

# Hosting the 9th UIC World Congress on High-speed rail

JR East International Department

## Introduction

East Japan Railway Company (JR East) held the 9th UIC World Congress on High-speed rail in Tokyo from 7 to 10 July 2015 with the cooperation of the International Union of Railways (UIC). The UIC World Congress on High-speed rail is the world's largest conference on the theme of high-speed rail, and it has been held every few years at locations around the world from 1992. To celebrate the half-century of high-speed rail, this congress was held in Japan, where high-speed rail was born.

This article gives an overview of the 9th UIC World Congress on High-speed rail, attended by around 1200 people from about 40 countries.

## JR East's Relationship UIC

The world's largest international association of railways, UIC, was founded in Paris in 1922 to promote cooperation between members and contribute to the advancement of railways. Its current membership is made up of about 200 organizations from 95 countries, and Japan (the Ministry of Railways at the time) has been a member since its founding. JR East has been actively involved in UIC as an active member since the division and privatization of Japanese National Railways in 1987. From 2009 to 2012, the then Vice Chairman of JR East, Yoshio Ishida served as UIC Chairman. Currently, JR East Chairman Satoshi Seino is the Chairman for the UIC Asia-Pacific Region.

UIC activities are separated mainly by region, such as Europe and Asia-Pacific, and theme, such as high speed/conventional rail and train control/signal systems. In region-specific activities, Japan is in the Asia-Pacific region including China, South Korea, India, Russia, Kazakhstan, Mongolia, as well as countries in Southeast Asia and Oceania. It works actively to support and promote further sustained development of the economy and society of this rapidly developing region using railways. In theme-specific activities, specialists from UIC members around the world

participate to share their latest efforts and hold discussions on overcoming various issues.

Another important activity of UIC is to hold discussions with government agencies, industry, or other business fields in addition to UIC members to share knowledge broadly. UIC holds many international conferences that are venues for many people involved in railways to come together to share information and exchange opinions. The largest of these is the UIC World Congress on High-speed rail.

## UIC World Congress on High-speed rail

The opening of the world's first high-speed railway—the shinkansen—Japan in 1964, and the opening of the TGV in France in 1981, attracted attention as a means of high-volume/high-speed transport between urban areas. As shown in Fig. 1, high-speed rail lines started to be constructed and planned across Europe from around 1990, with that momentum spreading around the world as it entered the 21st century. Today, high-speed rail networks span more than 30,000 km in locations around the globe.

With the increased attention on high-speed rail, UIC held the EurailSpeed international conference in Brussels to share the latest technologies and information between people involved in high-speed rail around the world. The congress came to be held in locations throughout Europe every few years, eventually changing its name to the UIC World Congress on High-speed rail at the seventh congress in Beijing. With that name change, it came to be the world's largest international conference on the theme of high-speed rail, both in name and substance. Fig. 2 shows the history of congresses held until now.

At the 50th anniversary of the shinkansen opening as the world's first high-speed railway, JR East organized the 9th UIC World Congress on High-speed rail in the birthplace of high-speed rail with the cooperation of UIC.

Figure 1 Growth of Global High-speed rail Network and Major Start Dates

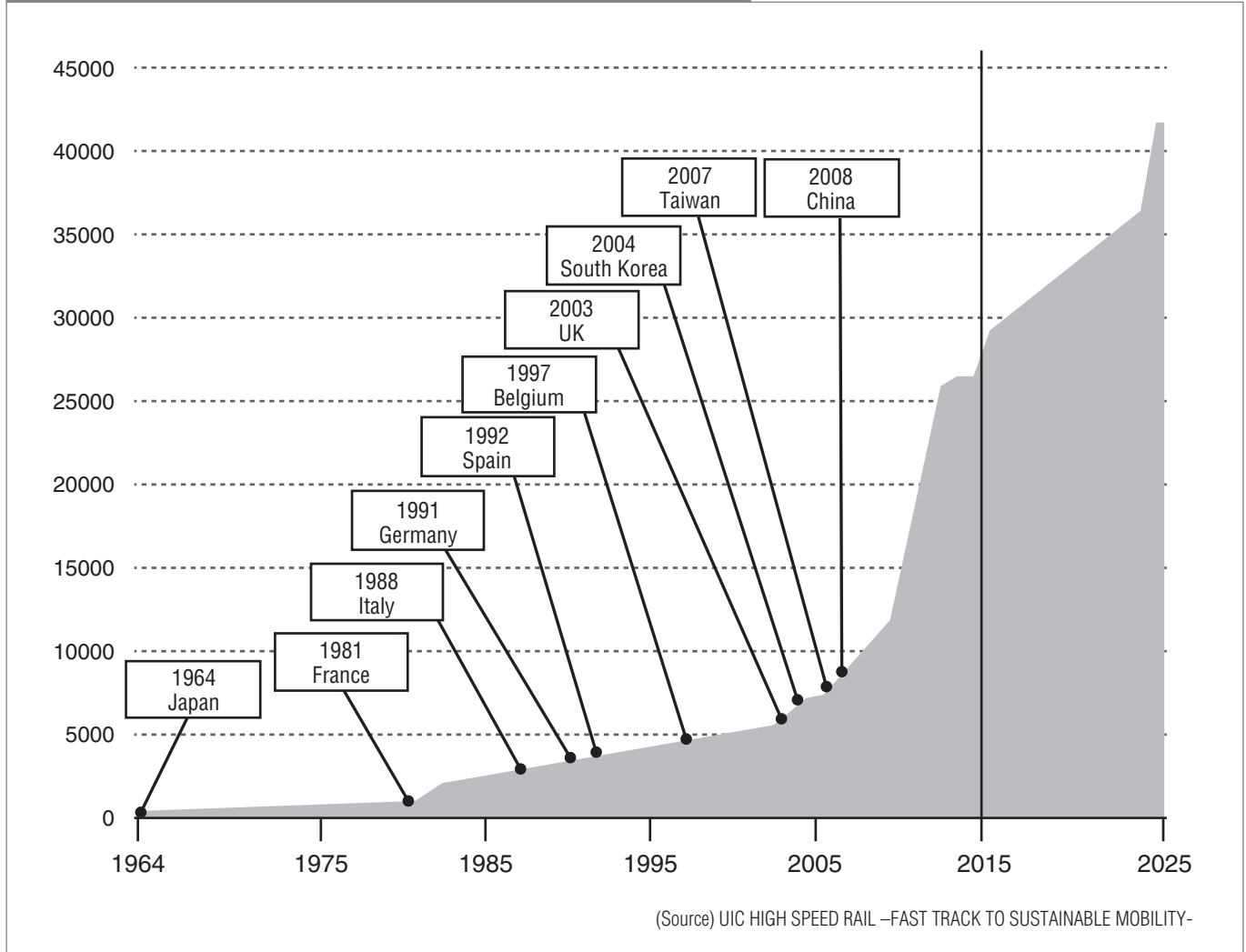


Figure 2 History of UIC Congresses

		Year	Location	Participants
EurailSpeed	1st	1992	Brussels, Belgium	1200
	2nd	1995	Lille, France	1700
	3rd	1998	Berlin, Germany	1700
	4th	2002	Madrid, Spain	1200
	5th	2005	Milan, Italy	1350
	6th	2008	Amsterdam, Netherlands	840
UIC World Congress on High-speed rail	7th	2010	Beijing, China	2700
	8th	2012	Philadelphia, USA	1000
	9th	2015	Tokyo, Japan	1200

Figure 3 Agenda of 9th UIC World Congress on High-speed rail

Tuesday 7 July						
9:30 - 12:00	Opening Ceremony Speakers from countries already having High Speed Rail (HSR) review past developments in HSR. Celebrate the past					12:45 - 20:30 Exhibition Exhibition Hall
12:00 - 12:45	Exhibition inauguration      Speakers of Opening Ceremony cut tape to open Exhibition					
12:45 - 13:30	Lunch					
	Press Conference					
14:00 - 15:45	Parallel Session 1 (5 themes) <span style="float: right;">Past 50 years</span>					
	<b>[Technology A]</b> -Engineering Structures-	<b>[Technology B]</b> -Performance-	<b>[Management]</b> -Capacity Management-	<b>[Culture &amp; Society]</b> -Network Planning-	<b>[Customers]</b> -Mobility-	
15:45 - 16:15	Coffee Break					
16:15 - 18:00	Parallel Session 2 (5 themes) <span style="float: right;">Past 50 years</span>					
	<b>[Technology A]</b> -Track-	<b>[Technology B]</b> -Technical Specifications-	<b>[Management]</b> -Risk Management-	<b>[Culture &amp; Society]</b> -Benefits-	<b>[Customers]</b> -Customer Services-	
18:30 - 20:30	Welcome Reception					
Wednesday 8 July						
9:00 - 10:15	Parallel Session 3 (5 themes) <span style="float: right;">Past 50 years</span>					9:00 - 18:00 Exhibition Exhibition Hall
	<b>[Technology A]</b> -Systems-	<b>[Technology B]</b> -Safety & Security-	<b>[Management]</b> -Real-time Operation-	<b>[Culture &amp; Society]</b> -Rail Policy-	<b>[Customers]</b> -Marketing & Distribution-	
10:15 - 10:45	Coffee Break					
10:45 - 12:45	Round Table 1 <span style="float: right;">Past 50 years</span>					
12:45 - 14:00	Lunch					
14:00 - 15:45	Parallel Session 4 (5 themes) <span style="float: right;">Next 50 years</span>					
	<b>[Technology A]</b> -Maintenance-	<b>[Technology B]</b> -Energy & Environment-	<b>[Management]</b> -Operations & Stations-	<b>[Culture &amp; Society]</b> -Territory Management-	<b>[Customers]</b> -Competition-	
15:45 - 16:15	Coffee Break					
16:15 - 18:00	Parallel Session 5 (5 themes) <span style="float: right;">Next 50 years</span>					
	<b>[Technology A]</b> -System Improvement-	<b>[Technology B]</b> -New Technical Developments-	<b>[Management]</b> -Project Management-	<b>[Culture &amp; Society]</b> -Sustainability-	<b>[Customers]</b> -Accessibility & Intermodality-	
19:30 - 21:30	Gala Dinner					

Thursday 9 July						
9:00 - 10:15	Parallel Session 6 (5 themes)					9:00 - 14:30 Exhibition Exhibition Hall
	<b>[Technology A]</b> -Advanced Structures-	<b>[Technology B]</b> -New Technologies-	<b>[Management]</b> -New Trends for HSR-	<b>[Culture &amp; Society]</b> -System Choice-	<b>[Customers]</b> -Revenues-	
10:15 - 10:45	Coffee Break					
10:45 - 12:45	Round Table 2					
12:45 - 14:00	Lunch					
14:00 - 15:45	Parallel Session 7 -Academic Sessions-					
	<b>[Technology A]</b> -Standards & Parameters-	<b>[Technology B]</b> -Signalling-	<b>[Academic Session 1]</b> -Philosophy of HSR Network-	<b>[Academic Session 2]</b> -Universities for Tomorrow-		
15:45 - 16:15	Coffee Break					
16:15 - 17:45	Closing Ceremony Speakers from countries planning to have high speed rail (HSR) envision future developments in HSR.					

Friday 10 July	
	<b>Technical Visits</b> Participants can select and join one of the eight courses, including a ride on a shinkansen and a tour to shinkansen related facilities.

## 9th UIC World Congress on High-speed rail

### Theme and features of congress

The overall theme of this time's congress was 'Celebrate the past, Design the future'. The first half of the congress reflected on the achievements and innovations over the past 50 years, and the second half covered the outlook for further advances in the next 50 years. To make this a venue for comprehensively announcing and discussing a broad range of themes in a well-balanced manner, half the time was allocated for technical themes and half for themes on policies, management, and operations. With this '50/50' concept, we created an opportunity to reflect on the 50 years up to now and to look ahead to the next 50 years from various perspectives.

Furthermore, we made the first attempt to use tablet

computers at the congress to achieve the two goals of making the congress paperless out of concern for the global environment and interactive in a way that involves the audience instead of being one-way from the speakers and presenters. Tablets were distributed to all participants thanks to the cooperation of Toshiba Corporation, and the audience participated in discussions through a special application installed on the tablets for the congress. In this way, we achieved a conference where all could participate by using ICT.

### Structure and overview of congress

The congress was made up of an Opening Ceremony, Parallel Sessions, Round Tables, and a Closing Ceremony. On the final day, Technical Visits gave participants to experience Japan's shinkansen. There was also an



Japanese Prime Minister Shinzo Abe speaking at Opening Ceremony

(JR East)



JR East President Tetsuro Tomita speaking at Opening Ceremony

(JR East)

Exhibition during the congress where railway-related manufacturers and railway companies introduced their latest services and efforts. (Fig. 3)

The following provides an overview of the individual programmes during the congress.

### Opening Ceremony

The Opening Ceremony at the start of the congress was a spectacular showing of faces with representatives of railway companies in countries around the world with high-speed rail. UIC Chairman Vladimir Yakunin, then president of President RZD (Railways of the Russian Federation), took the podium as representative of the organizers to state that he would like the conference to paint a picture for the next half century of high-speed rail based on the experiences and lessons of the previous half century. UIC Vice Chairman Michele Elia, CEO of FS (Ferrovie dello Stato Italiane), stressed the significance of the congress being an opportunity for participants to look back on and share their experience and knowledge on a variety of themes related to high-speed rail and create a foundation for considering what to do for high-speed rail to fulfil its important role in society.

Mr. Tomita, President & CEO of JR East, on behalf of the local host, expressed his pleasure to host this precious event and to welcome many of worldwide stakeholders of high speed rail. Then, he presented his expectation towards the congress by stating that he would like to make the congress an opportunity for participants to look back the experience and knowledge of various themes about high speed rail, to share them with each other and to build a foundation on what high speed rail should do for playing important roles in the society continuously for the next half-century. He was followed by representatives of railway companies from France, China, and other countries presenting on issues and future plans for high-speed rail in their countries, such as network expansion and links with other modes of transport.

Japanese Prime Minister Shinzo Abe and Minister of Land, Infrastructure, Transport and Tourism Akihiro Ota also attended the Opening Ceremony as representatives of Japan. Mr Abe expressed his hope that Japan would contribute to the world by sharing shinkansen technology widely with many countries. In that way, we can say Japan promoting further sustainable development for countries around the world through high-speed rail.



UIC Chairman Vladimir Yakunin (then President of Railways of the Russian Federation) speaking at Opening Ceremony

(JR East)



Presenters at Round Table 1

(JR East)

### Parallel Sessions

The five main themes of Technology A (infrastructure), Technology B (rolling stock), Management, Culture & Society, and Customers were set in order that sessions on technical themes and those on policies/management/operations would be 50% each. The main themes were subsequently broken down into a total of 34 sessions on Maintenance, Energy & Environment, Operations & Stations, Territory Management, Competition, and the like. Parallel Session speakers were selected by UIC and JR East from authors of papers submitted, with a total of 169 speakers from 28 countries around the world making presentations. The top five countries from which presenters hailed were France (31), Japan (20), Spain (18), China (17), and the USA (12). They introduced the latest efforts and achievements on issues in their

respective countries, raised questions, and engaged in productive discussions.

### Round Tables

Discussions by high-level railway personnel were held in Round Table 1 to sum up the first half of the congress (sessions 1 to 3) and Round Table 2 to sum up the second half of the congress (sessions 4 to 6). Round Table 1 reflected on the past half century of high-speed rail with themes such as technology and infrastructure strategies, governance of long-term projects, and ability to handle incidents that come up unexpectedly. Round Table 2 was a venue for discussions on themes such as impact of global environmental issues on intra-urban transport, station strategies for the future, technologies needed to increase the competitiveness of high-speed rail, and outlooks were



Presenters at Round Table 2

(JR East)

presented for the next half century of high-speed rail by means such as sharing issues that need to be handled in the future. JR East Vice Chairman Masaki Ogata closed Round Table 2 by stating that many innovations have fuelled the advance of high-speed rail and innovation must be continued to fulfil the important roles on high-speed rail in society and economy.

### Closing Ceremony

At the Closing Ceremony, representatives from the USA, Malaysia, and other countries aiming to construct their own high-speed railways took the podium to present their high-speed rail plans. It was also announced that the 10th UIC World Congress on High-speed rail will be held in Istanbul, and Ömer Yildiz, CEO of TCDD (Turkish State Railways), gave his greetings. In closing JR East President Tetsuro

Tomita called for future advancement of high-speed rail, saying he hoped the individual countries were able to gain valuable hints on railways through the congress and calling for a new start with partners from around the world.

### Technical Visits

Eight Technical Visits were prepared as shown in Fig. 4 for congress participants. They included a ride on the Hokuriku Shinkansen, which opened in March 2015, to experience the attraction of the newest shinkansen. In addition to shinkansen rides, participants could gain an overall feel for the attraction and abilities of shinkansen through tours of shinkansen-related facilities such as rolling stock maintenance facilities, training centres, and R&D centres.



Figure 4 Technical Visits

**1. Rolling stock maintenance to support safe and reliable shinkansen service and railways' responsibility as social infrastructure**

Direction	Sendai
Contents	Boarding on Tohoku Shinkansen (320 km/h, fastest in Japan), Shinkansen General Rolling Stock Center, Recovery efforts from damage of the 2011 Great East Japan Earthquake.

**2. Expanding shinkansen as backbone of society and economy in Japan**

Direction	Kanazawa
Contents	Boarding on Hokuriku Shinkansen (Latest shinkansen opened in March 2015), Hakusan Rolling Stock Center of JR West, Sightseeing tour in Kanazawa city.

**3. For further enjoyable and convenient shinkansen**

Direction	Yamagata
Contents	Boarding on Yamagata Shinkansen running directly from high speed lines to conventional lines, Boarding on 'Toreiyu', the special Shinkansen train with foot spa, Sightseeing tour in Yamagata City.

**4. Revitalizing communities by further enjoyable railways**

Direction	Morioka
Contents	Boarding on Tohoku Shinkansen (320 km/h, fastest in Japan), Looking on special train <i>Ginga</i> , the steam locomotive designed to provide the travel of imagination through culture, nature and landscape of Tohoku area, sightseeing in Morioka city.

**5. Unlimited business potential of railways**

Direction	Echigo-Yuzawa
Contents	Boarding on Joetsu Shinkansen Gala Yuzawa, the skiing resort with direct access to shinkansen.

**6. Nurturing human resources capable of providing services customers can use reliably and comfortably**

Direction	Shin-Shirakawa
Contents	Boarding on Tohoku Shinkansen (320 km/h, fastest in Japan), JR East General Education Center

**7. From history to innovation**

Direction	Omiya
Contents	Short ride on shinkansen and visit to The Railway Museum, and JR East Research & Development Center of JR East Group

**8. Rolling stock maintenance to support safe and reliable urban railway service**

Direction	Oimachi
Contents	Tokyo General Rolling Stock Center





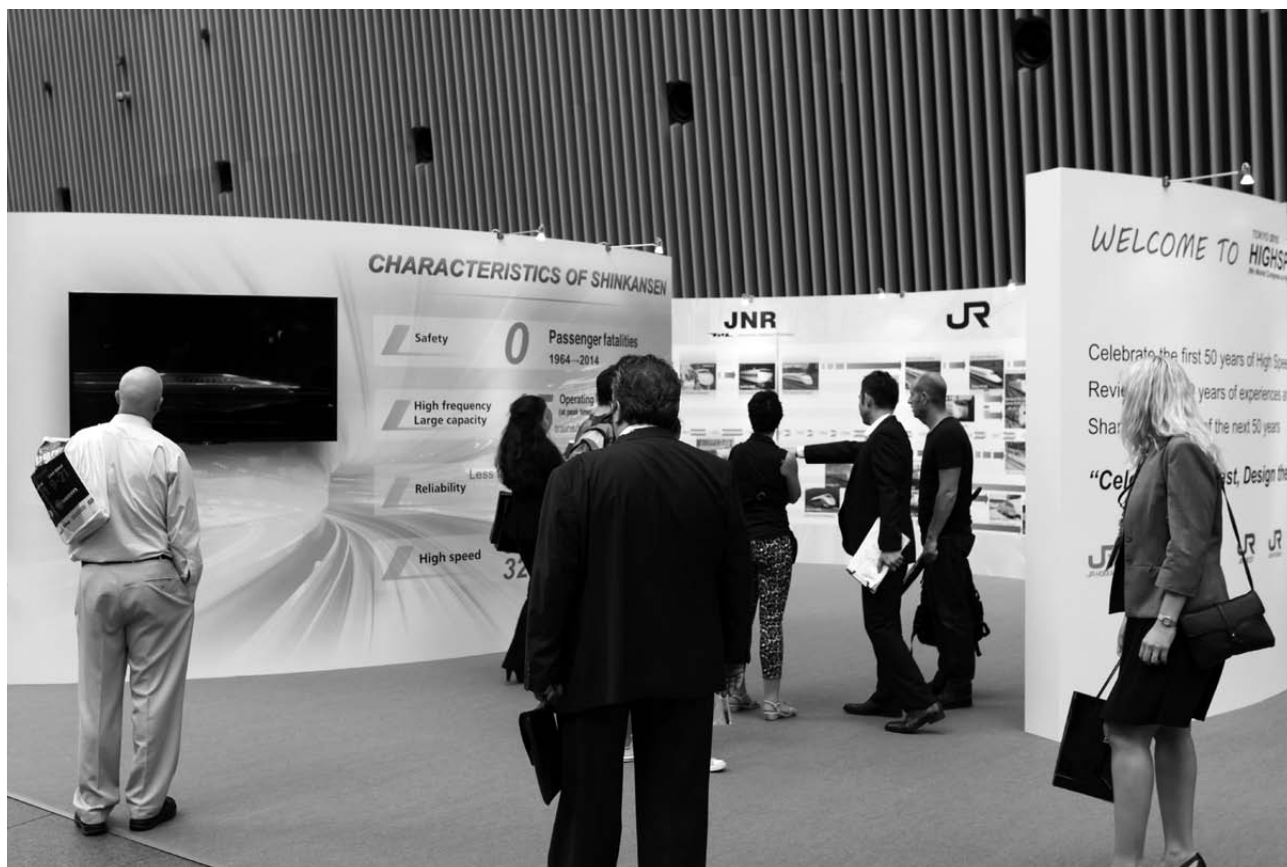
Cutting Exhibition Hall opening ribbon

(JR East)



JR East Exhibition Hall booth with Series E5 shinkansen simulator

(JR East)



JR Joint Booth in Exhibition Hall

(JR East)

## Exhibition

40 railway related organizations such as manufacturers, operators, and international organizations exhibited their latest products and services. A total of 2200 people visited the exhibition over 3 days.

A Series E5 shinkansen simulator was set up at the JR East booth in the Exhibition Hall where many visitors experienced driving and got a look at the latest simulator equipment. There was also a joint JR booth near the reception, where JR Hokkaido, JR Central, JR West, JR Kyushu, the Railway Technical Research Institute and JR East introduced history and features of shinkansen for all of Japan. The JR companies welcomed visitors and fostered their understanding of Japan's shinkansen.

## Conclusion

Almost every venue of the 9th UIC World Congress on High-speed rail was filled to capacity from the Opening Ceremony on the first day to the Closing Ceremony on the final day, and many people participated in Technical Visits and the Exhibition. The participants from around the world had favourable opinions of the congress as a whole.

These opinions were the result of efforts put into planning and operation, theme selection, and use of tablets. But most of all, it was thanks to the speakers, presenters, exhibiting companies and organizations, participants, and the many companies and organizations cooperating with the congress. JR East would like to take this opportunity to thank them all their support.

If the congress participants could gain information and contacts contributing to the future advancement of high-speed rail, it would complete our dreams as an organizer. It is our sincere hope that high-speed rail is chosen by even more passengers around the world for 50 years into the future and that it contributes to an even more affluent society and economy. ■

Personnel title/position as of July 2015.

## Acknowledgement

This article was contributed by JR East International Department.