

Creating "Social Value" –Social–

# Tokaido Shinkansen: Constant Effort to Enhance Service



Since its establishment, JR Central has constantly refined not only the safe and punctual but also-fast, frequent, high capacity, environmentally feasible, and comfortable characteristics of the Tokaido Shinkansen, which plays the role of Japan's main artery transportation, in order to maintain and strengthen its competitiveness. Specifically, we have constantly worked to enhance services through the introduction of the "12 Nozomi Timetable," the launch of new N700S Shinkansen rolling stock, and the expansion of online reservation and ticketless boarding services, among others.

## Characteristics of the Tokaido Shinkansen

<b>Safety</b> <b>0</b> accidents <ul style="list-style-type: none"> <li>No accidents resulting in fatalities or injuries of passengers on board since operations commenced</li> <li>Improvement of safety awareness and skills through human resources education and training</li> <li>Ongoing investment for safety-related facilities</li> </ul>	<b>Punctual</b> <b>1.6</b> minutes <ul style="list-style-type: none"> <li>Average delay time: 1.6 minutes/1 train in service  <small>* Results for FY2023 (including delays caused by natural disasters, etc.)</small></li> </ul>	<b>Fast</b> <b>285</b> km/h <ul style="list-style-type: none"> <li>Maximum speed: 285 km/h</li> <li>Between Tokyo and Shin-Osaka: 2 hours 21 minutes  <small>* Note: Accurate as of the March 2023 timetable revision (arrival time based on the fastest trains in service)</small></li> </ul>
<b>Frequent and High Capacity</b> <b>372</b> trains <b>432,000</b> passengers <ul style="list-style-type: none"> <li>Number of train services per day: 372  <small>* Results for FY2023 (including extra trains)</small></li> <li>Number of passengers per day: 432,000  <small>* Results for FY2023</small></li> <li>Number of seats available: 1,318 seats/train  <small>* 1,314 seats/train for the N700S type introduced in April 2021</small></li> </ul>	<b>Environmentally feasible</b> <b>1/8</b> <b>1/12</b> <ul style="list-style-type: none"> <li>The energy consumption amount per seat when traveling between Tokyo and Osaka is approximately 1/8th that of an aircraft.</li> <li>The CO<sub>2</sub> emissions for the same condition are around 1/12th.</li> </ul>	<b>Comfortable</b> <ul style="list-style-type: none"> <li>Wide open, quiet space</li> </ul>

## ▶ "12 Nozomi Timetable" expected to significantly improve our services

When the Company was established in 1987, we were operating the Tokaido Shinkansen at the maximum speed of 220 km/h. We put the Series 300 "Nozomi" into operation in 1992 with the maximum speed of 270 km/h, and, in 2003, we opened Shinagawa Station and raised the maximum speed to 270 km/h for all trains, which allowed us to shift to a Nozomi-centered timetable.

Then, in 2015, the speed of the Tokaido Shinkansen was increased for the first time in 23 years, reaching the maximum speed of 285 km/h.

The Series 700 was retired in the spring of 2020, and we completed the update to the N700A type\* to allow all trains to run at the maximum speed of 285 km/h. We also finished

improvements to equipment and introduced the "12 Nozomi Timetable" in March 2020.

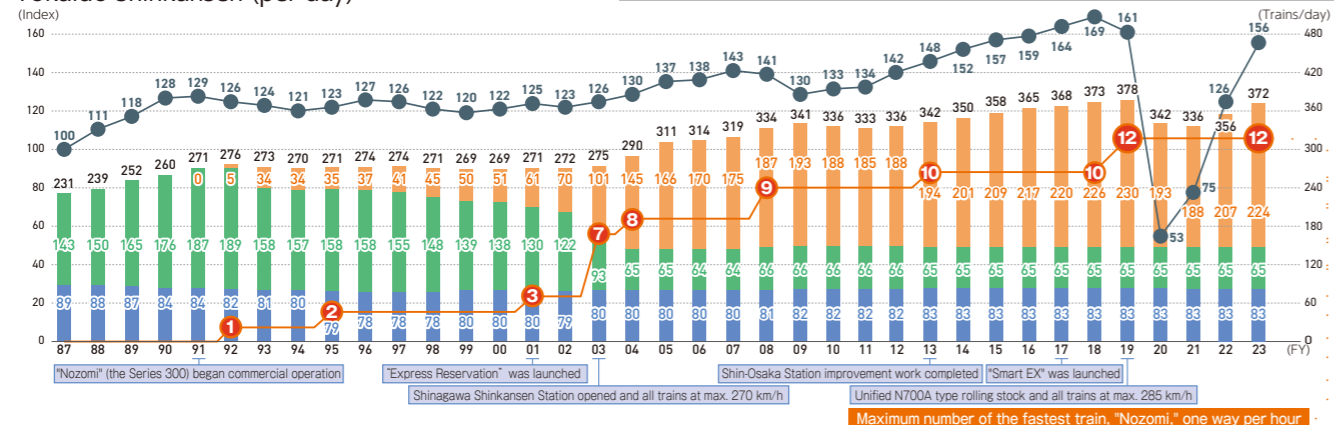
The maximum number of "Nozomi services" per hour increased by two from 10 in either direction, and we can now operate up to 12 "Nozomi" services during busy hours.

Also, all "Nozomi" services will travel between Tokyo and Shin-Osaka in less than 2 hours and 30 minutes.

Passengers can reduce their travel time by reserving train seats online at their convenience and using the new, faster "Nozomi." This has made the Tokaido Shinkansen even more convenient.

\* Generic name of the Series N700 and N700A, and later reflecting the main functions adopted in the N700A

## Number of services and passenger volume of the Tokaido Shinkansen (per day)



\*1 Departures shown include extra trains  
 \*2 Usage status is shown by means of an index with the sectional transportation volume for FY 1987 as 100.  
 \*3 Station stops - Nozomi: Shinagawa, Shin-Yokohama, Nagoya, and Kyoto / Hikari: Same as "Nozomi," plus a few additional stations / Kodama: All stations  
 \*4 The sum of figures for "Nozomi," "Hikari" and "Kodama" may not agree with the total due to rounding.  
 \*5 Departure figures and usage status figures in FY2020 through FY2022 were lower due to the impact of the COVID-19 pandemic

## ▶ Launch of new N700S Shinkansen rolling stock

We began in July 2020 to introduce the new N700S Shinkansen rolling stock, replacing the N700A type. The N700S is designed based on the results of years of technological development and is equipped with features such as enhanced safety and stability, enhanced comfort and convenience, higher emergency response capability, and a standardized design that can easily be constituted to any length of trainsets.



N700S

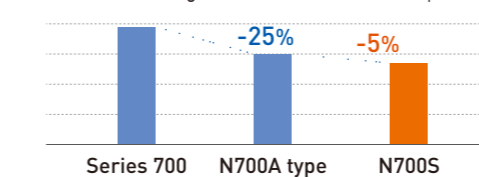
### Number of New Trainsets

Fiscal Year	2020 to 2023	2024 (plan)	2025 (plan)	2026 (plan)	2027 (plan)	2028 (plan)	Total
Number of Trainsets	42	7	7	7	7	6	76

### Main features of the N700S

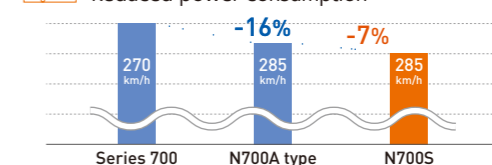
<b>Enhanced safety and stability</b> <ul style="list-style-type: none"> <li>Shorter braking distance in the event of an earthquake <b>Figure 1</b></li> <li>Enhanced snow-resistant features</li> <li>Enhanced status monitoring function</li> </ul>	<b>Enhanced comfort and convenience</b> <ul style="list-style-type: none"> <li>Equipped with a fully active damping control system</li> <li>Additional outlets for mobile devices</li> </ul>	<b>Lower running cost</b> <ul style="list-style-type: none"> <li>Reduced power consumption <b>Figure 2</b></li> <li>Reduced inspection/repair work</li> </ul>	<b>Higher emergency response capability</b> <ul style="list-style-type: none"> <li>Battery-based self-propelled system <b>Figure 3</b></li> <li>Additional security cameras</li> <li>Enhanced intercom functions</li> <li>Toilet functions during power outage</li> </ul>
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**Figure 1** Shorter braking distance in the event of an earthquake (at 285 km/h)



The braking distance during an earthquake is 5% shorter than the N700A type thanks to an improved ATC and brake system.

**Figure 2** Reduced power consumption



Employing the Dual Supreme Wing design, which reduces air resistance, and a drive system that uses next-generation silicon carbide semiconductors, the N700S consumes 7% less electricity than the N700A type.

**Figure 3** Battery-based self-propelled system



The N700S is the first high-speed train equipped with a battery-based self-propelled system. It can travel to a location where passengers can safely evacuate in the event of a long power outage following a natural disaster, etc.

## Message



Corporate Executive Officer  
 Director General of the  
 Shinkansen Operations Division  
**Atsushi Tsujimura**

The Tokaido Shinkansen timetable differs every day. By utilizing our infrastructure such as rolling stock and tracks and having various technical departments work together, we are able to configure trains to meet customer needs. This is one of our strengths.

As we recover from the COVID-19 pandemic, we are making efforts to accurately capture customer demand by utilizing the "12 Nozomi Timetable" and flexibly scheduling trains during peak periods. We believe that the recovery in transportation volume and revenues is a reflection of such efforts.

For the N700S rolling stock, which will be introduced from 2026, we will be working on "Reform of Business Operations" such as ground facility checks (for some trains) and reducing the labor required for on-board maintenance work, as well as continuing to provide improved services by introducing private rooms, etc. We hope that you will continue to place your trust in the Tokaido Shinkansen as a pillar of our revenue stream.



📍 Tokaido Shinkansen: Constant Effort to Enhance Service

➤ Promoting Online Reservation and Ticketless Boarding Services

In an effort to have customers more conveniently use the Tokaido Shinkansen, JR Central takes the initiative in promoting greater use of online reservation and ticketless boarding services via "EX Service" ("Express Reservation," "Smart EX," etc.).

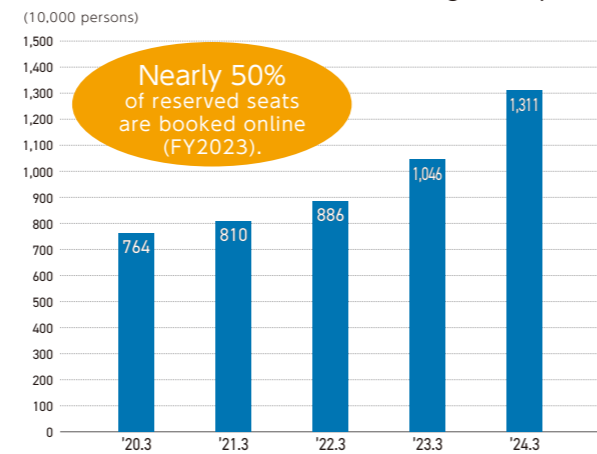
For customers who frequently ride the Shinkansen for business or other reasons, we provide an "Express Reservation" service that offers a discounted member price throughout the year. Members of the service can smoothly ride the Shinkansen by simply touching their member IC card, etc. At the automatic ticketing gates after reserving their preferred seats with a smartphone or other device beforehand. There is no need to stop at the ticket counter of a station, allowing customers to significantly reduce their total transit time. In addition, reservations can be changed as many times as necessary before departure without any handling fees, allowing customers to use the service without worry even if there are sudden schedule changes.

We also offer "Smart EX" with no membership fee for customers who only occasionally use the Shinkansen, including people traveling to visit their hometown, tourists, and foreigners visiting Japan, so that they can also use the convenient online reservation & ticketless boarding service. This ticketless service enables customers to immediately

use the service by simply registering their credit card and the nationwide interoperable transportation IC card from their smartphone, etc. As a result, we offer greater convenience to even more customers.

At the moment, reservations for reserved seats using these services currently account for nearly half of all reservations.

Numbers of EX Service members and registered persons



➤ Further Enhancing Our EX Reservation Service

In March 2021, we launched a ticketless boarding service for group passengers, a ticketless boarding service using a QR code for visitors to Japan, and a reserved seat reservation/change service for delayed trains. Thanks to these services, passengers who board trains in groups and visitors to Japan who do not have transportation IC cards are now able to board Shinkansen trains without the bother of obtaining a ticket.

Furthermore, in June 2022, we extended the service areas of the EX Service to the Kyushu Shinkansen (Hakata - Kagoshima- Chuo section), beginning to offer the service along all of the Tokaido, Sanyo and Kyushu Shinkansen lines (Tokyo - Kagoshima-Chuo section).

Since October 2023, we have been operating "EX Shinkansen Travel Packages," a travel product that

accommodates changes in train until immediately before boarding and ticketless Shinkansen travel, and "EX Hotels and Activities," a service to allow users to seamlessly book and pay for any combination of lodging facilities, sightseeing plans, car rentals, etc., of their choice. In addition, we have enhanced EX Service to make Tokaido Shinkansen seats available for reservations up to one year in advance. We have also disclosed per capita CO<sub>2</sub> emissions for each section of the Tokaido, the Sanyo, and the Kyushu Shinkansen in response to the needs of our corporate members.

We aim to enhance our services in terms of both business and tourism by offering products attractive to customers under these structures so that we can increase future usage and revenues.

\* QR Code is a registered trademark of Denso Wave Incorporated.

One-stop, seamless reservation for trips for business or pleasure will become possible.



- Other service enhancements
- The "EX Points" service to grant points according to the use of the Tokaido Shinkansen
  - Tokaido Shinkansen seats have been made available for reservations up to one year in advance

➤ Stimulating Tourist Demand

We are working to stimulate tourist demand by introducing various campaigns for each region or target segment through various information media and sales channels. For Kyoto and Nara, which are the largest tourist resources in our market area, we have continuously implemented travel campaigns in collaboration with local governments and travel agencies, such as the Kyoto Campaign (launched in 1993), the Nara Campaign (from 2005 to 2021), and the renewed Nara Campaign (launched in 2022), and are promoting the use of the Shinkansen mainly from the Tokyo Metropolitan area to the Kansai region. In addition, we are working on coming up with attractive products associated with areas along our railway lines.

Since summer 2020, we have been actively implementing new promotional measures that capture customer

trends and needs, including the following: "zurashi tabi" (shifting travel), a new way of traveling whereby the times, locations, means of travel and action at destinations are shifted from the "standard; "Oshi Travel" a campaign in which the content of "Oshi Travel" of going to see one's own recommendations is developed and suggested in collaboration with business operators; and "Chartered Shinkansen Package," a service to allow customers to charter a whole car of the Tokaido Shinkansen to, for example, hold an event of their own.



"Kyoto CP" poster

➤ Improving the Environment to Support New Ways of Working

In response to the spread of a new work style in which people can work anywhere, we have been working to enhance the business environment in stations and trains to enable passengers to spend their travel time in a manner suited to their work style. In order to further enhance the in-car environment for businesspeople, we will provide new services going forward.

We enhance the "S Work Car" service, which is set in Car No. 7. of the Nozomi, Hikari, and Kodama trains by installing a partition at some of the B seats in Car No. 7. and starting to offer A and C seats on both sides as "S Work P Seats." The "S Work Car" service is available during busy and the busiest seasons. The service is also available for sale at stations, etc. in addition to the "EX Service," making it easier for passengers to use the service.

In addition, "Business Booths" in the N700S trains have

been operated with a fee on a regular basis gradually from October 1, 2023. The booths will be installed in all N700S trains by the end of FY2024.

Furthermore, we have set up semi-private work booths and poles fitted with power outlets that are available free-of-charge in some waiting rooms at all Tokaido Shinkansen stations where Nozomi stops. We also operate "EXPRESSWORK," a paid work space service. In addition to booth-style space available at all Nozomi stations and some Hikari stations, lounge-style space is available at Tokyo Station.

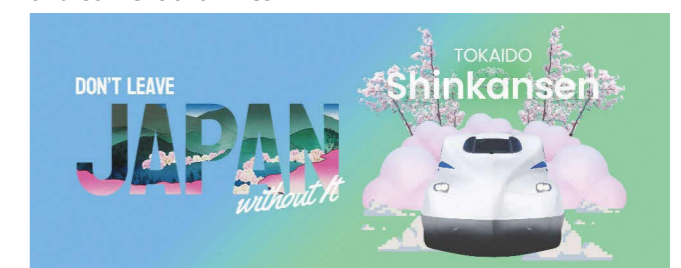
We aim to continue working to enhance our services in a variety of aspects so that businesspeople who use the Tokaido Shinkansen can spend their travel time in more convenient and comfortable ways.

➤ Initiatives to attract inbound tourists

We are strengthening our promotions targeting overseas customers, with a focus on the continually increasing number of foreign visitors to Japan, and working to increase users of our main product, Smart EX, by promoting the appeal of traveling on the Tokaido Shinkansen.

Furthermore, in order to attract customers to the Chubu and Hokuriku areas with an abundance of tourism resources, we are working with local governments along the train lines and other transportation businesses to stimulate strong inbound demand by establishing and offering value tickets in areas popular with foreign visitors to Japan, including "Takayama and Hokuriku." We are also disseminating information through the multilingual portal site "Central Japan Shinkansen/Train Portal," which compiles information on products and tourist information in these areas, as well as various other web content.

We will continue to work to increase the use of "Smart EX" by visitors to Japan, as well as promote the value tickets and strengthen collaboration with local governments along the train lines, overseas OTAs (Online Travel Agents), other companies, etc., in order to encourage more visitors to Japan to use the Shinkansen and conventional lines.




Global website banner

URL <https://global.jr-central.co.jp/en/onlinebooking/contents/shinkansen/>



**Message**



Corporate Officer  
Director General of the  
Marketing Division  
**Atsushi  
Sakakibara**

To recover profits after the COVID-19 pandemic, we need to reform our "earning strategy," and we are changing our strategies and approaches.

The first one is "Being outwardly open." In order to meet the changing needs of our customers, we are collaborating with a wider range of content holders than ever before to undertake new measures to promote the use of the Tokaido Shinkansen. The second is to "Remove barriers to creativity." The Shinkansen wrestling event and the Delicious Shinkansen project utilizing the Chartered Shinkansen Package were made possible by thinking outside the box.

As we continue to plan new projects, we are hearing more and more people say they would like to realize new projects together with JR Central, creating a virtuous cycle that leads to more and more projects.

We are also continuing to consider new seating options, including the introduction of high-quality facilities and services on the Tokaido Shinkansen.

It is our intention to continue to respond to changing customer needs, create new demand, and strive to provide high added value products and services in order to achieve further revenue growth.

▶ 60th Anniversary of the Tokaido Shinkansen

Since its opening on October 1, 1964, the Tokaido Shinkansen has made ensuring safe and reliable transportation its number one priority and tirelessly continued to develop technology and improve services. It has been used by more than seven billion passengers since its opening. To express our gratitude for your patronage to date and to build expectations for the further evolution of high-speed railways, we have started in April 2024 to plan for the 60th anniversary of the opening of the Tokaido Shinkansen.

First, to convey our gratitude for our customers' patronage and to invite them to become more familiar with the Tokaido Shinkansen, we asked picture book author Noritake Suzuki to create a logo mark featuring the 60th anniversary pose, inspired by the salute of crew members that customers often encounter when using the Tokaido Shinkansen. He also created a heartwarming illustration entitled "60 Years of You and the Shinkansen" that will bring back fond memories to customers who have journeyed on the Tokaido Shinkansen. In addition, to build expectations for the further evolution of high-speed railways, we are holding an event for the general public called "The History of High-Speed Railways." This event introduces the timetables of both back when the service first started and the present, and we also hold events where

employees directly explain about the Tokaido Shinkansen's outstanding technology, in addition to displaying panels and parts. Through these events, we are introducing the evolution of the Tokaido Shinkansen and its high level of technology.

As part of the 60th anniversary project, we are also working on collaborating with various other anniversary projects, and in collaboration with Calbee's Kappa Ebisen, which is celebrating its 60th anniversary in 2024, we invited 60-year-old Kappa Ebisen fans selected by lottery in May to board a chartered Tokaido Shinkansen train called the "Snack Shinkansen Kappa Ebisen Train" that operated between Tokyo and Nagoya. Other events include the "Exciting Railway Stamp Rally," where participants can collect stamps by visiting facilities related to railways along the Tokaido line, and depending on the number of stamps they collect, they can apply for special offers such as the "Ride the Doctor Yellow event" or the "Ride the SCMAGLEV Train event." Projects related to the 60th anniversary will continue until the end of FY 2024. Through these various projects, we hope to convey our gratitude for your patronage to date, as well as to draw attention to the Tokaido Shinkansen and further expand its use.



Illustration "60 Years of You and the Shinkansen" (by Noritake Suzuki)



Departure ceremony for the "Snack Shinkansen Kappa Ebisen Train"

Business Strategy
Reinforcement of Earning Power
Generating "Economic Value"
Creating "Social Value"
Corporate Data

Social

Creating "Social Value" –Social–

# Conventional Lines: Maintenance and Development of Social Infrastructure

By operating conventional lines in the Tokai region that form a network with the Tokaido Shinkansen, JR Central supports the people in this region and, in a broader sense, undertakes the mission of supporting social infrastructure. By continuing to further refine the operation of a network of conventional lines, we will contribute to the maintenance and development of social infrastructure.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

▶ Mission as social infrastructure of the local community

Along with the management of Japan's main transportation artery, JR Central operates in a locally-oriented manner a network of conventional lines in the Tokai Region, centered on the Nagoya and Shizuoka areas, thereby supporting the people in these areas. The 12 conventional lines operated by JR Central, total approximately 1,400 km in operating kilometers, which is approximately 2.5 times the length of the Tokaido Shinkansen, and play a role as a means of transportation for daily life, including commuting to work and school. In other words, they serve as social infrastructure of the local community. We have steadily improved our services by, for example, introducing new vehicles and thereby increasing the speed and frequency of the services.

In order to enhance the convenience of limited express trains, we will continue to develop an integrated network of the Shinkansen and conventional lines by improving connections between the two and increase flexibility in the operation by increasing the frequency of services or number of cars per train to absorb demand fluctuations caused by seasonal factors and events. In FY2022, we began putting the new hybrid powered limited express "Series HC85" into commercial service for our limited express train "Hida." Series HC85 has been introduced to all our "Hida"

and "Nanki" limited express trains through FY2023. The Series HC85 has achieved commercial operation as the first hybrid powered electric car in Japan to reach a top speed of 120 km/h.

Moreover, in order to offer convenient timetables for local train passengers, we will continue to develop a convenient rapid train system, operate trains at regular intervals, and increase the frequency of services or the number of cars per train, especially during the morning and evening commuting hours. Furthermore, we put the Series 315 commuter electric railcar into commercial operation in FY2021, which will continue to be introduced to conventional lines centered on the Nagoya and Shizuoka areas through FY2025. By launching these new vehicles, we will improve services for our customers by providing safety, stability, comfort and convenience and by further enhancing environmental performance.



New Series HC85 limited express vehicle

▶ Sales and marketing in coordination with local communities along our lines

Areas along our lines are blessed with many tourist resources. While continuing to strengthen our relationships with local residents and travel agencies at tourist spots in our operating areas, we are working to stimulate tourist demand by publicizing attractive tourist resources at stations, on trains, through our website and by other means and by taking various sales and marketing measures.


For example, we offer a train journey with a sense of the extraordinary by operating the express train "Iida Line Unexplored Stations" on the Iida Line, which runs through remote mountain stations and scenic sections, during periods of high tourist demand. Furthermore, we are holding the "Sawayaka Walking" service, offering free-of-charge walking tours requiring no reservation that start from our

stations and visit wayside sightseeing spots. We are also collaborating with local governments, travel agencies, etc. through the Destination Campaign organized jointly by the six JR companies to develop attractive tourism resources and products and operate sightseeing trains, etc., contributing to regional revitalization as well as promoting the use of the Shinkansen and conventional lines.



Kowada Station and "Iida Line Unexplored Stations" express train

**Message**



Corporate Executive Officer  
Director General of the  
Conventional Lines  
Operations Division  
**Masami  
Nitta**

Conventional lines centered on the Nagoya and Shizuoka areas are used by customers living in these areas as a means of daily transportation, forming an integrated transportation network with the Tokaido Shinkansen. In operating conventional lines, we place the highest priority on ensuring safety. We have responded to natural disasters, which have become more frequent and more severe in recent years, with the understanding and cooperation of all concerned in the region.

Amid various changes in the business environment surrounding conventional lines, such as the decline in the population along the lines, the development of road networks and the spread of teleworking, the Conventional Lines Operations Division is also focusing on "revenue expansion" by implementing railway usage and sales promotion measures through regional cooperation, and on "reform of business operations" to reduce recurring costs. Through these efforts, we will build an operating system that can continue to efficiently provide comfortable railway services far into the future, to continue providing safe and reliable transportation, while at the same time working to refine transportation services on conventional lines in cooperation with the communities along our lines.