



Society

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Relationship with Passengers

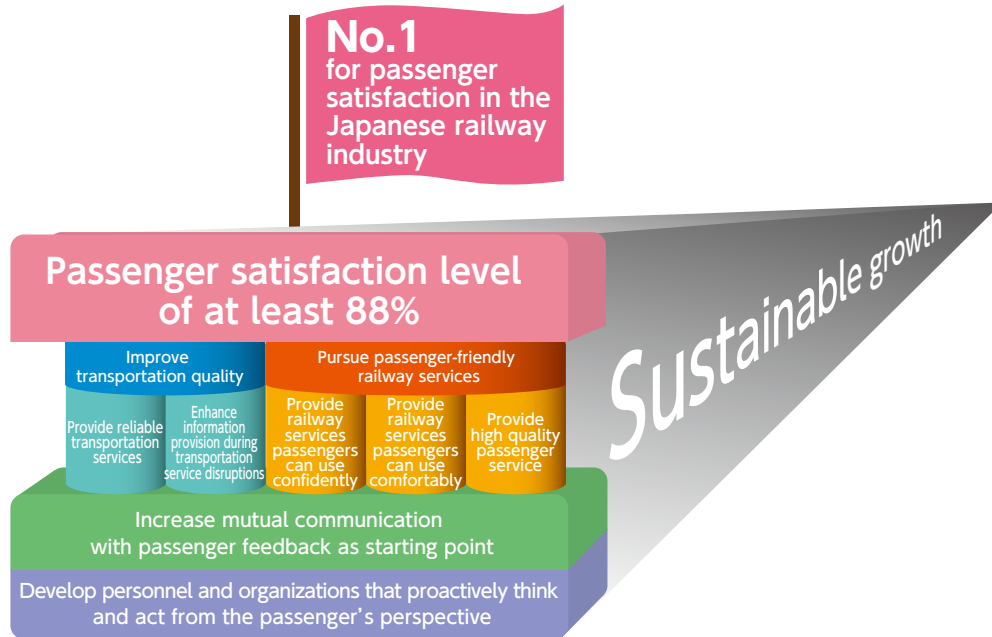
Our fundamental concept of service quality

The "JR East Group Management Vision V" states that "Service Quality Reform" is one of the group's eternal missions. In order to become a corporate group that is the preferred choice of passengers and local communities, JR East will reform service quality through cross-divisional and cross-sectional teamwork with the aim of becoming Japan's number-one railway in terms of passenger satisfaction. In order to achieve this, we will work to increase safety and convenience and further improve transport quality while promoting the creation of railways that passengers can use confidently and pursuing the comprehensive delivery of passenger-friendly railway services.



Medium-term Vision for Service Quality Reforms 2017

In order for the JR East Group to continue growing amid the various changes occurring in the surrounding environment, we formulated the "Medium-term Vision for Service Quality Reforms 2017," a three-year plan starting in 2015. With the aim of being number one in the Japanese railway industry when it comes to passenger satisfaction, this vision is founded on enhancing mutual communication with passenger feedback as the starting point and developing personnel and organizations that proactively think and act from the passenger's perspective. It specifies five pillars for further improvement: safety, information provision during service disruptions, confidence, comfort, and service.



Confirm our understandings of issues and effects of measures implemented through passenger satisfaction surveys

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.



Safety



Society



Environment

Provide reliable transportation services

Transport disruption prevention and prompt resumption of train operation after transport disruptions, and minimization of the effects of disruptions to other sections

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.

We continue to implement expanded introduction of railcars with dual systems* and installation of track switches of next-generation design to make equipment failure less likely, measures to prevent lightning strike damage to electric facilities and other disruption countermeasures. 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 thus 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 the disrupted section or operate 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.

*Railcars with dual systems Railcars with increased reliability through duplication of major equipment



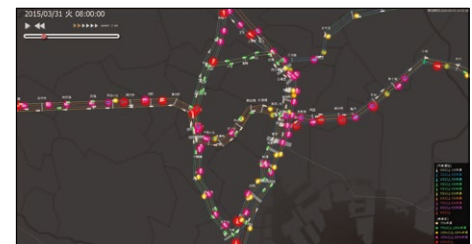
Rescue drill

Addressing measures to reduce congestions at the morning commuter rush hours

A major cause of delayed trains during the morning commuter rush hour is congestion. For the purpose of reducing congestion during the morning commuter rush hour, we have thus far taken such measures as increasing train services and adopting railcars with widened passenger space. In addition, we are also addressing measures to disperse passengers to different trains and to shift commuting time to off-peak hours. We will continue to try to reduce congestion by indicating congestion spots for each railcar of trains during the morning commuter rush hour on posters at stations and information displays at the wickets.

Real-time visualization of the status of conventional railway lines

We have developed a system of visualizing the complete status of congestion on conventional railway lines in real time by indicating data for each train pertaining to its location, delays and number of passengers and overlapping the data on the map of regional railroad lines, and introduced the system to the Tokyo General Direction Office in April 2017, where we control train operations.



Visualization system for congestion on conventional railway lines (an image)

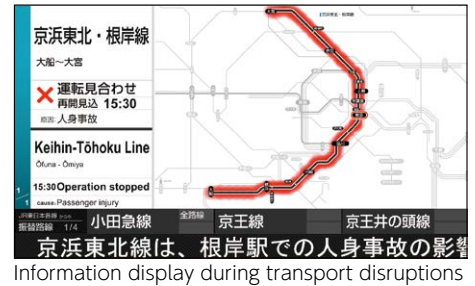


Enhance information provision during transportation service disruptions

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 within ten minutes of a suspension of operations following an accident resulting in casualties, and giving subsequent updates depending on the situation. Furthermore, we have started in April 2017 a system of announcing the expected time of resuming train operation at a time of suspending the train operation due to reasons other than injury accidents. In addition, as tools for providing transport information, we have installed "service disruption information displays" (installed at 266 stations as of the end of March 2017).

We also provide information through various media, such as onboard liquid crystal displays and the content of cellular devices. 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.



Information display during transport disruptions

Timely Information Provision through Smartphones

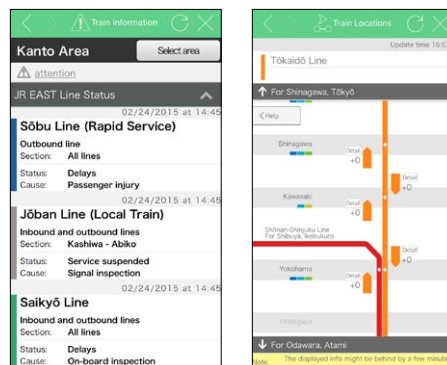
In order to provide timely information to meet individual passenger needs, we released the smartphone app "JR EAST APP" in March 2014. "JR EAST APP" allows passengers to view information on train operations of not only JR East's trains but also of 15 companies including private railway companies. In addition, it allows for viewing of information on all stops (transfer lines, platform maps and station premise maps) and the status of congestion and temperature in all cars of all trains currently in operation on the Yamanote Line.

In addition to the above services, we launched "JR-EAST Train Info," an English version of the JR EAST APP which is made 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.



JR EAST APP



JR-EAST Train Info



Railway services passengers can use confidently

Assistance Campaign and Support

We have a campaign in which we personally greet all passengers in need, including those passengers with disabilities and elderly passengers, to make sure that they can use our stations and other facilities safely and with a sense of security. In order to foster the momentum for supporting one another and to create a society where all people can live safely and comfortably with peace of mind, we are promoting the "Assistance Campaign and Support" by asking not only our own employees but also employees of other group companies and, even passengers using our services to greet others. Starting from FY 2017, we plan to expand the campaign by addressing the issue in cooperation with private railroad companies within the metropolitan area (Tobu, Seibu, Keisei, Keio, Odakyu, Tokyu, Keikyu, Tokyo Metro, Sotetsu, Shin-Keisei, Tokyo Metropolitan Government Transportation Bureau and Tokyo Monorail) and thereby will further disperse and reinforce the movement.



"Assistance Campaign and Support" poster

Acquisition of Care-fitter 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.

TICKET
TO
TOMORROW

Initiatives as a Care-Fitter



Miho Araki Conductor, Omiya Transportation Depot, Omiya Branch

I work as a conductor for the Saikyo and Kawagoe Lines. I acquired Care-Fitter certification while I was working at the station. I now try to proactively help customers in trouble by utilizing the knowledge and skills for assistance I acquired then. The other day, I received an unexpected word of appreciation when I offered a help to a visually-impaired person at Kawagoe Station, and that made me happy. Moreover, I am taking the lead in "Assistance Campaigns and Support" by exerting the "mindset of hospitality" I learned as a Care-Fitter. I would like to continue making efforts so that the customers in need of assistance as well as all other customers will be able to enjoy our services with peace of mind.



Reinforcing provision of multi-lingual information during service disruptions

To enhance the provision of information at stations and on trains during service disruptions, we expanded in March 2017 the "Multilingual information provision app for service disruptions," which had been introduced on a trial at select stations, in order to have it installed at all stations and all crew member sections where tablets are installed. The tablets provide emergency information in both the text and speech of four languages (Japanese, English, Chinese and Korean).

In addition, we have introduced the function of providing service disruption information in the speech of two languages (Japanese and English) and in the alphabet of four languages (Japanese, English, Chinese and Korean) to the railcars installed with the information indicators above doors of the trains that are being run within the metropolitan area.

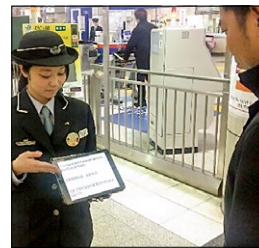
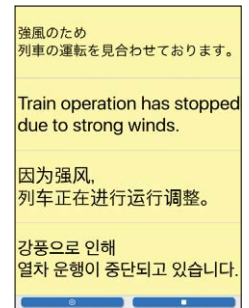


Image of information provision



Multi-lingual information provision app for service disruptions

Barrier-free Stations

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 Smooth Transportation, etc. of Elderly Persons, Disabled Persons, etc.)" As of the end of March 2017 we had completed the installation of elevators in 533 stations.

Barrier-free Railcars

We have introduced the universal design E233 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 to 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 feature free space in all railcars that can be used more safely by wheelchair users and baby stroller users (whereas there used to be a space for wheelchair users only in the front railcar).

Spacious toilet rooms capable of accommodating advanced electric wheelchairs with improved handles have been introduced on new Narita Express E259 series cars as well as the Shinkansen E5, E6 and E7 series cars and the new limited-express E657 series trains on the Joban Line.



Free space on E235 series

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.



"Escalator Safety" campaign poster



Safety



Society



Environment

■Creating an environment where passengers with baby strollers can use our services safely

To increase safety for passengers with baby strollers who use our stations and trains, we have been working to improve the response of railcar doors in the event that baby stroller frames and other devices are caught by the doors. In addition, we carried out a campaign organized by the "Council for Use of Baby Strollers on Public Transportation, etc.," which was formed by the Ministry of Land, Infrastructure, Transport and Tourism, transport operators including our company, baby stroller manufacturers and others, to urge passengers with baby strollers to be careful, as well as asking passengers with baby strollers and other passengers to give way to each other when boarding trains. In FY2015, we posted baby stroller signs, which were selected by the council, in the spaces for wheelchair users on local trains, to create an environment where baby stroller users can safely use our services. In addition, we have baby rooms installed at 48 stations as of the end of June 2017.



Baby stroller sign

■Measures against Female Molestation

In addition to adding women-only cars during certain hours, and with the aim of enabling female passengers to travel stress-free, we have been installing SOS buttons on major Tokyo metropolitan area lines 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. As a further step in the discouragement of female molestation, we have installed on-board security cameras in the leading cars on all Saikyo Line trains.

■Crime Prevention Measures

For conventional lines, security cameras are installed in the two-level green cars on the Tokaido, Tohoku, Takasaki, Joban and other Lines in addition to the Saikyo Line and at the decks of cars of Series E259 and E657 limited express trains, and in and after the spring of 2018, the same device will also be sequentially installed on the Yamanote Line E235 series trains.

For Shinkansen railcars, security cameras are installed at the decks and in the cars of E5, E6 and E7 series trains, and we are now proceeding with the installation at the decks and in the cars of part of the E2 and E3 series trains.



Railway service that can be comfortably utilized

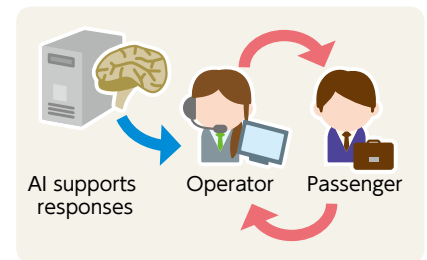
■System to respond to inquires

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 introduce 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.

■Operator supporting system by utilizing AI for the purpose of raising the response rate

Since the Center for Inquiries must receive a great number of various questions, we plan to introduce the Center for Inquiries work supporting system utilizing AI (artificial intelligence) sequentially from the latter half of FY2018.

With this system, we expect to become able to raise the rate of responses to inquiries and homogenize the responding quality as well as to reduce the cost of training operators.



Work supporting system at the Center for Inquiries utilizing AI (an image)

■Transport Services Improvements

In consideration of the situation of the passengers' utilization after the opening of the Hokkaido Shinkansen Shin-Hakodate-Hokuto Station and Hokuriku Shinkansen Kanazawa Station, we have increased in March 2017 the number of Tohoku Shinkansen "Hayabusa" services and reinforced the transportation capacity of Joetsu and Hokuriku Shinkansen during evening commuting hours to reduce congestion.

For the conventional lines, we have enhanced convenience by increasing the number of the limited express "Narita Express" trains to leave and arrive at Shinjuku Station at every 30 minutes during 10:00 and 19:00 hrs. and tried to enhance service for commuting on the seat by newly setting the limited express "Swallow Akagi" services during the morning commuting hours.

For "Tokyo Mega Loop*," we also increased the frequency of operations during the evening commuting hours for the Keiyo Line to reduce congestion.

As a result of implementing the above-mentioned and other efforts, in the fiscal year ended March 2017 the average level of in-train congestion during morning commuting hours was 168%, 70 percentage points below the rate in the fiscal year ended March 1988.

*Tokyo Mega Loop the loop formed by the Musashino, Keiyo, Nambu and Yokohama lines in the Tokyo metropolitan area that has many connections with other JR lines and lines of other railway companies.

■Improvement of onboard service

As part of improvement of onboard service, Furthermore, 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 limited express trains and new Shinkansen railcars are showing newscasts as well as destinations and other transport information.

Passengers can also avail themselves of Internet connections on some of the limited express trains through WiMAX and Wi-Fi.

Furthermore, we have installed power receptacles on all the seats of the E7 and part of E5 series railcars, and on part of the seats of E2, E3 and E5 railcars of Shinkansen trains as well as E6.



E235 series digital signage



Creation of new stations to develop railway network

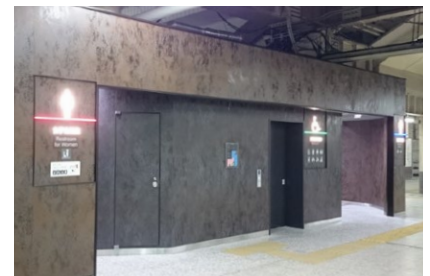
We are also cooperating with local governments in the creation of new stations in line with their city planning, based on requests from local governments, etc.
In April 2017, we opened a new station, Koriyama Tomita on Ban'etsu West Line.



Koriyama Tomita Station on Ban'etsu West Line

Improvements in Station Toilets

In order to dispel the image of station toilets as dark, dirty, and malodorous and to enable passengers to be able to use them comfortably, since its establishment JR East has been steadily upgrading its toilet facilities.
Measures taken include changes 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 2017, we renovated the toilets in 21 more stations, as a way to increase passenger comfort and satisfaction.



Toilet in Ueno Station

Provide impressive passenger service

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 renewals to suit the changes of the times to improve our passenger service since then.
In March 2016, we replaced the former six important passenger service terms with "hospitality terms" to further draw out the needs of each passenger.



Cover and contents example of Green Handbook



A poster of words for expressing hospitality



Increase mutual communication with passenger feedback as the starting point

Constant attention to passenger comments

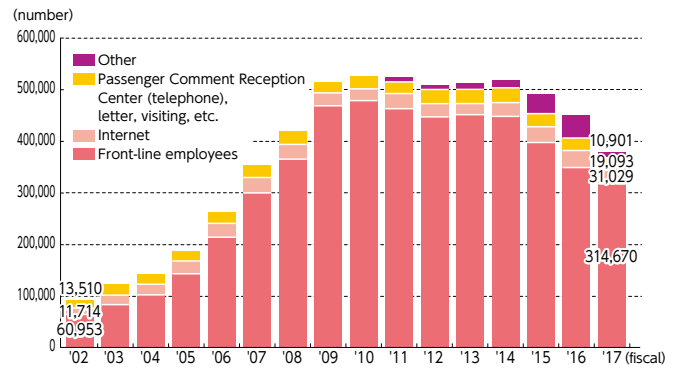
The starting point of enhancing the service quality at JR East is the passenger comments. To constantly improve our services, it is most important for us to listen carefully to passenger comments, including their interests and complaints, and then promptly respond to their requests through service improvements.

JR East is endeavoring to collect passenger comments on a daily basis including those which are received by each of our employees directly from passengers but also those posted on the Internet, those given over the telephone, and those which can be collected by utilizing other various types of tools.

All of these comments are quickly shared and analyzed on a companywide basis, and form the core of our improvements. We believe that each and every individual passenger comment contributes to the core of improved passenger satisfaction.

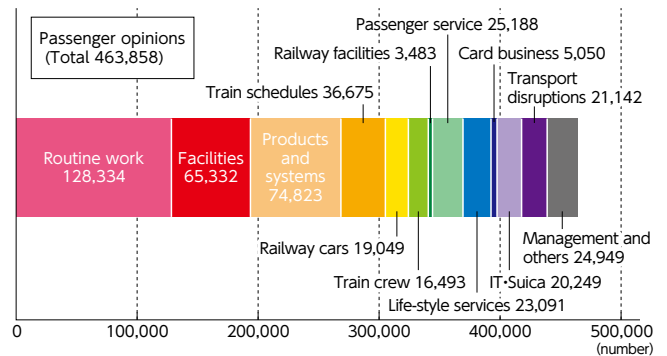
Passenger comments are considered at various levels within the company. Initially, a decision as to whether or not some action of improvement is possible is made at the level that initially received the original passenger comments. The action will reflect this decision. If action is difficult to take at that level, then the comments are passed on to higher levels, where potential improvements can be discussed. At the very top level, we have also established the Passenger Comments Committee comprised of concerned executive officers, which considers the possible implementation of improvement measures based on collected passenger comments. Through this system, we are constantly striving for the attainment of improved passenger services.

[Trends in the number of passenger comments classified by the method of reception (FY2002~)]



*Since the number of comments collected via "others," which are comments collected through the Group companies, etc., grew among the number of comments collected via passenger Comment Reception Center (telephone, letter, visiting, etc.), such has been categorized separately under a new "Others" category.

[Itemized breakdown of the Passenger comments in FY2017]



*The chart shows the number of comments on each subject. Some passengers commented on more than one subject.

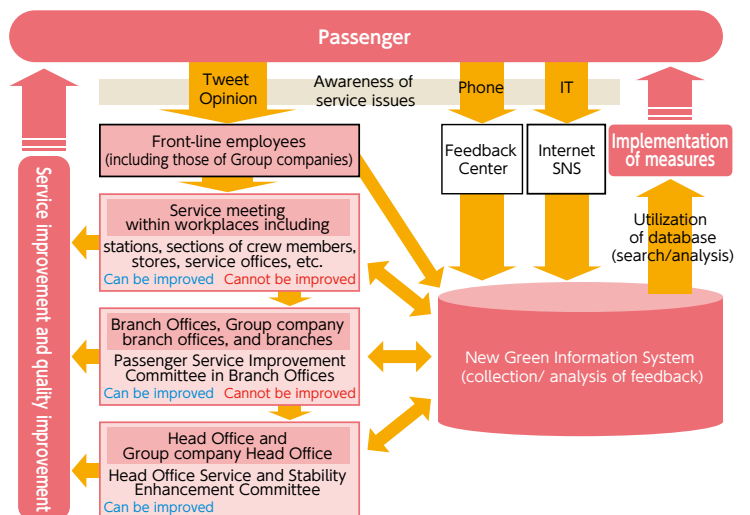
[Case of improvement based on passenger comments]

About installation of luggage spaces on E7 and W7 series trains

As the railcars of Hokuriku Shinkansen has been renewed, the luggage space that used to be equipped on the former railcars is now unavailable, and therefore, I feel great inconvenience. When I must carry a large piece of luggage, where can I place it?

For the Hokuriku Shinkansen Line, since the numbers of passengers from abroad and passengers carrying a large piece of luggage such as skis and snowboards during the winter season are increasing, we have newly installed a baggage space each on the deck of the even-numbered cars (except for the grand class cars) and the Green Car (No. 11) of the relevant trains.

[Systematic improvements based on passenger comments]





Utilization of various channels

In order to ascertain what our passengers really need, JR East considers it necessary not simply to receive comments directly given us by 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" launched in May 2012, we proactively provide information including information about our company's various measures as well as notification of our campaign plans to promote two-way communications with passengers. Furthermore, the "Projects for Improving Service Quality," designed to identify passenger needs and to promptly improve service quality and transmit information, began during 2013. 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.



JR EAST Official Facebook



Projects for Improving Service Quality (Crew Members Version)



Poster of example cases of improvement at each workplace



Safety



Society



Environment

Develop personnel and organizations that proactively think and act from the passenger's perspective

■ Service Quality Symposiums

JR East holds the "Service Quality Symposium" once a year. We consider it an opportunity for all JR East employees to think over how to challenge the enhancement of service quality through team work through special lectures, presentations of example cases, etc.



Service Quality Symposiums

■ Service Quality Promotor and Service Quality Coordinator

As leaders to promote overall improvement of service quality beyond the borders of job category groups and divisions, we appoint employees working in the frontlines of workplace in all the job category groups as the "Service Quality Promoters."

In addition, for overall improvement of railway service quality including the stability of transportation focused on team efforts for service improvement and for providing reliable railway transport, we stationed Service Quality Coordinators in district and branch offices beginning in October 2011. The coordinator's job is to supervise the area-wide improvement of service quality, as well as to support and promote solutions for cross-organizational problems. In this way efforts will be made to improve service quality rapidly from the front-line field operations.

■ Service Quality Meetings

To improve our service quality further with operating fields, branch offices and the head office working as a team, we instituted Service Quality Meetings, in which senior executives from our head office visit operating fields and exchange views with field supervisors.

In the fiscal year ended March 2017, we held discussions on the theme of "early announcement of expected time of resuming train operation after the occurrence of a transport disorder" so that we may promptly provide necessary information to passengers.

JR East strives to improve quality of service by means of overall teamwork beyond the borders of divisions and job category groups.

■ 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 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.



IT and Suica Business

About Suica

Suica is an IC ticket provided by JR East. Its service started at 424 stations in the Tokyo metropolitan area in November 2001, and the number of Suica cards issued reached approximately 63.98 million on July 31, 2017. The locations where Suica can be used continues to expand as more shops in JR East's business area begin to accept payment with Suica; interchangeable use with the other 10 IC cards throughout the country was made available in 2013.

Furthermore, e-money service enabling use of Suica for shopping payment started in March 2004. Speedy settlement, no hassle over small change and additional convenience have been supported by many passengers, and the maximum number of uses on a single day of Suica and other e-money cards operated by transport companies reached approximately 6.64 million (recorded on August 25, 2017). We aim to increase the number to 8 million by FY2021 by further expanding the number of affiliated stores and promoting its use.

| | |
|---|--|
| 【Number of Suica cards issued】 (of which with e-money function) | Approx. 63.98 million Approx. 61.81 million |
| 【Number of Mobile Suica users】 | Approx. 4.44 million |
| 【Membership of Suica Point Club】 | Approx. 2.47 million |
| 【Number of uses in March 2017】 | Approx. 149.09 million |
| 【Number of uses per day (record-high)】 (recorded on August 25, 2017) | Approx. 6.64 million |
| 【Number of shops accepting Suica】 | Approx. 388,040 |
| 【Number of locations accepting Suica (number of terminals)】 | Approx. 705,260 |

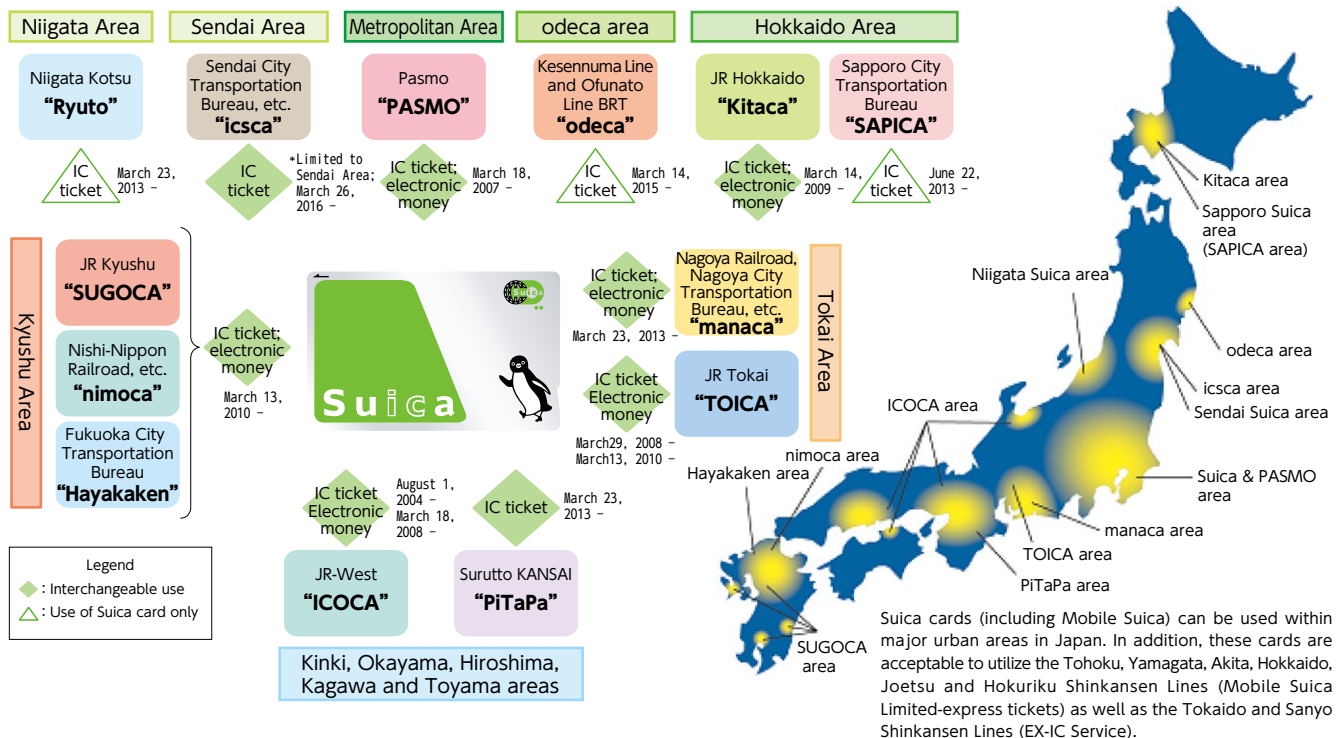
(As of the end of March 2017 unless otherwise specified)

As an IC Ticket

Ten IC cards, including Suica, used in public transport throughout the country were made interchangeable in March 2013. In addition, interchangeable use of Suica with "icsca," IC cards issued by Sendai City Transportation Bureau, in the Sendai region started in March 2016. Furthermore, from April 2017, all stations from Nirasaki to Matsumoto within the metropolitan area (except for the stations to be reached via Tatsuno Station between Okayama and Shiojiri Stations) became included in the Suica area, and these stations, including the stations that used to be able to partially handle Suica cards, started to provide all Suica services including handling of Suica commuter tickets. Also, Miyauchi Station on the Shin'etsu Main Line in the Niigata area which used to be able to partially handle Suica cards and Koriyama Tomita Station which newly opened in April 2017 on the Ban'etsu West Line in the Sendai area similarly became included in the Suica area and started providing all Suica services including handling of Suica commuter tickets. The number of stations where Suica can be used, including stations of railway companies accepting interchangeable use, is 4,850 across the nation as of April 1, 2017.

[Interchangeable Use of IC Cards Area]

(As of April 1, 2017)





■As Electronic Money

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. In FY2017, Suica electronic money was adopted by large-scale chains including TSUTAYA, Tully's Coffee, and CoCo Ichiban. Examples of where Suica can be used include major convenience stores and supermarkets as well as restaurant chains and drugstore chains. In addition to these, we have expanded its use to services, such as online shopping sites like "Amazon" and "Rakuten Ichiba."

■Responding to Diverse Needs

The number of users of "Mobile Suica," reached approximately 4.44 million at the end of March 2017, reflecting the fact that Suica service for Apple Pay was started in October 2016.

Also, in order to enhance convenience to foreign visitors to Japan in the station premises, we have started from September 2016 to install cash dispensers for exclusive use with cards issued in overseas countries. In addition, in order to make it possible to access the Internet by means of WiMAX even at concourses inside the wickets and underground platforms in the station premises where radio waves cannot easily reach, we proceeded with establishing WiMAX base stations.

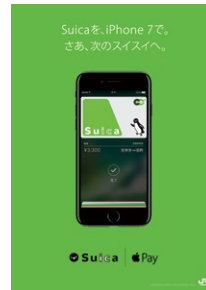
We have also been working to enhance convenience in the railway business and the life-style business and to further develop passenger services by utilizing information obtained from Suica and View cards.



Mobile Suica



View Suica Card



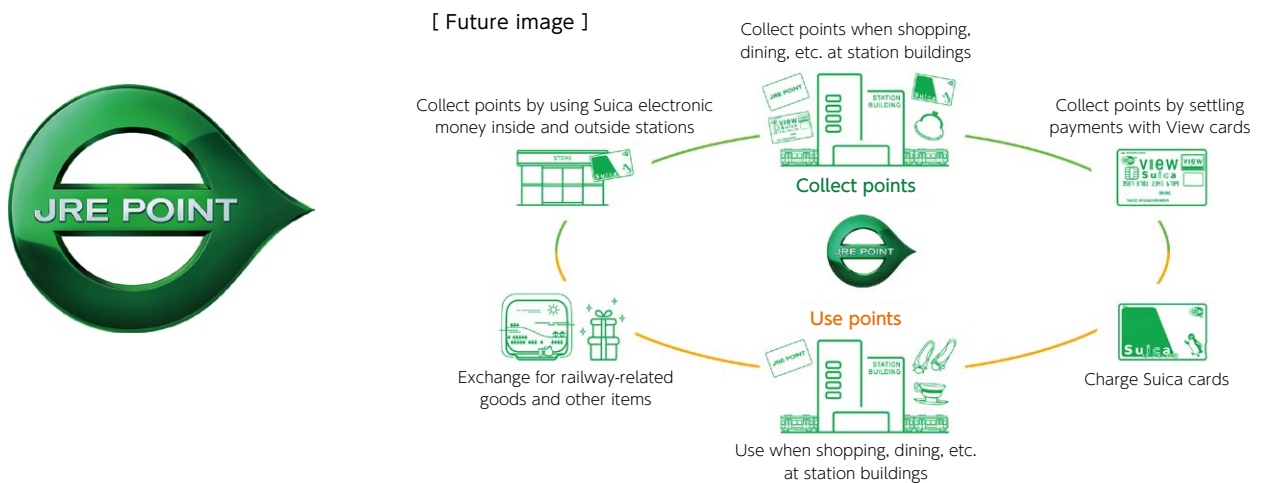
Advertisement related to Suica for Apple Pay (an example)



Improvement of a WiMAX base station

■JRE POINT

In order to build a service system that is attractive to both passengers and member stores by communalizing the multiple number of point systems existing within the Group, we launched in February 2016 the "JRE POINT" program. As of the end of August 2017, it has become to be usable at 77 places including station building (including uses at Ekinaka through NET), and hereafter, the entire Group will continue to address measures to build a highly convenient point service system by further communalizing it with Suica point and View-thanks point.





Safety Society Environment

Taking various measures for inbound tourism

In order to take in demand of rapidly increasing overseas visitors, we are taking active measures such as proposing attractive products and carrying out promotional activities in full cooperation with communities. Furthermore, we are working to reinforce capability to accept overseas visitors so that they will be able to use the railway network safely and comfortably.

Improved environment where foreign visitors can purchase products free of worry

"JR EAST Travel Service Center" for foreign visitors is located at Narita International Airport Terminal 1, Narita International Airport Terminal 2, Haneda Airport International Terminal Station on the Tokyo Monorail line, Tokyo Station and Shinjuku Station that many overseas visitors use.

In April 2016, a foreign visitors' travel counter was set up in Travel Service Center (View Plaza) at Sendai Station, and with regard to "JR EAST Travel Center," we are reinforcing the system by expanding that in Tokyo Station in June, newly opening that in Ikebukuro Station in October, expanding that in Airport Terminal 2 in January 2017, and other works for improvement.

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



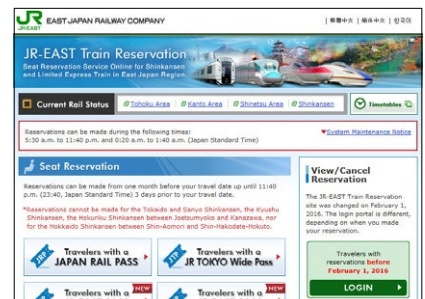
Inbound Travel Counter at View Plaza Sendai Station

Products that Appeal to Overseas Visitors

As products that can accommodate to different travel plans, we offer the "JR EAST PASS," which allows unlimited travel within the JR East service area, the "JR Kanto Area Pass," which allows unlimited travel within the Kanto area, and "N'EX TOKYO Round Trip Ticket" as a product providing access from Narita International Airport to Tokyo. Starting from April 2016, we divided "JR EAST PASS" into two products ("Tohoku area" and "Nagano/Niigata area") to improve convenience while launching new products such as "JR East-South Hokkaido Rail Pass" for traveling on Hokkaido Shinkansen and "Tokyo-Osaka Hokuriku Arch Pass" for traveling on Hokuriku Shinkansen to provide overseas visitors with more convenient and reasonable products and encourage them to take enjoyable trips using railways.

Seat reservation system allowing reservations from overseas

We offer "JR-EAST Train Reservation," which is a seat reservation service allowing reservations from overseas for Shinkansen and major limited express trains of JR East. Starting from February 2016, real time reservations became possible online, and reservation service in Chinese (traditional Chinese and simplified Chinese) and Korean in addition to English was made available, further enhancing convenience for overseas passengers. Furthermore, we have expanded in February 2017 the areas for which reservations can be made in cooperation with JR Hokkaido and JR-West, and as a result, "all areas" of JR Hokkaido and "Hokuriku Shinkansen (up to Kanazawa Station)" are now covered by the system.



Online seat reservation site "JREAST Train Reservation"



Free Public Wireless LAN Service for Overseas Visitors

As of March 31, 2017, we have installed and provide free public wireless LAN services at 89 stations (mainly on the Yamanote Line) and at the "JR EAST Travel Service Centers" which are used by many overseas visitors. (This service is provided in four languages: English, Chinese, Korean and Japanese.)



Adoption of Station numbering system

To offer easier and safer use of railways not only for foreign visitors but also for all passengers, a "station numbering system" has been sequentially introduced in the Tokyo metropolitan area, with station names indicated in four languages (Japanese, English, Chinese, and Korean), starting at Meguro Station from August 2016.



Station numbering

- 1 Shows the combination of the route code (two letters) and station number (two-digit number) using the route color.
- 2 In addition to the route code and station number, "three-letter codes" that represent the station names using three alphabetical characters are shown for hub stations.

Image of JR East station numbering

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.

JAPAN RAIL CAFE

In December 2016, the "Japan Rail Café" has opened in Singapore, providing a "venue" to offer travel information on Japan and personal exchange among local people highly interested in Japan. In cooperation with local governments and other organizations in Japan, it holds special events monthly in which visitors can enjoy culture, meals, tourist attractions, etc. of various regions in Japan, to enhance opportunities for visits to Japan.



JAPAN RAIL CAFE

Establishment of a prayer room

In consideration of the situation that Muslim visitors to Japan from Southeastern countries and other district are on an increase, a prayer room has been established for them in the premise of Tokyo Station.



Prayer room



Safety



Society



Environment

Technical renovation

Medium- to Long-term Vision for Technical Renovation

Since its inauguration as a company, JR East has established its firm foundation and has promoted researches and developments for creation of new value and service in the railway system in order to sustainably grow as a corporation.

In November 2016, in view of the progress of technologies including IoT, big data and AI, we formulated the "Medium- to Long-term Vision for Technical Renovation" aiming to realize a forward-looking technical renovation.

With the "Medium- to Long-term Vision for Technical Renovation," we will thoroughly review the services provided by the JR East Group from the viewpoint of passengers by utilizing IoT, big data, AI and other technologies, to materialize the "Mobility Revolution" with thinking beyond the traditional mindset.

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 open 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

Research and development of service robots

For the purpose of supporting passengers who are not accustomed to railways and providing support for security in the station premises, we are promoting researches and development of service robots (information robots, transfer-supporting robots, etc.) so that all passengers may use stations without worry.

In addition, in order to accelerate development and introduction of service robots, we will establish a limited liability partnership (LLP) to recruit technical and development partners from outside the Company.



Information robot (an image)



Transfer-assisting robot (under joint development)

TICKET TO TOMORROW

About research and development of service robots

Takeshi Saito

Researcher, Frontier Service Development Laboratory, JR East Research and Development Center

In preparation for the arrival of super ageing society with fewer children in future, the Frontier Service Development Laboratory is addressing the research and development of robots that will be the base for supporting station services including providing information to passengers, cleaning, transportation, security and other services. We do not consider robots to be mere substitution for men, but aim to find method to utilize robots that will work in cooperation with men and facilitate to heighten the level of the entire station services. Differently from factories, since various risk factors that can threaten safe operation of robots are hidden in the station premises utilized by many passengers, it is impossible to utilize mere robotics in station premises. Therefore, we are challenging to combine the safety technology and know-how peculiar to railway industry and the most advanced robotics. Creating stations in which various types of robots can be utilized is the very first attempt in the railway industry, and we feel very satisfied with the work.

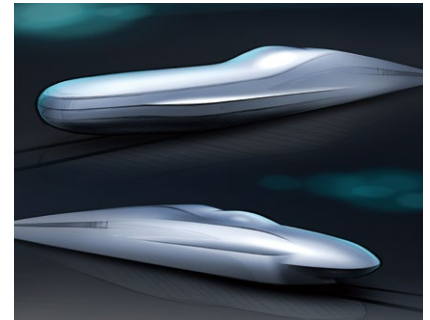




Research and development toward the next-generation Shinkansen

We will newly manufacture E956 type Shinkansen experimental railcar (nicknamed ALFA-X) to promote the "development for realization of next-generation Shinkansen."

For the next-generation Shinkansen, in addition to the conventional concept of providing safe and high-speed means of transfer, we aim to provide new value, and will promote development with concepts of "Pursuit of further safety and stability," "Comfortability," "Environmental performance," and "Maintainability." The experimental railcar is planned to be completed in spring of 2019.



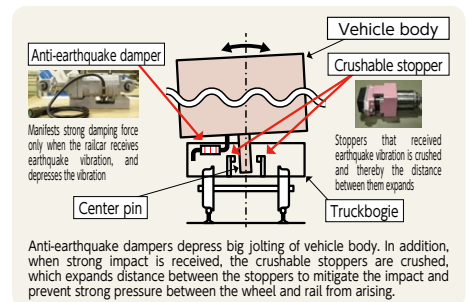
An image of E956 type Shinkansen railcar (ALFA-X)

Concept of next-generation Shinkansen

Pursuit of further safety and stability

-- We will realize the next level of "safety" and "stability."

- Equipped with a development article to make a train to stop more promptly and to be more hardly derailed when earthquake occurs
- Conducting tests of railcar structure that prevent snow accretion, aiming at Shinkansen that is strong against snow and coldness
- Enhancing safety by autonomously determining the railcar conditions with monitoring of each equipment on the railcar as well as addressing enhancement of transportation quality by detecting sign of failure and prevent its occurrence

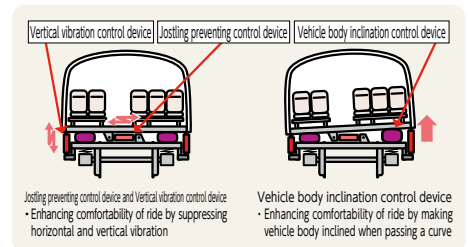


Development to make train stronger against derailment (Anti-earthquake damper and Crushable stopper)

Comfortability

- Flexibly responds to more diversified needs -

- By means of installing oscillation preventing control device and testing vehicle body structure with high sound absorbency and insulation, etc., it is aimed to realize comfortable indoor space that is "quiet" and "does not swing."
- Addressing development work to realize services with which passengers can pass time as if they were at home.
- In order to enhance the speed, technically verifying possibility of maximum speed of 360 km/h in business operation.

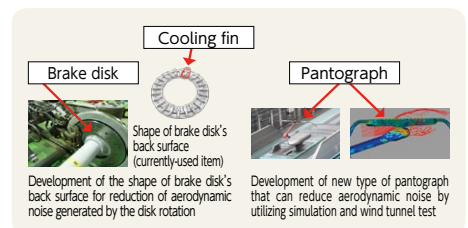


Jostling preventing control device, etc.

Environmental performance

- Brushing up environmental performance -

- Aiming to reduce noise by making lower part of vehicle body, pantograph, etc. to generate less noise.
- Aiming to reduce pressure wave at the time of entering into tunnel by verifying the shape of new head car.
- Addressing promotion of energy reduction by testing technologies related to energy-saving operation



Reduction of noise from lower part of vehicle body, pantograph, etc.

Maintainability

- Innovates maintenance work -

- In addition to realization of further safer and more stable transportation, realization of CBM* is aimed at, by loading device for monitoring ground facilities and each unit of equipment on board.

* CBM: Condition Based Maintenance

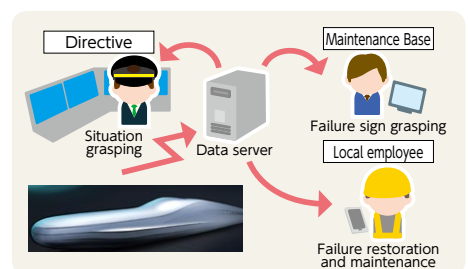


Image of CBM



Realization of smart maintenance

By loading devices for monitoring not only equipment on railcars but also tracks and power facilities while train is running, it becomes possible to grasp 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. Currently, we are examining method of analyzing and evaluating data.

[Examples of CBM]

Railcar ---
Currently, the condition of major equipment is being monitored from both sides of device on board and that on the ground, and in future, we plan to utilize the system for grasping failure signs and promptly effecting restoration in case of failure.

Tracks ---
We will continue to collect data on track displacement (slight distortion and/or gap of track width). Operation has also been started on Tohoku Main, Echigo and Nikko Lines.

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

