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SAFETY   LEVEL CROSSINGS

Reporting

### Successful 9th edition of ILCAD, the International Level Crossing Awareness Day Conference on “How to improve safety at and around level crossings” June 2, 2017, Montréal, Québec, Canada

The 9th edition of the International Level Crossing Awareness Day ILCAD was a success: more than 40 countries participated worldwide and messages of prevention were disseminated around the world all day on 2 June.

On this occasion, the same day, a conference on “How to improve safety at and around level crossings” was jointly organised in Montreal by UIC and the Railway Association of Canada (RAC).

Michael Bourque, President & Chief Executive Officer, Railway Association of Canada (RAC) said: “I said this before, but it bears repeating: nothing is more important to railways than safety. Canada’s railway industry believes that rail safety is a shared responsibility. Crossing incidents affect everyone: train crews and first responders, their families, communities and more.” He continued by adding that “Investments on infrastructure will bring more connectivity-productivity-safety. Crossing and proximity issues are the top opportunity areas for rail-related public safety improvements. Canada’s railways have invested more than \$24 billion in infrastructure since 1999 to maintain a safe and efficient network. Our industry’s sustainability depends on being able to grow safely and in harmony with the communities that we go through”.

Yves Desjardins-Siciliano, President and Chief Executive Officer VIA Rail Canada, Chairman of UIC North America Region (NARA) highlighted: “Nothing is more important to us than ensuring that our passengers arrive safely at their destination and that all our VIA Rail colleagues safely return home to their families and loved ones at the end of the day. We are always striving to improve in this area. In 2016, VIA Rail invested 71.9 million dollars in safety and efficiency, including capital investments in the fleet, equipment and major infrastructure projects. We have continued to embed our safety culture through ongoing investments in safety training and on-the-job peer review and rules compliance observations. Hence, last year, we reported a 42 % reduction in the number of train incidents compared to 2015 as a result of our strengthened safety culture. [...] We must continue our engagement with communities with the primary focus on increasing safety awareness and educating the public on the importance of prevention. I salute everyone’s accomplishments and invite us all to continue to come up with other innovating solutions that will enhance public awareness in rail safety and help us get to our ultimate goal of zero incidents”.

Renato Mazzoncini, Chairman of UIC, CEO of Italian Railways (FS), who was also in Montreal to attend the Regional Assembly of North America Members the day before, underlined: “The DNA of the UIC, since its origins: to make the transport offer more reliable, to make it more and more “seamless” thanks in particular to interoperability, while bringing all its technical expertise in order to globally improve advantages of this mode of transport, connected to others. This includes the smart management of the interfaces between different modes of transport, and all the work that has been going on for years with the road sector on crossings.

Jean-Pierre Loubinoux, Director General of UIC mentioned that “The rail community that I represent as the UIC Director General is obviously proud to be the driving force behind the creation of this International campaign on Level Crossings, ILCAD. Thanks to its network of experts and its spirit of cooperation, UIC’s mission is also to be concretely at the service of lives. Lives saved thanks to this kind of awareness campaign. Human factors are the main cause of road collisions. This year, the theme of the awareness campaign concerns the possible negative effects of distraction. Motorists, bicycle drivers, cyclists and pedestrians use their smartphones, GPS, headphones, etc. often intensively and underestimate the dangers of using them when driving, walking, where all their



A level crossing in Montreal  
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A level crossing in Montreal  
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Speakers at ILCAD 2017  
(IMG/jpg/16\_speakers\_at\_ilcad\_2017.jpg)

attention should be required. The message of the ILCAD campaign this year is: "Make it safer together!" And it is addressed to everyone, even though special attention is therefore focused on young people this year. Within UIC, we have been involved in these issues in a global way and at various levels for many years. UIC is proud to have initiated the creation of a group of experts in 2014 on this topic of level crossings with the United Nations. Important work has also been carried out with the IRU on this theme (three flyers for truck drivers, buses, taxis available in 12 languages available on our websites). Finally, very recently, UIC was selected by the European Commission to coordinate the SAFER-LC (Level Crossings) project, which emphasises the exchange of information and data between the rail and road systems so that everyone can manage the disturbances or difficulties coming from the other. In France, the road killed 3,500 people in 2016, 25,500 in the EU in 2016, 31 people died in France in 2016 (according to SNCF) / 296 killed in the EU in 2015 at grade crossings. I personally hope that the figures I have just quoted will only improve with time. Thanks to our coordinated actions, through exchanges".

After the opening session, a first thematic session was dedicated to the topic "Behaviour, Distraction, Enforcement, Regulations".

Rob Johnston, Transportation Safety Board of Canada (TSB) gave a presentation on fatal distraction: the OC Transport-VIA RAIL collision. He reported on the analysis of the collision that happened on 18 September 2013 between a VIA Rail Passenger Train & an OC Transpo Double-Decker Bus. With dramatic consequences: derailment of the train, several fatalities on the bus. The cause main cause is distraction (visual...) of the bus driver and created great damages on the bus, and the locomotive. It led to recommendations.

Jocelyn Latulippe, Deputy Chief, CN Police Service, Canada, reported on CN Police mandates, competences and strategies. They organise Prevention and education sessions in schools surrounding level crossings and tracks at least every year and awareness actions to communities. They also conduct traffic enforcement at and around level crossings. They have partnerships with the local police and authorities. Round tables with police agents. Each incident is reported by the local police and give recommendations. Traffic enforcement on the road and on the tracks. 5000 tickets were given in a year by CN police to trespassers, they also explained that it is not only dangerous but also illegal.

A second session was dealing with "Trespassing and Suicide prevention". Mr. Lauby, FRA's Chief Safety Officer & Associate Administrator for Railroad Safety took the floor on "Trespassing – the leading cause of rail-related fatalities in the US". He reported on trespassing on the railway tracks in the USA that causes not only fatalities but also severe injuries. The number is increasing. There have been 450 killed persons by trespassing each year between 2012 and 2016. 25% of all fatalities (by trespassing) are suicides. The trespassing cases are mainly caused by photographs on tracks, walkers, hikers, people who use of their IPHONE and earphones. The number one US state for worst figures for trespassing is in California (many homeless cases). FRA is trying to focus actions on research, technology (detection systems, anti-trespass guards), collaboration, enforcement and community outreach making prevention, they organise trespass prevention workshops every two years, they collaborate in international projects (GRASP). They put suicide signage, use many other countermeasures. There is a mapping of suicide and trespassing incidents and analysis.

Kurt Topel, Chairman, Chicagoland Rail Safety Team, USA presented a report on "Rail trespassing and suicide prevention". He reported on suicides and trespassing in the USA but more from an advocate point of view. From 2012-2015 the US average annual railroad fatalities: 45% were trespassers, occupants in vehicles at LC 16%, pedestrians at LC 8%, suicides 26%.

The number of collisions and fatalities at LCs has been drastically reduced over the last decades but the trespassing cases have increased and he thinks they are underestimated. He informed on the causes of trespassing and suicides and some countermeasures:

He'd like to see more research, and more public funds, more detection. Allan Spence, Head of Corporate Passenger & Public Safety, Network Rail, spoke about "Influencing the public to make Britain's railway safer together". He presented first Network Rail and the LC safety situation on the UK network. They closed over 1000 LC, there are still 6300 LC (out of which three quarters are passive crossings), they have 100 dedicated LC Managers across the country, who make a risk assessment at each LC.

They had six deaths in 2016, one on a public road and the others on private crossings.

He reported on the users targeted in their campaigns: dog walkers, people being distracted, campaign "drinkaware" last year for people going out for a drink in bars close to level crossings with which they also targeted trespassers. They conducted a campaign on trespassing this year with the BTP: "Jack played on the tracks". He showed a video of a testimony of an ex-basket ball player Simon Munn, who trespassed and lost his leg.

He also reported on their actions related to suicide prevention. The won an award for the campaign "We listen" made at potential access points: railway stations and level crossings in cooperation with the Samaritans.

They have also trained 15000 people in the company to detect suicide behaviours and react accordingly: they saw a 18% reduction within 2 years. An app was developed SAVE A LIFE.

A third session during the morning made an Overview of level crossing safety in Europe and beyond.

Isabelle Fonverne, Senior Advisor Safety, UIC presented "Safer-LC, UIC Coordinated EU project (within Horizon 2020): Safer Level Crossings by integrating and optimizing road-rail infrastructure management and design". She informed on SAFER-LC project, for which UIC has been selected by the EU in January 2017, kick off meeting in May 2017, workshop 1 on the requirements of final users to take place at UIC HQ on 28 September 2017: Atelier and a mid-term conference in Madrid in October 2018. Website: [www.SAFER-LC.eu](http://www.SAFER-LC.eu) (<http://www.SAFER-LC.eu>); for more info contact: [Info@safer-lc.eu](mailto:Info@safer-lc.eu) She also informed on ILCAD 2017 and the numerous participating countries and invited participants to visit [www.ilcad.org](http://www.ilcad.org) (<http://www.ilcad.org>)



From left to right: Gérald Gauthier, VP Communications, RAC, Michael Bourque, President & Chief Executive Officer, Railway Association of Canada (RAC) (IMG/jpg/img\_0207.jpg)



Yves Desjardins-Siciliano, President and Chief Executive Officer VIA Rail Canada, Chairman of UIC North America Region (IMG/jpg/dbua2lquwaa6r00.jpg)



Renato Mazzoncini, Chairman of UIC, CEO of Italian Railways (FS) (IMG/jpg/img\_0213.jpg)



Jean-Pierre Loubinoux, UIC Director General (IMG/jpg/dbudb59w0aahayr.jpg)



(IMG/jpg/dbv1x5rwwaa6d3c.jpg)

During the afternoon session, "Engineering, innovative solutions" were discussed.

Mr. Neil Ternowetsky, Product Manager and CTO, TRAINFO, Canada took the floor on "Improving road safety and public health with real time and predictive train crossing information". To public road authorities and road users, there is very little transparency in the movement of trains over level crossings. The daily distributions, and crossing durations are typically left as a best guess that focus solely on through train movements. These best guesses are developed with little consideration into shunting and switching movements at crossings. TRAINFO provides this level of information to road authorities and road users. This information provides the basis of a range of applications; everything preventing delays at rail crossing by predicting when the crossing will be blocked, to in depth crossing safety studies. This presentation focuses on the work TRAINFO is doing with Canada's National Research Council to prepare for connected and autonomous vehicle interactions at level crossings and with Transportation Canada to study pedestrian movement activities at crossings.

Mrs. Parinaz Bazeghi Kisomi (MSc Student) and Dr. Morteza Bagheri, School of railways, University of Science and Technology (JUST), Iran presented on "Use of smart watches to reduce train-pedestrian collisions".

Train-pedestrian collisions and accidents have been shown to be the leading cause of fatality in rail accidents around the world. About every three hours, a person or a vehicle is hit by a train in the US and trespassing accident is an important challenge of railways worldwide. Beside technical, physical and behavioral measures to reduce accident occurrence, new technologies, innovative solutions and digital revolution can play an important role to prevent trespass collisions. The objective of this presentation is to introduce an idea to detect people adjacent to rail track by GPS sensors of smart watches and trains to inform person about coming train.

Smart vehicle, smart user and smart infrastructure will lead us to decrease number of pedestrian-train collision and to employ intelligent transportation systems to improve safety at level crossings and make them smarter. Smart phones and smart watches are increasingly used by people and they can be used to make them aware of danger of being hit and help to reduce collisions, death and injuries.

Mr. Enrico Vignozzi, Managing Director, Progress Rail, Italy presented "State of the art of the radar technology (76GHz) applied to detection of vehicles and pedestrians at level crossings". In the railroad sector the crossings where trains, cars and trucks are using the same infrastructure, create risks for any safe railroad operation. Progress Rail has developed its first generation of Obstacle Detection Systems for level crossings (PAI-PL) based on a CENELEC SIL 4 Design, about 15 years ago. These systems were based on a 10GHz Microwave Radar and they have been used as a Fully Automated Safe Control of the level crossing area before the transit of the train. Those systems have avoided several accidents and they have saved many lives. Recently, given the rising awareness of the risks associated to level crossings' operations and the request of railways to increase safety at their level crossings, Progress Rail has developed a new generation system for such an application called "MIRA" (Multi Inspection Radar Application). MIRA includes the best from Progress Rail previous generation systems but it also includes new enhancements in terms of Availability and Maintainability thanks to its new state of the art 76GHz Microwave Radar technology.

Mrs. Virginie Taillandier, Level Crossing Safety Manager, SNCF, France focused on "Anti collision Tech4rail project". SNCF has recently launched a technological upgrade programme for example through the Tech4rail project. 8 projects were endorsed including a level crossing safety project aiming at preventing collisions at level crossings. Within the last few years we have been experiencing collisions between trains and heavy vehicles which could have been dramatic. SNCF has identified various safety barriers to prevent those risks: Protection measures through obstacle detectors and Prevention measures through the identification and improvement of the road profiles of certain level crossings. This project is included in a more global policy towards an intelligent level crossing connected to autonomous road vehicles and trains of the future.

A last session was dedicated to Education/Awareness/Community outreach.

Tamo Vahemets, CEO, Operation Lifesaver Estonia took the floor on "LC safety awareness activities in Estonia". He informed on the origins of ILCAD, how the logo was created on a collaborative basis by OLE for UIC, how it was amended when the campaign that started European became global. He then presented OLE activities.

Danijela Baric, Head of Chair for Road Transport Technology, University of Zagreb, Faculty of Transport and Traffic Sciences made a presentation on "Level crossing safety campaign in Croatia". She gave an overview of activities carried out within the project "Implementation of measures to increase the safety of the most vulnerable road users at level crossings." The project is part of the National Road Traffic Safety Program of the Republic of Croatia 2011-2020.

Level Crossing Safety Campaign in Croatia is a joint work of the Faculty of Transport and Traffic Sciences and HZ Infrastructure (Croatian Railways).

She also reminded the audience that they participate in ILCAD. She showed which activities they have carried out in Croatia: Distribution of safety flyers (including UIC/IRU flyers) as well as a Clip made by 2 students of 16-17 year-olds in a high school: testimony of a sportsman (participating in the Paralympic games) who lost his leg at the age of 14, the video is called "Railway tracks are not a playground".

Isabelle Fonverne on behalf of PKP presented PKP activities to reach young people in the context of safe behavior on rail-road crossings and gave a summary of the 12th edition of the "Safe rail-road level crossing..." campaign.

PKP promote socially desirable attitudes, raise awareness of threats posed by inappropriate behavior whilst going through the railway area. We strive to reduce the number of accidents at level and railway crossings in Poland. Thus, it is important that our campaign message reaches all target groups and the entire cross-section of society. Evaluation studies carried out under the "Safe rail-road level crossing..." campaign have shown that we are the least recognizable among young people. In the age of mobile technology, the Internet and social media seem to be the best channel for reaching this specific target group.

Sarah Mayes, National Director (Interim), Operation Lifesaver Canada presented on "Look. Listen. Live. Re-Imagining Canada's Rail Safety Public – Awareness Program". She presented OL Canada and the activities carried out to improve safety at level crossings and also at and around tracks. She provided an overview of an innovative campaign, launched by Operation Lifesaver (OL) Canada in April 2017, which harnesses cutting-edge technology to promote rail safety to OL's target audience of 18 to 25-year-olds. She showed the video "Never game a train!" visit <http://looklistenlive.ca> (<http://looklistenlive.ca>)

They promoted their national campaign in the media. They made digital ads, social media and out-of-home ads.

She showed a video with Scott Sacanney's story published on internet; he lost an arm and a leg in November 2012 <http://www.operationlifesaver.ca/> (<http://www.operationlifesaver.ca/>)

She mentioned OL Rail safety week in the whole country:

Next steps: produce additional VR videos on winter sports, professional drivers, redesign their web platforms to support their new brand, etc.



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