

FEATURE 2: A NEW SHINKANSEN NETWORK JOINING TOGETHER TOKYO AND SHIN-AOMORI

Introducing the Hayabusa Series E5 Shinkansen train service to the Tohoku Shinkansen Line. Top speed of 300 km/h. Tokyo to Shin-Aomori in as little as 3 hours and 10 minutes. "GranClass" provides travel in supreme comfort.

Hayabusa Series E5

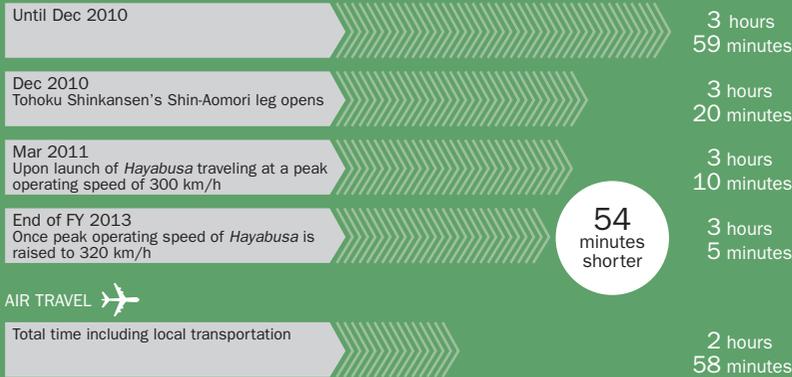
320

km/h max. speed*

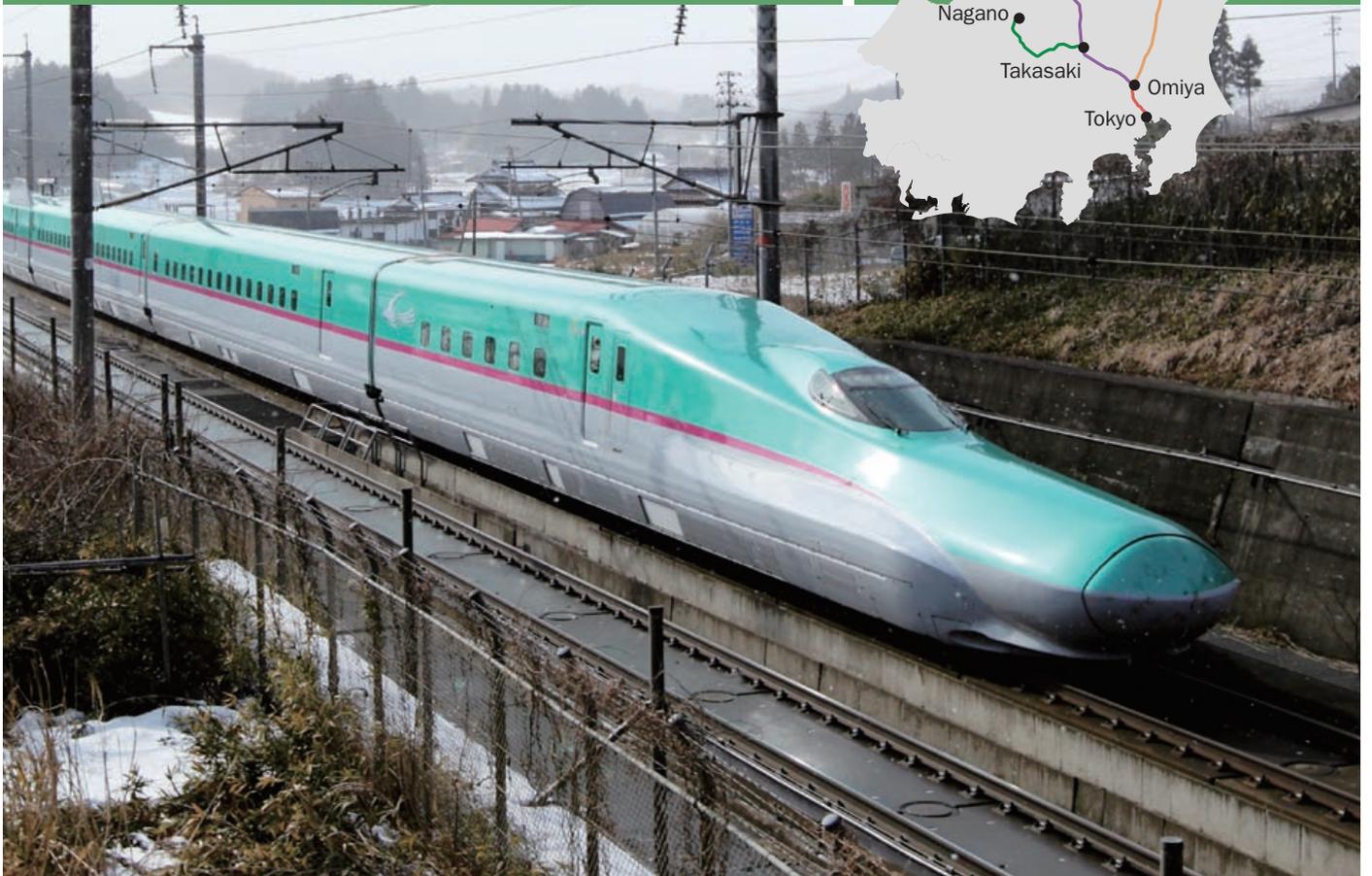
* For commercial operations, commenced at speed of 300 km/h in March 2011, to be raised to 320 km/h at the end of fiscal year 2013.

Chronology of the Shortest Travel Time Between Tokyo and Aomori

JR EAST



JR East's Shinkansen Network





1 Cherry blossoms at Hirosaki Castle



2 A Nebuta float



3 Komaki Onsen



4 Maguro don (tuna rice bowl) made from Oma Maguro

AOMORI MAP



HAYABUSA LAUNCHED ON THE NEW SHINKANSEN SERVICE TO SHIN-AOMORI STATION

Completion of Tohoku Shinkansen Line to Shin-Aomori

Trains started running on the Hachinohe to Shin-Aomori segment of the Tohoku Shinkansen Line on December 4, 2010. By completing the Tohoku Shinkansen Line with this segment, JR East now has a high-speed network that links all six prefectural capitals in the Tohoku region with Metropolitan Tokyo. The shortest travel time on the direct service between Tokyo and Shin-Aomori was reduced to 3 hours and 20 minutes, from the previous 3 hours and 59 minutes.*

With the Shinkansen service to Shin-Aomori operating, JR East will partner even more with local communities in the Tohoku region on programs to increase demand for Shinkansen tickets, with the goal of invigorating the economies of Aomori Prefecture and the Tohoku region. JR East aims to account for 80% of travel to Aomori compared with the current 70% share against 30% for air travel to this region.

*Note: Information is as of the commencement of service to Shin-Aomori, on December 4, 2010.

Aomori— Home to Many Popular Sightseeing Destinations

Located more than 700 km from Tokyo on the northern tip of Honshu, Aomori prefecture offers visitors opportunities to enjoy nature as well as well-known cultural sites. Hirosaki Castle is famous for its cherry blossoms. Lake Towada and Oirase Stream have spectacular scenery. The *Shirakami-Sanchi* (mountains) is designated as a UNESCO World Heritage Site. Natural beauty that is virtually unchanged from many years ago can be found throughout the prefecture. In the city of Aomori, the exciting *Nebuta* Festival that takes place from August 2 to 7 each year attracts more than 3 million tourists. A *Nebuta* is an enormous wood and paper float, each one meticulously handcrafted with pictures of warriors and other historical people that

is illuminated from inside. Looking at a *Nebuta* from close by is an unforgettable experience. Aomori is also famous for its many types of *onsen* (hot springs). Tourists can visit secluded *onsen* deep in the mountains, relax in an *onsen* with apples, a famous Aomori product, and enjoy other *onsen* experiences. Local cuisine is another way to enjoy the unique history and culture of Aomori. Sushi featuring *Oma Maguro* (branded cold-water tuna, caught off the northern tip of Aomori) and other fresh fish is just one of the numerous ways in which visitors can enjoy the distinctive tastes of Aomori.

During the three-month period that started on April 23, 2011, the six JR companies conducted the *Aomori Destination Campaign* in conjunction with tourism associations and municipalities in Aomori Prefecture.



The first train leaves Shin-Aomori Station for Tokyo

HAYABUSA INTERIOR



Ordinary car on the Hayabusa



Green Car



GranClass

The Debut of the Tohoku Shinkansen Hayabusa series E5

Hayabusa trains started running between Tokyo and Shin-Aomori on the Tohoku Shinkansen Line on March 5, 2011. These new series E5 high-speed Shinkansen trains are the fastest in Japan with a maximum operational speed of 300 km/h. Travel time between

Tokyo and Shin-Aomori is only three hours and 10 minutes.*

Hayabusa is filled with advanced technologies that produce dramatic improvements in environmental performance, operational speed performance, reliability, passenger comfort and other characteristics. To enhance environmental performance and reduce noise pollution, trains feature low-noise

pantographs, wheel covers, a long, aerodynamic nose and other innovations. For comfort, Hayabusa is Japan's first Shinkansen train with full-active suspension (roll prevention and control system) to give passengers an even more pleasant ride.

For additional comfort, seat pitches are wider and seats in Green Cars have motor-adjusted footrests and

ordinary seats come with adjustable headrests. With other features, Hayabusa cars offer travelers a relaxing and comfortable environment.

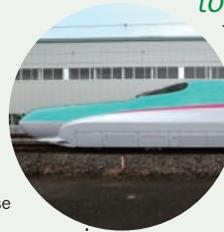
JR East plans to raise Hayabusa's maximum operational speed to 320 km/h by the end of the fiscal year ending March 31, 2013.

*Note: Information is as of the start of the Hayabusa service on March 5, 2011.

Overview of New Technologies on Hayabusa

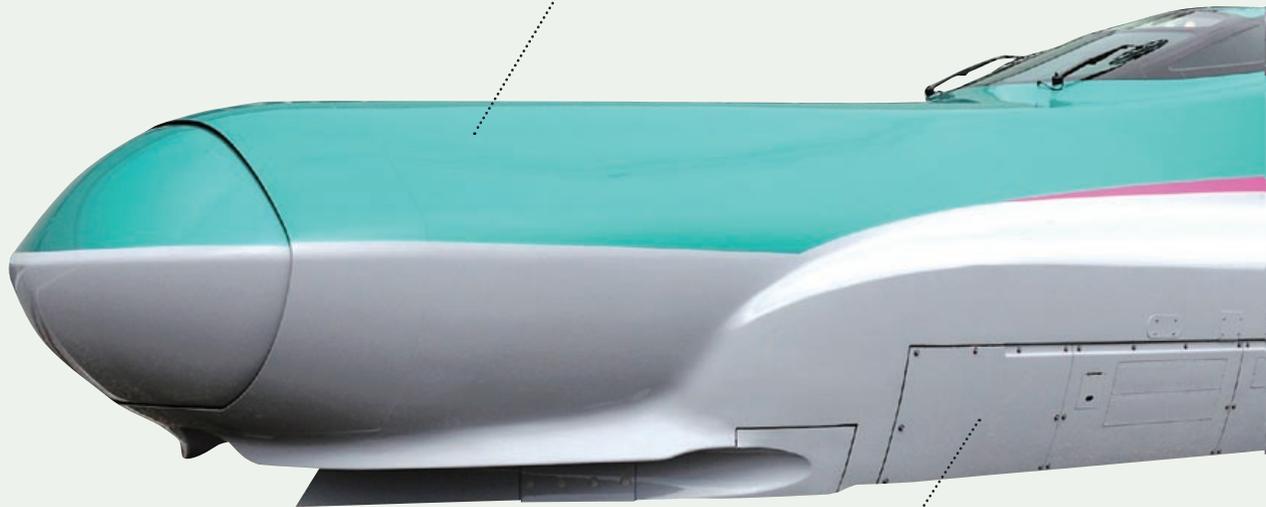
BETTER ENVIRONMENTAL PERFORMANCE

*LONG-NOSE IN FRONT—
to reduce tunnel boom*



Long-nose

The 15-meter nose of Hayabusa gives the train a sleek profile. The aerodynamic nose reduces tunnel boom, or the shockwave and noise at the exit-end when a train enters a tunnel at high speed.



BETTER ENVIRONMENTAL PERFORMANCE

*FULL BOGIE COVERS—
New technologies cut noise to the absolute minimum*

Completely covering wheels holds down mechanical noise and reduces aerodynamic noise by making the sides of cars smoother. Equipment underneath car floors is insulated with sound-absorbing materials as much as possible to lower the noise level.



Full bogie cover

The Debut of GranClass

JR East introduced a first class service called *GranClass* with the launch of the *Hayabusa*. The first Shinkansen service of this type, *GranClass* is based on the concept of offering passengers a unique and memorable traveling experience. Interiors of *GranClass* cars are designed for elegance and sophistication in order to

treat passengers to a trip that is like no other.

The lush interior designs incorporate leather, wool and other high-grade materials. Lighting is equally sophisticated. *GranClass* gives passengers highly personalized and comfortable illumination that use LED fixtures to provide multiple sources of light, both indirect and in close proximity.

Innovative back-shell-type seats never before used on trains give passengers unprecedented comfort. Reclining angles are large and seat pitch is wider. To provide even more space and comfort, there are only three seats in each row. An attendant assigned exclusively to the *GranClass* car handles requests for food, beverages and other services.



The luxurious *GranClass* seat

BETTER ENVIRONMENTAL PERFORMANCE

PANTOGRAPHS—

Low-noise pantograph

Hayabusa uses a low-noise pantograph and other quiet components to reduce the noise level alongside the Shinkansen tracks. Sound blocking panels are placed on both sides of the pantographs to further lower noise.



Low-noise pantograph

BETTER CRUISING PERFORMANCE AND IMPROVED RELIABILITY

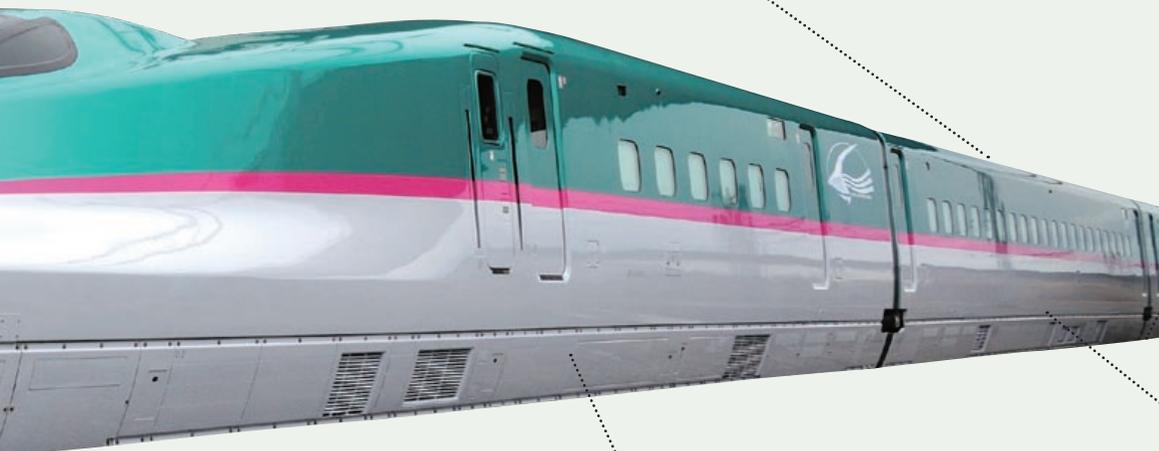
BRAKE SYSTEMS—

for stopping trains traveling at 320 km/h

The brake system has many improvements, including greater wheel-to-rail adhesion. These advances give *Hayabusa* a stopping distance at 320 km/h that is the same as the distance required by a conventional Shinkansen train at 275 km/h.



Brake system

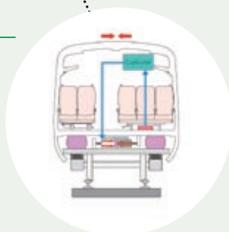


IMPROVED PASSENGER COMFORT

ALL CARS HAVE FULL-ACTIVE SUSPENSION—

More comfort at high speeds

All cars are equipped with full-active suspension that detects rolling and limits side-to-side swing. Passengers can enjoy a comfortable ride even at high speeds.



Full-active suspension

IMPROVED PASSENGER COMFORT

CAR BODY TILTING SYSTEM—

Comfort when traversing curves at high speed

To improve comfort and increase speed at curves, *Hayabusa* uses air springs that tilt train cars as needed for reducing centrifugal force. This technology allows negotiating curves with a radius of 4,000 meters at a speed of 320 km/h.



Car body tilting system



The *Aoike* version train used for *Resort Shirakami*

RESORT SHIRAKAMI

RESORT ASUNARO



Resort Asunaro



The viewing deck of *Resort Asunaro*



THE NEW RESORT TRAIN

JR East started operating *Resort Asunaro* (series HB-E300), which uses an environmentally friendly hybrid system, at the same time that the Tohoku Shinkansen service to Shin-Aomori began. The new train runs on the Ominato Line and Tsugaru Line in Aomori Prefecture. Cars have monitors to show passengers the view from the front of the train and present sightseeing information. A viewing deck is placed behind where the driver sits. Large side windows give passengers panoramic views of scenery and there are also seats and sofas specifically for people who want to enjoy the scenery in comfort.

At the same time, for its *Resort Shirakami* train, JR East started operating the *Aoike* version (series HB-E300) that has a hybrid system. Passengers can ride this train along the beautiful Gonō Line in Akita and Aomori prefectures that passes through the *Shirakami-Sanchi*, a UNESCO World Heritage Site, and many other sightseeing areas.

NEW SHOPPING FACILITIES PROVIDING LOCAL FOODS AND SPECIALTIES

JR East opened the *Aomori Shunmi-kan* at the Shin-Aomori Station Building as part of renovations at the station to prepare for the start of the Shinkansen service. Shoppers can find numerous local and seasonal products including the tuna and apples Aomori is famous for at this new commercial facility. Merchandise ranges from food products made in Aomori to handicrafts and other items that are made locally. Opening *Aomori Shunmi-kan* makes Shin-Aomori Station a true gateway to Aomori Prefecture by

allowing travelers to sample and shop for foodstuffs and souvenirs of Aomori and the prefecture's Tsugaru region.

Along with activities at Shin-Aomori Station, JR East opened a multi-purpose commercial facility called *A-FACTORY* near Aomori Station in the waterfront area of the city. There are two components; *A-FACTORY Studio* makes cider from Aomori apples and other beverages, while *A-FACTORY Market* sells locally produced food products.



Shin-Aomori Station



Aomori Shunmi-kan



A-FACTORY Studio



A-FACTORY Market