

Transportation—Shinkansen Network

►► OVERVIEW

For JR East, its Shinkansen services rank alongside its transportation services in the Tokyo metropolitan area as a mainstay business. JR East operates a five-route Shinkansen network that links Tokyo with five regions: Tohoku, Joetsu, Nagano, Yamagata, and Akita. Specially designed hybrid Shinkansen trains—capable of running on Shinkansen and conventional lines—serve the Yamagata and Akita regions.

The 631.9-kilometer Tohoku Shinkansen line runs between Tokyo and Hachinohe, with the fastest train on the line covering this distance in 2 hours and 56 minutes. Meanwhile, the 303.6-kilometer Joetsu Shinkansen line connects Omiya and Niigata. The minimum travel time to complete the 333.9-kilometer section between Tokyo and Niigata is 1 hour and 37 minutes. The 117.4-kilometer Nagano Shinkansen line extends from Takasaki to Nagano. The fastest train covers the 222.4-kilometer Tokyo–Nagano stretch of line in 1 hour and 23 minutes. A through service to a conventional line links Tokyo and Shinjo and covers 421.4 kilometers. And, the Yamagata hybrid Shinkansen can complete that journey in as little as 3 hours and 14 minutes. The Akita hybrid Shinkansen, also a through service to conventional lines, covers the 662.6-kilometers between Tokyo and Akita in a minimum of 3 hours and 49 minutes.

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Unstoppable Hayate

In December 2002, the Tohoku Shinkansen line was extended 96.6 kilometers, from Morioka to Hachinohe. A journey between Tokyo and Hachinohe on the quickest train now takes only 2 hours and 56 minutes—a saving of 37 minutes. To coincide with the launch of services between Morioka and Hachinohe, JR East unveiled its E2-1000 series railcar, which enhances passenger comfort through full active suspension and low-noise

pantographs. Further, to cater to passengers' seating requirements, JR East introduced the *Hayate* all-reserved-car service.

In its second year of operations, the *Hayate* service continued to see impressive passenger volumes. As in its first year, average daily usage on the Morioka–Hachinohe segment topped 11,500 passengers, which is 50% more than *Hayate's* predecessor, the *Hatsukari* limited express service.

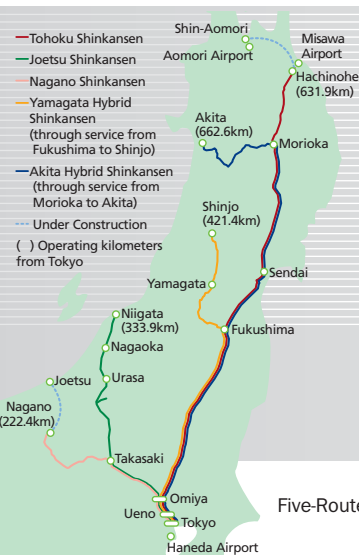
For service north of Hachinohe, passenger numbers also remained high. Over the Hachinohe–Aomori segment, the limited express services *Tsugaru* and *Hakucho* recorded a more than 2% year-on-year increase in passenger numbers. In addition, compared with pre-*Hayate* levels, passenger volumes on those services are up roughly 30%.

The *Hayate* service has enabled JR East to carve out a significantly larger share of the market, against airlines, for travel between Tokyo and the Aomori and Misawa areas. Before the launch of the *Hayate* service, JR East accounted for about 40% of that market. Since the service began, JR East has turned the tables: sustaining an approximately 70% market share over the two years through fiscal 2005.

Furthermore, a JR East survey has shown that the opening of the Morioka–Hachinohe segment has generated significant new demand. In fact, the number of passengers associated with new demand has surpassed that won from airlines.

Niigata Chuetsu Earthquake and Restoration Work

At 17:56 on October 23, 2004, a magnitude 6.8 earthquake epicentered on Chuetsu struck Niigata Prefecture derailing eight of the *Toki* No. 325's ten cars, which had been traveling outbound on the Urasa–Nagaoka segment of the Joetsu Shinkansen line. Although 154 people were onboard at the time, no one was injured.



Five-Route Shinkansen Network



Shinkansen trains



Hayate, E2-1000 series railcar

The earthquake severely damaged elevated railway tracks and tunnels, mainly on the Urasa–Nagaoka segment of the line, located near the epicenter. In addition to damaging track slab and rail fastenings along an approximately 1.6-kilometer section of track, the derailment significantly dislodged some rails.

Following intensive restoration work, JR East resumed services on the Joetsu Shinkansen line on December 28, 2004—66 days after the earthquake (see page 44 for details).

Niigata Support Campaign

In collaboration with the Niigata prefectural government and travel agencies, JR East implemented the Niigata Support Campaign from December 28, 2004, to March 31, 2005. The campaign sought to help Niigata Prefecture recover from direct, physical damage, dispel damaging misconceptions among the public, and boost the Joetsu Shinkansen line's passenger volumes and revenues. To those ends, campaign efforts targeted sending large numbers of tourists to hotels and guesthouses in Niigata. JR East and six major travel agencies cleared their respective targets of 70,000 and 110,000 tourists during the campaign period.

Rigorous Snowfall Countermeasures

To ensure safe, reliable transportation services on the Joetsu Shinkansen line, which traverses a heavy snowfall area, JR East has installed roughly 30,000 sprinklers to clear snow from railway tracks and railcar undercarriages.

During winter 2004–2005, although some areas along the Joetsu Shinkansen line experienced the heaviest snowfalls recorded in 19 years, there were no service delays or cancellations on the line due to snow. In fact, there has not been a single snow-related delay or cancellation in the 23 years since the installation was commenced in November 1982.

▶▶ OUTLOOK

FASTECH 360S—The 360km/h Challenge

Aiming to realize a higher-speed Shinkansen network, JR East has set a speed of 360km/h as its technical target. JR East's goal is to develop Shinkansen that boast world-beating levels of speed, reliability, environmental compatibility, and comfort.

Of the two types of high-speed test railcars that JR East has been developing, the Shinkansen railcar familiarly known as FASTECH 360S was finished in June 2005 and is currently undergoing operational trials. The other prototype is the FASTECH 360Z hybrid Shinkansen railcar, which is slated for completion in spring 2006.

Shinkansen Line Extensions

The Japan Railway Construction, Transport and Technology Agency (JRTT) is constructing extensions to the Tohoku Shinkansen line between Hachinohe and Shin-Aomori and to the Hokuriku Shinkansen line between Nagano and Kanazawa (Joetsu marks the limit of JR East's service area). Under the auspices of an examination committee for the development of new Shinkansen lines, the national government and ruling parties slated the end of fiscal 2011 for the completion of the Hachinohe–Shin-Aomori segment and the end of fiscal 2015 for the Nagano–Kanazawa segment (see page 26 for details).

In February 2005, JRTT completed the Hakkoda tunnel, which makes up roughly one-third of the 81.2-kilometer segment between Hachinohe and Shin-Aomori, stretching 26.5 kilometers under a mountain range.



Derailed Toki No. 325



A scene of restoration work



FASTECH 360S

Transportation—Tokyo Metropolitan Area Network

▶▶ OVERVIEW

The Tokyo metropolitan area network has a total of 1,106.1 operating kilometers, excluding Tokyo Monorail, that link central Tokyo with nearby suburban cities. Most of the network is within a 100-kilometer radius of Tokyo station. JR East accounts for almost half of the Tokyo area's huge, highly profitable rail transportation market in terms of passenger kilometers and operating revenues (see page 86 for details).

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Competition with Other Railway Companies

In Tokyo, competition is intensifying as operators of rival subway networks and other railway systems develop their networks and services. JR East is responding to this competitive environment by strengthening its network. JR East has a significant advantage in those expansion efforts because it is able to leverage established infrastructure without incurring large capital expenditures through such measures as developing new routes that share existing line segments with other services.

Meanwhile, JR East has not raised fares since its establishment in 1987, except to reflect consumption tax introduction (1989) and revision (1997). In contrast, during the same period, most of the other major passenger railway companies have been compelled to raise fares more than once to offset sizable investments needed to boost capacity. As a result, JR East's price competitiveness has risen steadily.

Without fare increases or large capital expenditures, JR East has been able to achieve a capacity increase over the 18 years since its establishment equivalent to roughly 3 times the average capacity of its major Tokyo competitors.

Shonan-Shinjuku Line—Removal of Bottleneck Increases Services

By sharing existing line segments with other services, JR East launched the Shonan-Shinjuku line in December 2001. The route, with a maximum length of more than 180 operating

kilometers, has changed passenger flows by eliminating the need to change trains when traveling between suburban cities in the northern part and southern part of the Tokyo metropolitan area.

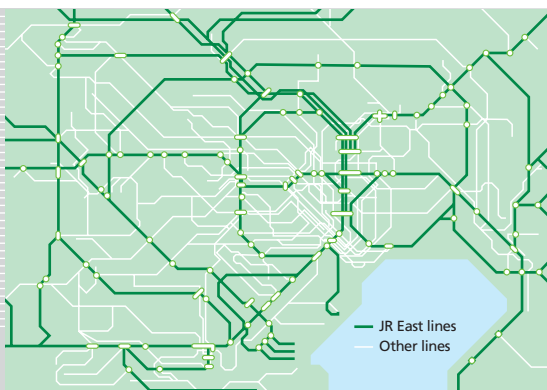
Initially, the Shonan-Shinjuku line carried 25 round-trip trains a day. The completion of a track overpass crossing near Ikebukuro station has enabled a significant increase in service volumes—particularly in the morning rush-hour period. In October 2004, JR East stepped up services from 38 to 64 round trips a day.

Daily passenger numbers have soared from about 30 thousand in the primary stage of the service, to more than 130 thousand as of March 2005. A JR East survey revealed that approximately 25% of those passengers had switched to the Shonan-Shinjuku line from rival railway services. A major driver of higher passenger volumes has been the marked increase in commuter-pass passengers, who are attracted by the line's upgraded rush-hour services.

Green Cars—Extended Coverage Area and Added Value

JR East aims to grow revenues and address passengers' seating needs by connecting double-decker *Green Cars* (first class cars) to local train services on a further three line sections from October 2004. Also, JR East has introduced two new services—*Green Car Suica System* and *Green Attendant*—for certain *Green Cars*.

The *Green Car Suica System* minimizes onboard ticket inspection by displaying *Suica's* first class ticket purchase data on the ceiling above each seat. The *Green Attendant* initiative targets enhanced service and revenues. Under the system, staff of Nippon Restaurant Enterprise Co., Ltd., carry out onboard ticket inspection duties—lightened by the *Green Car Suica System*—while selling snacks and beverages. Moreover, JR East renewed the *Green Car* charge structure in October 2004. The resulting charge reductions are expected to generate heavier demand and to add about ¥5 billion to annual revenues.



Rail lines around Tokyo



Green Car (first class car) railcars



Green Car Suica System

Reduced Crowding

In October 2004, JR East significantly reduced overutilization of the Saikyo line services—from approximately 210% to 170%—by increasing services on the Shonan-Shinjuku line, which shares sections of railway track with the Saikyo line. Steps to alleviate crowding on main lines in the Tokyo metropolitan area during the morning rush hour by developing new routes, increasing the number of railcars per train, introducing new wide-bodied railcars and railcars with longer seats, and using commuter liners to segregate passenger flows have reduced overutilization rates from 238% when JR East was established in fiscal 1988 to 189% as of fiscal 2005.

▶▶ OUTLOOK

E531's Joban Line Debut

July 2005 is slated for the introduction of the new E531 series train on the Joban line, a trunk line serving the Tokyo area. The E531 series will become JR East's first suburban commuter train with a top speed of 130km/h. Also, JR East will use the E531 series to run an hourly special rapid train during the daytime. The fastest service will cover the 66.0 kilometers from Ueno station to Tsuchiura station in 55 minutes—16 minutes less than the journey takes at present.

The Joban line's main rival is likely to be the Tsukuba Express, which will begin operations along a 58.3-kilometer stretch of track from August 24, 2005. With that in mind, JR East aims to heighten the Joban line's competitiveness through a range of operational initiatives (see page 30 for details).

Through Service with Tobu Railway Company

JR East and Tobu Railway Company have slated spring 2006 for the opening of a through limited express service linking Shinjuku station and Tobu's stations at Nikko and Kinugawa Onsen. It is expected that 460 thousand

passengers per year will use the line as the shortest route from Shinjuku station to the Nikko–Kinugawa area, famous for its World Heritage-registered temples and shrines as well as some of Japan's best hot springs.

New Musashi Kosugi Station

In April 2005, JR East and the municipal government of Kawasaki, a city neighboring Tokyo with a population of 1.3 million, agreed on the construction of a new Musashi Kosugi station, which will be located near the intersection of the Nanbu line and the Yokosuka/Shonan-Shinjuku line and begin operations in fiscal 2010. Including transfers from the Toyoko line, which is owned and operated by Tokyu Corporation, 140 thousand people use the Nanbu line's Musashi Kosugi station every day. Following the opening of the new station, JR East expects a total of 180 thousand passengers will use the existing and new stations daily. Under the agreement, the municipal government will shoulder the cost of constructing the new station and an adjacent square, which constitutes the bulk of the ¥20 billion project cost.

Tohoku Through Line Concept

JR East aims to establish a new through route by laying additional double tracks between Ueno station, which is the terminus for northbound, medium-distance services, and Tokyo station, which is the terminus for southbound, medium-distance services. Service roll-out is slated for fiscal 2010, and the project is expected to cost approximately ¥30 billion.

JR East is confident that improvement of its network will heighten competitiveness with other railway companies by easing crowding, reducing travel times, and eliminating bothersome transfers.



E531 series railcar



Image of Tohoku through line



Enhanced Tokyo Metropolitan Area Network

Note: The stations and the lines in this map appear throughout the text, including in the non-transportation section.

Transportation—Intercity and Regional Networks, Travel Agency Services

INTERCITY AND REGIONAL NETWORKS

▶▶ OVERVIEW

Intercity and regional networks cover 5,367.8 kilometers, accounting for more than 70% of JR East's total network. Those networks provide non-Shinkansen intercity services and regional services not covered by the Tokyo metropolitan area network.

The intercity network mainly comprises limited express trains. JR East continues to upgrade services with the introduction of new-type railcars, more frequent departures, and more convenient connections to Shinkansen lines. For the regional network, JR East is working to improve business performance by reflecting customer trends in train scheduling to promote travel by railway and by raising efficiency through such measures as the introduction of trains that can be operated by only one crew member.

Particularly in rural areas, the advantages of automobiles are increasing due to highway construction and improvements in local road networks. JR East is adapting to this changing environment and seeking new earning opportunities by introducing a range of services that dovetail with road travel. Such initiatives include park and ride, bus, and rent-a-car services.

▶▶ TOPICS

Niigata Chuetsu Earthquake and Restoration Work

At 17:56 on October 23, 2004, a magnitude 6.8 earthquake epicentered on Chuetsu struck Niigata Prefecture damaging the embankments and other infrastructure along five lines at 86 locations. However, there were no derailments or injuries.

Intensive restoration efforts steadily restored services. After clearing blocked track sections, on December 27, 2004, services were resumed on all sections of the two lines that had been damaged. Although single-track operations remained in effect on certain sections, the restart

of multiple-track operations on March 25, 2005, marked the full restoration of earthquake damaged line segments (see page 44 for details).

New Sendai Baseball Team

After choosing Fullcast Stadium Miyagi as its home ground, the Tohoku Rakuten Golden Eagles, a professional baseball team, began regular season games from spring 2005. It is a five-minute walk to the stadium's nearest station—Miyaginohara station on the Senseki line. To provide transportation to baseball fans, JR East increased train frequency to coincide with the end of games. And, because Miyaginohara station is only two stations from Sendai station, access to the Tohoku Shinkansen line is excellent. Inside the stadium, Nippon Restaurant Enterprise operates lunch-box wagons.

TRAVEL AGENCY SERVICES

▶▶ OVERVIEW

JR East sells travel packages mostly through its chain of *View Plaza* travel centers, mainly located in busy stations. In particular, JR East offers superior packages that leverage its railway network. JR East is working especially hard to offer travel packages that target specific customer groups based on detailed market research.

▶▶ TOPICS

Enhanced Package Tours

The scale of JR East's travel agency business model is unlike those of other travel agencies. JR East focuses on triggering "booms" that will stimulate railway usage and regional economies. After unearthing new tourist destinations within its service area, JR East develops related travel packages and advertises them extensively. By tying in JR East's railway network with accommodation facilities and tourist attractions, JR East brand travel packages—*View Travel Products*—are a major business catalyst



Joetsu line between Echigo Kawaguchi and Ojiya after the Earthquake



Restoration work on the Joetsu line



Joetsu line between Echigo Kawaguchi and Ojiya after restoration work

in the JR East service area. In fiscal 2005, 2.2 million people used *View Travel Products*, and JR East is rolling out more travel packages every year.

Aiming to respond more sensitively to market changes, JR East created a new organization at its Tokyo branch office in September 2004 that integrates overall marketing strategy for the Tokyo area and product development. Also, JR East sought to heighten the profile of *View Travel Products*. Until recently, those travel packages were mainly sold through JR East travel agencies. As a result, awareness of *View Travel Products* was relatively low in areas beyond the immediate vicinity of JR East's railway lines. To rectify this, JR East has been stepping up commission sales of *View Travel Products* through other travel agencies and highlighting the status of *View Travel Products* as a JR East brand.

Senior Travelers—Demand Creation

During fiscal 2006, JR East plans to inaugurate a club to encourage rail travel among senior citizens. JR East aims to stimulate increased use of its railway network by offering discounts and easing the age restrictions that apply to the six JR passenger companies' existing travel club. Also, JR East will conduct a variety of sales promotions through a members' magazine; the target is to recruit 1.8 million members by the end of fiscal 2009.

Travel Center for Growing Numbers of Overseas Visitors

To attract more overseas tourists to Japan and strengthen its marketing to those customers, JR East opened a JR East Travel Service Center at each of Narita Airport's two railway stations in November 2004. Japan's private and public sectors are currently making a concerted effort to vitalize the domestic economy by promoting tourism. The Japanese government has launched the Visit Japan Campaign, which aims to increase the number of non-Japanese tourists visiting Japan to 10 million a year by 2010. Thanks to those efforts, in 2004 a record-breaking 6.1 million people visited Japan from overseas—almost 1 million more than in the previous year.

eki-net

In April 2001, JR East launched the *eki-net* travel web site as a one-stop ticketing service. By using the site, customers can reserve JR line tickets, air tickets, rent-a-car, hotel rooms, and a variety of travel packages. Since its establishment, more than 1.3 million people have become registered *eki-net* members. JR East is working to introduce sales methods that require minimal staff intervention and curb the sales commission payments to companies outside the group. With that in mind, in December 2002 JR East launched the *eki-net* discount system, which offers passengers discounted fares if they reserve tickets through *eki-net* and collect them from an automated ticket vending machine.

Yahoo! Internet Guide, a monthly magazine issued by Softbank Publishing Inc., ranked *eki-net* third in the travel and ticket reservation category of its Web Site of the Year 2004 awards. In the previous year, *eki-net* placed fifth.



A scene at a View Plaza travel center



Demand creation among senior citizens



World *eki-net* site
<http://www.world.eki-net.com/>