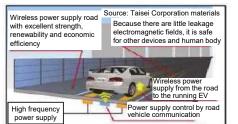
Image of Carbon Neutral Port(CNP) formation

- (2) Adaptation to the effects of climate change
- O Conversion to disaster prevention measures that respond to the effects of climate change.
- Increasing heavy rains and rising sea levels, etc. are projected associated with climate change, so plans and standards related to rivers, sediment control, coasts, harbors, and sewers are to be shifted to those with climate change impact taken into account.

	Phenomena associated with climate change	Review of non-target forces for facility maintenance
f	Increasing frequency and intensity of heavy rainfall	Target flow rate for river maintenance     Planned rainfall for sewerage     Sediment volume handled with     sediment control plan, etc.
	Sea level rise	Target tide level for coastal
	Increase in intensity of tropical cyclones	conservation, etc. Design tide level of port facilities, etc.
1	Increasing number of non-precipitation days	<ul> <li>Water volume that can be supplied by water resources development facilities</li> </ul>
	Decreasing snow depth	(dams, etc.)

- O Global warming countermeasures in the civil aviation sector.
- Promote environmental improvement for introduction of sustainable aviation fuel (SAF) to meet the goals of "improving fuel efficiency by an average of 2% per year by 2050" and "to not increase total greenhouse gas emissions" after 2020".
- O Improving the environment for promoting dissemination of next-generation vehicles.
- Dissemination of Green Slow Mobility.
- Promote installation of charging facilities, etc. at roadside stations, SA/PA and public roads and support for the development of wireless power supply technology as environment maintenance toward the spread of electric vehicles.





<Installation of EV chargers at the roadside stations> <Research and development support of contactless power supply technology>

## Part II Trend in MLIT Policies



Chapter 1 Efforts for reconstruction and restoration from the Great East Japan Earthquake	Chapter 6 Building a competitive economy and society
<ul> <li>Current Status and Measures Towards Restoration and Reconstruction</li> <li>Reconstruction and Revitalization of Fukushima</li> <li>Steady Recovery and Reconstruction of Infrastructure and Transportation</li> <li>Promoting Post-Disaster Town Reconstruction and Securing Stability of Residency</li> <li>Securing Local Public Transportation and Promoting Tourism</li> <li>Securing Local Public Transportation and Promoting Tourism</li> <li>Ensuring the Smooth Execution of Reconstruction Projects</li> <li>Building Tsunami-resistant Communities by Learning from the Great East Japan Earthquake</li> </ul>	<ul> <li>Developing Trunk Road Networks</li> <li>Implementing Comprehensive and Integrated Logistics Policies</li> <li>Reactivating Industries</li> </ul>
Chapter 2 Deployment of the Land, Infrastructure and Transport Administratioin response to the demands of the times	Chapter 7 Building a safe and secure society
<ul> <li>Driving the Implementation of a National • Driving the Implementation of Land Policy Package</li> <li>Measures, etc., against Aging Social Infrastructures</li> <li>Driving the Social Infrastructure Development</li> <li>Promoting the Implementation of Promoting the Implementation of Promoting Bicycle Use Policy</li> <li>Promoting Bicycle Use Policy</li> <li>Promoting Bicycle Use Policy</li> <li>Policy Evaluations, Project Evaluations,</li> </ul>	<ul> <li>Realizing a Universal Society</li> <li>Natural Disaster Measures</li> <li>Ensuring the Safety of Architecture</li> <li>Strengthening Safety Measures in the Transport Sector</li> </ul>
Driving the Implementation of a Tourism and Interactive Administration     Policy Package Initiatives for the Tokyo 2020 Games	Chapter 8 Conservation and creation of a beautiful and positive environment
<ul> <li>Chapter 3 Realization of an advanced tourism country and building a beautiful country</li> <li>Trends in Tourism</li> <li>Initiatives to Realize a World-Class Tourist Destination</li> <li>Building a Beautiful Nation Blessed with Pleasing Landscapes, etc.</li> </ul>	<ul> <li>Promoting Global Warming Countermeasures</li> <li>Promoting the Creation of a Recycling Society</li> <li>National Land Development That Revives and Preserves the Natural Environment</li> <li>Maintenance and Restoration of Sound Water Cycles</li> <li>Protecting the Marine Environment</li> <li>Improving Living Environments by Preventing Atmospheric and Noise Pollution</li> <li>Observing, Monitoring, and Forecasting Changes in the Global Environment</li> </ul>
Chapter 4 Promotion of regional revitalization	Chapter 9 Strategic international development and strengthening of international contribution
<ul> <li>Approaches to Regional Revitalization</li> <li>Promoting Measures Supporting Regional Revitalization • Promoting the Private Urban Development</li> <li>Promoting Localized Promotion Measures</li> <li>Promoting Localized Promotion Measures</li> </ul>	<ul> <li>Promoting the Overseas Development of Infrastructure Systems</li> <li>Promotion of International Cooperation and Negotiations</li> <li>Initiatives for International Standardization</li> </ul>
Chapter 5 Creation of comfortable living spaces	Chapter 10 Utilization of ICT and promotion of research and development of technology
<ul> <li>Realizing Affluent Residential Living</li> <li>Realizing Comfortable Living Environments</li> <li>Realizing Traffic with Enhanced Convenience</li> </ul>	<ul> <li>Promoting Innovation in the Fields of Land, Infrastructure, Transport, and Tourism Through the Use of ICT</li> <li>Promoting Technological Research and Development</li> <li>Improving Construction Management Technology</li> </ul>

- Because of the enormous damage during the Great East Japan Earthquake due to the huge earthquake and tsunami that were formerly inconceivable, a new concept of disaster mitigation to minimize damage with multiple defenses combining the development of equipment- and facility-based measures and non-structural measures for the largest class tsunami (L2) was presented.
- The development of coastal levees were continued to be promoted from the perspective of saving human lives and resources, etc. and preserving national land against relatively frequent tsunamis (L1).

## Largest class tsunami (L2)

O Aim to minimize damage to human life with "multiple defenses" that combine equipment- and facility-based measures, urban planning and an establishment of an alert evacuation system against the largest class tsunamis.

## Relatively frequent tsunami (L1)

- O Aiming to reliably protect human life, assets, national land (coastline), etc. based on the response by the maintenance of coastal conservation facilities against relatively frequent tsunamis (about once every few decades to hundreds of years).
- O Implement technical development and maintenance of structures in which the effects of the facilities can be exerted tenaciously even if the tsunami height of the design target is exceeded.

# Tsunami height during the 1896 Meiji Sanriku Earthquake Relatively frequent tsunami (L1)

Largest class tsunami (L2)

Tsunami height during the 2011 off the

Pacific coast of Tohoku Earthquake



## Chapter 2. Deployment of the Land, Infrastructure and Transport Administration in response to the demands of the times

### Promotion of strategic and planned social capital development (Priority Plan for Infrastructure Development)

The Cabinet approved the 5th Priority Plan for Infrastructure Development (2021-2025) in May 2021.
 In the 5th plan, priority goals related to "digital" and "green" were newly set looking ahead to the post-COVID19 era. Furthermore, two concepts of "Full forces" and "infrastructure management" were added toward the maximization of stock effects.

\*The Priority Plan for Infrastructure Development is a plan to prioritize social capital development efficiently and effectively based on the Act on Priority Plan for Social Infrastructure Development.

Chapter 1 : Changes in social landscape after 4<sup>th</sup> plan

(1) More catastrophic/frequent natural disasters, (2) Changes in local communities due to falling population, etc. (3) Changes in domestic/international economic conditions, (4) rapidly aging infrastructure, (5) Accelerating digital innovation, (6) movements towards realizing green society (e.g., carbon neutrality in 2050), diversifying lifestyles and values

COVID-19-driven changes (needs for digitalization, reshoring of supply chains, growing interest in moving to rural areas and increased awareness of the risk of Tokyo centralization)

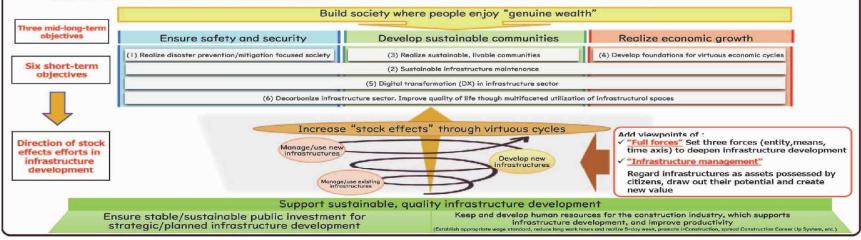
#### Chapter 2 : Direction of infrastructure development initiatives

#### [Mid-long-term objectives of infrastructure development]

- Build a society where people truly enjoy "genuine wealth."
- To realize the above, focus on developing social infrastructure that can contribute to <u>3 mid-to-long term objectives</u>, "Ensuring safety and security," "Development of sustainable communities," and "Realization of economic growth," to maximize stock effects.

[5-year short-term objectives and direction of efforts towards these objectives]

- > Set <u>6 short-term objectives for the next 5 years</u> based on the 3 mid-to-long term objectives and changes in social landscape.
- In particular, it is necessary to develop foundations for digital transformation (DX) in the infrastructure sector, decarbonization, supply chain enhancement/optimization, new population flows, with "new normal" and realization of carbon neutrality in 2050 in mind.
- To maximize "stock effects" of infrastructure development towards achieving the objectives, it is essential to introduce the viewpoints of "full forces" and "infrastructure management" into infrastructure development and generate "virtuous cycles."



(Related link)

5th Priority Plan for Infrastructure Development <u>https://www.mlit.go.jp/report/press/sogo08\_hh\_000168.html</u>

## Chapter 3. Realization of an advanced tourism country and building a beautiful country (1)

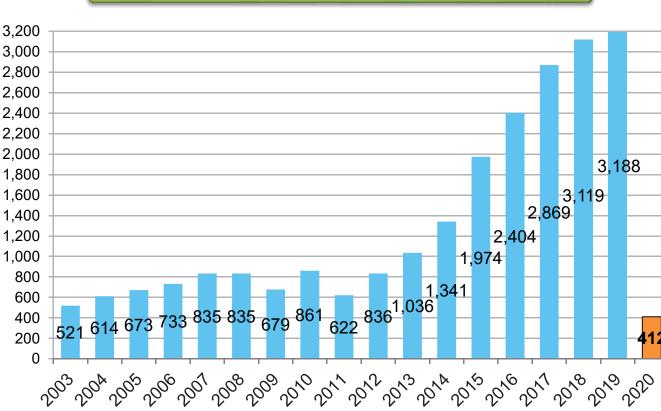


### Current state of tourism

Japanese domestic tourism consumption in 2020 was approximately 10.0 trillion yen in total for overnight trips and day trips (54.5% decrease from the previous year).
 The number of foreign tourists visiting Japan in 2020 significantly decreased after February due to the effects of COVID-19, and was 4.12 million people, an 87.1% decrease from the previous year.

### Current status in 2020

Item	Results	Relative change from previous year
Domestic tourism consumption	10.0 trillion yen	54.5% decrease
Number of foreign tourists visiting Japan	4.12 million	87.1% decrease
Amount of consumption of foreigners visiting Japan	744.6 billion yen (*Estimated from January to March 2020)	84.5% decrease
Total number of foreign guests visiting Japan in rural areas	7.79 million	81.9% decrease
Number of Japanese leaving Japan	3.174 million	84.2% decrease



(Related link)

Japan Tourism Agency statistical information

https://www.mlit.go.jp/kankocho/siryou/toukei/index.html

### Changes in the number of foreign tourists visiting Japan

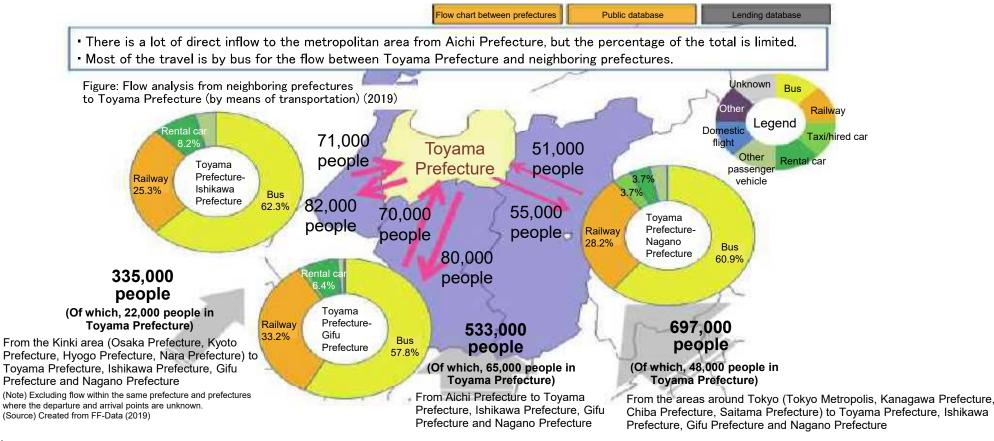
## Chapter 3. Realization of an advanced tourism country and building a beautiful country (2)



## Efforts to realize an advanced tourism country (promotion of wide area excursion sightseeing)

■ To encourage excursions to each region by foreign tourists to Japan, the FF-Data (Flow of Foreigners-Data) for 2019, which enables you to understand the actual situation of movement of foreigners visiting Japan, was published in March 2021. This is expected to be used for analysing excursion routes and planning and review of strategic promotion measures.

<Example of analysis using FF-Data (flow analysis of specific prefectures/example of Toyama Prefecture)>



(Related link) FF-Data (flow data of foreigners visiting Japan)

https://www.mlit.go.jp/sogoseisaku/soukou/sogoseisaku\_soukou\_fr\_000022.html

## Chapter 3. Realization of an advanced tourism country and building a beautiful country (3)



## Efforts towards the realization of an advanced tourism country

(Enhancement of system for accepting foreign patients that can sufficiently handle emergency cases, etc.)

In 2020, a list of 1,920 medical institutions that can accept foreign patients (of them, there were 1,450 base medical institutions that could accept foreign patients designated by prefectures) and the information was disseminated.

Points of the list (list of medical institutions) that summarized information on medical institutions that can accept foreign patients

Of the medical institutions that showed a willingness to cooperate with medical treatment to foreign patients, those that were determined to be qualified by the prefectures are published. The medical institutions that the prefectures determined to be unqualified were not published.

- The medical institutions that the prefectures selected considering the local medical systems were placed into the following two categories as "base medical institutions that can accept foreign patients" and published.
  - Category 1: Medical institutions that can deal with emergency patients requiring hospitalization (one or more in the prefecture)
  - Category 2: Medical institutions that can accept foreign patients including healthcare clinics and dental clinics

(one or more in the secondary medical area)

Medical institutions published in the medical institution list <sup>1), 2)</sup>			
Base medical institutions that can accept foreign patients			Qualified medical institutions that can accept foreign patients (No selection as base medical institutions)
Category 1		Category 2	
(Emergency response available One or more in the prefecture		(Including healthcare clinics: more in the secondary medical area)	(Requirements)
(Requirements)			<ul> <li>Deemed to be qualified for multiple languages by the</li> </ul>
<ul> <li>Deemed to be qualif</li> </ul>	ied for multiple	languages by the prefectures	prefectures
<ul> <li>Selected by the pre-</li> </ul>	fectures consid	dering the local medical systems	

The medical institution list has been jointly compiled by the Ministry of Health, Labour and Welfare and Japan Tourism Agency since the 2019. At the Japan Tourism Agency, the list is published in multiple languages on the Japan National Tourism Organization (JNTO) homepage.

### (Related link)

1

2

Japan National Tourism Organization (JNTO) homepage Ministry of Health, Labour and Welfare homepage https://www.jnto.go.jp/emergency/jpn/mi\_guide.html https://www.mhlw.go.jp/stf/newpage\_05774.html

## Chapter 3. Realization of an advanced tourism country and building a beautiful country (4)



## Efforts toward building a beautiful country (promotion of green infrastructure)

- Due to the active participation of various entities and public-private partnerships, the "Green infrastructure public-private partnership platform" was established in March 2020 for the purpose of promoting green infrastructure using various functions of the natural environment and connecting to developing sustainable and attractive national land, cities and communities in both tangible and intangible terms such as social capital development, land use, etc.
- In its first year in 2020, examples of green infrastructure initiatives were collected and awarded, online seminars and symposiums were carried out, and the green infrastructure advisor system were established to examine survey, research and financing methods, etc. on social dissemination and technologies of green infrastructure.

### <Collection of case studies on green infrastructure>

In March 2021, the "Collection of green infrastructure case studies", whose purpose was to form a concrete image of the efforts to enable diverse entities to get a better understanding of green infrastructure, "Collection of green infrastructure technologies" that collected and organized a wide range of technologies related to green infrastructure and the "Collection of green infrastructure financial subcommittee materials" regarding the securing of financing were created and published by members of the green infrastructure public-private partnership platform as a fulfilment of support to promote green infrastructure.

### Collection of green





Collection of green infrastructure technologies



Collection of green infrastructure financial subcommittee materials



### <Implementation of online seminars>

Online seminars where the department chairperson and organizers serve as lecturers to introduce examples of efforts, technologies and financing method related to green infrastructure are held every month.

(Image)



### (Related link)

Green infrastructure public-private partnership platform

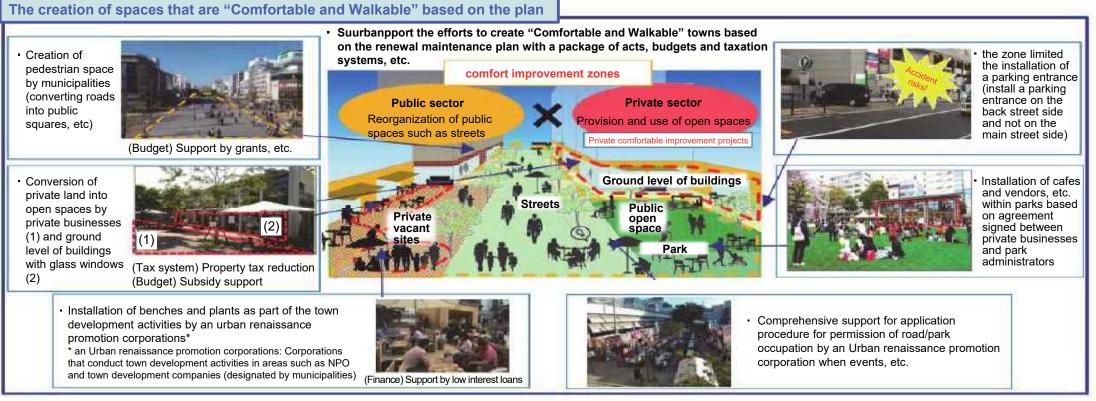
https://gi-platform.com/



## Creation of "Comfortable and Walkable" towns

While there is concern that the vitality of regions will decline as the population decline and aging of the population progresses, "Comfortable and Walkable" spaces are created with an integrated approach from public and private sectors to improve the attractiveness of towns and create a lively atmosphere in towns.
 In September 2020, partial revisions of acts including the Act on Special Measures concerning Urban Renaissance to take measures such as positioning efforts to create a lively atmosphere in cooperation with the public and private sectors as a municipal town development plan were enacted. The creation of "Comfortable and Walkable" towns is supported with a package of acts, budgets and taxation system.

### [Attractive town development by the creat on of "Comfortable and Walkable" towns]



### (Related link)

Ministry of Land, Infrastructure, Transport and Tourism the creation of "Comfortable and Walkable" towns <a href="https://www.mlit.go.jp/toshi/toshi\_machi\_tk\_000072.html">https://www.mlit.go.jp/toshi/toshi\_machi\_tk\_000072.html</a>

## Chapter 4. Promotion of regional revitalization (2)



## Urban Policy in Response to the Coronavirus Crisis

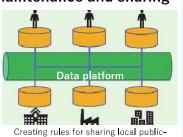
In April 2021, the urban policy that makes the most of urban assets as "how new urban policies adapted to the new normal" was published.

[Specific efforts toward the urban policy that should be aimed at (image)]





Maintenance and utilization of 3D urban models



private data



Social experiment of temporary converting a underused space into a public square (Fukuyama City)

Social experiment at a park using automated driving technology (Nara City)





Water supply to evacuees at parks during a disaster (Kumamoto City)

(Related link) an expert meeting on urban policy responses to adapt to the "new normal" and digital transformation accelerated by COVID-1 https://www.mlit.go.jp/toshi/machi/toshi daisei tk 000062.html



## Elimination and suppression of occurrence of owner-unknown land

Consideration for the review of the law for owner-unknown land three years after being enacted is underway, and the required bill will be submitted at the next ordinary session of the Diet.
 A leaflet for land owners and a collection of case studies on dealing with owner-unknown land were created, and a publicity campaign to disseminate recent systemic revisions on land was conducted.

### (Main revisions on the law for owner-unknown land)

Expansion of a mechanism to promote the smooth utilization of owner-unknown land

Creation of a mechanism for proper management of insufficiently managed land

Creation of a mechanism for smooth utilization of underused or unused land

8th "Conference of ministers concerned for the promotion of measures for ownerunknown land"

Ministry of Land, Infrastructure, Transport and Tourism material "Consideration for the review of the law for owner-unknown land three years after being enacted" https://www.cas.go.jp/jp/seisaku/shoyushafumei/dai8/siryou1-1.pdf

### (Related link)

2

3

Ministry of Land, Infrastructure, Transport and Tourism promotion of land policy in the era of depopulation ~Measures such as owner-unknown land~ https://www.mlit.go.jp/totikensangyo/totikensangyo\_tk2\_000099.html

## (Dissemination/awareness building activities using leaflets for land owners)

Leaflet that summarizes an outline of the law related to proper management of land, land risks you should know and consultation counters for matters causing distress <u>https://www.mlit.go.jp/totikensangyo/content/001406391.pdf</u>



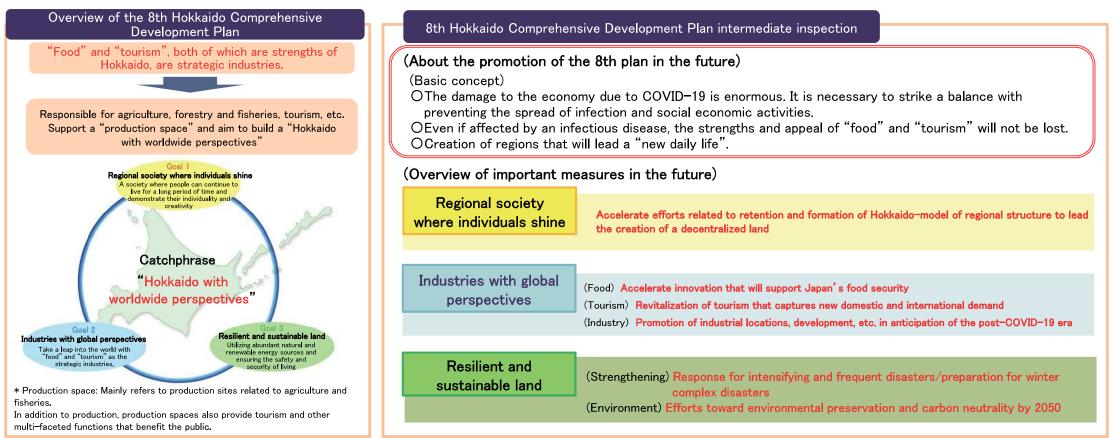


## Promotion of Hokkaido comprehensive development

## (8th Hokkaido Comprehensive Development Plan intermediate inspection)

In March 2020, an inspection (intermediate inspection) report of the current Hokkaido Comprehensive Development Plan\* was formulated and published. In this, the important measures in the future were organized for the basic concept for future plan promotion and each of the three goals of the plan, "Regional society where individuals shine", "Industries with global perspectives" and "Resilient and sustainable land".

\*The Hokkaido Comprehensive Development Plan is a plan formulated by Japan based on the Hokkaido Development Act to promote the vibrant development of the region and contribute to solving the issues facing Japan by taking advantage of the resources and characteristics of Hokkaido. Currently the 8th planning period (approved by the Cabinet in March 2016, planning period: 2016 to roughly 2025).



(Related link) Ministry of Land, Infrastructure, Transport and Tourism 8th Hokkaido Comprehensive Development Plan intermediate inspection report https://www.mlit.go.jp/report/press/hok07\_hh\_000151.html



## Promotion of Hokkaido comprehensive development (establishment of Upopoy the Symbolic Space for Ethnic Harmony)

- In July 2020, Upopoy (Symbolic Space for Ethnic Harmony) was opened as a central facility for the revitalization and creation of Ainu culture.
- Upopoy consists of the "National Ainu Museum" and the "National Ainu Park" where visitors can experience traditional Ainu lives and performing arts.
- The management and operation of the museum aims to attract one million visitors per year with the hope that many people will visit Upopoy to experience the excellence of Ainu culture and to relate to our philosophy of ethnic harmony.



(Related link) Upopoy homepage <u>htt</u>



## Realization of an affluent housing life (Housing Life Basic Plan)

- The Housing Life Basic Plan (national plan) establishes goals and basic measures related to ensuring and promoting the stability and improvement of people's housing lives based on the Basic Act for Housing (Act No. 61 of 2006), and is reviewed approximately every five years.
- In March 2021, the Housing Life Basic Plan (planning period: 2021-2030) was approved by the Cabinet as a housing policy guideline for the new era.
- This plan stipulates the direction of measures that can respond to new daily life and heavy rainfall disasters, etc. and measures toward the realization of carbon neutrality by 2050 based on changes in the social environment.

Current status and challenges revolving around housing life O Household status O Climate change issues O Housing stock O Diverse ways of living, new ways of living O Utilization of new technology, promotion of DX, etc. O Disasters and housing

To meet these challenges, eight goals were set from three perspectives to comprehensively promote the measures.

### (1) Perspective of "changes in the social environment"

Goal 1: Promotion of new daily life and DX, etc. Goal 2: Formation of safe housing and residential areas, etc.

### (2) Perspective of "residents/communities"

Goal 3: Homes that are easy to give birth in and raise childrenGoal 4: Communities where elderly people can live with peace of mind, etc.Goal 5: Maintenance of safety net functions

### (3) Perspective of "housing stock/industries"

Goal 6: Construction of housing circulation system, etc.Goal 7: Management, elimination and utilization of vacant housesGoal 8: Development of housing life industry

(Related link) Ministry of Land, Infrastructure, Transport and Tourism Housing Life Basic Plan (national plan) <u>https://www.mlit.go.jp/jutakukentiku/house/jutakukentiku\_house\_tk2\_000032.html</u>



## Realization of street space that meets diverse needs

- In November 2020, a law to amend a part of the Road Law, etc. (Act No. 31 of 2020), which establishes the Improving Pedestrian Convenience Road System (Hokomichi) was enacted to construct a street with a lively atmosphere.
- "Spaces that improve pedestrian convenience" were established on the sidewalk, and when they occupy a specific facility, etc. that improves the convenience of pedestrians, the licensing standards for occupation are relaxed to enable flexible occupancy of open cafes, etc.
- Also, by selecting occupants by open recruitment, it made it easier to utilize private sector ingenuity and enabled occupancy for up to 20 years to promote the entry of restaurants with terraces, etc.

\*Relocation to the Improving Pedestrian Convenience Road (Hokomichi) and dissemination of this system after the exceptions for occupancy during COVID-19 will be promoted so that these streets can continue to be used even after the special measures are completed.

Special area to induce occupancy to improve convenience



Case examples of implementation of the exceptions for occupancy during COVID-19

Utsunomiya City, Tochigi Prefecture

Matsumoto City, Nagano Prefecture





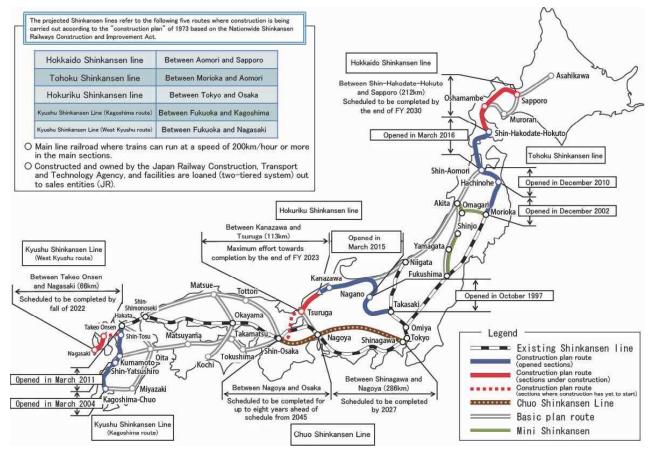
(Related link) the Improving Pedestrian Convenience Road System(Hokomichi) <u>https://www.mlit.go.jp/road/hokomichi/</u>



## Construction of Shinkansen railway

- The Hokkaido Shinkansen Line (between Shin-Hakodate-Hokuto and Sapporo) and the Kyushu Shinkansen Line (between Takeo Onsen and Nagasaki) will aim to be completed and open by the end of FY 2030 and the fall of 2022, respectively.
- Construction of the Chuo Shinkansen Line is currently underway by the Central Japan Railway toward the early opening between Shinagawa and Nagoya.

(Current status of the nationwide Shinkansen railway network)



[The projected Shinkansen line (section currently under construction)]

- O The Hokkaido Shinkansen Line (between Shin-Hakodate-Hokuto and Sapporo), is currently being developed with the aim of being completed and opened by the end of FY 2030.
- O The Kyushu Shinkansen Line (between Takeo Onsen and Nagasaki) is currently being developed with the aim of being completed and opened by the fall of 2022.
- O Maximum effort is being put into the Hokuriku Shinkansen Line (between Kanazawa and Tsuruga) with the aim of being completed and opened by the end of FY 2023.

### (Chuo Shinkansen Line)

O Currently, construction is underway by the Central Japan Railway Company on the early opening of the route between Shinagawa and Nagoya in accordance with the construction implementation plan of the Chuo Shinkansen Line between Shinagawa Station and Nagoya Station (Part 1) and (Part 2) that was approved by the Minister of Land, Infrastructure, Transport and Tourism.

### (Related link)

About the Shinkansen railway https://www.mlit.go.jp/tetudo/tetudo\_fr1\_000041.html



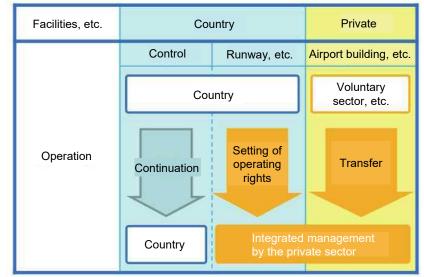
## Promotion of the managerial reform of the Airport

- The managerial reform of the Airport is being promoted at national airports, etc. through the utilization of private sector capacity and integrated management of the air transportation business and non-aviation business by utilizing the Civil Airport Management Act.
- In April 2020, operation consignment was commenced at Kumamoto Airport. Operation consignment also began sequentially for the seven airports in Hokkaido starting with the New Chitose Airport in June.

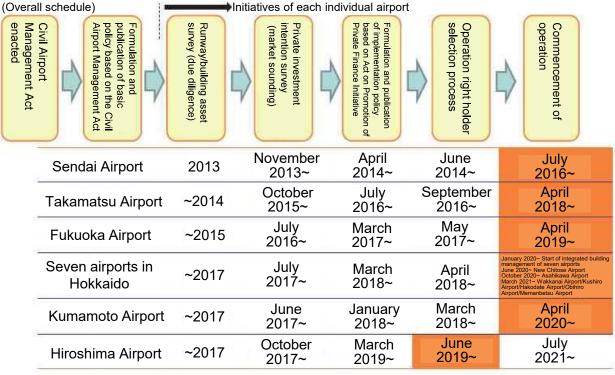
(Overview of the managerial reform of the Airport) (Overview of the concession scheme)

National airports, etc.

Aiming to realize regional revitalization by the integrated management by utilizing the ingenuity of the private sector based on the Civil Airport Management Act, enhancement of aviation networks through the flexible setting of landing fees, etc. and expansion of the domestic and foreign nonresident population.



(Examination status related to outsourcing the operation of airport management)



\* Private consignment of operation commenced at Kansai International Airport/Itami Airport (April 2016), Tajima Airport (January 2015), Kobe Airport (April 2018), Tottori Airport (July 2018), Shizuoka Airport (April 2019) and Nanki-Shirahama Airport (April 2019)

### (Related link)

Management of national airports utilizing the ingenuity of the private sector

### https://www.mlit.go.jp/koku/koku\_tk5\_000008.html



## Enhancement of functions of international container hubs

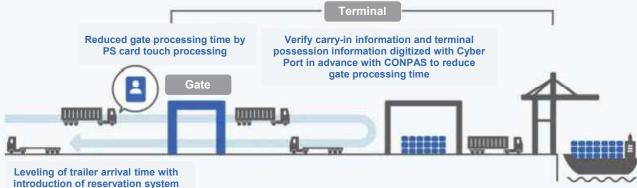
- In April 2021, the primary operation of the Cyber Port was started to improve the efficiency of port logistics procedures. In the future, cooperation with other systems and functional improvements, etc. according to user needs will be promoted.
- In April 2021, the operation of CONPAS, which performs pre-verification of carry-in / out information, etc. began at the Yokohama Port.
- In October 2020, the enforcement of special measures to ease the burden of tonnage tax and special tonnage tax to reduce entry and exit costs for international hubs commenced.

### (What is Cyber Port?)

A platform that streams line operations by digitizing port logistics procedures between private businesses conducted by paper, telephone and email, etc., and is intended to improve productivity of overall port logistics.

### [What is CONPAS?]

A system which aims to improve the efficiency of gate processing and cargo handling in the yard by utilizing ICT.



\* Abbreviation of Port Security card. IC card issued by Japan to smoothly and reliably manage the entry and exit of people to the restricted area of the port.

(Special measures for tonnage dues/special tonnage dues)

The rate when paying tonnage dues and special tonnage dues (every net tonnage up to one ton) one time for a year when a foreign trade container cargo liner entering service on European and North American routes arrives at the Keihin Port, Osaka Port, Kobe Port, Nagoya Port or Yokkaichi Port is as follows.

Payment type	Tonnage dues		Special tonnage dues	
	Current	After revision	Current	After revision
Payment at each arrival	16 yen	16 yen	20 yen	20 yen
Payment at one time for a year	48 yen	24 yen	60 yen	30 yen

### (Related link)

Cyber Port/CONPAS portal site https://www.cyber-port.net

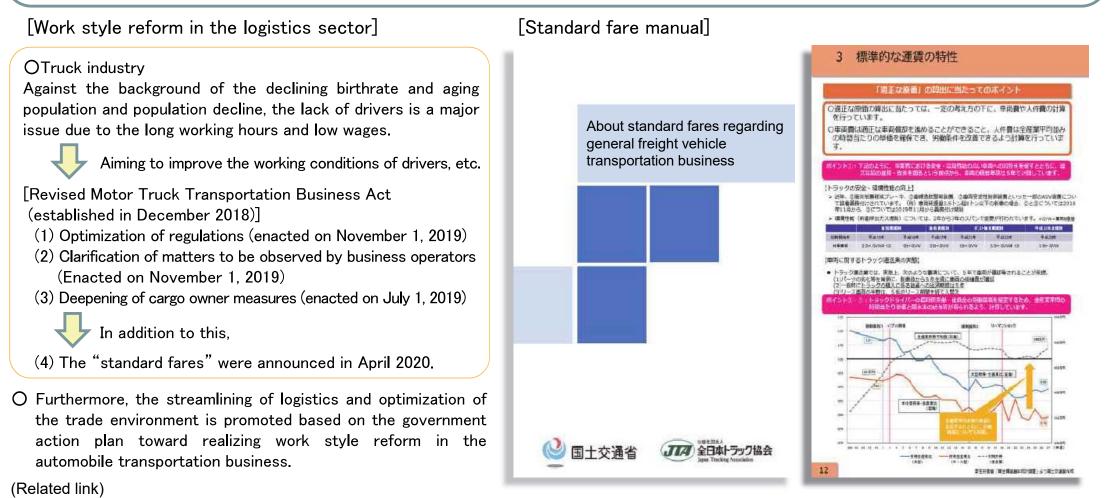
About the international container hubs policy <u>https://www.mlit.go.jp/kowan/kowan\_tk2\_000002.html</u>





## Work style reform in the logistics sector (trucking business)

Against the background of population decline and aging, the work style reform of the logistics sector is promoted because it may be difficult to secure human resources.
 The streamlining of logistics and optimization of the trade environment is promoted in addition to aiming to penetrate "standard fares" based on the revised Motor Truck Transportation Business Act in the trucking business.



Japan Trucking Association standard fare summary page <u>https://www.jta.or.jp/rodotaisaku/hatarakikata/kaisei\_jigyoho\_202008.html</u>



## Building a sustainable construction industry/securing and nurturing leader in the construction industry

In the construction business, the securing and nurturing of leaders is an issue, so the "New Three Public Works Bearers Acts" was established in June 2019 and partially enacted in October 2020 for the purpose of reforming the work style in the construction business, improving productivity in construction sites and securing a sustainable business environment.

### <Number of construction workers>

O Although it has been flat in recent years, the aging of the bearers is progressing and securing and nurturing future bearers is an issue.

Changes in construction investments. number of licensed contractors and number of employees. (trillion yen) (thousand vendors, ten thousand people) 90 900 Peak of construction investment nt investment amount (trillion ven 84 trillion ven (1992) Number of employees 610 million est amount (trillion ven Number of licensed contractors: 531,000 vendors 80 800 Number of employe Peak number of employees Peak hour ratio 85 million (1997 average A 28.19 70 700 Peak number of licensed contractors 601,000 vendors (end of FY 1999) 60 600 Peak hour ratio 50 36 33 39 31 40 35 36 37 36 36 33 <sup>30</sup> 32 33 35 30 30 30 28 29 31 31 31 25 24 26 27 29 30 300 24 Construction 20 200 Peak hour ratio 32 34 33 35 35 33 34 32 30 28 A 34.3% 29 24 15 18 19 20 20 20 20 19 19 21 23 23 18 18 16 16 18 18 19 20 20 21 22 22 100 19 19 17 17 Materials: Ministry of Internal Affairs and Communications, Ministry of Land, Infrastructure, Transport and Tourism

### [Points of the New Three Public Works Bearers Acts]

<Act on Promoting Quality Assurance in Public Works>

• Corresponding to work style reform by giving the responsibilities of setting appropriate construction periods taking into consideration the days off, preparation period and weather, etc. to the ordering party.

<Construction Business Act and Act for Promoting Proper Tendering and Contracting for Public Works>

- Correcting long working hours by establishing nonbinding obligations for the ordering party of public works to take secure necessary construction periods and take measures for harmonizing construction periods.
- Improving productivity at construction sites by streamlining regulations regarding construction site engineers, effectively utilizing limited human resources and promoting employment of young people.

O Aim to reform the work style in the construction business, improve productivity in construction sites and promoting the securing of a sustainable business environment to secure and nurture bearers.

### (Related link)

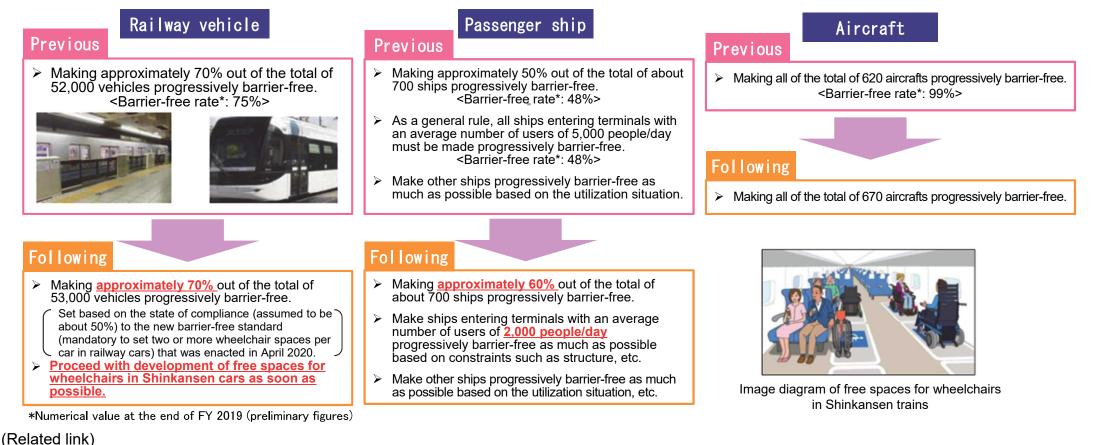
About the New Three Public Works Bearers Acts (partial amendment of the Act on Promoting Quality Assurance in Public Works, Construction Business Act and Act for Promoting Proper Tendering and Contracting for Public Works) https://www.mlit.go.jp/totikensangyo/const/totikensangyo const tk1 000175.html



## Realization of a universal society

In May 2020, the "Barrier-free Law" was amended, and was fully enacted in April of this year.
 In addition to promoting "barrier-free minds", the basic policy that stipulated the barrier-free development goals, which has a target period of five years starting from 2021 that was established in December 2020 based on the amended Barrier-free Law was amended.

[About the goals for the next period in the basic policy based on the Barrier-free Law (excerpt)]



https://www.mlit.go.jp/sogoseisaku/barrierfree/index.html

Ministry of Land, Infrastructure, Transport and Tourism barrier-free universal design



### All-out disaster prevention/disaster reduction project

- In July 2020, the "All-out disaster prevention/disaster reduction project" was coordinated under the slogan of "disaster prevention and disaster reduction for saving lives" as a way to reduce and prevent disaster with the collective efforts of the Ministry of Land, Infrastructure, Transport and Tourism against various natural disasters based on the lessons learned from past disasters.
   In this project, a package of ten measures to protect the lives of citizens was compiled from the
- perspective of promoting easy-to-understand measures from the point of view of the people and for strengthening and enhancing measures by cooperating with authorized personnel and other sectors.

### (Package of ten measures)

7

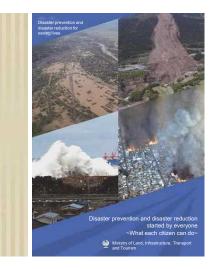
- Conversion to "basin flood control" throughout the entire area by various authorized personnel.
- 2 Review of the flood control plan that reflects the effects of climate change.
- 3 Promotion of ways of living and land use for disaster prevention and mitigation.
- 4 Controlling the flow of people and logistics in the event of a disaster
- 5 Preliminary measures to secure transportation and logistics
- 6 Advance preparation for safe and secure evacuation
  - Measures against aging infrastructure and strengthening of regional disaster prevention capabilities
- 8 Enhancement of functionality and increase in speed of disaster prevention and mitigation with the use of new technology
- 9 Promotion of transmission of easy-to-understand information
- 10 Establishment of disaster prevention and mitigation perspectives for activities and efforts of the government, business operators and citizens

### (Dissemination by pamphlets)

A pamphlet that summarizes the project contents in an easy-to-understand manner and focuses on what each resident can do now has been created and disseminated.

All-out challenge Disaster prevention/ disaster reduction project Disaster prevention and disaster reduction for saving lives

finistry of Land,



### (Related link)

Ministry of Land, Infrastructure, Transport and Tourism all-out disaster prevention/disaster reduction project <u>https://www.mlit.go.jp/sogoseisaku/sosei\_point\_tk\_000034.html</u>

## Chapter 7. Building a safe and secure society (3)



## Crisis management and security measures/critical infectious disease (COVID-19) measures

The "Ministry of Land, Infrastructure, Transport and Tourism COVID-19 Infectious Disease Control Headquarters" was established on January 30, 2020 based on the COVID-19 Special Measures Law.
 Implemented ministry-wide efforts such as infection control measures and protection measures at ports and airports in Japan.

### [Infection control measures in Japan]

(1) Requests for businesses in industries under the jurisdiction of the Ministry of Communications

Request to businesses to implement ensure the wearing of masks at airports, train stations, etc., encourage washing of hands, installing disinfectants, enforcement of ventilation in the workplace and remote working and staggered commuting among staff members.

### (2) Infection control guidelines

Supporting the formulation of guidelines to promote voluntary infection prevention measures by businesses, etc., and request for infection prevention measures accordingly.

(49 guidelines were published by 62 organizations as of the end of March 2021)



Three requests to passengers for using railways with peace of mind



Efforts of airline companies for using airplanes with peace of mind (The Scheduled Airlines Association of Japan)

- (3) Calling on public transport users
- (1) Wear a mask and refrain from talking
- (2) Understanding and cooperation for ventilation inside vehicles
- (3) Cooperation for remote working and staggered commuting Posting announcements and posters inside train stations and vehicles, etc.
- (4) When a state of emergency is declared

Call for refraining from travel at airports, train stations and SA/PA of highways and installation of thermography devices at major airports, etc.



Request to users

# Safe use of public

③ 国主交通省

transportation

Temperature measurement at Haneda Airport

[Protection measures at ports and airports such as refused entry of foreigners and quarantine enhancement, etc.]

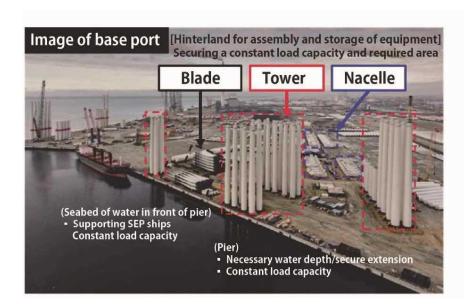
- •Request to limit arrival airport of aircrafts and port usage adjustment.
- Dissemination of replacing all air inside airplanes in three minutes.
- Secure inspection ability of approximately 20,000 passengers per day for inspections at the time of entry at Narita International Airport, Haneda Airport, Kansai International Airport, Chubu Centrair International Airport, Fukuoka Airport and New Chitose Airport.

### (Related link)

Response of Ministry of Land, Infrastructure, Transport and Tourism regarding COVID-19 <u>https://www.mlit.go.jp/kikikanri/kikikanri\_tk\_000018.html</u>

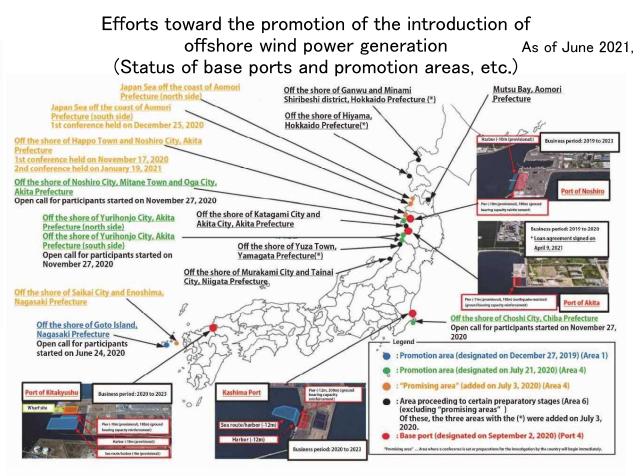
## Ports that support offshore wind power generation

Offshore wind power is promising as a sustainable energy source in Japan, which is surrounded by the sea on all sides, and is a trump card for realizing carbon neutrality by 2050.
 Japan has designated "base ports" equipped with functions required for equipment installation and maintenance by amending the Port and Harbor Act of 2019, and established a system for long-term and stable lending of wharfs to power generation companies to promote the introduction of offshore wind power generation.



(Related link)

Ministry of Land, Infrastructure, Transport and Tourism introduction of offshore wind power generation at ports <u>https://www.mlit.go.jp/kowan/kowan\_tk4\_000006.html</u>



## Response to oil spill off the coast of Mauritius

- On July 25, 2020 (local time), Japanese bulk carrier MV Wakashio was stranded and leaked approximately 1,000 tons of fuel oil into the sea.
- The Japan Coast Guard dispatched four staff members including two members of the National Strike Team, a unit that specializes in oil removal, and contributed to the early resolution of the situation by conducting a survey on the marine pollution, providing analysis results of satellite images and issuing guidance and advice, etc. on oil removal to the Mauritius Coast Guard.



# Chapter 9. Strategic international development and strengthening of international contribution (1)



## Promotion for overseas development of infrastructure systems (1)

- In July 2020, the MLIT published the "MLIT Action Plan 2020 for Overseas Development of Japanese Infrastructure" compiling the main measures to be executed in the infrastructure and transportation sectors, as well as major projects to focus on, in order to propell the overseas development of Japanese infrastructure systems, which is an important growth strategy for the Japanese Government.
- In addition to analyzing the efforts of 134 individual projects since the formulation of the Action Plan in 2016 and extracting issues, the content was enhanced based on the rapid changes in the world and the impact of COVID-19. Furthermore, strategies for the maritime field were added, and strategies for the current eight fields were updated. 80 major projects that should be focused on in the next three to four years were selected.

Summary of "MLIT Action Plan 2020 for Overseas Development of Japanese Infrastructure"

### Analysis of efforts

Difference in size and competitiveness between Japanese and overseas companies.

Relative decline in technological advantages of Japanese companies.

Lack of experience and passion among Japanese companies toward overseas projects.

Difficulties due to the circumstances of partner countries.

## Analysis of Measures: Response to the rapid changes in the world and the impact of COVID-19.

 Support for overseas development of infrastructure incorporating new technologies based on IoT, AI, and big data, as well as advanced demonstrations of these technologies overseas, while taking the achievement of the SDGs and ESG investment into consideration.

Flexible response while paying attention to transition of values such as increased public health awareness after convergence of COVID-19 and orientation to an autonomous decentralized society, as well as geopolitical changes.

### Basic concept of countermeasures

Japan's strengths:

Consider countermeasures centered on

"Quality infrastructure systems"

### Main measures required in the future

- · Strengthening continuous involvement from upstream.
- · Strengthening responsiveness to PPP projects.
- Project formulation using Japan's strengths.
- Improving the quality of surveys by Japanese consultants.
- · Strengthening the competitiveness of Japanese companies.
- Ensuring enough human resources and arranging environment for overseas development of Japanese companies
- Continuous follow-up after receiving an order.
- Measures based on the spread of COVID-19.

Analyze the market trends and strengths and weaknesses of Japan by sector and illustrate future overseas development and the detailed policies, etc.

●80 projects that should be focused on in the next three to four years were selected from the perspective of the possibility of contracts by Japanese companies.

# Chapter 9. Strategic international development and strengthening of international contribution (2)



## Promotion for overseas development of infrastructure systems (2)

- "The Certification and Award Program for International Infrastructure Engineer" was established in 2020. This program certifies and awards achievements in overseas projects by engineers from Japanese companies to incentivise engineers to engage in both domestic and overseas projects.
- International development and cooperation in MLIT fields were promoted by organizing the 2nd ASEAN-Japan Smart Cities Network High Level Meeting in 2020, holding meetings with countries and institutions, engaging in dialogue and signing a memorandum of understanding.

(Certification and Award Program for International Infrastructure Engieer)

### 2020 results

### Number of achievements certified

	Number of companies certified (number of companies applied)	Number of projects certified (number of projects applied)	Number of engineers certified (number of engineers applied)	Number of certificates issued (number of applicants)
Number of certifications	45	367	708	1,081
	(46)	(422)	(742)	(1,203)

### Number of Minister's Awards and Honorable Mentions

- Minister's Award for Outstanding International Infrastructure Engineer (Minister of Land, Infrastructure, Transport and Tourism Award): 17 recipients
- Minister's Encouragement Award for Outstanding International Infrastructure Engineer (Land, Infrastructure, Transport and Tourism Award) : 11 recipients

### (Related link)

MLIT Certification and Award Program for International Infrastructure Engineer (Japanese) https://www.mlit.go.jp/kokusai/kokusai\_tk3\_000198.html (2nd ASEAN-Japan Smart Cities Network High Level Meeting)

Schedule: December 16, 2020 (wed) 13:00-19:00 (Japan time) \*Web conference Host: MLIT

(Sponsor : The Ministry of Foreign Affairs, Support: Cabinet Office, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, Ministry of the Environment)

Chair: MLIT (Minister of Land, Infrastructure, Transport and Tourism) and Ministry of Construction of Vietnam (Deputy Minister)(Vietnam is the 2020 ASEAN Presidency)

Attendees: 10 ASEAN countries, Deputy Secretary and Director-level members of the Japan Infrastructure Office, ASCN26 City Representative, ASEAN Secretariat, Japanese Municipality, Japanese companies, local companies, related organizations, international organizations, etc.



Opening remarks by Kazuyoshi Akaba, Minister of Land, Infrastructure, Transport and Tourism

# Chapter 10. Utilization of ICT and promotion of research and development of technology (1)



## Advanced utilization of geospatial information: Release of GSI Maps Vector (tentative name)

The Geospatial Information Authority participated in the development of the United Nations Vector Tile Toolkit (UNVT\*). The national maps converted into vector tile data with the UNVT was released with the GSI Maps Vector (tentative name).

[Functions of the GSI Maps Vector and usage examples] Display various maps with a single click!



The colors of features and size of letters can be edited!



### [What is the United Nations Vector Tile Toolkit (UNVT\*)?]

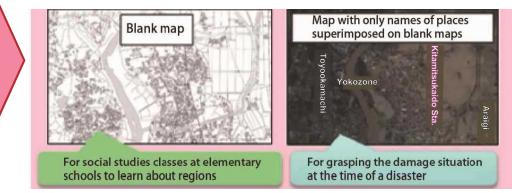
- O A software package packed with technology that can convert vector geospatial information into vector tiles.
- O Staff members of the Geospatial Information Authority were seconded to the United Nations and were committed to the development of the UNVT.
- O The UNVT is currently utilized at the United Nations Global Service Centre (for activities related to human security) and Geospatial Information Authority.

### [Efforts so far]

\*United Nations Vector Tile Toolkit

- O Since the start of the operation of the Digital Japan Web system (currently titled GSI Maps) in 2003, the "tile method" that divide maps into small pieces and delivers them has been adopted.
- O 2014: Start of experiments in distributing machine-readable vector tiles.
  - $\rightarrow$  Map representation according to the purpose of use has become possible.

Map with only the names of places superimposed on blank maps and aerial photographs can be easily created, so it is expected to be used in the field of disaster prevention and for school classes.



### (Related link)

Release of nationwide data of the GSI Maps Vector (tentative name) https://www.gsi.go.jp/johofukyu/johofukyu200318.html

# Chapter 10. Utilization of ICT and promotion of research and development of technology (2)



## Promotion of development, use and open data conversion of 3D urban models (Project PLATEAU)

In 2020, the Ministry of Land, Infrastructure, Transport and Tourism developed the "3D urban models" that reproduce real world cities and virtual spaces three-dimensionally and used these to conduct use case demonstration experiments to solve social issues under the name, "Project PLATEAU".
 City planning, urban development, enhancement of disaster prevention measures and the creation of diverse urban services, etc. are anticipated as use cases.

### [Development of 3D urban models]

Create 3D shapes of buildings, etc. and convert attribute information such as area, use, structure, etc. into data.

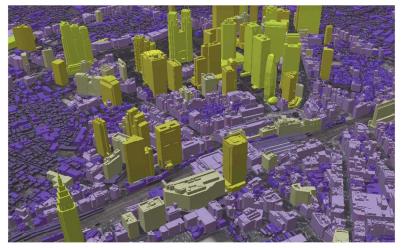
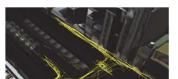


Image of 3D urban model (area around Shinjuku Station)

### [Use case examples]

 Visualization of urban activities with cameras, sensors, etc.
 ✓ Use to monitor the status of the "three C's" as measure against COVID-19, understand the migratory situation in cities and create a lively atmosphere.



### Visualization of disaster risk information

✓ Convert disaster hazard information such as floods, etc. into 3D and use to spread awareness of disaster prevention and for disaster prevention plan examinations.

### Town planning using data

✓ Promote smart planning with a three-dimensional grasp of urban structures, simulations of development plans and visualization of urban issues, etc.

### Creation of new services

✓ Development of web applications that contribute to improving the QoL of citizens in various fields from town planning, infrastructure management, entertainment and communication.



### <2020 initiatives>

- O Create <u>3D urban models of approximately 50 cities nationwide</u> and convert them into open data.
- O Formulated <u>data product specifications of 3D urban models</u> in Japan for the first time.
- O <u>Demonstrated use cases</u> and published various manuals such as collection of utilization cases.

### <Initiatives after 2021>

- O <u>Established a method to maintain and update data efficiently and independently</u> in various municipalities.
- O Demonstrated <u>advanced use cases that contribute to social implementation of smart</u> <u>cities</u>.



## Promotion of new technology utilization in directly controlled construction

■ Newly established a dedicated page for CO<sub>2</sub> reduction related technologies on NETIS\* towards the realization of a decarbonized society (February 2021).

Mandated the use of new technologies in directly controlled civil engineering work with exceptions.

Newly established a dedicated page for CO<sub>2</sub> reduction related technologies on NETIS

### トップページ (イメージ)



 ✓ NETISIC登録された技術から キーワード「C02削減」で検



Note) The " $CO_2$  reduction-related technology" was extracted from the technologies that are described regarding  $CO_2$  reduction effects etc. in the application form submitted by the applicant, and the  $CO_2$  reduction effects of the technology are not confirmed or evaluated by the Ministry of Land, Infrastructure, Transport and Tourism.

\* New Technology Information System (NETIS). A database system developed for the purpose of providing information on new technologies developed by private companies for the promotion of new technologies by the Ministry of Land, Infrastructure, Transport and Tourism.

Mandated the use of new technologies in directly controlled construction

### (Purpose)

In addition to promoting the use of ICT, promote the use of new technologies, create a virtuous cycle of activation of new technological developments, respond to intensifying and frequent disasters and improved productivity and contribute to securing leaders as an industry that utilizes the latest technology.

Orders are placed using four utilization methods in addition to the two newly established methods.

Usage method	Details	
ICT utilization type	Use of ICT and BIM/CIM	
Orderer designation type	Individually specify new technology	
Orderer designation type (Option presentation type) Newly established	Present themes and multiple new technologies to drawings and specifications and enable contractors to select new technologies after concluding a contract	
Contractor selection type Newly established	As a general rule, orders will use one new technology (including the use of new technologies based on proposal from the previous contractor).	

(Related link) NETIS (New Technology Information System) <u>https://www.netis.mlit.go.jp/NETIS/PubEntrance/PubEntrance?ReturnUrl=%2fNETIS</u> Ministry of Land, Infrastructure, Transport and Tourism Use of new technologies ~New technology utilization system in public works~ https://www.mlit.go.jp/tec/gijutu/katuyo.html

Ministry of Land, Infrastructure, Transport and Tourism

This document and the full White Paper on Land, Infrastructure, Transport and Tourism in Japan can be found on the website of the MLIT.



#### https://www.mlit.go.jp/statistics/file000004.html https://www.mlit.go.jp/en/statistics/white-paper-mlit-index.html mlit.go.jp/en/statistics/white-paper-mlit-index.html ホーム>白書・オープンデータ>白書>国土交通白書 国土交通自書 令和3年版国土交通白書 Home About MLIT White papers / Reports Policy Bureau 国土交通白書全文 PDF版 > HTML版 正誤表(PDF:424KB) HOME > Policy Bureau > WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAI 概要 概要資料(1枚版)(PDF:669KB 概要資料(第1)部 21枚版) SUMMARY OF THE WHITE PAPER ON LAND INFRASTRUCTURE TRANSPORT AND TOURISM IN JAPAN 2020 (PDF:3,045KB) WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN, 2019 ダイジェスト版(第1部) > ダイジェスト版(第2部) WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN, 2017 WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN, 2016 WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN, 2015 はじめてお読みになる方はこちら WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN, 2014 第十次通常 WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN, 2013 >一般 > 自治体 WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN, 2012 研究者・シンクタンク WHITE PAPER ON LAND, INFRASTRUCTURE, TRANSPORT AND TOURISM IN JAPAN, 2011