

REVIEW OF DATA QUALITY AND APPROACH OF THE AGENCY  
ANNUAL REPORT ON SAFETY

# Assistance to the Agency in Organising Related Workshops for Stakeholders

European Railway Agency

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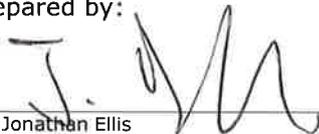
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## 1 EXECUTIVE SUMMARY

This report provides the summary of discussions and the conclusions of each agenda item for the workshops on Suicide on Railway Premises and Common Occurrence Reporting, held at the European Railway Agency (the Agency) premises in Valenciennes on 28<sup>th</sup> and 29<sup>th</sup> October 2015. It should be noted that there was a previous workshop on Suicide on Railway Premises on 5th February 2015. This was included in the Task 2 report but is reproduced here in Appendix A for completeness.

The October workshops provided feedback on the results and conclusions from the "Review of Data Quality and approach of the Agency annual report on Safety". The workshops allowed:

1. Stakeholders to review the outputs, conclusions and recommendations of the study,
2. Stakeholders to provide feedback on these outputs, conclusions and recommendations,
3. Stakeholders to present and discuss recent developments in these topics within their Member States and organisations,
4. The final reports to be updated to reflect stakeholder feedback.

The workshops provided full support for the outputs, conclusions and recommendations of the study and no updates of the reports were necessary.

## 2 WORKSHOP ON SUICIDE ON RAILWAY PREMISES

The following provides a summary of discussions against each agenda item.

### 2.1 Welcome and Introduction

Jayne Yeo from the Agency welcomed all to the workshop and provided an overview of the agenda for the day.

### 2.2 Study Objectives and other Expectations

Jayne Yeo from the Agency introduced the elements of the study "Review of Data Quality and approach of the Agency annual report on Safety" relevant to suicide on railway premises.

### 2.3 Size of the Problem: Latest Suicide Statistics in the EU

Vojtech Eksler of the Agency presented an overview of the latest (2014) statistics for suicide on railway premises as reported as Common Safety Indicators.

### 2.4 Study Results – Suicide Reporting in Member States

Dr Jonathan Ellis of DNV GL presented the results of the survey of National Safety Authorities into Suicide Reporting in the Member States. This indicated a complex pattern of reporting as compared to the reporting of other railway occurrences. At the level of the individual victim the process is robust but at a system level it involved multiple agencies taking decisions and storing data in separate databases. Decision making was apparent but is not against publically available or visible criteria and the ultimate verdict on cause of death, whilst considered robust, can take an extended period of time to be delivered.

This is significant in terms of occurrence reporting in that the reporting requirements for the Common Safety Indicators (CSI) are annually, whilst the time frame for a verdict on the cause of death can take considerably longer than this. Member States are thus required to report against the CSI requirements before a formal decision on cause of death has been reached. This is considered a cause of the under and over reporting seen in the CSI statistics.

The presentation was welcomed by the workshop and no issues were raised.

### 2.5 Study Results – Normalisers and Under/Over Reporting

Dr Jonathan Ellis of DNV GL presented the study results on a suitable normaliser for the reporting of suicide on railway premises. Normalisers are considered important in permitting the comparison of statistics on suicide on railway premises both over time and between Member States. The normaliser has to account for both variation over time in the factors that are known to be linked to underlying suicide rates such as GDP growth and size of population and factors specific to the railway that may influence it being the chosen method for an individual contemplating taking their own life.

The recommended normaliser for addressing variation over time and wider (non-railway) factors that may affect suicide in a Member State was the underlying rate of suicide in that Member State. The recommended normaliser for the railway factors was the annual number of train km. To account for the fact that a levelling off of this was observed in the data i.e. a point is reached at which further train km represent a diminishing increase in suicide rate, the form  $\ln(\text{train km} + 1)$  is recommended. The overall recommended normaliser is thus the combination of both of these factors.

As discussed in section 2.4 there are two primary databases for reporting suicide on railway premises. Through comparison of these an assessment of potential under and over reporting was assessed. This



was determined to be significant for a few Member States and to be a consequence of the differing timelines for reporting. It was recommended that the reporting requirements for the reporting of CSI data on suicide on railway premises be aligned with that for the formal verdict on the cause of death and that the differing definitions used in reporting be harmonised.

The presentation was welcomed by the workshop and no issues were raised.

## **2.6 IM Experience of Preventing Suicide**

Bart Hoogcarspel of Prorail presented an overview of the suicide on railway premises prevention programme in the Netherlands and how this had evolved over time. A multi-agency approach was being adopted including with the media. This extended to trying to portray the railway in an unattractive light for those contemplating suicide on railway premises.

## **2.7 Train Drivers' Experience of Suicide on Railway Premises**

Michael Bublies and Michael Dittmann of Gewerkschaft Deutscher Lokomotivführer, representing ALE, presented the work of the ALE working group on coping with stressful events. The impact of a suicide on railway premises on a train driver was demonstrated to be an extremely stressful event. The role of the "confidant" in helping the train driver recover was discussed. The confidant is a fellow train driver who attends the scene to help the traumatized train driver cope with the direct consequences of the event and make sure they are either taken to a hospital (if injured) or home in a safe manner and that they have appropriate support when they do arrive home.

## **2.8 Railway Suicide Prevention – Lessons Learnt**

Ian Stevens of Network Rail presented Network Rail's suicide prevention programme and the lessons learnt by the organization. The two main points were the need to demonstrate the savings made to the industry from suicide prevention as a means of justifying the suicide prevention programme and the need for a joined up approach with stakeholders rather than one organisation acting in isolation.

## **2.9 Study Results – Economic Impact of Suicide**

Dr Jonathan Ellis of DNV GL presented an assessment of the economic costs of suicide based on the CSI statistics for 2013. The total estimated cost was €6 billion with railway specific costs estimated at €270 million across the EU, Norway and Switzerland in 2013.

The presentation was welcomed by the workshop and no issues were raised.

## **2.10 RU Approach and Experience of Suicide Prevention**

Eckhard Huwald of Deutsche Bahn presented a first-hand account of the delay consequences of suicide on railway premises. He then discussed the impact of copycat acts following high profile suicides events on railway premises.

## **2.11 Recommendations for the Study**

Dr Jonathan Ellis of DNV GL presented the overall recommendations from the study. These constituted improved reporting by aligning CSI reporting with decision making within the Member States so that consistent and accurate data would be provided. Further, that an opportunity existed for a multi-agency approach to tackle the issue justified by the savings in the economic cost identified in section 2.9.

The presentation was welcomed by the workshop and no issues were raised.



## 2.12 Meeting Summary and Next Steps

Jayne Yeo of the Agency summarised the workshop and thanked all for attending. The Agency does not intend further work in this area, but encouraged others to act.

## **3 WORKSHOP ON OCCURRENCE REPORTING IN RAILWAYS**

The following provides a summary of discussions against each agenda item.

### **3.1 Welcome and Introduction**

Chris Carr of the Agency welcomed all to the workshop. Dr. Edward Smith of DNV GL, the moderator, then echoed this and provided an overview of the agenda for the day.

### **3.2 Study Objectives and its Background**

Vojtech Eksler of the Agency introduced the elements of the study "Review of Data Quality and approach of the Agency annual report on Safety" relevant to occurrence reporting in railways.

### **3.3 Occurrence Reporting in Member States (study results)**

Dr. Jonathan Ellis of DNV GL presented an overview of the study results on railway occurrence reporting in the EU, Norway and Switzerland. The primary purpose in a majority of Member States is to collect data primarily to meet regulatory obligations. A significant opportunity exists to learn more from the data that is collected and a number of Member States are currently engaged in this.

The presentation was welcomed by the workshop and no issues were raised.

### **3.4 Developments in OR in MSs (national experience and feedback)**

Stephen Queva, Rafal Wachnik and Kirsi Pajunen provided three presentations on the latest developments in railway occurrence reporting in France, Poland and Finland respectively. These demonstrated how these Member States were, as in section 3.3, seeking to extract more value from the data they collected in terms of railway occurrence data informing regulatory activity. This included additional trend monitoring and the highlighting of organisational learning (e.g. between RU and IM). The need to avoid duplication of effort in reporting systems and a reduction in the administrative burden was noted. If data is to be more widely shared it will need to be anonymised. The issue of ease of use was raised by Finland who noted that only a small fraction of fields from the aviation taxonomy is regularly used.

### **3.5 Benefits of common OR and Impact assessment (study results)**

Dr. Jonathan Ellis of DNV GL presented the benefits of occurrence reporting. Classification of Member States National Occurrence Reporting systems by maturity and correlation of this with safety performance as recorded in the CSIs demonstrated statistically significant improvements in safety through the adoption of a comprehensive occurrence reporting regime. The costs associated with occurrence reporting were assessed from a survey of infrastructure managers and railway undertakings. Together this demonstrated a positive impact for the mandatory adoption of a comprehensive occurrence reporting system at National or Member State level.

Further benefits were identified at an EU level through having Common Occurrence Reporting to a central EU body. When compared to the costs associated with this a positive impact was determined for the mandatory adoption of a Common Occurrence Reporting regime based upon a restricted set of consolidated occurrence reports being reported from the National Occurrence Reporting regimes to the EU level Common Occurrence Reporting regime.



The presentation was welcomed by the workshop and clarification sought, and received, that the majority of benefits from a mandatory occurrence reporting regime lay at the Member State level. The workshop noted the dis-benefits of simply duplicating reporting at both a national and an EU level.

### **3.6 Sharing occurrence information in Single European Railway Area (Experiences and suggestions from IMs and RUs)**

Giuseppe Acquaro, Bart Hoogcarspel and Enno Wiebe from RFI, Prorail and the Group of Representative Bodies respectively made presentations regarding their experience of sharing information. All were supportive of sharing information but did raise some points of detail that would need to be considered in any practical application of a mandatory occurrence reporting regime.

### **3.7 Occurrence reporting in 4<sup>th</sup> Railway Package Legislation**

Vojtech Eksler of the Agency presented an overview of the 4<sup>th</sup> Railway package legislation as it impacted or described occurrence reporting.

### **3.8 Recommendation for a common occurrence reporting (study results)**

Dr. Jonathan Ellis of DNV GL presented a recommendation for the mandatory Common Occurrence Reporting regime and its associated taxonomy. This was based on a review of occurrence reporting regimes in other sectors which indicated that key success factors for any occurrence reporting regime were to have a clear objective for reporting, ease of reporting and validation of data. In particular, without a clear objective there is a significant risk of an occurrence reporting regime becoming a “data graveyard” in which data is collected and never used. The taxonomy of any occurrence reporting regime will be driven by its objective(s).

Various possible objectives for a Common Occurrence Reporting regime were described. In the absence of any objective established in the 4<sup>th</sup> railway package legislation or currently at an EU level one based around better understanding of Potentially High Risk Train Accidents has been assumed for this study. These events are of sufficient rarity that collation of events at an EU level would be beneficial in understanding the risk and improved risk regulation. This led to a taxonomy based upon the existing CSI requirements but not restricted to significant accidents.

A broad outline of steps to implement this enhanced reporting was presented.

The presentation was welcomed by the workshop and no issues were raised.

### **3.9 The Agency’s Work**

Jennifer Ablitt of the Agency gave a short presentation on the Agency’s planned work in this area which extended to considerations of a risk model and the occurrence reporting regime. Details were to be developed further by the Agency.

### **3.10 Summary and Conclusions**

Dr. Edward Smith of DNV GL summarised the workshop. Chris Carr of the Agency provided additional summing up thanked everyone for attending and participating.

## APPENDIX A

# NOTES FROM THE 1ST WORKSHOP ON THE REPORTING OF SUICIDE ON RAILWAY PREMISES

### 5th February 2015

The workshop was opened by the Agency who welcomed all attendees. The workshop was placed in the context of suicides on railway premises representing broadly 70% of all railway fatalities and acknowledged the work of the Restrail project that further data and analysis of this data was needed to understand the issue and determine how to influence it.

The first presentation provided an introduction to the need for further data. The statistics held by the European Detailed Mortality Database for railway suicide and those held in ERADIS show evident differences in the classification of a fatality between suicide (intentional) and accidental death. Further there was variation in the number of accidental deaths, intentional deaths and undetermined deaths between roughly similar countries, even when differences in population were accounted for. It was unclear whether this represented differences in the reporting system used between the countries or inherent differences in the approaches to managing and reducing the number of fatalities. Hence, the desire by the agency for a study to explore the issue of suicide reporting in the EU, Norway and Switzerland. Accurate data is a first step in understanding the nature and extent of the problem.

The first step in the study to explore suicide reporting was a short survey which had been circulated by the Agency to the NSAs. This survey was presented with an encouragement to the NSA representatives present to please respond. Comments made by the workshop were that:

Other databases and reporting systems are held by the police and emergency services which often contain valuable information.

In one Member State 5% of fatalities are to non-nationals who are not recorded as they are not contained in the national registry of population.

It can often take up to a year for a fatality to be classified as a suicide or an accident. As data for ERADIS is collected annually this can result in a number of fatalities not being classified at the time of reporting and hence there is a need to revise the data at a later date.

Until such time as a final formal decision is made regarding accidental or intentional death then the databases of the IM, NSA, and NIB may all hold different data on the same event. It was suggested that a first step in reporting would be to treat accidental and intentional deaths as equivalent for safety reports in the first instance.

Presentations were then made on the Swedish, British and Lithuanian systems for suicide reporting in their respective countries. This highlighted the role of the police or prosecutor and the judiciary (coroner) in investigating and classifying a fatality as accidental or intentional and the timescale over which this occurred. This could take between 6 months and three years. In the UK the Ovenstone criteria were applied during this period to classify the fatality with some success as few classifications were subsequently changed as a result of a coroner's verdict.

The Ovenstone criteria are already recommended in the "IMPLEMENTATION GUIDANCE FOR CSIs, ANNEX 1 OF DIRECTIVE 2004/49/EC AS AMENDED BY DIRECTIVE 2009/149/EC". It was recommended that the use of these together with the data held by the national police and emergency services would form a suitable basis for a second survey of those organisations holding data.



The workshop finished with a consideration of the use of normalisers for suicide reporting and an initial assessment of the impact of suicide on railway premises at an EU level.

Normalisers for the reported data are intended to facilitate comparison between different Member States with different sizes and types of railway. Little information was currently available in this area. Normalisers explored included overall population of a Member State, underlying rate of suicide and frequency of train service. It was stated that the incidence of suicide varied by region within several countries and that normalisation at a regional level as opposed to a national one may be more beneficial. Overall it was felt that little normalisation of the data is undertaken at present by the workshop attendees and that in terms of evaluating the effectiveness of any suicide reduction measure it would be preferable to use changes in trend rates (e.g. suicide rates rising in the overall population but falling for those areas employing the reduction method) rather than absolute numbers.

The impact of suicide on railway premises was explored in terms of the loss of the individual, trauma to railway staff and delay to the railway. The workshop considered it appropriate to employ the use of a Value per Life Saved figure as described in "IMPLEMENTATION GUIDANCE FOR CSIs, ANNEX 1 OF DIRECTIVE 2004/49/EC AS AMENDED BY DIRECTIVE 2009/149/EC". All available evidence was that an individual saved from committing suicide does not then seek to commit suicide a second time (figures of over 90% of all potential victims prevented from committing suicide die of old age). As an approximate figure it was calculated that the annual cost of suicide on railway premises in the EU Norway and Switzerland was approximately €5 billion. Further work in the study would seek to determine a more precise estimate.

The meeting finished by the Agency thanking all for attending and for the valuable exchange of information.



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