



NEXCO East  
Annual Report **2019**

We connect communities and are connected to communities

NEXCO East Group engages in the construction, management and operation of expressways, rest areas and other expressway-related businesses in the eastern part of Japan.

For the purpose of achieving a sustainable society that extends beyond the framework of regions, countries, and generations, NEXCO East Group will strive to create the value of “connecting” and will continue to grow as a company that contributes to all stakeholders.



Chairman  
Kunie OKAMOTO

President and Chief Executive Officer  
Toru OBATA



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SUSTAINABLE DEVELOPMENT GOALS  
17 GOALS TO TRANSFORM OUR WORLD



NEXCO East Group supports sustainable development goals (SDGs), advancing solutions for social issues through our expressway business, with the purpose of achieving sustainable global development.

All segments of NEXCO East Group business are contributing to the following SDGs

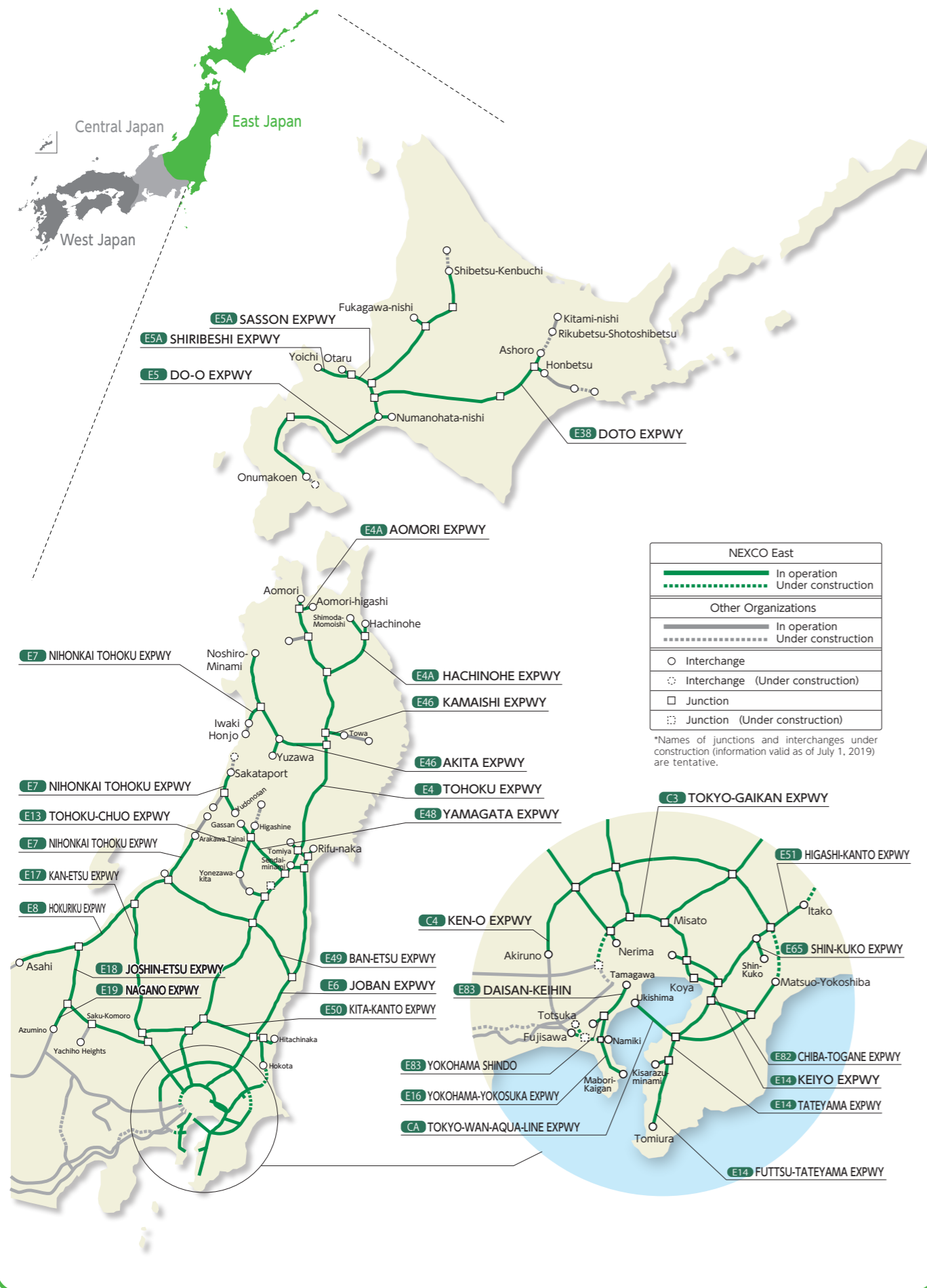


NEXCO East has participated in the “United Nations Global Compact” initiative and has adopted 10 principles in the four areas of human rights, labor, the environment, and anticorruption, as stated in this initiative.

● Policy for compiling this report	This NEXCO East Annual Report has been issued to publicize to stakeholders details on NEXCO East Group's business involving expressways and its actions toward the development of a sustainable society through business involving expressways. This report can be downloaded from the corporate website of NEXCO East.
● Scope of reporting	East Nippon Expressway Co., Ltd. (NEXCO East) and its 27 group companies.
● Reporting period	From April 1, 2018 to March 31, 2019 (Some activities outside of the specified period are also included.)



## Business Areas of NEXCO East



## Management Principles of NEXCO East Group

### ◆ Group Management Principle

NEXCO East Group will contribute to the revitalization of the entire Japanese economy by supporting the development of regional communities and improving lifestyles by maximizing the effects of expressways.



### ◆ Group Management Vision

NEXCO East Group will create value that connects all stakeholders, working toward a prosperous society transcending regions, countries, and generations, and will grow as a company that contributes to these stakeholders.



### ◆ Group Management Policy

- NEXCO East Group puts our customers first, and improves the safety, reliability, comfort, and convenience of expressways.
- NEXCO East Group applies our technologies and know-how in order to contribute to society based on fair and transparent business activities, and provides accurate corporate information.
- NEXCO East Group optimizes our business resources to improve our customer service and corporate value and to establish sound management with a never-ending pursuit of efficiency.
- NEXCO East Group respects the efforts and results of each employee, and values their motivation and challenging spirit.
- NEXCO East Group promotes CSR management that contributes to all stakeholders, including customers, local communities, global society, the public, the environment, shareholders and investors, business partners, and employees.



## ● NEXCO East Group Business Operations

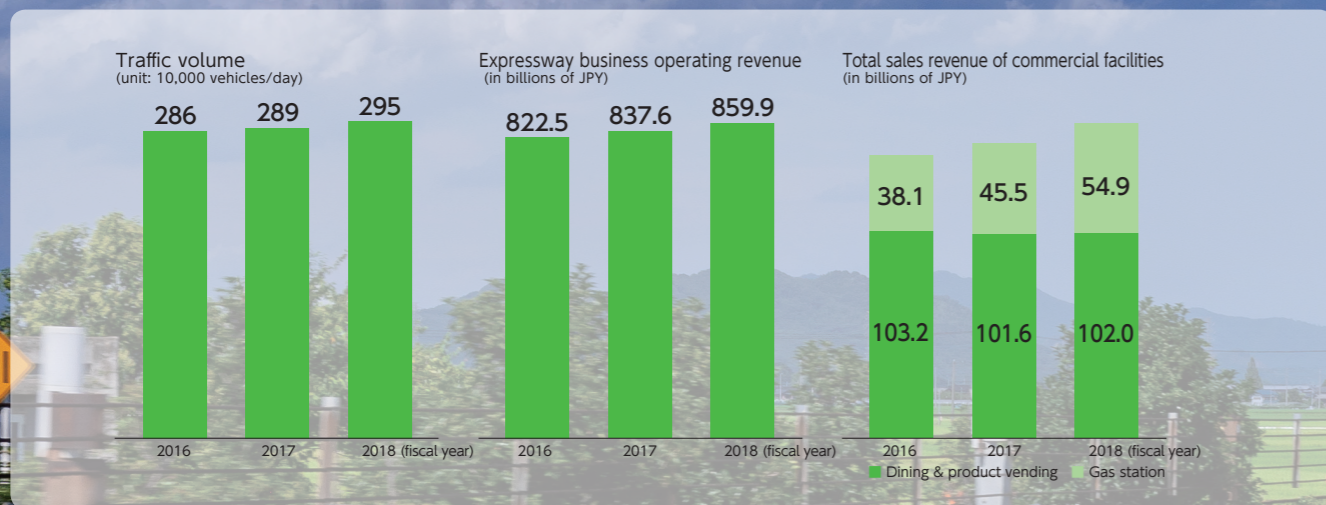
NEXCO East Group engages in the construction, management and operation of expressways, rest areas and other expressway-related businesses in the eastern part of Japan\*.



## ● Company Profile

Trade Name	East Nippon Expressway Company Limited
Representative	Toru Obata, President and Chief Executive Officer
Date of Establishment	October 1, 2005
Capital	52.5 billion yen
Number of Employees	2,283 (As of March 31, 2019, the figure excludes employees from our company assigned to outside the company and includes employees from outside the company assigned to our company)
Length of roads in service	3,943km
Interchanges	443
Smart interchanges	55
Rest areas and parking areas	328 (of which 199 have commercial facilities, 129 do not)
Quick charging stations	149

## ● Major Indexes



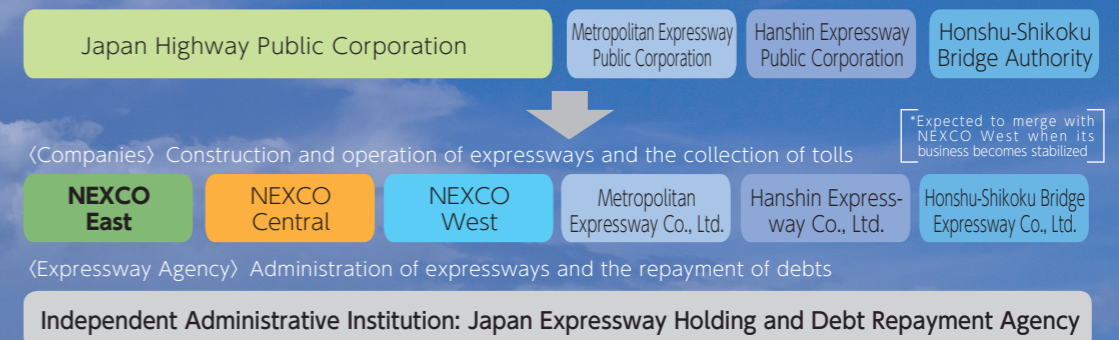
\* Hokkaido, Tohoku, Kanto, Niigata prefecture, and part of Nagano prefecture

## ● Corporate History

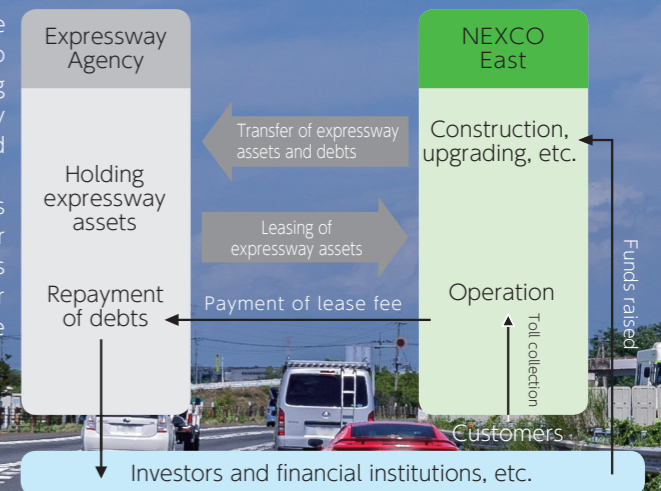
- 1956 Japan Highway Public Corporation is established.
- 1960 Section between Ichinoe Ramp and Funabashi IC on KEIYO EXPWY is opened, becoming the first road in Japan to function as an expressway in the following year.
- 1971 First expressways in Hokkaido (DO-O EXPWY between Kitahiroshima IC and Chitose IC, and SASSON EXPWY between Otaru IC and Sapporo-Nishi IC) are opened.
- 1975 The entire route of the TOHOKU EXPWY is opened.
- 1985 The entire route of the KAN-ETSU EXPWY is opened.
- 1988 The entire route of the HOKURIKU EXPWY is opened.
- 1997 TOKYO-WAN-AQUA-LINE EXPWY is opened.
- 1999 The entire route on JOSHIN-ETSU EXPWY is opened.
- 2001 ETC service is started.
- 2005 Privatization of Japan Highway Public Corporation and establishment of the East Nippon Expressway Company Limited.
- 2006 The brand name, NEXCO East, is chosen.
- 2007 The customer center is established.
- 2008 Commercial facilities flagship brand "Pasar Makuhari" is opened.
- 2009 India Liaison Office is established.
- 2010 First Themed Area, "Yorii Rest Area: The Little Prince" is opened.
- 2015 The entire route of the JOBAN EXPWY is opened. The Expressway Renewal Project is launched.
- 2017 The section of the KEN-O EXPWY between Sakai-Koga IC and Tsukuba-chuo IC is opened, linking the TOMEI EXPWY and TATEYAMA EXPWY
- 2018 The section of the TOKYO-GAIKAN EXPWY between Misato-minami IC and Koya JCT is opened.

## ● Framework of Expressway Business Operation

On October 1, 2005, following the privatization of Japan Highway Public Corporation, which had been established in 1956, along with other public highway corporations, Japan Expressway Holding and Debt Repayment Agency (hereinafter referred to as the "Expressway Agency") and six expressway companies were established.



NEXCO East constructs and upgrades expressways in the eastern Japan area and transfers the assets and debts to the Expressway Agency, while at the same time operating the expressway assets leased from the Expressway Agency for which a lease fee is paid through the management and operation of the leased assets. The Expressway Law specifies that tolls from expressways shall not generate profit. The collected tolls are used for the necessary operation and maintenance of expressways and the provision of various services, as well as for paying back debt by means of the lease fee paid to the Expressway Agency.







## Contributing to society and creating a virtuous cycle of sustainable growth

President and  
Chief Executive Officer  
**Toru OBATA**

### — The Social Mission of NEXCO East Group —

#### Fulfilling Social Responsibility via Business Activities

The upkeep and operation of transport infrastructures, starting with roads, railways and airways, are public services. Notably, in the case of expressways, 24 hours a day, 365 days of the year, safe, secure, comfortable and convenient service must be provided – this is the mission of NEXCO East Group, and it will not change in the next ten or 20 years to come. We are fulfilling our corporate social responsibilities (CSR) based on the three pillars of “vitalization of regional communities,” “promotion of traffic safety” and “environmental preservation.” And, as our business activities underpin public service, we believe that those very activities fulfil our CSR.

Whereas, regarding our initiatives for SDGs, we support them, and we have made it known publicly that we have revised the current Mid-Term Management Plan to apply SDGs to the action plans for each of our business operations.

#### Anticipating the Futures of Regions

We are continuing to focus on improvements to the expressway network to eliminate missing links. And, thanks to work on the TOKYO-GAIKAN EXPWY, the volume of traffic flowing into the heart of the city is being optimized, while work on other routes also

can be expected to stimulate promotion of regional economies, including the attraction of industries and primary industries.

Also, we are developing our rest area and parking area infrastructures from the perspective of comfort and convenience. On July 29, 2019, moving away from Tokyo slightly, TOHOKU EXPWY Hasuda Rest Area (inbound) was opened as one of the biggest rest areas under the jurisdiction of East Japan. The commercial facilities in this inbound rest area are the seventh set of facilities we have opened as “Pasars,” providing amazing services to the public. From here on too, we not only want to encourage expressway users but also the locals of communities to use our rest areas and parking areas – thus, to that end, we want to contribute to the vitalization of regional communities by enabling local communities to sell specialties as well as local fish and local fruits & vegetables at our rest areas and parking areas.

#### Creating an Infrastructure for Disaster Response and Recovery Support

In recent years, natural disaster risks, including earthquakes, typhoons and torrential rain, are increasing. At the NEXCO East Group, besides regularly engaging in disaster prevention training to respond swiftly at times of disaster, we collaborate with the relevant authorities to enable the fire department, police and self-defence forces, etc., to make use of rest

areas and parking areas for their recovery activities.

As a company with operations in the eastern region of Japan, we are striving to contribute to further recovery from the Great East Japan Earthquake. We are collaborating with the people in Tohoku, who are making great efforts for their region, through expanding the JOBAN EXPWY to 4 lanes and promoting tourism that will draw people to Tohoku. The entire company will continue to work together for the recovery.

From a CSR perspective, we place great importance on support of the recovery work from the Great East Japan Earthquake, cooperating in events, such as the Tohoku Kizuna Festival.

### — NEXCO East Group from Here On —

#### New Challenges

Some 50 years have passed since the expressways were first built, so an urgent challenge involves dealing with aging expressways. What is more, aging is rapidly speeding up due to the tendency for more trucks to use expressways and the impact of anti-freezing agents, used because many of the areas we operate in are susceptible to heavy snowfalls and ice. Therefore, while ensuring the safety and security of our customers by continuing daily maintenance work, we have launched a massive project, the Expressway Renewal Project, which is a long-term initiative stretching to FY2030. This kind of project is a new experience for our group – new fields, including the development of technologies for inspecting and maintaining, that we will challenge.

#### Greater Productivity is the Keyword

Amidst a decreasing birthrate and aging population that are leading to a reduced working age population, one of the issues we are faced by is: “how do we secure our workforce?” Yet, for vehicles and roads, etc., there are some amazing technological innovations in the areas of hardware technology as well as software technology, such as AI and ICT. And, at NEXCO East Group, we too need to change with the times, in order to take on board the technologies we can make use of. Under such circumstances, we have started an initiative called SMH (Smart Maintenance Highway). SMH is a technical work system promoting the use of robots for inspections, compiling results in a database, and using AI and other technologies to support management of the infrastructure.

Further, we will promote the optimization of work by making use of technologies such as robotic process automation (RPA) to automate basic office work in fields like accounting and on-site assets management. In terms of securing a workforce, we will encourage veteran employees to continue working for us or

joining us again, while also taking measures to increase positions that provide opportunities for both men and women, including the introduction of flexible working hours.

Since this April, the Act Related to Workstyle Reforms is being phased in. At NEXCO East Group, this is year zero for our workstyle reforms, and we want to raise awareness of management in the role of creating schemes for maintaining work-life balance and assure healthy lifestyles of our employees, and we want those schemes to become ingrained into worksite practices. Yet, amidst these efforts, there could be employees who find that work means everything to them, so they do not want to be restricted in how they work – therefore, modifying the idea, we think it is important to fulfil our mission within the framework of the law and social rules, but raise productivity in so doing.

#### Together with Society

For a company to remain in business, it is vital to have technical prowess, but, more importantly, the company also must function efficiently and correctly, to earn the acclaim from society for its results. Japan originally had the precept of “Omi merchant's” Sanpo Yoshi” (Sanpo means three sides and Yoshi means good), as a business culture, and it has been accepted by people. “Three” indicates “seller”, “buyer”, and “public”, and the concept of the precept is that good business will benefit whole society, as well as satisfy the seller and buyer. Thus, contributing to society and being acknowledged for that contribution is the honor and ethical duty of each employee. NEXCO East Group considers itself as a company within society and will continue to contribute to the growth of society.





# Challenging Ourselves and Making Rapid Progress to Realize the Future Ideal State of NEXCO East

~2025 Long-term Vision and Mid-term Management Plan~



Expressway Renewal Project (TOHOKU EXPWY between Fukushima-Nishi IC and Fukushima JCT)



Opening ceremony for SHIRIBESHI EXPWY between Yoichi IC and Otaru JCT (December 2018)



KAN-ETSU EXPWY Akagi-kogen Rest Area (inbound) opened after renewal project (April 2018)

In 2017, NEXCO East Group formulated its Mid-term Management Plan (FY2017-FY2020) identifying the four years from FY2017 until FY2020 as “a period for challenging themselves and making rapid progress to realize the future ideal state of the company” in order to achieve the 2025 Long-term Vision of the group, and, as such, the group united to implement the plan based on five core policies to fulfill our social mission.

Approaching the halfway mark of the Mid-term Management Plan, we have revised some aspects of the plan in order to appropriately accommodate new business and business environment changes that have come about since the plan was formulated.

Thus, in the remaining two years of the Mid-term Management Plan, by aspiring to create value that “connects” all stakeholders, as laid out in the group’s Management Vision, and to grow as a corporate group contributing to every stakeholder, NEXCO East Group is promoting the plan in a united fashion.



Representative Director and Senior Executive Officer  
Corporate Strategy Division  
**Seigo SAKAKI**

## ◆ Long-term Vision 2025

NEXCO East Group has formulated “Long-term Vision 2025” to enhance the corporate value of the Group and continuously fulfill our mission. This is a summary of what we would like to achieve by 2025, 20 years after the establishment of NEXCO East.

### A company that is trusted by the public: Reliable

By placing safety and reliability as top priorities of the company, NEXCO East Group will be a model company for infrastructure management companies which take action for the realization of a sustainable society with a pioneering spirit, including the secure maintenance of aging expressways.

### A company that is needed by customers: Required

NEXCO East Group will always pursue the provision of the largest satisfaction to our customers with a minimum cost and offer new value to customers by utilizing information and communication technologies, etc.

### A company that lives up to the expectations of local communities: Responsible

NEXCO East Group will establish a strong relationship with local communities, contribute to local communities through the use of our expressway network and assets, and continuously take a variety of actions that lead to co-existence and co-prosperity with local communities.

### A company that receives recognition from international society: Recognized

By utilizing our high technical capabilities, NEXCO East Group will establish relationships of mutual trust with overseas stakeholders and accumulate expertise on overseas businesses to meet the needs of international society.

### A company whose employees realize the value of their work: Rewarding

NEXCO East Group will have an established corporate culture in which creating the value of “connection” through our business brings employees satisfaction at work.

(Formulated in May 2014)

## ◆ Partial Revision of Mid-term Management Plan (FY2017-FY2020)

We have revised some parts of the Mid-term Management Plan as it approaches the halfway stage in 2019, with the following being the main revisions.

### (1) Response to Additional Business

- Construction of four lanes on KEN-O EXPWY between Kuki Shiraoka JCT and Daiei JCT
- Lane-adding work for DOTO EXPWY, AKITA EXPWY, BAN-ETSU EXPWY and FUTTSU-TATEYAMA EXPWY

### (2) Promotion of Further Safety and Security Measures

- Promotion measures to prevent head-on collisions in sections where there is two-way traffic
- Promotion of efforts to reduce accidents during periods when traffic restrictions are being applied

### (3) Strengthening of Measures to Prevent and/or Reduce Impact of Damage at Times of Major Natural Disasters

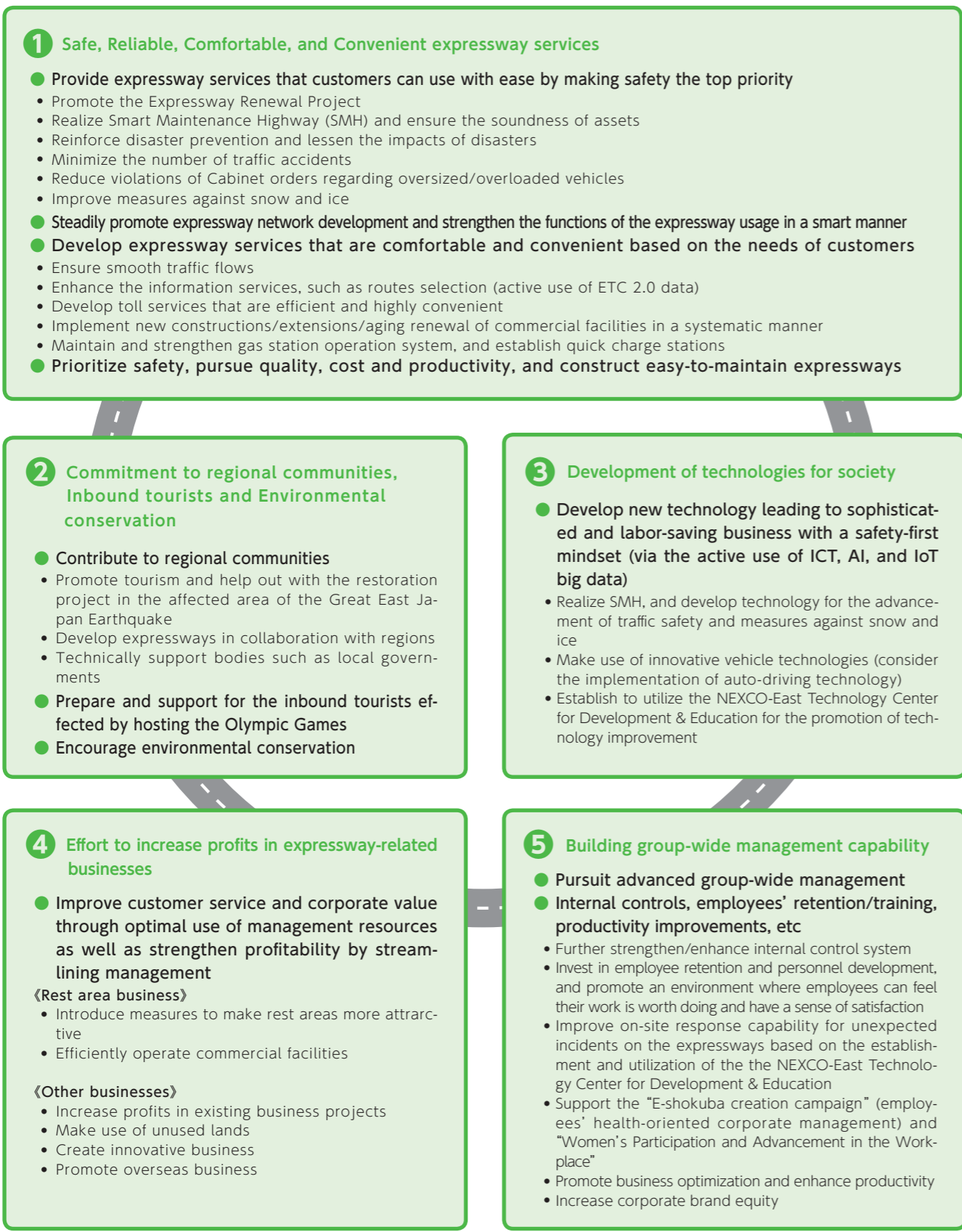
- Provision of measures to keep roads open during heavy snow
- Strengthening of monitoring system for tunnel fires

### (4) Changing Business Environment to Contribute to Response to Establishment of Act Related to Workstyle Reforms and SDGs (suggested by UN)

- Implementation of workstyle reforms (employee awareness reforms, appropriate management of working hours, etc.)
- Contribute to the establishment of SDGs via our business



◆ Overall Perspective ~5 Basic Policies with Priority Actions~



◆ Financial Projections

● Expressway Business

Profit & loss plan

Based on the agreement with the Japan Expressway Holding and Debt Repayment Agency (Expressway Agency), NEXCO East steadily engages in the necessary management of expressways and the payment of rent for expressway assets from the expressway toll income that we receive from our customers, so that the Expressway Agency can use it to pay back its debts.

Total from FY2017 to FY2020	Toll income:	Approx. 3.1 trillion yen <sup>*1</sup>
	Rent for expressway assets:	Approx. 2.3 trillion yen <sup>*1</sup>
	Administrative expenses, etc.:	Approx. 800 billion yen <sup>*1</sup>

\*1 Planned figures (excluding tax) in the agreement that was concluded (revised) with the Expressway Agency on March 26, 2019

Investment plan

Regarding the assets of the Expressway Agency<sup>\*2</sup>, based on the agreement with them, NEXCO East Group has an approximately 2.2 trillion yen investment plan for new construction, repair, and reconstruction projects for the TOKYO-GAIKAN EXPWY (between Misato Minami and Koya JCT, and between Oizumi JCT and Chuo JCT), YOKOHAMA KANJO-MINAMI EXPWY (between Kamariya JCT and Totsuka), and expanding the JOBAN EXPWY to 4 lanes. For the assets of group companies, approximately 120 billion yen in investments is projected for the development of toll collection machines and ETC facilities as well as renewal of aging roads.

Total from FY2017 to FY2020	Agency assets <sup>*2</sup> :	Approx. 2.2 trillion yen
	Company assets:	Approx. 120 billion yen

\*2 Expressway assets that are scheduled for hand-over to the Expressway Agency after construction completion

● Expressway-related Business

Profit & loss plan

NEXCO East Group enhances its customer services and corporate values via the optimum use of management resources, and strengthens earning capacities by streamlining management, aiming to reach 2.9 billion yen in operating income in the last year of the plan (FY2020).

Operating income (consolidated)	Results of FY2016:	1.8 billion yen
	Plan for FY2020:	2.9 billion yen

Investment plan

We are scheduling investments of approximately 44 billion yen in the assets of expressway-related businesses, such as the establishment of new commercial facilities, extension and remodeling of existing commercial facilities, and renewal of aging facilities, as well as the establishment of the NEXCO-East Technology Center for Development & Education and the replacement of IT systems.

Total from FY2017 to FY2020	Company assets:	Approx. 44 billion yen
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\*Please refer to p.6 for an outline of expressway business scheme.




















# NEXCO East Group Contributions and Initiatives for SDGs

At NEXCO East Group, we have taken a look at our business in comparison to SDGs, goals common to international societies, and have set ourselves some goals that will enable us to contribute to society through our businesses. Hence, through our business, we will make a contribution in the following SDGs: Goal 3 "SOUND HEALTH AND WELL-BEING," Goal 8 "DECENT WORK AND ECONOMIC GROWTH," Goal 9 "INDUSTRY INNOVATION AND INFRASTRUCTURE" and Goal 11 "SUSTAINABLE CITIES AND COMMUNITIES." The chart shows the goals we will contribute to through our various businesses. Furthermore, in all our business activities, we will place great importance on caring for our stakeholders and partnerships (Goal 17).

5 Basic Policies of Mid-term Management Plan	Important Plans	Important Goals
Safe, Reliable, Comfortable, and Convenient expressway services	<ul style="list-style-type: none"> <li>● Provide expressway services that customers can use with ease by making safety the top priority                             <ul style="list-style-type: none"> <li>- Promote the Expressway Renewal Project</li> <li>- Realize Smart Maintenance Highway (SMH) and ensure the soundness of assets</li> <li>- Reinforce disaster prevention and lessen the impacts of disasters</li> <li>- Minimize the number of traffic accidents</li> <li>- Reduce violations of Cabinet orders regarding oversized/overloaded vehicles</li> <li>- Improve measures against snow and ice</li> </ul> </li> <li>● Steadily promote expressway network development and strengthen the functions of the expressway usage in a smart manner</li> <li>● Develop expressway services that are comfortable and convenient based on the needs of customers                             <ul style="list-style-type: none"> <li>- Ensure smooth traffic flows</li> <li>- Enhance the information services, such as routes selection (active use of ETC 2.0 data)</li> <li>- Develop toll services that are efficient and highly convenient</li> <li>- Implement new constructions/extensions/aging renewal of commercial facilities in a systematic manner</li> <li>- Maintain and strengthen gas station operation system, and establish quick charge stations</li> </ul> </li> <li>● Prioritize safety, pursue quality, cost and productivity, and construct easy-to-maintain expressways</li> </ul>	<p>Promote measures for aging facilities and Expressway Renewal Project</p> <p>Reduce traffic accidents and traffic congestion</p> <p>Deal with adverse weather conditions such as snow and ice</p> <p>Develop network and strengthen capabilities</p>
Commitment to regional communities, inbound tourists and Environmental conservation	<ul style="list-style-type: none"> <li>● Contribute to regional communities                             <ul style="list-style-type: none"> <li>- Promote tourism and help out with the restoration project in the affected area of the Great East Japan Earthquake</li> <li>- Develop expressways in collaboration with regions</li> <li>- Technically support bodies such as local governments</li> </ul> </li> <li>● Prepare and support for the inbound tourists effected by hosting the Olympic Games</li> <li>● Encourage environmental conservation</li> </ul>	<p>Contribute to solutions for social issues</p> <p>Preserve the environment</p>
Development of technologies for society	<ul style="list-style-type: none"> <li>● Develop new technology leading to sophisticated and labor-saving business with a safety-first mindset (via the active use of ICT, AI, and IoT big data)                             <ul style="list-style-type: none"> <li>- Realize SMH, and develop technology for the advancement of traffic safety and measures against snow and ice</li> <li>- Make use of innovative vehicle technologies (consider the implementation of auto-driving technology)</li> </ul> </li> <li>- Establish to utilize the NEXCO-East Technology Center for Development &amp; Education for the promotion of technology improvement</li> </ul>	Innovate
Effort to increase profits in expressway-related businesses	<ul style="list-style-type: none"> <li>● Improve customer service and corporate value through optimal use of management resources as well as strengthen profitability by streamlining management                             <ul style="list-style-type: none"> <li>(Rest area business)                                     <ul style="list-style-type: none"> <li>- Introduce measures to make rest areas more attractive</li> <li>- Efficiently operate commercial facilities</li> </ul> </li> <li>(Other businesses)                                     <ul style="list-style-type: none"> <li>- Increase profits in existing business projects</li> <li>- Make use of unused lands</li> <li>- Create innovative business</li> <li>- Promote overseas business</li> </ul> </li> </ul> </li> </ul>	<p>Boost earning power in business such as rest areas and parking areas</p> <p>Develop overseas business</p>
Building group-wide management capability	<ul style="list-style-type: none"> <li>● Pursuit advanced group-wide management</li> <li>● Internal controls, employees' retention/training, productivity improvements, etc                             <ul style="list-style-type: none"> <li>- Further strengthen/enhance internal control system</li> <li>- Invest in employee retention and personnel development, and promote an environment where employees can feel their work is worth doing and have a sense of satisfaction</li> <li>- Improve on-site response capability for unexpected incidents on the expressways based on the establishment and utilization of the the NEXCO-East Technology Center for Development &amp; Education</li> <li>- Support the "E-shokuba creation campaign" (employees' health-oriented corporate management) and "Women's Participation and Advancement in the Workplace"</li> <li>- Promote business optimization and enhance productivity</li> <li>- Increase corporate brand equity</li> </ul> </li> </ul>	<p>Provide Customer Satisfaction (CS)</p> <p>Provide governance</p> <p>Make further improvements via workstyle reforms</p>

**Group Management Principles**

NEXCO East Group will contribute to the revitalization of the entire Japanese economy by supporting the development of regional communities and improving lifestyles by maximizing the effects of expressways.

Initiatives for Mid-term Management Plan (FY2017-FY2020)	SDGs Related to All Aspects of Business	SDGs Related to Individual Initiatives
<p>Promote the Expressway Renewal Project, advancing initiatives for large-scale renewal or large-scale repairs on necessary constructions, starting with bridges.</p> <p>Ensure sound roads, providing road surfaces that are comfortable to travel on.</p> <p>Implement traffic safety measures, reducing casualty and fatality accident rates.</p> <p>Take measures to prevent traffic congestion such as additional lane, and work to reduce the loss time of users due to traffic congestion</p> <p>Build expressways that cope well with snow, reducing road closure time during winter.</p> <p>Improve peripheral expressways surrounding Tokyo Metropolitan expressway network and expressways in regional areas to eliminate any missing links in network.</p> <p>Promote road expansion to 4 lanes, enhancing safety and comfort.</p> <p>Strengthen expressway capabilities by developing additional junctions, interchanges, smart interchanges, and new rest areas and parking areas.</p>		  
<p>Work toward finding solutions for social issues in fields with strong affinities to expressway business (activation of regional communities, promotion of traffic safety, environmental preservation).</p> <p>Promote preservation of Earth environment, recycling society and preservation of roadside environments.</p>		    
<p>Mechanicalize inspections and quantify damage as technical developments to realize SMH.</p> <p>Prevent major accidents, such as head-on collisions, on provisional two-lane road sections as a technical development to contribute to traffic safety.</p> <p>Make use of the Quasi-Zenith Satellite System on snowplows as a technical development to raise level of snow and ice countermeasures.</p>		
<p>Efficiently operate commercial facilities at rest areas and parking areas to boost earning power. Also, create innovative business, and develop and expand services.</p> <p>Market the NEXCO East group technologies in overseas countries.</p>	 	
<p>The group will unite to provide safe, secure, comfortable and convenient road spaces for customers, improving travel comfort and providing a full array of rest facilities, in order to raise the level of satisfaction experienced by customers.</p> <p>Further strengthen and substantiate the internal controls system, promoting risk management and compliance to laws, which will involve everyone in the group uniting to observe compliance.</p> <p>Promote creation of environment that enables employees to feel the job is worth doing and have a sense of satisfaction in doing it.</p>		   

Contributing to Social Challenges Enhancing Sustainable Corporate Value





### ■ Establishment of Sustainable Long-term Expressway Maintenance (Expressway Renewal Project)

Of the 3,940 km or so of expressway operated by NEXCO East Group, some 1,760 km of it has been in common use for approximately 30 to 50 years, while the number of large-sized vehicles using expressways is tending to increase every year. Moreover, as shown by the amount of anti-freezing agent used—which reaches approximately 160,000 tons a year, about 70% of NEXCO East's roads pass through snowy and cold regions. This means that many of the bridges and tunnels located in NEXCO East's area are in a severe environment, and as a result, significant changes are occurring in the conditions of those structures. With these matters in mind, in FY2015, NEXCO East Group launched a large-scale project to renew and repair expressway structures to ensure that expressways could continue to play their role as vital lifelines in Japan that support social infrastructure in the areas of economics, communities, medicine, and disaster prevention. This project, which is run jointly

with other expressway companies, was named the "Expressway Renewal Project," and a logo was devised in order to enhance public understanding about the necessity of the large-scale renewal and repair work entailed in the project. In the near future, as the Expressway Renewal Project gets into full swing, each region will need to regulate large-scale road traffic restrictions, including road closing and implementing two-way traffic. Thus, NEXCO East Group is striving to minimize the impact on customers as we undertake renewal work by employing innovative technologies to curtail the time required in construction periods and making use of a mobile barrier system (Road Zipper® System) that enables operation of lanes to suit traffic volume. NEXCO East Group is therefore engaging in publicity activities in cooperation with other expressway companies to make sure that the purpose and need for this project is fully understood by customers.



### ■ Innovating via the Introduction of Smart Maintenance Highway (SMH)

SMH is a project that will make use of cutting-edge technologies, such as ICT and robotics, to provide long-term "safety and security" on our expressways as well as dramatically enhancing productivity in expressway assets management. In the first stage (to be introduced in 2020), SMH will be put to use on the theme of "structure inspections," which is the base of infrastructure management. While achieving efficiency in inspection work by introducing inspection support tools like high-resolution cameras, inspection robots and self-

propelled measuring vehicles as well as inputting inspection records into mobile personal computers, NEXCO East Group will use Business Intelligence (BI) tools to promote the standardization of decision-making processes. Apart from these, we will make use of cutting-edge technologies, including all-round road imaging and mixed reality (MR) technology. Hence, from 2020, work process reforms will start in infrastructure management with the aim of providing a sustainable expressway network.

#### Introducing SMH Development Tools that Make the Most of ICT Technologies

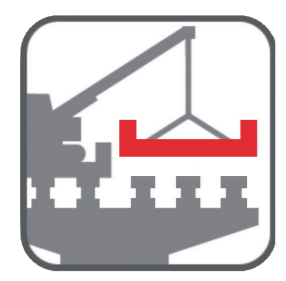


**Road-eye®**  
Mounted on a vehicle that travels at high speed (no need for traffic restrictions), this sensor system enables highly accurate measuring of damage on road surfaces and tunnel lining surfaces.



**Mobile PC Inspection Support System**  
When conducting on-site inspections, this system can be used to input data based on the history of the site. Furthermore, as there is no need to make records after on-site inspections, productivity is improved.

#### Activities of the Expressway Renewal Project



**Replacing slabs\***  
Old slabs are replaced with more durable concrete slabs.  
\*Slabs are parts of bridge structures that directly support the weight of vehicles, etc., passing over the bridge and transmit the load to the girders.





### Benefits of Opening Ring Road Around Tokyo (TOKYO-GAIKAN EXPWY between Misato-minami IC and Koya JCT)

Traffic between Saitama prefecture and Chiba prefecture (TOHOKU EXPWY ⇄ HIGASHI-KANTO EXPWY) used to go via the heart of Tokyo (SHUTO EXPWY), but, with the opening of the ring road (between Misato-minami IC and Koya JCT) on June 2, 2018, approximately 80% of traffic has switched over to the TOKYO-GAIKAN EXPWY. In addition, due

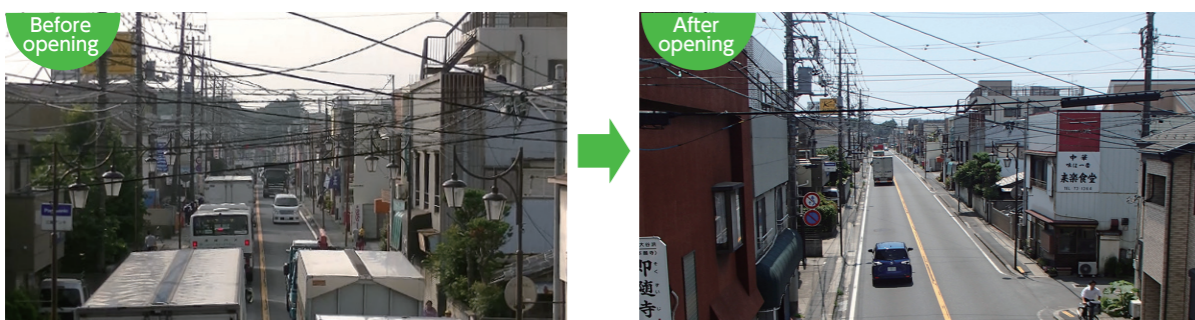
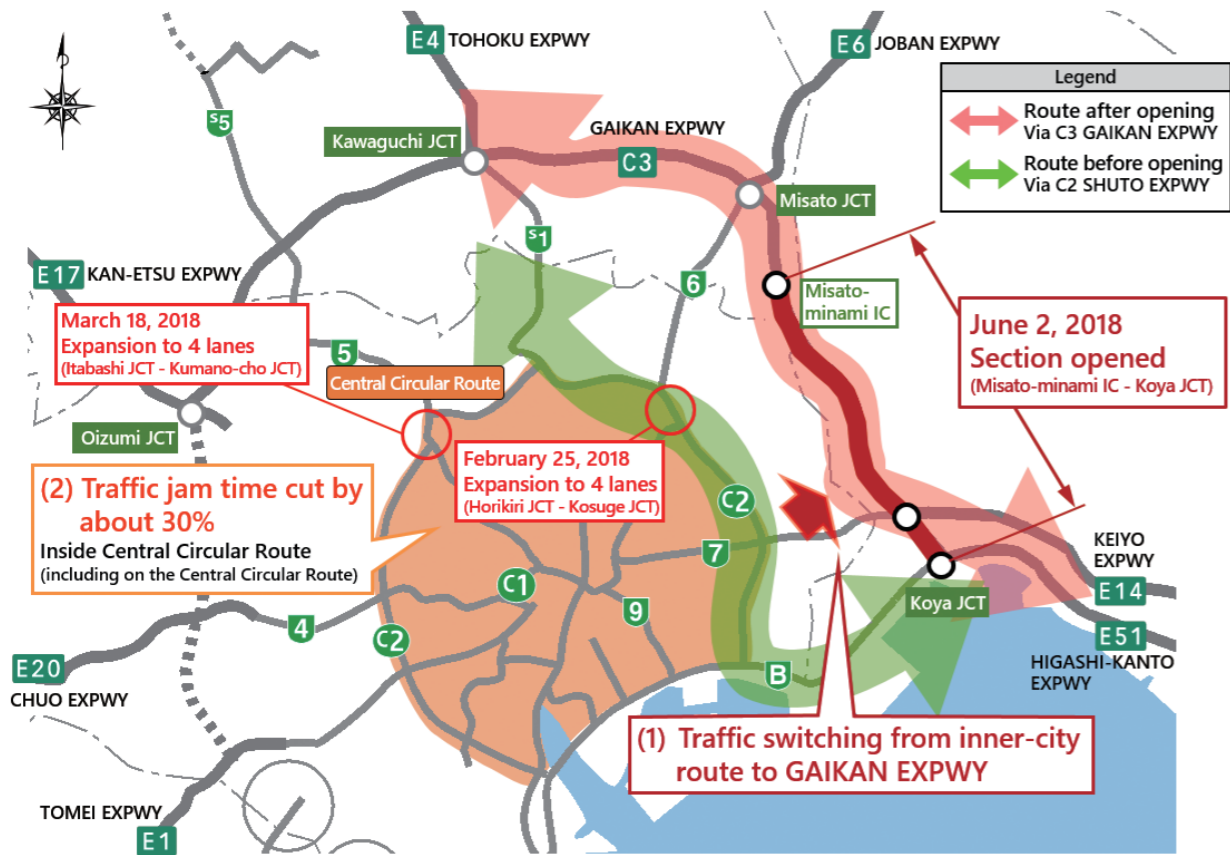
to the opening of the ring road and the expanding the number of lanes to four between Horikiri JCT and Kosuge JCT, the traffic congestion loss time of the SHUTO EXPWY inside the central ring (including on the Central Circular Route) decreased by about 30%.

### Regional Medical Care Strengthened Thanks to Opening of SHIRIBESHI EXPWY between Yoichi IC and Otaru JCT

With the opening of SHIRIBESHI EXPWY between Yoichi IC and Otaru JCT on December 8, 2018, the time required to carry critically ill patients to a tertiary emergency medical facility has been

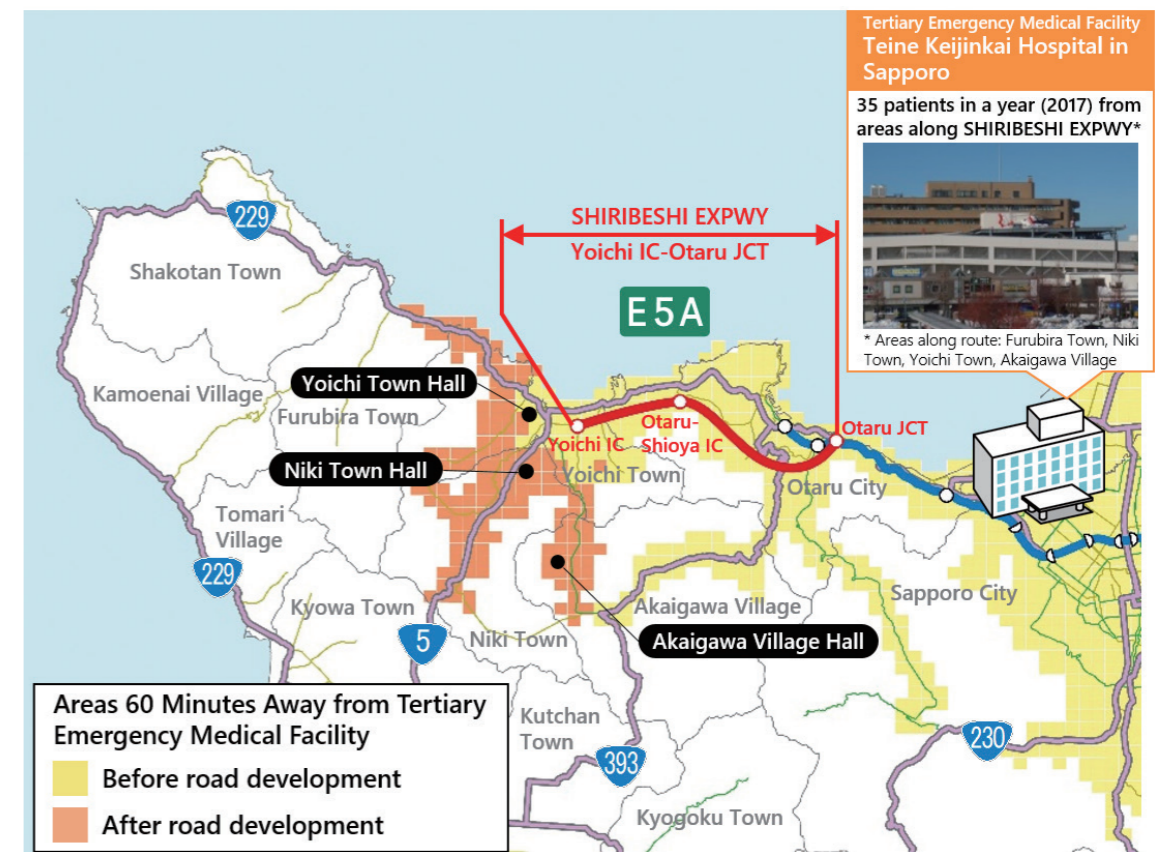
reduced, strengthening the emergency medical treatment service in the Shiribeshi region, which will hopefully contribute to safe, secure living in the area.

The following shows the routes before and after opening as well as changes to traffic congestion

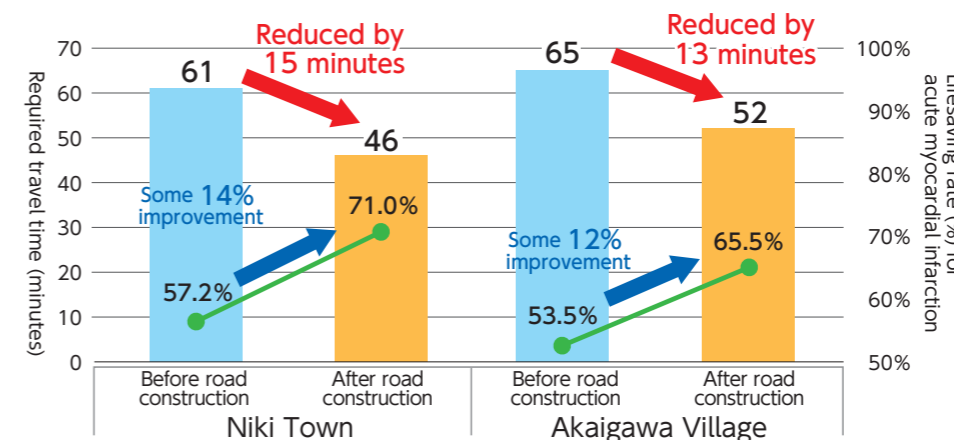


Photographed on September 26, 2017  
Photographed on July 19, 2018  
Improvement to traffic conditions on local road in the Ichikawa and Matsudo area

Areas now 60 minutes from tertiary emergency medical facility after completion of E5A section of SHIRIBESHI EXPWY



Required Travel Time to Teine Keijinkai Hospital in Sapporo and Changes to Lifesaving Rate



Material: 2015 study on organization of road traffic data on national highways: "improvements to emergency medical treatment due to road construction" (Japan Society of Traffic Engineers, Vol.45, No.5, 2010)

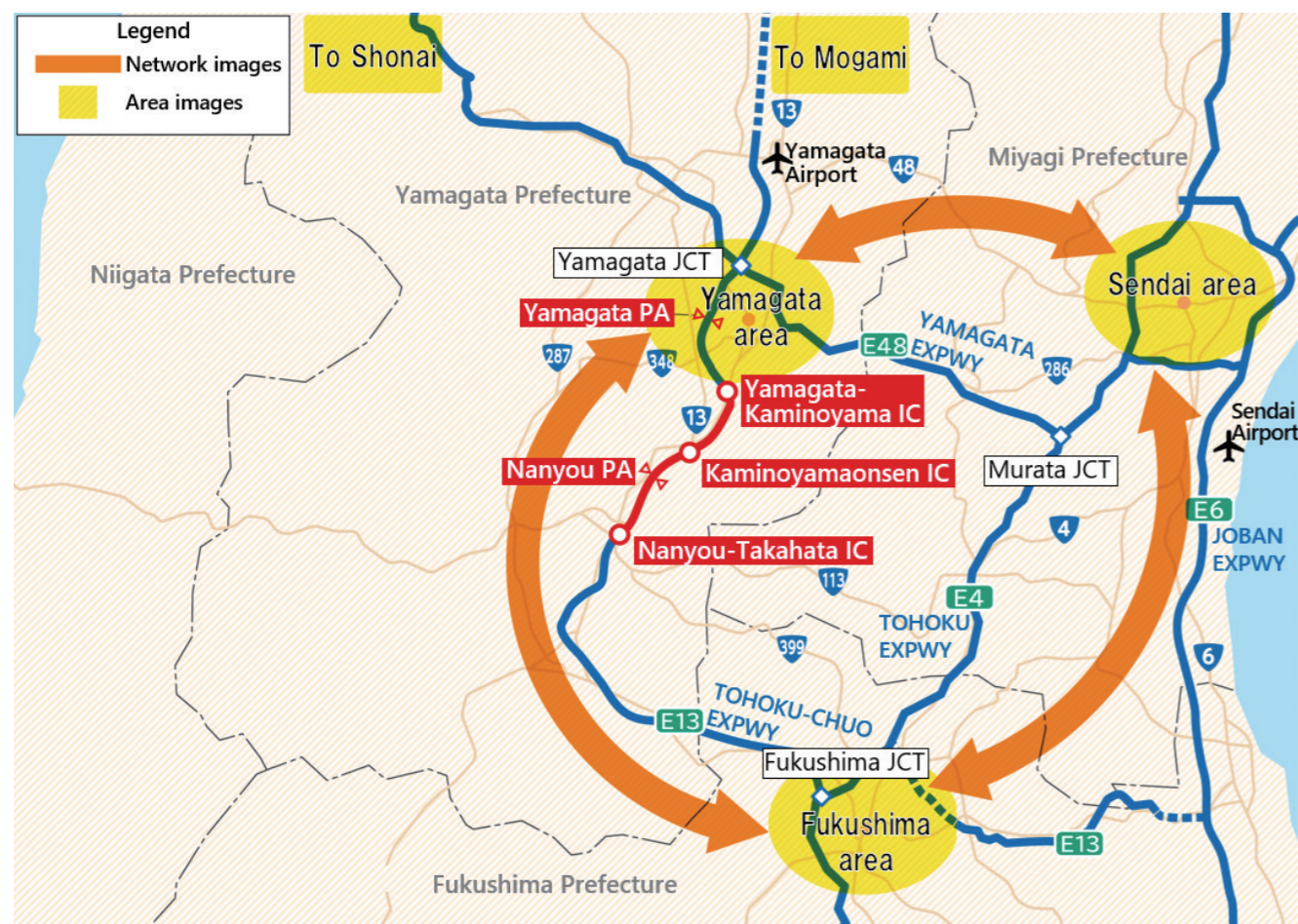
\*In response to moderate level of acute myocardial infarction



### Benefits of Opening TOHOKU-CHUO EXPWY between Nanyo Takahata IC and Yamagata Kaminoyama IC

The 24.4 km section of expressway on the TOHOKU-CHUO EXPWY between Nanyo Takahata IC and Yamagata Kaminoyama IC was opened on April 13, 2019, linking up the main inland cities of Fukushima, Yamagata and Akita prefectures. Indeed, with the opening of routes this time round, a double network has been formed for the

Yamagata area, the Fukushima area and the Sendai area, which means that routes mutually supplement each other and can maintain movement between areas, even if one of the routes (TOHOKU EXPWY, YAMAGATA EXPWY or TOHOKU-CHUO EXPWY) is closed for some reason.



### Accelerating Recovery Work via the Opening of Okuma IC on JOBAN EXPWY

Following on from the Great East Japan Earthquake, NEXCO East Group collaborated with Okuma town to advance the construction of the Okuma IC on the JOBAN EXPWY, opening the interchange on March 31, 2019. After Okuma IC was opened, Okuma town completed a new town hall, restarting administrative work in the town for the first time in about eight years and two months, following on from the earthquake – hence, since then, recovery work has picked up pace. The opening of Okuma IC is assisting the acceleration of recovery work, which will hopefully contribute to the recovery of the region by, for example, bringing efficiency to the transport of removed soil to interim storage facilities.



### Environmental Preservation Initiatives

#### Preventing Animal Intrusion

In areas where our planned routes pass through verdant countryside, NEXCO East Group installs intrusion prevention fences to prevent deer and other such wild animals from gaining access to expressways, where they could cause traffic accidents, such as collisions. We also install flight guiding poles to guide birds along movement pathways.



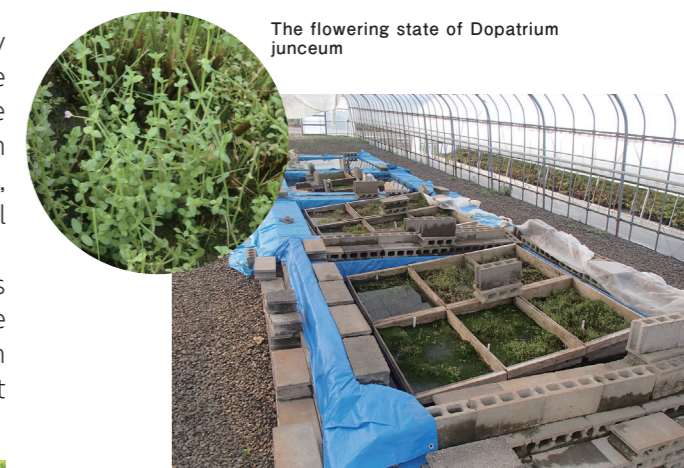
Deer intrusion prevention measures



Installation of bird flight guiding poles

#### Preserving Rare Plants

In an area where the topography was changed by an expressway, we found a rare plant, and, as the preservation period was before germination, we extracted the soil containing seeds, and let them germinate and grow in one of our group facilities, replanting them in a habitat similar to their original environment. Furthermore, to reduce the risk of extinction of this rare plant, we harvested the seeds from plants we cared for and sent them to the Shinjuku Gyoen National Garden of the Ministry of the Environment to be stored.



The preservation and growing of Dopatrium junceum (Greening Technology Center in the Nippon Expressway Research Institute Company Ltd.)



Gutter with crawling bank for small creatures

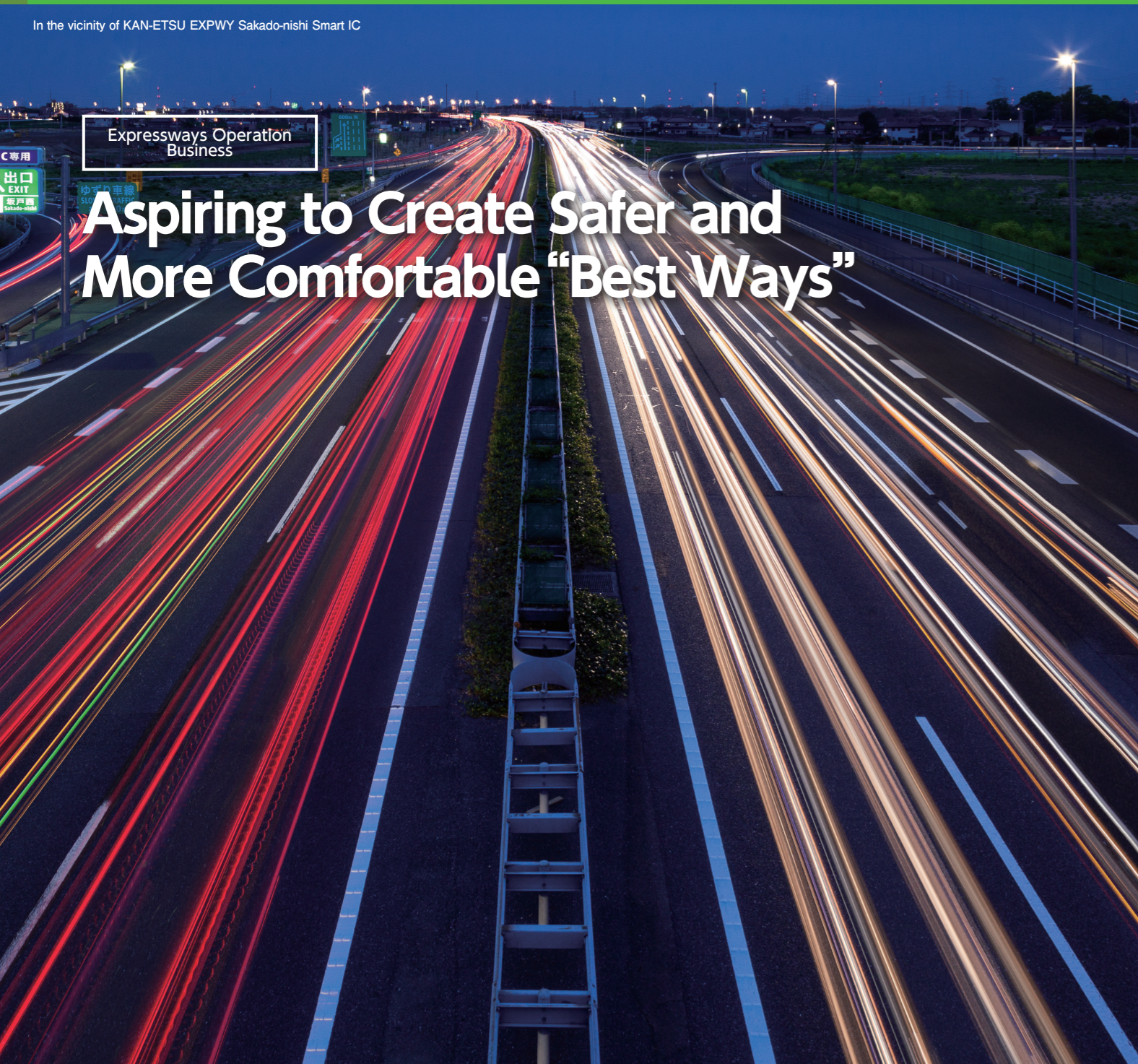
#### Preservation of Small Creatures

As planned roads pass through the habitats of small creatures, such as reptiles and amphibians, we install banked water channels to ensure movement routes that small creatures can crawl along.



Expressways Operation Business

# Aspiring to Create Safer and More Comfortable “Best Ways”



The Operation Division of NEXCO East supports the safety and reliability of 3,943 km of expressways in the eastern Japan area, 24 hours a day, 365 days a year. In addition to daily inspections, maintenance, and tasks regarding traffic safety and tolls, the Operation Division engages in a wide variety of projects, such as to strengthen the functions of expressways, including countermeasures for traffic congestion, as well as the Expressway Renewal Project for ensuring the soundness of the expressways for a long time into the future. In addition, securing transportation routes that support rescue and recovery activities as early as possible in the event of a large-scale disaster is also an essential mission of expressway-related companies.

Moreover, due to predicted changes in working age populations and the employment environment, improving efficiency and productivity is also a pressing task. The Operation Division is also working intensively on the realization of a next-generation comprehensive infrastructure management system (i.e., the “Smart Maintenance Highway Framework”) by utilizing the latest technologies, such as ICT and AI, and is focusing on the mechanization and advancement of operations to control snow and ice, due to having many regions with heavy snowfall under the company’s jurisdiction.

By putting customers first and giving top priority to safety, NEXCO East Group pursues the provision of safe, reliable, comfortable, and convenient expressways.

**Managing Director and Senior Executive Officer**  
**Director of Operation Division**  
**Tomomichi TAKAHASHI**

## Keeping a Close Watch on the Safety of Expressways 24 Hours a Day, 365 Days a Year

### Daily Maintenance Operations

At the NEXCO East Group, on a daily basis, we inspect and clean facilities to maintain the expressways in a condition for safe travel, and we also schedule repairs of road to keep them safe and reliable at all times.



Hammering test inspection on bridge



Repairing road surface



Grass cutting an embankment



Cleaning the lights in a tunnel

### “Relaxation through Flowers and Greenery” Expressway Garden Project

This is a project to establish “Expressway Gardens” to turn gardens of rest areas into easier-to-use and comfortable spaces, as well as to enhance local identities and seek cooperation with local communities. NEXCO East continues working to provide customers more peaceful and more soothing spaces.



An Expressway Garden that was designed and supervised by the garden facilities near a neighbourhood (Iwamizawa SA [outbound], DO-O EXPWY)



### Traffic Control Center

The Traffic Control Center is divided into the Traffic Control Division (keeping up to date on road conditions on expressways, dealing with unusual occurrences and offering information to customers)



Traffic Control Center, Kanto Regional Head Office (Traffic Control Division)

and the Facility Control Division (constantly monitoring the diverse range of facilities on the expressways), and strives to provide safe and comfortable expressways.



Traffic Control Center, Kanto Regional Head Office (Facility Control Division)

### Traffic Management Patrol

Regularly and on special occasions, we patrol expressways to collect information, such as traffic status due to congestion, etc., and the state of roads due to fallen objects, etc. Indeed, it is

important for the Traffic Patrol Squads to train on a daily basis, as they have to hasten to the scenes of unusual events to clean up fallen objects.

〈Achievements in 2018〉

Number of Fallen Objects Cleaned Up

Approx. **102,000** operations

Distance Covered in Traffic Management Patrols

Approx. **23,000,000** km

(Approximately 1.5 laps around the earth per day)



A scene from on-site action



A scene from regulation training

### Cracking Down on Vehicles in Violation of Laws and Regulations

The maximum speed limits according to vehicle dimensions on roads and the hazardous materials that vehicles can carry through long tunnels are designated by laws and regulations. In particular, overloaded vehicles that are in violation of laws and

regulations have a large impact on the structures of expressways and may lead to serious accidents. Therefore, NEXCO East Group cracks down on those vehicles at toll gates on the interchanges of expressways.



Traffic law enforcement (pulling over a vehicle)



Checking to see if a vehicle being operated legally

## Maintaining and Improving the Driving Environment

### Measures for Traffic Safety

In order to prevent traffic accidents, NEXCO East Group analyzes the situations of traffic accidents that have occurred in the past and implements various traffic safety measures such as using chevron alignment signs, high-visibility reflective

tape, guiding lane markings, rumble strips, and thin-layer pavements so as to call attention to sharp corners, control speed and prevent lane departure, etc.



Sharp curve sign



Guiding lane markings (broken line section)

### Measures to Prevent Driving the Wrong Way

As driving the wrong way on expressways can cause fatal accidents, we promote measures to prevent unreasonable turning and wrong way driving, including the installation of rubber poles at merging points to main lanes, arrows and signs indicating the correct driving direction, and coloring of road surface according to direction at crossing points of Y-shaped interchanges.



Measure to prevent wrong-way driving at flat intersection of flat Y-shaped IC

### VOICE

Member of Nagaoka Traffic management Office  
Nexco-Support Niigata Company Ltd.

**Naoto SHINADA**



As members of the Traffic Patrol Squad, we have to be available 24 hours a day, 365 days of the year, to swiftly deal with unusual occurrences, such as objects that fall onto expressways, breakdowns and traffic accidents. One momentary judgmental mistake or hesitation can easily endanger patrol members and customers (expressway users). Thus, we train daily in various situations that we can expect on site. And, my goal is to improve my skills so that, whatever the situation, I remain calm and collect as I undertake my work safely. From here too, I will strongly adhere to being a professional, prioritizing the safety of customers and striving to ensure comfortable travel on our expressways.



Rest Area Business

# For More Convenient and Comfortable Service



The Rest Area Business Division operates 199 commercial facilities, including "Pasars" and "YASMOCCA," at rest areas and parking areas on expressways, along with running expressway-related businesses, such as the Asset Utilization Business. Also, we have systematically established new commercial facilities, expanded and renovated them, and renewed aging facilities at rest areas and parking areas, so that our customers can use them safely, reliably, comfortably and conveniently. In addition, we aspire to create rest areas (service areas & parking areas [SA/PA]) that contribute to local communities, by acting as showrooms for the various regions, devising menus that use locally grown produce, and by establishing walk-in gates. We are also creating rest areas for foreign visitors that feature duty-free shops, area concierge multilingual guidance and easy-to-understand pictograms. Regarding the expressway-related business, we proactively engage in a wide variety of business by efficiently using management resources, such as businesses utilizing spaces below elevated structures, and the hotel business.

Managing Director and Senior Executive Officer  
 Director of Service Area Business Division  
**Ryuichi HAGIWARA**

## Engagement in the Creation of Unique and Fascinating Rest Areas



### Development of "Enrichment of Uniqueness and Attractiveness" Areas

#### ● Development of Pasar

"Pasar" is the flagship brand of NEXCO East Group's commercial facilities called "Michi-naka (In Expressway)," and it has provided familiar chain stores for public and gourmet foods that drivers can only enjoy onsite, aspiring to offer a wide

variety of services. So far, six Pasars have opened near the Tokyo Metropolitan Area, including Pasar Makuhari (Outbound) on the KEIYO EXPWY.



Pasar Moriya (Outbound), JOBAN EXPWY



- List of Pasar**
- Hanyu PA (Outbound), TOHOKU EXPWY
  - Miyoshi PA (Inbound), KAN-ETSU EXPWY
  - Moriya SA (Inbound), JOBAN EXPWY
  - Moriya SA (Outbound), JOBAN EXPWY
  - Makuhari PA (Inbound), KEIYO EXPWY
  - Makuhari PA (Outbound), KEIYO EXPWY
  - TOHOKU EXPWY Hasuda SA (inbound) opened on July 29



## Improving Comfort to Create Customer-Friendly Rest Areas and Parking Areas for Everyone

### Accessibility Measures

Aiming for rest areas and parking areas that are comfortable to use for all our customers, we are introducing universal design and making our facilities accessible to those with disabilities by eliminating steps, providing disabled parking, wheelchairs and communication boards.



Parking for the disabled



Multifunctional restroom (universal toilet)

In addition to installing warm water bidet-style toilet seats and automatic hot-water faucets, we are providing large stalls with baby seats and small handwashing facilities, children's urinals and ostomate-equipped toilets (restrooms equipped with washstands for colostomy bag users).

### Spaces for Kids and Infants

At many rest areas and parking areas, we also installed diaper-changing stations, nursing rooms, and hot-water heaters for baby formula so that small children and their families can use expressways in comfort.



Diaper-changing station and nursing room (JOBAN EXPWY, Moriya SA [inbound])



Kids' space (KEIYO EXPWY, Makuhari PA [outbound])

### Installation of Quick-Chargers

NEXCO East Group is progressively installing quick-charging stations for e-vehicle users, with 149\* quick-chargers installed up to now, and

more installations pending based on their usage trend.

\*As of July 1, 2019



KITA-KANTO EXPWY, Mibu PA (west bound)

### Multilingual Guidance

For all the facilities in rest areas and parking areas, including commercial facilities and toilets, NEXCO East Group has added multilingual explanations (English, Chinese [simplified/traditional], Korean, etc.) to international symbols and JIS-standardized pictograms to provide

guidance to overseas visitors.

Also, all of our information desks provide multilingual assistance using tablets and portable translating devices, so as to make our commercial facilities convenient for overseas visitors.



Pictogram display



Multilingual guidance by tablet





Shield machine at GAIKAN EXPWY Oizumi JCT

Expressway Construction Business

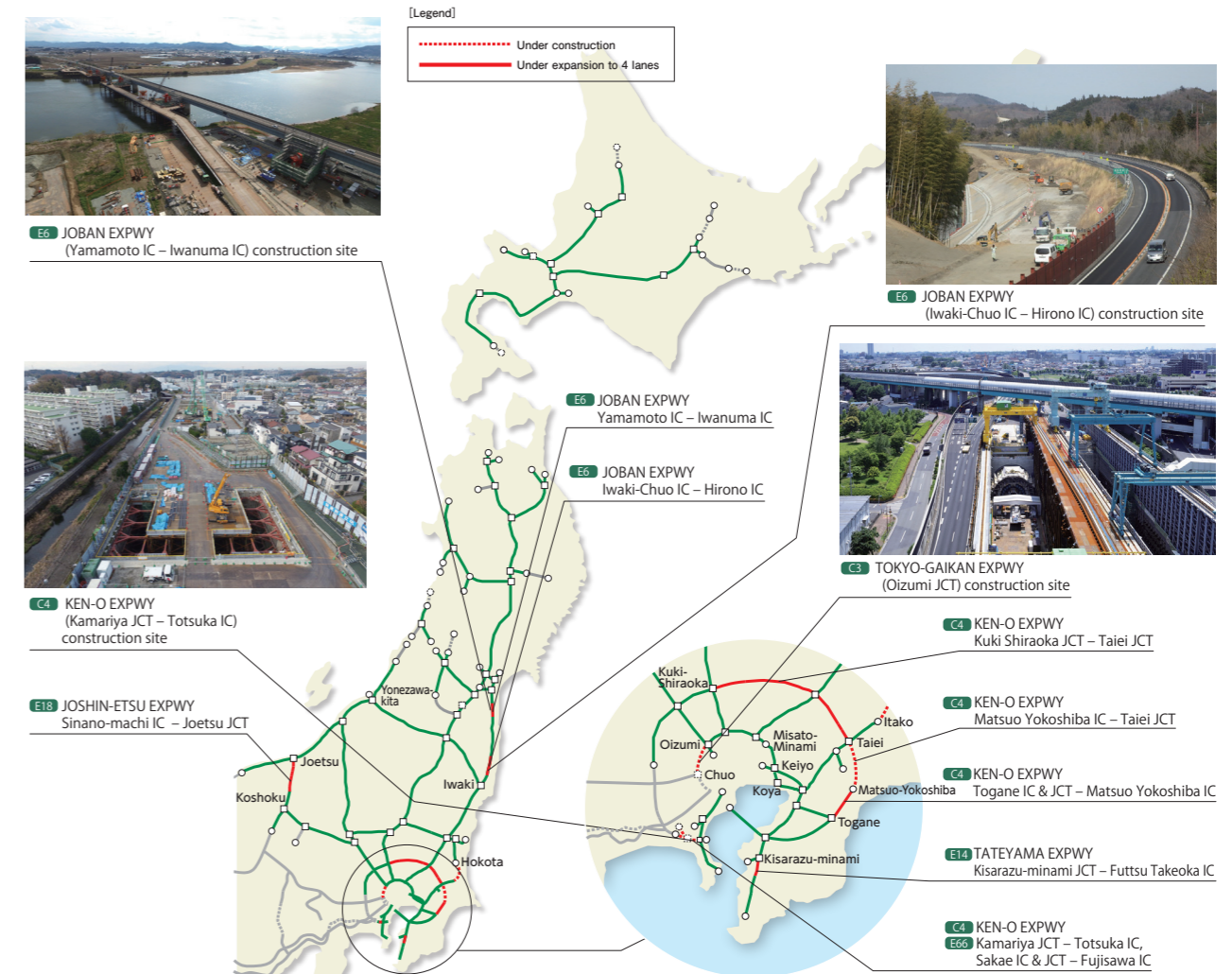
# Building the Network and Further Enhancing Functions

## Steadily Expanding Expressway Networks so as to Contribute to the Development of Local Communities

### Promoting the Steady Expansion of Expressway Networks

NEXCO East is working to develop the expressway network and increase the number of lanes to four in eastern Japan, starting with the Metropolitan Area. Since 2005, 12 routes (605 km) have been added into the network, with four routes (86 km) expanded to four lanes. Within these works, a 23.3 km section of expressway on SHIRIBESHI EXPWY between Yoichi IC and Otaru JCT was opened in December 2018 and a 24.4 km section on

TOHOKU-CHUO EXPWY between Nanyo Takahata IC and Yamagata Kaminoyama IC was opened on April 13, 2019. And, we will continue to push ahead steadily with work to add four more routes (75 km) to the network and expand six more routes (164 km) to four lanes, in order to contribute to the development of regional communities.



At the Construction & Technology Division, we work to develop expressway construction business, building the expressway network and further enhancing functions.

Although our expressway network is well established, there are still missing links in some areas, starting with the Tokyo Metropolitan Area. Yet, amidst the tough constraints of working in urban locations, we will complete the network using the latest technologies while putting safety first.

Indeed, once the expressways are completed, there will still be a demand for further improvements to functions from the perspective of enhancing safety, time reliability and comfort, as well as ensuring optional routes to cover for unforeseen temporary closures (redundancy measures). Therefore, while ensuring traffic movement on existing expressways, we will push ahead with efforts to expand from provisional two-lane roads to four-lane ones, install additional lanes, and build smart interchanges and new rest areas.

In addition to the construction technologies we have developed at NEXCO East, we will use cutting-edge technologies, such as i-Construction, to further improve productivity, as we strive to build even more trustworthy roads that prioritize safety as well as pursue quality and cost efficiency.



Managing Director and Senior Executive Officer  
 Director of Construction Division  
**Kazuhiro SAWADA**



## Developing the Expressway Network by Continuously Applying Various “Creation Technologies”

### Tunnel Construction in Urban Areas

Shield machines have been used for constructing tunnels in urban areas on the TOKYO-GAIKAN EXPWY and KEN-O EXPWY. In particular, for the construction of the TOKYO-GAIKAN EXPWY

(between the KAN-ETSU EXPWY and TOMEI EXPWY), we used a shield machine that has the largest cross-section area in Japan—about 16 m in diameter.



Tunnel construction using shield machine



Shield machine with largest cross-section area in Japan

### Various Beam Constructions

In spanning roads that the expressway intersects with elevated structures (viaducts, etc.), traffic has to be stopped at night while we get a multi-axle truck into position to put a beam system up in one go. Whereas, it can be difficult to get cranes

into position when spanning between mountains or crossing rivers, so we use cable erection techniques, always employing the spanning technique that suits the on-site conditions.



Consolidated viaduct construction using a multi-axle truck



Cable erection work

### VOICE

Construction Manager  
Iwanuma Area  
Sendai Construction  
Office  
Tohoku Regional Head  
Office

Denichiro YAMADA



I am in charge of on-site work on expanding the JOBAN EXPWY to four lanes. I am immensely happy to be able to hold the position of construction manager, a much sought after engineering position at NEXCO East, and, as such, I go about my daily work with a strong sense of mission. The main work I oversee in my section is the construction of the Abukumabashi, a long bridge extending 534 m. We are using special construction techniques, so there are lots of issues to overcome, but we are striving to build a road of high quality that will be easy to use – thus, step by step, we will show our true mettle in getting the job done in line with the principle of safety first.

## Focusing on Quality, Cost and Productivity while Always Placing Top Priority on Safety to Build More Reliable Roads

### Improving Work Safety

Of all the technologies at our disposal, the most important one is “safety.” More than ever, we are strongly promoting initiatives to introduce safety-related techniques and raise awareness of safety among everyone involved in our work from construction of expressways through to operation and maintenance of them.



On-site safety training

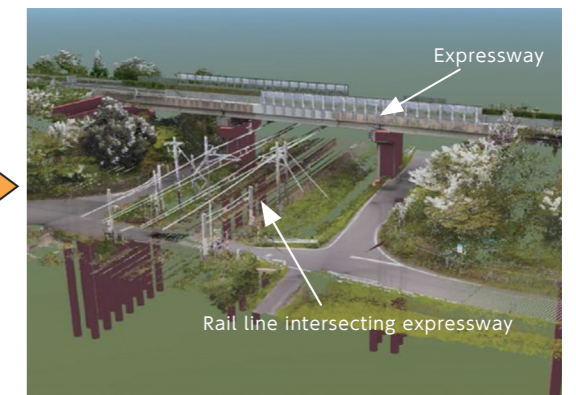
### Promotion of i-Construction

In Japan, decreasing birth-rate and aging population are leading to a reduced working age population in the construction industry field, where it is becoming a serious issue. Up to now, initiatives have been taken to employ computer-aided construction in civil engineering and precast

technology for structures – yet, when it comes to the responsibility of building and operating important infrastructures like expressways, we are readily turning to i-Construction in order to further improve productivity.



Vehicle-mounted camera



3D map

A vehicle-mounted camera is used to gather point group data to create 3D maps that enable us to efficiently grasp the precise positions of intersecting properties (the rail line in the above map).

### ●What is i-Construction?

By introducing ICT\* into all areas of on-site construction work, we improve productivity in all areas of our constructing system while aspiring to make our construction sites more appealing.

\* ICT (Information and Communication Technology) is the technology we consistently use in all civil engineering processes – surveying, designing, scheme of execution, construction and inspections.



# Making Use of Our Technology to Realize Next-generation Expressways



At the Technology Development Division, we are working on R&D projects on realizing SMH by advancing inspection methods, enhancing traffic safety, advancing countermeasures for snow and ice, and preserving the environment, all as technologies that make the most of aging expressways. In addition, we are making use of the technologies and knowhow we have nurtured up to now, to contribute to regional communities through public-private collaborations and operation of local government infrastructures as well as in development of business overseas, international interaction and international conferences. Also, to make sure that such technologies get passed on to the next generation, we undertake a variety of necessary initiatives, including the preparation and operation of the NEXCO East Technology Center as a place where the essential training of engineers can take place, so that they can, in turn, undertake the technological R&D we need.

Managing Director and Senior Executive Officer  
 Director of Technology Division  
**Kaoru MATUSAKI**

## Making Use of Cutting-Edge Technology to Contribute to Society

### Development of Driving Support System for Snowplows

Apart from prioritizing safety in our development of technologies, NEXCO East endeavors to advance countermeasures for snow and ice by utilizing IoT, AI, and robotics, in order to reduce road closures in the winter and cope with the shortage of skilled workers who implement these countermeasures.

At present, we are developing and trialing driving support technologies to guide the safe operation of snow-ice control vehicles by combining the Quasi-Zenith Satellite System, which can provide high-precision location information, with high-precision 3D map data.

① Combining technologies

② Development of system

③ Trialling

Making use of the Quasi-Zenith Satellite System and further advanced technology, we have been working on the autopilot technology to

drive rotary-blade snowplow at high speed (approximately 50km/h), which supports snow removal work.



Image of how high-speed snow plowing can be assisted



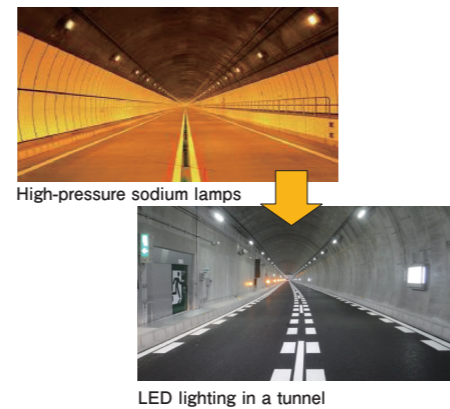
Image of rotary-blade snowplow on autopilot



## NEXCO East's Various Efforts for Environmental Preservation

### Energy Conservation and Employing High-visibility Lighting Fixtures

NEXCO East is upgrading the lighting in tunnels from conventional high-pressure sodium lamps to LED lamps, which is improving visibility and also saving energy. In FY2018, lighting in 29 tunnels was changed to LED lamps. The total reduction in electricity usage by switching to LED lamps so far is estimated at approximately 35 million kwh/year (CO<sub>2</sub> reduction of about 19,000 tons/year). Also, in addition to tunnel lighting, we are now reducing electricity usage even further by introducing LED lamps for lighting on roads.

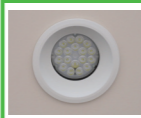

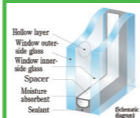





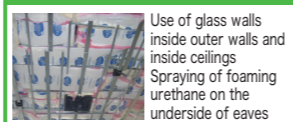


### Promoting Environmentally Friendly “eco Inters” and “eco Areas”

Based on a policy of actively installing energy-saving electrical facilities in interchanges and rest areas, NEXCO East is promoting the establishment of “environmentally friendly” facilities in which steps

are taken to improve the efficiency of heating and cooling systems inside buildings and utilize reusable energy sources such as solar power.

#### An example of eco Inters

<b>Indoor lighting</b>  LED lighting used as standard	<b>Solar power</b>  Solar power generation: 5 kW	<b>Double-paned glass sashes</b>  Double-paned glass used as standard for the outer surface sashes
<b>Thermal insulation coating</b>  Use of a folded-plate thermal insulation coating product		
<b>Road lighting</b>  Use of LED floodlights		
<b>Information boards</b> Use of LED units		
<b>Signal lights</b> Use of LED lamps		
<b>Gate lighting</b>  Use of LED floodlights		
<b>Water heating systems</b>  Use of electric water heaters (EcoCute)	<b>Eave materials</b> Use of aluminum panels to lighten the eaves. Implementation of fall-prevention measures in both base materials and finished materials	<b>Thermal insulation</b>  Use of glass walls inside outer walls and inside ceilings. Spraying of foaming urethane on the underside of eaves

### Reducing Impact on Habitats Along Our Roads

NEXCO East is erecting noise barriers and establishing roadside greenbelts to reduce the impact on the environment along our expressways. In FY2018, we erected some 15 km of noise barrier, which means we have erected a total of approximately 1,080 km.



GAIKAN EXPWY (Misato-minami IC - Koya JCT) roadside greenbelt

### Tree Planting to Help Prevent Global Warming

Up to FY2018, NEXCO East has planted trees on approximately 3,700 ha of expressway land. These trees absorb CO<sub>2</sub>, providing an estimated fixed effect of approximately 39,000 tons of absorbed CO<sub>2</sub> per year. And, we take care to appropriately manage our green infrastructures (including the trees).



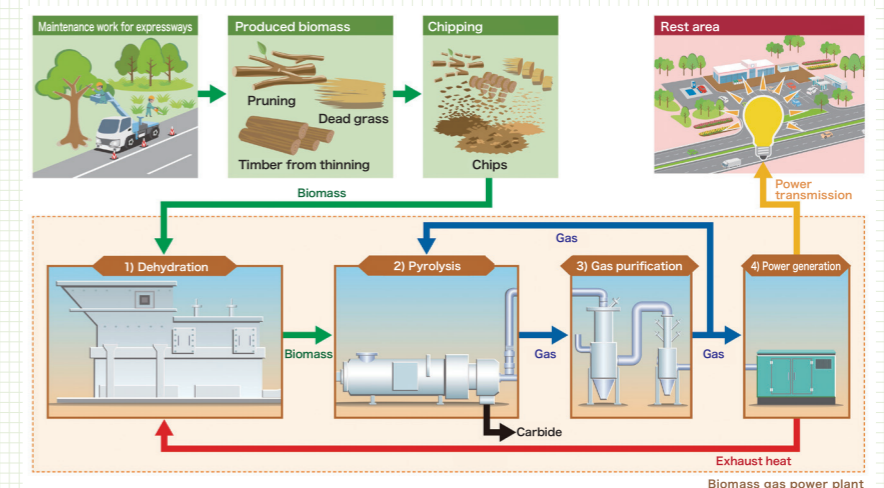
How a bank looks when the trees are first planted



The state of the trees after some years of management

## New Green Recycling Challenge ( “Biomass Gasification Power Generation” )

NEXCO East operates a biomass gas power generation system that utilizes the gas derived from pyrolysis as energy, as a new recycling system for the plant-derived materials produced from the mowing of grass, pruning of trees, and thinning of timber, in order to supply electricity to a rest area (Nasu-Kogen SA [Inbound], TOHOKU EXPWY).





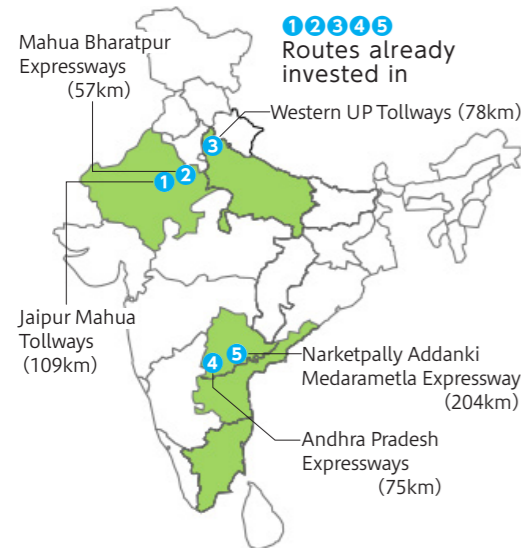
# Developing Overseas Business By Utilizing the Technologies and Know-how of NEXCO East's Expressway Business

## Participating in the Overseas Road Project

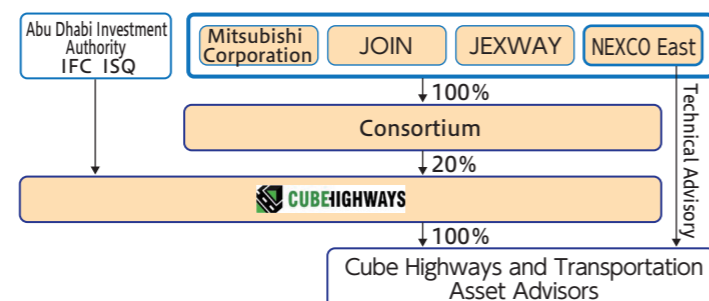
In 2010, NEXCO East established a liaison office in India, where large-scale road development is expected, and has been collecting information and participating in projects there. In March 2014, the company entered the road Public-Private Partnership (PPP) business in India through the acquisition of 9% of the shares of a Special Purpose Vehicle (SPV) and set about the task of preparing for participation in Indian business. Since April 2017, NEXCO East has been providing technical advisory services to Cube Highways (Cube Highways and Infrastructure Private Limited) regarding surveying and designing of a rest area project on a toll road in India, and we are currently examining how we can expand our rest facilities business. Furthermore, in December 2017, we formed a consortium with Mitsubishi Corporation and Japan Overseas

Infrastructure Investment Corporation for Transport & Urban Development (JOIN) and have acquired a 20% share in Cube Highways (the Indian PPP operating company), fulfilling the basic agreement of participating in toll road operation business in India. Since then, Japan Expressway International Company Limited (JEXWAY) has joined the consortium, which then completed acquisition of shares for five routes (extending approximately 520 km [routes (1) to (5) on the map below]) in December 2018 and commenced participation in earnest. Going forward, we will focus on discussions and coordination to acquire the shares of other routes, while we will also provide technical advice to bring improvements and added value to this business.

### Our Toll Road Business in India (As of April 2019)



### Diagram of Investment in Cube Highways



Jaipur Mahua Tollways (Item 1 on left side map)



Western UP Tollways (Item 3 on left side map)

## Consulting Projects for ODA

NEXCO East provides surveying, planning and technical support for projects in the road, bridge, tunnel and ITS sectors as part of the Government of Japan's efforts to promote the export of quality infrastructure to developing countries.



Supervising a local engineer in India on a project to strengthen development capacity for building sustainable mountain roads



Traffic congestion in Bengaluru, India



Overseas engineers at NEXCO East for training



On-site supervision in project for capacity development of road bridge technology in Myanmar

## International cooperation

Through the Japan International Cooperation Agency (JICA), we have dispatched two long-term experts in the fields of construction and maintenance, one each to India and Myanmar

(as of April 2019). Moreover, in FY2018, NEXCO East received about 100 foreign trainees in Japan through agencies such as the Ministry of Land, Infrastructure, Transport and Tourism and JICA.



The JICA expert in India (second from left)



JICA expert in Myanmar (standing at lectern)

## International Exchange

NEXCO East has exchanged technical information for expressways since April 2008 with ASFINAG, the public corporation managing expressways in Austria. In FY2018, young members of our group visited ASFINAG in Austria, where they interchanged various views and opinions on expressways with their Austrian counterparts.



NEXCO East Group employees visiting ASFINAG in Austria in June 2018

## International Conferences

NEXCO East collects and transmits information on expressway technologies around the world through participation in conferences held by the International Science Council. In 2018 and 2019, engineers from NEXCO East and our group companies participated in the PIARC International Winter Road Congress in Poland, the ITS World Congress in Denmark, the India Road Congress (IRC) in India and a concrete paving seminar in India, where they broadly passed on information about our technologies and know how to foreign audiences.



Presenting a paper at the IRC concrete paving seminar in India in January 2019



Fulfilling Our Social Responsibility

# For Society and For Employees



Recognizing that employees' health is essential to fulfill the mission of providing safe, reliable, comfortable, and convenient expressways, we have been engaged in workstyle reforms with the goal of creating a company where each of our employees can live a healthy life, work with peace of mind and feel one's work is worth doing. As a part of workstyle reforms, we establish a comfortable working environment as well as propose diverse work styles. Additionally, in order to change the mindsets of our employees, the "E-shokuba creation campaign" (employee health-oriented corporate management) has been started since 2016.

Moreover, through our business activities - starting with expressway business - we are collaborating with various partners to contribute to the fulfilling of SDGs (Sustainable Development Goals).

We also place great value on communicating with all our stakeholders about the activities that support our business, such as internal controls, accounting practices, financial operations, advertising and CSR, and strive to ensure that these activities are carried out efficiently and properly so that we can realize even sounder management.

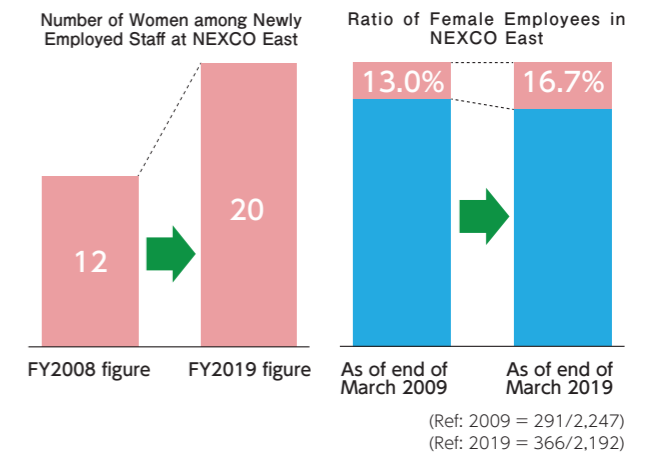
Managing Director and Senior Executive Officer  
 Director of General Affairs & Accounting Division  
**Makoto ARAKAWA**

## Promoting Active Participation of Women

To build our company and workplaces into platforms where women can participate more than ever, NEXCO East is pushing ahead with the creation of female-friendly workplaces, including the establishment of a "Project Promoting Active Participation of Women," as well as setting up female-only restrooms in our offices, all as across the-group efforts that we can unite together to carry through.

Additionally, in an initiative mainly run by the Gender Equality Bureau Cabinet Office, the examination of and consequent implementation of specific measures from five perspectives: "employment, appointments and human resources development," "realization of work-life balance," "reform of workplace environments," "raising of awareness among employees and behaviour reforms" and "in-house advertising strategies"

are taking place, including efforts such as science and technology companies signing up to become "supporters of science and technology challenges" as well as holding female-only company briefing sessions for female students on science courses and proactively promoting employment of women.



## The CSR Ideal to Which NEXCO East Group Aspires

In February 2014, NEXCO East Group formulated the "CSR Declaration," which is the CSR ideal to which NEXCO East Group aspires. We take action for CSR following the slogan, "We connect communities and are connected to communities" to realize our Management Principles and Visions.



## CSR Activities Making the Most of Our Expressway Business

We are promoting CSR activities cored around three items (vitalization of regional communities, promotion of traffic safety and environmental preservation) that make use of our expressway business.

In particular, in an effort called "Kofuku-Renkei," where

our expressways work together with social welfare bodies, we aspire to contribute to the activation of regional communities through expressways by providing opportunities for the disabled to participate in events, such as jointly run clean-up campaigns and greening projects held at Rest Areas.



Kofuku-Renkei Expressway and social welfare body working together at rest area (JOSHIN-ETSU EXPWY Arai PA)



Winter safety driving workshop for the elderly (Memuro-cho)



Clean-up event at Yokotegawa (Yokote-city)

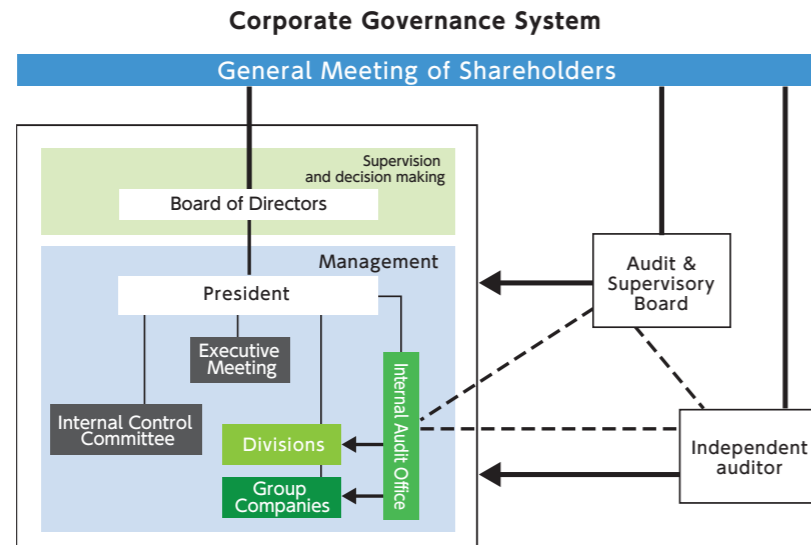


# Having Established a Suitable System, We Work to Ensure Sound, Efficient and Transparent Management

## Corporate Governance

At NEXCO East, we are establishing an internal controls system, including the setting up of an internal control committee as well as construction of a compliance system and a risk management

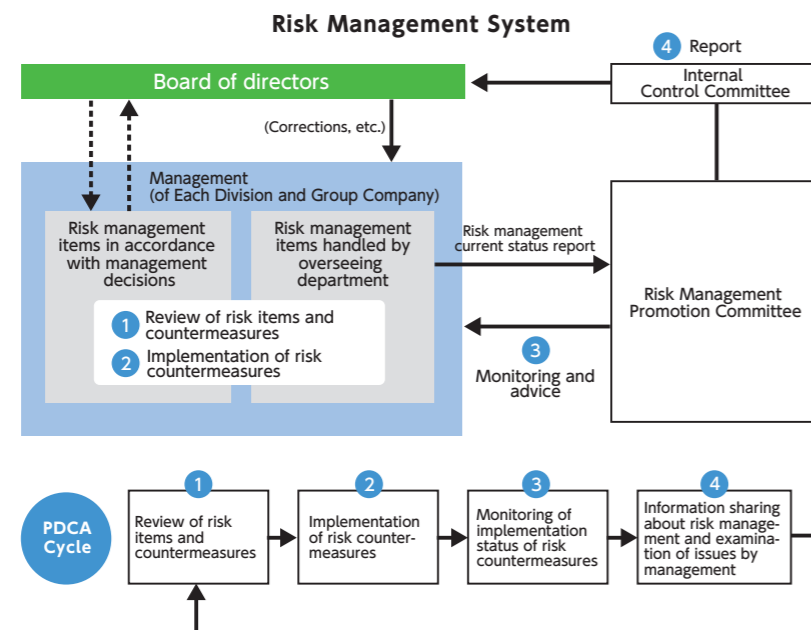
system (see below), in order to give our corporate governance the kind of repleteness that enables us to conduct business appropriately and efficiently.



## Risk Management System

Regarding the risks incumbent in management, NEXCO East hold board of directors meetings to deliberate over a given risk that could have immense impacts on the company while at the same time configuring countermeasures in overseeing departments, as well as setting up a "Risk Management Promotion Committee" to support the implementation of risk

management in accordance with the plan-do-check-act (PDCA) cycle. In the Risk Management promotion Committee, the relevant department(s) identify the most serious risks that could have a major impact on the company, mostly using items that span multiple fields and making the items the main targets of their monitoring.



## Company Profile

Trade Name	East Nippon Expressway Company Limited		
Location of Head Office	Shin-Kasumigaseki Building, 3-2, Kasumigaseki 3-chome, Chiyodaku, Tokyo 100-8979, Japan <Service Area Business Division> MOMENTO SHIODOME Bldg., 3-17, Higashi-Shimbashi 2-chome, Minato-ku, Tokyo 105-0021, Japan	TEL	+81-3-3506-0111
Representative	Toru Obata, President and Chief Executive Officer		
Date of Establishment	October 1, 2005		
Capital	52.5 billion yen		
Number of Employees	2,283 (As of March 31, 2019. This figure excludes employees from our company assigned to outside the company and includes employees from outside the company assigned to our company)		
Business Purpose	To facilitate road traffic via effective new construction, reconstruction, maintenance, repair, and other forms of expressway management, etc., thereby contributing to the healthy development of the national economy and the improvement of the life of the people.		
Business Descriptions	Expressway management and construction business, rest area operation business, parking lot operation business, below-viaduct area utilization business, truck terminal operation, credit card business, internet services business, hotel business, overseas business, etc.		

## Board Members

Chairman	Kunie Okamoto	
President and Chief Executive Officer	Toru Obata	CEO
Representative Director and Executive Vice President	Seigo Sakaki	Director of Corporate Strategy Division
Managing Director and Senior Executive Officer	Ryuichi Hagiwara	Director of Service Area Business Division
Managing Director and Senior Executive Officer	Makoto Arakawa	Director of General Affairs & Accounting Division
Managing Director and Senior Executive Officer	Kazuhiro Sawada	Director of Construction Division
Managing Director and Senior Executive Officer	Tomomichi Takahashi	Director of Operation Division
Managing Director and Senior Executive Officer	Kaoru Matsusaki	Director of Technology & International Division & Deputy Director of Operation Division (Renewal)

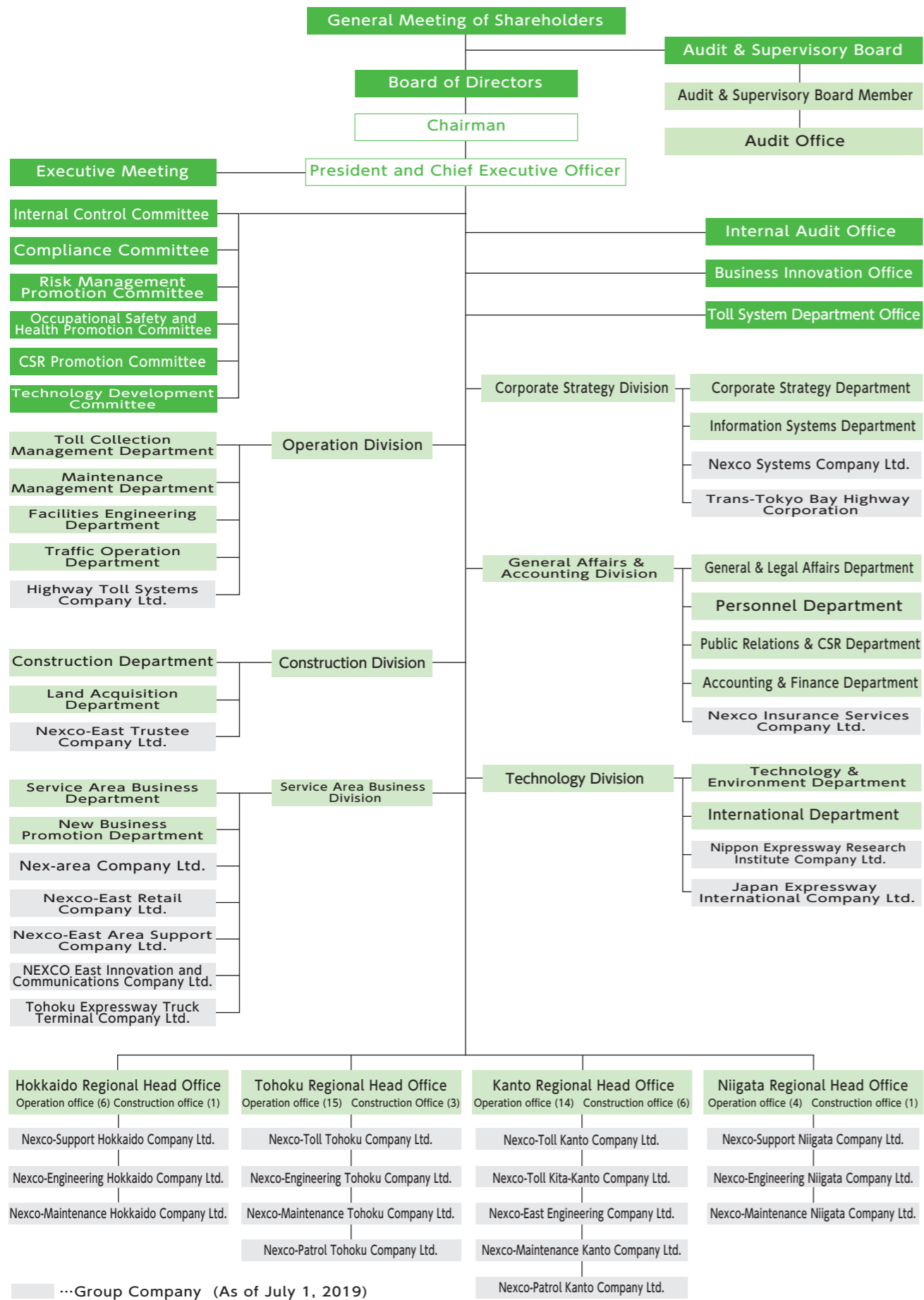
Audit & Supervisory Board Member (full-time)	Taizo Fujita	
Audit & Supervisory Board Member (full-time)	Noboru Okamoto	
Audit & Supervisory Board Member	Michiaki Ozaki	
Audit & Supervisory Board Member	Keiko Sakurai	

Executive Officer	Shigemi Oba	Deputy Director of Operation Division & Director of Toll Collection Management Department
Executive Officer	Youichi Chida	Deputy Director of Operation Division & Director of Maintenance Management Department
Executive Officer	Hiroyuki Tanaka	Director of Corporate Strategy Department, Corporate Strategy Division
Executive Officer	Yutaka Shina	Director of Personnel Department, General Affairs & Accounting Division
Executive Officer	Hideo Yoshimi	Director of Accounting & Finance Department, General Affairs & Accounting Division
Executive Officer	Naoki Tanaka	Director General of Hokkaido Regional Head Office
Executive Officer	Shigeki Yagi	Director General of Tohoku Regional Head Office
Executive Officer	Toru Yoshimine	Director General of Kanto Regional Head Office
Executive Officer	Hiroyuki Suzuki	Director General of Niigata Regional Head Office

As of July 1, 2019



### Organization Chart



### List of Expressways Currently Operating

#### List of National Networks (Expressways) Currently in Business

	Names of roads in service	Length of roads in service (km)	Traffic volume (number of vehicles/day)	Toll income (1,000s of yen/day)
National Expressway	DO-O EXPWY	443.5	116,811	116,747
	SHIRIBESHI EXPWY	23.3	608	523
	SASSON EXPWY	38.3	52,558	21,170
	DOTO EXPWY	206.1	10,133	29,881
	TOHOKU EXPWY	680.5	325,762	514,008
	AOMORI EXPWY	15.6	4,276	1,514
	HACHINOHE EXPWY	81.3	7,232	11,376
	KAMAISHI EXPWY	11.4	2,591	957
	AKITA EXPWY	143.6	20,556	22,405
	YAMAGATA EXPWY	109.8	24,328	21,108
	BAN-ETSU EXPWY	212.7	21,488	44,550
	NIHONKAI TOHOKU EXPWY	91.6	26,157	13,393
	TOHOKU-CHUO EXPWY	51.5	5,313	2,339
	KAN-ETSU EXPWY	246.3	214,617	258,518
	JOSHIN-ETSU EXPWY	203.4	62,919	105,776
	JOBAN EXPWY	300.4	209,894	228,638
	TATEYAMA EXPWY	55.7	80,201	36,686
	HIGASHI-KANTO EXPWY	92.1	198,008	129,069
	SHIN-KOKU EXPWY	3.9	6,710	1,560
	TOKYO-GAIKAN EXPWY	49.2	189,572	97,862
KITA-KANTO EXPWY	135.0	77,533	80,447	
NAGANO EXPWY	42.7	7,197	24,308	
HOKURIKU EXPWY	195.8	53,925	91,369	
<b>Subtotal</b>		<b>3,433.7</b>	<b>1,718,390</b>	<b>1,854,202</b>
General Toll Road	FUKAGAWA-RUMOI EXPWY	4.4	1,977	263
	HIDAKA EXPWY	4.0	6,018	851
	MOMOISHI EXPWY	6.1	5,462	723
	YUZAWA-YOKOTE EXPWY	14.5	6,253	1,916
	AKITA EXPWY	9.5	6,222	1,943
	AKITA EXPWY (Kotooka-Noshiro Road)	17.1	4,460	1,810
	SENDAI-HOKUBU EXPWY	13.5	20,465	7,668
	SANRIKU EXPWY	7.8	47,023	7,704
	SENDAI-TOBU EXPWY	24.8	68,070	24,861
	SENDAI-NANBU EXPWY	12.9	28,233	8,342
	TOHOKU-CHUO EXPWY (formerly YONEZAWA-NANYO EXPWY)	8.8	5,751	1,538
	HIGASHI-MITO EXPWY	10.2	15,446	4,051
	KEIYO EXPWY	36.7	286,723	69,430
	CHIBA-TOGANE EXPWY	16.1	54,316	15,213
	TOKYO-WAN-AQUA-LINE EXPWY	15.1	48,114	39,205
	AQUA RENRAKU EXPWY	7.1	34,332	8,119
	FUTTSU-TATEYAMA EXPWY	19.2	14,007	5,946
	KEN-O EXPWY	216.7	216,150	183,415
	DAISAN-KEIHIN	16.6	134,565	29,421
	YOKOHAMA SHINDO	11.3	125,720	37,642
YOKOHAMA-YOKOSUKA EXPWY	36.9	104,894	51,874	
<b>Subtotal</b>		<b>509.3</b>	<b>1,234,199</b>	<b>501,936</b>
<b>Total</b>		<b>3,943.0</b>	<b>2,952,589</b>	<b>2,356,139</b>

● Length of roads: As of July 1, 2019 ● Traffic volume and toll revenues: FY2018 data  
 ● The totals for traffic volume and toll revenues may not be consistent because of the rounding of the subtotals.



## Financial Statements

### ● Key Points Concerning Consolidated Statement

#### 《Consolidated Balance Sheet》

- The majority of assets are highway assets in process, which are road assets prior to being transferred to the Expressway Agency. The majority of liabilities are road-building bonds payable / long-term loans payable liabilities that were procured for the construction of road assets.

#### 《Consolidated Income Statement》

- In the breakdown of operating revenue, revenue came from toll revenues from expressway business, asset construction revenue from the opening of new expressways and sales from expressway rest area business, etc., with the majority of revenue coming from toll revenues and road asset construction revenue.
- FY2018 was characterized by an operating profit of 4.4 billion yen, and 4.1 billion yen of net income in the period attributable to owners of parent company.

### ● Consolidated Balance Sheet (March 31, 2019)

(In billions of JPY)

Assets		Liabilities	
Current assets	930.3	Current liabilities	347.2
Cash and deposits	118.0	Non-current liabilities	669.4
Highway assets in process	539.5	Road-building bonds payable / Long-term loans payable	566.9
Other current assets	272.6	Other liabilities	102.4
Non-current assets	316.3	Total liabilities	1,016.6
Properties, plants and equipment	257.8	Net assets	
Intangible assets	14.9	Shareholders' equity	244.2
Investments and other assets	43.5	Capital stock	52.5
Deferred assets	0.7	Capital surplus	58.7
		Retained earnings	132.9
		Accumulated other comprehensive income	(13.4)
		Valuation difference on available-for-sale securities	(0)
		Remeasurements of retirement benefits	(13.3)
		Total net assets	230.8
Total assets	12,474	Total liabilities and net assets	1,247.4

\*The calculations in the table may not appear to be consistent, as any numbers less than 100 million have been rounded down.

### ● Consolidated Statement of Income (From April, 2018 to March, 2019)

(In billions of JPY)

Operating revenue	1,943.1
Operating expenses	1,938.6
Rent expenses on highway assets	621.1
Administration costs of highway business and cost of sales	1,225.7
Selling, general and administrative expenses	91.7
Operating income	4.4
Non-operating income	3.2
Non-operating expenses	0.1
Ordinary income	7.5
Extraordinary income	0.3
Extraordinary losses	0.5
Income before income taxes	7.2
Income taxes etc.	3.1
Net income attributable to owners of parent	4.1

\*The calculations in the table may not appear to be consistent, as any numbers less than 100 million have been rounded down.

## NEXCO East Websites

**Corporate Site**

<https://www.e-nexco.co.jp/en/>

**Drive Plaza Site**

<https://en.driveplaza.com/>

Thank you for reading the 2019 NEXCO East Annual Report. We hope the report helps you understand how we at NEXCO East Group are working toward a sustainable society through our expressway businesses.

We would appreciate your cooperation in improving and substantializing our next report by filling out our survey form.

**2019 NEXCO East Annual Report survey form**

<https://www.e-nexco.co.jp/en/csr/form.php>



### NEXCO East Customer Center

We are open 24 hours a day, 365 days of the year, waiting to hear from our customers.

Feel free to ask us questions on subjects such expressway tolls, ETC discounts and traffic information, etc.

- With the Navidial call service, a call from a landline phone is charged at the local call rate. Moreover, we even bear part of the cost for a call from a mobile phone.
- With the Navidial call service, mobile phone companies' free-call and flat-rate call systems do not apply. If you phone the landline (03-5338-7524), contract charge plans will apply.
- Please note that we record phone conversations with callers to ensure that we respond properly to calls.
- If you cannot connect to an operator due heavy call volume, please note that the call will be automatically cut after operators have been paged for a set amount of time.

Navidial **0570-024-024**  
Or:03-5338-7524





## Annual Report 2019

### East Nippon Expressway Company Limited

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<https://www.e-nexco.co.jp/en/>

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