

ANNEX 9 (HSC/03/02)

Public Dialogue on Train Protection

Draft Report

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EXECUTIVE SUMMARY

BACKGROUND

This report sets out the findings from the Public Dialogue on Train Protection. This public dialogue project was designed to support the Health and Safety Executive's (HSE's) Railways Directorate in developing policy on the reduction of risk and the protection of *people working or travelling* on the railways. This project supports the directorate's specific aim of:

- “*To make preparations for the implementation of the Cullen and Joint Inquiry Reports*”

“*The Joint Inquiry into Train Protection Systems*” (Uff & Cullen) which resulted from the Southall and Ladbroke Grove accidents in 1997 and 1999 respectively recommended that HSE should draw up regulations for the fitment of the European Rail Traffic Management System (ERTMS) within three years and that HSE should establish a programme of consultation to inform the drafting of regulations. The Health and Safety Commission (HSC) has to provide advice to Ministers by early 2003.

As part of the process of developing advice for Ministers the HSC asked the HSE to undertake a review of the ERTMS Project Team's report outlining the industry's preferred options for implementation of ERTMS. The HSC wished to ensure that consultation and dialogue reached beyond those normally consulted, so aim of this project was to ensure that public views were gathered as a part of the overall review. In the project brief the HSE set out an objective to reach a wide range of relevant groups, including those not traditionally contacted.

METHODOLOGY

This project was designed to create opportunities for members of the public to deliberate on the issues raised by railway safety. There were opportunities for people to receive and exchange information, to question and reflect on evidence and opportunities to explore the costs and benefits of different courses of action. The consultation was structured around four activities: an “experts” forum; workshops with the public, (specifically: Birmingham commuters; Scottish rail commuters; non-users of the railways; occasional users of rail for pleasure; occasional business users of rail; London rail commuters); reconvened discussions with the public; and a deliberative conference where workshop representatives met the “experts”.

FINDINGS

Railway Safety

There was a general assumption among those who took part in this exercise that the railways provide a safe means of transportation. Safety concerns that emerged spontaneously were usually linked to personal security and the effects of vandalism and anti-social behaviour.

Most participants did not spontaneously voice worries over the safety of trains with respect to the possibility of accidents. This does not mean that people are not concerned about this aspect of safety, rather, when the subject was explored, the provision of a safe service was expected as part of the contract of buying a ticket.

Structural Issues

Participants felt that structural issues were inhibiting the effective development of safety strategies, whether ongoing activities such as maintenance or major investments such as train protection. These structural issues were seen as related to the fragmented nature of the railway industry and the lack of clear leadership, strategy and national standards to provide greater coherence to the sector. The HSE was seen as having an important role to play in providing this leadership in relation to safety issues.

Train Protection

Train protection was not something with which many of the public participants had any great familiarity before their involvement with this project. However, many were aware that signals passed at danger (“*jumping red lights*” was the phrase most often used) had been a cause of major accidents. When signalling practices and the assistance available to drivers were described, some participants in the workshops were surprised at the low level of technology available to support drivers, others had not known what to expect. People contrasted the relatively simple systems on the railways with the high degree of automation found on passenger airlines and the central air traffic control system.

There were mixed views on whether or not train protection was a priority area for investment. For some, the historic data showing the high proportion of fatal accidents that were preventable by Automatic Train Protection (ATP) provided compelling reasons to invest in ATP. For others, the perceived decline in investment in the railways in recent years led to the conclusion that investing in the basics, particularly maintenance, was a more appropriate way to invest limited funds, especially given the low level of fatalities.

Choosing an ERTMS system

European interoperability requirements mean that in the future upgrades of high speed and main lines will need to meet a European standard. The European Train Management System (ERTMS) is therefore the means by which ATP will be delivered. The basic components of ERTMS levels 1 and 2 were explained in the workshops and the industry summary report “*ERTMS: Towards a better safer rail system*” was provided to give participants access to more information if they wished to have it. This allowed participants to consider the impact of a range of safety-related and economic factors when trading off the relative merits of different options. For any system, the reliability of the technology and its influence on the safety of passengers were widely regarded as being extremely important.

Given two options of systems that would deliver ATP, there were also mixed views on which offered the better value. From one perspective the greater speed with which level 1 could be delivered was a particularly important factor, whilst for others, the ability to further upgrade level 2 in the future was seen as a way of ensuring commitment to the ongoing development of safety systems. One view was that it was better to invest in a more “modern” system based on modern mobile communications systems and that would be capable of further development in the future, rather than to invest in a “once off” system.

At the deliberative conference, a majority view emerged, with level 2 being the preferred option of most of the participants from the workshops, because of the greater range of benefits it offered. However there was a minority view that was firmly in favour of level 1 as it could be delivered more quickly.

Timing and legislation

Generally timing featured heavily in the debates that took place regarding the two systems and was a critical factor for many who preferred level 1 ERTMS. Very few people were

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happy with what they perceived to be extremely long timescales to implement either system. No one in any of the workshops defended the proposed timetables despite the extensive nature of the railway network.

Not only was there almost universal surprise at the timescales proposed for implementing either ERTMS system but some participants felt that this was merely a delaying tactic to avoid ever having to make the capital outlay. The fact that the HSE had commissioned technical and economic assessments of the industry report was welcomed as a way of checking the industry assumptions.

In general participants at the workshops thought that the industry could not be relied upon to devise and follow through an implementation plan without a regulatory framework providing an element of compulsion. The workshop representatives at the deliberative conference confirmed this view, albeit with some softening of attitudes following direct interaction with industry representatives. The conference attendees recommended that legislation should be introduced and that milestones should be established against which progress could be measured.

1 INTRODUCTION

1.1 BACKGROUND

This report sets out the findings from the Public Dialogue on Train Protection. The Health and Safety Executive (HSE) commissioned People Science & Policy Ltd (PSP) to undertake this work in September 2002. The public dialogue elements took place in October and November 2002.

This public dialogue project was designed to support the HSE's Railways Directorate in developing policy on the reduction of risk and the protection of *people working or travelling* on the railways. The Directorate is responsible for co-ordinating HSE's work to promote and regulate railway safety, which includes the development of new regulations and guidance. It has responsibility for both passengers and workers. One of the directorate's specific aims is:

- *"To make preparations for the implementation of the Cullen and Joint Inquiry Reports"*

"The Joint Inquiry into Train Protection Systems" (Uff & Cullen) which resulted from the Southall and Ladbroke Grove accidents in 1997 and 1999 respectively, was concerned with broad questions of safety on the railways in the light of developments before and since these particular accidents. That report recommended that HSE should draw up regulations for the fitment of the European Rail Traffic Management System (ERTMS) within three years and that HSE should establish a programme of consultation to inform the drafting of regulations.

There are two main motivating forces behind the installation of train protection systems. One is the safety benefits that might be offered by automated systems. The other is a European Directive (96/48/EC) on "interoperability" that requires the implementation of Automatic Train Protection (ATP) through Europe when high-speed lines are up-graded or renewed.

The current state of the technology of automatic systems is potentially confusing. Both "warning" and "protection" systems are available, each of which is, or will be, available with different levels of performance and different requirements concerning on-train and trackside equipment. The industry, through the ERTMS Project Team has undertaken an analysis and put forward a preferred option. The Health and Safety Commission (HSC) asked the HSE to undertake a review of this work, as part of the process of developing the Commission's advice to Ministers on this issue. That advice is due to be delivered early in 2003.

At the heart of the consultation recommended by the Joint Inquiry, is analysis *by a variety* of stakeholders of the relative costs and benefits (financial and non-financial) of different courses of action that the HSE might propose. In particular, it is important to explore the trade-offs to which different courses of action might lead. Factors that will need to be borne in mind include cost, impact on safety (for both workers and passengers), modal choices, capacity of the system and perceptions of the railway system.

To achieve such a broad ranging analysis, the HSE has established three parallel activities: a technical review; an economic review; and, to ensure input from the public, both those who use the railways and those who do not, this public dialogue project. The last of these was established at the express wish of the HSC.

1.2 OBJECTIVES

The overall aim of this work is “*to gauge public attitudes to train protection issues and rail safety generally*”. Within this overall aim, more specific objectives were set. Namely to:

- encourage and facilitate wider public debate, including the participative framing and exploration of the main concerns and issues;
- provide, in an appropriate form and depth, intelligence on public attitudes to train protection issues and rail safety generally, to inform HSC decisions on whether to recommend legislation to require fitment to a specified timescale;
- reach a wide range of relevant groups, including those not traditionally contacted;
- collate and analyse public views on train protection and other railway safety matters of concern; and
- explore and reveal any differences in views between groups.

1.3 METHOD

In order to address these objectives PSP designed a project that actively drew in different types of rail users (but not members of action groups) and some non-users. A discursive or “focus group” approach was used which, while directed to the issues of policy concern to the HSE, enabled the participants to express their own views. This was combined with technical input to enable the members of the public involved to understand the issues fully and an opportunity for some of them to discuss their concerns with experts at the deliberative conference. Finally, those members of the public who had attended all the stages of the project, including the deliberative conference, made informed recommendations to HSE both on the type of system they preferred and on whether or not they perceived a need for regulation.

The public dialogue project had three main elements: an “experts” forum, which took place on 4 October 2002; six, four hour workshops with the public on Saturdays, which were reconvened one evening the following week for 1½ hours; and a deliberative conference, which was held in London on 16th November 2002. The “experts” forum included a range of people who, for one reason or another, had become closely involved in discussions about the future of the railways in the UK. This included members of the HSE, a Commissioner, representatives of the unions, industry and various regulatory and oversight bodies, as well as some bereaved parents. A full list of those who took part and the agenda can be found in annexes 2 and 3.

The Saturday workshops each included 15 members of the public recruited by a specialist market research company using a recruitment questionnaire, which can be found in annex 4. Each of the six workshops in some sense “represented” a specific type of train user and in one case, non-users. These four-hour sessions were run by PSP facilitators with support from HSE staff. The sessions began by exploring participants views of the railways. The main section focused on explaining various technical details and the last 45 minutes enabled participants to discuss and question the information they had received. The reconvened session, usually held on the following Wednesday evening, with the members of the public and PSP facilitators, enabled participants to structure their thoughts to provide feedback on the specific issue of train protection systems. At this session, the participants nominated two members of the group to go to the deliberative conference with some of the “experts” from the “experts” forum. The topic guides for these sessions can be found in annexes 5 and 6.

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All those who participated in the regional workshops were sent an interim report in advance of the deliberative conference and the draft final report for comments to ensure that all the points that had been made during the project had been suitably covered. Full details of the method are set out in annex 1.

1.4 THE REPORT

This report is structured around the issues that the members of the public who were recruited to take part (the participants) identified as important. These are: perceptions of the railways; safety of the railways; train protection and trust and regulation. The participants also identified cost and the need for a national strategy as crucial to improved safety but we have included costs under train protection issues and the development of a national strategy under trust and regulation.

The next four chapters address each of the major issues in turn. The final chapter then draws out some over-arching conclusions. It was never the intention of this project to seek a consensus. All views are presented in order to ensure that the HSE has the fullest possible picture of public views to draw on in constructing its final advice to the Health and Safety Commission. This approach cannot provide quantitative data on the prevalence of any view in the wider society because, while we selected a cross-section of users and non-users, they were not statistically representative.

2 PERCEPTIONS OF THE RAILWAYS

This section highlights the main issues that participants at the regional workshops identified as being important to them about the railways in Britain today. While there are differences between participants, on the whole the perceptions are very similar and differences are not accounted for by usage patterns but by individual perceptions and dispositions.

2.1 PERCEPTIONS OF THE RAILWAYS

There was a view across all elements of the project that the railways are an important part of the country's infrastructure. This perception was not linked to people's use of, or familiarity with, the railway and was as prevalent in the regional workshops as in the "expert" forum.

In all of the workshops people were aware of efforts to move traffic from the roads to the railways, which was generally supported. However, some men felt that they were being pressurised to not use their cars and other participants gave no thought at all to environmental issues in choosing how to travel. However, there were significant concerns over whether or not the railway infrastructure could cope with increased traffic. The limitations to increased railway use (in no particular order) were identified as:

- Overcrowding;
- Geographical coverage of the railways;
- Unreliable services;
- Unpleasant or threatening environments on stations and trains; and
- High ticket prices.

Despite these negative images most workshops participants expressed a preference for using the railways for at least some types of journeys. For commuting into city centres the railway was often given as the preferred mode of transport, some preferred to use the railways for longer distance travel and for some, railway journeys were used as "family treats". The railways at their best offer opportunities for efficient travel, relaxation, quiet reflection and productive work. For some there is also nostalgia.

When participants were asked about how and why they chose a particular means of transport, travelling by car was the main comparison for the railway. The impact of traffic on travelling time, the cost of petrol and parking as well as the availability of parking, were incentives to use the railway rather than a car. Where cars were preferred this was because they offer door-to-door transport, freedom and a feeling of being in control with no need to limit the amount of luggage taken on trips.

"They're not going to run the train line to your house."
Male non-rail user, Norwich

Some people also felt more secure in their own car than on public transport.

2.2 "OVERCROWDING"

In all of the workshops where the participants were users of the railways, the issue of overcrowding arose spontaneously and was perceived by many as a serious safety issue. Although it was particularly important to all the commuter groups, the occasional users still noticed overcrowding on particular routes and at certain times.

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“You seriously worry about heart attacks. Crowded like sardines – it’s inhuman. If the train derails we’d be squashed to death – no chance.”

Woman commuter Birmingham

The commuters saw themselves as a captive market because other transport options were either impractical (taking cars into city centres) or not as convenient and fast as railways (buses), although where they exist or were remembered, trams were popular. The feeling of being tied to certain forms of transport was particularly prevalent in cities that either have very busy road systems or are making concerted efforts to exclude private vehicles.

2.3 GEOGRAPHICAL COVERAGE OF THE RAILWAYS

In a number of the groups the limited coverage of the railway network emerged as an important issue. This did not just emerge in locations that might be considered more rural, it was also a factor for some city centre commuters, especially in the Glasgow workshop, where particular parts of cities were said to be poorly served.

I travel on the train quite often, but only to Glasgow city centre, because where I come from its very very limited where I can travel to by train

Man commuter Glasgow

A number of people pointed out that moving traffic from the roads to the railways was only possible if the right infrastructure existed. It was also a concern to some that new-build projects such as airport links were not used as a means of increasing local access to the railways while such a major investment was being made.

2.4 SERVICE RELIABILITY

Across all the user groups, the biggest complaint was the unreliability of services and the poor levels of communication to passengers when things go wrong. This widespread perception of unreliability was also seen as a major barrier to increasing usage of the railways. Many passengers claimed to be less interested in faster or more frequent services, preferring to be offered a reliable timetable so that they could plan accordingly. This was also seen as a fundamental precursor to achieving effective integrated transport systems.

“We definitely need efficiency before speed”

Woman leisure traveller, Cardiff

At the deliberative conference, this theme was picked up again and one of the groups made the following point on a feedback sheet.

“Reliability is key. Efficiency before speed.”

Group feedback, deliberative conference

2.5 STATION AND TRAIN ENVIRONMENTS

For a number of passengers the environment at stations and on trains was an important issue with several aspects. The general environment on the railways was not seen as very pleasant. Either it was overcrowded or at night it was threatening. In people’s minds reduced staffing levels on both trains and at stations meant that they did not feel safe after dark and this applied to both men and women. Some of those who did not feel safe said that this influenced decisions not to use the railways at certain times or in particular places. The introduction of CCTV was not reassuring, people wanted more staff around to prevent incidents rather than CCTV to record that an incident had happened.

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“I use the train during the daybut after darkness I wouldn't feel comfortable. I know there's camera's at the stations but there's nobody manning them, there's nobody there.”

Woman commuter Glasgow

However, there was an appreciation that more staff will not be provided.

“It'd be nice to see staff on the trains but I don't think it's a reality, is it? Becauseif you've got two people you've got two lots of wages.”

Male commuter, London

In addition to personal security a number of people commented that infrastructure often rendered the railways inaccessible to some passenger groups such as the less able-bodied and those with young children.

“I work for Learning Disability and we have an ongoing feud at the moment about wheelchairs...If we want to take wheel chairs to the station they are very unkind about us using the lift... There is no facility for wheelchairs.”

Woman commuter, London

2.6 TICKET PRICES

The high price of tickets emerged spontaneously in all of the groups, although some appreciated that efforts were being made to attract passengers to off-peak services using reduced fares. In Manchester there was a discussion over the wide variations in ticket prices and the confusion that this can cause.

“The prices do fluctuate, its ridiculous. You can go for as little as twenty quid and it can be as much as £150.”

Male long distance business user Manchester

A principal concern was how the revenues from fares and other sources were being used and whether sufficient re-investment in the railway network was being made.

“I have to go to up to London for a course three times a week from Tamworth to Euston and I need to be there by nine in the morning and it costs me £95 each time!”

Male commuter, Birmingham

Many people wanted to see much greater transparency in the information provided by the rail industry about income and expenditure more generally.

“They get a lot of money, the tickets are expensive. Where does it all go?”

Woman commuter Birmingham

2.7 COMMUNICATION

Poor communication to keep passengers informed when things go wrong was identified as a serious shortcoming. Again, the lack of staff at stations to give information was commented upon, with the addition that where there are staff they often do not have information.

The Birmingham and Norwich groups were surprised to learn that drivers often cannot give out information because they do not always have it themselves. This is because of the patchy coverage of communication between trains and the network. In an age of mobile 'phones participants could not understand why communication was so poor.

2.8 SPENDING PRIORITIES

It would be easy in an exercise focusing on a topic such as railway safety for participants to become so bound up in the topic that wider perspectives are lost. For this reason, in the reconvened sessions, participants were asked to rank twelve spending priorities. Generally “health” and “education” were at the top of the lists with “sport” and “museums and culture” at the bottom. “Railways” (and roads) were usually in the middle of the lists. By judging that transport was not the most important spending priority for the Government, the participants highlighted that there is a need to prioritise between and within different modes of transport. It is important to ensure that the limited budgets available were most effectively used.

3 SAFETY ON THE RAILWAYS

This section explores the perception of safety on the railways from the perspective of the workshop participants. Some issues arose spontaneously during open discussions at the beginning of the workshops, while others were drawn out during the presentation of information about signalling and train protection and warning systems and the subsequent discussions.

3.1 SPONTANEOUS ISSUES

When safety emerged spontaneously during discussions, it was almost always linked to the personal security of passengers, whether on board trains, on stations or in the locality of stations. Strongly linked to personal security was the effect of vandalism and its impact on both railway services and passengers' well-being.

It was rare that safety in the sense of the potential for accidents arose spontaneously. This does not mean that this was not an issue for the workshop participants, rather, the provision of safe passage (or the absence of accidents) was felt to be part and parcel of the contract of buying a ticket.

"You think you buy a ticket and you'll get there"
Woman long distance business user, Manchester

This theme was reflected at the deliberative conference, one expert summing up the situation as follows.

"Safety should already be included in the costs. The public expect it – they don't consider it – you are paying to be 'de-risked'."
Expert, deliberative conference

Participants reported a brief heightened concern for their personal safety and a reluctance to travel by rail immediately after major accidents but otherwise safety is not a conscious concern when travelling (unlike for air passengers). Several participants admitted to a fear of flying, which is statistically safer than travelling by rail.

3.2 SAFETY AS A PART OF MODAL DECISIONS

The term 'safety' is taken by the general public to refer to a wide set of issues and for some it is often assumed to refer to personal security. A few people gave personal security as a reason for choosing not to travel on the railways at particular times such as at night or when major sporting events will mean that trains are particularly crowded or populated by "drunks".

At the "expert" forum, a number of people wanted to know whether the wider travelling public viewed the railways as a safe method of transport. The view emerged from the workshops that the railways were likely to be safe.

None of the participants in the workshops cited fear of crashes as a reason not to travel on the railways. However, a small number said that the perceived risks associated with driving were a factor in choosing to use railways.

I never think about safety getting on the train. Not like I do when I get in my car."
Woman commuter Birmingham

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As the previous section has shown, in general the factors governing the choice of mode of transport were much more concerned with convenience, price, the range of options available and personal security, for those travelling alone or at night, than with safety.

3.3 FACTORS AFFECTING SAFETY

In all the workshops, several factors were identified that could have an immediate impact on the safety of the railways. These included:

- Poor maintenance – of either tracks or trains
- Design of rolling stock;
- Trains failing to stop at signals; and
- Vandalism and trespass.

In some locations other factors emerged, which might be termed strategic rather than immediate. These included:

- The lack of national standards relating to maintenance and staff training (both drivers and track workers);
- Historical under investment; and
- The perceived lack of clear national leadership and planning within the railway sector.

3.4 MAINTENANCE

Maintenance of both rolling stock and infrastructure was highlighted as a critical factor in ensuring railway safety. Many of those in the workshops believed that the recent Potters Bar accident was caused by poor maintenance. This led to discussions of the standards of staff training and responsibility.

One group highlighted the importance of having a culture on the railways that positively encouraged the reporting of faults and systems in place that would ensure an appropriate response. This issue was discussed further at the deliberative conference, when it emerged that there were in fact two different systems in place for encouraging people to report faults and/or concerns. For railway employees there is the Confidential Incident Reporting System (CIRS) that has recently been introduced nationally. While for the public there is the “Keep crime off the line” campaign, which encourages people to report crimes or suspicious incidents on the railway to British Transport Police. The latter had not been noticed by any of the deliberative conference delegates apart from HSE staff.

Enhanced maintenance was viewed as something that could have a positive impact on safety with relatively little additional expenditure and was thus a priority investment. Across all of the workshops, there was a belief that no safety system would be fully effective without adequate maintenance.

3.5 DESIGN OF ROLLING STOCK

The design of the rolling stock was central to some participant’s concerns about safety and was raised in workshops by participants spontaneously. At the deliberative conference delegates were reassured to learn that modern rolling stock is more robust than the older stock. While some workshop participants thought that the older metal “slam door” carriages must be sturdier than newer carriages, others were concerned about the safety of the older stock.

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“Some of our trains are really old now, they’re ready to fall apart.”
Woman commuter Glasgow

The absence of seat belts was raised by several individuals but dismissed by others:

“they’re not going to do you any good in a high speed crash”
Male commuter, London

3.6 SIGNALS PASSED AT DANGER

“Trains going through red lights” was identified as a cause of accidents in all of the workshops. When signalling practices and the assistance available to drivers were described, there was some surprise at the low level of technology available to support drivers. In this context there was reference to the aeroplanes and the high degree of automation found on passenger airlines and the central air traffic control system.

“I was absolutely appalled at the basic system that trains operate on, I was just amazed that there’s not been more crashes and more accidents... the system is not totally failsafe, it’s down to human error.”
Woman long distance business user, Manchester

Others had not known what to expect and a third group had assumed that drivers relied exclusively on signals and what they could see from the cab.

Some participants identified that there is a heavy burden on drivers but others were less sympathetic. There were divided opinions on how drivers who had passed a signal at danger should be treated. Some felt that it should be regarded as a serious disciplinary offence. Participants drew a parallel with driving a car through a red traffic light.

“If you drive through a red light you still get fined, even if you haven’t done it before. Seems to be another rule for train drivers.”
Woman non-rail user, Norwich

Others felt that the focus of attention should be to identify the cause of the incident to ensure that it could not happen again.

While there was a belief that drivers should be properly supported through appropriate training, both at the beginning of their career and through an ongoing up-dating programme, there was also great concern about the dangers of drivers not being fully fit to drive. These concerns encompassed the need for random alcohol and drugs testing as well as general physical examinations to ensure that drivers did not fall ill on duty.

The data on train accidents resulting in at least one fatality shows that, of the 77 such accidents between 1967 and 2000, 31 (40%) would have been prevented by ATP. Workshop participants were surprised that such a figure had not already led to a concerted effort to install ATP systems. That said, the apparently high costs of fitting ATP led other people to question whether it offered value for money, when compared with other investments in safety.

3.7 VANDALISM AND TRESPASS

Many people were seriously concerned about the impact of malicious damage on railway safety and wanted to see investment in reducing the impact of this sort of behaviour. Increased numbers of (appropriately trained) staff on the trains, more effective fencing of the

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railways and an enhanced profile for the British Transport Police were all mentioned. The “Keep crime off the line” campaign addresses just these issues, but seems to have had a very limited effect in engaging passengers, based on awareness among the deliberative conference delegates.

3.8 WORKER SAFETY

There was a strong feeling that trackside workers should be working within a committed safety culture with clear safety procedures in place. Questions were asked about the cause of worker accidents and fatalities but the general view was that *“it is an occupational hazard”*.

3.9 NATIONAL STRATEGY

In the workshops where strategic issues were raised it was generally concluded that addressing the strategic issues is key to improving the railways. It was felt that unless there is a clear evolving strategy, delivery is less likely to be handled effectively. During a shuffle card exercise to identify priorities for the railway, one group expressed a commonly held view:

“National strategy has got to be up there somewhere because it means everything’s got to be working together to improve standards.”

Male commuter, London

The reconvened session in Norwich with non-rail users divided the responsibility for safety between the Government, the train operators and Network Rail. They suggested the following structure:

Government

- The structure of the rail industry
- National standards for train operators
- A long term strategy
- A clear national strategy

These things have to work together and can be planned well in advance, including the development of long-term budgets. Participants felt that the Government should focus its money on building the strategy, rather than fragment the public money that is available.

“Rather than long term strategy, have a clear national strategy... I don’t think having a long term strategy sounds all that committed”

Woman non-rail user, Norwich

Within national standards, the train operating companies (TOCs) and Network Rail should then take responsibility for specific aspects of safety as shown below.

TOCs

ATP

Driver training

Staff on trains

Network Rail

Maintenance of tracks and signals

Maintenance of trains

Prevention of vandalism

4. TRAIN PROTECTION SYSTEMS

This section reports on participants' reactions to, and thoughts about, various automatic train protection systems and how their installation might be funded. The workshops presented two options to participants based on the industry report "*ERTMS towards a better, safer rail system*" published by Railway Safety and the Strategic Rail Authority in May 2002. The workshop participants were asked for their views on the two systems and how they might choose between them. There was also discussion about the need for such systems.

4.1 TIME TO IMPLEMENTATION

There was surprise at the amount of time it was estimated to take to install train protection systems. When considering the recommendations of the "Uff-Cullen" joint inquiry the usual response was "*why should it take so long?*" After the industry proposals from the ERTMS Project Team were introduced, the response from some was even more critical, particularly when the estimated timetable for level 2 implementation was described.

"Why does it take 25 years to get an improvement?"
Woman commuter, Glasgow

This was also fed back at the reconvened sessions as a question raised by people to whom the participants had spoken.

"I've talked to a couple of people ... you're looking at two options, one to improve the system in 15 years, and one to improve the system much more efficiently in 30 years time, and their reaction was very much, 'but why can't they do it now?'"
Woman long distance business user, Manchester

A number of participants questioned the extended roll-out period for level 2 ERTMS, once it had been successfully proven given the lower levels of trackside equipment associated with this system. Others questioned why level 1 implementation should take as long as proposed as it was drawing upon existing technology.

This issue of projected time to install the systems was the single biggest point of contention in choosing between level 1 and level 2 at the deliberative conference, although other issues had emerged as important in the workshop discussions, including estimated costs and lives saved. At the deliberative conference the majority of the workshop representatives said that they would prefer to see level 2 ERTMS implemented because of the wider benefits it offered in addition to safety. However, a minority were not happy that this was an acceptable timeframe and supported the introduction of level 1 on this basis.

4.2 LIFETIME OF SYSTEMS

In the London workshop a further issue of timing was raised, this was the longevity of either ERTMS option. There was a widespread view that a forty-year lifespan was inadequate for such a major investment.

"They should be able to come up with something better. It's a lot of money for something that won't be lasting very long [only forty years]."
Woman commuter London

Other participants felt that it must be possible to upgrade any system that is installed. In Glasgow the key question raised was whether or not it was feasible to upgrade and develop

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ERTMS level 1 to level 2. The reported lack of compatibility between levels 1 and 2 provided a major disincentive to follow the level 1 option, despite the shorter time required for implementation across the network. A view also reflected in Norwich.

“It sounds as if level 1 will be dated by the time it’s put in.”

Woman non-rail user, Norwich

Some people suggested that the technical solutions being offered did not reflect the cutting edge technology available in other sectors, particularly the air industry and were not content with some of the answers provided regarding the technology.

“If satellite navigation is available in other sectors why not for rail? The technology exists – where is the railway!”

Male leisure traveller, Cardiff

This group of men in Cardiff wanted to see a long-term strategy developed for all investment in the railways, including safety, to ensure that options were chosen that allowed ongoing upgrading and updating of systems.

4.3 THE ROLE OF TRAIN PROTECTION WARNING SYSTEM

Participants were told that the Train Protection Warning System (TPWS) will be fully fitted on high speed lines by the end of January 2004 and that it will prevent between 65% and 80% of the fatal injuries that might be prevented by full automatic train protection. This investment in TPWS was generally welcomed, although some wanted to know why TPWS had been installed rather than ATP and others questioned whether ATP was needed in addition to TPWS. The rationale for this view was that the railways are safe enough and there will always be accidents as a result of human error, if nothing else.

Some participants asked how TPWS had apparently been fitted so much more quickly and cheaply than the estimates for ATP. They wanted to know whether this is a function of the wider ERTMS requirements, or because of the train protection technology itself.

For those groups that considered the timescale and costs associated with the fitting of the TPWS, there was questioning of why the estimated costs of this were lower and the fitment time shorter, than the estimates for ERTMS level 1, as both are established systems.

4.4 IS AUTOMATIC TRAIN PROTECTION A PRIORITY?

There was a broad spectrum of views on the degree to which ATP should be considered as a high investment priority. This spectrum occurred in all the workshops. The competing pressures between improving personal security, improving the reliability of services and improving communication with passengers, all led to debates about the degree to which ATP should be treated as a special case.

“I’m not convinced it is worth spending all that money on the new system when so few lives will be saved,”

Woman commuter London

“I would say don’t spend billions on the new ATP system, spend it on more rolling stock, cut the overcrowding for the percentage difference. They are already quite safe and half the accidents are caused by other reasons apart from signalling problems.”

Commuter Birmingham

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The London women's group thought that if saving lives is the focus, then a wider approach was needed, with personal safety, including tackling vandalism high on their agenda. Moreover, driver training should be a higher priority, especially as eliminating SPADS will not stop all accidents:

"It's quite sad if they have to spend all this money on this system to stop these fatalities happening. If train drivers were more alert, then this wouldn't happen. We're not allowed to drive through red lights."

Woman commuter, London

On the other hand, the view was that spending money on ATP was saving money elsewhere.

"What was the cost of the Ladbroke Grove accident? One or two accidents could pay for the whole new ATP system."

Leisure traveller Cardiff

Some people suggested that prioritising high-speed lines, where the potential effect of a SPAD-related accident is higher, was a sensible option. Some wondered about the cost-effectiveness of introducing ATP on other lines where TPWS appears to be reasonably effective.

There was much questioning of the need for inter-operability and hence the need for ATP to be installed on all lines. Participants said that because Britain is an island the extent to which trains that run in the UK run in the rest of the EU was minimal and should not be given priority. The argument that a single market would produce more cost-effective products was rejected in favour of a view that this was designed to support business at the expense of tax payers and passengers. The EU Directive was seen as the EU interfering in British affairs and preventing the UK Government from taking the best option for the UK.

"Is interoperability about making more money or is it safety?"

Woman commuter, Glasgow

"Why do we have to integrate with Europe. Why make the whole country compatible with Europe? It's more important to attend to our needs now."

Leisure Traveller Cardiff

The mixed nature of the traffic running on British railways led some to suggest that Britain should be investing in laying more lines to separate the different types of traffic rather than in ATP. In the London commuters group this led to a discussion about whether this was environmentally desirable or possible.

A number of groups concluded that it was right to commit to a course of action now, regarding train protection. The nettle should be grasped, the rationale being that it is possible to prevaricate endlessly, waiting for the next technology, or waiting for the costs of existing technology to fall, thus:

"They could put in ATP right now if they wanted to"

Leisure traveller Cardiff

This conclusion that action is required, was, however, generally backed-up by a concern that the course of action agreed should be one part of a long-term strategy to enhance railway safety and not a one-off decision.

4.5 CHOOSING BETWEEN TRAIN PROTECTION SYSTEMS

ERTMS levels 1 and 2 were presented in the workshops. In discussing the pros and cons of the two systems, the two main factors that people took into account were the impact that a system would have on preventing deaths on the railways and the reliability of any system that was introduced. Secondary factors were the time before implementation would be completed, the effect on the capacity of the railways and the associated impact on deaths on other forms of transport. The safety of track workers hardly featured at all.

In both Glasgow and London, there were serious doubts over whether or not the predicted modal shifts from the railways would occur if capacity were reduced. People said that they already put up with overcrowding and are likely to continue to do so.

Man 1: *“Can you really imagine people these days, who miss their trains because they’re delayed all the time, that get cancelled all the time, thinking, ‘oh my god, I’ve lost one an hour. Let’s get in the car?’”*

Man 2: *“Ye, and then sit in a traffic jam for hours.”*

Male commuters, London

Reliability of the service was said to be more important to participants than losing one train in eight under level 1.

In an ideal world people said that cost should not be an issue, but in reality they appreciated that any investment had to be considered in an economic context. Nevertheless, one group chose to ignore costs completely in exploring how they might choose between levels 1 and 2 because both estimates were very high and were likely to turn out to be inaccurate. Participants said that value for money rather than outright costs was important. In this context. Choosing the option with the possibility of upgrading from level 2 to level 3 and other systems with longer life spans made better economic sense than choosing level 1.

While some people took the industry estimates on costs, lives saved or lost, installation dates and capacity as given, others did not. This questioning of the data, particularly of cost and time, provided by the industry, meant that it was difficult for people to make effective judgements on different courses of action.

In at least two of the groups (Birmingham and Norwich) there was considerable concern about the reliability of the systems, particularly level 2. The Norwich group also realised the difficulty of the decision to be made, saying:

“I wouldn’t want to be the one to make the decision.”

Woman non-rail user Norwich

Factors like the ability to upgrade the system as technology develops, a rolling programme of maintenance of, and investment in, the infrastructure, and a commitment to national standards of maintenance and staff training were all seen as important factors in maximising the benefits offered by train protection systems.

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“There should be long term planning so that no new system becomes obsolete.”
Leisure traveller Cardiff

“This is because there hasn’t been any investment in anything for 20 years.”
Male commuter, London

At the deliberative conference the discussions were slightly different from those in the regional workshops. In the deliberative conference greater emphasis was placed on the speed with which systems could (or should) be implemented and the package of benefits offered by the alternative systems. Cost was still regarded as a major issue, but given the lack of confidence in the sums being proposed for either level 1 or level 2 implementation, it was not considered as a major factor in weighing the relative merits of the two systems.

The deliberative conference provided an opportunity for the workshop representatives to interact directly with technical experts. This enabled people to put their questions directly and allowed greater depth of explanation and cross-questioning. It was noticeable that the combination of interactive questioning and the passion and commitment that the industry expert conveyed, led to a much greater belief in the answers than had been achieved by the ERTMS Project Team’s written report or the explanations provided by the PSP and HSE teams at the workshops.

4.6 COSTS

The only figures available regarding the possible costs of ATP through the installation of ERTMS were those provided by the ERTMS Project Team in the report *“ERTMS: Towards a better safer rail system”*. These figures were viewed with a level of suspicion by some of those who took part in the workshops.

“These numbers are just made up.”
Man commuter, Glasgow

While some accepted the costs at face value, others questioned why a system currently in development and with an installation period twice as long, should be estimated to cost approximately half as much as an existing system, that would take less time to fit.

“If level 2 takes that much longer there should be an increased cost or is the saving because of the extra time?”
Woman leisure traveller Cardiff

“The case for investment (ERTMS Industry case P10) isn’t at all clear – there is no investment case – it didn’t make sense,”
Women commuter London

The fact that the HSE had commissioned technical and economic assessments of the industry report was welcomed. Questions were asked about the level of ticket revenue and the amount of public subsidy going into the railways. These showed that the sums of money being proposed for ERTMS were large in comparison to this income when considered on an annual basis. However people realised that over the timescales being proposed, the likely size of the investment was a much smaller part of the total resources that will be available.

Whilst a number of people offered the view that *“you can’t put a price on life”* they saw, sometimes reluctantly, that in fact this was exactly what policy makers had to do when weighing up investment decisions. In that context, some of the delegates at the deliberative

conference were interested in exploring the additional benefits, or otherwise, offered by the different ERTMS systems, in order to try to form an overall judgement on the value offered by each.

4.7 FUNDING OPTIONS

Opinions were divided amongst workshop participants about who should have responsibility for providing the funding. One view was that the railways represent a national infrastructure resource and therefore funding of safety measures should be the responsibility of the state. Comparisons were drawn with public services

“Loads of people don’t choose to use libraries but we still have them.”

Women commuter Glasgow

Others believed that it was fairer if those benefiting directly from any investments made should bear the responsibility of the costs, that is, passengers should pay. An automatic initial response from some was that the companies should pay but it was pointed out that their income is from passengers.

This division of views carried through to the deliberative conference. Although it was made clear that without public sector input, major investments in the railway were unlikely to be possible, a number of delegates were unhappy that public money should be used to *“solve a privatisation problem”*.

In almost all of the workshops there were people present with both of these views and after a fairly short discussion, the merits of both arguments were accepted. Moreover, the scale of the funding required, meant that people accepted, with varying degrees of reluctance, that the pragmatic choice was likely to be some sort of funding package that drew on both private and public sector contributions.

4.8 FUNDING MECHANISMS

It was universally recognised that in the end, the general public will pay, whether as taxpayers or as ticket purchasers.

“At the end of the day, the individual is going to pay. Whether its public or private you’re going to pay in to the Government or you’re gonna pay to use the service.”

Male leisure traveller Cardiff

Some groups questioned the HSE over the ability of the industry to make large-scale investments without Government aid. On hearing that such investments are rarely, if ever made, without major public sector support, there were several suggestions for mechanisms that recovered the initial outlay from the private sector.

The simplest was a profit cap, after which further profits should go directly into investment in infrastructure. A more complex idea proposed in Glasgow and Cardiff was increasing the fees to the train and freight operating companies, thus recouping the state’s initial investment. This income could revert to the Exchequer or go to Network Rail for further investment. In Manchester a group proposed that franchise agreements should be updated to reflect infrastructure improvements, demanding higher track access fees, but allowing costs to be passed on to passengers to reflect any improvements in services.

At the deliberative conference there was a discussion about the mechanisms of allocating money to the railways for infrastructure improvements. It was explained by a couple of the

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experts that this was managed through the Strategic Rail Authority, which considered bids for funding different projects and that no allocation had yet been made for ERTMS installation.

4.9 VISIBILITY

There were discussions about how it is often difficult to see the benefits of public spending. Whilst people recognised that they were paying various taxes and accepted that large sums were being invested in public services, their inability to “see” the benefits led to concerns over how well money was being managed.

“If we’re going to be taxed for something then let’s have it transparent and be sure that the tax goes into it.”

Male leisure traveller Cardiff

This discussion was reflected in one of the table discussions at the deliberative conference as well as in the Manchester and Cardiff workshops.

In the Manchester workshop people picked up on the need for the railway industry to proactively communicate the investments in improved safety, through a marketing campaign showing progress towards the final goal of full implementation. Suggestions for funding communication work included a levy on the various companies in the railway industry or using a small portion of advertising time/space already purchased by the industry to highlight safety investments as well as other service improvements.

Man 1 *“You’d think that if they’re spending £3.6 or £6 billion, part of that would be to illustrate to people what’s being done. In the cheapest possible way of course.”*

Man 1 *“It could be a three second slot in every virgin ad or something or there’s a special safety logo that this is what we’re aiming for, by such and such, a sort of countdown”*

Male long distance business users Manchester

5. REGULATION

This section sets out the participants' perceptions of those involved in the rail sector. It explores the reasons behind these perceptions and thoughts on how the industry should be co-ordinated and regulated.

5.1 TRUST & LEADERSHIP

A consistent theme throughout the workshops was a lack of trust in the various players in the railway industry. This was compounded by an absence of perceived leadership. None of the players were exempt from this lack of confidence, the train operators, Railtrack/Network Rail, the Government and the Civil Service all came in for greater or lesser degrees of criticism because no-one seemed prepared to take overall control and make themselves accountable. Railtrack with its image of low investment and sub-contracting took the brunt of the criticism for the railways. There appeared to be little spontaneous awareness of its successor Network Rail.

The fragmented nature of the railway industry was understood, at least to some extent, by all of the workshop participants, although some were surprised by the complexity of the relationships between the various organisations and companies. The Rail Passengers Council (RPC) publication "*Funding the Railways*", which was used as a handout after the initial workshop sessions, includes descriptions of the structure and funding of the railways. These descriptions did not instil confidence amongst those who read them. In the later workshops the structure was presented to the groups.

"In the rail industry there's lots and lots of companies all vying for position with each other all trying to get contracts off each othertoo many cooks spoil the broth."

Male, non-rail user Norwich

"I thought it was written by Stephen King, it's a horror story."

Male, leisure traveller Cardiff

The relationship between the various organisations is set out in a diagram in the RPC publication and it was described as a "*spider diagram*" by the group of male London commuters.

A principal concern was that a fragmented structure allowed organisations within the rail industry to shirk responsibilities by passing blame between them, rather than addressing problems. Moreover, there was no central monitoring body setting standards and checking the quality of work done. In a number of groups the Potters Bar crash was thought to be the result of poor maintenance and a lack of national standards and co-ordination.

In some places the HSE was identified as a body that might have the reputation, "*clout*" and central position that would enable it to provide the leadership that people wanted to see. This theme was developed further at the deliberative conference, where a number of delegates suggested that the HSE should take a leading role. The HSE was described as a trusted and respected organisation, words not widely used by participants throughout this project.

Conversations about the structure of the railway system led to concerns about where leadership for the railway industry might be found. Those (and there were many) who wished for a return to British Rail were sometimes countered by observations that a nationalised

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system had also had its weaknesses. Politicians were felt to have a part to play in setting strategic goals, but the transient nature of Ministers, whether or not there were changes of Government, was recognised. This led to a general view, amongst those who considered the issue, that some way should be found to ensure that there was a clearly defined mechanism for defining and driving forward a comprehensive national strategy. The Department of Transport was the obvious candidate for this role for some of the participants.

5.2 CONFIDENCE IN THE INDUSTRY

Whilst all those involved with the railways were criticised, the deepest scepticism was reserved for the industry and the summary report “*ERTMS: Towards a better safer rail system*” setting out the industry’s preferred options only served to reinforce the mistrust.

“The industry seem to paint a very rosy picture, to leave the upgrading for another 15 years, doesn’t that make you suspicious?”

Male leisure traveller Cardiff

This comment led to a debate over whether the industry was simply looking for ways of delaying investment, perhaps as a means of ensuring that it never had to be made at all.

Against this backdrop, many participants felt that regulation would be required to ensure that any final plan to implement ERTMS was carried through to an acceptable timetable. Those groups who were informed that TPWS installation had been required by regulation felt that this supported their view that the industry could not regulate itself.

Within the deliberative conference one of the experts suggested that the only way in which the industry could start to build up a level of trust in its activities was by doing the “*boring*” things properly. Running the trains on time was at the heart of this.

5.3 A NATIONAL STRATEGY

The concept of a national strategy did not arise spontaneously in all of the workshops. However, in those locations where it did emerge, it quickly assumed a central position during the discussions.

“A long term strategy should be top of the list. If they get that right they are not going to be bouncing through red lights.”

Woman leisure traveller Cardiff

All potential investments in the railways, whether in safety systems, staff training, maintenance or new infrastructure, were felt to be unlikely to realise maximum benefits without a sound, over-arching national framework. Such a framework could tie together the various issues associated with the structure of the railways, investment plans and if properly managed, provide the “*transparency, clarity and accountability*” called for by delegates at the deliberative conference.

Many of the topics discussed at the deliberative conference, such as the need for reliable services, good quality information, standards of training, standards for maintenance and financial planning, all led to the need for these topics to be considered as part of an overall strategy and not handled in a piecemeal fashion.

5.4 REGULATION AND NATIONAL STANDARDS

There was a good deal of concern over the lack of national standards associated with different aspects of the railway industry, for example the lack of common standards relating to driver

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training and maintenance requirements. Some people wanted to see rigorous guidelines laid down for both the train operators and Network Rail (and its sub-contractors) and some form of inspection to ensure that standards were being met. An analogy was drawn from the roads, where to be allowed to use the roads, individual drivers have to be able to demonstrate that they have reached a nationally accepted standard of competence and that their vehicle meets nationally accepted standards of mechanical performance.

“You’ve got your standards, buses, taxis, all have MOTs if things aren’t up to standard you can’t use the system. It should be the same for trains.”

Male long distance business user Manchester

Within the deliberative conference, there was a consensus amongst the regional workshop participants that regulation would be required to ensure a firm and demonstrable commitment to action. People felt that regulation should set out suitable milestones to allow progress to be monitored and reported, but there was a view that some degree of flexibility should be built in if ERTMS level 2 was chosen as the preferred option, given the relatively early stage of the technology’s development. At the deliberative conference a HSE representative explained that regulations can include regular reporting on the progress of systems in development to ensure that the project is moving forward.

5.5 MANAGING REGULATION

This issue was not discussed in all of the workshops. From the groups that discussed this topic, it was clear that any initial decisions on a plan for implementation of ERTMS and associated regulation were likely to need political will. Subsequent monitoring of compliance required a body with both the requisite skills and remit to ensure that a national plan could withstand fluctuations of political will.

The reconvened group of business travellers had the following discussion about regulation and enforcement:

Man 1: *“Who’s the transport secretary?”*

Man 2: *“Alistair Darling, isn’t it?”*

Man 3: *“Ye, but he’s only temporary.”*

Man 4: *“There’s no structure whatsoever...There’s no, this is what’s going to happen, this is how long it will take, and we’re not going to stray off it.”*

Man 1: *“We’re saying it’s Alistair Darling’s job to put that in place.”*

Man 3: *“There should be Alistair Darling at the top with the carrot but there should also be a committee below that with a big boot to make it happen.”*

These men felt that a monitoring or enforcement body would need to be comprised of people who bring together the attributes of competence, experience, independence and a proven track record.

It was recognised in another group that the HSE had a role in developing legislation, but a limited one, due to its limited responsibility. Other factors besides health and safety were felt to be important in ensuring that ERTMS fitment was part of a continually evolving national railway strategy. This led to suggestions that there should be a body established that had clear responsibility for overseeing implementation of ERTMS across the industry that drew on relevant technical and safety expertise, but also had passenger representation.

The male commuters in London discussed the membership of a governing body.

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Man 1: *“The TOCs shouldn’t be on the central board. They should be being told what to do by the governing board, not sticking spanners in the works.”*

Man 2: *“HSE should be at the top looking after people’s/workers interests.”*

Man 1: *“The inspecting needs to be done by a body with representatives from across the industry. But not the TOCs because they won’t want things done that cost money because it will [affect their profits]. “You need a body that has the power to make them comply. But this body needs to consult with the others but the governing body has to have the casting vote. Governing body should have HSE on it and the Department for Transport. These have transport and health and safety issues in hand between them.”*

The deliberative conference discussions moved in a rather different direction, with people seeing a rationalisation of oversight and management structures as the most important thing.

“You don’t want a proliferation of “Quangos”, the system needs streamlining.”

“There’s no national strategy, there are too many authorities not in authority”

Group feedback, deliberative conference

Questions were asked of the roles of the Office of the Rail Regulator and the Strategic Rail Authority, neither of which were represented at the deliberative conference.

6. CONCLUSIONS

The HSE's objectives set out in the Introduction to this report, fall into two broad categories, those that address the issues of rail safety and train protection and those that relate to the process of the dialogue project. The objectives related to the issues were to:

- provide, in an appropriate form and depth, intelligence on public attitudes to train protection issues and rail safety generally, to inform HSC decisions on whether to recommend legislation to require fitment to a specified timescale;
- collate and analyse public views on train protection and other railway safety matters of concern; and
- explore and reveal any differences in views between groups.

Whilst the process objectives were:

- encourage and facilitate wider public debate, including the participative framing and exploration of the main concerns and issues;
- reach a wide range of relevant groups, including those not traditionally contacted;

This section draws conclusions on the two classes of objectives separately.

6.1 THE ISSUES

Train Safety

There was a general assumption among those who took part in this exercise that the railways provide a safe means of transportation. Safety concerns that emerged spontaneously were usually linked to personal security and the effects of vandalism and anti-social behaviour.

Most participants did not voice worries over the safety of trains with respect to the possibility of crashes. This does not mean that people are not concerned about this aspect of safety, rather, when the subject was explored, the provision of a safe service was expected as part of the contract of buying a ticket.

Participants felt that structural issues were inhibiting the effective development of safety strategies, whether ongoing activities such as maintenance or major investments such as train protection. These structural issues were felt to be related to the fragmented nature of the railway industry and the lack of clear leadership, strategy and national standards to provide greater coherence to the sector. The HSE was seen as having an important role to play in providing this leadership in relation to safety issues.

Train Protection

Train protection was not something with which many of the public participants had any great familiarity before their involvement with this project. However, many were aware that signals passed at danger ("*jumping red lights*" was the phrase most often used) had been a cause of major accidents. When signalling practices and the assistance available to drivers were described, some participants in the workshops were surprised at the low level of technology available to support drivers, others had not known what to expect. People contrasted the relatively simple systems on the railways with the high degree of automation found on passenger airlines and the central air traffic control system.

There were mixed views on whether or not train protection was a priority area for investment. For some, the historic data showing the high proportion of fatal accidents that were ATP preventable provided compelling reasons to invest in ATP. For others, the perceived decline in investment in the railways in recent years led to the conclusion that investing in the basics, particularly maintenance, was a more appropriate way to invest limited funds, especially given the low level of fatalities.

Choosing an ERTMS system

The basic components of ERTMS levels 1 and 2 were explained in the workshops and the industry summary report “*ERTMS: Towards a better safer rail system*” was provided to give participants access to more information if they wished to have it. This allowed participants to consider the impact of a range of safety-related and economic factors when trading off the relative merits of different options. For any system, the reliability of the technology and its influence on the safety of passengers were widely regarded as being extremely important.

As noted above, in the workshops there was no clear consensus on whether or not it was appropriate to invest in ATP at all. Given two options of systems that would deliver ATP, there were also mixed views on which offered the better value. From one perspective the greater speed with which level 1 could be delivered was a particularly important factor, whilst for others, the ability to further upgrade level 2 in the future was seen as a way of ensuring commitment to the ongoing development of safety systems. One view was that it was better to invest in a more “modern” system based on modern mobile communications systems and that would be capable of further development in the future, rather than to invest in a “once off” system.

At the deliberative conference, a majority view emerged, with level 2 being the preferred option of most of the participants from the workshops. The diagram below is a copy of the flipchart produced at the end of the conference by the workshop representatives to present their conclusions to the “experts”.

**We (but not all of us)
want ERTMS Level 2**

- **Because**
 - It is multi-purpose
 - If it provides more efficiency and brings more people onto the railways it will have a positive effect on general transport safety
- **But**
 - It is so slow to implement
 - We want a commitment to action
 - We want regulation to ensure implementation

Timing

The minority view at the conference was primarily driven by a concern that the timescale being proposed by the industry team for full implementation of level 2 was unacceptably long.

Generally timing featured heavily in the debates that took place regarding the two systems and was a critical factor for many who preferred level 1 ERTMS. Very few people were happy with what they perceived to be extremely long timescales to implement either system. No one in any of the workshops defended the proposed timetables despite the extensive nature of the railway network.

Implementing an ERTMS system

Not only was there almost universal surprise at the timescales proposed for implementing either ERTMS system but some participants felt that this was merely a delaying tactic to avoid ever having to make the capital outlay. The fact that the HSE had commissioned technical and economic assessments of the industry report was welcomed as a way of checking the industry assumptions.

Very few people thought that the industry could be trusted to devise and follow through an implementation plan without a regulatory framework providing an element of compulsion. The workshop representatives at the deliberative conference confirmed this view.

Differences between groups

The overwhelming impression is one of the similarity of, rather than differences between, the conversations in the different workshops. This became very clear at the deliberative conference where the representatives put forward the views of the wider groups. Indeed, one deliberative conference delegate commented on the apparent similarities in the discussions in all the workshops, based on the discussions at the conference. Across the country the same issues cropped up, reliability, personal security, concerns over strategic leadership and national standards, mistrust in the railway sector and the need for a legislative framework to drive implementation of safety systems.

The only major difference that was observed was that the workshop of non-rail users did not pick up an issue that emerged spontaneously everywhere else, overcrowding.

6.2 THE PROCESS

The process used and described in more detail in Annex 1 was successful in engaging members of the public in debate about rail safety generally and train protection issues in particular. Given the time and resources available to the HSE, it was impractical to have a debate that engaged large portions of the UK public. The structure therefore facilitated an in-depth debate with members of the public, selected to be symptomatic of specific sections of society with respect to the railways. These people could accurately be described as “those not traditionally contacted” that is, specific types of railway users and non-users but not passenger activists.

Strengths of the process

Participative framing and exploration of the issues was ultimately relatively straightforward to achieve. “Topic guides” were used to provide an outline structure for the initial workshops and for the reconvened sessions. However, the reconvened sessions were designed to pick up on points made in the workshops and to answer the questions raised. Consequently, each session was slightly different in content but overall the same issues arose as important. The

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emphasis that the regional groups placed on different issues was reflected in the final structure of the deliberative conference and in this report. The results presented in this report provide guidance on how the public would like to see ERTMS taken forward.

Improving the process

A weakness of the process was that at the workshops and the deliberative conference there was effectively only one perspective on the ERTMS options on offer. It would have made for more balanced debate if two perspectives had been presented. So it would, for example, have been helpful to be able to draw on the technical and economic reviews commissioned by HSE to present other perspectives on the options. Whether these reviews ultimately endorse, or disagree with the industry perspective, does not really matter, what is important is that they could be seen to come from different, and independent, sources. This option was not available under the constraints of this project, but should be borne in mind for any similar exercises in the future.

Creating wider debate

To build a wider public debate requires different strategies and more time and financial support. This project has demonstrated that it is possible to disseminate information about various safety options and their respective implications beyond various categories of “expert” and “interest” groups, thereby raising the level of the wider debate and extending the debate. One of the industry representatives at the deliberative conference commented on the good grasp that the workshop delegates had of the technical details and the issues. The Health and Safety Executive and Commission are now seeking to widen the debate still further.

It is possible to use a project such as the public dialogue project to stimulate wider discussions of both the issues and even the nature of the debate itself. The most obvious way to do this would be for the HSC/E, with a media partner, to construct a story around the process of the project and, using the materials developed for the workshops, thereby inform and engage a wider section of the public.

ANNEX 1 METHODOLOGY

The public dialogue project had in six stages, these were:

- “Experts” forum;
- “Lay” workshops;
- Reconvened “lay” discussions;
- Interim report;
- Deliberative conference; and
- Final report.

“Experts” Forum

The “experts” forum contributed to the overall consultation by capturing the views of key stakeholders. However, it also played an important part in preparing for the “lay” workshops, both through contributing to the development of the topic guides for the public workshops and in enabling the “experts” to understand the framework of the consultation. A full list of attendees is given in annex 2.

The forum enabled discussion between “experts” and drew out all points of view. The full agenda is given in annex 3.

“Lay” Participants

There were six groups of 15 people recruited to the following profile:

1. Non-London rail commuters (at least 3 days per week) – held in Birmingham. This will be the pilot group.
2. Scottish rail commuters (at least 3 days per week) – held in Glasgow
3. Non-users (less than twice a year) of rail– held in rural East Anglia. This group of will be defined as not using railways, who otherwise would, because:
 - a. they do not live near a railway station;
 - b. the trains do not go where they want to go;
 - c. the trains are too infrequent for their needs; or
 - d. the cost of rail travel is prohibitive.
4. Occasional (i.e. 5-12 to times a year) users of rail for pleasure (including shopping) – held in Cardiff
5. Occasional (i.e. 5-12 to times a year) business users of rail (long distance) – held in Manchester
6. London rail commuters (at least 3 days per week) – held in central London

The groups were mixed on age, gender and social class, only rail use was used as a selection criterion. Within this sample we had people who use the railways to different degrees and for different purposes. This allowed the variety of underlying values and attitudes to be drawn out.

Participants will be recruited using a professional market research company, using a recruitment questionnaire agreed with the HSE, which is given in annex 4.

Initial workshops

Each workshop had two or three PSP facilitators and one or two HSE representatives. The workshops began with a brief introduction after which the group of 15 split into two groups.

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In four of the six groups this was done on the basis of gender. In these two groups there were general discussions that drew out general impressions of the railways before exploring issues of safety and more specifically, accidents. This was followed by nearly two hours (with a break in the middle) setting out:

- general information on railway safety;
- train operating and the nature of signalling practice;
- accidents involving passengers;
- the technical advantages and limitations of different automatic systems;
- the economic, and other costs, of different automatic systems, including how they are installed;
- accidents involving railway workers; and
- the cost (both financial and non-financial) to passengers of disruption to services.

The final half an hour of discussion enabled participants to clarify and question the information they had received and to give their first impressions. The first workshop took place in Birmingham and was used as a pilot. The final workshop topic guide is given in annex 5.

Reconvened discussions

The workshops were reconvened on the following Wednesday or Thursday evening for 1½ hours by PSP facilitators without HSE and were run as two small groups. In the time between the two sessions HSE obtained answers to the questions raised by the participants and these were given at the start of the second session. Annex 6 gives the questions and the answers provided by HSE.

Between the two sessions the participants were encouraged to talk to others and reflect on the information they had received. These sessions were used to explore priorities for the railways and to identify the priority the railways might be given in public spending.

The primary purpose of the reconvened group was to prepare input from the individual groups for the concluding deliberative conference. The PSP facilitators operated in traditional “facilitator” mode, concentrating on helping the groups to organise their input to the deliberative conference. The topic guide is given in annex 7.

Interim Report

An interim report was sent to all those who took part in the workshops and the expert forum after the last reconvened discussion groups. The purpose of this report was to:

- provide feedback to all the participants;
- provide briefing material for “experts” and “stakeholders” attending the deliberative conference;
- introduce to the workshop groups, the discussions held by the other groups; and
- give the HSE team an early indication of emerging themes.

The interim report is bound separately and can be obtained from WHERE?

Deliberative Conference

The final deliberative conference will allow the different perspectives from the various user and non-user groups and the expert forum to be drawn together so that common themes can

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be identified and major differences exposed. There were two representatives from each of the regional workshops and representatives from across the “expert” groups as well as from the HSE railway directorate. The list of experts who attended the deliberative conference with indications of the workshop representatives is set out in annex 8. In all 27 people attended, including the PSP facilitators.

“Consultation” means “to seek advice from; to take counsel” and implies an interaction of views and a shifting of positions as each party comes to understand the perspective of the other. The premise of genuine consultation is that no one view holds greater weight than others, but rather that both those consulting and those being consulted are willing to change their minds in response to information and debate. This was the guiding principle behind the conference.

The conference was interactive and deliberative with the representatives of the six “lay” workshops making short presentations on the key issues that their group identified. The “expert” representatives had an opportunity to question the “lay” participants and put their point of view. This was followed by table discussions that enabled more people to put their perspective and for more in-depth discussions. The agenda is set out in annex 9.

The conference achieved its goal of producing recommendations and supporting arguments that the HSE can consider when preparing its submissions to Ministers.

Final Report

A draft of the final written report was sent to all those who took part in the workshops and the expert forum, including those who did not attend the deliberative conference. This enabled them to make further comments to ensure that the final report adequately reflected all views.

The final report was presented to HSE on 16 December 2002.

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ANNEX 2 LIST OF “EXPERTS”

Mr Rob Andrews	Railway Inspectorate
Mr David Bennett	ASLEF
Ms Margaret Burns	HSC
Mr Ken Burrage	Institution of Railway Signal Engineers
Mr Clive Burrows	First Group
Mr Phil Dee	RMT
Mr John Dennis	The Railway Forum
Mrs Linda Di Lieto	
Mr Andy Doherty	Railtrack
Mr Mark Dyball	People Science & Policy Ltd
Ms Liz Gibby	HSE
Mr Rob Gifford	The Parliamentary Advisory Council for Transport Safety
Mrs Maureen Kavanagh	STAG
Mr Robin Kellow	STAG
Ms Fiona McNeil	ERTMS Project Team
Mr David Morris	HSE
Mr Rod Muttram	Railway Safety
Mr Fred Parsonage	HSE
Mr Anthony Smith	Rail Passengers Council
Mr Giles Thomas	Strategic Rail Authority
Mr Alan Tipping	TSSA
Mr David Waboso	ERTMS Project Team

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ANNEX 3 AGENDA FOR “EXPERT” FORUM

PUBLIC DIALOGUE ON TRAIN PROTECTION SYSTEMS

4th October 2002

Health and Safety Executive
Rose Court, 2 Southwark Bridge, London SE1

Agenda

- 1.15 p.m. Lunch
- 2.00 p.m. Welcome, Margaret Burns, Health and Safety Commissioner
Background and purpose of the public dialogue, how it fits into the bigger picture, etc.
- 2.10 p.m. Introduction, PSP
What we want from the forum and round table introductions
- 2.25 p.m. Overview of the public dialogue exercise, PSP
Questions
- 3.00 p.m.
- Key questions for the public to address
 - Key pieces of information the public should have
 - Identification of issues for those present
- 3.45 p.m. Identification of those present able to help in the public sessions and other suggestions of other “expert” representatives for those sessions
- 4.00 p.m. Close

Tea, coffee and water will be available throughout.

ANNEX 4 RECRUITMENT QUESTIONNAIRE

We want to recruit six groups of 15 people for a four hour workshop on surface rail safety on the following Saturdays in October and November.

12 October group 1
 19 October group 2
 26 October groups 3&4
 2 November groups 5&6

Each group of 15 will be reconvened one evening the following week on the following dates for 1½ hours.

Thurs 17 October group 1
 Wed 23 October group 2
 Wed 30 October groups 3&4
 Wed 6 November groups 5&6

At this second session they will be asked to nominate 2 people to go to a meeting in London on 16 November (Facts International is not responsible for getting people to this meeting). The profile of the six groups should be as follows.

1. Non-London rail commuters (at least 3 days per week) in Birmingham
2. Scottish rail commuters (at least 3 days per week) in Glasgow
3. Non-users (less than twice a year) of rail in rural East Anglia. This group of will be defined as not using railways, who otherwise would, because:
 - a. they do not live near a railway station;
 - b. the trains do not go where they want to go;
 - c. the trains are too infrequent for their needs; or
 - d. the cost of rail travel is prohibitive.
4. Occasional (i.e. 5-12 to times a year) users of rail for pleasure (including shopping) in Cardiff.
5. Occasional (i.e. 5-12 to times a year) business users of rail (long distance) Manchester.
6. London rail commuters (at least 3 days per week) – held in central London and be recruited from Charing Cross and Waterloo railway stations.

Groups 1,2,4,5&6 to include at least 2 people whose ethnic origin is either Black (including British, Caribbean and African), Indian sub-continent (India, Pakistan and Bangladesh) or mixed.

We will ask for people to give us their names and addresses at the first session so that we can send them additional information.

CLASSIFICATION

QA.	Which member of your household, either yourself or related to you, would you say is the CHIEF INCOME EARNER. That is the person with the largest income, whether from employment, pensions, state benefits, investments or any other source.	Self	
		Spouse/Partner	
		Other Adult (specify)	

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QB.	Is the CHIEF INCOME EARNER		
	Working (either full or part-time)	1	
	Retired/not working with PRIVATE PENSION /MEANS	2	Ask QC
	Unemployed less than 6 months	3	
	Unemployed more than 6 months	4	CODE
	Retired with STATE BENEFIT/PENSION ONLY	5	SOC GDE
	Not working with STATE BENEFIT ONLY	6	AS 'E'
	Student	7	CODE SOC GDE AS 'C1'
QC.	OCCUPATION OF CHIEF INCOME EARNER		
	Job Title		
	Job Description		
	Industry		
	Size of Company		
	Qualifications		
	If manager/supervisor/self-employed - Number of people responsible for:		
	IF RESPONDENT IS NOT CHIEF INCOME EARNER ASK:-		
QD.	What is your own occupation?		
SOCIAL GRADE		CODE	ROUTE
	A		
	B		
	C1		
	C2		
	D		
	E		
MARITAL STATUS			
	Single	1	
	Married/living together	2	
	Other	3	
GENDER		CODE	ROUTE
	Male	1	REFER TO
	Female	2	QUOTA
ETHNIC ORIGIN			
QE.	Which of these best describes your ethnic origin SHOWCARD		
	White	1	
	Black (including British, Caribbean and African)	2	REFER
	Indian sub-continent (India, Pakistan and Bangladesh)	3	TO
	Other	4	QUOTA
	Mixed	5	

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AGE last birthday (WRITE IN):				
	20-24		1	Ensure
	25-29		2	A
	30-34		3	Spread
	35-39		4	Of
	40-44		5	Ages
	45-49		6	
	50-55		7	
	56-60		8	
	60+		9	
WORKING STATUS				
	Full-time (30+ hours/wk)		1	ENSURE
	Part-time (8-29 hrs/wk)		2	SOME
	Not working		3	FROM 1
QE.	Have you EVER attended a group discussion or depth interview before?	YES	1	ASK QF
		NO	2	GO TO QJ
QF.	Have you been to a group discussion or depth interview in the last 6 months?	YES	1	CLOSE
		NO	2	GO TO QG
QG.	How many group discussions/depth interviews have you been to in the last 2 years? (i.e. 6 months - 2 years ago)	None	1	GO TO QI
		1 or 2	2	GO TO QH
		More than 2	3	CLOSE
QH.	Did you go to any groups/depths between 2 and 7 years ago?	Yes	1	CLOSE
		No	2	CONTINUE
QI.	What was the subject of the discussion group(s)/depths you took part in in the past? (WRITE IN SUBJECT MATTER AND APPROX - WHEN IT WAS FOR EACH OCCASION).			
	IF ABOUT Railways or travel within the UK - CLOSE. THIS IS VERY IMPORTANT. THE RESPONDENT MUST NEVER HAVE PARTICIPATED IN A DISCUSSION ON THE SAME SUBJECT.			
<p>IN A NUTSHELL: NB: If you have any queries at all, please call your Regional Manager</p> <ul style="list-style-type: none"> • At least one-third of each group/set of depths must be brand new recruits. • The remaining two-thirds can have attended up to a maximum of 2 groups/depths in the last 2 years (ie. 6 months -2 years ago) • Those who have been to 2 groups/depths in the last 2 years must have had a 5 year gap before that • None to have attended any group/depths in last 6 months • None ever to have attended a group/depths on the same subject matter (see QI) <p>None to work in or have family or close friends who work in any of the excluded occupations listed at QJ.</p>				

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QJ.	Do you or any close family or friends work in any of the following jobs or industries?		
	Teaching	1	
	The Railways	2#	CLOSE
	Retailing	3	
	Journalism	4#	CLOSE
	Market Research	5#	CLOSE
	Medical profession	6	
	The Law	7	
	Road Haulage	8	
# Recruit no one who codes			
We are undertaking a project about the railways .			
Q1.	Do you think that ordinary people should have more say about railways?		
		YES	V
		NO	X
Recruit some of each response within the sample.			
Q2.	Which of these statements best sums up your usage of the railways.		
	Don't use	0	Go to Q3
	Use occasionally (5-12 times a year) for business	1	RECRUIT TO GROUP 5
	Use occasionally (5-12 times a year) for pleasure (including shopping)	2	RECRUIT TO GROUP 4
	Use regularly (at least 3 days per week) as a commuter	3	RECRUIT TO GROUPS 1, 2 and 6
	Don't know	4	CLOSE
Q 3.	Which of these statements best explains why you don't use the railways SHOWCARD		
	I don't live near a railway station	1#	Go to Q4.
	The trains don't go where I want to go	2#	Go to Q4.
	The trains don't run often enough for me	3#	Go to Q4.
	Ticket prices are too high	4#	Go to Q4.
	None of the above	5	CLOSE
# Recruit some from each of 1-4 to group 3			
Q4.	If it wasn't for that would you like to use the railways?		
	Yes	1	Refer to Quota and Recruit to Group 3
	No	2	CLOSE

ANNEX 5 WORKSHOP TOPIC GUIDE

The left hand column contains briefing notes for facilitators, the right hand column contains instructions and suggested techniques, and aids. Block Capitals indicate instructions to the moderators.

BRIEFING NOTES	QUESTIONS AND TECHNIQUES
<p>INTRODUCTION TO THE PROJECT (15 MINUTES)</p> <p>Introduce HSE team as Civil Servants from the Government department that is our client. Do not mention Health and Safety at this early stage.</p>	<p>THANK EVERYONE FOR COMING. INTRODUCE SELF</p> <p>CHECK EVERYONE IN THE GROUP IS OF THE RIGHT CATEGORY</p> <p>See focus group introduction sheet to ensure all issues of confidentiality, procedures and respect for participants are covered.</p> <p>REQUEST TAPE RECORDING.</p> <p>Standard ice-breaking introduction</p> <p>INTRODUCE HSE AND GIVE OVERVIEW OF THE PROJECT</p> <p>Overview of project We are meeting here today for a four hour workshop and there are five other sessions like this being run around the country. We have someone here to answer questions later and they will also give you their perspectives on the issues we're going to discuss. On Wednesday/Thursday we are going to meet without him (REINFORCE THAT THE PSP TEAM ARE NOT EXPERTS). At that meeting we would like you to identify some key points that you want to put to a small conference next month/in two weeks time. We would also like you to nominate two people from this group to go to that conference to put your views. After the conference we will send you a short report for you to comment on so that we are sure that your views have been included. We will send you the final report by the end of the year.</p> <p>This process is part of a review of the railways. The results of this exercise will be part of the information that Civil Servants draw on when giving advice to Government Ministers on what should be done. So this is your chance to influence what happens.</p> <p>SPLIT INTO 2 GROUPS</p>

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BRIEFING NOTES	QUESTIONS AND TECHNIQUES
INTRODUCTION TO RAIL TRAVEL 30 MINUTES	<p>When you travel about in your day-to-day lives how do you usually do it? What about at weekends? Or travelling to work? Taking the kids to school, going shopping, that sort of thing?</p> <p>Do you ever think about the best way to travel somewhere? When you do what sort things do you take into account? Long distance versus local trips?</p> <p>Are they all personal views or do people see/consider the bigger picture eg pollution levels reduced?</p> <p>PROBE FOR WHETHER THE DECISION-MAKING PROCESS IS DIFFERENT IN DIFFERENT SITUATIONS?</p> <p>Thinking about the railways, what are the first thoughts that spring to mind?</p> <p>USE FLIP CHART TO RECORD WORDS PROBE REASONS FOR WORDS</p> <p>What is most important to you about the railways?</p> <p>PROBE FULLY TO IDENTIFY ALL THE ELEMENTS THAT ARE IMPORTANT TO PEOPLE WHEN THEY TRAVEL BY RAIL AT A CONSCIOUS LEVEL AND WHAT FACTORS THEY TRADE-OFF IN DECIDING WHICH MODE OF TRANSPORT TO USE</p> <p>ENSURE ALL ASPECTS COVERED IN SOME DEPTH. ENSURE FULL RANGE OF ISSUES (POSITIVE AND NEGATIVE) COVERED</p> <p>SAFETY MAY BE SOMETHING THEY TAKE FOR GRANTED AND/OR DO NOT THINK ABOUT CONSCIOUSLY, SO NEED TO PROBE SUBTLY FOR THIS</p> <p>TRY TO ESTABLISH A RANK ORDER OF RAILWAY FEATURES/ ATTRIBUTES FOR THE GROUP</p>

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BRIEFING NOTES	QUESTIONS AND TECHNIQUES																
<p>RAILWAY SAFETY Figures from the EU transport Safety Council in 1999 show the following numbers of fatalities per “billion passenger km” for different transport modes.</p> <p>This data is also on board 1</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Rail</td> <td style="text-align: right;">0.4</td> </tr> <tr> <td>Air</td> <td style="text-align: right;">0.01</td> </tr> <tr> <td>Bus or Coach</td> <td style="text-align: right;">0.4</td> </tr> <tr> <td>Van</td> <td style="text-align: right;">1.2</td> </tr> <tr> <td>Car</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Pedal cycle</td> <td style="text-align: right;">41</td> </tr> <tr> <td>Foot</td> <td style="text-align: right;">57</td> </tr> <tr> <td>Motor cycle/moped</td> <td style="text-align: right;">109</td> </tr> </table>	Rail	0.4	Air	0.01	Bus or Coach	0.4	Van	1.2	Car	3	Pedal cycle	41	Foot	57	Motor cycle/moped	109	<p>FOLLOW-UP ON ANY SAFETY ISSUES RAISED</p> <p>What concerns you about railway safety? Do you think that its safer to travel by rail in the UK than to travel by road? And what about cycling and walking?</p> <p>Who should pay for safety measures/improvements on the railway?</p> <p>POINT OUT IF NECESSARY THAT “THE INDUSTRY” MEANS PASSENGERS AND OR SHAREHOLDERS “THE GOVERNMENT” MEANS ALL OF US AS TAX PAYERS</p> <p>Explore issue of tax payers pump priming and private TOCs increasing their profit as a result but longer term this may lead to TOCs seeing the ability for increased profit and making the investment themselves</p> <p>TRY TO PROBE VIEWS ON THIS IN MORE DEPTH</p> <p>USE FLIP CHART IF HELPFUL</p> <p>Why do you think accidents happen on the railways? What causes accidents? How might they be prevented?</p> <p>USE FLIP CHART TO RECORD SUGGESTIONS</p>
Rail	0.4																
Air	0.01																
Bus or Coach	0.4																
Van	1.2																
Car	3																
Pedal cycle	41																
Foot	57																
Motor cycle/moped	109																
<p>TRACKSIDE WORKERS’ SAFETY On average 2.2 trackside workers are killed each year (average per year 1996-2001)</p>	<p>What about the safety of workers? Should this be taken into account not just in operating procedures but also in the decisions about what equipment to put in place?</p> <p>RECONVENE AS ONE GROUP</p>																

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BRIEFING NOTES	QUESTIONS AND TECHNIQUES
<p>INTRODUCTION TO NEXT SESSION 75 MINUTES.</p> <p>THIS SESSION WILL EXPLORE THE CAUSES OF ACCIDENTS AND LEAD INTO DISCUSSIONS OF TRAIN PROTECTION.</p>	<p>THIS IS A LONG SESSION. IF IT APPEARS THAT THE WORKSHOP IS BECOMING TOO MUCH LIKE A CLASSROOM OR LECTURE USE TECHNIQUES SUCH AS BREAKING THE GROUP INTO PAIRS OR SMALLER GROUPS TO BREAK UP THE SESSION.</p> <p>We want to spend the rest of the time available exploring your views on some issues that the rail industry and those who regulate it are facing. We're going to give you some key pieces of information and you'll have an opportunity to question the HSE representative. On Wednesday/Thursday evening we will meet without the HSE representative and (STRESS YOU ARE NOT AN EXPERT) identify questions that you want to put to a bigger conference in London next month. We will also want to identify the delegates from this group to go to that conference.</p> <p>There are a number of technical pieces of information people need to have as well as some background on how we got where we are today.</p>
<p>ACCIDENTS</p> <p>Four main causes of accidents:</p> <ol style="list-style-type: none"> 1. Faults with the infrastructure 2. Faults with the train 3. SPADS (Signals passed at danger) 4. Trespass and vandalism <p>2.7% of all collisions derailments over the last 30 years have been directly caused by SPADS. However, the crashes at Watford (1996, 1 Passenger death), Southall (1997, 7 deaths) and Ladbroke Grove (1999, 31 deaths) all resulted directly from SPADS.</p>	<p>PICK-UP ON CAUSES OF ACCIDENTS FROM END OF PREVIOUS SESSION</p> <p>Which worries people the most? EXPLORE VIEWS ON THESE DIFFERENT CAUSES.</p> <p>In this project we want to focus on train protection systems, not issues of maintenance or security. So lets look at why SPADS (Signals passed at danger) happen.</p>
<p>SPADS</p> <p>In the UK all the track is divided up into sections (called "blocks") about a kilometre in length. A train should not run into a section occupied by another train. The track detects the presence of a train and turns the signal at the start of the block red. But because the train needs such a long stopping distance and the driver won't be able to see the red light in time, the signal at the beginning of the previous section turns to yellow and the one at the front</p>	<p>In order to understand why SPADS happen you need to know a bit about how the signalling systems work on the railway. It's not like pulling up at the traffic lights in your car. A high-speed train needs well over a mile stopping distance. Anyone who's driven a heavy vehicle like a lorry or a big camper van or something like that will appreciate this.</p> <p>USE BOARD 2 TO EXPLAIN SIGNALLING PROCESS [PSP TO OUTLINE THIS]</p>

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of the previous section to that shows a double yellow. Anything further back along the line will show green.

The exact stopping distance depends on things like the exact length of the block (they are not all the same) the condition of the track, the steepness of the site, the weather conditions and so on, just like in a car. So the driver has to know the route.

If the driver misjudges any of these factors the train may run past the red signal. There are about 4 SPADS per week at the moment but only significantly less than 1 in 100 SPADS result in an accident with casualties. A driver is involved in a SPAD about once every 17 years of their working life. (David Davies article).

CfIT FACT SHEET 10: Fatal accidents due to SPADS happen on the railway about once every 2 years. The average number of fatalities per accident due to SPADs is 4. Hence about 2 deaths per year could be prevented by eliminating SPADs. Because of Ladbroke Grove in particular, the average fatalities per accident due to SPADs for 1996 – 2001 is much higher at 7.8 per year. Prior to Ladbroke Grove the average fatalities per accident due to SPADs was 2.2.

This highlights a potential weakness of using past statistics to measure future cost-benefit relationships.

On the roads there were 3,409 accidental deaths in 2000. On the motorway and trunk road network the accident rate is 41 accidents per 100 million vehicle kms, resulting in 1,945 deaths.

Given this structure how might it be that a train can pass a signal at danger? Record suggestions on flipcharts.

THIS MIGHT BE AN APPROPRIATE PLACE TO BRIEFLY SPLIT THE GROUP INTO PAIRS OR SUB-GROUPS.

ONCE SUGGESTIONS GATHERED PASS TO HSE REPRESENTATIVE TO DISCUSS REASONS FOR SPADS INCLUDING THE ROLE OF DRIVER IN AVOIDING SPADS (Signals Passed At Danger)

Has anyone been involved in any incidents like this? If so ask about experiences.

ASK HSE REPRESENTATIVE TO EXPLAIN THE IMPACT OF SPADS IN TERMS OF FATALITIES. CHECK EVERYONE IS CLEAR ON THIS AND ASK FOR QUESTIONS

How big a problem is the level of fatalities caused by SPADs perceived to be? What money and resources should be put into this? Why? Why not? How much effort is the risk worth? Is the risk likely to be completely eliminated? How might the risk be reduced? **AGAIN THIS MIGHT BE AN APPROPRIATE PLACE TO BRIEFLY SPLIT THE GROUP**

HSE REPRESENTATIVE TO BE CALLED ON TO DESCRIBE IMPACT ON SURVIVORS AND THE BEREAVED, ROLE OF DRIVERS, IMPACT ON DRIVERS. WIDER EFFECTS ON THE RAILWAYS AS NECESSARY.

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BRIEFING NOTES	QUESTIONS AND TECHNIQUES
<p>TRAIN PROTECTION SYSTEMS</p> <p>There are a number of systems that try to help the driver with their judgements.</p> <p>The simplest UK system, Automatic Warning System AWS gives drivers an audible and visual indication of whether a signal is “clear” (green) or not. Where a signal is at red (“stop”) or yellow (“caution”) the train brakes are automatically applied unless the driver cancels the warning within 2 seconds. Experience has shown that AWS does not prevent all SPADs - it cannot prevent human error.</p> <p>Regulations made by the Health and Safety Commission¹, mean that the railway industry is installing the Train Protection and Warning System (TPWS) on much of the network. TPWS automatically applies a train’s brakes if it approaches a signal too fast, or if it fails to stop at a signal set to “danger” (red). It won’t stop the train at the signal but will do so in the so-called “overlap” - the portion of track beyond the signal before the point where danger occurs. This system’s effectiveness depends on speed of the train. Higher speed (above about 75 mph) means that TPWS may not ensure the train stops in the overlap. Poor or defective brakes, or low wheel to rail adhesion, could exacerbate the problem. Nevertheless, it is estimated that when TPWS is fully installed (by January 2004) it will prevent between 65% and 80% of the fatal injuries that might be prevented by full automatic train protection.</p> <p>This system should eliminate about between 65%-80% of SPAD-related risk of collision at speeds below 75 mph and is expected to save about 3 lives per year and cost £500 million. (David Davies article). The Ladboke Grove collision would have been entirely averted by TPWS, because the speed of the Thames Train was quite modest and the overlap during which the train can safely stop at was quite long. TPWS would not have prevented the Southall collision.</p> <p>BUT HOW LONG WILL THE SYSTEM LAST? THIS IS IMPORTANT IF THE COST PER LIFE IS TO BE CALCULATED.</p> <p>With this system fully installed, fatal accidents due to SPADs are expected to happen once every 6 years – less than one fatality per year. (CfIT fact sheet)</p>	<p>Technical systems are being developed to reduce the number of SPADS. CHECK FOR LEVEL OF AWARENESS KNOWLEDGE OF ANY OF THESE</p> <p>EXPLAIN THAT YOU ARE GOING TO OUTLINE SOME SYSTEMS AND BE CLEAR THAT PEOPLE SHOULD ASK QUESTIONS AS YOU GO THROUGH THIS. EMPHASISE THAT ALL THE FIGURES QUOTED ARE ESTIMATES.</p> <p>Already in existence is the Automatic Warning System (AWS)</p> <p>USE BOARD 3 TO EXPLAIN AWS, TPWS AND ATP. CHECK EVERYONE IS CLEAR ON THIS AND ASK FOR QUESTIONS</p> <p>ASK HSE REPRESENTATIVE TO DESCRIBE ROLL-OUT OF TPWS ACROSS THE RAILWAYS. HIGHLIGHTING WHAT IT CAN AND CANNOT DO.</p> <p>Expect some debate about the value of a life do not introduce the concept of “official” values. HSE representative to have this data available if questioned</p>

¹ *The Railway Safety Regulations 1999*

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BRIEFING NOTES	QUESTIONS AND TECHNIQUES
<p>There are more sophisticated automatic train protection systems (ATP) that are computer-based and monitor the speed of the train, the signal aspect, distance to the next signal, etc. for the driver.</p> <p>These deal with the risk of SPADS at higher speeds by over-riding driver instructions and stopping trains if signals against them. One way of looking at the effectiveness of ATP is data on train accidents which result in at least one fatality. Of the 77 such accidents between 1967 and 2000, 31(40%) would have been prevented by ATP.</p> <p>An EU directive makes ATP obligatory on high speed lines when signalling is renewed/up-graded. Another EU directive coming into effect in 2004 will make ATP compulsory on all main lines. In order to ensure “interoperability” across Europe, i.e. trains can run across borders and enables a single market in trains and infrastructure the EU directive on ATP therefore also requires the use of ETCS (European Train Control System), which means that all technical specifications must be common on trains that are to run on the Trans European Network.</p> <p>ETCS is the train part of a wider protection system called ERTMS (European Rail Traffic Management System). This is a computer and communication-based train control system that effectively replaces conventional signalling. It puts the signal in the cab.</p> <p>Level 1 ERTMS uses track-side equipment to transmit signal to cab and means the driver gets the signal with a time lag, so if the track further ahead has cleared the driver won’t know that until s/he gets to the next beacon. Because there is track-side equipment there is a danger to track workers.</p> <p>Level 2 ERTMS (still in development) uses continuous digital radio connection between train and control centre so information on track ahead is always current and trains can respond more immediately to the situation.</p> <p><i>There are different subsystems within level 1 and level 2 see table on page 36 of the ERTMS report. We do not need to differentiate between these unless participants raise the issue.</i></p> <p>Level 3 offers more sophistication still but is not even in development yet.</p>	<p>Explain that ATP on great western and chiltern lines is not compatible with modern european standards so does not provide a working system that can be “rolled out” across the country.</p> <p>USE BOARD 4 TO INTRODUCE THE DIFFERENCES BETWEEN CURRENT AND FUTURE ERTMS SYSTEMS</p> <p>BOARD 5 CAN BE USED HERE TO EXPLAIN THE CAPACITY DIFFERENCES BETWEEN LEVEL 1 and 2 SYSTEMS.</p> <p>PAUSE FOR QUESTIONS AND ANY DISCUSSION</p> <p>ASK HSE REPRESENTATIVE TO BRIEFLY DESCRIBE EUROPEAN DIRECTIVE REQUIREMENTS</p> <p>PAUSE AGAIN FOR QUESTIONS DISCUSSIONS</p>

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BRIEFING NOTES	QUESTIONS AND TECHNIQUES
<p>RECENT RAIL ACCIDENTS</p> <p>The UK rail track is probably the most densely used in the world. We also use the same tracks for high speed and commuter passenger trains and freight trains. Passenger numbers have increased and are forecast to continue rising.</p> <p>1997 there was Southall and in 1999 the Ladbroke Grove accidents. These resulted in what's called the Joint Enquiry Report by Professor Uff and Lord Cullen, which reported last year. The report recommended:</p> <ul style="list-style-type: none"> • that by 2010 all high speed routes (100 mph +) should have ATP • other routes operating at >75 mph should follow • that fitment should be a statutory requirement <p>Industry prefers a slower implementation timetable, citing low level of benefits offered by existing ERTMS systems</p>	<p>EXPLAIN INCREASING PRESSURE ON UK RAILWAYS</p> <p>USE BOARD 6 TO SHOW UFF/CULLEN RECOMENDATIONS</p> <p>Explore reactions to the recommendations PROBE ESPECIALLY THE NEED FOR REGULATION. Can the industry be trusted to fit etcs without legislation? Why? Why not? Is implementation of legislation feasible? Probe for any drawbacks to regulation?</p> <p>ASK HSE REPRESENTATIVE TO DESCRIBE ROLE OF LEGISLATOR</p> <p>Will it be enough for there to be a plan if there is another spad-related accident? What would you want to know if there were to be another serious SPAD-related accident?</p>
<p>OTHER TECHNICAL INFORMATION</p> <p>GSM-R Global System of Mobile communications – Railway part of ERTMS Radio bearer that supports ETCS</p> <p>ETML European Traffic Management Layer Control centre for the technology that operates GSM-R</p>	<p>WE SHOULD NOT NEED TO COVER GSM-R OR EMTL. THIS IS HERE FOR BACKGROUND AND IN CASE ANYONE IS AWARE OF THE ISSUE AS REPORTS COVERING THESE ARE PUBLISHED.</p> <p>ALSO NO NEED TO WORRY ABOUT ERTMS LEVEL 3</p>
<p>BREAK 30 MINUTES</p>	<p>OPPORTUNITY FOR PARTICIPANTS TO ASK QUESTIONS AND DEBATE INFORMALLY</p>

DRAFT

BRIEFING NOTES	QUESTIONS AND TECHNIQUES
<p>INDUSTRY VIEW 30 MINUTES</p> <p>The industry has done a feasibility study and wants to move straight to ERTMS level 2 with a fitment end date of 2015. The Joint Report recommended 2010.</p> <p>The reasons for this are:</p> <p>Level 1 will result in reduced capacity of 10%-15% (SEE BOARD 8), will cost £3.5 bn and reduced capacity will increase road usage which is less safe.</p> <p>Level 2 will maintain capacity and could increase it with additional enhancements (SEE BOARD 9), will cost less and will not result in transfers to road transport with the associated higher death rate. But it is still in development.</p> <p>FROM BOARD 7 Other reasons: Cost Safety</p> <p><i>NB DURING “POSSESSIONS” IE WHEN TRAINS CAN’T RUN BECAUSE OF MAINTENANCE, TRAIN OPERATING COMPANIES (TOCs) ARE PAID COMPENSATION</i></p>	<p>EXPLAIN THAT UFF CULLEN ARE RECOMMENDATIONS AND THAT GOVERNMENT HAS YET TO RESPOND. THIS WORKSHOP IS PART OF THE PROCESS OF DEVELOPING A RESPONSE.</p> <p>However the rail industry has already responded and would prefer to move straight to the fitment of the more advanced level 2 systems with a fitment date of 2015</p> <p>Views on industry study (board 7). In particular probe for faith/trust in the results.</p> <p>USE BOARDS 8 & 9 (IF NECESSARY) TO EXPLAIN CAPACITY REDUCTION COMPARED TO NO ERTMS AND ESTIMATED COST IMPLICATIONS</p> <p>HSE is now reviewing the industry study as much relies on the assumptions used.</p> <p>PROBE FOR VIEWS ON HSE STUDY. What do participants think the likely outcome will be? Who is likely to prevail? Is regulation required? What about enforcement?</p> <p>What questions should hse be asking?</p>

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BRIEFING NOTES	QUESTIONS AND TECHNIQUES
QUESTIONS 50 MINUTES	IN TWO GROUPS USE THIS SESSION TO FULLY EXPLORE AND DISCUSS ISSUES RAISED BY THE PARTICIPANTS. START WITH A GENERAL OPENING, E.G.: We've heard a lot of information this afternoon, what issues does it raise for you? LET SILENCE DO THE PROMPTING PROBE FOR TRUST IN THE VARIOUS PLAYERS. PROBE AGAIN FOR WHO SHOULD BE FUNDING RAILWAY IMPROVEMENTS AFTER ABOUT 35 MINUTES TRY TO PULL TOGETHER KEY POINTS, CHALLENGES, QUESTIONS FOR THE "HSE". Are there questions that need to be taken away and answers provided in the follow-up session?
CLOSING 10 MINUTES	<i>IN ONE GROUP</i> Any last points that anyone would like to cover? REMIND EVERYONE OF WEDNESDAY SESSION TIMES AND LOCATIONS AND PURPOSE THANK AND CLOSE

HANDOUTS

ERTMS – Summary report, Railway Safety and Strategic Rail Authority

Funding the Railways Looking Years Ahead 1: Setting the scene, Rail Passengers Council, May 2002

The Safety of Rail Transport, Sir David Davies in Science and Parliament, Whit, 2002

Summary of the Public Dialogue project.

ANNEX 6 WORKSHOP PICTURE BOARDS

BOARD 1

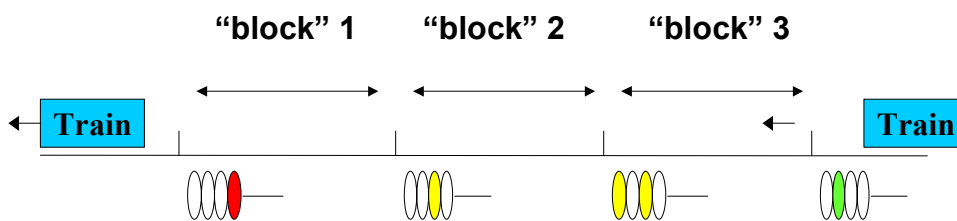
Passenger Fatalities per billion km	
Rail	0.4
Air	0.01
Bus or Coach	0.4
Van	1.2
Car	3
Pedal cycle	41
Foot	57
Motor cycle or moped	109

Figures from the Department for Transport represent the average for the period 1992-2001. Air refers to accidents involving UK registered airline aircraft in UK and foreign airspace.

1

BOARD 2

Railway signalling



In real situations, "block" sizes are not all exactly the same length.

2

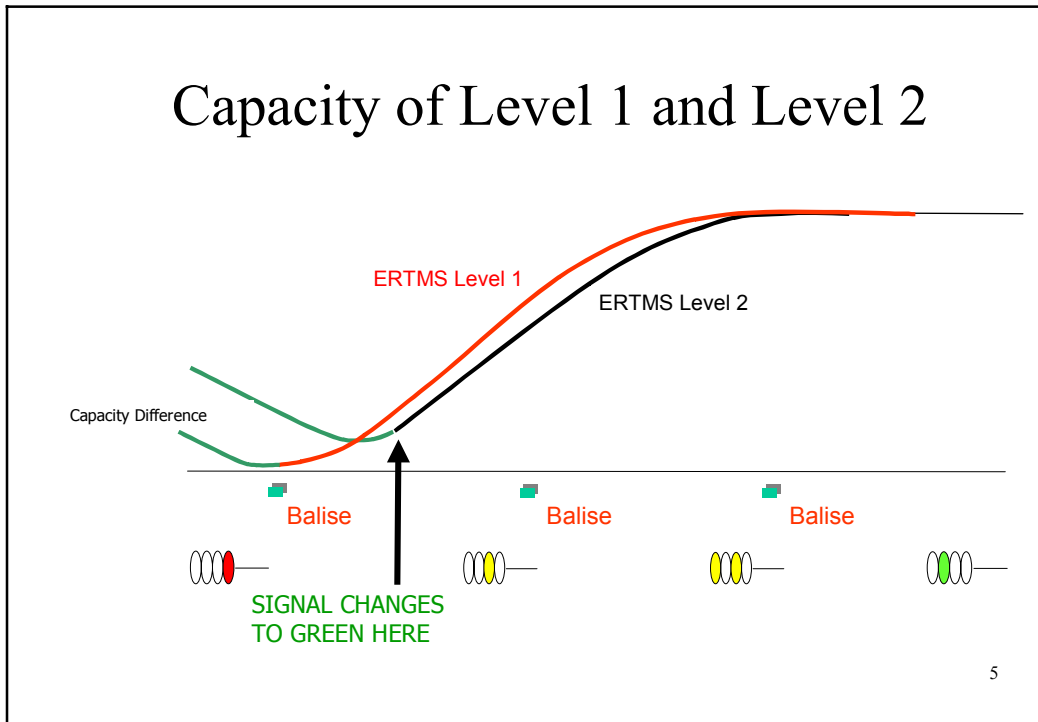
BOARD 3

Helping Drivers			
	<i>Automatic Warning System</i>	<i>Train Protection and Warning System</i>	<i>Automatic Train Protection (ATP-BR)</i>
<i>What it does</i>	Provides a visible (light) and audible (in the cab) signal to the driver. Where a signal is at red ("stop") or yellow ("caution") the train brakes are automatically applied unless the driver cancels the warning within 2 seconds	Automatically applies brakes if train approaches signal too fast or if it fails to stop at a "danger" (red). Effectiveness depends on speed of the train Stops in overlap section at less than 75 mph	More sophisticated computer-based systems that monitor the speed of the train, the signal aspect (colour) and distance to the next signal. Can't go through a red light
<i>Control</i>	The driver can override the system.	The system overrides the driver.	Over-ride driver instructions and stop trains if signals are against them.
<i>Availability</i>	In place now	To be implemented across the network by January 2004	Present on two lines (Great Western and Chiltern)

BOARD 4

ERTMS Strengths and Weaknesses		
	<i>Early Systems (Level 1)</i>	<i>Advanced Systems (Level 2)</i>
<i>How it works</i>	Line side signal allows the train to move	Radio signals allow the train to move
<i>Effect on capacity</i>	A lack of information between signal points will reduce capacity.	Constantly updated information can increase capacity.
<i>Effect on trackside workers</i>	More trackside equipment, but this means more maintenance	Less trackside equipment, means less maintenance
<i>Availability</i>	Sooner – systems exist	Later – systems in development

BOARD 5



BOARD 6

Uff – Cullen Recommendations

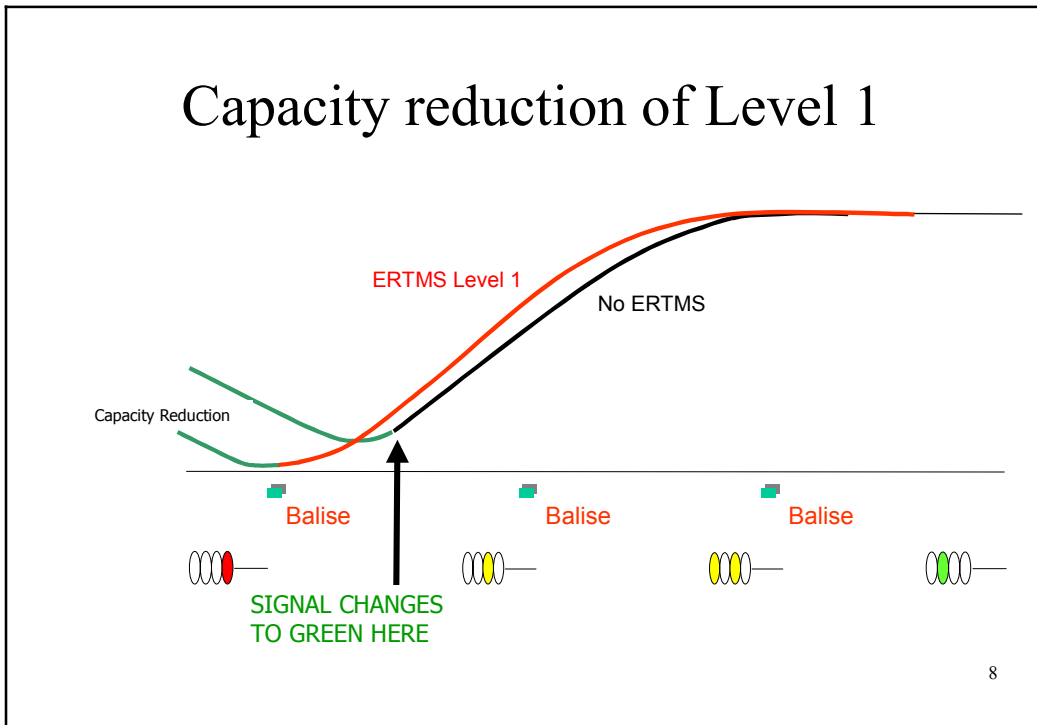
- That by 2010 all high speed routes (100 mph +) should have ETCS
- Other routes operating at >75 mph should follow
- That fitment should be a statutory requirement

BOARD 7

RAIL INDUSTRY ANALYSIS TABLE		
	<i>Rapid Implementation (Uff/Cullen recommended)</i>	<i>Industry Preferred Implementation</i>
ATP on high speed lines by	2010	2015
ATP on all network lines by	2015	2030
Safety effect for passengers and on-board railway staff	Prevent approx 83 fatalities over 40 years	Prevent approx 74 fatalities over 40 years
Implications for capacity	Lose around 1 in 8 train paths	Possible increase of up to 1 in 10 train paths
Possible safety effect if passengers transfer to cars	680 to 720 additional road fatalities over 40 years	150 to 450 fewer road fatalities over 40 years
Possible safety effect on trackside workers	Bad (increases the amount of trackside equipment that requires maintenance)	Good (reduces trackside equipment that requires maintenance)
Approximate capital cost	£6,000 million	£3,600 million

7

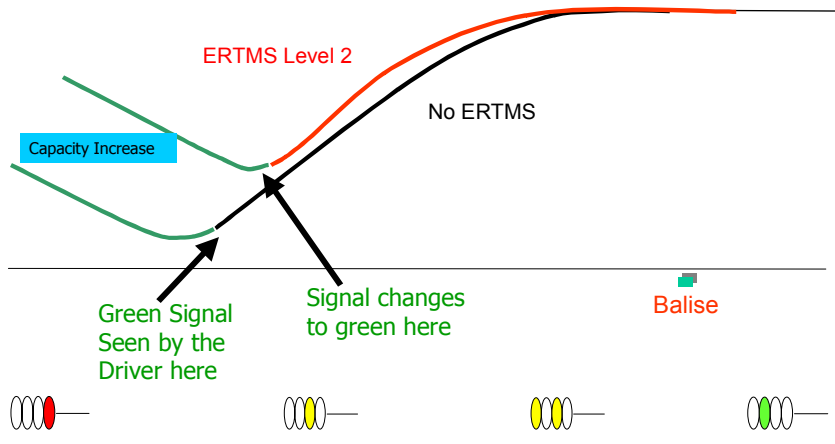
BOARD 8



8

BOARD 9

Capacity increase of Level 2



Balise provides position reference only. Other data provided by digital radio link

ANNEX 7 RECONVENED TOPIC GUIDE

IN TWO GROUPS FOR 1½ HOURS.

INTRODUCTION

Welcome everyone back. Outline that there are two hours to pull together the key points the group wants to make at the deliberative conference in London on 16 November. They also need to elect one member to attend the conference to put their points and “represent” them. They will then get a copy of the draft report on the whole project to comment on before the final report is submitted to HSE.

WARM-UP

USE ROUND TABLE FEEDBACK suggesting that each participant takes a couple of minutes to say whether they have noticed anything relevant to railway safety since Saturday or had any thoughts or conversations about the topic. Moderators should look particularly for anything that participants say has influenced their opinions.

OUTSTANDING QUESTIONS

PROVIDE ANSWERS TO FOLLOWING QUESTIONS

INSERT QUESTIONS GATHERED ON SATURDAY AND ANSWERS PROVIDED BY HSE.

REPRESENTATIVES FOR 16 NOVEMBER CONFERENCE

IDENTIFY VOLUNTEERS AT THIS STAGE.

ISSUES

BREAK GROUPS DOWN INTO SUB-GROUPS OF 3-4. USE CARDS GENERATED FROM SATURDAY’S DISCUSSIONS. SEE LIST BELOW ALSO USE BOARD TO RUN THROUGH THIS LIST. ASK FOR ANY FURTHER THINGS THAT PEOPLE WISH TO SEE ADDED WRITE THESE ON SPARE CARDS. What improvements are needed?

Thinking overall about the railways and the need for improvements in different areas – what is most important to you?

INSERT LIST FROM WORKSHOP

*Get groups to categorise them and then prioritise into urgent, or long-term – **no more than six can be urgent**. Emphasise that it is ok for people to have changed views since Saturday having had time to reflect. Get each sub-group to stick cards onto a board and then compare and discuss any differences. Collate an agreed view for the group.*

ONCE THIS EXERCISE IS UNDERWAY, LIAISE WITH OTHER MODERATOR TO CHECK THAT THERE ARE SUFFICIENT VOLUNTEERS FOR THE NOVEMBER 16 CONFERENCE. IF NECESSARY SWAP PEOPLE TO ENSURE THAT EACH GROUP HAS AT LEAST ONE VOLUNTEER.

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SPENDING ON THE RAILWAYS

USE THE SECOND SETS OF CARDS TO PRIORITISE SPENDING OF **TAX PAYERS MONEY**. THIS EXERCISE IS TO EXPLORE HOW IMPORTANT THE RAILWAYS ARE RELATIVE TO OTHER POTENTIAL SPENDING OF GOVERNMENT MONEY. I.E. SHOULD THE RAILWAYS HAVE A GREATER SICE OF THE OVERALL PIE?

Railways
Roads
Health
Education
Pensions
Social security
Defence
Agriculture
Industry
Law and order
Museums and Culture
Sport

SPENDING ON SAFETY

USE THE THIRD SETS OF CARDS TO PRIORITISE SPENDING ON **RAILWAY SAFETY**. This exercise is to explore the relative importance of different actions.

Insert list from workshop

How important is it that the public are consulted about improvements to the railways?

ELECTION

IF YOUR GROUP HAD MORE THAN ONE INITIAL VOLUNTEER, CHECK THAT VOLUNTEERS ARE STILL WILLING AND RUN AN ANONYMOUS VOTE. MAKE IT CLEAR PEOPLE **CAN** VOTE FOR THEMSELVES IF THEY WOULD LIKE TO GO TO THE CONFERENCE.

ERTMS OPTIONS

Comparison of ERTMS Level 1 vs Level 2 SHOW TABLE. POINT OUT ASSUMPTIONS MADE BY INDUSTRY AND DISCUSS

The saving of 83 (Level 1) vs 74 (Level 2 fatalities) how significant overall?

The capital cost (face value) of Level 1 is nearly twice as expensive.

That people will automatically switch to using cars if capacity is reduced.

That the switching will involve between 680-720 road user fatalities

Choosing a system

How would you decide whether a system is acceptable or not? (have you sufficient information?) Which factors are the most critical? PUT ON CARDS & DISCUSS ADD TO THE LIST BELOW ANY FURTHER SUGGESTIONS FROM THE GROUP.

INSERT LIST FROM WORKSHOP

RECORD PREFERENCES ON FLIPCHARTS

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COSTS

Who should pay for it? PROBE THIS THOROUGHLY LOOKING FOR OPTIONS AND SUGGESTED MECHANISMS.

Passengers only (via fares)

General taxation

Mixture of above

REGULATION AND LEGISLATION

Can the existing structures effectively deliver implementation? How necessary is a regulation to drive implementation. Who should regulate/ oversee it?

Additional, newly created body?

Government?

What sort of people should be represented?

PROBE FOR TRUST IN VARIOUS PLAYERS AND THE ROLE AND VALUE OF LEGISLATION

CLOSING

GIVE OUT INCENTIVES AND ENSURE THAT WE HAVE NAME AND ADDRESS FOR EVERYONE UNLESS THEY EXPRESSLY DO NOT WANT TO GIVE IT. EXPLAIN THAT WE'D LIKE TO SEND PEOPLE FURTHER MATERIAL TO KEEP THEM INFORMED AND INVOLVED, EVEN IF THEY ARE NOT GOING TO THE CONFERENCE.

FOR THE REPRESENTATIVES WE ALSO NEED PHONE NUMBER

ANNEX 8 QUESTIONS RAISED

This annex demonstrates the breadth and depth of questions raised by the participants during the workshops. These were all questions where the moderators and HSE officials present on the day felt that it was appropriate to gather further data for the participants that could be fed back at the reconvened session.

ACCIDENTS

- If there is a failure (or crash) who is accountable and how?
- *What percentage of accidents are due to poor maintenance (faults on trains and tracks)? The ideal would be to have a figure that compares to the 40% of fatal accidents being due to SPADs.*
- Why have there been so many fatal crashes recently?
- How much can we trust the accident numbers - 2 per year doesn't sound very much, but lots of people have been killed in accidents recently?
- Is there any data comparing safety on the railways before and after privatisation?
- How safe will the system be during the 6 years after TPWS but before ATP in either 2010 or 2115?

SIGNALLING AND INFRASTRUCTURE

- Are “blocks” for the signals shorter in busier areas?
- What is the size of a signal person’s patch?
- Is there communication between trains?
- How many miles of track are there in GB?
- Are there a set number of trains on the tracks at any one time?
- Are speed limiters like those that can be fitted on coaches, fitted on trains?
- *How do the brakes on trains work? The background to this was the thought that a more effective braking system might be one way to prevent SPADs.*

MAINTENANCE

- How often are the tracks checked?
- What is being done to improve the track?
- How are the track workers killed? Is it their negligence?
- What is being done about this perennial problem of leaves on the line? Do trees get cut back? Can trees hinder visibility of signals?

DRIVERS

- *How many train drivers are there across the UK?*
- How much training do drivers receive?
- What training do experienced drivers get? Do they get refresher courses?
- What can be done to improve driver skills as a way of reducing SPADS and improving safety?
- How often do train drivers have physical check-ups?
- How frequent are drink tests for drivers?
- What are the limits on number of hours that can be worked by drivers?
- Why aren’t there two drivers in the cab?
- What sort of communications systems do drivers currently have?

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- How easy or difficult will it be for drivers to learn to use ETRMS 1 or 2?
- What level of skill will be needed for ETRMS 1 or 2?
- *How will driver of the future using ETRMS being different? What are the implications for recruitment and training?*
- In cases of driver error, how are drivers disciplined? Is there a national disciplinary system? How are they supervised?
- What happens to drivers who go through SPADs? Are they prosecuted?

TRAINS

- How long do trains last?
- Are there other ways of increasing capacity, like putting more carriages on?
- Why can't we have double-decker trains as a means of increasing capacity?

TPWS

- When did we start to install TPWS? How long has it taken to implement from first discussions to end Jan 2004?
- How much is it costing to fit TPWS?
- What was the original cost estimate for TPWS and how much did it finally cost?

ERTMS

General

- *Who owns the intellectual property associated with ERTMS, is the technology freely available?*
- How long will Level 1 and Level 2 last? (40 years doesn't sound very long.) Is it 40 years from now, from 2020/2015 or from 2015/2030?
- Why isn't there a system that can be upgraded over time?
- Why isn't satellite based technology being considered/developed given the apparent low cost "*you can get it in a mobile phone*"? All radio-based systems could be vulnerable to vandalism.
- There are various estimates provided by the industry of when work might be completed on different installations, but when would work start?
- *Why haven't the railways invested in this before now?*
- How do Level 1 and 2 compare in terms of lifespan?

Level 1

- Could putting in more balises improve Level 1 capacity?
- *Can level 1 ERTMS be a step towards level 2 or are they so different that it would need to be scrapped and work started again?*

Level 2

- *Does level 2 ERTMS recognise different train types e.g. fast, slow, freight to allow priorities to be allocated? i.e. How much traffic management does the system allow?*
- Will Level 2 actually complete development or will it get stuck?
- *What does Level 2 really offer? Is it a matter of a couple of hundred yards more acceleration time and does this really translate to the capacity increases claimed?*
- How far into development is Level 2 and can we be sure that Level 2 won't be obsolete by 2015?
- Why does it take 30 years to implement level 2?

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- What is the evidence that Level 2 will cost this much? We all know that costs are usually well over budget.
- How can we be sure that Level 2 will work? (There was a general anxiety about computer based/telecoms based systems in this group, being perceived as less reliable/more prone to breakdown)
- Would Level 2 result in job losses, because there is less trackside stuff to maintain? (ditto)
- Is Level 2 upgradeable?
- *Why does it take so long to get to level 2 and to finish installation of level 2?*

International

- Where is level 1 running already?
- Why has the level 2 ERTMS system in Switzerland been stopped?
- Going beyond Europe, can we learn from the Japanese – and their famous bullet trains? What are their systems like? How do they control the bullet trains?
- What can we learn from the USA? How does their system work?

Costs

- *What is the total cost of a major accident?*
- Is it cheaper to pay compensation for accidents than to maintain the tracks?
- *Could money be saved by implementing ATP (level 1 or 2) on high speed lines only?*
- How much public money goes into the railways now – ie tax payers money from the Treasury?
- Can the public sector afford to pay. Will some form of PFI be needed?
- Do the railways receive bigger subsidies in Europe than in the UK? Is public money a greater proportion of their income/investment than in the UK?
- Do EU trains run better because of European subsidies?
- What would be the effects on timescales and costs if there was no Government funding provided?
- Who will pay for these initiatives?
- *How much is the Channel Tunnel High Speed Link costing?*

National Policy

- *Is there one standard set for drivers across all TOC's? Who sets it and regulates it?*
- *Is there a common set of standards with regard to track maintenance?*
- *What happened to the money gained from privatisation of the railways? Was any of it reinvested?*
- *Why are the railways so behind the air industry? Why isn't rail safety taken as seriously as air safety?*

Regulation

- How will subcontractors upgrading and improving systems be regulated? Is there going to be a new oversight body?
- If “they” cut corners on maintenance (as participants believe subcontractors will be tempted to do) will the 40 year life span of a new system would be reduced even more.

TOCs

- What is the ticket revenue for TOCs?

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- What proportion of ticket revenue is spent on safety features?
- What is in the TOCs franchise contracts regarding re-investment of profits?
- Do TOC's currently pay for radio equipment in the trains?

Network Rail

- *What is the legal structure of Network Rail?*
- *Who funded the purchase of Railtrack by Network Rail?*

Consultation

- Will they 'the government' *really* listen to the public's opinions or just pay us lip service?

What would happen to any decisions taken as a result of this consultation if in the future there is a change of government?

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ANNEX 9

DELIBERATIVE CONFERENCE DELEGATES AND TABLE PLAN

Suzanne King	People Science & Policy Ltd - Facilitator
John Dennis	The Railway Forum
Elizabeth Gibby	HSE
Jill MacFadyen	London
Fiona McNeil	ERTMS Project Team
Sally Nairn	Norwich
Liz Russell	Cardiff
Nicki Quadri	Birmingham

Mo Ressler	People Science & Policy Ltd - Facilitator
Rob Gifford	Parliamentary Advisory Committee on Transport Safety
Robin Kellow	Safe Trains Action Group
Rick Landsell	London
Verdun Moore	Cardiff
Fred Parsonage	HSE
Janet Picken	Glasgow
Marika Rajah	Manchester

Alison MacLeod	People Science & Policy Ltd - Facilitator
David Bennett	ASLEF
Lorette Bates	Birmingham
Richard Clifton	Director, Railways Directorate, HSE
Tom Hickey	Manchester
Steve Jones	ERTMS Project Team
Barry McEwan	Glasgow
David Morris	HSE

Also Present:

Mark Dyball People Science & Policy Ltd
Nick Pidgeon University of East Anglia

ANNEX 10 DELIBERATIVE CONFERENCE AGENDA

INTRODUCTION

09:30 **Welcome Coffee**

10:00 **Overview** **Health and Safety Executive**

This will set the event in the wider context of HSE's work.

10:10 **The day** **People Science & Policy Ltd**

The structure of the day and "rules of engagement" will be outlined

10:15 **Railway priorities**

A general exploration of the workshops' priorities for the railways

10:35 **General safety priorities**

A broad discussion of priorities related to safety and personal security

11:20 **ERTMS/ATP Priorities - Morning Coffee**

Focused discussion on train protection issues

12:05 **A national strategy**

Who can/should provide the lead for the railways

12:45 **LUNCH**

1:45p.m. **Trust and regulation**

Who will be trusted to ensure that appropriate actions are taken forward, is regulation required?

2:30 p.m. **Costs**

Putting ERTMS costs into the context of spending on the railways, including a discussion of "who pays"

3:00p.m. **Workshop representatives group - Afternoon Coffee**

The workshop representatives will discuss their conclusions from the day.

3:40 p.m. **Conclusions**

A short presentation by the workshop representatives to explain their thoughts, conclusions and priorities.

3:55 p.m. **Thanks and Close**