



Safety critical rule compliance toolkit (T506)

Introduction

Rule compliance relates to an individual's willingness or otherwise to follow rules and procedures. Failure to follow the rules (non-compliance) can occur through: ignorance of the rule or of its applicability in a given situation, through difficulty (a rule that is hard to apply), or through deliberate intent (believing there are appropriate reasons not to apply the rule). The issue of compliance with rules and procedures is of great concern to the rail industry.



Fig 1: The train crash at Southall on 19 September 1997, where seven people lost their lives and many more were injured. This was due to non-compliance with rules such that the driver of an HST passed two red signals and collided with a freight train

The RSSB Research Programme commissioned Greenstreet Berman to develop the Safety Critical Rule Compliance Toolkit as a practical tool to help Railway Group companies to understand and manage the factors that influence compliance.

Initial research (comprising surveys, interviews, incident data analysis, and reviews of previous research) investigated the extent of rule non-compliance within the rail industry, and the factors that gave rise to it. Non-compliance with safety critical rules was found both to be extensive, and also under-reported.

A paper based toolkit was developed from this research. It provides a set of guidelines to help managers to understand the underlying causes and potential solutions for non-compliance within their organisation. For further information please refer to the project report *T145 Safety critical rule compliance* on the RSSB website <http://www.rssb.co.uk/allsearch.asp>.

Aims

The aim of this follow-on project was to convert the paper-based toolkit and guidelines from the initial research into an interactive CD-ROM toolkit, and pilot it with a cross-section of Railway Group companies, to provide a practical and pragmatic tool to improve rule compliance.

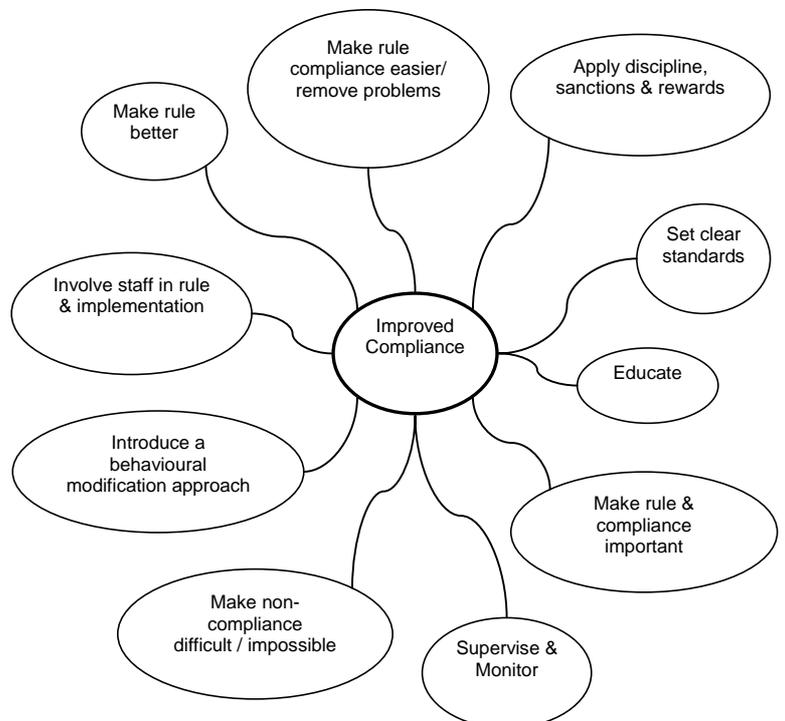


Fig 2: Set of solutions to improve compliance



Approach

An interactive CD-ROM was piloted over a 4 month period (in three train operating companies, one freight operating company and two Infracore engineering companies). Further amendments to the CD-ROM toolkit were made at the end of the pilot study, to take account of comments and suggestions. The aim was to validate the toolkit and make it fit for purpose, user-friendly and compatible with rail companies' requirements.

The CD-ROM Toolkit

The toolkit focuses on two areas: helping the user to understand why non-compliances occur and providing a set of potential solutions that will help the organisation reduce the incidence of non-compliance.

The Toolkit contains a number of parts:

- Introduction – defines non-compliance and use of the toolkit
- Diagnostic toolkit – takes the user through an analytical process that helps them understand causes of observed non-compliances and directs them to appropriate solutions
- Proactive toolkit – allows the user to consider situations before any non-compliances have been observed, to understand vulnerabilities and potential weaknesses
- Solutions – direct access to the set of solutions for users who are familiar with non-compliance causes
- Examples – provides a set of examples of how non-compliance can be reduced.

The key factors influencing compliance that were used to develop the guidance and solutions set were:

- Organisational factors (eg support for compliance behaviour)

- Motivations and behaviour (justification for non-compliance)
- Systems and procedures (rule comprehension)
- Individual differences (unable to control compliance behaviour)
- Workplace design (job complexity)

The purpose of the CD-ROM toolkit is to enable users to understand which factors may be affecting observed or potential non-compliance, and to be able to tailor potential solutions to suit their organisation.

Findings

The CD-ROM Toolkit has been well received by the companies that took part in the pilot trials.

The majority of companies warmly welcomed the toolkit because it provides additional insights and it provides an audit trail and assurance that confirms that they are addressing issues appropriately.

All users saw value in the toolkit as a training aid. One organisation has already incorporated it into company procedures.

The consensus is that the toolkit is a valuable means of improving rule compliance. The following comments were received from rail companies:

'The toolkit is a very useful tool. It gives structured guidance to individuals with less experience in this area, however it is also a good means for the more experienced manager/ investigator to cross check their conclusions.'

'This is the perfect tool to introduce to managers who are not in the habit of being involved in investigations.'

'The toolkit has not identified new solutions; however it has made us think about levels of ambiguity concerning rules and procedures.'



'The best thing about the toolkit is that it reassures us that we are following investigations in a structured manner.'

Next steps

The toolkit has been revised in the light of feedback from the pilot phase and is now issued to the industry via the RSSB website http://www.rssb.co.uk/r_and_d.asp and the human factors research catalogue.

The solutions and examples in the toolkit have provided a basis for companies to consider how they can enhance their existing safety management systems in order to become more robust against rule non-compliance. As experience is gained of the use of the toolkit, companies are likely to find that the principles can become easily incorporated into their existing systems. The solutions have been generated with guidance that allows them to be tailored. Each organisation will need to consider how best to implement them, taking account of their own circumstances and constraints.

The toolkit may be re-issued periodically, to take account of further experience in its use, to incorporate further examples that are more specific, and to provide additional guidance within the solutions. This option will be subject to review based on the expressed needs and wishes of Railway Group members.

The toolkit is not in itself a solution to non-compliance. It provides a structured approach to identifying solutions appropriate to a particular organisation, and guidance on how to implement those solutions. Rule compliance is amenable to

management control and the use of the toolkit assists management to achieve this.

To use the toolkit

The toolkit can be downloaded from the RSSB website as a WinZip file. The toolkit is 2.7 MB in file size and it might take a few minutes to download.

To download the toolkit and view the download instructions go to http://www.rssb.co.uk/pdf/reports/research/Instructions_to_download_and_run_the_Toolkit_final.pdf

The toolkit contains guidance (select the powerpoint training pack in the 'introduction' section of the toolkit), which describes the purpose of the toolkit and how it can be used. It is structured in a form that allows it to be used as a training aid.

Contact

Michael Woods
Head of Operations Research
Research and Development Programme
Rail Safety and Standards Board
research@rssb.co.uk