

20th International Railway Safety Conference

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Conference Paper Theme:

Human Factors - Global Perspective for Managing Performance

Conference Paper Topic:

A National Approach to Managing Safety Performance - An Australian Perspective

Presented by Kevin Taylor

General Manager

Rail Industry Safety and Standards

Australia

David Edwards has raised some very important moral and ethical issues that we as safety professionals need to address, particularly in difficult periods of financial instability. He argues in his paper that companies in Australia have cut overheads because of the GFC and that this has had an impact on safety.

This paper will attempt to provide the reader with a different perspective and perhaps a balance to what is happening in Australia in the Rail Safety domain through the Australian Rail Industry Safety and Standards Board (RISSB). In the process the paper will provide a short history of rail in Australia.

The Australian Rail Industry has its roots within the individual States and Territories of Australia. As a consequence there were no strategic drivers for it to become a truly National Industry until the 1980s. Indeed there was no real desire to harmonise practices and standards in the Australian Rail Industry despite the fact that Australian capital cities have been connected by standard gauge through the Defined Interstate Rail Network (DIRN) since the 1960s.

However in the 1980s further network development of the DIRN commenced and as a result the Australian Government sought to harmonise user practices through a number of codes of practice and manuals. And while these served a very useful purpose they did not harmonise the entire Australian Rail Network; they only focussed on the DIRN.

In late 2005 the Board of the Australasian Railway Association (ARA) decided, that in the interests of interoperability and safety, to form the Code Management Company and purchase the DIRN Codes of Practice, the Railways of Australia Manual and the Freight Loading Manual from the Australian Government. With the Government's agreement, the Code

Management Company became responsible for managing and updating these documents. But it soon became evident that the Industry needed to develop other documents to harmonise the entire Australian Rail Industry; not just those using the DIRN.

In July 2007 the Code Management Company was replaced with the Rail Industry Safety and Standards Board (RISSB).

In December 2007 the Board of the Australasian Railway Association (the ARA) published seven strategic objectives that would guide the Australian Rail Industry for the next 10 years. Strategic objectives four and five focus on Achieve Industry collaboration to improve efficiency, productivity and safety of the Industry (or harmonisation as it is commonly known) and Railway Level crossing safety respectively. The RISSB exists to satisfy these two objectives.

The RISSB is an accredited standards development organisation under the Standards Australia umbrella and is, by far, the second largest developer of Standards in Australia behind Standards Australia. Since its inception in 2007 the RISSB has produced 42 Rolling stock standards, one infrastructure standard, a number of guidelines and handbooks, and most notably a national suite of safe working rules and procedures. The RISSB aims to produce a further 150 standards, four codes of practice, and five guidelines within the next 5-7 years. This is a significant body of work for a small organisation of nine people with an annual cash budget of \$3million from the Australian Rail Industry and the Australian Governments. In addition RISSB receives \$3.5million worth of 'in kind' contributions from the Industry and Government agencies per year in developing its products.

Now turning to the theme of the session 'Human Factors - Global Perspective for Managing Performance' the RISSB and the ARA are doing a large amount of work in this space. I would like to focus on two particular aspects, namely improving human performance and compliance with safety rules, and assessing human performance on safety.

However before doing this I would like to complement David Edwards for his paper about cost cutting during the GFC. He has raised some very important issues that I hope will stimulate debate during this conference.

It is instructive to note that during the height of the GFC the Australasian Railway Association (ARA) commissioned a strategic review of it and its subsidiaries including the RISSB. The view was that budget cuts would be made and the savings redirected back to the Industry. However the reverse applied. A restructure of the ARA and the RISSB occurred but both organisations retained their budgets and increased staff numbers. The view by the ARA Board was that economic difficulties was not the time to cut staff and budgets, particularly when safety was at stake.

And there were a number of other positive safety initiatives occurring during the height of the GFC. Queensland Rail for example embraced 'zero harm' and it has been relentless in the pursuit of improving the safety culture of its people. This change emanated from a spate of

Railway Level crossing incidents and work on track incidents in 2008 and 2009. I will talk more about safety culture soon.

It is fair to say that QR's work has cost a lot of money but the proof is now in the pudding. For example safety shares are a common feature in QR every time someone attends a meeting. This was unheard of 18 months ago. And it is also making a significant investment in Railway level Crossing safety. Safety is significant safety culture change as we speak.

Another large Australian Rail owner and operator, RailCorp in NSW, was and is also pursuing many initiatives to improve its safety culture and practices. Apart from the day to day improvements through progressive safety management, RailCorp invests significant money in its annual safety workshops and conference. And it is leading the Australian Rail Industry in the pursuit of technologies to improve track worker safety. Again more about this later.

And for its part the RISSB is pursuing a number of important safety projects. Apart from the development of its standards, codes etc the RISSB has recently promulgated a National Rail Safety Strategy. This strategy is necessarily high level but will guide the Industry as it seeks to harmonise its safety practices in the future.

And it is important to note that:

- RISSB brings nearly all of the Australian Rail Industry's Safety professionals together every three months to discuss safety matters and pursue national initiatives as appropriate, and
- A select group of these professionals meet every four months with the seven Australian rail safety regulators to discuss matters of safety concern.

Improving Human Performance and Compliance with Safety Rules

Turning now to the theme of human performance and compliance with safety rules.

The RISSB has completed a number of important projects in the past two years to assist the Australian rail Industry in improving human performance and compliance with safety rules.

These are:

- National Safe Working Rules and Procedures,
- a National Rail Safety Strategy, and
- a national Rail Safety **Data** Strategy.

National Safe Working Rules and Procedures

The completion of this project has been hailed as one of the Rail Industry's most significant. Presently there are 14 different rulebooks throughout Australia. In essence each Access Provider has its own. Clearly with interstate rail operations and a large transient workforce in Australia this many rulebooks introduce unnecessary risks, not to mention the training impost and its associated costs for each provider.

The Australian National Rules and Procedure Project (the ANRP) started 13 years ago but

stalled for a number of valid and not so valid reasons. Three years ago the Industry decided enough was enough and in the spirit of cooperation and consensus decided to move ahead.

In March 2010 the final stage of the project was completed with 38 train operations rules and procedures being approved for use by the RISSB Board.

Technological differences around Australia became a sticking point early in the project. However this was resolved through the use of various options within the rules and procedures. The important thing was that most of hazard reduction measures in the rules and procedures became common. And as technologies become similar in the future the options within the rules and procedures will reduce. The important thing however is that Australia now has a common set of rules and procedures upon which a common training curriculum can be based. There is no doubt that there will be safety dividends realised as access providers embrace the national suite of rules and procedures. This will occur over the next two years.

In summary compliance with a national set of rules and procedures by interstate operators and track workers will be easier than dealing with numerous rulebooks.

National Rail Safety Strategy

This strategic plan is designed to provide a direction and a central focus for rail safety to the year 2020; it is complimentary to the National Occupational Health and Safety (OHS) Strategy 2002-2012. The strategy represents a serious commitment on behalf of the Australian rail industry to make rail the safest and most sustainable freight and passenger transportation system in Australia. It encompasses six strategic areas of focus for the next 10 years to bring about greater consistency in rail safety practices and heightened accountability for delivering safety outcomes.

By detailing the industry's vision, drivers for change, priorities for action and indicators of success, the strategy seeks to provide a framework for all stakeholders of the rail industry to focus their safety improvement efforts.

The strategy has been developed in the knowledge that the following principles are fundamental to its successful implementation:

- A safe systems approach.
- A shared responsibility using a co-operative approach.
- Engagement with industry, government, rail stakeholders and the community.
- A risk-based approach
- Using existing information and building on research and international developments.

These principles give rise to six strategic areas of focus that are designed to provide a holistic approach to improving safety within the industry. These include a focus on safety standards, risk management, culture, data and knowledge management, stakeholders, and public and industry education.

These six areas of focus form the basis of a series of corresponding national priorities for action. These priorities are:

- To develop high quality, effective national rail safety standards, codes of practice and guidelines
- To implement targeted interventions for the rail industry’s “Top 5” risks:
 - To reduce the risk of collisions and near misses at railway level crossings
 - To reduce the risk of rail collisions
 - To reduce the risk of rail derailments
 - To reduce the occurrence of rail worker injuries and incidents
 - To improve passenger safety and security on passenger rollingstock and at stations
 - To improve the safety culture and risk management capabilities of the rail industry
 - To develop a system for achieving timely, reliable, comparable and nationally consistent rail safety data
 - To build effective partnerships that drive significant and sustainable safety improvement while achieving practical outcomes at a national level
 - To achieve heightened public and industry awareness of key rail safety risks and mitigation strategies

This strategy will be implemented by a series of collaborative partnerships between industry stakeholders. It will be supported by a number of annual action plans that provide the detail and accountabilities for specific safety improvement projects. The strategy will be reviewed as required by the RISSB to monitor progress against meeting its objectives and to ensure it remains focussed on the industry’s risk profile and changing priorities.

The vision of the Australian rail industry is to remain the safest and most sustainable passenger and freight land transportation system in Australia. In an industry marked by immense diversity of scale and scope, significant internal and external competition pressures, unprecedented legislative reform and competing regulatory frameworks, this is no small task. However we hope that the National Rail Safety Strategy will assist in satisfying this goal.

Rail Safety Data Strategy

In 2008 the Australian Transport Council released a National Rail safety Data strategy which had the aim of providing a reference point for initiatives to improve the nature, quality, utility and consistency of rail safety data and the processes for its collection, accessibility, publication and use.

The strategy has a number of strategic themes, which contain actions to address identified problems and to improve rail safety data. These themes are:

Strategic Theme 1 - Better focused national data. This theme relates to the need to have a

nationwide picture of rail safety across Australia through national data.

Strategic theme 2 - Better data quality. This theme relates to improving the quality and timeliness of data to make them more relevant and useful.

Strategic theme 3- Better consistency and comparability. This theme relates to better consistency and comparability of data to improve the quality of rail safety data.

Overall there are eight actions arising from these strategic themes. The strategy assigns responsibility to the Rail Safety Regulators Panel (RSRP) and the ARA to ensure that these actions are satisfied. The RSRP (with Industry input) has the lead in satisfying five of the actions while Industry, through the RISSB, has three actions (in brackets) , namely.

Strategic Theme 1 (Specify industry needs for collated national data and develop the data items that will meet those needs). The Australasian Railways Association is reviewing and identifying its needs for collated national data and the collection and reporting requirements will be modified appropriately.

Strategic Theme 3 (Improve rail safety data reporting for industry). The Australasian Railways Association and accredited rail transport operators, with assistance from the Rail Safety Regulators Panel and in consultation with other stakeholders, will develop an industry-wide education program to improve reporting culture.

Strategic Theme 3 (Better rail safety data for industry). The Australasian Railways Association, in consultation with relevant stakeholders including rail unions and the Rail Safety Regulators Panel, are investigating options in relation to responsibility for a national industry rail safety database containing such information and/or a safety risk model. This will include a cost benefit analysis of the options and their suitability in the Australian rail environment. As you would appreciate this is a significant undertaking given that there are many legacy systems throughout the Industry. Unfortunately none of them talk to each other.

In summary there are a number of projects that have arisen from these requirements which will be addressed through a number of guidelines on safety data definitions, rail safety data normalisers, and classifying, recording and reporting rail safety data.

Assessing Human Performance on Safety

Clearly there are many ways of assessing human performance on safety. And the RISSB is working very closely with its stakeholders with two projects, namely:

- a code of practice on Rail Safety Worker Checking, and
- a safety culture toolkit.

Rail Safety Worker Checking Tool

The Australian Rail Industry is replete with transient workers. Clearly career ambitions, the offer of higher salaries and lifestyle all contribute to rail safety workers moving between the

various states and territories during their career in the Industry. And this is good for the Industry as it allow a sharing of safety ideas, practices etc.

However the Rail Industry does not have a tool that allows it to 'track' rail safety workers with poor safety records or they are serial safety offenders. As a consequence this introduces significant risks with these people transferring from one industry member organization to another. As a consequence the RISSB commissioned a consultant to produce a study of various methods for sharing safety-related information between employers. The ultimate aim of the work is to highlight a way for the rail industry to identify rail safety workers who are inherent safety offenders.

The study looked at three industries: Midwifery, Aviation Maintenance, and Security. It looked at the pros and cons associated with the protocols established in these industries, and whether they could be utilised within the rail industry. Additionally the Rail Safety Regulator in New South Wales provided RISSB with a separate paper which detailed the protocols established around reference checking in the Financial Services Industry.

As a consequence RISSB has now embarked on a project to develop a code of practice on Rail Safety Worker Reference Checking. We aim to have this Code available for use within two years.

Safety Culture Toolkit.

In 2008 the RISSB introduced an electronic safety Culture toolkit for use by its members. This toolkit is an excellent tool for allowing organisations to assess safety performance through benchmarking within an organisation (departments) and between organisations.

Use of the toolkit was limited. But in mid 2009 organisations using the toolkit increased quite considerably. Today there are about 40 rail organisations using it in one way or another. It is available to ARA funding members free of charge.

The Toolkit works in a similar fashion to most of the safety culture surveys that rail industry members have utilised on a company-basis for many years. It allows companies to issue safety culture survey questionnaires to individual employees which are received and stored in national database on a confidential (de-identified) basis.

The RISSB Toolkit now contains well over 1000 data points from a range of companies across the Australian rail industry, both government and privately owned, ranging in size from small to very large, and ranging in type from rail operators, track managers, maintainers, and constructors/manufacturers.

The significant amount of data, and the diversity of organisation means that it is now possible to begin to perform de-identified national analyses of the data and inform relevant industry senior managers as to what can be expected be the subjective view of safety culture by employees across industry.

In July 2010 the RISSB undertook and analysis of the data within the toolkit. The results

suggest that workers tend to perceive the safety culture of the industry to be relatively good. However, there are some areas of concern in terms of how employees appear to perceive safety as the following (in order from highest concern to least):

- Sometimes I am uncertain how to do a job safely.
- My supervisor seldom checks that people are working safely.
- I don't think my immediate boss does enough to ensure a safe working environment.
- Safety is not a priority for my supervisor.
- The company/organisation I work for does not learn from its incidents/accidents.
- Some safety procedures/instructions/rules do not need to be followed to get the job done safely.
- Management sometimes turn a blind eye when safety procedures/instructions/rules are broken

It should also be noted that it is only an initial snapshot, and that as internal company interventions would likely have already been started in all participating companies, things may have changed. However it does demonstrate the usefulness of a tool like this in assessing safety perceptions and performance in an organisation.

Conclusion

The RISSB was established by the Australian Rail Industry in 2007 to harmonise the Australian Rail Industry through the development of national standards, codes of practice, rules and procedures. And it is doing a good job in making this happen. Additionally the RISSB facilitates meetings of key rail safety professionals through a number of forums to debate and share safety initiatives, concepts etc. And this has been effective in moving safety forwards in the Australian Rail Industry.

While there were pressures on individual rail organisations to reduce costs during the GFC, the RISSB's work was not affected. This paper has highlighted a number of projects that the RISSB pursued during the GFC; these relate to the themes, '*improving human performance and compliance with safety rules*' and '*assessing human performance on safety.*'

End of Paper

Date:

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