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# TRANSPORT, ROADS AND TRAFFIC

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This article presents an overview of the main trends and outlook in Japan between January and December 2022, focusing on the Ministry of Land, Infrastructure Transport and Tourism (MLIT).

## **1 Details and Results of Traffic and Transportation Initiatives at the Olympic and Paralympic Games Tokyo 2020, and Future Recommendations**

The Olympic and Paralympic Games Tokyo 2020 were held in the summer of 2021, a year later than originally scheduled because of the global spread of the COVID-19 pandemic. This was the first time that the Olympic and Paralympic Games had been postponed and, with spectators in the Tokyo metropolitan area unable to attend the events, this was an unprecedented and difficult situation. For the hosting of the Games, traffic management initiatives were promoted, including travel demand management (TDM) to facilitate the safe and smooth transportation of athletes and other parties while protecting social and economic stability, measures for tolls on the Tokyo Metropolitan Expressway, as well as traffic system management (TSM). In March 2022, Tokyo reported the details and results of traffic and transportation initiatives at the Tokyo 2020 Games, and the Traffic and Transport Technical Consideration Meeting announced recommendations for further actions related to traffic and transportation.

### **1.1. Comprehensive Transportation Management Initiatives**

A comprehensive approach to traffic and transportation management was applied to help ensure the appropriate traffic fluidity and realize safe and smooth transportation during the Games (Fig. 1). To avoid congestion during the period of the Games, a wide range of companies and individuals were asked to cooperate with the TDM initiatives. Tools and information were also provided during the Games for the same purpose and to sup-

port corporate activities. Detailed guidance was supplied from the period immediately before the Games, which was then supplemented by daily congestion forecasts for the following day while the Games were in progress.

### **1.2. Initiative Results**

TDM and other initiatives helped to reduce traffic volumes during the Games, and the various traffic and transportation management measures were judged to have functioned appropriately. In addition, the number of people travelling in and out of Tokyo was successfully reduced by public appeals to avoid the area, the issuance of congestion forecasts, and other measures (Fig. 2).

### **1.3. Recommendations for Future Application of Traffic and Transportation Measures**

The following recommendations are the summaries of policies and measures that should be developed to broadly achieve better transportation in the future, and are widely aimed at residents, companies, governments, and the like as a legacy of the measures taken through the Tokyo 2020 Games.

**Recommendation 1:** To help ensure appropriate traffic flows depending on the situation, it is important for governments, residents, companies, and other parties to share values, goals, and so on, and to implement comprehensive traffic management through mutual understanding and cooperation.

**Recommendation 2:** It is important for governments to provide information and support that will help ensure the business continuity of corporations with the aim of maintaining social and economic activities even in the event of a major disaster such as a typhoon, large earthquake, or epidemic. In addition, company management must take initiatives to promote the establishment of diverse and flexible working styles such as teleworking, and staggered commuting hours, the improvement of logistics efficiency, and the establishment of comfortable workplace environments for employees.

**Recommendation 3:** To further improve the effi-

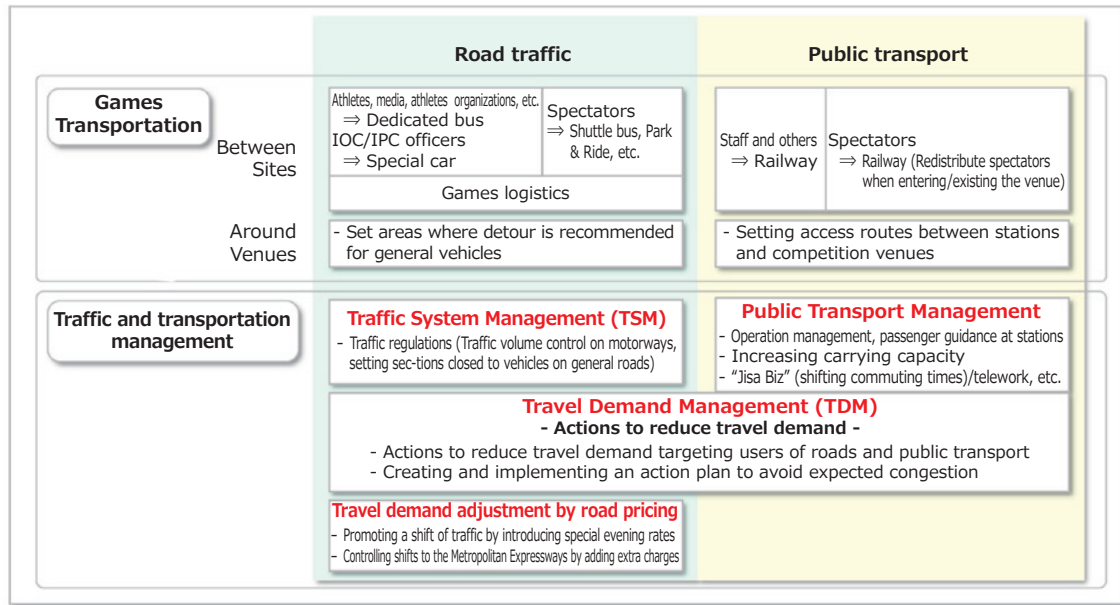


Fig. 1 Comprehensive Traffic and Transportation Management

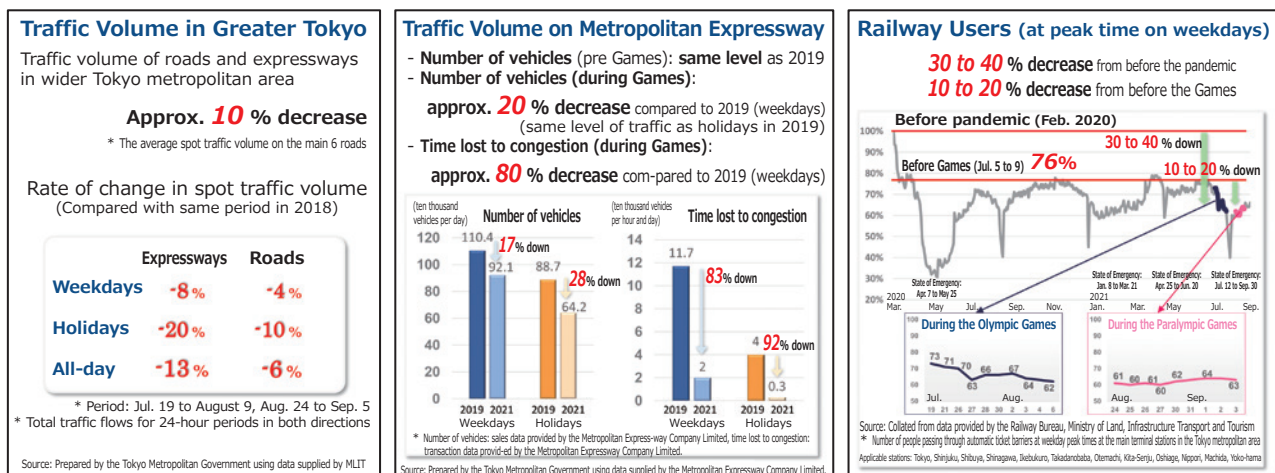


Fig. 2 Results of Traffic and Transportation Management Initiatives (Changes in Traffic Demand)

ciency of logistics, it will be necessary to focus on logistics that emphasize social value (social logistics) to support people's lives and safety while aiming to achieve social objectives and goals, as well as conventional logistics that create economic value (business logistics).

**Recommendation 4:** To achieve an inclusive society in which everyone can play an active role, it will be important to widely expand barrier free efforts in terms of tangible infrastructure throughout society to enable safe and smooth movement for all people, regardless of disability, and to promote an environment that ensures smooth communication with everybody (i.e., barrier free communication from an intangible perspective).

## 2 Publication of National Land Use Plan (National Plan) Interim Report

On July 15, 2022, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) published an interim report in preparation for the issuance of a new National Land Use Plan (National Plan) after deliberations by the National Land Development Council.

The key points of this interim report are listed below as a response to the issues facing the use of national land, namely population decline, the declining birthrate and aging population, and the risk of large-scale natural disasters. The purpose of the report is to share informa-

	2022	2023	From 2024 (2020s)	Medium-to-long term initiatives(2030s)
(1) Road-based support for automated driving		Joint public-private sector field operational tests (FOTs) pertaining to predictive information (engineering work restrictions on roads, etc.)		Realization of automated driving on expressways (level 4)
(2) Development of next-generation ITS	Formulation of guidelines pertaining to the introduction of automated driving centered on <i>michi no eki</i> roadside stations	Studies into service management systems for automated trucks		Nationwide realization of unmanned automated driving services
(3) xROAD construction and data utilization	Preparation of xROAD trials and partial public release of data	Further xROAD enhancement	- Acquisition of location information on underground property and data on local roads - Further public release of data - Start of road management application preparation	
	Acquisition of MMS 3D point group data on all publicly managed roads (complete in FY 2025)			Development of applications by the private sector, etc.
	Disclosure of MMS 3D point group data			
	Installation of CCTV in 50% of necessary sections of roads used for emergency transportation (complete in FY 2025)			
(4) Development of base station policies, bus terminals, and <i>michi no eki</i> roadside stations	Practical adoption and popularization of relay transportation for logis-tics	- Promotion of base station building, etc. - Popularization of initiatives using IT, such as private sector matching services		
	Utilization of PFI methods for building and managing service areas and parking areas on expressways			
	Promotion of initiatives linking regions and the Shinjuku bus terminal through mixed passenger and goods transportation			
	Preparation of BCPs for in-use bus terminals			
	3rd stage of initiatives for <i>michi no eki</i> roadside stations	- Introduction of cashless payment (80% or higher in FY 2025) - Introduction of facilities for babies (50% or higher in FY 2025)		

\* In the promotion of each of these initiatives, it will be important to coordinate between a wide range of bodies and plans based on local characteristics, and proceed while obtaining the understanding and consensus of local regions and residents.

Fig. 3 2040 Vision for Roads in Japan (1)

	2022	2023	From 2024 (2020s)	Medium-to-long term initiatives(2030s)
(5) Building of usage environments for new mobility vehicles	Formulation of guidelines pertaining to the introduction of public transport systems (BRTs), etc.			Acceleration of introduction of public transport systems (BRTs) and mobility hubs
	Studies into the preparation of spaces and data sharing for supporting the operation of automated delivery robots			
	Building of environments etc. for electric kick boards (building of spaces for automated driving)			
	Support for social experiments pertaining to driving and parking spaces for new mobility vehicles			
(6) Realization of green society	Formulation of guidelines for the installation of EV charging stations on public roads			Acceleration of the installation of EV charging stations on public roads
	Support for research into dynamic wireless charging			Field operational tests (FOTs) on public roads, etc.
	Formulation, communication, and acceleration of the introduction of technical guidelines for installing solar power generation facilities along roads			Utilization of renewable energy on roads
	Technical verification of road surface systems incorporating solar cells			
	Field operational tests (FOTs) of advanced road lighting	Formulation of road lighting installation standards (draft)		Acceleration of energy-saving measures for road lighting
(7) Building of usage environment for bicycles	Revision of guidelines etc. for the building of bicycle lanes			Promotion of the building of bicycle lanes
	Publication of case studies for coordination with public transport systems			
	Formulation of bicycle share guidelines			
	Construction of promotion system to strengthen collaboration between relevant local parties			
(8) Realization of people-centric roads	Formulation of case study collections and guidelines (parklets, installation of EV charging stations on public roads, installation of roadside car sharing stations, etc.)			Realization of the flexible use of sidewalks, road shoulders, etc.
	Studies into the construction of areas that allow the flexible use of road shoulders (vibrant infrastructure (provisional name))			
	Studies into integrated management of sidewalks, road shoulders, etc.			Construction of road spaces that allow the coexistence of pedestrians and vehicles.
	Studies into systems to promote the building of roads that prioritize pedestrians			
	Acceleration of development of private sector applications to ensure the safety and security of pedestrians using xROADs			
	Promotion of safety measures for residential roads and 30 km/h zone plus initiatives			

\* In the promotion of each of these initiatives, it will be important to coordinate between a wide range of bodies and plans based on local characteristics, and proceed while obtaining the understanding and consensus of local regions and residents.

Fig. 4 2040 Vision for Roads in Japan (2)

tion about these issues and present ideas on how the issues should be addressed in the modern age.

- (1) Creative collaboration between public and private entities to maximize the efforts of the private sector
- (2) Thorough utilization of digital technologies
- (3) Optimization of convenience for local residents and business operators
- (4) Efforts that cross the boundaries of different fields (i.e., ideas for cooperation between fields)

Under these four principles, the key initiative fields to help address the issues faced by national land were de-

finied as follows.

- (1) New living spaces self-designed by local stakeholders using digital technology: local living spaces.
- (2) New and globally unique urban spaces that respond to diverse needs and enable a wide range of lifestyles and economic activities: evolution of the so-called “super mega region.”
- (3) National land that enables the mutual supplementing of functions through structural shifts and the redeployment of industry: Redeployment of industry in the modern age.
- (4) The strengthening and nationwide deployment of

ideas for realizing appropriate land use and management as the population declines, with government support based on direct discussions with residents (national use plan).

It is hoped that these principles will help realize the sustainable use of national land, achieve bottom-up growth from the regions to the whole country, and correct the concentration of resources in the Tokyo region. In the future, the intention is to advance deliberations on matters requiring deeper study before coming up with a final summary and formulating a new National Land Use Plan (National Plan) in the middle of 2023.

### **3 Summary of Government Roadmap: Changing the Landscape of Roads - 2040 Vision for Roads in Japan -**

In June 2020, the Policy Subcommittee of the Road Committee of the Panel on Infrastructure Development released a vision for roads in Japan called the “Changing Road Landscape in 2040.” While looking ahead to new lifestyles and transformations in the social economy after the COVID-19 pandemic, this document reconsiders the

role of roads in the future and shows a vision of society that might be achievable through road policies, alongside the direction for such policies over the medium-to-long term, looking at a period roughly twenty years ahead.

However, after this road policy vision was formulated, various significant changes have occurred in the background, including rapid progress in digitalization and data usage, initiatives toward carbon neutrality, and the severe effects of the Covid-19 pandemic.

Based on these changes, in August 2022, the Policy Subcommittee published a document called “Changing the Landscape of Roads - 2040 Vision for Roads in Japan -.” This is a summarized roadmap of activities in the road policy field for the immediate future, and was formulated after specific deliberations on the following items with the aim of clarifying the issues and directions of road policies toward the realization of the 2040 vision: (1) automated driving, (2) ICT traffic and transportation management, (3) base station policies, (4) usage environments for new mobility vehicles, (5) the realization of a green society, (6) usage environments for bicycles, and (7) usage methods for road spaces.