

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

Safety 0 accidents

- No accidents resulting in fatalities or injuries of passengers on board since operations commenced
- Improvement of safety awareness and skills through human resources education and training
- Ongoing investment for safety-related facilities

Punctual 1.1 minutes

- Average delay time: 1.1 minutes/1 train in service
- * Results for FY2022 (including delays caused by natural disasters, etc.)

Fast 285 km/h

- Maximum speed: 285 km/h
- Between Tokyo and Shin-Osaka: 2 hours 21 minutes
- *Note: Accurate as of the March 2023 timetable revision (arrival time based on the fastest trains in service)

Frequent and High Capacity 356 trains 360,000 passengers

- Number of train services per day: 356
- Number of passengers per day: 360,000
- Number of seats available: 1,323
- * 1,319 seats/train for the N700S type introduced in April 2021
- * The numbers of train services and passengers per day in FY2022 were reduced by the impact of the COVID-19 pandemic.

Environmentally feasible Approx. 1/8 Approx. 1/12

- The energy consumption amount per seat when traveling between Tokyo and Osaka is approximately 1/8th that of an aircraft.
- The CO₂ emissions for the same condition are around 1/12th.

Comfortable

- Wide open, quiet space

"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.

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.

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.

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 N700S

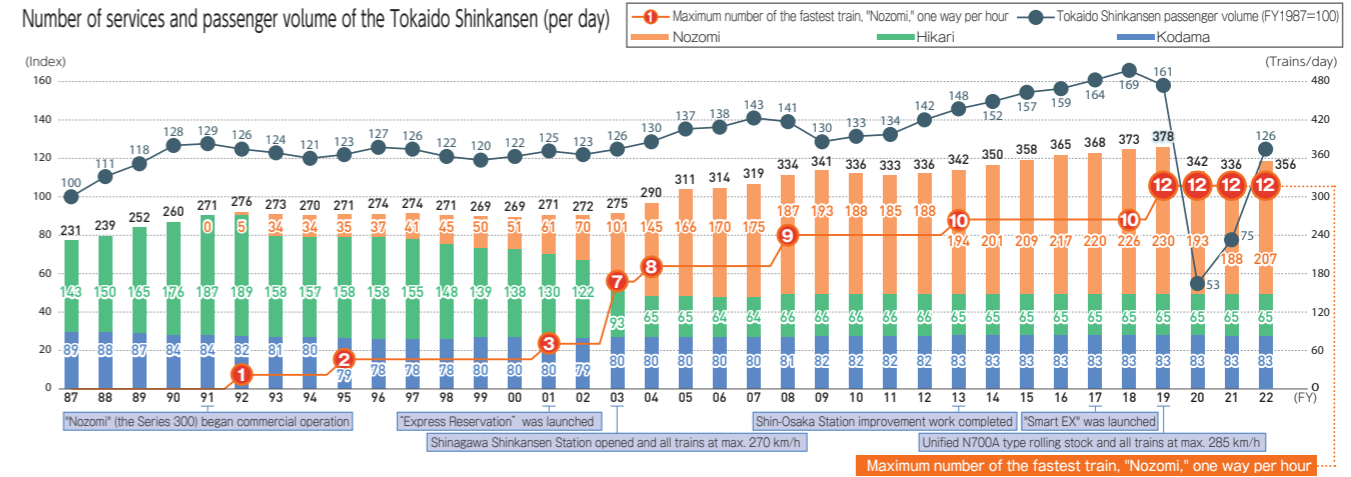


Figure 1: Travel Time of "Nozomi" between Tokyo and Shin-Osaka and Number of Services per Hour during Pattern Hours

Travel Time	10 Nozomi Timetable (Spring 2019 revision)	12 Nozomi Timetable (since Spring 2020 revision)
Within 2 hr 30 min	3 trains	12 trains
2 hr 33 to 37 min	7 trains	None

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.

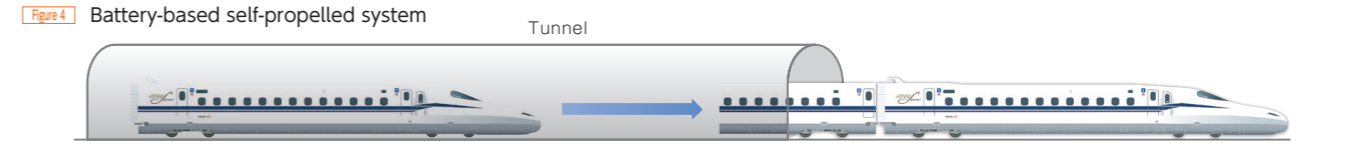
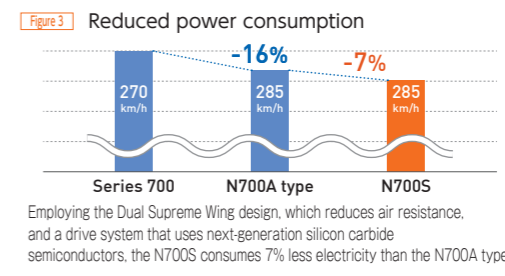
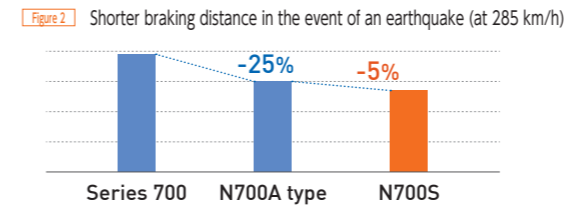


Number of New Trainsets

Fiscal Year	2020	2021	2022	2023 (plan)	2024 (plan)	2025 (plan)	2026 (plan)	Total
Number of Trainsets	12	13	13	4	7	7	3	59

Main features of the N700S

- Enhanced safety and stability**
 - Shorter braking distance in the event of an earthquake
 - Enhanced snow-resistant features
 - Enhanced status monitoring function
- Enhanced comfort and convenience**
 - Equipped with a fully active damping control system
 - Additional outlets for mobile devices
- Lower running cost**
 - Reduced power consumption
 - Reduced inspection/repair work
- Higher emergency response capability**
 - Battery-based self-propelled system
 - Additional security cameras
 - Enhanced intercom functions
 - Toilet functions during power outage



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.

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▶ 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 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

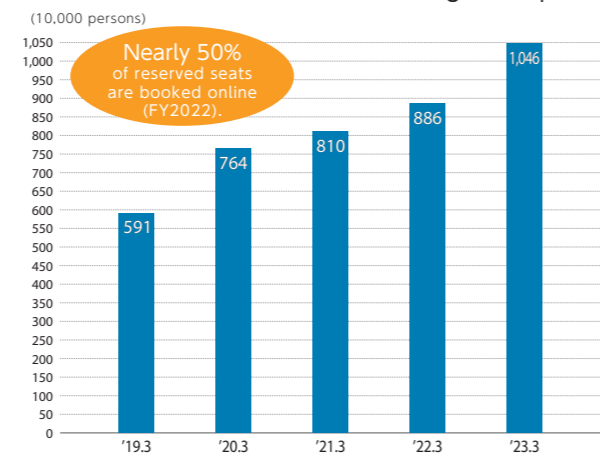
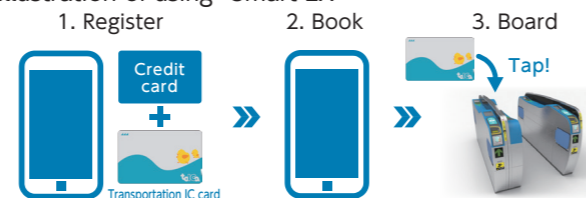


Illustration of using "Smart EX"



▶ 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 CO₂ 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

- Launch of 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 Update," a campaign in which the content of "Oshi Travel" of going to see one's own recommendations

is updated and suggested in collaboration with business operators; and "Chartered Car Package," a service to allow customers to charter a whole car of the Tokaido Shinkansen to, for example, hold an event of their own.

Furthermore, targeting inbound tourists, we are working in cooperation with municipalities located along our train lines and other transportation companies to offer sightseeing value tickets covering destinations that are popular among international tourists, such as "Takayama and Hokuriku." We also have travel products to encourage customers to travel in areas along the Tokaido Shinkansen and other train lines of our company. We offer information on the "Central Japan Shinkansen/Train Portal," a multi-lingual website packed with information on products and tourist destinations in the areas in which we operate.



"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.

More specifically, we will enhance the "S Work Car" service, which is operated in Car No. 7. of the Nozomi train, by installing a partition at some of the B seats in Car No. 7. of the Nozomi train and starting to offer A and C seats on both sides as "S Work P Seats." We will also operate Car No. 7. of the Hikari and the Kodama trains, in addition to Nozomi, as "S Work Cars," including during busy and the busiest seasons.

In addition, "Business Booths," introduced in N700s trains,

was installed in all N700S trains after being improved for higher convenience and operated on a regular basis gradually from October 1, 2023. "Business Booths" will be a paid service upon the start of its regular operation.

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.

