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The International Union of Railways UIC is definitively on the “digital track”, one year after having launched the UIC Worldwide Digital Platform

UIC’s 2nd Digital Conference held in St Petersburg focused on Security, Cyber-Security, Productivity and Services; the 1st UIC Digital Awards; a regularly enhanced Digital Progress Paper and a growing ecosystem

(Paris, 7 December 2016) The International Union of Railways, UIC, launched UIC Digital Platform in November 2015 which brought together representatives of the digital field among UIC Members at global level. This platform aims to share creative ideas, to ensure harmonisation, to support new developments and to boost innovation. It has identified three main areas of potential interest: security – and in particular the crucial issue of cyber security in which UIC is very involved – as well as services and productivity.

A worldwide Digital Conference organised in St Petersburg

In the framework of the UIC statutory meetings, UIC and Russian Railways (RZD) organised a digital conference on the theme “More trains, More connections, Better services for our customers” on 30 November in St Petersburg. This conference follows a series of events organised throughout 2016 dedicated to the digital issue.

This means that in only one year, by being particularly agile in leading projects, UIC gave the opportunity to its Members, partners, to startups and Technical Opinion leaders to meet, to share, and even to start to co-build the future of mobility together.

- A UIC event was organised in Washington in June on Security; Management of Security, one of the first historical fundamental values of the railway system, is crucial. Otherwise the Transport chain is weakened. Safety and Security are closely related and Safety Professionals use technology more and more to address human factors safety issues. Understanding the man-machine interface between the human and the technology is very important for Safety and Security. When the man-machine interface is not fully understood, human factor safety issues are sometimes traded for security vulnerabilities.

- In October UIC also organised a dedicated workshop on Passenger and Freight in Paris; the intersection of digital technology and railways can be seen as an opportunity to improve the service and attractiveness of railways. ICT is already part of the Railways' core functions: from waybilling to accounting and train control systems. Growing uses in passenger services and logistics make railway services more attractive and competitive.
- For early 2017, UIC will also organise a Conference on IoT input in Services and Infrastructure & Big Data next June in Beijing. Because Key Trends are here today – IOT and mobile apps are areas of development in which railway organisations will need to “play a role”. Because the revolution underway in Machine to Machine communications will have profound implications for all sectors, including the rail industry. Sensors, devices, systems and enterprise applications must work collaboratively, interacting with each other, and with the supply chain, regulators and customers in ways that produce lower CAPEX and OPEX project costs, improved customer experience, and more efficient running of the network.

Mr Evgeny CHARKIN (IT Director of the JSC “Russian Railways”), who became Co-Chairman of the UIC Digital Platform during the UIC General Assembly on 1 December, and Mr Jean-Pierre LOUBINOX, Director General of UIC, introduced the conference.

Mr CHARKIN said: *“Regarding big data and IoT, we need to share knowledge, we need to benchmark. We also need standards as we talked about global infrastructure. And as shown today, we have started to build our eco-system together. Presentations given by start-ups were bright and had great potential. We have to continue to build this eco-system to face further digital challenges”*. He added: *“The UIC Digital Conference is the right place to talk about innovative, digital technologies. And it's a good place to try such technologies – our new application allows participants to put all conference documents on their smartphones, ask questions to speakers, write notes and avoid using any paper during the conference.”*

Mr LOUBINOX said: *“We are living today in the Digital Era. Today, digital is everywhere. Transport modes and railways as the backbone must take advantage of this new opening. This is not an option...this is imperative. The role of UIC is to provide input, to provide the development framework of a Digital Hub; this role is not to develop projects for itself. Our motto is “Share-open-connect”; open up the relationship with incubators, universities, start-ups. We can all take benefit from this cooperation (not competition!). Share vision, best practices, data. Connect to each others, to others. That is the sense and philosophy of our 1st UIC Digital Awards! The next steps will be to go further with, among others, the development of several Proof of Concepts and then possible IRS. All these developments are included in the UIC Digital Progress paper available online on the UIC website”*.

Around 10 presentations were given during this conference, highlighting different aspects around three main themes:

- “More trains/ freights/ passengers”
- “Better connectivity”
- “More services to clients”

This conference gave participants from all continents and from the railways as well as start-ups the opportunity to share the latest information on these themes and hold lively discussions.

On the other hand, taking into account the development of a data-driven economy and how Big data can make the difference for Railways, UIC will organise a conference on Big Data and IoT in Beijing in June 2017. Indeed digital is nothing without Data, and data is the key, its Collection, its Connection, as well as its Control and Correction, to keep man over the machine, and not vice versa.

1st UIC Digital Awards

In 2016, UIC decided to launch its first UIC DIGITAL AWARDS. Together with its Members, railway companies, and through establishing ties with digital stakeholders, UIC wanted to seek to recognise the sharing of knowledge between railway companies and start-ups and to give them the opportunity to shape the future of mobility. These Awards, which will be continued in the future, open new perspectives to the railway sector and to future mobility due to the innovative and creative nature of start-up companies. Hence, the slogan of this first edition was “Start-ups! Together let’s shape the future of Mobility. UIC is your smart partner, Join the Ecosystem.”

This 1st edition was a success by receiving around 25 projects coming from start-ups based on the 5 continents.

During the UIC-RZD Digital conference, the three winners of this first edition had the opportunity to present their projects to railway CEOs in the categories Productivity (the winner was start-up Datadvance, from Russia), Services (the winner was start-up Glowee from France), Safety (the winner was start-up Borna, from Iran).

More details on the projects received at UIC in the context of the 1st UIC digital Awards are available here: www.uic.org/digital

In the near future UIC will set up dynamic mapping of the start-up ecosystem and will catalyse some great success stories in this field.

UIC Digital Progress Paper

All these initiatives are catalysed in a common thread of UIC’s actions: the document titled “UIC Progress Paper”, enriched by meetings, by iterations, by humble but pragmatic approaches, based on the core business of UIC: the technical expertise.

Several prototypes known as Proof of Concepts have already been set up and concrete answers to concrete questions are already coming, not by themselves but the combined action of a chain of different actors, and coming not only from the Transport world. That’s a powerful added-value. These “POC” for example currently deal with the detection of shunting defects on track circuits. These prototypes, presented to our members, will be the basis for new IRSs (International Railway Solutions) which will then be passed on to industry.

UIC is a technical platform, at the service of its members around the world, and stays very attached to pragmatic solutions bringing added value to the Railway sector and industry.

Jean-Pierre LOUBINOUX said: *“If we agree that transport is the mobility of goods and people and is therefore the key to social economic growth; if we share the opinion that rail is the backbone of a new optimised transport modal mix, then the question is not if or when we survive this third digital revolution, but how fast we catch up with it and become a vector and driver of it, for the benefit of all, through our modest contribution...”*.

Please visit the dedicated page at: www.uic.org/digital

The projects of the 1st UIC Digital Awards winners are available here:

http://uic.org/IMG/pdf/digital_awards_winners.pdf

The UIC Digital Progress Paper is available here:

http://uic.org/IMG/pdf/progress_paperv2_page_par_page.pdf

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