

The primary responsibility of the JR East Group in CSR terms is to safely and reliably operate its railway system. Since its establishment, JR East has considered the implementation of safety measures its highest priority, and has consistently invested in equipment improvements, research and development.

In addition, in order to foster good relations with local communities as well as the customers who use the railways and services of Group companies, we are working to reflect customer feedback in a constantly improving service and by striving to build a society in which life is comfortable.

We also undertake various initiatives to enhance the work environment so that employees can feel proud to work here.

The corporations of the JR East Group will continue to dedicate themselves to maintaining the trust that society places in them.

## Measures to Ensure Safety

# What Is the JR East Group Doing to Ensure Railway Safety?

JR East has made safety the top management priority since the company was established and has undertaken many initiatives for that purpose. Today, based on *Safety Plan 2008*, JR East is working to be the world's safest railway.

## Dedication to Railway Safety

### Safety Plan 2008

Since its foundation, JR East has adopted and implemented safety plans on a five-yearly basis. Under the five-year *Safety Plan 2008*,<sup>\*1</sup> which began in fiscal 2004, we are shifting from an approach of preserving safety to a more proactive one of providing safety, and through this are taking various steps to provide an even safer railway. This includes not only raising the safety awareness of employees, but also investing about 400 billion yen in safety measures. Our target is to achieve "zero customer and employee fatalities and injuries."

### Challenge Safety Campaign

One main pillar in JR East's endeavours to provide an even safer railway is our Challenge Safety Campaign (CS Campaign).

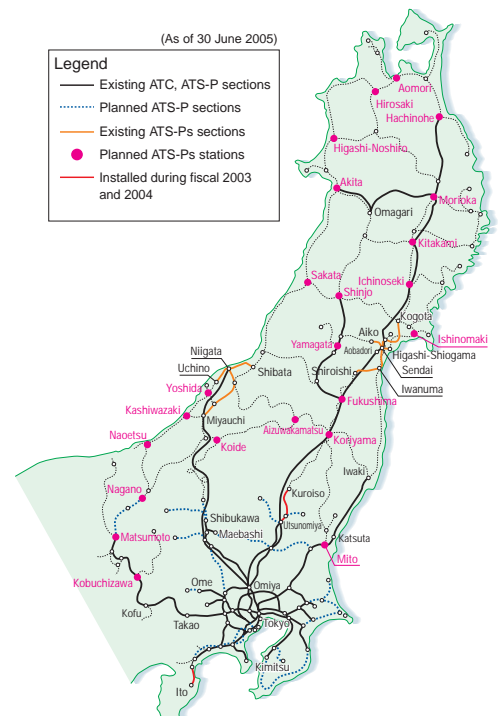
Its aim is to create an atmosphere whereby employees – those who are actually on-site and know their job best – always work with safety in mind and personally take on the challenge of reducing accidents to zero. In particular, we encourage them to gather any safety concerns or near-accidents that occur during the course of their working day and to discuss matters with their colleagues. Also, through training sessions we are developing leaders for the CS Campaign.

By conducting the campaign, we anticipate an increase in the number of employees routinely discussing accident prevention and a more open atmosphere to the discussion of safety, which will result in an even better record of accident prevention.

## Ensuring safe train operations

In order to ensure the safety of train operations, JR East has been systematically installing automatic train control (ATC) systems that automatically check and control train speeds, and automatic train stop (ATS-P and ATS-Ps) systems that automatically stop trains as they approach a stop signal. In June 2005, we decided upon a plan to expand the area covered by ATS-P and ATS-Ps systems, and to carry out equipment upgrades to prevent excessive speed at curves and specific points along tracks. The implementation of these plans will drive us towards even higher safety levels.

### Rail sections with ATC, ATS-s, ATS-Ps systems



\*1 *Safety Plan 2008*

<http://www.jreast.co.jp/safe/safe2008/index.html>

### Earthquake safety

By the end of fiscal 2004, JR East had completed the expansion of a system to simultaneously stop all trains in the event of a major earthquake (until recently, the system was in operation only in the Tokyo metropolitan area).

With this system, when vibrations above a certain threshold level are detected by two or more seismic sensors along the railway tracks, an emergency stop signal will be transmitted automatically to all trains operating in the vicinity (through wireless or other technology), causing them to stop immediately. This system will help to minimize the damage in the event of a major earthquake.

In addition, after the Hanshin-Awaji earthquake in 1995 we have been conducting seismic upgrades on the pillars of elevated tracks of the Shinkansen and conventional train lines. After the Niigata-Chuetsu Earthquake in 2004, we accelerated the seismic upgrade work.

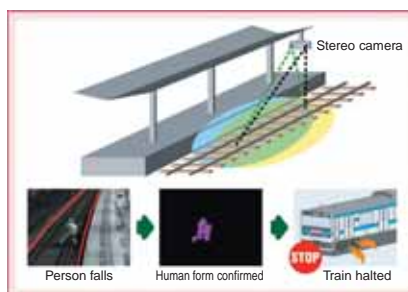
### JR East Safety Network 25

In recent years the outsourcing of railway operation work has become more common. In the belief that to maintain a high level of safety and reliability it is essential that JR East work closely on safety measures with Group companies and other entities, JR East developed a safety promotion network we call JR East Safety Network 25 (abbreviated as JES-Net25). The network encourages the 25 companies involved in work and construction directly affecting train operations to share JR East's perspective on safety, and promotes collaborative measures while enhancing communications between all involved.

### Safety on station platforms and at railway crossings

JR East is implementing various accident-prevention measures on station platforms, including the installation of covers to prevent people from falling into the spaces between train cars; emergency stop buttons on platforms; and mats to detect a person fallen to the tracks. Since fiscal 1999 we have also continued a "Platform Safety Campaign" to raise safety awareness. We began to develop and implement a device that uses stereo image processing technology to automatically detect when a person has fallen below the platform, and then stop the train.

In addition, to prevent accidents at railway crossings, we are scaling up the installation of detectors of obstructions, as well as larger barriers on railway crossings, and are appealing for greater caution through our "Railway Crossing Accident Prevention Campaign."



JR East has developed an image-processing device to detect fallen persons, now in use at Shinjuku Station.



JR East targets customers with a safety awareness program named the Platform Safety Campaign.

### Disaster response training

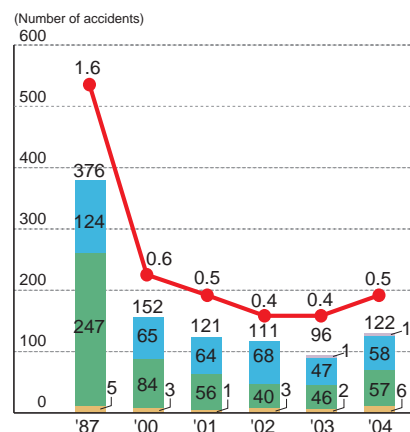
In the interest of enhancing emergency response capabilities in the event of a major earthquake, every year on September 1 (National Disaster Prevention Day in Japan), JR East and its Group companies conduct comprehensive disaster prevention drills, in which about 15,000 employees participate. In fiscal 2004, we placed a priority on training for initial responses, making this a relatively practical exercise, and this included drills in guiding evacuations with one's own station layout and problem areas in mind. Also, we tested our coordination with other railway companies and station buildings, as well as with police and fire departments and other agencies.



Scenarios are used for emergency-response trainings.

### Railway accidents

- Causing damage to railway facilities
- Causing personal injury
- At road crossings
- Train collisions
- Accidents per million Train-km



## ▶ Measures to Ensure Safety

### Safety education

At JR East's General Education Center and the General Training Centers of our branch offices, we routinely conduct research and training sessions on the design of safety systems as well as policies and rules to ensure safety.

In November 2002, we established the "Accident History Exhibition Hall" to ensure that we learn the most lessons possible from past accidents.



Training conducted on site for emergency response to accidents at railway crossing.

### Head Office Safety Campaign

We also regularly conduct a "Head Office Safety Campaign," in which Head Office personnel, including the company president and executives, visit actual operation on the front line and directly discuss safety issues with employees.

In fiscal 2004, under the theme of "discovering potential accidents," actual work conditions were inspected and members discussed individual safety concerns as well as accident prevention practices. The Head Office later considered supplementary measures to address the concerns raised, and is reflecting them in policies to further raise safety levels.



Top management visits actual operations to discuss safety.

### Safety-related technological development

JR East is working on a range of research and development projects in order to raise safety levels. For example, we are developing devices that can detect large obstructions on tracks, utilizing image-processing technologies. Other equipment we have developed is already in practical use, including an inspection vehicle that uses radar to diagnose imperfections such as cracks and cavities inside the concrete walls of Shinkansen tunnels.

As maintenance vehicles become larger in size, we are developing technology that will allow us to shorten the time that maintenance vehicles are running on tracks, in order to avoid collisions with trains.



The Tunnel Wall Inspection Vehicle inspects Shinkansen tunnels with precision and efficiency.

### 'Learning from past accidents': The Accident History Exhibition Hall

Many of the facilities, frameworks and rules that ensure railway safety today have been developed from the lessons of past accidents and incidents. Memories of accidents fade with the passage of time, however, and there is a tendency for people to forget the original reasons why certain rules were established.

For this reason, in November 2002, we opened the Accident History Exhibition Hall inside the JR East General Education Center in Shin-Shirakawa, in order to ensure that past accidents are addressed in a systematic manner, and that people are able to learn about safety from past experience. This is important, as safety measures become embedded into automatic

systems and generations of employees change over time. In this exhibition hall one can find displays giving descriptions of 25 past accidents and the resultant countermeasures, etc. Examples include an accident at Mikawashima (1962), which prompted improvements in railway rules and safety equipment such as ATS systems; and an accident at Higashi-Nakano (1988), which triggered improvements in institutional arrangements for safety and accelerated the installation of ATS-P systems. The exhibits also give each individual the opportunity to

understand personally what might occur if equipment, systems, or rules break down.

We will continue to tackle the challenge to achieve 'ultimate safety,' by learning sincerely from past accidents, and by a commitment to day-to-day efforts for safety by each and every employee in the JR East Group.

