Cooperation with customers and communities to ensure safety

To ensure the safe use of stations and trains, we are implementing various measures so that our customers and people in communities can press emergency stop buttons when they sense danger.

Platform zero accident campaign
We are conducting platform zero accident campaigns to alert customers to avoid coming into contact with trains or falling onto tracks at platforms. Additionally, the campaigns aim to ask customers to push emergency stop buttons when they sense danger.

Campaign to prevent dashing onto a departing train
26 railway companies are jointly implementing a campaign to prevent dashing onto a departing train to raise awareness among passengers that it is dangerous, and asking them to push an emergency train stop button when they notice danger.

Level crossing zero accident campaigns
We ask our customers and neighboring communities for cooperation in the safe use of level crossings, through awareness increase activities with local police stations and by posting campaign posters at stations and showing TV and radio commercials.

Utilization of simulators for platforms and level crossings
We are offering opportunities for our customers to try pushing emergency stop buttons that can be found on platforms and at level crossings. Platform simulators are located at stations and local events, while level crossing simulators are located at driving license centers, etc. so that people can try pushing the button and see how it works.

Level crossing safety lecture
To prevent level crossing accidents involving children, since 2016 we have been visiting elementary schools near level crossings and offering level crossing safety lectures. At a level crossing safety lecture, to show the children how to push an emergency train stop button in an emergency, we have them push an emergency button of a replica of a level crossing. Additionally, we teach them not to cross a level crossing when an alarm is activated and not to play near railway tracks, so that they will use level crossings safely.

In cooperation with local police stations, we visit local elementary schools near Class 4 level crossings, which do not have crossing gates or alarms, for educational activities.

During the campaigns, we post campaign posters and distribute pocketable tissue packs with campaign information at stations.

Campaign to prevent dashing onto a departing train

Platform zero accident campaign

Campaign to prevent dashing onto a departing train

Platform simulator

Level crossing simulator

Level crossing zero accident campaigns

Utilization of simulators for platforms and level crossings

Society

CONTENTS

Relationship with Passengers... 49
Relationship with Society... 62
Relationship with Employees... 73

Relationship with Passengers

Medium-term Vision for Service Quality Reforms 2020

Since designating 2011 as the baseline year for service quality reforms, we have been working to improve our service quality by implementing a variety of measures, and in FY2019, we announced our new “Medium-term Vision for Service Quality Reforms 2020.” This document outlines our vision for accelerating and further developing the initiatives we have implemented to date, with the aim of being number one for passenger satisfaction in the Japanese railway industry.

• Preventing transport disruption
We will resolutely strive to prevent transport disruptions from every aspect.

• Minimizing effects of disruptions on passengers
We will respond flexibly through actions such as turning trains back and promptly resuming train operations.

• Provision of information during emergencies
In order to help passengers decide on their next step, we will communicate information without delay during emergencies.

• Realizing railway services passengers can use comfortably
We will provide stations, railcars, and services that live up to passenger expectations of JR East.

• Providing impressive passenger service
We will offer services that inspire passengers to use our group again.

We conduct passenger satisfaction surveys via our JR East Passenger Questionnaires to enable us to gain an understanding of how passengers evaluate our services that we cannot get simply through passenger feedback and to quantitatively check levels of passenger satisfaction. Based on the survey results, we are addressing various measures while making it a rule to pick up such matters as the “stability of transportation” and “provision of information to passengers during transportation service disruptions” as issues we should most urgently address.
Provide reliable transportation services

We are implementing various measures to improve transport quality by striving to prevent transport disruptions and by stepping up early resumption of operations after transport disruptions, as well as preventing disruptions impacting on connecting lines, in order to minimize the impact on passengers.

■ Preventing transport disruptions

By paying careful attention to the causes of disruptions that occurred in the past, we strive to prevent similar types of disruption occurring again. Specifically, we are moving forward with initiatives to upgrade facilities, install more durable facilities, and reduce the variety of facilities while continuing to implement measures such as the introduction of railcars with increased reliability through the duplication of major equipment, expanded installation of track switches with next-generation designs to make equipment failure less likely, and simplification and integration of electric facilities.

■ Prompt resumption of train operations after transport disruptions and minimization of the effects of disruptions to other sections

For early resumption of operations, we maintain efforts to enhance our post-disruption response abilities by such measures as drills to deal with accidents resulting in casualties and rescuing passengers. Notably, concerning accidents resulting in casualties, cooperation with police and fire services is important and we implement drills, etc., for employees, jointly with police and fire services, on a regular basis. In addition, we try to turn trains back before they enter a disrupted section or operate on other routes wherever possible in an effort to minimize the impact on passengers.

When a disruption has occurred, each worksite involved reflects on how it was dealt with, learns the lessons from this, and uses the knowledge to study and implement measures to prevent recurrences, which are then widely disseminated in-house to raise the level of each and every employee.

Enhance information provision during transportation service disruptions

■ Information Enhancement

For better information provision in an emergency, JR East is taking steps to provide passengers with more accurate information by having the anticipated time at which operations should resume announced at an early point when operations are suspended, and giving subsequent updates depending on the situation.

In addition, as tools for providing transport information, we have installed "service disruption information displays" which are installed at 304 stations as of the end of March 2018. We also provide information through various media, such as onboard liquid crystal displays and directly to passengers’ cellphones.

In addition, on our website, we provide information on service suspensions of conventional line limited express trains, etc. and distribute delay certificates on major lines in the Tokyo metropolitan area.

■ Timely Information Provision through Smartphones

In order to provide timely information to meet individual passenger needs, we released the smartphone app "JR EAST APP" in March 2014. "JR EAST APP" allows passengers to view information on train operations of not only JR East’s trains but also of 15, other companies, including private railway companies. In addition to the above services, we launched “JR-EAST Train Info,” an English version of the JR EAST APP which is based on the JR EAST APP and delivers information on operating status of individual trains, maps of major stations and such in English, in March 2015.

Furthermore, for smartphones, we instituted "JR East Train Operation Information Push Notification," a service for notifying information on our train operations. In addition, we provide "Doko-Train," a train operation information service that enables passengers to confirm the operating status of individual trains on their own.

Providing services tailored to passengers’ situations

■ Efforts to improve passenger service

We prepared a “Green Handbook,” establishing the basics of passenger service, in 1987 and started distributing it to all employees. We have been utilizing it while making repeated revisions to incorporate changes to improve our passenger service since then.

In March 2016, we replaced the former six important passenger service terms with “hospitality terms” to further determine the needs of each passenger.

■ Acquisition of Service Assistance certification

We have encouraged our employees to qualify themselves for Care-Fitter certification to acquire hospitality mindset and assistance skills, and approximately 13,000 employees in total from all job category groups were certified. In addition to acquisition of new qualifications by employees, we are also endeavoring to brush up their knowledge and technology. The qualified employees wear a “Care-Fitter” name tag so that passengers will be able to recognize them easily.

Assistance Campaign and Support Initiative

As part of the Tokyo Station City Operation Committee, I work with other employees of Group companies who are working at stations to create a comfortable environment in Tokyo Station. In 2015, the committee began an initiative to increase the number of personnel with Care-Fitter certification. To date, 64 people have obtained the certification and are using their new skills to assist passengers.

In addition, following on from the seminars and passenger awareness activities that we implemented as part of our Assistance and Support Enhancement Campaign last year, this year we hold an Assistance and Support Seminar: Understanding and Putting into Practice through Experience, which helped employees—including myself—to increase their level of knowledge. Going forward, I will keep striving along with my colleagues to think of new mechanisms that enable us to provide passengers with support in a more confident manner and create an environment that ensures they feel comfortable every time they visit Tokyo Station.
Safety

Environment

Society

JR East has been working with local governments and other entities to install elevators at stations in accordance with the “New barrier-free law (Act on Promotion of Smoother Transportation, etc.)”. As of the end of March 2018 we had completed the installation of elevators in 544 stations.

Barrier-free Railcars

We have introduced the universal design E235 series railcars, in which the height of luggage racks and hand straps at the ends of railcars was changed, location of priority seats was clarified and information indicators for displaying operation information in texts were installed, sequentially, on the Chuo Rapid, Saikyo, Yokohama, Nanbu and other Lines. Furthermore, E235 series trains, which started operation on the Yamanote Line in 2015, now have priority seats in each railcar as well as free space in all railcars that can be used more safely by wheelchair users and baby stroller users, earing there was a space for wheelchair users only in the front railcar.

Scapacious toilet rooms capable of accommodating advanced electric wheelchairs with improved handles have been introduced on new Narita Express railcars (E259 series and after) and new Shinkansen train railcars (E5 series and after).

Escalator Safety Measures

To prevent injuries to passengers on escalators, we are carrying out safety enhancements, including measures that will prevent sandals from getting caught, prevent falls during emergency stops, and prevent steps from descending when escalators stop. In addition, we are also working together with other railway companies, retailers and other facilities to carry out campaigns in an effort to draw the attention of passengers through such means as posters and handing out free pocket tissues that call for the safe and proper use of escalators.

Crime and terrorism countermeasures

In preparation for the Tokyo 2020 Olympic and Paralympic Games, improvement of railway security is a major issue of our Company to ensure that passengers feel safe and confident when using our services. As one of the measures, we are installing security cameras in key facilities, including stations (ticket gate areas, escalators, stairs, platforms, etc.) and onboard train cars (in cars and deck areas). As for the trains, we expect that installation of security cameras will have been completed for all Shinkansen trains and conventional lines in the Tokyo metropolitan area, with the exception of certain railcars scheduled for retirement. Furthermore, we will endeavor to ensure a rapid response to any event through centralized management of information necessary for security, including footage of security cameras installed in railway facilities, and in close collaboration with police and other related parties. In addition, SOS buttons that passengers can use to alert train cars when they sense danger are installed in cars as a measure against violence on trains. We will also newly install protective items including shields on Shinkansen trains and providing more first aid kits. In addition, we are implementing scenario-based training with the help of the police and other parties to deal with suspicious individuals in order to improve response capabilities of train crews.

We are also implementing drills on such as measures against terrorists, explosive ordnance disposals, helping injured persons (triage, etc.) on an ongoing basis in cooperation with police, fire services, etc.

Measures against Female Molestation

In addition to women-only cars during certain hours in various railway services in the Tokyo metropolitan area, and with the aim of enabling female passengers to travel stress-free, we have been continuously installing SOS buttons on all railcars that women can use to alert train crews if they are improperly touched or otherwise molested. Furthermore, in cooperation with police and other railway operators we are actively conducting a campaign to eliminate on-train molestation and have significantly increased security surveillance on trains and in stations.

Measures to reduce congestion in the morning commuter rush hours

For reducing congestion during the morning commuter rush hour, we have taken measures such as increasing train services and adopting railcars with widened passenger space. In conjunction with this, we are also working on measures aimed at dispersing passengers to different trains and promoting the shift of commuting to outside of peak hours. As congestion is a major cause of delayed trains during the morning commuter rush hour, we will continue seeking to reduce congestion by informing passengers about which trains become crowded in certain sections of the line and which railcars tend to become especially congested, using posters at stations and the JR East app.

Real-time visualization of the status of conventional railway lines

We have developed a system that visualizes overall train conditions, including congestion, by indicating data for each train pertaining to its location, delays and number of passengers, and overlaying the data on the map of regional railway lines. It was introduced in April 2017. This would lead to achieving higher quality in transportation services, as passengers can plan more accurately by being as they will be able to consider the impact of congestion in trains and delays.

Improvement of onboard service

As part of improvement of onboard service, in addition to liquid crystal display (LCD) on trains in the Tokyo metropolitan area showing guides and advertisements, LED displays in full color installed in new railcars for limited express trains and Shinkansen lines are showing newscasts as well as destinations and other transport information.

In addition, on Narita Express, Hitachi and Tokiwa trains, passengers can connect to the Internet using WiMAX and Wi-Fi. We have also launched free public wireless LAN services for passengers onboard the Shinkansen, and sequentially expanding target trains for the service. We will begin introducing the service on Super Azusa limited express trains on the Chuo Line in order to better meet the needs of overseas visitors to Japan on a continuing basis. Furthermore, we are proceeding with the installation of power outlets on Shinkansen and conventional line limited express trains.
Improvements in Station Toilets
In order to dispel the image of station toilets as dark, dirty, and malodorous and to enable passengers to use them comfortably, since its establishment JR East has been steadily upgrading its toilet facilities. Measures taken include changing to western-style toilets, improved ventilation and the use of larger floor tiles. The upgrading also includes water-saving type toilets and automatic faucets in the washbasins to reduce water consumption. During the fiscal year ended March 2018, we renovated the toilets in 22 more stations, as a way to increase passenger comfort and satisfaction.

System to respond to inquiries
JR East Center for Inquiries receives questions from passengers through telephone. In order to quickly and correctly respond to the passengers’ inquiries, the Center is addressing measures to improve the work supporting system utilizing AI and to improve the function of the system for controlling lost and found objects as well as to enhance the quality of responses by regularly implementing the monitoring evaluation of calls and responses.

System for handling lost property
JR East collects more than 2.2 million lost items annually, and the number is growing every year. With the aim of promptly returning lost property to the original owner, we are striving to facilitate searching for and providing information about missing items by managing this information using a centralized, searchable database and setting up a dedicated lost and found customer support center.

Development of rolling stock manufacturing business
In October 1994, the Niiitsu Rolling Stock Plant was established and has been mainly manufacturing commuting and suburban type railcars for use in the metropolitan area, for the purpose of acquiring knowhow as well as enhancing technical capability. In April 2012, in order to establish the rolling stock manufacturing business as the “Fourth pillar for management” of JR East, Japan Transport Engineering Company (former Tokyo Car Corporation) which manufactured Japan’s first stainless steel railcar, joined our company. Furthermore, in April 2014, Japan Transport Engineering Company succeeded to the business of Niiitsu Rolling Stock Plant.

Japan Transport Engineering Corporation has been offering not only rail cars for commuting and suburban use, but also a wide range of products having high quality and high added value, including limited-express E353-series, Hokuriku Shinkansen E7-series, TRAIN SUITE SHIKISHIMA and other railcars. Among those railcars, we have been focusing on the stainless-steel “sustina” cars which are the company’s main product making the use of strength of stainless-steel. “Sustina” aims to reduce the manufacturing cost by mass production on a common platform specifications of car body structure and equipment systems made common and consolidated as well as reducing lifecycle costs by leveraging the JR East Group’s expertise to lower maintenance costs.

“sustina” stainless-steel railcars

Routine work
Facilities
Products
Railway facilities
Trains
Trains schedules
3,483
34,389
20,315
30,139
21,387
3,187
92,626
4,212
354
15,985
25,187
18,617
23,129
403,964

Passenger comments (Total 403,964)
In order to ascertain our passengers’ needs, JR East considers it necessary not only to receive feedback directly from passengers but also to actively and widely collect and analyze passenger comments. Therefore, we are also striving to comprehend their potential opinions that are transmitted through social media.

Through the JR East Official Facebook page launched in May 2012 and JR East Official Twitter account launched in April 2015, we proactively provide information to the public, including details about various measures we have implemented and publicity campaign-related notifications, with the aim of engaging in two-way communication with passengers. Furthermore, in 2013, we began Projects for Improving Service Quality, which provides information about initiatives, policies, and solutions designed to improve our service quality. We not only provide information on our entire company related to the enhancement of our service quality through posters, videos and other media, but also introduce example cases of improved service quality at each workplace based on passenger comments.

Improvement of service quality pursued by the entire Group working as a single team (SQ Network)

To rapidly promote improvements in the quality of our services by reflecting passenger comments deemed as the starting point as the JR East Group, our Company and group companies closely involved in transport service established the SQ (Service Quality) Network in 2011. The SQ Network holds meetings of representatives of JR East and group companies in the frontlines of operating fields such as stations, branch offices and the head office, to share passengers’ comments and devise solutions and improvements through teamwork, which goes beyond individual departments or group companies. In this way, the JR East Group as a whole can dedicate itself to enhancing passengers’ satisfaction.

Suica as an IC ticket

The Suica service was launched at 424 stations in the Tokyo metropolitan area in November 2001. In March 2013, ten public transportation IC Cards used throughout the country, including Suica, were made interchangeable. Usage of Suica was expanded further in March 2016, when it was made interchangeable in the Sendai region with the "icsca" IC card issued by the Sendai City Transportation Bureau. A new service, Touch and Go Shinkansen, was only launched in April 2018 that makes it possible to use Suica and other public transport IC cards for certain standard nonreserved Shinkansen seats within the JR East network. This provides passengers with rapid, ticketless access to Shinkansen trains.

[Interchangeable Use of IC Cards Area]

We are also working on initiatives that will lead to enhanced passenger service, such as using information obtained from Suica and View cards to improve the convenience of our railway and lifestyle businesses.

IT and Suica Business

Suica as Electronic Money

The electronic money service enabling Suica to be used for shopping was launched in March 2004. Thanks to the speed of the payment process and the convenience of not requiring small change, it has been adopted by many passengers, and the number of places where Suica can be used as electronic money has been increased to include shops not just inside but also outside stations. It may be used in major convenience stores, major supermarkets, restaurant chains, and drugstores. In 2017, Suica electronic money was introduced at large-scale chains such as McDonald’s, Mos Burger, and Uniqlo.

Mobile Device Usage/Information Usage

The Mobile Suica service was launched in January 2006, and with the subsequent launch of services such as Suica for Apple Pay in October 2016, Suica for Google Pay in May 2018 and Mizuho Suica in August 2018, the number of users is growing steadily.
Service improvement for foreign visitors
We have been actively working on measures such as proposing attractive products and carrying out promotional activities in collaboration with local communities with the aim of expanding demand from overseas visitors to Japan, whose numbers are rapidly growing in recent years, and vitalizing communities by transporting passengers to regional areas. Furthermore, we are working to reinforce our capability to accept overseas visitors so that they can use the railway network safely and comfortably.

Improved environment where foreign visitors can purchase products free of worry
We have established JR East Travel Service Centers at locations which are frequently used by passengers from overseas, including Narita International Airport Terminal 1 and Terminal 2 buildings, Haneda Airport International Terminal Station on the Tokyo Monorail Line, and major terminals such as Tokyo Station and Shinjuku Station. Following the opening of new locations at Shibuya Station in December 2017, Ueno Station in February 2018 and Hamamatsucho Station in July, we are aiming to further reinforce the system. At those centers, foreign language speaking staff engage in sales of products for foreign visitors such as the “JR EAST PASS.” At Tokyo, Shinjuku, and Sendai centers, tourist information centers are also placed to help overseas visitors consider their trips using JR East. In addition, we have enhanced convenience for overseas visitors by setting up a duty-free counter, etc. in the stations.

JR EAST Travel Service Center at Tokyo Station
JR EAST Travel Service Center at Sendai Station

Products that Appeal to Overseas Visitors
In order to encourage overseas visitors to take enjoyable trips using railways, we offer convenient, reasonable products that they can choose from according to their travel plans. In January 2018, we introduced the JR Tokohoku-South Hokkaido Rail Pass, which may be used for travel at a reasonable price within both the South Hokkaido and Tohoku areas, enabling passengers to travel around a wide area. Going forward, we will continue working in close collaboration with local communities to promote sightseeing routes covering a wide area so that more overseas visitors can enjoy their travels.

JR EAST PASS
Pass providing unlimited travel within the applicable area (available: Tohoku area, Nagano/ Nikko area)

JR TOKYO Wide Pass
Pass providing unlimited travel within the applicable area (available: Tokyo area, Yamanote Line, and Narita Airport)

NEX TOKYO Round Trip Ticket with View-thanks points
Ticket providing access to the Tokyo and Shinjuku stations

JR East South Hokkaido Rail Pass
Ticket providing travel on the Hokkaido Shinkansen

Tokyo-Osaka Hokkaido Arch Pass
Pass providing travel on the Hokkaido Shinkansen

Establishment of currency exchange centers/dedicated cash machines for foreign-issued cards
To enhance the convenience of station buildings for overseas visitors to Japan, in February 2015, we established currency exchange centers in Shinagawa Station and elsewhere. Such centers are currently operating in seven locations. In September 2016, we also introduced dedicated cash machines for foreign-issued cards at Shinjuku Station and other locations. Ten of these machines are currently operational.

JR East Travel Service Centers

Free Public Wireless LAN Service for Overseas Visitors
As of March 31, 2018, we have installed free public wireless LAN service at 91 stations (mainly on the Yamanote Line, which is used by many overseas visitors), at JR East Travel Service Centers, and on board Narita Express trains. Starting in FY2019, we are planning to steadily expand provision of the service on Tohoku, Joetsu, Hokkuro, Yamagata, and Akita Shinkansen trains as well as Chuo Line E353-series limited express trains. (This service is provided in four languages: English, Chinese, Korean and Japanese.)

Strengthening service of multilingual business interpreters
In order to smoothly provide information service in stations and railcars, we have changed the service hours for multilingual business interpretation through telephone from the former 10:00 – 18:00 hrs. to 24 hours a day, starting from April 2017. For passengers to whom it is difficult to provide information in Japanese, our employees at stations and crew members call up the Interpreter Center, and information is provided over the phone through operators.

Technical renovation
As stated in our Medium- to Long-term Vision for Technical Renovation established in November 2016, we will leverage IoT, big data, AI, and other technologies thoroughly review the services provided by the JR East Group from the viewpoint of passengers, with the aim of going beyond conventional thinking to achieve a “mobility revolution.” To be concrete, we aim to create by means of AI and other technologies new values out of the data obtained through our Group’s all business activities, in the four fields, namely, “Safety and Security,” “Service and Marketing,” “Operation and Maintenance,” and “Energy and Environment.” To that end, we will strive to promote further innovations to incorporate the world’s most advanced technologies, and thereby build the “Innovation Ecosystem” which continues to provide innovative services in the area of mobility.

Industrial cooperation among corporations to promote innovations
"Mobility Revolution" by the four fields

https://www.jreastmall.com

[ Key Products ]
JR EAST PASS
JR TOKYO Wide Pass
NEX TOKYO Round Trip Ticket with View-thanks points
JR East South Hokkaido Rail Pass
Tokyo-Osaka Hokkaido Arch Pass

JR EAST Travel Service Centers

Currency exchange centers/dedicated cash machines for foreign-issued cards

Online registration site "JREAST Train Reservation"

JR EAST Travel Service Centers

JR EAST Travel Service Centers
Establishing task forces to promote the Medium- to Long-term Vision for Technical Renovation

We have established seven task forces to strongly promote the Medium- to Long-term Vision for Technical Renovation in order to carry out missions by formulating road maps and developing internal and external promotion systems while clarifying achievement targets for inhouse cross-organizational measures. To date, we have established seven task forces and will achieve innovation in the railway operation business by actively incorporating new technologies into our society, such as AI, IoT, and big data, while aiming to provide new value for passengers and enhance the safety and stability of transportation services.

Launch of Mobility Revolution Consortium

In September 2017, we launched the Mobility Revolution Consortium as a venue for creating and strengthening "links" between our Group companies, external companies, universities, research institutions, etc., and driving innovation in the field of public transportation. There were 111 members as of April 2018.

The purpose of this Consortium is to work on resolving social issues that are challenging for a single company to tackle alone by collaborating and combining the respective strengths of various transportation operators (including JR East), domestic and international manufacturers, universities, research institutions, and other stakeholders with the aim of developing an innovation ecosystem.

Research and development of service robots

For the purpose of supporting passengers who are not accustomed to railway travel and passengers with physical disabilities as well as performing tasks for which labor shortages are becoming an issue (cleaning, security, baggage transportation, etc.), we are considering expanding the usage of service robots in station premises to expand. Accordingly, we are pursuing research and development of a cloud system that will monitor station conditions (congestion, etc.), real-time and autonomous mobile robots that can operate in pedestrian areas via a link to this system.

In addition, in order to accelerate the development and introduction of service robots, we established JRE Robotics Station, a limited liability partnership (LLP) centering on the JR East Group, in July 2017. In FY2019, it is identifying needs and issues, recruiting technical and development partners, and beginning to consider the introduction of robots to support tasks such as providing information (including information for overseas visitors) and assisting the transfer of passengers.

Task force (driverless operation)

We are investigating and collecting data on various variables around trains and tracks on lines using high-speed and fine-grained monitoring technology, camera sensors, and other equipment to cover various situations and update the "Knowledge Base." The Knowledge Base is at the forefront of the "IDS (Intelligent Driving System)." We have significantly increased the amount of data collected with the introduction of a new monitoring device.

Task force (next-generation ticketing)

We are investigating and collecting data on various variables around trains and tracks on lines using high-speed and fine-grained monitoring technology, camera sensors, and other equipment to cover various situations and update the "Knowledge Base." The Knowledge Base is at the forefront of the "IDS (Intelligent Driving System)." We have significantly increased the amount of data collected with the introduction of a new monitoring device.

Lots of smart maintenance (collect and analyze huge amounts of data concerning the status of facilities and consider optimum timing and methods of maintenance) [please see page 61], (2) driverless operation (expansion of one-man train operation and consider matters related to the introduction of automation technology for driving and controlling trains), (3) next-generation Shinransen (production of test trains for realizing next-generation Shinransen and implementation of test drives [please see page 13]), (4) measures against natural disasters (predict natural disasters by using screen sensors and other technologies as well as prediction technology and consider introduction of finely detailed operational restrictions [please see page 32]), (5) operation control using AI (consider automated train operation control using AI etc., and introduction of flexible transportation planning methods that meet passengers’ demands), (6) next-generation ticketing (consider matters related to achieving seamless ways to board trains without standing in line at the station counter or vending machines) and (7) JRE-BIM (Building Information Modeling; consider introduction of construction and production systems that utilize BIM and IoT). We will set up new task forces as needed.

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General Meeting

<table>
<thead>
<tr>
<th>Steering Committee/Secretariat</th>
</tr>
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<tbody>
<tr>
<td>Due to Due President Working Group</td>
</tr>
<tr>
<td>Smart City Working Group</td>
</tr>
<tr>
<td>Robotics Working Group</td>
</tr>
<tr>
<td>Robot Application Working Group</td>
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<tr>
<td>Foresight Working Group</td>
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<td>Information (ID) / Hackathon / study sessions</td>
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"Foresight formed from "Train" and "Technology." An inquest is an event where ideas for solving a specific issue are intensely transformed and collected during a set period of time.

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Conclusion

We will continue to contribute to this system in a sequential manner.

Railcar — The condition of major equipment is being monitored from both devices on board and devices on the ground, and we plan to utilize the system for detecting failures and promptly effecting restoration in case of failure.

Tracks — We will continue to collect data on track displacement, impact distortion, and the rolling of track wheels.

Electric power — We aim to collect data on the abrasion of trolley wire (wear of wire caused by friction), etc.

*CBM: Condition Based Maintenance

Realization of smart maintenance

By loading devices for monitoring not only on railcars but also tracks and power facilities from trains while they are running, at normal operating speed it becomes possible to observe the condition of facilities very frequently. By utilizing these data, we aim to realize maintenance at optimum timing by means of CBM.

We will collect a great deal of data, predict degradation from the data, and capture changes in facility conditions, and manage optimum timing and method of maintenance. At present, we have established a method for data analysis and presented it in railway sections.

Examples of CBM

- We aim to collect data on track displacement, impact distortion, and the rolling of track wheels.
- Electric power: We aim to collect data on the abrasion of trolley wire (wear of wire caused by friction), etc.

*CBM: Condition Based Maintenance

The Infinite Possibilities of Monitoring Data

Assistant Manager, Track Maintenance Section, Facilities Division, Nagoya Branch Office

My workplace is involved in tasks ranging from management and operation of track facility monitoring to processing and analyzing data. I am involved in processing and analyzing data, and there is an extremely large volume of data, since we perform measurement using equipment installed on railcars in actual operation. Even when limited to the Yamanote Line, data for twenty times the 34.5 km circuit of the Yamanote Line, which is equivalent to the distance between Tokyo and Okayama are processed every day, I am looking for ways of processing and analyzing this huge quantity of information so that it can be used to optimize track maintenance.

Going forward, as a member of the JR East Group, I will continue working to support optimal track maintenance using CBM and contribute to the development of tracks that passengers can use more comfortably and confidently.

[Image of Mobility Revolution Consortium’s Structure]

[Image of Mobility Revolution Consortium’s Structure]
In order to swiftly create new businesses and services as passengers’ needs and the management environment change rapidly, JR East requires expertise in unknown technologies and business fields, where we lack experience. Therefore, in addition to leveraging our internal resources, we are also collaborating with venture companies, universities, and other research organizations and will be proactively adopting their technologies and expertise. As part of these efforts, in February 2018, we established JR East Startup Co., Ltd. for the purpose of speeding up the promotion of open innovation. By creating new businesses and services through the provision of funding for venture companies and promotion of collaboration, we will contribute to further vitalize local communities and improve the standard of living.

**JR East Startup Program**

In FY2018, we launched the JR East Startup Program to solicit, refine, and implement proposals for businesses and services making use of stations, railways, and the Group’s business. By FY2018, the program received 237 proposals, from which 19 were selected for development. Of these, 11 have been implemented on a trial basis, including an unstaffed store at Omiya Station and baggage check service at Tokyo Station. Collaboration with a view to commercialization is currently under way for several other proposals. For the second edition of the program in FY2019, there will be expanding themes to include new areas such as partnerships with communities (local governments, etc.) and collaboration with foreign venture companies.

**Creating new stations to develop the railway network**

We are also cooperating with local governments in the creation of new stations in line with their city planning, based on requests from local governments, etc. In April 2018, we opened a new station, Ashikaga Flower Park Station, on the Ryomo Line.

**Opening New Station in Collaboration with the Local Community**

On April 1, 2018, Ashikaga Flower Park Station opened on the Ryomo Line. With the cherry blossoms in full bloom, the opening ceremony, attended by around 800 people, was a magnificent occasion. The station is located next to Ashikaga Flower Park, which is famous for its wisteria arbors. Normally, the station is unstaffed, but during the Great Wisteria Festival in Golden Week, which is the best time for viewing the wisteria, it was used by a large number of passengers, so staff from the Takasaki Branch Office, including personnel from Ashikaga Station, were present to assist passengers.

Ashikaga Flower Park is very popular even among passengers from other countries as well, so in addition to providing information using multiple signs created by Ashikaga Station employees, I tried to make PA announcements in English and Chinese that would be easy for visitors to understand.

Going forward, I will strive to provide information that enables passengers to use our facilities confidently and contribute to vitalize local communities.

**Relationship with Society**

**Strengthening Collaboration with Communities**

The very existence of the JR East Group depends on the health of the communities and of Japan as a whole. As a company responsible for a form of social infrastructure (i.e., railways), and as a member of the community, we work together with communities in order to take actions aimed at achieving their desired future. We are actively implementing community revitalization and tourism promotion measures that leverage the unique capabilities of our group, as well as pushing forward with the creation of appealing urban areas centering on railway stations.

**Development of large-scale terminal stations**

In the Shinagawa area, we are aiming to realize town development where advanced businesses and human resources will gather from all parts of the world and new businesses and culture will be created from their interactions, and the construction of a new station which will be the core of the new town has been launched between Shinagawa and Tamachi Stations.

At Shibuya Station, with the move of part of the Tokyu Toyoko Line to underground tracks as the turning point, we are proceeding with renewal and reorganization of the functions of the station, rearrangement and expansion of surrounding infrastructure, and construction of jointly developed buildings, in cooperation with related business operators. At Yokohama Station, with increasing momentum in the surrounding community for further urban redevelopment, we are proceeding with reconstruction of West Entrance Building under a theme of enhancing attractiveness of the station and town, strengthening disaster-prevention strength, addressing environmental issues, reinforcing it as a place for pedestrians, etc., in cooperation with the local government.

**Opening of Tokyo Station Marunouchi Station Square**

JR East has been working with the Tokyo Metropolitan Government to develop an urban space in the district around Tokyo Station commensurate with its status as the gateway to the capital city of Tokyo. Following the completion in October 2012 of preservation and restoration work at the Tokyo Station Marunouchi Building (designated as an important cultural property), development of the plaza in front of the Marunouchi exit was completed in December 2017, marking the end of work on the Marunouchi side covering a period of around 10 years.

Tokyo Station is a landmark building that is a terminal used by the Emperor and Empress of Japan and other VIPs, while also being the starting point for some of Japan’s main railway lines. The recently completed work has created a new, upscale, bustling urban landscape befitting the gateway to the capital city of Tokyo that is integrated with the surrounding district, including Gyoko-dori Street.

To celebrate the work’s completion and express our gratitude to the many people involved, we held a ceremony to commemorate the completion of Tokyo Station Marunouchi Station Square on December 7, 2017, and the public was able to use the entire space beginning on that date. At this ceremony marking the start of a new chapter in the station’s history, we were honored by the presence of the Emperor and Empress, and guests, including Prime Minister Shinzo Abe.