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Safety performance data and benchmarking

Submitted by Community Safety Partnerships Ltd, UK, France, Ireland, the ERA and the UIC

This informal document submitted by the subgroup comprised of Community Safety Partnerships Ltd, UK, France, Ireland, the ERA and the UIC, provides an analysis of the GE.1 survey findings related to the safety performance of types of level crossings in UNECE member States, and proposes next steps.
What does the questionnaire reveal?

The UNECE expert group questionnaire generated 24 responses from 22 countries of which 14 were in the EU, two the EEA and six others. Where two responses from a country were submitted, the most comprehensive submission has been used in considering the data component of the questionnaire.

In so far as data collection is concerned:

- 12 countries say that they use the ERA/Eurostat level crossing typology. However, overall, 21 countries collect data by type of level crossing
- 13 countries record incidents as well as accidents
- 19 address private as well as public level crossings
- 13 collect national data in a way that allows accidents/incidents at individual level crossings to be considered
- 14 countries address suicide and suspected suicide within their data
- 17 countries report that they are able to normalize data
- 2 countries do not include data for pedestrians (India and Belarus)
- 7 countries record that they do not keep data in accordance with Eurostat requirements. Four countries who say that they do not could move to the Eurostat approach leaving three that do not who also say they could not (France, Georgia and India)

There is clearly a great deal of data being collected with varying approaches to the use of this data to reduce risk arising at level crossings. Equally, there is scope for the data to be used in a more consistent manner if common approaches to managing risk arising at level crossings are to be adopted.

Further action 1: UNECE countries that have not submitted their response to the questionnaire should be encouraged to submit their data to widen the basis of analysis

Is further data convergence appropriate?

The ERA / Eurostat requirements are the best multi-national foundation available for UNECE countries as the statistics collected by the International Union of Railways (UIC) do not have the cachet of being independent as is the case when data is collected by governments, albeit from railway sources in many cases.

However, the limitation of a single UNECE-wide approach is that there are many countries with substantial railway systems that are not participating in this work. To determine how further progress might be made to improve international benchmarking and reduce the harm arising on level crossings, a greater understanding of the data collected in these non-UNECE jurisdictions is needed.

Convergent approaches are best facilitated by engaging a broader range of countries during the development of the specification around which convergence is to be pursued.

However, as the ERA / Eurostat approach has already secured broad support, it should remain the vehicle around which further convergence should be pursued. Importantly, ERA / Eurostat should be seen as willing to take on-board good practice approaches identified as other non-EU jurisdictions engage to share their level crossing data.
Further action 2: Non UNECE jurisdictions should be encouraged to engage with the work of this expert group through their response to a second distribution of the questionnaire (see further action 4).

Analysing the safety performance of different types of level crossing

On the basis of the data submitted in response to the questionnaire and the analysis of data proposed to be captured by ERA to allow the adoption of common safety indicators of accidents by crossing type (as per the ERA / Eurostat groupings), there is a foundation from which benchmarking of safety performance by type of level crossing, albeit where non ERA / Eurostat approaches have been adopted there will possibly be a need for some qualification where there are elemental differences of any significance.

As a large-scale retrospective collection of source data by the UNECE expert group is at present not justified, careful consideration needs to be given to how the UNECE expert group might best initiate analysis by type of level crossing ahead of the EU adopting further common safety indicators to provide for analysis by type of level crossing.

As 21 of the 22 countries have indicated that they record data by type of level crossing, it may be possible that the requisite data can be provided from a single national source along with the definitions used at the national level for each type of level crossing, can be provided without creating an onerous reporting burden. Ideally, a minimum of five-years of relevant data by crossing type through to 2013 will be available for consideration.

As further non-UNECE jurisdictions respond to the questionnaire already developed, they should also be asked to contribute the data that will enable benchmarking of their level crossing safety performance against the data already analysed.

As there are many significant differences between countries, it is important to compare like with like. For example, it would be meaningless to compare the most developed nations with the least developed. Rather, greater utility will arise if the benchmarking is undertaken against to generate the norms for regional groupings so that a country can first see how it performs against others in a region. Similarly, it would be appropriate to compare jurisdictions inter-regionally where they are at a similar level of economic development. For example, the EU could be broken down into Eastern and Western groupings.

Further action 3: The UNECE expert group’s safety data sub-group should analyse the most suitable indicators of safety performance at level crossings taking account of existing approaches and data available in UNECE countries.

Further action 4: To enable the initial benchmarking, the UNECE expert group’s sub-group responsible for data should agree the scope of the data to be solicited within a revised questionnaire from non-ERA / Eurostat reporting jurisdictions and the timescale for its return and the method of analysis to be employed.

Further action 5: Consideration should be given to the basis on which benchmark regional groupings are used and the criteria to be used when creating broader groupings for comparison inter-regionally.