Up to fiscal 2013, JR East Group has established five-year safety plans a total of five times. Safety was placed as our most important management issue in those, and we steadily went forward with their implementation. As a result, the number of railway operation accidents as shown in Fig. 1 has dropped from 376 at the start of the company in fiscal 1987 to 147 in fiscal 2012. Even so, more than 100 railway operation accidents still occur every year.

In light of the severity of this situation, we established our sixth five-year safety plan, "Group Safety Plan 2018—Safety through Individual Development and Teamwork", while going forward steadily with measures implemented up to now. In that plan for fiscal 2014 to 2018, we focus on dealing with changes in the environment surrounding JR East operations, such as advances in computerization, generational change, division of duties between group and partner companies, and repeated occurrence of natural disasters. Furthermore, we will also strive for "extreme safety levels" in the new plan.

Soon after the plan was announced, a major accident occurred in February 2014 at the yard of Kawasaki Station on the Keihin-Tohoku Line where a road railer and deadhead train collided, resulting in the train derailing. In the period covered by the plan staring in April 2014, we are working to raise the level of safety with the determination that we never allow such an accident to occur again.

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(3) Focus on passing technological expertise to new generations

As the time is rapidly approaching for many skilled veteran employees to enter into retirement, we position the next five years to be their last chance to pass on their technological expertise to their successors. We aim to take specific measures in improving our safety management by actively and deliberately passing down these abilities and through measures to thoroughly understand the gravity of accidents.

3 Concrete Initiatives

Fig. 2 provides an overall image of JR East Group Safety Plan 2018. We are implementing specific efforts based on the four pillars of the plan to achieve our goals and directions.

(A) Three principles of actualities

Safety problems constantly occur at worksites, and solutions also lie there. Consequently, the Group pursues “three principles of actualities” (actual location, actual objects, and actual people) that involve actually going to worksites to see, hear, feel, and think about what has happened. In that way, we are able to unearth problems and lessons in the process of producing true solutions (Fig. 4).

(B) Five cultures

By assigning all the safety approaches developed so far from our “safety culture” as a foundation to build on, we shall establish safety as “part of the DNA” of each employee.

(A) Five cultures

JR East Group promotes a culture where employees take serious note of accidents that have happened and signs of potential accidents—a culture where employees discuss, learn from, and act on issues based on information (Fig. 3). In culture of action, “stopping the train when danger is sensed” in particular is set down as a firm code of conduct of the JR East Group. Furthermore, we work to prevent accidents by reconfirming the importance of basic actions such as confirmation dialogs and pointing and calling, practicing day-to-day efforts in a careful and diligent manner.

(C) Challenge Safety (CS) Campaign

We are carrying out efforts whereby each and every employee at individual workplaces thinks about, discusses, and acts on safety so as to gain a sense of accomplishment and thereby increase ability to imagine dangers and have a sharper sense of safety. Those efforts are not limited to meetings, presentations, and the like, being implemented independently by workplaces so employees can take on efforts in a freethinking manner.
(2) Improve safety management system
Amidst the rapid loss of skilled veterans due to retirement, the importance of nurturing younger employees who will be at the core of safety-related knowledge, technical expertise, and leadership is growing greater. To meet this challenge, we will improve our management system in the area of safety by means such as personnel training and passing on technical expertise.

(A) Nurture personnel who will bear the burden of safety
We will work on nurturing human resources centering on “safety professionals” assigned to branches and other locations, “key safety leaders” assigned to locations such as field offices, and “General Training Centers” and “Skills Training Centers” that conduct training according to actual practices (Fig. 5).

(B) Pass on specific technological expertise in an active manner
We will thoroughly pass on experience-based knowledge accumulated up to now, such as the scheme of safety rules and reasons for past accidents, and we will unearth and pass on the experience-based knowledge of seasoned employees. And through seminars by the “Chroniclers of Safety”, an organization of highly experienced past employees, we will hand down the experiences in safety by those past employees.

(C) Improve safety with the group acting as one
We will undergo specific efforts such as sharing information across the entire JR East Group including group and partner companies, using each other’s safety education and training facilities while sharing values on safety, and creating a system for improving facilities.

(D) Create initiatives to learn the gravity of accidents
Efforts will be instituted to learn about the gravity of accidents. That will be done through means such as having all employees visit the Accident History Exhibition Hall within the JR East General Education Center where actual rolling stock and the like involved in accidents is displayed and building an actual vehicle hands-on line where accidents and incidents can be simulated using actual rolling stock and the like.

(E) Minimize human errors
Complex rules and deployment of diverse machinery can easily lead to human errors. For that reason, we are making efforts in simplification such as narrowing down rules and unifying machinery.

(F) Provide easy-to-understand learning materials and information
We are putting together an environment that gives access to necessary materials, including videos, when needed by utilizing the “safety portal” intranet site. Also, we are deploying e-learning utilizing ICT where users can learn whenever they want by devices such as computers or tablets.

(3) Steadily reduce risk
Accidents will be sorted into the three categories of “accidents due to internal causes”, “accidents due to external factors”, and “accidents closely related to society”, and the direction that needs to be taken for those will be decided. Moreover, initiatives to steadily reduce risks will be promoted.

Even if certain issues are not presently seen as risks, JR East will continue to stay one step ahead by unearthing and counteracting potential risks that are emerging with the changing circumstances in the railway sector.

(A) Thoroughly reduce risks for accidents due to internal causes
We aim to eliminate by every means possible accidents where the cause lies within the JR East Group and that can be prevented by improvement to railway operation and maintenance systems. Those include systematically putting in place risk reduction measures already implemented, utilizing the results of technical development in areas such as ICT and GPS, and reviewing systems.

First of all, we will steadily pursue accident prevention measures by both physical and systematic means so not to repeat serious accidents like the derailment at Kawasaki Station. We also aim to eliminate incidents that occur for the same reason as those accidents and that could have led to the casualty of customers or employees, even though actual accidents were avoided.
(B) Thoroughly reduce risks for accidents due to external factors

We will pursue countermeasures against large earthquakes, rainfall, wind gusts, and the like, systematically reducing the risk of those. By doing so, we hope to identify risks of and minimize damage after large earthquakes and recent weather anomalies such as localized rainstorms and gusts that have been on the increase recently.

(C) Thoroughly reduce risks for accidents closely related to society

For accidents such as those involving obstruction of level crossings and falling from platforms, the JR East Group is steadily implementing countermeasures including setting up level crossing obstruction warning devices and automatic platform gates. Concurrently, we are deploying comprehensive measures such as reorganizing or eliminating level crossings and carefully providing information by conducting awareness campaigns for platforms, crossings, escalators, and the like while working in concert with customers and the community.

(4) Promote priority improvement plans for safety equipment

JR East has made safety-related investments of over 3,000 billion yen over the past 27 years since the company was established. This effort will be continued by earmarking another trillion yen or so in safety investments over the five-year course of JR East Group Safety Plan 2018. The specifics will involve the continued enactment of countermeasures in preparation for major earthquakes, the installation of even more reliable safety equipment, and stepping up measures for preventing level crossing accidents. In addition, we will complete the installation of automatic platform gates at 23 stations on the Yamanote Line while implementing plans in stages for expanding their use on other line segments (Fig. 6).

Conclusion

JR East Group Safety Plan 2018 as summarized in this paper is a five-year plan to improve safety by both physical and systematic means. Particularly, taking serious note of the derailment accident at Kawasaki Station in February 2014, we will share the strong determination to never again cause a serious accident and continue to strive endlessly for “extreme safety levels”.

Photo 3 Large-scale Earthquake Countermeasures (seismic reinforcement of viaducts, reinforcement of embankments)

Photo 4 Platform Gates and Level Crossing Obstruction Warning Devices