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## **UIC discusses the issues of Internet of Things and Big Data at workshop in Beijing**

(Paris, 20 June 2017) The International Union of Railways (UIC) and China Railway Corporation (CR) jointly hosted a workshop on 19 June in Beijing dedicated to two key subjects: Internet of Things (IoT) and Big Data.

During the opening session, Mr HE, Chief Engineer at China Railway Corporation, spoke about technologies, construction, constant knowledge and high-speed railways.

He underlined the fact that the quality of service at China Railways is improving and that it is a continuity of communication, operation and maintenance.

Mr HE thanked CR and UIC for organising this workshop and hoped that it would be helpful and productive.

Mr Jean-Pierre Loubinoux, Director General of UIC, mentioned that this workshop was one of several initiatives organised by the UIC digital platform.

He said: *"The Motto "Share, Open, and Connect will be our guidelines for this workshop"*. He underlined the fact that digital is an open source and open data to innovative solutions.

He added that we live in a constant, rapid evolution, and digitalisation can be considered to be the third industrial revolution, and it is changing the railway system.

The world is predicted to have 50 billion IoT devices within the next three years – it will be one major driver of predictive management.

Big data can make the difference between prevention and prediction.

To conclude, he underlined that digital technology is not only data and machines but it is needed to remain human.

As a keynote speaker, Mr HE mentioned that China Railway has the world's largest ticketing system with 12 million tickets sold daily. Moreover, China's high-speed rail has a punctuality rate of 98%.

Several projects are currently being developed:

- Freight service, online business marketing online
- Facilities and equipment and track maintenance,
- Signalling and power supply equipment
- Safety protection systems...are among some of the major trends of CR's digital strategy

During the first session dedicated to IoT, Mr Krekounian from SNCF Gare & Connexions, Mr Semion from RZD and Mr Ozerov from JSC NIIAS Russia spoke respectively about real-time monitoring, early detection failure, easy access to information, detection of malfunctions, increased security, guide robots, applying IoT in the railways, and safety and security concepts. Mr Gradinariu from UIC explained that UIC has developed several POCs for the benefit of its members that will at a later stage be rolled out into IRS.

During the second session dedicated to Big Data, Mr Huang, Professor at Beijing's Jiatong University, spoke about the eco-design of the data management in the railways, and that data governance is the first task of data management.

Mr Charkin, Chief Information Officer at RZD underlined the main achievements and projects of RZD in big data management, in which all sectors of the railway are impacted.

Mr Gradinariu from UIC said that asset management needs to be cost effective and rationalised. This can be achieved with a big data approach.

Mr Jeanmaire, SNCF, spoke about the complexity and the capacity to organise between each contributor, the need to implant digital continuity. The rail system is complex, so the first issue to be resolved is semantic. Two initiatives have been launched: IFC rail and Rail ML (RailTopoModel).

Mr Bedel, representing the UIC Digital platform, reported on the activities to come:

- Call for the global project, digital impact on business
- Official launch of second digital awards at the next UIC Generally Assembly in Istanbul

- Second edition of Digital Days in Rome dedicated to asset digitalisation, and cybersecurity
- 6 December 2017, third digital conference, Paris, with celebration of second edition of awards
- Third edition of progress paper

To conclude the workshop:

Mr Charkin, Chairman of the UIC Digital Platform said that there are common issues and questions: analysing, integrating the ecosystem, security, people development, the platform is the best place to dedicate our time and effort.

Mr Loubinoux concluded the day by reminding the audience of the new paradigm: we cannot live and work alone anymore, we are full part of the new ecosystem.

The Digital Platform is less than two years old and has showed that it is necessary.

Mobility is the challenge we will have to face during the 21st century – rail is the answer and digital technology is one of the major levers.

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