NEXCO East Annual Report 2022

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Published in September 2022

We are connected to communities by connecting communities.

NEXCO East Group is engaged in managing and constructing expressways, operating rest areas, and other highway-related businesses in Eastern Japan. To achieve a sustainable society that extends beyond the boundary of regions, countries, and generations, NEXCO East Group will strive to create value in “connecting” and will continue to grow as a company that contributes to all stakeholders.

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NEXCO EAST

NEXCO East Annual Report 2022

[Policy for compiling this report]

NEXCO East Annual Report is published to inform all stakeholders of NEXCO East Group’s expressway business and its efforts toward the development of a sustainable society through its expressway business. The entire report, as well as the CSR book, can be downloaded from our corporate website.

[Scope of reporting]

NEXCO East and its 28 group companies.

[Reporting period]

From April 1, 2021, to March 31, 2022 (Some activities outside of this period are also included.)

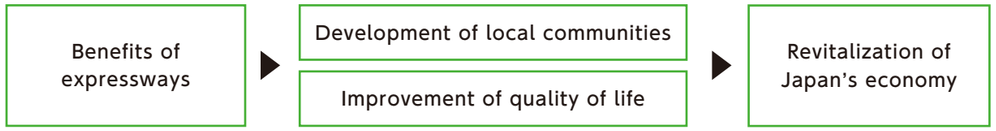
● Corporate History

1956	Japan Highway Public Corporation is founded.
1960	A section between Ichinoe and Funabashi on the Keiyo Expressway is opened. It becomes Japan's first motorway in the following year.
1971	The first expressways in Hokkaido are opened (between Kitahiroshima and Chitose Interchanges (ICs) on the Do-O Expressway and between Otaru and Sapporo-Nishi ICs on the Sasson Expressway.)
1985	The entire route of the Kan-Etsu Expressway is opened.
1987	The entire route of the Tohoku Expressway is opened.
1988	The entire route of the Hokuriku Expressway is opened.
1997	The Tokyo-Wan-Aqua-Line Expressway is opened.
1999	The entire route of the Joshin-Etsu Expressway is opened.
2001	The Electronic Toll Collection (ETC) system is implemented.
2005	Japan Highway Public Corporation is privatized, and East Nippon Expressway Company Limited is established.
2006	“NEXCO East” is selected as its brand name.
2008	A commercial facility called “Pasar Makuhari” is opened as its flagship brand.
2011	Great East Japan Earthquake takes place. Expressways managed by our company are also severely damaged.
2015	The entire route of the Joban Expressway is opened. Expressway Renewal Project is launched.
2017	A section between Sakai-Koga and Tsukuba-Chuo ICs on the Ken-O Expressway is opened, connecting the Tomei and Higashi-Kanto Expressways.
2018	A section between Misato-Minami IC and Koya Junction (JTC) on the Gaikan Expressway is opened, connecting the Kan-Etsu and Higashi-Kanto Expressways.
2019	A local subsidiary is established in India. Pasar Hasuda, one of the largest rest areas in Eastern Japan, is opened.
2020	Operation at the “NEXCO-East Technology Center for Development & Education” starts.
2021	The vision (concept) of the next generation expressway is announced.

Mission Statement

Group Management Principles

NEXCO East Group supports the development of local communities, improves their quality of life, and contributes to the revitalization of the entire Japanese economy by maximizing the benefits of expressways.



Group Management Vision

NEXCO East Group will continue to grow as a company that creates value in "connecting" and contributes to all stakeholders in order to realize a thriving society beyond the boundary of regions, countries, and generations.

Group Management Policies

- ○ NEXCO East Group prioritizes its customers and improves their safety, security, comfort, and convenience while driving.
- ○ NEXCO East Group conducts sound group management by optimizing the use of management resources based on fair and transparent business activities, as well as provides accurate corporate information.
- ○ NEXCO East Group supports the development of society by endlessly pursuing efficiency and demonstrating our technology and expertise.
- ○ NEXCO East Group creates a healthy and rewarding work environment for our employees and values every employee's efforts, achievements, and determination to succeed.
- ○ NEXCO East Group promotes CSR management, increases the value provided to stakeholders and the corporate value of the entire group, and contributes to creating a sustainable society.

Corporate Social Responsibility (CSR) of NEXCO East Group

Quintessential CSR for NEXCO East Group

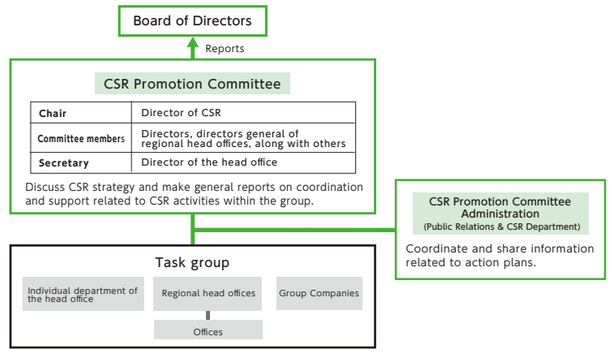
CSR Motto
"We are connected to communities by connecting communities."

NEXCO East Group revised the "Quintessential CSR for NEXCO East Group" as a guideline for CSR management in March 2021, as shown in the diagram on the right. We are taking CSR initiatives to build a sustainable society with the motto "We are connected to communities by connecting communities."
We believe that the business activities of NEXCO East Japan Group will fulfill our corporate social responsibility, and we continue to support the development of a sustainable society based on the idea of being a company in the community.

Creating a sustainable society

CSR Promotion System

The CSR Promotion Committee, chaired by a CSR director, and the Board of Directors examine and discuss strategies and issues to build a system to promote CSR activities.
NEXCO East supports the United Nations Global Compact and its 10 principles in the areas of human rights, labour, environment, and anti-corruption.



Contributions to achieving SDGs

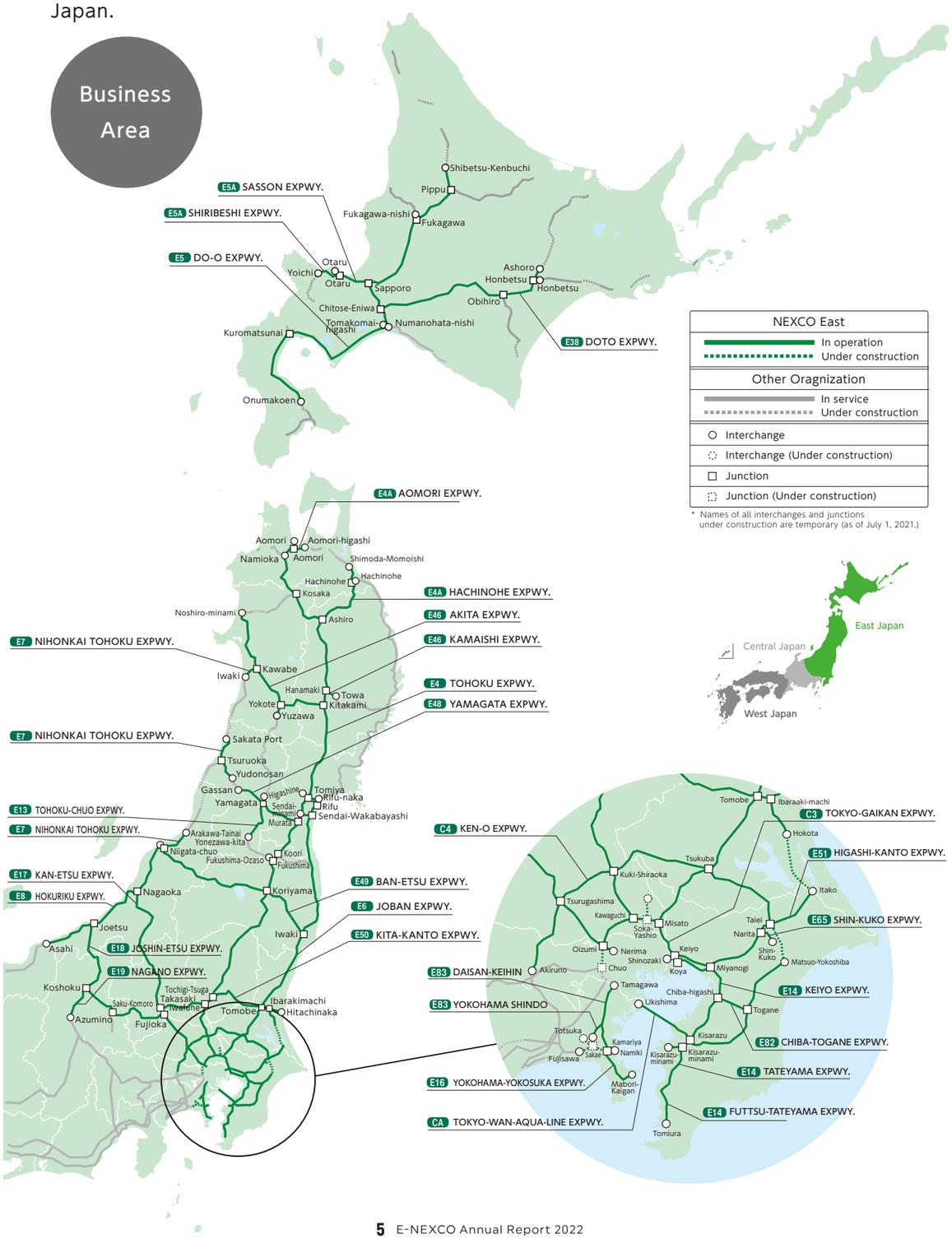
NEXCO East Group supports the Sustainable Development Goals (SDGs) and strives to achieve global sustainable development by promoting the resolution of social issues through our expressway business. Please refer to pages 13-14 for details.

NEXCO East Group contributes through our businesses to the following SDGs

NEXCO East Group's Business

NEXCO East Group is engaged in the management and construction of expressways, operation of rest areas, as well as other expressway-related businesses in Eastern Japan.

Business Area



NEXCO East	
	In operation
	Under construction
Other Oragnization	
	In service
	Under construction
○	Interchange
◌	Interchange (Under construction)
□	Junction
⬚	Junction (Under construction)

* Names of all interchanges and junctions under construction are temporary (as of July 1, 2021.)

Expressway Business

Management

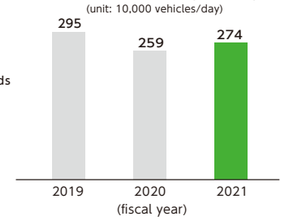
Construction

Length of Operating Roads
3,943 km

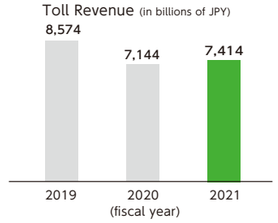
Interchanges (IC)
446

Smart Interchanges (SIC)
59

Traffic Volume of Expressway
(unit: 10,000 vehicles/day)



Toll Revenue (in billions of JPY)



Related Businesses

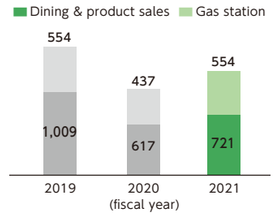
Rest Area Business

Other Expressway-Related Businesses

Service Areas (SA) and Parking Areas (PA)
328
(including 196 with commercial facilities and 132 without)

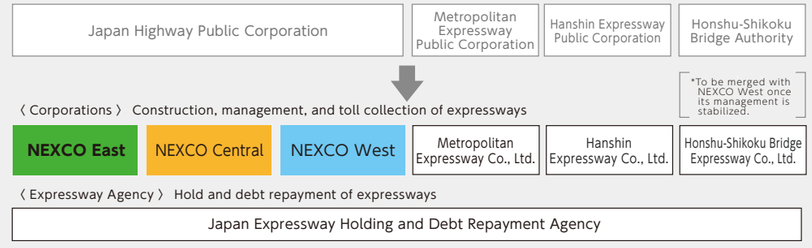
EV Quick-Charging Stations
154

Total Sales Revenue of Commercial Facilities on Expressways (in billions of JPY)



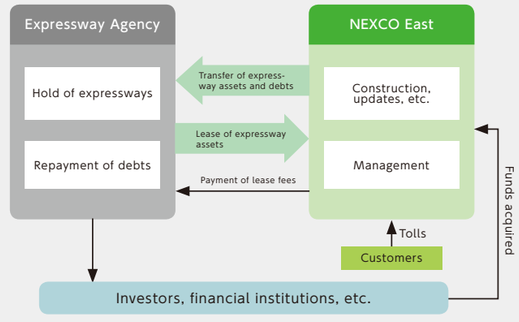
Framework for Expressway Business Operations

Founded in 1956, the Japan Highway Public Corporation was privatized along with other highway-related public corporations. Six expressway companies and Japan Expressway Holding and Debt Repayment Agency (hereinafter referred to as "Expressway Agency") were established on October 1, 2005.



NEXCO East constructs and improves expressways in the eastern Japan region before handing over the assets and debts acquired for the construction to the Expressway Agency. We also pay lease fees for expressway assets (hereinafter referred to as "lease fees") to the Expressway Agency by managing the leased assets.

The law stipulates that highway tolls shall not include any profits. Income from tolls is used to pay lease fees, expressway maintenance and management costs, and the costs of providing various services. The Expressway Agency uses these funds to repay debts.



Nexco East Group's Challenges for a New Future Society

Fumihiko Yuki
President and Chief Executive Officer
East Nippon Expressway Company Limited

The business environment surrounding expressways and their roles

The impact of the novel coronavirus pandemic, which started about two and a half years ago at the beginning of 2020, has significantly changed people's lifestyles.
There is no exception to our group businesses. Our business environment has changed dramatically, as with other transportation infrastructures, such as a decrease in traffic volume, mainly of small-size vehicles, due to restrictions on traveling and people's behavior. Although the traffic volume in 2021 increased by 5.8% compared to 2020, it was still 7.3% below 2019, indicating that it has not recovered to the pre-Covid level.
However, we believe that the expressway is still one of the significant social infrastructures that support the flow of people and goods even in such a volatile condition of socio-economic activities.

Providing a sustainable, safe, secure, comfortable, and convenient expressway area

Our group's first management policy is to "prioritize our customers and improve their safety, security, comfort, and convenience while driving." Every employee of our group works diligently to realize this policy.
A recent earthquake off the coast of Fukushima Prefecture, which recorded the maximum seismic intensity of upper 6, cracked the Tohoku Expressway (outbound) up to 100 meters between Kunimi IC and Shiroishi IC in the middle of the night of March 16 of this year. However, urgent repair work was completed by 15:30 the following day, and the section was reopened.
We believe that our accumulated knowledge and technologies through our experience in road repair and reconstruction support for various large-scale disasters in the past, including the Great East Japan Earthquake in March 2011, allowed us to respond quickly and appropriately to such disasters. Not to mention that all Group employees strive to work together with a strong sense of mission to "repair the roads as quickly as possible."
We will continue to build disaster-resistant roads and prepare for disasters through various measures, such as drills, in cooperation with related organizations. Meanwhile, we ensure that these mindsets and skills are passed on to the next generation.
In 2021, we formulated a medium-term management plan (FY2021-FY2025). We established a primary key project plan to be addressed over the next five years under six basic policies, based on the assumption of changes in the internal and external environment in the next 10 to 20 years.
One of them is to address aging infrastructure. Some sections of expressways have been operating for 40 to 50 years, and appropriate measures are urgently needed in terms of disaster prevention/mitigation and national resilience.
Therefore, since FY 2015, we have been carrying out the Expressway Renewal Project, a large-scale renewal and repair project for road structures such as replacing bridge deck slabs and reinforcing tunnels. The future target sections include heavy traffic routes in the Tokyo metropolitan area. Thus, we will strive to ensure smooth traffic flows while conducting more efficient construction by utilizing new technologies, such as the precast method and the movable barrier (Road Zipper System), where concrete barriers can be moved freely by specialized vehicles.
In addition to the sustainable maintenance of these expressway functions, further development and functional enhancement of the expressway network is necessary for regional revitalization and other factors.
Our group has continued to expand the expressway network by opening approximately 605 ㎞ of routes and supported the development of local communities and improvement of their quality of life since its privatization in October 2005. As for expressways connecting major areas under our management, we are working to eliminate missing links centered around the Three Ring Expressways of the National Capital Region, such as Ken-O Expressway and Tokyo Outer Ring Road. Meanwhile, we are also progressively undertaking four-lane and additional lane projects, such as between Kuki-Shiraoka JCT and Taiei JCT on the Ken-O Expressway, to ease congestion and further improve safety within the provisional two-lane sections.
Also, we are determined to continue to make company-wide efforts to prioritize and address residents' concerns. We sincerely strive to rebuild their trust in our company as our response to the sinkhole accident during the Tokyo Outer Ring Road construction.

Creating new value for a new future society

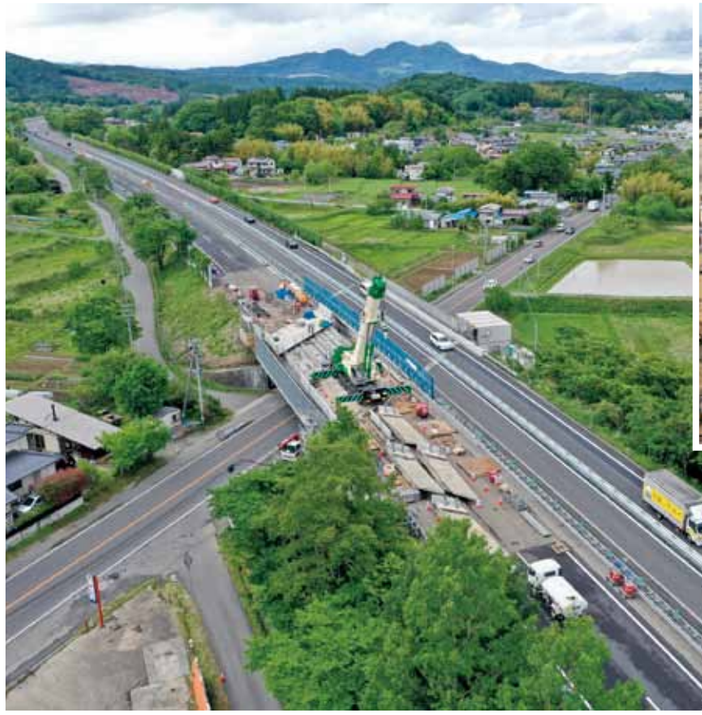
Our group utilizes support tools such as Smart Maintenance Highway (SMH) and i-Construction, making full use of cutting-edge technologies, including ICT and robotics, in order to efficiently advance our business.
Moreover, we have launched two significant initiatives to create new value for a future society and deliver it to our stakeholders.
The first is the promotion of "moVision."
It is a nickname for the concept, "Next Generation Expressway That Accelerates the Realization of Autonomous Driving Society." We formulated this concept in April 2021, seeking to provide new mobility services to enhance expressway functions and solve social issues amid the imminent arrival of a fully autonomous driving society.
This concept consists of 31 primary projects, including the following: Trial stage projects, such as "Next Generation Highway Radio" to provide traffic information on the direction of a vehicle based on its location and "Snowplow Operation Support System" using the quasi-zenith satellite system. Planning stage projects for future-oriented demonstration experiments such as "Autonomous Driving Lanes" and "Autonomous Driving Signs" to accommodate the spread of self-driving and connected vehicles.
We recognize that it is imperative to address from a tangible perspective, such as expressways, for the future growth of Japan's economy in today's world, where the automotive industry's social environment is changing dramatically along with the advancement of autonomous driving technology.
The second is the promotion of "business and human resource development through new partnerships."
We are currently undertaking two specific initiatives for this purpose.
One is the "Drive Plaza Innovation Lab," established in July 2021 to collaborate with a wide range of organizations, including startup companies. It is to co-create and socially implement new businesses that will lead to new expressway services, local revitalization, and solutions to various social issues.
It was the first attempt at an accelerator program as an expressway company. We received 84 proposals during the two-month period from September 1 to October 31 of the same year. After reviewing and considering each potential and feasibility, we have selected five companies and begun demonstration tests in December.
The other is the "Sendai Graduate School or Project Design", established with our support in April of this year. It is part of our reconstruction support after the Great East Japan Earthquake. It serves to revitalize the Tohoku region, which has strong ties with our group, and to train their future human resources who will play essential roles in the area.
It is intended to nurture human resources who can envision and implement new businesses, create new business opportunities, and contribute to the local communities.

Sustainability as a company

We need to be sensitive to the changing times and respond to common issues and trends not only at the local and domestic level but also globally in order for our group to continue to provide safe, secure, comfortable, and convenient expressway areas to our customers.
We will address various issues affecting economic activities, such as aging infrastructure, declining birthrate, aging population, post-Covid, carbon neutrality, diversity and inclusion, and souring prices due to global turmoil, by achieving management focusing on sophistication, efficiency, and consolidation of operations and promoting ESG-related initiatives.
SDGs are 17 Goals tools set to resolve common global issues. Primarily, we aim to contribute to achieving six goals (No. 3, 8, 9, 11, 13, and 17) as our major challenges since they are closely related to our expressway and associated businesses.
The fiscal year 2023 marks the halfway point of our medium-term management plan. I will exercise my top management skills and sound judgment about initiatives to be more eagerly promoted and those to be implemented flexibly based on changes in the social and economic environment. Therefore, I will contribute to the growth of our group to meet all stakeholders' trust and expectations.

Medium-term Management Plan (FY2021 - FY2025)

Time to Contribute to Achieve the SDGs and to Transform Toward a New Future Society



Expressway renewal project (Tohoku Expwy.)

Four-lane construction (Ken-O Expwy.)

Trial implementation of contactless guidance (Hasuda SA on Tohoku Expwy. (Inbound))

Satoshi Iseda
Managing Director and
Senior Executive Officer,
Director of Corporate Strategy Division

NEXCO East Group has set the five years from 2021 to 2025 as “Time to Contribute to Achieve the SDGs and to Transform Toward a New Future Society” and formulated the “Medium-Term Management Plan (FY2021-2025)” in 2021.

We are currently working on the following policies based on this medium-term management plan to fulfill our group’s social mission: “Realization of comfortable expressways that are safe and secure and respond to innovations such as autonomous driving,” “Dramatic improvement in reliability of expressway infrastructure against aging and disasters,” “Enhancement of network functions by improving and reinforcing expressways and promoting four lanes,” “Pursuit of usability based on various customer needs,” “Reinforcement of the managerial capability in the post-Covid,” and “Creation of a work style that responds to a new lifestyle and enables everyone to thrive at work.”

In order to achieve SDGs for a better, sustainable world by 2030, the entire NEXCO East Group will closely work together to grow into a corporate group that contributes to all stakeholders through creating value in “connecting,” as stated in our group management vision.

Six Basic Policies

FY2021	FY2022	FY2023	FY2024	FY2025

Basic Policy 1
Realization of comfortable expressways that are safe and secure and respond to innovations such as autonomous driving

Basic Policy 2
Dramatic improvement in reliability of expressway infrastructure against aging and disasters

Basic Policy 3
Enhancement of network functions by improving and reinforcing expressways and promoting four lanes

Basic Policy 4
Pursuit of usability based on various customer needs

Basic Policy 5
Reinforcement of the managerial capability in the post-Covid world

Basic Policy 6
Creation of a work style that responds to new lifestyles and enables everyone to thrive at work

FY2030

Key Performance Indicators (KPI)

No.	Key Performance Indicators (KPI)	FY2022	FY2025	Note:
1	Overall Customer Satisfaction	3.7pts	3.8pts	Total CS (out of 5 pts)
2	Lost Time of Traffic Congestion on Main Routes	7.79 million vehicles/hr	7.7 million vehicles/hr	Calendar year value
3	Comfortable Driving Road Surface Ratio	95%	95%	
4	Sales Revenue Operating Profit Margin	3.1%	5.8%	SA and PA businesses (consolidated)
5	Total Annual Actual Working Hours	1,965hours	1,950hours	

Six Basic Policies and Priority Actions

Basic Policy 1

Realization of comfortable expressways that are safe and secure and respond to innovations such as autonomous driving

- We will promote the improvement of safety through accident countermeasures and assurance of punctuality by traffic congestion control.
- We will establish road space adapting to innovations such as autonomous driving and truck platooning.
- We will strive to create comfortable expressways by improving management sophistication and efficiency.

Basic Policy 2

Dramatic improvement in reliability of expressway infrastructure against aging and disasters

- We will improve the sophistication and efficiency of maintenance work through the further evolution of SMH (Smart Maintenance Highway) and implement appropriate anti-aging measures.
- We will build strong expressways that can respond to intensifying and frequent disasters.
- We will promote new initiatives that help improve the reliability of expressway infrastructure.

Basic Policy 3

Enhancement of Network Functions by Improving and Reinforcing Expressways and Promoting Four Lanes

- We will implement the safe, secure, and steady maintenance and reinforcement of the expressway network for a sustainable society.
- We will promote businesses considering productivity and infrastructure life cycle cost (LCC) by actively utilizing new ICT technology.

Basic Policy 4

Pursuit of usability based on various customer needs

- We will provide services that are user-friendly, comfortable, and convenient for various customers.
- We will promote the business activities that will lead to a revitalization of local communities and tourism promotion.

Basic Policy 5

Reinforcement of the managerial capability in the post-Covid world

- We will improve the corporate value of the entire group.
- We will enhance our existing revenue-generating businesses and promote new revenue-generating businesses.
- We will engage in environmental conservation through corporate and business activities.

Basic Policy 6

Creation of a work style that responds to new lifestyles and enables everyone to thrive at work

- We will establish a work foundation for new lifestyles and improve work efficiency by promoting further digitalization.
- We will improve productivity by creating a safe and healthy work environment that group employees can appreciate.

Financial Projection

■ Expressway Business

[Profit & loss plan]
Based on the agreement with the Expressway Agency, we commit ourselves to pay lease fees to repay the debts that the Expressway Agency holds and diligently execute the necessary management of expressways, using the income earned from our customers.

[Investment plan]
Pertaining to the Expressway Agency's assets *1, based on the agreement, we plan to invest approximately 2.5 trillion yen in repair projects such as the Expressway Renewal Project as well as construction and renovation projects, including the following: The section between Oizumi JCT and Chuo JCT on the Gaikan Expressway, the section between Kamariya JCT and Totsuka on the Yokohama Kanjo-Minami Expressway, and four-laning of the Joban Expressway.

As for company assets, approximately 250 billion yen is planned to be invested in toll collection machines, ETC systems, and the renewal of aging roads.

Cumulative total for FY2021 to FY2025

Toll income
Approx. 3.6 trillion yen
Lease fees
Approx. 2.6 trillion yen
Administrative expenses, etc.
Approx. 1 trillion yen

Cumulative total for FY2021 to FY2025

Agency assets *1
Approx. 2.5 trillion yen
Company assets
Approx. 250 billion yen

*1 Expressway Agency's assets are the expressway assets which will be handed over to the Expressway Agency after completion of the construction.

Expressway-Related Business

[Profit & loss plan]
We will improve customer service and corporate values by optimizing the use of management resources and increase our profitability by boosting efficiency. We have also set 2.1 billion yen of operating income as our goal for the final year (FY2025).

FY2025 Plan

Operating Income (consolidated)
Approx. 2.1 billion yen

[Investment plan]
We plan to invest approximately 55 billion yen in the assets of related businesses, such as new construction, renovation, and renewal of commercial facilities. This investment also includes common assets, such as replacing IT systems.

Cumulative total for FY2021 to FY2025

Company assets
Approx. 55 billion yen

* Please refer to page 6 for an overview of privatization and expressway business scheme.

Overview of the Medium-Term Management Plan
https://www.e-nexco.co.jp/en/company/strategy/mid_term/

NEXCO East Group Primary Key Projects and Contributions for SDGs

This diagram maps the SDGs 169 targets to our primary key projects stated in the NEXCO East Group's medium-term management plan (FY2021-2025). A wide range of numbers is assigned to plans, including business activities that contribute to the achievement of each target.

※This diagram does not include other regular initiatives since it links the SDGs 169 targets to our primary key projects stated in the medium-term management plan (FY2021-2025).
※This matrix was prepared based on the Sasaya Matrix, invented by Hidemitsu Sasaya, and his theory of organizing.

★:Main SDGs that NEXCO East Group contributes through our businesses.

		1 ★	2	3 ★	4	5	6	7	8 ★	9 ★	10	11 ★	12	13 ★	14	15	6	17 ★
Basic Policy 1	**Realization of comfortable expressways that are safe and secure and respond to innovations such as autonomous driving**																	
Safety and security	※Implement safety measures utilizing new technology for accident-prone areas and provisional two-lane sections.			3.6						9.1		11.2						
	※Implement structural and non-structural measures in areas with high traffic concentration in Tokyo metropolitan area as well as traffic congestion measures by controlling road pricing.			3.9						9.1		11.6	12.4					
	※Engage in research and technological development leading to minimize traffic regulations, disaster mitigation measures, and accident prevention.			3.6						9.1		11.2 11.b						
	※Adapt to the speed limit increase (120 km /h) for reducing driver's stress.									9.1								
Adapting to innovation	※Formulate a road improvement plan for autonomous driving and try out a project model.								8.2	9.1 9.5								17.17
	※Establish a supporting environment for platooning and double-connected trucks. (including safety measures for merging points to the main routes)								8.2	9.1 9.5								17.17
	※Establish an efficient supply system for refueling and power charging facilities.							7.3		9.1				13.2				
Improving sophistication and efficiency	※Improve road management utilizing new technologies, such as remote monitoring systems, AI, and sensors.								8.2	9.1 9.5				13.1				
	※Improve sophistication and efficiency of toll management, such as remote collection, and work on ETC-dedicated toll gates.			3.3					8.2	9.1								
Basic Policy 2	**Dramatic improvement in reliability of expressway infrastructure against aging and disasters**																	
Anti-aging measures	※Establish and expand SMH (Smart Maintenance Highway), along with increasing the applicable areas, as well as improving the sophistication of maintenance work and productivity.								8.2	9.1 9.5								17.17
	※Implement anti-aging measures and full-scale preventive maintenance for healthy assets.								8.4	9.1		11.2	12.2					
	※Reduce the number of vehicles violating Vehicle Restriction Ordinance and improve the rate of bridge soundness by optimizing large vehicles on the road.									9.1							16.3	
	※Develop technical standards for promoting renewal projects.								8.2	9.1 9.5								
Disaster response	※Improve structures' seismic performance, establish disaster control bases, enhance road control center functions, and improve the organization's disaster response capability.									9.1		11.5 11.b		13.1 13.3				
	※Minimize road closures by enhancing functions and optimizing standards as measures against natural hazard risks of severe winds and floods.									9.1		11.5 11.b		13.1 13.3				
	※Minimize the risk of road closures and reduce the occurrence of immobilized vehicles due to road closures during winter by enhancing countermeasures against heavy snow and building an advanced and efficient snow and ice control system.								8.2	9.1 9.5		11.5 11.b		13.1 13.3				17.17
	※Accelerate disaster response by creating a database of disaster recovery cases.									9.1		11.5 11.b		13.1 13.3				
Use and development of new technologies	※Utilize and expand new expressway-related technologies such as RZS (Road Zipper System).			3.6					8.2 8.8	9.1		11.2						
Basic Policy 3	**Enhancement of Network Functions by Improving and Reinforcing Expressways and Promoting Four Lanes**																	
Enhancement of network functions	※Consider enhancing expressway network centered around the Three Ring Expressways of the National Capital Region and promote road works while ensuring the safety of construction.			3.8					8.9	9.1		11.2 11.a						
	※Carry out planned four-laning and additional lane projects (including Doto Expressway, Akita Expressway, Ban-Etsu Expressway, Joban Expressway, and Ken-O Expressway).			3.8					8.9	9.1		11.2 11.a						
	※Build new SA/PA commercial facilities in collaboration with rest facility development (such as Bando PA and Sanbu PA).								8.9	9.1		11.2 11.a						
	※Enhance access to regions through Smart Interchanges (such as Osarushi, Sugo, Yamagata PA, Hasuda, Miyoshi, and Ozumi).			3.8					8.9	9.1		11.2 11.a						
Expressway maintenance with new technologies	※Promote i-Construction and collaboration with SMH and improve construction management efficiency and safety management by AI/IoT technologies.								8.2 8.4	9.1 9.5			12.2					
	※Engage in research and technological development of highly durable pavement repair technology.								8.2	9.1 9.5								
Basic Policy 4	**Pursuit of usability based on various customer needs**																	
Comfortable and convenient	※Enhance and expand service functions of SA/PA commercial facilities that can respond to changes in customer attributes and lifestyles.		2.1				6.2		8.9	9.1	10.2	11.2 11.7 11.a						
	※Implement measures to alleviate congestion at rest facilities and provide real-time parking availability information and comfortable rest space.									9.1		11.2 11.7						
	※Improve the sophistication of providing real-time information in the event of a disaster or traffic disruption.			3.6					8.2	9.1		11.2 11.6						
	※Respond to flexible pricing by developing a new toll system.								8.2	9.1		11.2						
Commit to local communities	※Utilize expressways to enhance local cooperation and to create new added value.									9.1								17.16 17.17
	※Contribute to local revitalization through tourism promotion in areas visited by various tourists such as inbound tourists.				4.7				8.9									17.17
Basic Policy 5	**Reinforcement of the managerial capability in the post-Covid-19**																	
Reinforce managerial capability	※Support SDGs for creating a sustainable society.																	
	※Operate strong group management that can respond to the pandemic.									9.1							16.7	
	※Engage in sustainable international cooperation using technological capability and expertise.				4.4					9.1 9.a								17.16 17.17
	※Provide training for our Group employee's skill development as well as human resource development.				4.4	5.1			8.5		10.2							
	※Create a revenue base that can respond to changes in the social environment in SA/PA businesses.								8.2									
	※Establish a business that can become a new primary revenue source through external alliances.								8.2									17.17
	※Continue to develop the business in India and promote consulting and advisory services.	1.5	2.1		4.4				8.1	9.1 9.a								17.16
	※Consider and try out new sustainable overseas businesses.				4.4				8.1	9.1 9.a								17.16
Environmental conservation	※Actively utilize low fuel consumption and low emission equipment and minimize energy consumption.			3.9				7.2 7.3		9.4		11.6	12.2 12.5	13.2				
	※Support the environmental management system (ISO14001) based on environmental policies, such as Net-Zero Emissions by 2050, as well as continue to meet the certification requirements.			3.9			6.3	7.2 7.3		9.4		11.6	12.2 12.4 12.5	13.2	14.1	15.1		
Basic Policy 6	**Creating a work style that responds to a new lifestyle and in which everyone can enjoy working**																	
Work Efficiency	※Digitalize all work processes, convert to a work style using smart devices, and create an environment suitable for a new work style.								8.2 8.5									
	※Improve work efficiency about current methods of putting seals, giving approvals, and storing documents and support new work styles, such as telework.								8.2 8.5									
	※Promote "Work Style Reform" by implementing a new procurement management system, reviewing the current procurement flow, and implementing digital transformation.								8.2 8.5									
Work environment where employees can enjoy working	※Reduce annual total actual working hours by reducing long work hours and further promote taking annual leave.			3.4		5.5			8.5									
	※Promote occupational safety and health by further raising safety awareness and taking initiatives to reduce construction accidents.				4.4				8.8									

Feature Story

NEXCO East Group's efforts toward a future society

We are steadily moving projects forward and coordinating the course of action to provide advanced mobility services that can respond to changes in the social environment. Our intention is to sustainably fulfill the expected role of expressways, such as responding to increasingly severe and frequent natural disasters and the aging infrastructure, as well as enhancing the road network functions.
NEXCO East Group will continue to work toward a future society through business and human resource development by building new partnerships.

01

Toward Disaster Prevention, Disaster Mitigation, and National Land Resilience

- To support society through expressways, always and in the future -

Measures for disaster prevention and mitigation

◎ Building disaster-resilient roads

We are promoting various measures to build disaster-resilient roads to restore functions promptly in the event of a large-scale earthquake. Those measures include the installation of fail-safe drop-off prevention structures, bridge collapse prevention structures, lateral displacement restraining structures, seismic retrofitting with reinforcement of bridge piers and bearings, and embankment erosion control to prevent it from collapsing.

◎ Enhancing cooperation with related organizations

Disaster response requires not only structural but also non-structural cooperation with related organizations. We have been conducting joint drills with associated organizations, such as the police and fire departments, in order to secure emergency traffic routes and support recovery and reconstruction efforts in the impacted areas in the event of a large-scale disaster. In addition, we have signed disaster cooperation agreements with individual infrastructure companies to strengthen cooperation further.

◎Early recovery from disasters

(A case of repair efforts following a cut slope failure)

On July 3, 2021, heavy rainfall caused a cut slope failure which spilled soil over the ramp, and Zushi IC on the Yokohama-Yokosuka Expressway was closed. The safety of the residents was our priority since there was a residential area above the cut slope. We carefully removed the debris with real-time monitoring using observation devices. The next day, an emergency response route was secured, and Izu IC resumed operation on September 30, 2021.

(A case of restoration activities after an earthquake off the coast of Fukushima Prefecture.)

An earthquake with a maximum seismic intensity of 6 struck off the coast of Fukushima Prefecture in the middle of the night on March 16, 2022. It caused various damage to the Joban Expressway and Tohoku Expressway, including road cracks, drop-offs, and damaged bridge expansion and contraction devices. Approximately 830 ㎞ of the expressway were closed immediately after the earthquake. We promptly made emergency repairs to the damaged paved surfaces. All closed sections of the Tohoku Expressway were opened at 15:30 on March 17, and the closure of the whole Joban Expressway was lifted at 12:00 on March 18.

[Building disaster-resilient roads]

Before pier reinforcement

After pier reinforcement

[Enhancing cooperation with related organizations]

Emergency response drill performed by disaster prevention helicopter (Outside of Shisui PA)

Cooperation drill with a mobile telecommunication provider

[Early recovery from disasters]

Zushi IC on the Yokohama-Yokosuka Expressway after the cut slope failure caused by heavy rain (left) and after resuming service (right)

Immediately after the earthquake off the coast of Fukushima Prefecture
(Longitudinal and transverse cracks in the paved surface of the Tohoku Expressway)

The emergency restoration was completed within approximately 16 hours after the disaster.

Promoting the Expressway Renewal Project

◎ **Current state of aging infrastructure**

The rate of over 50-year-old expressways managed by NEXCO East Group will reach 20% by 2030 and exceed 70% by 2050.

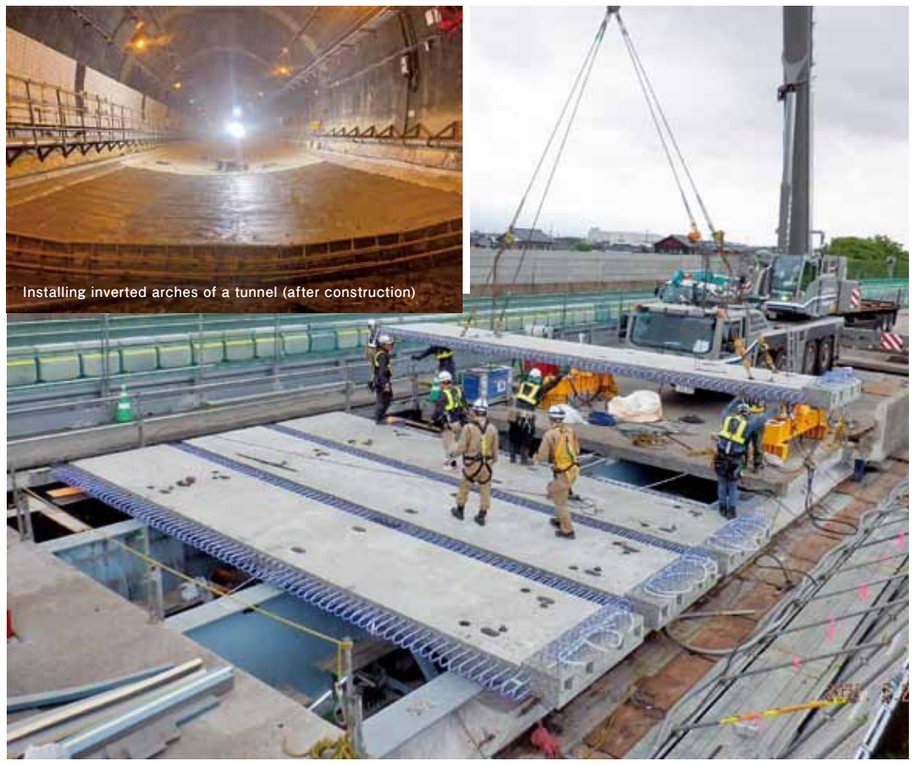
The leading causes of deterioration are the increase in heavy vehicle traffic and the use of deicing salts. Road structures such as bridges and tunnels are in a state of deterioration, showing signs of notable deformation.

◎ **Status of business promotion**

We were approved for the renewal project by the Minister of Land, Infrastructure, Transport and Tourism on March 25, 2015, based on the Act on Special Measures Concerning Road Construction and Improvement. Thus, we started a large-scale renewal and repair project on road structures in FY2015 to fulfill our role as Japan's main artery in supporting social foundations, such as economy, society, medical care, and disaster prevention.

We have been emphasizing public relations by purposely using the name "Expressway Renewal Project" and its logo across all the expressway companies in order to help customers understand the need for this significant restoration and repair work.

The "Expressway Renewal Project" has focused on routes with relatively low traffic volumes so far; however, we started replacing bridge deck slabs of Kamariya Daini Viaduct on the Yokohama-Yokosuka Expressway. This project will be fully implemented in the Tokyo metropolitan area in the near future. Although we have been taking measures against traffic congestion and safety, construction work that require major traffic control, such as road closures and two-lane traffic, is expected to increase in various regions. We will continue to strive to minimize this project's impact on our customers by employing flexible traffic operation with new technologies and a movable barrier system (Road Zipper System).



Installing inverted arches of a tunnel (after construction)

Replacing bridge deck slabs

Construction details of the Expressway Renewal Project

Replacing bridge deck slabs[*1]

Replace existing deck slabs with concrete slabs of high durability.

*1 Deck slab: A structural component that directly supports a vehicle passing through a bridge and transmits the load to the girders.

Example of bridge deck slab replacement work

Applying waterproofing membranes to the deck slabs

Apply high-performance waterproofing membranes to prevent deterioration of the concrete slabs.

Reinforcing girders

Add reinforcements to the girders to increase durability.

Installing inverted arches[*2]

Install inverted arches to improve the stability of the structure of the tunnels experiencing excessive force.

*2 Inverted arch: A semi-circular-shaped concrete support is installed underneath the road surface to prevent deformation by making the shape of the tunnel circular to distribute stress.

Image of countermeasure construction

Installing ground anchors[*3]

Install high anti-corrosive ground anchors to ensure the long-term stability of the cut slope area.

*3 Ground anchor: Stabilizes the deforming force of a cut slope by driving high-strength steel rods into the slope.

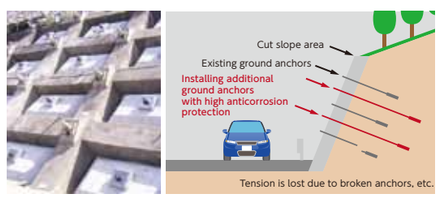


Image of countermeasure construction

For more information on the Expressway Renewal Project: https://www.e-nexco.co.jp/en/renewal/

Building a Disaster-Resilient Expressway Network

We are enhancing the expressway network function by eliminating missing links on expressways and converting provisional two-lane sections to four lanes in response to increasingly severe and frequent natural disasters. Here you can find information on expressway network development centered around the Three Ring Expressways of the capital region. For other sections, please refer to P.34.

◎ **Eliminating missing links**

In the Tokyo metropolitan area, a section of the Ken-O Expressway from Sakai-Kokage and Tsukuba-Chuo ICs was opened in 2017, connecting the Tomei and Higashi-Kanto Expressways. Also, a section between Misato-Minami IC and Koya Junction on the Tokyo-Gaikan Expressway was opened in 2018, connecting the Kan-etsu Expressway and Higashi-Kanto Expressway.

We are currently working on the following sections in order to eliminate missing links: Between Chuo JCT and Oizumi JCT on the Gaikan Expressway, Kamariya JCT and Totsuka IC, Sakae IC/JCT and Fujisawa IC, and Taiei JCT and Matsuo-Yokoshiba IC on the Ken-O Expressway. It is expected to improve time reliability, stimulate local economies, and serve as emergency transportation routes in the event of a disaster.

◎ **Four-laning of provisional two-lane sections**

A carefully planned four-lane construction is being implemented based on time reliability, accident prevention, and network substitutability.

We are enhancing the expressway network functions by promoting four-lane construction in the Tokyo metropolitan area, such as the section between Kuki-Shiraoka JCT and Taiei JCT on the Ken-O Expressway.

■ Yokohama Kanjo-Minami Expressway

The Yokohama Kanjo-Minami Expressway is part of the Metropolitan Inter-City Expressway (Ken-O Expressway). It is a motorway with a total length of approximately 8.9 ㎞, connecting Kamariya JCT on the Yokohama-Yokosuka Expressway and the National Route 1. NEXCO East is currently working on this project jointly with the Ministry of Land, Infrastructure, Transport and Tourism.

The development of the Yokohama Kanjo-Minami Expressway is expected to improve logistics efficiency by reducing travel time between the Yokohama Port and the inner capital region while improving punctuality. It is expected to bring economic benefits such as inter-regional exchanges and business expansion along the route.

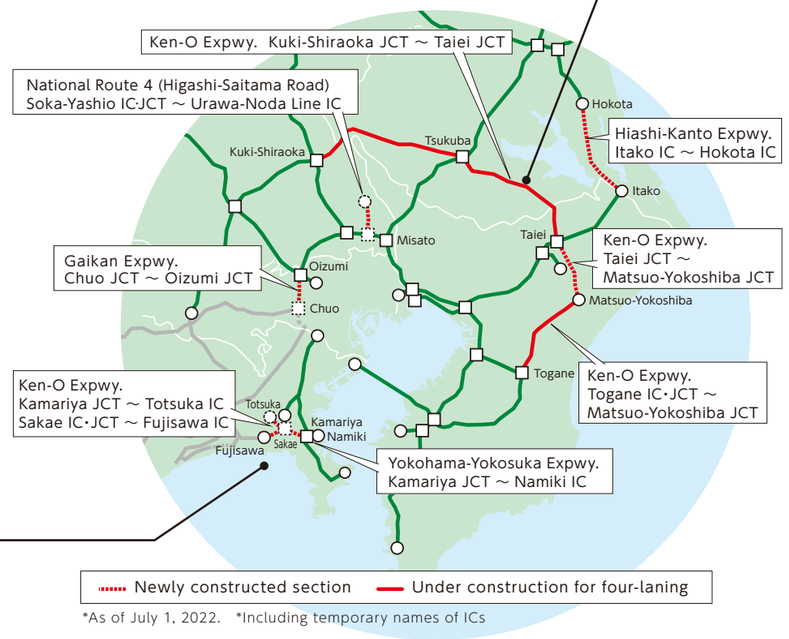
In addition, it is intended to serve as an emergency transportation route and a detour or alternative transportation route when roads are cut off during a disaster.

■ Ken-O Expressway (between Kuki-Shiraoka JCT and Taiei JCT)

Metropolitan Inter-City Expressway (Ken-O Expressway) is an approximately 300 ㎞ long highway connecting 40 to 60 ㎞ from the city center in a loop.

NEXCO East is currently working with the Ministry of Land, Infrastructure, Transport and Tourism on the four-lane project of approximately 92 ㎞ between Kuki-Shiraoka JCT and Taiei JCT.

It will facilitate smooth traffic flow and reduce the risk of road closures, which will result in contributing to the revitalization of local economies by further improving the business sites through more efficient logistics.



*As of July 1, 2022. *Including temporary names of ICs

02

Promoting the Vision (Concept) of the Next Generation Expressway That Accelerates the Realization of an Autonomous Driving Society

We formulated the concept, "Next Generation Expressway That Accelerates the Realization of Autonomous Driving Society" (hereinafter referred to as the "Concept") on April 28, 2021, seeking to provide new mobility services in order to enhance expressway functions and services as well as solve social issues, and launched the primary projects which consist of 31 components to realize the vision of the next generation expressway.

[Image of the future goal, "primary projects"]

◎ Overview of 31 primary projects

	Project Names	Overview
1	Next Generation Highway Radio	Provide road and traffic condition information on the direction of travel based on the driving location.
2	Snowplow Operation Support System	Support snowplows using the quasi-zenith satellite.
3	Anomaly Detection Using Probe Data	Identify anomalies early using probe data collected from vehicles.
4	Traffic Demand Control	Fluctuate toll rates based on traffic conditions.
5	High Capacity Communication Facilities	Establish communication facilities to collect and distribute various data.
6	Advanced Traffic Prediction	Provide highly accurate traffic prediction using AI and other technologies.
7	Merging Assistance for Autonomous Vehicles	Develop a system that shares information on vehicles traveling on the main routes with merging vehicles to support and facilitate smooth merging.
8	Real-Time Monitoring System of the Entire Routes	Monitor expressway conditions continuously using cameras.
9	Drone Patrol	Inspect traffic and road conditions using drones.
10	Advanced Overloaded Vehicle Monitoring	Enhance surveillance and patrol of overloaded vehicles using digital technology.
11	Parking for Large Vehicles	Establish parking areas for oversized vehicles.
12	Reserved Parking Space	Install reservable parking spaces at SAs and PAs.

PR of the Concept

● Creating nickname and logo

We have created the nickname "moVision" and a logo to make the concept more widely known to the public, along with the consideration and promotion to accomplish it.

The nickname is a coined word combining "Mobility" and "Vision," and the logo represents a path toward the future.

● Creating an animation

We have created an animation, "203X Next Generation Expressway," to explain the concept.

You can see the animation here.
https://www.e-nexco.co.jp/activity/safety/future/

[Logo and Animation (excerpts)]

moVision™

	Project Names	Overview
13	Smart Grid	Transform an expressway electrical grid into a smart grid.
14	Innovative Mobility Services	Establish mobility hubs where people can transfer to other modes of transportation.
15	Next-Generation Fuel Service Stations	Install wireless EV charging stations and hydrogen refueling stations.
16	Signs for Autonomous Driving	Install signs compatible with automated driving recognition technologies.
17	Conversion of Idle Facilities Into Compact Parking Areas	Convert currently unused facilities into parking areas.
18	Logistic Mobility as a Service (MaaS)	Establish logistics hubs as bases for double trailer trucks and forming and separating platooning.
19	Self-Driving Car Lanes	Install lanes dedicated to autonomous and platooning vehicles.
20	Content Delivery	Deliver content that can be enjoyed in a car during automated driving.
21	Automated Inspection Vehicles	Inspect expressways efficiently using automated inspection vehicles.
22	EV Charging While Moving	Install wireless EV charging lanes so that electric vehicles can be charged while in motion.
23	Valet Parking	Develop valet parking areas where vehicles automatically drive to and park themselves in designated parking spaces.
24	Disaster Response Enhancement	Identify natural disaster information early using meteorological observation data and satellite images.
25	Operation Management Based on Lane and Vehicle Types	Enhance operation management by dedicating lanes to certain vehicle types.
26	Next-Generation Billing System	Implement a next-generation billing system that detects travel routes and calculates toll charges automatically.
27	Maintenance and Repair Automation	Implement automated expressway maintenance and repair vehicles.
28	Next-Generation Traffic Rules	Implement traffic rules for autonomous vehicles.
29	Data Coordination	Coordinate collected data on expressways with external data and enhance information provision.
30	Automated Snowplow Control	Remove snow using automated driving.
31	Optimization of Road Structure	Streamline road structure by improving traffic capacity.

03

Streamline road structure by improving traffic capacity

- Business and human resource developments beyond industry boundaries -

Established "Drive Plaza Innovation Lab"

- The first recruitment-based accelerator program as an expressway company -

"Drive Plaza Innovation Lab" was established in July 2021 to further promote open innovation and new initiatives with various businesses, including startup companies. We will create businesses that will realize next-generation expressway services, revitalize local communities, and solve social issues while working with companies with new technologies and service ideas to verify technologies and business models. In addition, we aim to make the "Drive Plaza Innovation Lab" serve as a place to build a "challenge mindset" for the entire NEXCO East Group.

[Implement diverse initiatives with co-creating companies]

Concierge guide using 3DCG avatars for contactless services
(Moriya SA Outbound, Joban Expwy.)

Digital Frontier Inc.

Customer service by a 3DCG avatar

Concierge remotely operating the avatar

Consideration of a plan to encourage people to visit the Tohoku region through an app that identifies and locates an area that may appeal to listeners based on their taste in music

Placy Co., Ltd.

Discussion by employees in their 20s from both companies

Collision avoidance test by automated drone control
Minamisoma-Kashima SA on the Joban Expwy. (adjacent parking lot)

FaroStar Inc.

The back right drone automatically avoids another drone (front left).

Jointly Established [Sendai Graduate School or Project Design]

- Industry-academia co-creation for human resources development for the sustainable revitalization of the Tohoku region -

On August 2, 2021, we concluded a "Basic Agreement on Mutual Cooperation for Human Resource Development and Local Revitalization" with the Graduate School of Project Design (Advanced Academic Agency; Head Office: Minato-ku, Tokyo; President: Risa Tanaka). Then, "Sendai Graduate School of Project Design" was jointly founded in April 2022.

NEXCO East has adopted "Supporting the Development of Local Communities and the Improvement of Quality of Life" as our group management principles and "Creating Value in Connecting to Contribute to Local Development" as group management principles. We have identified the medium-term management plan as "Time to Contribute to Achieve the SDGs and to Transform Toward a New Future Society" and have adopted a policy to revitalize local communities and enhance human resource development. Primarily, we have strong ties with local communities in the Tohoku region through our reconstruction support following the Great East Japan Earthquake. We recognize the region's declining birthrate, aging population, and depopulation are serious issues.

Meanwhile, our philosophies and objectives are matched to those of the Graduate School of Project Design. We signed a "Basic Agreement to Revitalize Human Resources and Create New Businesses Together." The Graduate School of Project Design conducts practical research on project designs and design plans. It is committed to fostering human resources that will play an essential role in transforming companies, regions, and society through producing project designers.

We will comprehensively utilize the knowledge, experience, and human resources that both parties possess in Miyagi Prefecture and continue to contribute to local revitalization through the development of human resources aspiring to put project designs into practice at the "Sendai Graduate School of Project Design."

Signed the "Basic Agreement on Mutual Cooperation for Human Resource Development and Regional Revitalization"

Classroom instruction

Degree	Master of Project Design
Course Term	Two years
Course Days	Weekday evenings and Saturdays
Admission Period	Every April
Entrance Exams	Application screening, interview, and essay exam
Fees	Admission fee: 100,000 yen / Tuition: 1,600,000 yen (per year)
Location	JR Sendai East Gate Building 7F, 1-1-1, Tsutsujigaoka, Miyagino-ku, Miyagi Sendai 983-8477

※Please visit the following website for grants and other details: **https://www.mpd.ac.jp/en-projectdesign/**

01 Expressways Operation Business

Expressway renewal project / Bridge deck slab replacement work
(Do-o Expwy. Yubari River Bridge)

Striving for Sustainable “Best Ways”

FROM SEO

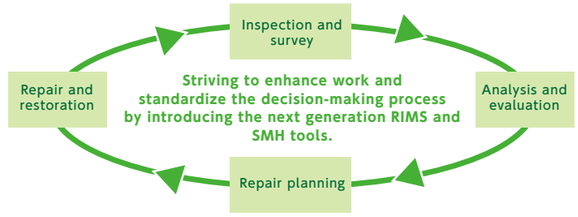
Expressways are major arteries supporting the lives of the people and the economy. Therefore, our mission as an expressways management business is to maintain and improve the safety, security, comfort, and convenience of approximately 4,000 ㎞ of expressways under NEXCO East’s management.
Thus, we diligently conduct the following tasks 24 hours a day, seven days a week: Daily inspections, cleaning, maintenance, repairs of roads, and patrols and traffic control for early detection and prompt response. Provide accurate traffic information to customers and ensure smooth and precise toll collection. We are also responsible for snow and ice control to secure traffic during winter.
In addition, we are working on enhancing those functions by taking various measures. They include traffic safety measures to eliminate car accidents, traffic congestion control focusing on urban areas with significant congestion, and anti-aging measures by repairing and replacing aged structures to extend their service life. Moreover, we are making efforts to prepare our expressways for recently intensifying natural disasters to serve as “Roads of Life” to support disaster relief and recovery efforts. We are also working to achieve next-generation expressways, including the advanced informatization of expressways that respond to the evolution of vehicle technology such as autonomous driving.
We aim to accomplish higher quality and more reliable expressway services by executing those diverse tasks using new materials, new construction methods, and cutting-edge technologies such as ICT, robotics, and AI.

Shigeki Yagi
Managing Director and Senior Executive Officer, Director of Operation Division

The Launch of the Smart Maintenance Highway (SMH) Operation

SMH is a project that improves the productivity of expressway asset management by using the latest technologies such as ICT and robotics to ensure the long-term “safety and security” of expressways.
By introducing SMH tools, we strive to improve functionality, efficiency, and quality of work and increase work productivity by standardizing the decision-making process at every work situation. Consequently, we hope to create an environment where engineers can focus on “tasks requiring technical thinking” to maximize their knowledge and experience.
The first phase of the operation was launched in June 2020. In addition to renewing RIMS*, the foundation of digitized road management information, we have implemented the following systems: BI tools to visualize inspection data, omnidirectional road video imaging system, and pavement work ordering support system (PSS). We have been particularly successful in improving the productivity of decision-making for bridge and pavement repair works within a series of work processes, such as “inspection/survey,” “analysis/evaluation,” repair planning,” and “repair/restoration.”

*RIMS : An acronym for Road Maintenance Information Management System. It is an information system that accumulates and stores data on road maintenance.



※More information on “SMH” :
https://www.e-nexco.co.jp/en/activity/safety/smh/

What is the answer for “engineers x ICT” in terms of SMH?

- Reconstruction of the information infrastructure and visualization and analysis of data without restriction.
- Precise decision-making based on data (numerical basis).
- Prompt decision-making with support tools.
- Standardization of both work procedures and decision-making processes.

○ Free engineers from simple tasks
○ Allow engineers to focus on the roles of an engineer

Day-To-Day Management for Safe Driving

NEXCO East Group conducts daily inspections and cleaning to maintain safe road conditions, along with systematic repairs of the roads to provide safety and security at all times.

Inspecting the bridge

Repairing pavements

Inspecting the power receiving and distribution equipment

Cleaning ventilation tunnel

Cleaning walls of the tunnel

Road Control Center

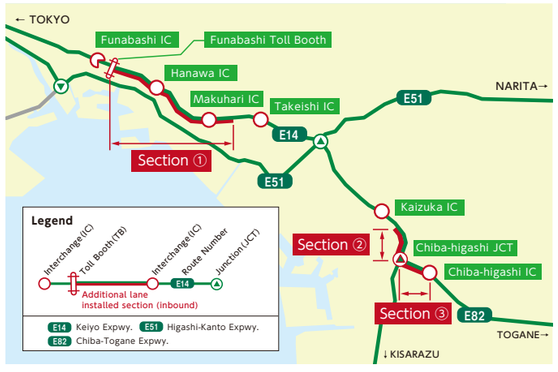
It consists of the "traffic control department" and "facility control department" and strives to provide safe and comfortable expressways. The traffic control department monitors expressway conditions, responds to abnormal incidents, and provides information to customers. The facility control department keeps expressway facilities such as tunnel emergency facilities under constant surveillance.

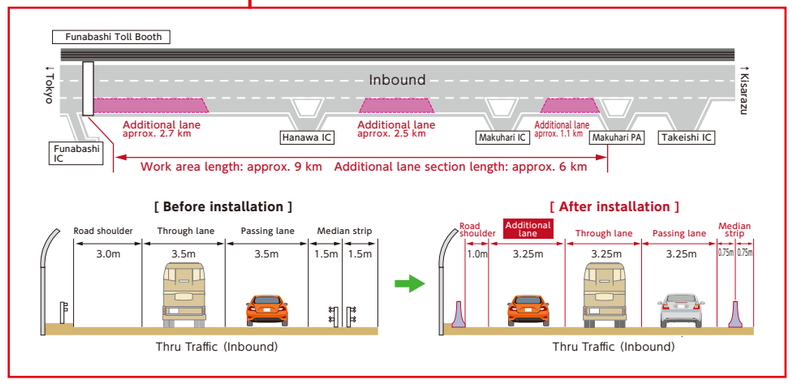
Road Control Center, Kanto Regional Head Office

Initiatives to Eliminate Traffic Congestion

◎ Traffic congestion measures

Traffic congestion measures, such as additional lanes, are being installed to reduce the frequency of traffic jams and improve punctuality in areas with inevitable congestion.





Initiatives to Prevent Traffic Accidents

◎ Traffic Patrol

We patrol expressways regularly or occasionally and collect information on traffic congestion and other traffic conditions, road conditions caused by falling objects, and weather conditions. Also, in case of an abnormal incident, we rush to the scene regardless of time and weather conditions to remove falling objects or respond to accidents. Therefore, daily training is also essential.

◎ Instruction and enforcement against vehicles violating laws and regulations

Laws and regulations specify the maximum vehicle dimensions allowed on the road and hazardous materials allowed to be carried through long tunnels.
Especially, overweight vehicles are strictly enforced at entrance toll booths since they seriously contribute to the deterioration of road structures and can lead to severe accidents.

◎ Traffic safety measures

We analyze past traffic accidents and implement various traffic safety measures to prevent traffic accidents. Those measures include the following: Install arrow boards, reflective tapes for better visibility, leading lane marks, ramble strip marks, and thin layer pavement in order to alert drivers for sharp curves, control speed, and prevent lane deviation.

◎ Wrong-way driving prevention

We are promoting various wrong-way driving prevention measures since wrong-way driving on expressways can lead to serious accidents. These measures include installing rubber poles along the merging areas leading to the main routes to prevent forced turning or reversing, arrow road marks/signs to show the correct way, and colored pavement markings for each direction at flat intersections of Y-shaped interchanges.

◎ Head-on collision prevention measures in provisional two-lane sections

Outbound and inbound lanes of provisional two-lane sections are divided by rubber poles on expressways. However, wire ropes have been installed in place of rubber poles in the earthwork sections and small and medium bridge sections since April 2017 to prevent head-on collisions. No fatalities or injuries caused by accidents where vehicles are veering into the opposite lane have been recorded in the areas with wire ropes. (As of March 31, 2022)
The “5th Technical Review Committee on Measures to Prevent Head-on Collisions on Expressways” was held on June 8, 2021. Based on their results, center pipe dividers and concrete block dividers have been installed experimentally for long bridges where wire ropes are not applicable.

On-site response

Regulation enforcement training

Enforcement action (Pulling over vehicles)

Enforcement action (Measuring vehicle length)

The number of fallen objects: approx. **97,300** cases

Traffic control patrol distance: approx. **64,400** ㎞ /day (approximately the same as going around the earth 1.5 times daily)
(the actual number for 2021)

Leading lane marks (Broken lines)

Thin layer pavement (Pavement with yellow stripes)

Countermeasures against wrong-way driving at ramp merging section

Center pipe divider

Concrete block divider

Pasar Hasuda (Tohoku Expwy. Hasuda SA(Inbound))

02 Service Area Business

Providing More Convenient and Comfortable Service

FROM SEO

The Service Area Business Division operates commercial facilities, such as “Pasar” and “YASMOCCA” in rest areas (SA and PA) on expressways, as well as expressway-related businesses, including asset utilization business.
In response to the coronavirus outbreak, we are fully committed to taking thorough measures to prevent infection in the facilities at our rest areas. We are also enhancing and expanding service functions that correspond to new lifestyles through planned new construction of commercial facilities and expansion, renovation, and renewal of aging facilities.
We are also actively engaged in various businesses, such as a hotel business that effectively utilizes management resources, a travel business that employs local tourism resources and infrastructure, and an accelerator program to promote open innovation and new initiatives.
We will continue to pursue usability based on customer needs and strive to provide services that respond to new technologies and changes in the social environment for our customers’ safety, security, comfort, and convenience.

Hideo Yoshimi
Senior Executive Officer, Director of Service Area / New Business Division

Developing “Unique, Enticing, Pleasant” Areas

◎ Development of “Pasar”

“Pasar” is a flagship brand of NEXCO East’s commercial facilities, also known as “Michi-Naka (within expressways)” commercial facility, and it strives to provide a wide variety of services, including the hottest shops in town and local foods that satisfy foodies. We have so far opened seven Pasars in Greater Tokyo, including the Pasar Makuhari (outbound) on the Keiyo Expressway.

Pasar List of locations

[Tohoku Expressway]
Hanyu PA Outbound / Hasuda SA Inbound
[Kan-Etsu Expressway]
Miyoshi PA Inbound
[Joban Expressway]
Moriya SA Inbound / Moriya SA Outbound
[Keiyo Expressway]
Makuhari PA Inbound / Makuhari PA Outbound

◎ Pasar

This name was created by putting together the following letters: PA from a parking area, SA from a service area, and R from relaxation. The idea is to offer our customers “a place to relax and enjoy, in the middle of their journey.”


Pasar (Kan-Etsu Expwy. Miyoshi PA (Inbound))

◎ Developing “Dramatic” Areas

Our SAs and PAs function as a base for local communities. We are producing “dramatic” areas to add spice to an individual journey scene by bringing together all kinds of “local tastes and fun of traveling.” We offer local ambiance in various forms, including surrounding scenery, food, and souvenirs.

Tohoku Expwy. Kunimi SA (Inbound)


Tohoku Expwy. Kunimi SA (Outbound)

Developing “Basic Service” Areas

We provide basic services (food, souvenirs, etc.) in small-to-medium-sized rest areas as “Basic Service” areas. We also have “YASMOCCA” for casual stops in between driving, as well as “Convenience Store” areas offering a wide variety of products for people on the go.

◎ YASMOCCA

This brand was developed in a basic area as a store to offer customers “a breather” in between driving to their destinations. “YASMOCCA,” meaning “Let’s take a break” in Japanese, strives to become a place for a quick chill-out for on-the-go drivers.

Its logo mark is designed based on the image of a car with a “smile” of our customers and a sense of “safety.”

◎ Private Brand

We sell our private brand products of beverages and rice crackers, including “Nagomi no Spring Water (Soothing Spring Water)” collected in Azumino, Shinshu, at the foot of the Northern Japan Alps.

” Nagomi no Spring Water” and “Nagomi no Carbonated Water” are available in vending machines at SAs and PAs. “Ocha (green tea)” and “Nureyaki-sen Kyusuke (rice crackers)” are available at YASMOCCA stores.

YASMOCCA (Tohoku Expwy. Yaita-kita PA (Inbound))

Convenience Store Area (Kan-Etsu Expwy. Yorii PA (Outbound))

Natural water “Nagomi” & Carbonated water

Geen tea

“Nureyaki-sen Kyusuke” (Rrice cracker)

Service Area Business

“Unique, Enticing, Pleasant” Area

Pasar — 7 locations

Dramatic Area — 19 locations

“Basic Service” Area

Basic Area* — 118 locations

Convenience Store Area — 48 locations

Vending Machine Area — 127 locations

* Including 40 locations of YASMOCCA

(As of July 1, 2022)

V O I C E

Shisui PA is located close to Narita Airport, attracting many foreign tourists. We strive to meet the various needs of our customers by providing a comfortable and convenient space tailored to each customer with a spirit of hospitality. We are attending English conversation schools and having translation tools ready, so we will be prepared to provide smooth services to foreign tourists when infectious diseases are under control and people return like before. All of our concierges will continue to strive to satisfy our customers from around the world.

Eri Okii
Chief Concierge,
Information
Shisui PA

Promoting Convenience

◎ Accessibility and Barrier-Free

For comfortable use of rest areas, we incorporate universal design and make our facilities barrier-free by eliminating steps and installing disability parking spaces, wheelchairs, and writing boards for deaf and hard-of-hearing persons.

As for washrooms, we have been replacing traditional Japanese-style toilets with western-style toilets. Also, large universal restrooms with baby protection seats and small sinks, kid’s toilets, and a stoma-friendly environment (installing sinks and small basins for ostomates) are installed.

◎ Space for Infants and Toddlers

Many SAs and PAs are equipped with baby change stations, nursing rooms, and heated water dispensers for baby formula, for comfortable use of expressways by families with small children.

Even smaller-size facilities have baby care rooms utilizing available small space.

◎ Electric Vehicle Quick-Charging Stations

We have been progressively installing quick-charging stations for customers with electric vehicles, and we currently have 154 locations* installed. We will continue to consider installing more stations based on the usage data of existing ones and various social conditions.

* As of July 1, 2022

◎ Shower Stalls

We have been installing shower stalls in SAs and PAs in order to respond to changes in customer usage and new lifestyles. Currently, shower stalls are installed in eight locations*. We will continue to develop our commercial facilities to further enhance and expand our service functions.

* As of July 1, 2022

Disability parking spaces

Large universal washroom

Kids play area (Tohoku Expwy. Hasuda SA (Inbound))

Coin-operated shower stalls (Kan-Etsu Expwy. Yorii PA (Inbound))

Baby change stations and a nursing room (Tohoku Expwy. Hasuda SA (Inbound))

EV quick-charging stations (Keiyo Expwy. Makuhari PA (Inbound))

Four lane Promption on Ken-O Expwy. (Between Kuki-Shiraoka JCT and Satte IC)

Enhancement of Network Functions by Improving and Reinforcing Expressways and Promoting Four Lanes

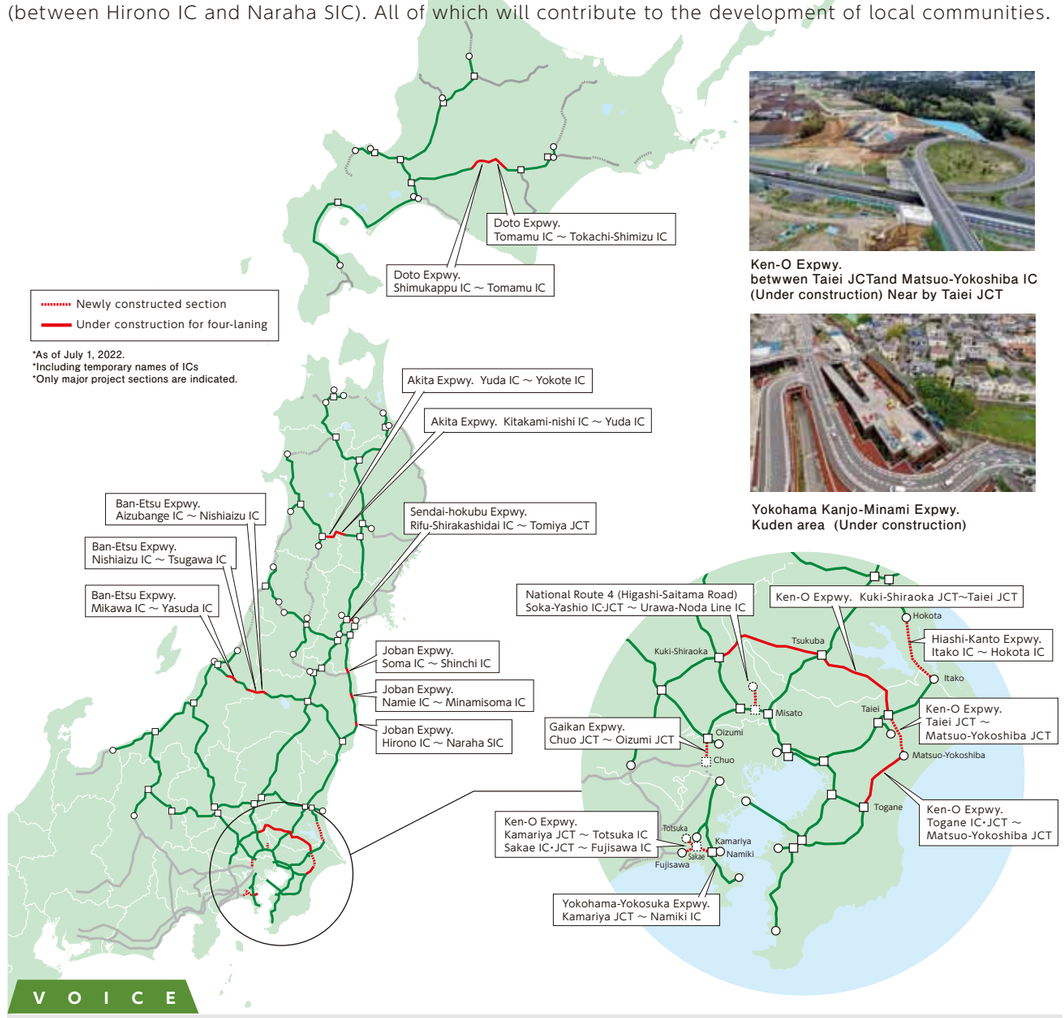
FROM MEO

Our Construction & Technology Division is working to improve the expressway network and further improve its functions.
The development of expressway networks in urban areas has lagged behind in Japan. Although it took a long time since it was planned, the Tokyo-Gaikan Expressway and Ken-O Expressway have gradually opened to traffic, having a significant effect.
It is expected to make groundbreaking improvements to the surrounding environment along the routes in addition to smooth logistics and travel flow. It is crucial to continue to complete sections currently under construction and planned routes.
Also, we are working on measures to reduce traffic congestion by adding lanes in areas where severe congestion is obstructing smooth traffic flow. We are improving safety and security functions in rural areas by making provisional two-lane sections into four lanes or installing additional lanes so that we can secure traffic routes during disasters, snow, or ice. Moreover, we are establishing smart interchanges in various locations collaborating with local governments to enhance accessibility to expressways in order to stimulate regional revitalization.
ICT and cutting-edge technologies are used for these developments to promote efficient, high-quality, and durable road maintenance and improvement.
Expressways will continue to evolve progressively for the future.

Tomomichi Takahashi
Representative Director and Managing Executive Officer, Assistant of President and Director of Construction Division

Promoting Expressway Network

NEXCO East is working on building the expressway network in the metropolitan and other areas, as well as replacing provisional two lanes with four lanes. Since 2005, we have completed 605 ㎞ of network and 142 ㎞ of four lanes and additional lanes. A section between Iwakichuo IC and Hirono IC on the Joban Expressway became four lanes in June 2021.
We are determined to build approximately 85 ㎞ of network, including the Tokyo-Gaikan Expressway (between Chuo JCT and Oizumi JCT), the Ken-O Expressway (between Kamariya JCT and Totsuka IC, as well as between Sakae IC/JCT and Fujisawa IC). Also, we will carry out approximately 260 ㎞ of four-laning, including the Ken-O Expressway (between Kuki Shiraoka JCT and Taiei JCT) and the Joban Expressway (between Hirono IC and Naraha SIC). All of which will contribute to the development of local communities.



Ken-O Expwy.
betwwen Taiei JCTand Matsuo-Yokoshiba IC
(Under construction) Near by Taiei JCT

Yokohama Kanjo-Minami Expwy.
Kuden area (Under construction)

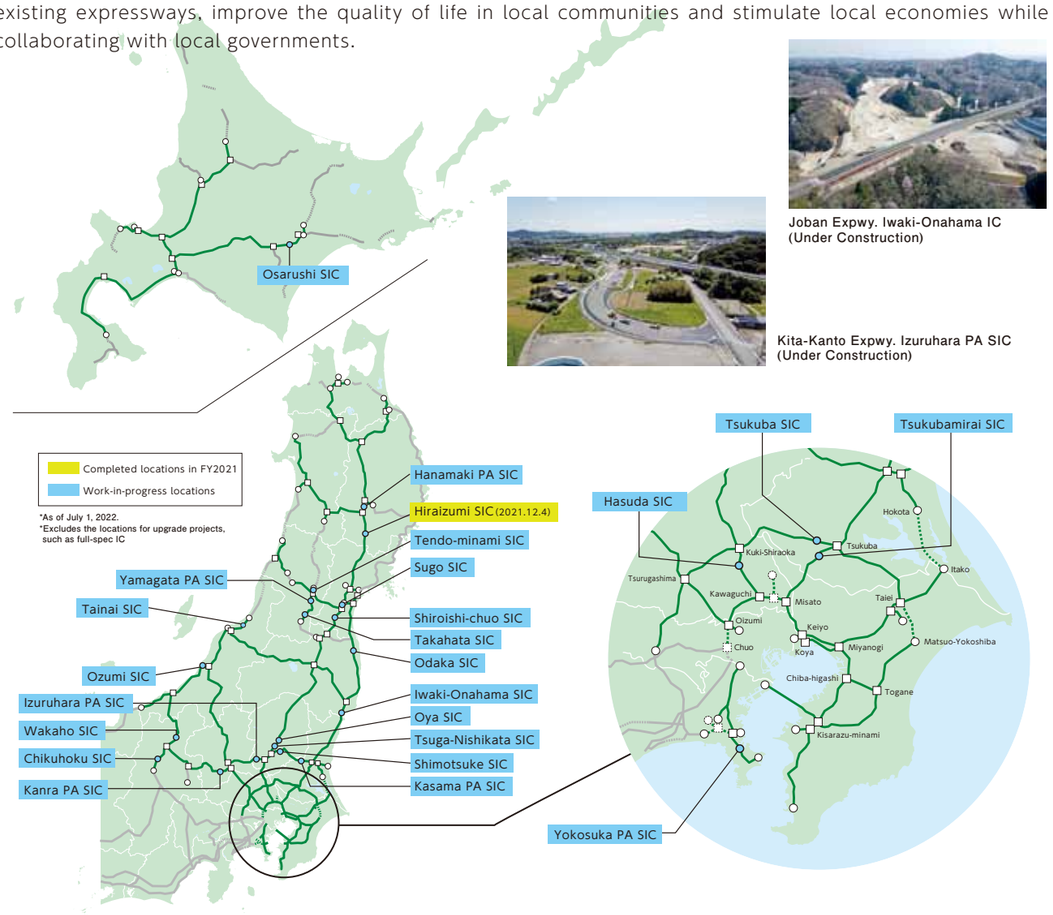
V O I C E

I am in charge of the Yokohama Kanjo-Minami Expressway construction site, which is part of the Ken-O Expressway located in Kanagawa Prefecture.
I am responsible for constructing culverts and retaining walls for approximately 1 ㎞, including Kuden IC. This area is particularly close to residential neighborhoods, among other places along the Yokohama Kanjo-Minami Expressway. Therefore, we are constructing with a focus on safety while holding frequent meetings with local residents to gain their understanding of this project.
Although we face various challenges as the construction progresses, we value daily communication with local residents, related organizations, and construction workers and respond in good faith to resolve issues in order to make steady progress toward the early opening of the Yokohama Kanjo-Minami Expressway.

Yoshihiro Fukuzawa
Manager ofKatsura-Kuden Construction Section
Yokohama Construction Office, Kanto Regional Head Office

Developing Local Revitalization IC and Smart IC

We are engaged in establishing Smart ICs (SICs) and local revitalizing ICs in order to optimize the use of existing expressways, improve the quality of life in local communities and stimulate local economies while collaborating with local governments.



Joban Expwy. Iwaki-Onahama IC
(Under Construction)

Kita-Kanto Expwy. Izuruhara PA SIC
(Under Construction)

Project Overview of Sections Under Construction

Higashi-Kanto Expressway (New Construction)

Higashi-Kanto Expressway Mito Route runs 140 ㎞ from Nerima-ku, Tokyo, via Chiba Prefecture to Mito city, Ibaraki Prefecture. The section between Itako IC and Hokota IC on the Mito route is approximately a 31 ㎞ national expressway from Itako city to Hokota city in Ibaraki Prefecture. NEXCO East is currently working on this new project jointly with the Ministry of Land, Infrastructure, Transport and Tourism.

Higashi-Kanto Expwy.
between Itako IC & Hokota IC

Doto Expressway (Four-lane project)

he Doto Expressway is a national expressway that is part of the Trans-Hokkaido Expressway connecting the central and eastern Hokkaido regions. We obtained a new project permit for approximately 6 ㎞ between Tomamu IC and Tokachi-Shimizu IC in March 2022. We are currently working on four laning of the approximately 47 ㎞ stretch between Shimukappu IC and Tokachi-Shimizu IC.

Doto Expwy.
between Tomamu IC &
Tokachi-Shimizu IC

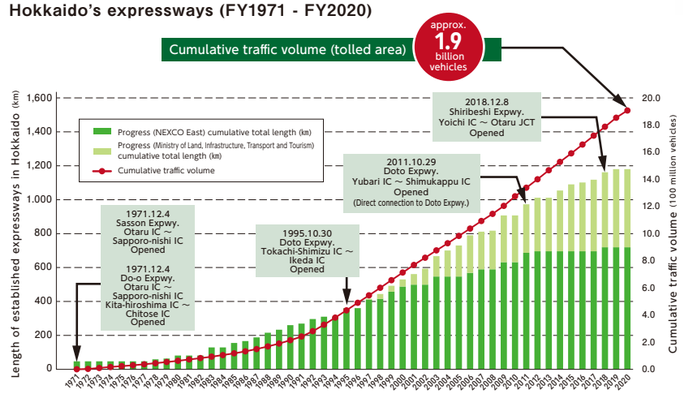
The 50th Anniversary and Impact of Hokkaido's Expressways

◎Established Length and Traffic Volume Trends

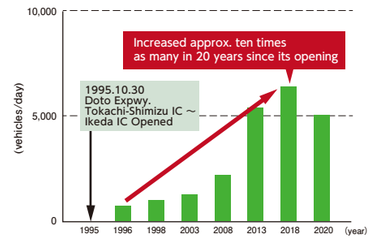
The Sasson Expressway (between Otaru and Sapporo-Nishi ICs) and the Do-O Expressway (between Kitahiroshima and Chitose ICs) were opened in December 1971 to coincide with the 11th Winter Olympics held in Sapporo in 1972. These expressways were the very first expressways in Hokkaido. The current total length of the expressways exceeds 1,180 ㎞ , and the cumulative traffic volume for tolled sections is approximately 1.9 billion vehicles. Developing a network covering the whole of Hokkaido has improved convenience. The traffic volume of the Doto Expressway, in particular, has increased approximately tenfold within the 20 years since its opening.

As of 2021
Opening Length : 1,180.1km

Changes in the established length and cumulative traffic volume of Hokkaido's expressways (FY1971 - FY2020)



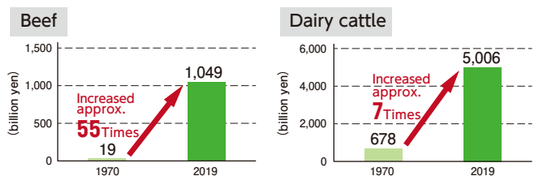
Changes in traffic volume on the Doto Expressway (between Tokachi-Shimizu IC and Memuro IC)



◎ Benefits of Developing Expressways

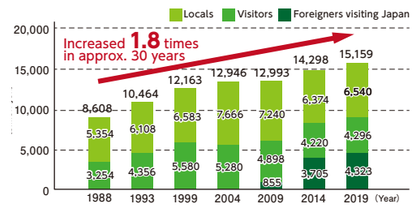
The expressways have dramatically increased the flow of people and goods, including inter-city travel by highway buses and transportation of agricultural, livestock, and fishery products. In addition, they have contributed to revitalizing local economies along the expressways, such as increased tourism spending and expansion of large-scaled commercial facilities and businesses.

Changes in livestock production (beef and dairy cattle) before and after expressways opening



Source: Statistics of Agricultural Income Produced

Changes in tourism spending within Hokkaido Locals

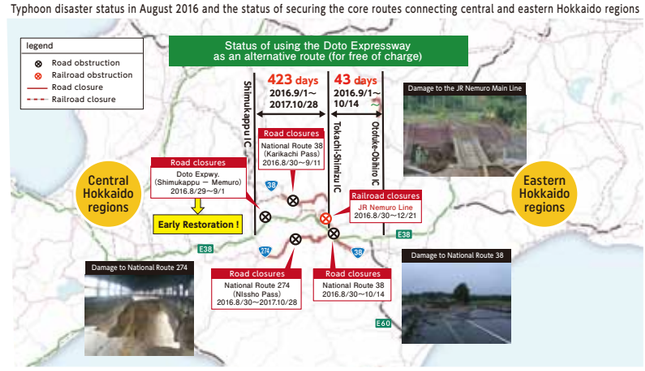


Source: FY2019 Hokkaido Visitor Satisfaction Survey Report (Hokkaido Tourism Organization)

◎ Expressway Contribution to Disaster Prevention and Mitigation

Expressways functioned as primary core and alternative routes while roads and railroads were cut off during the 2016 typhoon disaster, demonstrating their disaster prevention and mitigation effects.
We will continue to promote four-laning and long-term maintenance initiatives of expressways in order to contribute to the realization of a safe and secure society and the development of local economies.

Typhoon disaster status in August 2016 and the status of securing the core routes connecting central and eastern Hokkaido regions



Source: Ministry of Land, Infrastructure, Transport and Tourism data and the Tokachi Mainichi Newspapers

04 Technology Development and Overseas Business

ASNOS (Advanced/Autonomous Snow and ice control Operation System)


Hands-on training using VR

Official launch of road surface condition survey services in India

Pioneering the Future With “Evolved Technology

FROM SEO

It is absolutely essential for us to continue to maintain advanced technologies in various fields and deploy them on-site in order to improve the safety, security, reliability, and functionality of the expressway network. We will strive to enhance expressway functions and improve project efficiency suitable for the coming era. We will also actively promote establishing and revising technical standards, research and technology development, and introducing new technologies, methods, and machinery. Meanwhile, we will engage ourselves in ensuring construction safety.
We will particularly continue to pursue technology development as specified in our “Medium-Term Technological Development and Utilization Plan” (FY2021 - FY2025).
We will strive to achieve development and utilization goals related to preventive maintenance, disaster and snowfall countermeasures, information provision, and safety measures.
In addition, we will promote environmental management that contributes to achieving a sustainable society, overseas business development, international cooperation, and international exchanges by utilizing the technical capabilities and expertise that we have earned.
The cornerstones of technical capability enhancement are research, development, implementation, and improvement of products and techniques, as well as the development of human resources that carry these out. We will improve and enhance the entire company's technical capabilities by the following: training highly specialized engineers, utilizing cutting-edge technologies for research and development, cultivating international perspectives, providing on-site technical support by experts, providing technical training for on-site employees, and raising safety awareness.

Toru Yoshimine
Managing Director and Senior Executive Officer, Director of Technology & International Division

Promoting Research and Technology Development

◎ Autonomous Driving of Rotary Snowblower and Automation of Chute Operation

There are concerns over a shortage of skilled operators due to the aging and shrinking workforce. Therefore, we are developing “autonomous driving*1” and “automation of chute operation*2” using the quasi-zenith satellite system “Michibiki” in order to reduce labor and improve the efficiency of snow and ice control. We will conduct verification testing for snowblower autonomous driving and automated chute operation on expressways managed by Hokkaido Regional Head Office in FY2021 and strive to complete it by the end of FY2022.

*1: It is when a vehicle automatically drives and steers without a driver touching the steering wheel or accelerator while riding the vehicle.
*2: It is mainly to automatically control the angle and direction of the chute accordingly to signs and snow poles on the road shoulders.
*3: Between Iwamizawa IC and Iwamizawa SA on the Do-O Expressway.

System diagram

*The picture shows an image.

Video is now available on NEXCO East's YouTube channel, “E-NEXCO driveplaza.”
Development for Automated Snowblower Using the Quasi-Zenith Satellite System
https://youtu.be/2w-2uNxb460

ASNOS

“ASNOS” is a collective name for NEXCO East's advanced snow and ice control operation system.


Autonomous driving test of a rotary snowblower on the main route

Operation of the chute planned to be automated


Normal direction of the chute


Change the direction of the chute to avoid the sign

◎ Automation of Snowplow Operation

Spraying of anti-icing agents and operating electric sign displays at the back of snow removal vehicles have been automated by a “centralized control system*1” that uses GPS developed in 2018.
We are also working on the technological development for the automation of snowplows using the quasi-zenith satellite, which will allow plow blades to go up and down automatically in required sections like bridge joints, utilizing the quasi-zenith satellite. This system is currently being developed under the management of the Niigata Regional Head Office as the “centralized control system.”

*1: We first register work details, such as spraying antifreeze or displaying appropriate digital signs based on the road structure by linking GPS location information with the antifreeze spray device or digital signage display. This system can assist snow removal work with voice guidance and automatic control when approaching the applicable area using that information.

Centralized control system



Automatic control by connecting to the high-precision positioning information


Testing automated movement of a snowplow blade by letting the snowplow drive at normal work speed to see its blade goes up and down automatically at the virtual bridge joint (red framed area in the photo)

◎ Research on Snow and Ice Control Technology

We are conducting research and technology development using an accelerated corrosion testing apparatus and a temperature and humidity test chamber as an attempt to enhance measures against snow and ice. The temperature and humidity test chamber is a device that reproduces similar conditions as winter roads by controlling the temperature and humidity. We conduct tests and studies on measures against the solidification of antifreeze agents and technologies to remove ice from the road surface. The accelerated corrosion testing apparatus is a device that reproduces the corrosive conditions in a short time by repeating the process of spraying saltwater, drying, and adding moisture. We are using it to test and research repairing materials corroded by the spray of antifreeze agents.

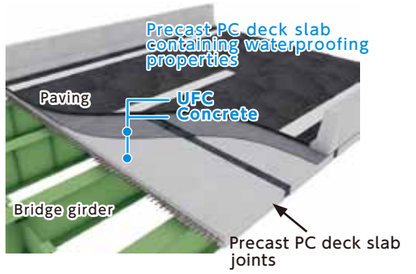
Material durability test using the accelerated corrosion testing device

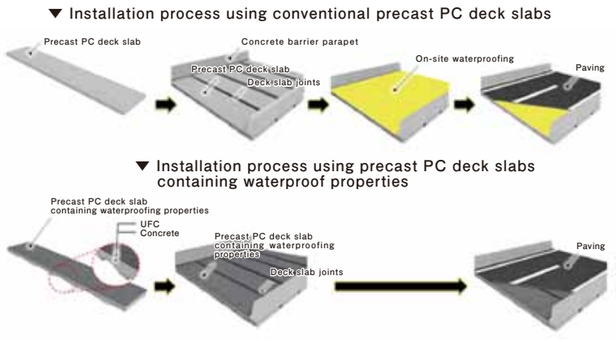
Antifreeze solidification test using the temperature and humidity test chamber

◎ Development of Waterproof Precast Bridge Decks

The Expressway Renewal Project includes on-site waterproofing of bridge deck slabs during the bridge deck replacement work in order to secure the deck's durability. However, this treatment is easily affected by the weather. Thus, we have developed a precast PC deck slab with a top layer of Ultra High Strength Fiber Reinforced Concrete (UFC) containing waterproofing properties. We can now complete jobs with more durable deck slabs within the given time frame by adopting these deck slabs.

Structure of the precast PC deck slab (left) and the installation process (right)





◎ Providing Information on Development Technologies

NEXCO East Group is developing various expressway-related technologies, including snow and ice control and SMH technologies, and offering such information through technical events and mass media.

Animation for future snow and ice technologies, 「Future Image 203X」

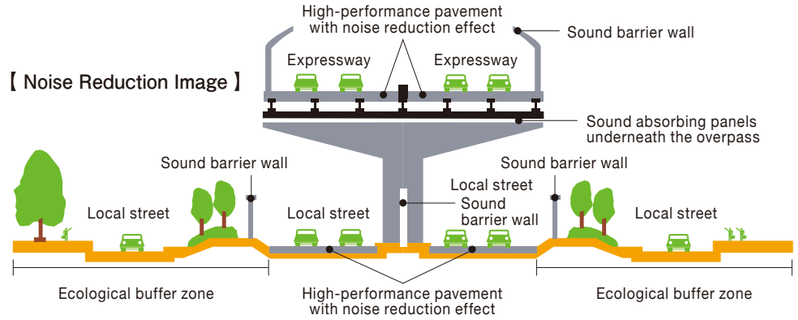
Highway Techno Fair 2021

"Future Image 203X" is available on our website.
https://www.e-nexco.co.jp/company/brand/mov/

Environmental Measures in Expressways

◎ Reducing the Impact on the Living Environment Along Our Roads

We have been taking action to reduce the impact on the living environment along the expressways by installing noise barriers to reduce noise, as well as creating ecological buffer zones. We have so far installed approximately 1,080 ㎞ of noise barriers in total.



Example of Ecological buffer zone

Example of Noise barriers installed

◎ Improving Energy Conservation and Adopting Lighting Fixtures for High Visibility

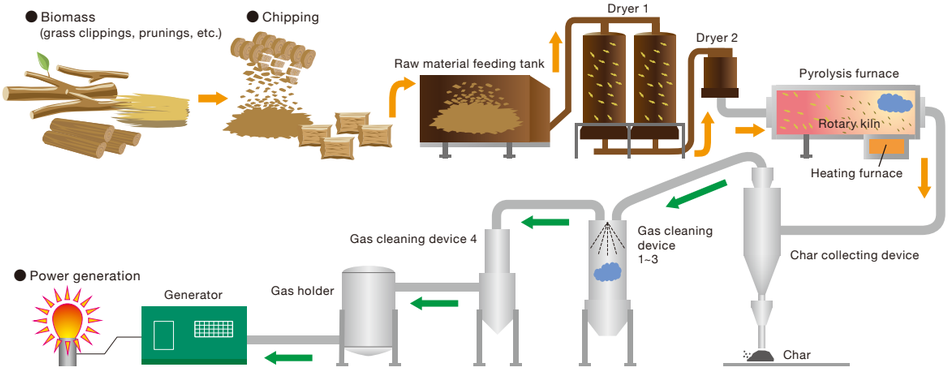
We are successfully improving the visibility inside the tunnels as well as saving energy by switching the tunnel lighting fixtures from conventional "high-pressure sodium lamps" to energy-efficient lighting such as "LED lamps." We have installed LED lamps in 303 tunnels so far, and 17 more locations were added to the list in FY2020. It is estimated that the amount of electricity saved by switching to LED lamps so far is about 38 million kWh per year, reducing 21,000 tons of CO_2 per year. We are also working on a further reduction in energy consumption by installing LED lamps for roadway lighting.

High-pressure sodium lamp　LED lamp

◎ New Challenge for Green Recycling, "Biomass Gasification Power Generation"

Tree planting management work on expressways creates plant resources (biomass) from mowing, tree pruning, and thinning.
For biomass gasification power generation, biomass is heated in a pyrolysis furnace to produce gas. Then, the gas is used as energy to generate electricity, which is currently utilized as a part of the electricity for toll booths.
Carbon (charcoal) is produced as residue when biomass is gasified without direct combustion. The charcoal can be effectively used as a soil conditioner to achieve "carbon negativity."

Biomass Gasification Power Generation



Business Development Overseas Using Our "Technical Capabilities and Expertise"

◎ Starting Operation of "E-NEXCO Eye," a Road Surface Condition Survey Vehicle

We opened our representative office in India in 2009. Then, we founded an overseas subsidiary, "E-NEXCO INDIA PRIVATE LIMITED (ENI)," on November 1, 2019, aiming to develop our overseas business in remarkably growing India. ENI introduces NEXCO East Group's technologies to India, conducts related research, and supports Japanese companies entering the Indian market.
We introduced "E-NEXCO Eye," a road surface condition survey vehicle, to India in FY2021 and began road surface condition survey work, such as measuring cracks, rutting, and IRI (international roughness index), on national roads in December.
E-NEXCO Eye is a locally customized version of equipment we actually use on Japanese expressways, collaborating with a road management company in India. The vehicle was also assembled on site.
Since the demand for advanced pavement management is increasing in India, we will fully develop road surface condition survey services to contribute to helping them formulate optimal repair plans and create safe road space.


ENI currently operates with two Japanese expatriates and two local staff


Road surface condition survey vehicle, E-NEXCO Eye


On-site assembly workers of E-NEXCO Eye

E-NEXCO Eye inspection

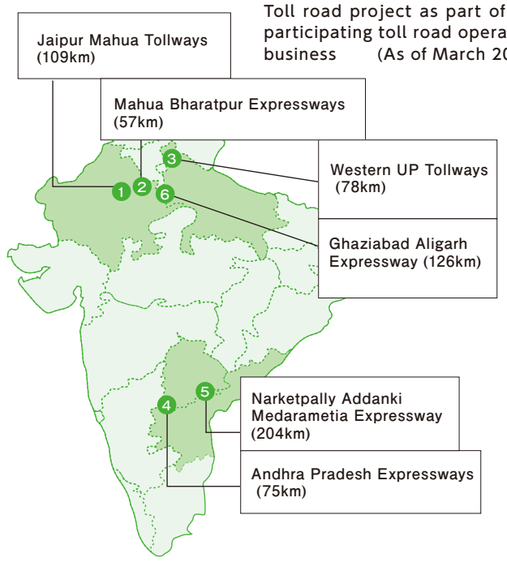

ENI representative (left) explaining E-NEXCO Eye


Training on road surface condition survey


Training on road surface condition analysis

◎ Participating in Indian Road Operation Business

Mitsubishi Corporation, Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN), Japan Expressway International Company Limited (JEXWAY), and NEXCO East joined to form a Japanese consortium of infrastructure. We are now taking part in the toll road operation business of Cube Highways (Cube).
We received an order from this consortium to perform inspection work on our invested roads as a shareholder with expressway expertise. Also, we have signed a technical advisory agreement with Cube for rest facility business and comprehensive road maintenance management. We are providing on-site instruction to introduce technologies to India.
We intend to continue to take advantage of our participation in the road operation business and plan to expand our and Japan's expressway technology to India.



Toll road project as part of the participating toll road operation business (As of March 2022)

◎ Providing ODA Consulting Services

We provide Official Development Assistance (ODA) consulting services to developing countries using our expressway technology and expertise. We promoted capacity-building projects for sustainable mountain road development in India, collaborating with local ministries and agencies. As a result, we contributed to the improvement of technology and capacity of the local expressway business.


Technical instruction in India


Discussion on mountain road technology

◎ International Cooperation

Although some operations have been suspended due to the global pandemic of the novel coronavirus, we dispatch long-term experts on expressway policy, planning, research, construction, and maintenance through Japan International Cooperation Agency (JICA). We also accept road engineers from developing countries and provide training in Japan upon requests of JICA and the Ministry of Land, Infrastructure, Transport and Tourism.


Lecture by JICA expert (left)


JICA expert inspecting a bridge during training in Japan (center)

◎ International Exchange/Conference

We visit ASFiNAG in Austria, with which we have concluded a technical cooperation agreement, and road-related organizations in other countries in order to visit sites and engage in dialogues about road technology. In FY2021, we provided information about our group's technologies and expertise as well as collected information on the world's highway technology by sending employees of NEXCO East and the group companies to international conferences. These included the World Road Association (PIARC) World Winter Service and Road Resilience Congress Calgary, technical seminars held by the Indian Road Congress (IRC), and academic conferences such as the Japan-India Road Meeting.

Participated in Indian WEBINAR as a presenter


Japan-India Road Meeting (held online)

05 For Our Society and Employees

Fulfilling Our Social Responsibility

FROM SEO

Our mission is to provide safe, secure, comfortable, and convenient expressway service 24 hours a day, seven days a week. Providing an environment where our employees can thrive is indispensable since they are responsible for achieving this mission at a higher level.
Therefore, we allow our employees to have a wide range of side jobs, enabling them to gain skills and experience and build careers and personal networks outside the company, leading to their personal growth and revitalization of the company. Meanwhile, we are also expanding opportunities for older employees by raising the retirement age of employees to 65 years old. We jointly opened the “Sendai Graduate School of Project Design” with the Advanced Academic Agency this April. We will create new business opportunities to solve social problems, contribute to local communities, and develop human resources while involving local communities and with our company’s active participation.
We will continue contributing to creating a sustainable society, striving to improve local communities’ quality of life through our expressway business, as well as enhancing our human resource capabilities to flexibly respond to the rapidly changing social environment.

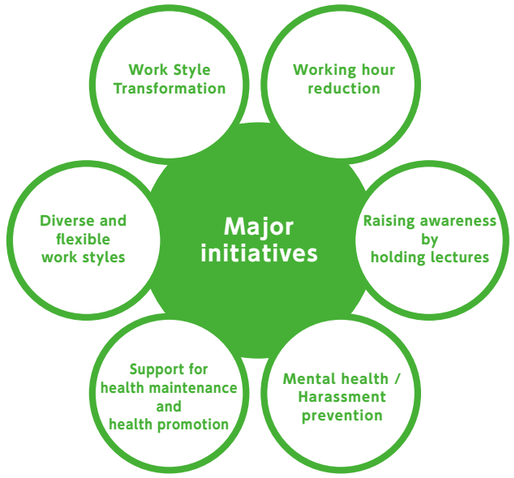
Yutaka Shiina
Managing Director and Senior Executive Officer, Director of General Affairs & Accounting Division

Creating Work Environment Where Each Employee Can Feel “Valued” and “Satisfied”

◎ Promoting Work-Life Balance

NEXCO East Group is striving to enhance the work-life balance of our employees by supporting their health promotion and maintenance. We hope to create a company where each member can comfortably work and feel secure and valued while they live a healthy life.
In addition to annual leave and special leave, we have set up the parental leave system in order to create a comfortable work environment for our employees to maintain a good balance between work and home.

Acquired annual paid leave for FY2021
Average **23.1** days/year
Total of annual paid leave, summer special leave, special leave for promoting reduced hours, and special leave for the corporate anniversary



Human Resource Development

We are engaged in various human resources training, such as training without boundaries of the group and cross-industry training in order to achieve our group's management vision and enhance the expertise and management power of the entire group.
The entire group provides position/job-specific training, including new employee training. Furthermore, "NEXCO East Technology Center for Development & Education" provides hands-on training for engineers.

New employee training

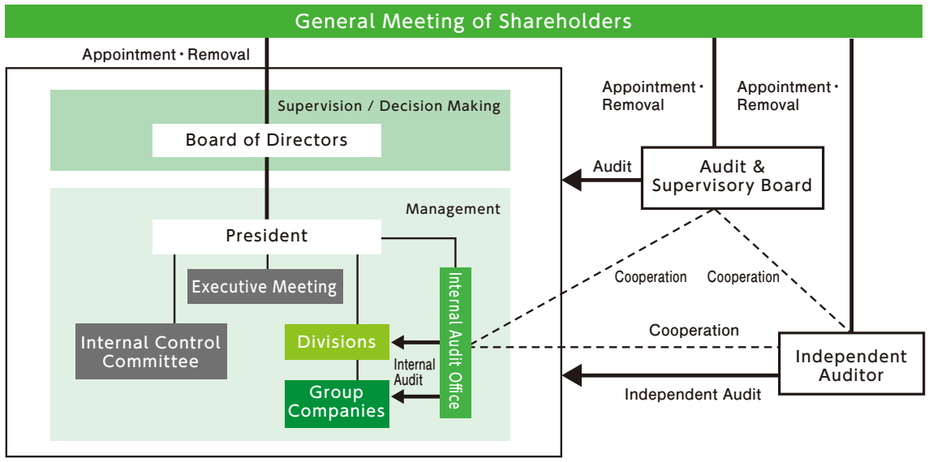
On-site training (Kan-etsu Tunnel)

Explaining the heliport (Moriya SA)

Corporate Governance

We are establishing an internal control system consisting of an internal control committee, a compliance system (see page 71) as well as a risk management system (see below) for enhanced corporate governance and efficient and appropriate operation.

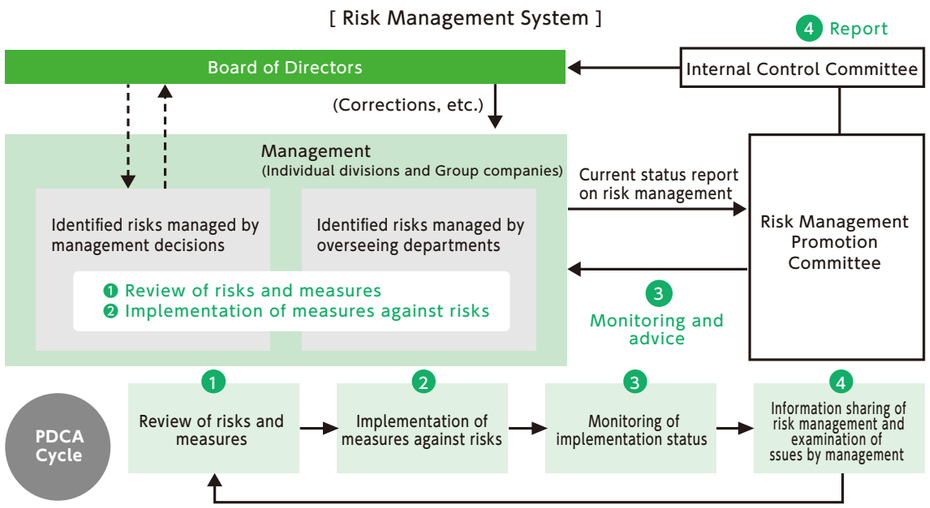
[Corporate Governance System]



Risk Management

While each overseeing department will take measures against operational risks, we hold the board of directors meetings to deliberate on risks that could seriously impact our business. Meanwhile, the "Risk Management Promotion Committee" is formed to support the implementation of risk management based on the PDCA (Plan-Do-Check-Act) cycle.
This committee focuses on cross-divisional matters involving multiple divisions, identifies the most critical risks that significantly impact management, and monitors these items as their main target.

[Risk Management System]



CSR Initiatives

NEXCO East Group is taking initiatives based on the idea that the group's business activities themselves fulfill our corporate social responsibilities and contribute to the development of society. Concurrently, we are promoting "revitalization of local communities," "promotion of traffic safety," and "environmental conservation" as CSR activities that utilize expressway business.
We offer information about such efforts using various public relations tools in addition to our corporate website.

"Expressway-Welfare Collaboration"
Inspired by the "agriculture-welfare collaboration," the "expressway-welfare collaboration (Kofuku-Renkei)" is an initiative to contribute to the revitalization of local communities through expressways by providing people with disabilities opportunities to play an active role in jobs, such as planting and beautification of rest areas (SA and PA).
The expressway-welfare collaboration not only promotes diversity but also contributes to Goal 10 of SDGs, "Reduce inequality within and among countries."
We rolled out this project organization-wide in 2018. We are now supporting the project to become a unified CSR activity by actively promoting it with a logo and website.

"Educational Support for Children"
We provide educational support for children about the role of expressways and traffic safety by offering field trips to expressway construction sites and SA/PA, as well as making educational visits to elementary schools.
Also, we are teaching children the importance of environmental conservation through biotope conservation work and birdhouse making, hoping that we can provide an opportunity for them to acquire various knowledge and sensitivity.


Expressway-Welfare Collaboration activity (flowerbed maintenance)

高福連携

Examples of the expressway-welfare collaboration

◎ Beautification that requires manpower, such as mowing and weeding in rest areas.
◎ Environment improvement such as the decoration of rest areas
◎ Sales of products made at welfare facilities in rest areas
◎ Cleaning of highway bus stops


Tour of SA/PA

V O I C E

The Tsuruoka Operation Office Group is engaged in the following CSR initiatives under the motto, "We are connected to communities by connecting communities." These initiatives include "Expressway-Welfare Collaboration," where we work with people with disabilities to beautify PAs and plant trees; the promotion of the "Citrus Ribbon Project" aiming to eliminate prejudice and discrimination related to the novel coronavirus; the registration as a "Tsuruoka SDGs Promotion Partner" promoting to raise awareness and encourage efforts to achieve the SDGs cooperating with Tsuruoka City. We prioritize our customers and work on each initiative to strive to improve their safety, security, comfort, and convenience.
We will continue to promote CSR activities to maximize the benefits of our expressways with a sense of how they are helping to achieve the SDGs while recognizing the characteristics and strengths of each group employee.

Aya Okuyama
Tsuruoka Operation Office

Company Overview

Company Name	East Nippon Expressway Company Limited		
Location	Shin-Kasumigaseki Building, 3-3-2, Kasumigaseki, Chiyoda-ku, Tokyo 100-8979 TEL:03-3506-0111 (Service Area Business Division) MOMENTO SHIODOME 6th floor, 2-3-17, Higashi-shimbashi, Minato-ku, Tokyo 105-0021		
Representative	Fumihiko Yuki, President and CEO	Capital Stock	525 billion yen
Founded	October 1, 2005	Number of Employees	2,457 (as of March 31, 2022. Excluding outgoing external secondees and including incoming external secondees)
Business Objectives	To contribute to the sound development of the domestic economy and improvement of people's lives by facilitating smooth road traffic through effective construction, renovation, maintenance, repair, and other management of expressways.		
Business Description	Management and construction business of expressways, service area business, parking lot business, underpass utilization business, truck terminal business, credit card business, online business, hotel business, overseas business, etc.		

Hokkaido Regional Head Office	5-12-30, Oyachinishi, Atsubetsu-ku, Sapporo 004-8512	TEL:011-896-5211
Tohoku Regional Head Office:	JR Sendai East Gate Building, 1-1-1, Tsutsujigaoka, Miyagino-ku, Sendai 983-8477	TEL:022-395-4002
Kanto Regional Head Office	Omiya JP Building, 1-11-20, Sakuragi-cho, Omiya-ku, Saitama 330-0854	TEL:048-631-0001
Niigata Regional Head Office	Niigata PLAKA3, 1-1, Tenjin, Chuo-ku, Niigata 950-0917	TEL:025-241-5111

List of Executives

Managing Directors

Kunie Okamoto
Chair of the Board

Fumuhiko Yuki
President and Chief Executive Officer

Tomomichi Takahashi
Representative Director and Managing Executive Officer, Director of Construction Division

Satoshi Iseda
Managing Director and Senior Executive Officer, Director of Corporate Strategy Division

Toru Yoshimine
Managing Director and Senior Executive Officer, Director of Technology & International Division

Shigeki Yagi
Managing Director and Senior Executive Officer, Director of Operation Division & Toll system Development Office

Yutaka Shiina
Managing Director and Senior Executive Officer, Director of General Affairs & Accounting Division

Akiyo Miyakawa
Managing Director

Audit & Supervisory Board Members

Ryuiji Sato
Auditor (full-time)

Yasunori Kuroda
Auditor (full-time)

Hironori Kawauchi
Auditor (full-time)

Noriko Yagasaki
Auditor

Executive Officers

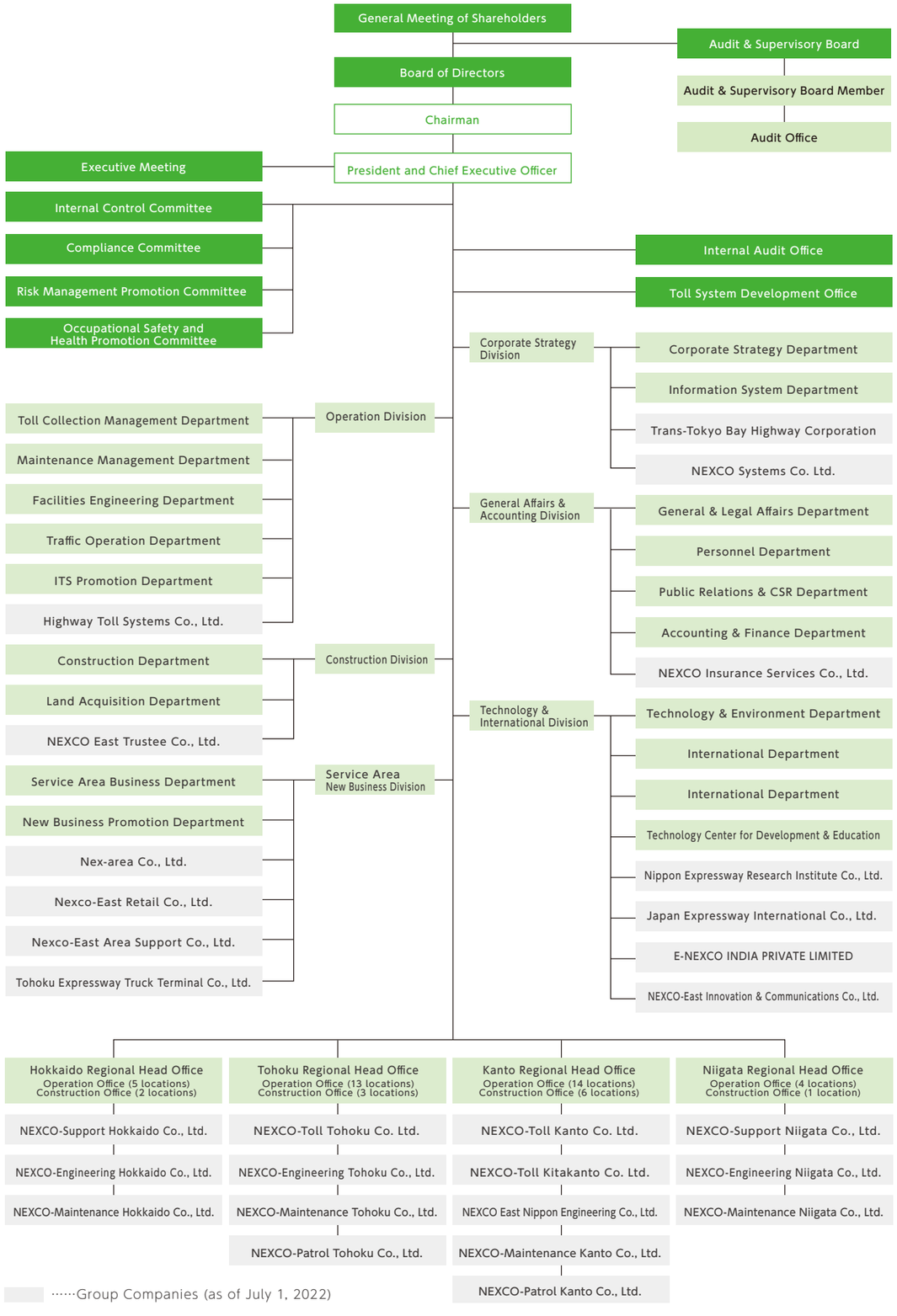
Hideo Yoshimi
Senior Executive Officer, Director of Service Area & New Business Division

Keiichi Hori	Deputy Director of Construction Division and Director of Construction Department
Hiroyuki Sakaue	Director of Toll System Development Office
Toshihiro Matsuzaka	Director of Corporate Strategy Department, Corporate Strategy Division
Toshiaki Harashima	Director of Personnel Department, General Affairs & Accounting Division
Takehiko Sato	Director of Accounting & Finance Department, General Affairs & Accounting Division
Kazuhiko Osanai	Director General of Hokkaido Regional Head Office
Hiroyuki Tanaka	Director General of Tohoku Regional Head Office
Yoichi Chida	Director General of Kanto Regional Head Office
Hideo Umeki	Director General of Niigata Regional Head Office

* Kunie Okamoto (Chair of the Board) and Akiyo Miyakawa (Managing Director) are part-time outside directors.
* Yasunori Kuroda (Auditor), Hironori Kawauchi (Auditor) and Noriko Yagasaki (Auditor) are outside auditors.

(As of July 1, 2022)

Organizational Chart



……Group Companies (as of July 1, 2022)

Financial Statements

< Key Points of Consolidated Financial Reports >

《 Consolidated Balance Sheet 》

·The majority of assets are work-in-process assets of expressways prior to being transferred to the Expressway Agency, and the liabilities are primarily corporate bonds and long-term debts that are acquired for the construction of expressway assets.

Consolidated Balance Sheet (unit:100 million yen)

Account Items	FY2017	FY2018	FY2019	FY2020	FY2021
Assets					
Current assets	15,572	9,303	9,498	10,073	11,805
Cash and deposits	1,397	1,180	965	1,090	996
Work-in-process expressway assets	10,991	5,395	6,081	6,212	7,609
Other current assets	3,183	2,726	2,451	2,770	3,199
Non-current assets	2,927	3,163	3,369	3,461	3,538
Property, plant, and equipment	2,408	2,578	2,712	2,798	2,808
Intangible assets	122	149	188	223	277
Investments and other assets	396	435	468	438	452
Deferred assets	11	7	11	14	18
Total assets	18,511	12,474	12,879	13,550	15,362
Liabilities					
Current liabilities	2,893	3,472	2,614	2,395	2,610
Non-current liabilities	13,385	6,694	7,859	8,811	10,397
Bonds and long-term notes payables for the construction of expressways	12,362	5,669	6,806	7,309	9,014
Other non-current liabilities	1,022	1,024	1,053	1,502	1,383
Total liabilities	16,279	10,166	10,473	11,207	13,007
Net assets					
Shareholders' equity	2,401	2,442	2,542	2,444	2,427
Capital stock	525	525	525	525	525
Capital surplus	587	587	587	587	587
Retained earnings	1,288	1,329	1,429	1,331	1,314
Accumulated other comprehensive income Total net assets	△ 169	△ 134	△ 136	△ 101	△ 72
Total net assets	2,231	2,308	2,405	2,343	2,354
Total of liabilities and net assets	18,511	12,474	12,879	13,550	15,362

(Calculations indicated on the table may not be accurate since figures are rounded down to the nearest 100 million yen.)

Note: Our group's business segments and main descriptions are as follows.

Business Segments		Main Contents
Expressway Business		New construction, reconstruction, maintenance, repair, disaster recovery, and other management for expressways
Related businesses	SA and PA business	Construction and management of rest areas and gas stations on expressways
	Consignment Business	New construction, reconstruction, maintenance, and repair of roads based on commissions from the national and local authorities and other projects based on consignments
	Other businesses	Parking lot business, truck terminal business, and others

《 Consolidated Statement of Income 》

·The operating revenue consists of toll revenue from the expressway business, appreciation from completed expressways, including newly opened expressways, and sales revenue from related businesses. The toll revenue comprises much of the income.
·Operating expenses include mainly lease fees for expressway assets based on the agreement with the Japan Expressway Agency and management costs of expressway businesses. Furthermore, the cost of the completed road assets is recorded as the same amount as the appreciation from the completed road under the operating revenue.
·The operating loss for FY2021 is 4.7 billion yen, and the net loss attributable to owners of the parent company is 1.4 billion yen.

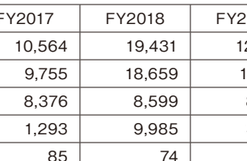
Consolidated Statement of Income (unit:100 million yen)

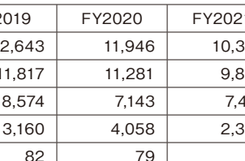
Account Items	FY2017	FY2018	FY2019	FY2020	FY2021
Operating revenue	10,564	19,431	12,643	11,946	10,303
Expressway Business	9,755	18,659	11,817	11,281	9,838
Toll income	8,376	8,599	8,574	7,143	7,416
Appreciation of completed expressway assets	1,293	9,985	3,160	4,058	2,348
Other operating revenue	85	74	82	79	73
Related Businesses	873	838	891	742	555
Rest area and parking area business	416	416	406	243	248
Consignment and other businesses	456	422	484	498	307
Elimination of intersegment transactions	△ 64	△ 66	△ 65	△ 77	△ 90
Operating expenses	10,566	19,386	12,542	12,005	10,351
Expressway Business	9,783	18,649	11,741	11,300	9,871
Lease fees for expressway assets	6,018	6,211	6,118	4,809	5,168
Cost of completed expressway assets	1,293	9,985	3,160	4,058	2,348
Management expense, etc.	2,471	2,451	2,462	2,432	※ 2,355
Related Businesses	847	805	867	783	570
Rest area and parking area business	392	385	384	291	267
Consignment and other businesses	454	419	482	492	302
Elimination of intersegment transactions	△ 64	△ 67	△ 65	△ 77	△ 90
Operating profit (△loss)	△ 1	44	100	△ 59	△ 47
Expressway Business	△ 27	10	76	△ 18	※ △ 33
Related Businesses	25	32	23	△ 41	△ 14
Ordinary income (△loss)	33	75	137	△ 25	△ 12
Net profit attributable to owners of the parent company (△loss)	208	41	99	△ 97	※ △ 14

(Calculations indicated on the table may not be accurate since figures are rounded down to the nearest 100 million yen.)

* We are focusing on earthquake-resistant measures project for bridges with rocking piers among overpasses crossing expressways managed by local governments in order to ensure safe traffic on expressways. This project uses the "reserve funds for earthquake-resistant measures for overpasses," funded by retained earnings from the expressway business. It is not recorded as operating revenue, but 10.3 billion yen is included in management and other expenses. When excluding this project, the operating profit for the expressway business is 6.9 billion yen, and the net profit is 8.8 billion yen.

【 Cover Photo 】
"Nature and Expressways in Niigata Prefecture"





The cover photo was taken near Oyashirazu IC on the Hokuriku Expressway managed by NEXCO East Group. In 1988, this expressway was opened in this location, which was once considered a problematic traffic route because of steep cliffs extending to the coastline. We are steadily renewing and repairing road structures in order to continue providing safe and secure expressway space in this extremely harsh terrain and natural environment.

The table of contents photo was taken between Nakago and Joetsu-Takada ICs on the Joshin-Etsu Expressway with a view of the snow-covered Mt. Myoko, located on the mountainside away from the coastline. We completed all the four-lane projects on the Joshin-Etsu Expressway in 2019 and have been working on enhancing network functions.

These photos were selected in the hope of providing a sense of how expressways managed by our group connect various areas and support the flow of people and goods.

We are here 24 hours a day, seven days a week to answer any questions or concerns you may have.
NEXCO East Customer Relations Center
+81-570-024-024 or +81-3-5308-2424

We are here 24 hours a day, seven days a week, to answer any questions or concerns you may have. Please feel free to contact us about expressway tolls, ETC discounts, traffic information, etc.