

JR East Security Measures

What can be done to improve staff training and to raise awareness among passengers?

25 November 2016
13th Florence Rail Forum

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1. Introduction of JR East

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3. Conclusions

1. Introduction of JR East

JR East is a private integrated railway and a dividend paying company. Infrastructure and the provision of transport services are integrated under one roof.

In addition to transportation business, we also run non-rail businesses such as in-station commerce, shopping center operation, office leasing, ICT service, etc.

- 17,3 million passengers/day
- 12.234 trains/day
- 7.457,3 km of lines
- 1.665 stations
- 12.560 passenger cars
- 23,9 billion Euro operating revenue (consolidated)
- 2,04 billion Euro net income (consolidated)
- 57.580 employees

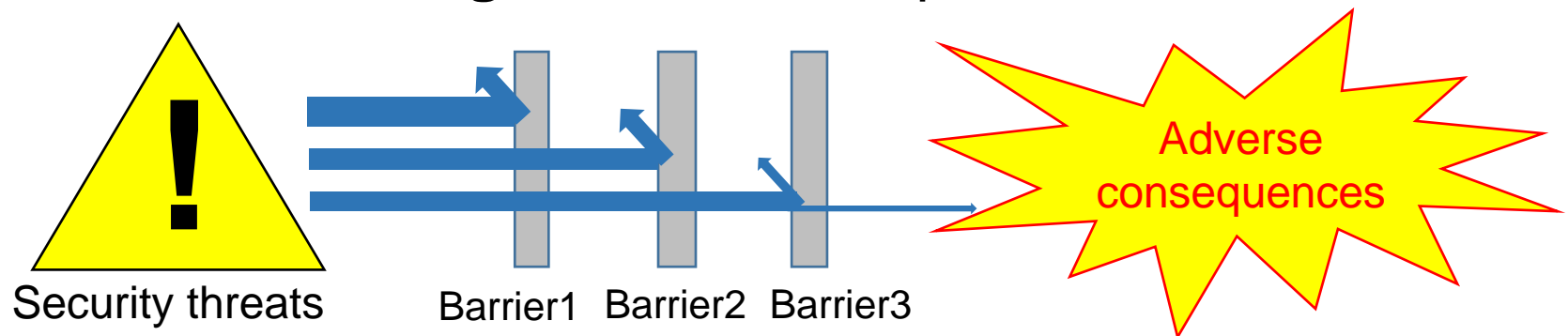
(FY2015; fiscal year ending 31 March 2016, €1 = yen120)



2. JR East security measures

Security strategies

- Barrier 1: **Deterring** security threats
- Barrier 2: **Detecting** security threats
- Barrier 3: **Minimizing** harmful consequences



JR East has implemented various security measures to prevent adverse consequences. There are three barriers: **Deterring security threats**, **Detecting security threats** and **Minimizing harmful consequences**.

The security measures consist of not only providing **security equipment and system** but also **training for the staff**.

2-1. Various type of security measures

Strengthening of security patrols

- Regular security patrols of station premises and trains by station staff and security guards
- Use of an “On Alert” armband shared by appointed staff companies during patrols

Checking for suspicious objects

- Check for suspicious objects by security guards and group company employees during vehicle cleaning at terminal stations



Renewing to transparent trash box

- Installation of trash receptacles with transparent materials on their side faces, so that their contents can be seen from the outside



2-1. Various type of security measures

Requests for passengers' cooperation regarding discovery of suspicious objects

- Guidance announcements, poster notices, and electronic signboard displays



Security Notice

JR East Group and the Police Department together are now **on a high alert.**

If you find something suspicious at a station or on a train, please inform station staff, conductors or security guards as soon as possible.

Emergency stop buttons

- Installation of “emergency stop buttons” on platforms so that customers themselves are able to stop trains in the event of abnormal situations
- This allows trains to be stopped urgently and relevant parties to be informed of abnormal situations
- Installation of emergency alarm devices in trains, allowing communication with crew in abnormal situations



2-1. Various type of security measures

Operation of inspection vehicles before first high speed train of the day

- Prior to operation of the first train of the day, the condition of the tracks is checked by a maintenance vehicle exclusively used for railway track confirmation



2-1. Various type of security measures

Installation of security cameras

JR East has approx. 24,500 CCTVs. 16,700 in stations, 7,200 in trains and others.

Station



Rolling stock



Notation for customers to understand that security cameras are in operation.

2-1. Various type of security measures

Security cameras with image recognition technology

JR East has implemented advanced type of CCTV with image recognition technology, enabling detection of unattended materials, sick passengers and congestion at the station.

If something happened in the monitor, the system will alert us immediately. Hence, we can perform the required actions.

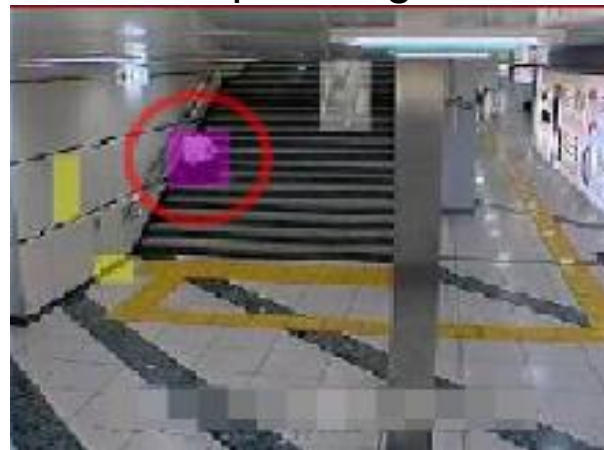
Unattended material



Congestion



Sick passenger 1



Sick passenger 2



2-2. Staff training for resilient reactions in emergency

The Great East Japan Earthquake taught us a lot of lessons on **how rail staff can be more prepared for emergency which can happen any time, anywhere**

- Subsequent massive tsunami devastated rail facilities
- Crews of 27 trains evacuated passengers in chaotic situations



Resilient responses of crews saved all passengers' lives in very critical situations



What was the key of success?

We have interviewed 104 railway staff involved about behaviors at that time, decision-making they faced and source of information they utilized.

The keys of success are **imagination, sensitivity to risk and decision-making.**

Identification of required competencies

- Rail staff are well trained to deal with prescribed events based on **rules and procedures**. We have also focused on **image training**.
- However, it turned out that flexible and adaptive behaviors are required in case of unprecedented events.
- It is need to extract competencies which contributed to successful responses to the unprecedented emergency.

- Imagination
- Sensitivity to risk
- Decision-making

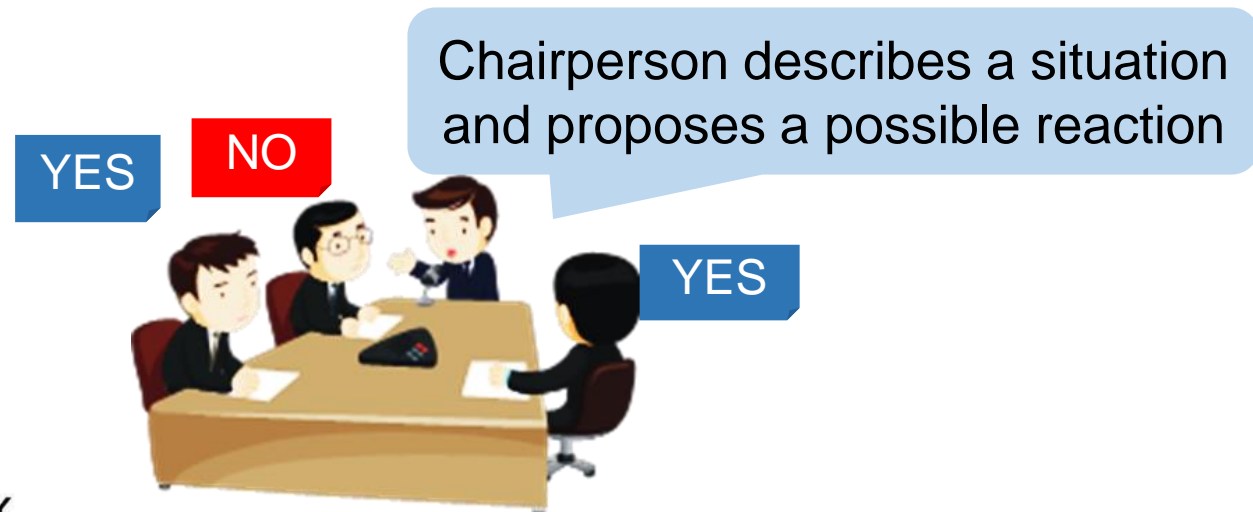


Training program addressing these competences needs to be developed

We developed a new training program based on a serious game named “Crossroad” developed by Kikkawa etc., 2004.

Training program

- Group of 4 to 6 members
- Chairperson reads a short description of an irregular event
- Each member imagines and decides what to do in that situation
- Members choose YES/NO card to an action proposed by chairperson
- All members simultaneously flip the card face up
- Discussion starts between the supporters of alternative decisions



Scenario Example

1. Short description of an irregular event

A train stopped at a red signal in a tunnel and smoke arose in a carriage at the same time. A few passengers are trying to open doors and escape.

2. Chairperson asks the members “Will you stop the passengers?”

3. Members **imagine** the situation and **decide “YES” or “NO”**

4. Members discuss why they chose “YES/NO”

5. Chairperson facilitates the discussion and members **learn important aspects to be considered** in a similar situation from others’ perspectives

POINT

No conclusions needed, but imagining the situation and sharing perspectives are important

Expected effects

- Higher alertness of the staff on suspicious materials/persons
Higher alertness on suspicious materials/persons by staff after imagining the event development.
- Increasing awareness of risks to be taken into account before making decisions in emergency.
- Mitigating the impact of panicking in the face of an emergency by simulating similar situations and imagining possible responses in advance.
- Expanding variations of decision-making and actions.

3. Conclusions

- As a sponsor of the Tokyo 2020 Olympic, our endeavors to provide secure services will continue towards the game.

- We will take a holistic approach to make trains and stations more secure and safer through:
 - ✓ Technological development
 - ✓ Staff trainings
 - ✓ Security patrols
 - ✓ Coordination with other organizations etc.

- Especially, staff trainings are essential. We can implement security measures as effectively as possible only by having competent staff.

Thank you

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