

# Safety Management System

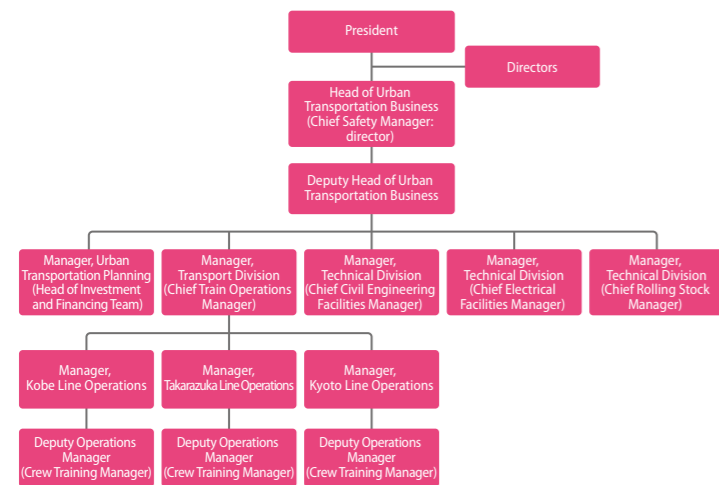
## Basic Safety Policy and Objectives

Hankyu Corporation and Hanshin Electric Railway put the highest priority on ensuring safe operations in our business activities. As described below, we have formulated a basic policy on safety and are doing whatever we can to prevent accidents, based on the goal of maintaining zero accidents for which we bear responsibility.

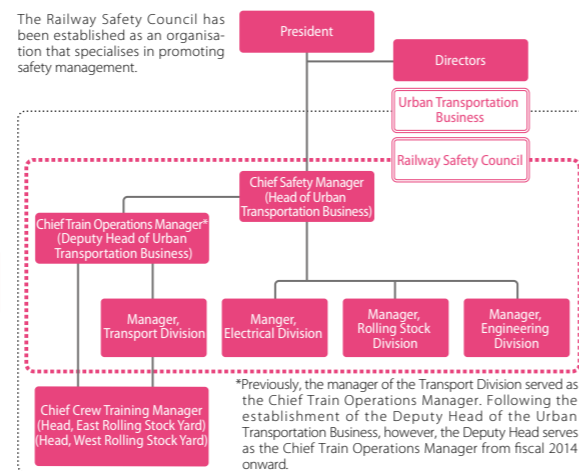
Hankyu Corporation Safety Policy (Code of Conduct)	Hanshin Electric Railway Safety Policy
<ul style="list-style-type: none"> <li>The president and directors of the Company are required to establish a framework that ensures all business activities place the highest priority on safety. Utilising the Company's civil engineering facilities, electrical facilities, rolling stock, and the expertise of its employees, the Company's basic policy for ensuring safety in transport and other operations shall be determined in accordance with the following.</li> <li>Code of Conduct for Safe Transport Operations*                             <ul style="list-style-type: none"> <li>Ensure safe transport</li> <li>Comply with all relevant laws and regulations</li> <li>Be fully aware of operating conditions and ensure equipment is safe</li> <li>Enforce check procedures and put the highest priority on safety</li> <li>Place priority on human life</li> <li>Provide information accurately and rapidly</li> <li>Continue making improvements and reforms</li> </ul> </li> </ul> <p>* Only titles for Code of Conduct items have been shown due to space restrictions. The full Code of Conduct provides detailed explanations for each item.</p>	<ul style="list-style-type: none"> <li><b>Maximum priority on safety</b> The president, directors and employees shall do whatever they can to ensure safety of operations, based on the understanding that putting the highest priority on ensuring safety is the mission of railway businesses.</li> <li><b>Compliance with laws and regulations</b> The Company shall comply with all laws and regulations related to safety and apply them rigorously and sincerely in its operations.</li> <li><b>Maintenance of safety management systems</b> The Company shall implement continuous verification procedures to ensure safety management systems are operating appropriately.</li> </ul>

## Transport Safety Organisations

Organisation Chart (Hankyu)



Organisation Chart (Hanshin)



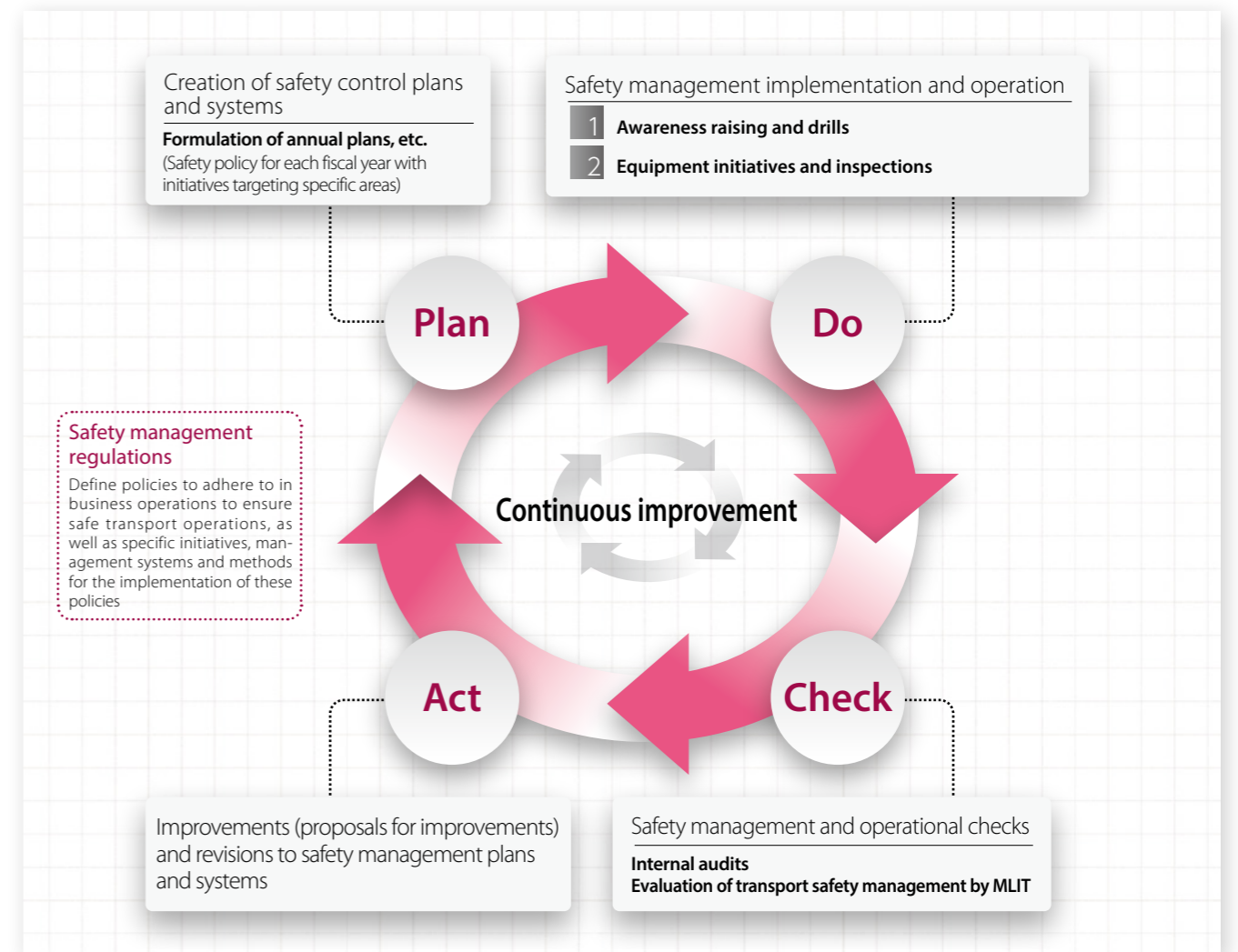
Position	Role
<b>President</b>	Ultimate responsibility for ensuring transport safety
<b>Chief Safety Manager</b> (Head of Urban Transportation Business)	Responsible for overseeing all activities related to ensuring transport safety
<b>Chief Train Operations Manager</b> (Deputy Head of Urban Transportation Business*)	Responsible for managing all aspects of train operations, under the direction of the Chief Safety Manager
<b>Manager, Transport Division</b>	Assists in train operations under the direction of the Chief Train Operations Manager
<b>Chief Crew Training Manager</b> (Hankyu: Deputy Operations Managers of each line; Hanshin: Heads of East and West Rolling Stock Yards)	Responsible for ensuring all crew are properly qualified (appropriate qualifications, knowledge and skills), under the direction of the Chief Train Operations Manager
<b>Other Safety Managers</b>	Individuals in each division responsible for ensuring facilities under their management do not act as an obstacle to transport safety, under the direction of the Chief Safety Manager

\* In the case of Hankyu Corporation, this role is filled by the Manager or Deputy Manager of the Transport Division.

## Initiatives to Reinforce the Safety Management System (Using the PDCA Cycle)

By applying our safety management system (PDCA cycle) to a range of safety initiatives, we are aiming to create a virtuous cycle of improvement based on even higher safety goals.

Outline of Safety Management System



Revisions to the Railway Business Law in October 2006 required railway companies to create new safety management systems dedicated to transport safety. Under our new safety management system, we are targeting even higher levels of safety by applying the PDCA cycle, ensuring compliance with all related laws and regulations, conducting operations that place the highest priority on safety, and fostering greater awareness of safety issues among employees from directors down.

From the next page, we explain in more detail points 1 — 2 of "Do = safety management implementation and operation" in the above diagram.

# 1

## Awareness Raising and Drills

### Activities to Raise Safety Awareness in Hankyu Corporation

#### On-site Inspections Undertaken by the President and Chief Safety Manager

On-site inspections undertaken by the President and Chief Safety Manager (Head of Urban Transportation Business) verified actual conditions and deepened communication through direct dialog with front-line employees.



#### Management Area Meetings

Communication and cooperation among divisions regarding current operations are indispensable for maintaining and improving the safety of railway operations on site. For this reason, we held management area meetings that gather front-line personnel working at train operations, civil engineering facilities, electrical facilities and rolling stock at Nishiomiya, Jyuso and Shojaku (which are integrated railway facilities) to exchange opinions and share information on safety.



#### Safety Lectures and Seminars

We work to improve employee safety awareness by inviting outside lecturers to hold lectures and seminars on transportation safety.

##### Main content

**Safety lecture:** A lecture on methods for analysing the causes of accident given by the Railway Technical Research Institute



### Activities to Raise Safety Awareness at Hanshin Electric Railway

#### Create a Corporate Culture That Prioritises Safety and Rigorously Ensure Compliance

Inspections, lectures and visits by the President, Chief Safety Manager (Head of Urban Transportation Business) and managers further improve employee safety awareness. We are also rigorously ensuring compliance.



#### Information Sharing through the Railway Safety Council

In principle, Hanshin Electric Railway holds meetings of its Railway Safety Council twice every month. The Council is chaired by the head of the Urban Transportation Business, and its members are made up of other managers from within this business. The Council hears reports from relevant managers regarding accidents, safety incidents, and potential accidents and near accidents, and shares information about these reports. It analyses the causes of these accidents, safety

incidents, and potential accidents and near accidents. Based on the results of this analysis, it formulates countermeasures to prevent reoccurrence, and issues instructions to the Railway Safety Liaison Team\* and related divisions.

\* Railway Safety Liaison Team: Comprising managers from each railway business division, this team is responsible for sharing information about operations, accidents, and issues in each division, and discusses and reviews causes and measures to prevent recurrence.

#### Ensuring the Information Sharing System Continues to Function Properly

Hanshin Electric Railway endeavours to ensure active communication with employees on a daily basis, with details fed back to the front lines when the causes of accidents, safety incidents, and potential accidents and near accidents are identified and countermeasures developed.

For incidents that were caused by human error, each division and the Railway Safety Liaison Team assess the effectiveness of measures to prevent any recurrence and report where necessary to the Railway Safety Council. This approach has given the Company a greater capability to assess the effectiveness of countermeasures.

#### Presentation and award received at the Train Operation Research Presentation

At the 33rd Train Operation Research Presentation hosted by the Japan Train Operation Association in November 2012, we announced our initiative entitled: "Safety Ethos for Locking and Unlocking Operations and the Recording of 468 Days without an Accident." At this presentation, we announced and received an incentive award for initiatives to identify methods to eliminate human error when attaching and detaching rolling stock at Amagasaki Station along with examples of successful preventive measures.

468

安全神話への連解作業  
無事故記録468日

安全で確実な連結解放



阪神電気鉄道株式会社  
運輸部尼崎駅管区 助役 志智 仁  
助役 高橋 哲哉




## 2 Equipment Initiatives and Inspections

### The Content of Drills Undertaken by Hankyu Corporation and Hanshin Electric Railway

Hankyu Corporation and Hanshin Electric Railway both conduct specific training programmes in their train operation, civil engineering (workshop) facility, electrical facility, and rolling stock divisions, as well as exercises to prepare for specific emergency situations. Both networks also hold their own independent joint drills for emergencies where cooperation across business divisions is required.

#### Joint Drills: Hankyu Corporation



Schematic exercise (held August 2012)  
Communication drills assuming the occurrence of an earthquake and tsunami originating in the Nankai Trough



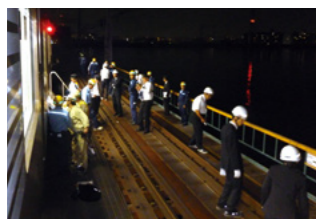
Practical emergency drill (held December 2012)  
Emergency evacuation guidance and restoration drill assuming a train fire and track flooding on a Kyoto subway line



#### Held Tsunami Drill

In May and December 2012, Hanshin Electric Railway held tsunami drills using actual rolling stock in conjunction with each division of the Urban Transportation Business on the Hanshin Namba Line's Shinyodogawa River Bridge. Before undertaking tsunami countermeasures in May, we conducted drills to verify passenger exit

methods from trains, the safety of the evacuation route and the time required to evacuate. Upon completing tsunami countermeasures in December that included installing emergency ladders on bridges, we held tsunami evacuation drills assuming evacuation guidance is given to passengers exiting a train stopped on one of those bridges.



Verification drills (held May 2012)



Tsunami evacuation drill (held December 2012)



Distance marker



Exit ladder

#### Held Joint Drills at the Daimotsu Training Centre

In October 2012, Hanshin Electric Railway conducted drills jointly with the Electrical and Transport divisions assuming that an occupational accident has occurred. The Daimotsu Training Centre was opened in fiscal 2010 as a general-purpose technical training facility that was upgraded in fiscal 2012 to improve expertise and skills regarding electric power facilities and track maintenance and transfer those skills to subordinates. The Daimotsu Training Centre conducted drills on providing first aid to accident victims and accident-related notifications by Electrical Division and on-board staff assuming a

train collision has occurred during a train crossing inspection being performed by an Electrical Division staff.



Hankyu Corporation and Hanshin Electric Railway both take a wide range of steps to improve safety using equipment and infrastructure. Below, we explain some of the main initiatives.

#### Overpass and Underground Construction Work

Both companies are pushing ahead with the construction of multiple rail overpasses to reduce the number of level crossings and improve traffic flow near train lines. Elevated or underground sections now account for large portions of Hanshin Electric Railway's Hanshin Main Line (87%) and its Hanshin Namba Line (90%), including the new extension from Nishikujo Station to Osaka-Namba Station. All of Kobe Rapid Transit Railway Line is in underground. This work to raise the tracks has led to a marked drop in the number of level-crossing accidents.

Grade separation (track elevation) works are currently underway on the Hankyu Kyoto Line near Awaji and Rakusaiguchi stations, and on the Hanshin Main Line between Sumiyoshi and Ashiya and between Koshien and Mukogawa.



Viaduct construction site

#### Controlling Rail Traffic with Automatic Signal, Point and Signage Systems

Both companies utilise computer-based systems to control rail traffic. Hankyu Corporation uses the Total Traffic Control (TTC) system, while Hanshin Electric Railway uses the Programmed Traffic Control (PTC) system. The companies' TTC and PTC centres automatically control signals, points, and platform signs and announcements based

on preprogrammed information for all trains and stations (such as departure times, line numbers, destinations, and train types). The computers at the heart of these systems (central control systems, PTC computers) are systemised with multiple backups and inbuilt redundancy to ensure a high level of reliability in the event of a problem.

#### Upgrading Automatic Train Stopping Equipment

Automatic Train Stop (ATS) equipment automatically slows down or stops trains when drivers fail to notice or respond to, or misinterpret signals or signalled speed limits. Hankyu Corporation and Hanshin Electric Railway both use continuous speed-checking type ATS systems on all their lines\*, including branch lines, ensuring a high level of safety.

\* Between Sakuragawa and Osaka-Namba stations on the Hanshin Namba Line, Hanshin Electric Railway relies on an onboard control-point continuous speed-checking type ATS system that Kintetsu Corporation employs.

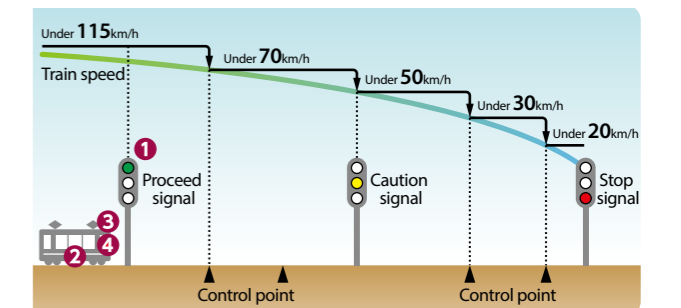
In an effort to further improve safety, Hankyu Corporation has been adding a new pattern control system to its existing ATS equipment. This new control system is aimed at preventing overrun into level crossings, failure to stop at designated stations, and collisions in which a train runs into the end block of lines. This system is already in operation on rail lines.

Both companies are also working to improve safety by installing ATS equipment on sharp curves and branches in lines to prevent derailments caused by excessive speed.

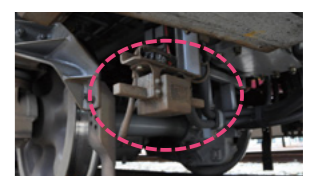
In March 2011, Hankyu Corporation finished compilation of independent safety standards stricter than those of the Ministry of Land, Infrastructure, Transport and Tourism. In May 2011, Hanshin Electric Railway completed installation of Automatic Train Stop (ATS) facilities at all 28 junctions on its network.

Hankyu Corporation is planning to introduce a safety system

#### Continuous speed-checking type ATS system: Hankyu Corporation's continuous speed-checking ATS system



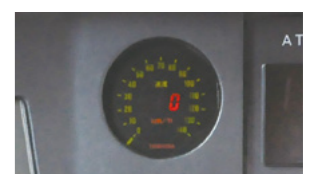
1 Obstruction signal



2 ATS pickup



3 ATS indicator in driver's cab



4 Speedometer in driver's cab

enabling automatic braking of rolling stock using ATS, even if the driver misses a 'stop' shunting signal in a train depot. This measure is intended to avoid damage to points if a train jumps a 'stop' light, as happened at Nishinomiya depot on the Kobe Line in November 2011

and June 2012. This system is already being used at the Nishinomiya depot and installation work is currently underway at the Shojaku and Katsura depots.

## Initiatives to Improve Platform Safety

At Hankyu Corporation and Hanshin Electric Railway, the following measures prevent objects and people falling onto the track from the platform, and forestall accidents:

### (1) Installation of yellow warning-line tiles on platform

To stop visually-impaired and other passengers from falling off the platform, we have installed yellow warning-line tiles next to the tactile tiles (with bumps that can be felt through shoe soles) so that a blind passenger can tell which side of the yellow warning-line he or she is.

Both Hankyu Corporation and Hanshin Electric Railway have already completed the installation of yellow warning-line tiles at all stations in fiscal 2013.



Yellow warning-line tile attached to a platform that conforms to standards established by the Japan Industrial Standards Committee

### (2) Platform widening

At Mukogawa Station on the Hanshin Main Line (up-line to Osaka), we have broadened the platform by about 1.5m to alleviate rush-hour crowding and enhance safety.



Mukogawa Station up-line platform

### (3) Installation of emergency alert devices

When somebody or something falls onto the track, the event is detected by special mats under the platform edge, or an emergency stop button on the platform can be pressed. These set off alarm indicators and an emergency buzzer for crews and station staff, preventing serious accidents. On Hanshin lines, we have completed installation of emergency stop buttons at all stations.

We are currently taking measures to further improve safety on Hankyu lines through the installation of platform emergency stop buttons that work in tandem with the ATS system installed at all stations.



Emergency stop buttons (Hanshin)

In addition, both companies installed shelters below platforms and steps to climb back onto platforms.



Platform evacuation steps  
(The dotted line to left shows a bar-type step and the one on the right indicates a ladder-type step)

## Other Risks and Countermeasures

The following is the Group's perspective provided in response to questions received from our investors in relation to the risks attendant on our business. Information about future events that appears in this report was determined by the Group to be current as of 31st March 2013 and is not intended to negate the possibility of these risks impacting the business performance, financial position and other aspects of operations of the Group.

### Economic Environment-related Risks

#### ■ Changes in the Financial Market

Despite increases in the interest rate set by the Bank of Japan and the difficulties associated with market-based financing accompanying changes in financial markets, the Group limits its exposure to risk associated with interest rate increases by prioritising the undertaking of long-term loans with fixed interest rates. In addition, the Group secures financing by working to establish back-up lines based on commitment lines set up with correspondent financial institutions.

Nevertheless, in the event that financial markets were to change dramatically, the business performance and financial position of the Group could be adversely affected.

#### ■ Foreign Currency Market Fluctuations

The Group assumes that sudden fluctuations in foreign currency markets will occur as economic conditions change. However, foreign exchange rate contracts, currency swap contracts and currency option contracts are employed to avoid the exchange rate fluctuation risks attendant on some foreign currency-denominated assets and liabilities.

Nevertheless, although foreign currency market fluctuation risk is mitigated through the use of foreign currency exchange-related derivative transactions, in the event that sudden fluctuations exceed assumptions, the business performance and financial position of the Group could be adversely affected.

The Group's overseas sales constitute less than 10% of its consolidated operating revenues.

### Business-related Risks

#### ■ Demographic Change

Due to the aging population, it is expected that capital expenditure on safety measures and construction aimed at making facilities barrier-free will increase. At the same time, due to future population decline caused by the falling birth rate, it is possible that transportation demand (for the Group's railways, buses and taxis) will recede, and that demand in other businesses may also decline.

In order to respond to this challenge, the Group is working with government and educational institutions on community-building initiatives with a focus on peace of mind, education and cultural enrichment. By doing so, we are working to enhance the appeal of the areas served by our stations so as to ensure that our railway lines enjoy the patronage of large numbers of people.

#### ■ Safety Management

In the Group's core railway business, our passengers would suffer greatly if an accident were to occur. We are keenly aware of the responsibility entrusted to us for our passengers' lives. Therefore, the cornerstone of our business is placing the utmost priority on ensuring the safety of customers.

Accordingly, the Group has upgraded all aspects of its safety capabilities in the conviction that putting passengers first and prioritising safety come above all else. We are engaged in a wide variety of endeavours for ensuring that we go one step further to offer our passengers even safer transportation.

#### ■ Risks Associated with Power Supply Shortages and Electric Utility Rates

In the event of a shortage of power supply, train and other services may be disrupted. In addition, increases in electric utility rates are a factor driving up power and other costs. In order to curb power usage to the maximum extent possible while minimising its impact on earnings and expenses, the Group is undertaking such measures as gradually introducing energy-saving equipment and strengthening cost reduction awareness among employees.

#### ■ Natural Disasters and Acts of Terrorism

The Group's businesses and transportation network infrastructure could be significantly damaged by natural disasters such as earthquakes, typhoons and floods or acts of terrorism.

Hankyu Corporation and Hanshin Electric Railway Co., Ltd. have installed rain, wind and river water gauges in the areas along our railway lines for collecting observation data. We also use real-time information provided by meteorological observatories to ensure the safe operation of our trains. If an earthquake of JMA seismic intensity 4 or above is detected by a seismograph or predicted by an earthquake early warning system, all trains that operate in the zone in question will immediately prepare for emergency stopping. For possible acts of terrorism, or where suspicious items or persons are identified or damage has occurred, we have risk-graded management response systems.

We have also developed emergency response systems for minimising the social impact in the unlikely event of an incident which causes long-term disruption to transit services or results in a great number of casualties.

#### ■ Infectious Disease Outbreaks and Epidemics

Group businesses could be significantly affected if economic activities were restricted or customers refrained from going out due to an outbreak or epidemic of an infectious disease such as SARS (Severe Acute Respiratory System) or H1N1 flu.

In response to the spread of infectious diseases such as H1N1 flu, the Group has developed a Business Continuity Plan (BCP) for each division, under the direction of core companies. During the H1N1 outbreak in 2009 and 2010, ongoing surveys into infection rates among employees and their families in each division gave us a good idea of the scale of risk, minimising the impact of H1N1 on our business. Also, in the railway business, which is a particularly important part of the social infrastructure, we drew up plans in advance to minimise the impact of any explosive spread of the disease, including multiple schedules assuming a shortage of railway staff.