A survey of current practices in safety-related decision making  
(T126)

**Background**

Many people in the rail industry make decisions that have safety implications. They are likely to have different levels of training, competence, and understanding of the decision-making process. This research reviewed the current practices of safety-related decision-making within the rail industry. The study was conducted by AD Little.

**Aims**

The review aimed to identify, analyse and understand the variety of practices currently used in the rail industry and to establish a benchmark against which any improvements can be measured. In addition, the review forms the basis for a programme of work to strengthen the safety decision-making process.

The overall objectives of the review were to identify who is making risk-based safety decisions and to ascertain the factors that these people consider to be important in making their decisions. Additionally, the research aimed to discover the frameworks that these decision-makers use to make their decisions and the weight they give to different factors.

**Method**

The review consisted of a confidential survey of 225 safety decision-makers across the UK rail industry. Responses were gathered using a web-based questionnaire, fax-back forms and 51 telephone and face-to-face follow-up interviews. The respondents, spanning a broad range of roles, had differing degrees of responsibility for safety management.

Focusing on four themes, the survey investigated:
- Whether the right people are making decisions
- Whether they are adequately trained
- Whether they have sufficient resources
- Tools and information and whether the process of decision making is robust

**Findings**

The survey attracted responses from major sectors of the rail industry including:
- Infrastructure controllers
- Train operating companies
- Freight operating companies
- Rolling stock companies
- Maintenance renewal / project contractors
- Project managers
- Suppliers
- Consultancies

A particularly good response was achieved from train operating companies and rolling stock companies.

The research proposed that decision-makers could be categorised into five frameworks; ‘compliance focused’, ‘safety risk enthusiast’, ‘thorough’, ‘pragmatist’ and ‘experienced’. Each of the five frameworks had both positive and negative attributes associated to them.
It was found that 92% of decision-makers have been given training relevant to safety decision making within the last three years. The majority of decision-makers believed they had received sufficient training to understand the safety aspects of a recent safety-related decision. However, further analysis indicated that 47% expressed a need for more training to help them make safety-related decisions in general.

The report also identified that there is a heavy reliance on personal experience (for 87% of respondents this was an important factor) when making decisions. However, decision-makers refer to risk-based guidance, company guidance, and industry codes of practice and regulations to assist them; HMRI and RSSB publications are not widely used. Key messages from the report are that there is much good practice in practical safety decision making, and that there is also scope for building on this to assist decision makers through focused training, information, tools and other resources.

**Next steps**

The report put forward a number of recommendations to further assist safety decision makers. It was primarily established that information and guidance available to decision-makers should be improved. The production of an industry good practice guidance note on processes for making safety related decisions would be a good first step. Additionally, the industry should ensure that company standards used in safety decision-making are firmly based on Railway Group Standards and regulatory standards. Improving the training and competence of decision-makers, perhaps based on formal, written training, but also using the flexibility of the Internet could increase the average amount of training received by decision-makers.

This report also prompts a number of further research studies to be undertaken such as:

- Investigating whether too many actions for implementing safety decisions are delegated, and whether this is resulting in a loss of control and increased safety risk.
- Undertaking research to determine whether cognitive bias is affecting safety-related decisions (e.g., dominance of experience and ‘gut feel’ over other evidence).
- Developing a forum to discuss the effect of emotive issues, such as public and media perception of safety risk, and determine guidelines for risk based investment that take account of this issue.

These ideas are being fed into the ‘Safety Decisions Programme’ managed by RSSB on behalf of the industry. The first output from this programme is the document ‘How Safe is Safe Enough?’ (HSISE).

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