# TRANSPORTATION BUSINESS SUPPORTS JR EAST AS A STABLE PROFIT RESOURCE

Through a continuous process of service innovation and efficiency improvement, JR East's transportation business provides a stable source of revenue and a growing source of profits. In this way, JR East faithfully attracts and serves a loyal customer base while rewarding shareholders with stable and long-term returns.





#### Development of Suica

In November 2001, JR East introduced a large-scale automatic fare collecting system using IC cards—*Suica*. As of June 2003, the number of cardholders exceeded 6.5 million. JR East is aiming to take a leap forward to the "dream card" by integrating current stored-fare ticket and pass functions with credit card and electronic money functions.



# Extension of Tohoku Shinkansen

In December 2002, Shinkansen bullet train services commenced on the newly completed Morioka–Hachinohe segment of the Tohoku Shinkansen line. Access to the north, which has wonderful tourism resources, has been dramatically improved.



# Through Services between Saikyo Line and Rinkai Line

Since December 2002, passengers have been able to use through services between JR East's extended Saikyo line and the Rinkai line. This facility has significantly enhanced the convenience of travel between northern part of Tokyo metropolitan area and the Tokyo Bay waterfront area.

#### **OPERATING REVENUES**



(Millions of Yen)	2002	2003
Transportation	1.789.599	1.800.434

#### **OPERATING INCOME**

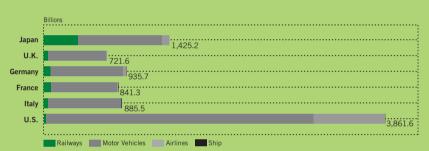


(Millions of Yen)	2002	2003
Transportation	235,585	256,743

Notes: 1. Percentage is a ratio of the year ended March 31, 2003

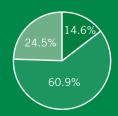
2. Operating revenues mean operating revenues from outside customers.

#### PASSENGER KILOMETERS



Figures for Japan and U.K. are for the year ended March 31, 2002 and 2001 respectively; figures for Germany and France are for the year ended December 31, 2000; and figures for Italy and U.S. are for the year ended December 31, 1999.

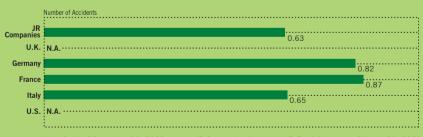
#### PASSENGER KILOMETERS



(Millions)	2002	2003
Shinkansen network	17,741	18,276
Tokyo metropolitan area network	76,200	76,278
Intercity and regional networks	30,975	30,622

Note: Percentage is a ratio of the year ended March 31, 2003.

#### **ACCIDENT FREQUENCY PER ONE MILLION TRAIN-KILOMETERS**



Note:1. As of December 31, 2000, except JR Companies (including JR East) figures as of March 31, 2001

2. Germany: Deutsche Bahn AG (German Railways),

France: Société Nationale des Chemins de fer Français (French National Railways), Italy: Ferrovie dello Stato S.p.A.(Italian National Railways),

3. Prepared by JR East based on International Railway Statistics of International Union of Railways (Union Internationale des Chemins de fer)

# IC card—Suica (Super Urban Intelligent CArd)

#### **OVERVIEW**

It has been more than one and a half years since JR East introduced the *Suica* system. Although this large-scale system was launched all at once, from its beginning no significant problems have occurred, and the system has been very popular with users. Today it is commonplace for passengers around Tokyo to go through automatic fare collecting gates simply by touching their commuter pass cases.

# TOPICS Highly Convenient Functions

JR East is the first company in Japan to introduce a large-scale IC card automatic fare collecting system. Under this system, passengers can pass through automatic fare

collecting gates just by touching their commuter pass case containing an IC card— Suica (Super Urban Intelligent CArd). There are two types of Suica. One is a high-tech commuter pass (Suica Pass) and another is a stored-fare railway ticket (Suica 10 Card), both replacing the magnetic cards that were formerly used. Because Suica Pass also has a stored-fare function, settlement is done automatically by the fare collecting gate when passengers ride a train beyond the area covered by their commuter passes. Furthermore, it is possible to renew the period of validity of the pass using the same card, since the data in the IC chip and the printed information on the exterior can be rewritten. In addition, because the information of individual commuter passes is registered on JR East servers, reissue can be made promptly following loss.

### **Expanding the Service Area**

JR East has continued to expand the service area for *Suica* since its introduction. As

of April 2003, *Suica* can be used at 465 stations on conventional lines, mostly in the Tokyo metropolitan area. Coverage is also being extended to other railway systems such as Tokyo Monorail, operated by a subsidiary, since April 2002, and the Rinkai line, operated by Tokyo Waterfront Area Rapid Transit Corporation, since December 2002. Passengers can use *Suica* at 481 stations in total, as of April 2002.

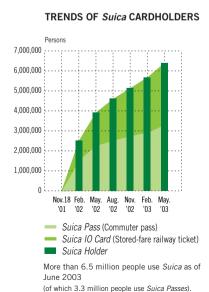
#### **Growing Number of Cardholders**

The number of *Suica* cardholders, which exceeded one million in just 19 days after the launch of the system, reached 6.5 million by June 2003. This growth reflects the convenience of the card and the expanding coverage area.

#### **Integration with Credit Card**

In July 2003, JR East inaugurated services for the *View Suica* card, an integration of the *Suica 10 Card* with the *View Card*, which is a credit card issued by JR East.







Recharging a *Suica* card at an automatic ticket vending machine

This single card will give cardholders access both to rail services and credit facilities, including stored-fare charging and general shopping. Also, from the autumn of 2003, it will be possible to use *View Card* bonus points to recharge the stored-fare balance on its *Suica* function. JR East is also studying other features, including automatic credit transactions to settle fare adjustments at automatic fare collecting gates when the stored-fare balance on the *Suica* card is insufficient, and integration of *Suica Pass* with *View Card*.

# FUTURE DEVELOPMENTS Expansion to Shinkansen Services and to Regional Area

From the autumn of 2003, passengers will be able to use their *Suica Passes* for Shinkansen travel within the *Suica* service area.

At the same time, the service will also be introduced on conventional lines in the Sendai urban area, which is the largest city in the Tohoku region, with more than one

million of population. *Suica Pass* and *Suica IO Card* will be available.

#### **Electronic Money**

In the spring of 2004, JR East plans to launch an electronic money service on the *Suica* system. Initially the service will be available in around 500 stores at stations within the *Suica* service area. JR East is examining the possibility of offering the same service in station shopping centers, and also in other stores without capital relationships with JR East. The ability to access both rail services and shopping with a single card will dramatically enhance cardholder convenience.

# Ticketless Travel through Integration with Mobile Telephones

Another concept being considered by JR East is an IC chip with *Suica* functions for inclusion in mobile telephones. With this *Mobile Suica*, passengers could buy commuter passes, reserve seats, and enjoy ticketless access to rail travel.

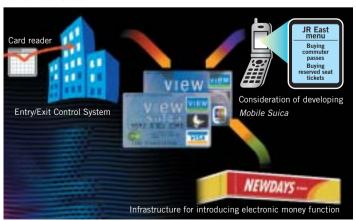
# Building Entry/Exit Control System Using Suica

JR East will commence sales of a system that allows its cards, including the *Suica Pass* and the *Suica IO Card*, as an entry card to buildings. It will be possible to use a single card for railway travel, as a building access card, and as an electronic money card. The benefits for building management include the ability to avoid complex card control requirements, as well as improved security, compared with conventional magnetic card systems.



A scene at the station
Touching commuter pass case to the automatic fare collecting gate

#### **FUTURE OF Suica**



### SHINKANSEN BULLET TRAIN NETWORK

#### **OVERVIEW**

Shinkansen services rank alongside transportation services in the Tokyo metropolitan area as a core business for JR East. JR East operates a five-route Shinkansen network that links Tokyo with five regions. The network comprises the Tohoku, Joetsu and Nagano Shinkansen lines and the Yamagata and Akita hybrid Shinkansen lines, with through service to conventional lines.

The 631.9-kilometer Tohoku Shinkansen runs between Tokyo and Hachinohe. The fastest train on this line covers the distance in 2 hours and 56 minutes. The 303.6-kilometer Joetsu Shinkansen links Omiya and Niigata. Minimum time between Tokyo and Niigata (333.9 kilometers) is 1 hour and 37 minutes. The 117.4-kilometer Nagano Shinkansen extends from Takasaki to Nagano. Minimum travel time between Tokyo and Nagano (222.4 kilometers) is 1 hour and 23 minutes. Yamagata hybrid

Shinkansen (through service to conventional lines) covers 421.4 kilometers between Tokyo and Shinjo, and its shortest travel time is 3 hours and 14 minutes. Akita hybrid Shinkansen (through service to conventional lines) covers 662.6 kilometers between Tokyo and Akita, and its shortest travel time is 3 hours and 49 minutes.

#### **TOPICS**

# Start of Operation between Morioka and Hachinohe of Tohoku Shinkansen

In December 2002, the Tohoku Shinkansen line was extended 96.6 kilometers from Morioka to Hachinohe. A journey between Tokyo and Hachinohe on the fastest train now takes 2 hours and 56 minutes, a saving of 37 minutes. JR East has significantly improved its ability to compete with air travel on routes between Tokyo and northern Honshu, Japan's mainland. To coincide with the start of operation of the Morioka–Hachinohe segment,

JR East also introduced the new E2-1000 series railcar, which has full active suspension for enhanced passenger comfort and new pantographs for noise reduction. Other enhancements include a new schedule format that made train schedules easier to understand for passengers. Specifically, trains leave and arrive at the same times each hour, except during commuting times, and each type of train stops at the same stations. In addition, JR East has introduced all-reserved-car Shinkansen trains to respond to an increased demand for reserved seats.

#### **Enhanced On-Board Services**

Passenger information is transmitted directly to the conductor's portable terminal as soon as each passenger passes through the automatic fare collecting gate at stations. This minimizes disturbance to passengers in the trains by eliminating manual onboard ticket inspections. As part of its

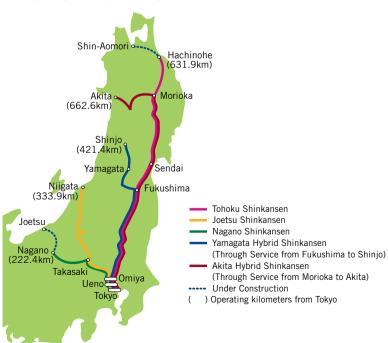


Shinkansen trains



*Hayate* E2-1000 series railcar for Tohoku Shinkansen

### FIVE-ROUTE SHINKANSEN NETWORK



efforts to compete with air services, JR East has also started to provide dedicated cabin service crew on its Shinkansen trains.

## **Shinkansen Commuter Services and Seating Services**

The demand for commuter services via the Shinkansen network has grown dramatically since the establishment of JR East in 1987. To stimulate further growth in demand, JR East is strategically increasing capacity by introducing Max all-doubledecker E4 series Shinkansen railcars. There are 1,634 seats in a 16-car format, and it is one of the the world's highest seating capacities for high-speed train services.

## **Measures Ensuring Reliability of Services**

In the past JR East cancelled train services for safety reasons when rainfall intensity exceeded a specific standard level. Rain-related can-

Green Car (first class) attendant



Conductor's portable terminal (Photo: Transportation News Co., Ltd.)

cellations have now been mostly eliminated due to the installation of countermeasures against rain-related damage along tracks.

Because the Omiya-Tokyo segment is shared by all five-route Shinkansen lines. breakdowns had a major impact on passenger services. In such cases, JR East is prepared to turn the trains at Omiya station, which has surplus platform facilities, to minimize delays. JR East has also improved communications systems.

# **FUTURE DEVELOPMENTS Becoming the World's Number-One High-Speed Train**

JR East aims to make its Shinkansen network the world's number-one high-speed train system by all criteria, including speed, reliability, environmental friendliness and comfort. In the spring of 2003, it conducted test trials using operational cars, with a view to increasing the maximum operating speed from 275km/h to over 300km/h. Through these trials, JR East could collect basic data, including riding comfort, stabilitv and noise levels.

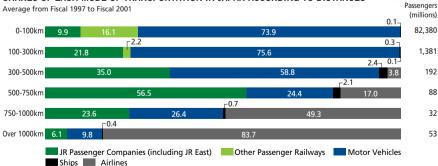
#### **Plans to Extend Shinkansen Lines**

Construction is currently in progress on the Hachinohe-Shin-Aomori segment of the Tohoku Shinkansen line and the Nagano-Toyama segment of the Hokuriku Shinkansen line. (JR East will operate between Nagano and Joetsu for the Hokuriku Shinkansen line.) (See page 47.)

#### MAJOR HIGH-SPEED TRIALS

1979 (JNR)	A test car, the prototype for railcars operating commercially on the Tohoku and Joetsu Shinkansen lines, reaches <b>319km/h</b> .
1991 (JR East)	A railcar for the Yamagata hybrid Shinkansen line reaches <b>345.8km/h</b> .
1993 (JR East)	A test car developed for a full model change and environmental countermeasures reaches <b>425km/h</b> .
2003 (JR East)	Most advanced railcar for the Tohoku Shinkansen line reaches 362km/h.





Source: Ministry of Land, Infrastructure and Transport Figures are based on number of passengers

Total Number of

### TOKYO METROPOLITAN AREA NETWORK

#### **OVERVIEW**

This network consists of 1,106.1 operating kilometers, excluding Tokyo Monorail, that link central Tokyo with surrounding areas. Most of these lines are within a radius of about 100 kilometers from Tokyo station. JR East claims nearly half of the Tokyo area rail transportation market, which is immense and profitable, in terms of both passenger kilometers and operating revenues. (See page 90.)

#### **TOPICS**

# Competition with Other Railway Companies

Competition with subway networks and other major passenger railway systems in Tokyo is intensifying due to ongoing development of their networks and services. JR East is meeting this challenge by strengthening its network through the opening of various routes. By using existing facilities, it is able to

develop new routes without large-scale capital outlays. JR East has never raised fares since its establishment in 1987, except to reflect the introduction and revision of the consumption tax. On the other hand, faced with sizable investments needed to boost capacity, most of the other major passenger railway companies have been compelled to raise fares repeatedly on most of their lines during the same period. Thus JR East's price competitiveness has risen.

Without increasing its fares or engaging in large-scale capital investment, JR East has been able to achieve a capacity increase equivalent to the total capacity of two of its major competitors around Tokyo in the 16 years since its establishment. This has been achieved through a combination of strategies, including the establishment of new routes, increased train frequencies and more cars for each train.

## Start of Through Services between the Saikyo Line and the Rinkai Line

In December 2002, JR East completed the extension of its Saikyo line and introduced through services with the Rinkai line. At present, 46 through service round trips are operated each day. These services provide a direct link between the northern part of the Tokyo metropolitan area and the rapidly developing Tokyo Bay waterfront area, via central Tokyo districts such as Shinjuku and Shibuya. For additional passenger convenience, the Rinkai line services can be accessed using JR East's *Suica* cards.

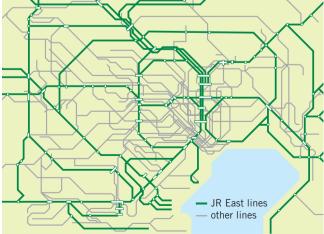
## Increased Services on the Shonan-Shinjuku Line

The Shonan-Shinjuku line started the operation in December 2001 using existing facilities. The creation of this route, which covers over 180 operating kilometers in the longest case, has eliminated the need for



Rush hour at Tokyo station

# RAIL LINES AROUND TOKYO



train changes when traveling between suburban cities in the northern part and the southern part of the Tokyo metropolitan area. It has already brought changes in passenger flows. In December 2002, JR East substantially increased the frequency of trains on the route. The Shonan-Shinjuku line has been used by approximately 53 thousand passengers daily since then, including people who previously used competitors' lines.

#### **Tokyo Monorail**

Tokyo Monorail, acquired by JR East in February 2002, operates a 16.9km link between central Tokyo and Haneda Airport, a major air gateway serving mainly domestic flights. JR East has made some improvements at the monorail transfer station, Hamamatsu-cho, such as making it a stop for the rapid train and providing barrier-free access.

# Approach to Enhancing Passenger Convenience through the Use of IT

Since August 2002, passengers have been able to book their seat reservation tickets for some commuting lines with mobile telephones. In this way JR East has created a true ticketless system in which passengers can board without the need to obtain tickets.

Another IT-related initiative is the experimental wireless LAN environment. Currently implemented mainly in major stations in the Tokyo metropolitan area, this system will be used both in station information services and also provide an Internet access service for passengers.

# FUTURE DEVELOPMENTS Overpass Construction at Ikebukuro Station

Because the route of the Shonan-Shinjuku line currently crosses the Saikyo line on the same level at Ikebukuro station, it is difficult

to increase the number of trains operating during the morning and evening rush hours. To accommodate expanded services, JR East is currently building elevated crossing tracks at Ikebukuro station. The project will be completed in the autumn of 2004.

### **Tohoku Through Line Concept**

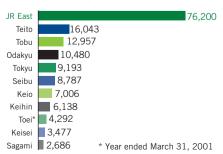
JR East is currently planning another through-route across Tokyo. This will be accomplished by installing approximately 1.3 kilometers of additional double tracks between Ueno station, which is now the terminal for north-bound intercity and medium-distance services, and Tokyo station, which is the current terminal for south-bound medium-distance services. The beginning of this service is targeted for fiscal 2010. The new line will enhance passenger convenience by alleviating congestion on JR East's parallel lines, reducing travel times and eliminating bothersome transfers.



Tokyo Monorail

#### **PASSENGER KILOMETERS (Millions)**

Year ended March 31, 2002



#### ENHANCED TOKYO METROPOLITAN AREA NETWORK



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

### INTERCITY AND REGIONAL NETWORKS

#### **OVERVIEW**

Made up of 5,367.8 operating kilometers, intercity and regional networks represent over 70% of JR East's total network. They provide non-Shinkansen intercity services and regional services not included in the Tokyo metropolitan area network.

The main services of the intercity network are the limited express trains. JR East continues to upgrade services with new railcars, more frequent departures and more convenient connections to Shinkansen lines. On the regional network, JR East is striving to improve business performance through measures to raise efficiency. This primarily involves efforts to keep schedules closely in line with customer trends and the use of railway cars that require only a single crew member.

Highway construction and improvements to local road networks are enhancing the advantages of automobiles, especially in rural areas. JR East is adapting to this trend by introducing a variety of services based on coexistence with road travel. These innovations include Park and Ride services, as well as bus services and rent-a-car operations.

#### **TOPICS**

# Changes to Rail Operations Following Extension of the Tohoku Shinkansen Line to Hachinohe

The extension of the Tohoku Shinkansen line to Hachinohe has been followed by a review of rail operations to locations north of Hachinohe. The number of limited express trains between Hachinohe and Aomori, which is a major regional city, has been increased from 14 round trips to 17 per day. Access to Hokkaido, one of Japan's major

islands, through the tunnel under the strait, has also been improved.

Operation of the conventional line running parallel to the Morioka–Hachinohe segment of the Tohoku Shinkansen line has been separated from JR East. (See page 47.)

#### **Park and Ride Services**

Parking lots at stations are being developed, especially in regional cities, to meet the needs of passengers who drive to their local station and then travel by train to their destinations. By the end of March 2003, parking lots with a total capacity for around 59,000 vehicles had been established at about 510 stations.

#### Rail and Rent-a-car

JR East offers an innovative approach to travel. Passengers can combine the comfort of rail travel to their destination station, with the freedom of a rental car after they arrive. The *Rail and Rent-a-car* service introduced a new service in April 1995 that allows passengers to rent cars at about one-half of the normal rate. As a result, in fiscal 2003, the number of passengers using the *Rail and Rent-a-car* service was about 143,000.

#### **World Cup Travel**

The 2002 FIFA World Cup was held in Japan and Korea over a one-month period starting in late May 2002. Five locations were chosen in JR East's service area. JR East ran numerous extra trains, including late-night services, to accommodate the resulting massive increase in passenger traffic. The World Cup period ended without any incidents or accidents, as a result of careful attention to safety and reliability.



Tsugaru

Operated between Hachinohe and Aomori, Hirosaki

#### CHANGES TO RAIL OPERATION



express Tsugaru



Park and Ride Services



The World Cup Rush (Photo: Transportation News Co., Ltd.)

### TRAVEL AGENCY SERVICES

#### **OVERVIEW**

JR East conducts sales of travel packages mainly in the *View Plaza* chain (travel agency), which has outlets mainly at stations. In particular, JR East will implement customer-friendly measures on the basis of market research and planning of packages attractive to target customers using its railway network. JR East also distributes information regarding attractive travel packages using railways by utilizing various media such as mass media and the Internet.

#### **TOPICS**

#### **Targeted Approaches**

One example of JR East's targeted travel products is its Otona no Kyujitsu, or "holiday for seniors." Some 49,000 passengers have bought Otona no Kyujitsu products in fiscal 2003, which were introduced to meet the needs of Japan's rapidly aging society. The Meguri-Hime, or "touring princess," caters to women who are in their middle years and enjoy increased leisure time as they are freed from childcare responsibilities. Around 19,000 of these packages were sold in fiscal 2003. The Nombiri Komachi, or "refreshing tours for young women," is a product targeted toward working women in their late twenties and early thirties. In fiscal 2003, this package was booked by almost 41,000 people.

#### eki-net Travel

JR East is continually working to improve customer convenience by introducing enhanced sales methods that do not require human intervention. In April 2001, JR East established a web site named *eki-net travel* where consumers can book all of their domestic ticketing requirements, including not only tickets on JR Companies' lines, but also air tickets, rental cars and hotels. In December 2002, JR East introduced the *eki-net* discount system, which entitles passengers to discounted fares if they book reservation tickets through *eki-net travel* and pick up their tickets from a vending machine.

As part of its efforts to promote Japan as a destination for tourists from other countries, JR East started, in January 2002, a ticket reservation service. Through this service, tickets for Shinkansen and the *Narita Express*, which connects Narita International Airport with central Tokyo, can be purchased from abroad.

The word *eki* means railway station in Japanese.



World eki-net Site (http://www.world.eki-net.com)