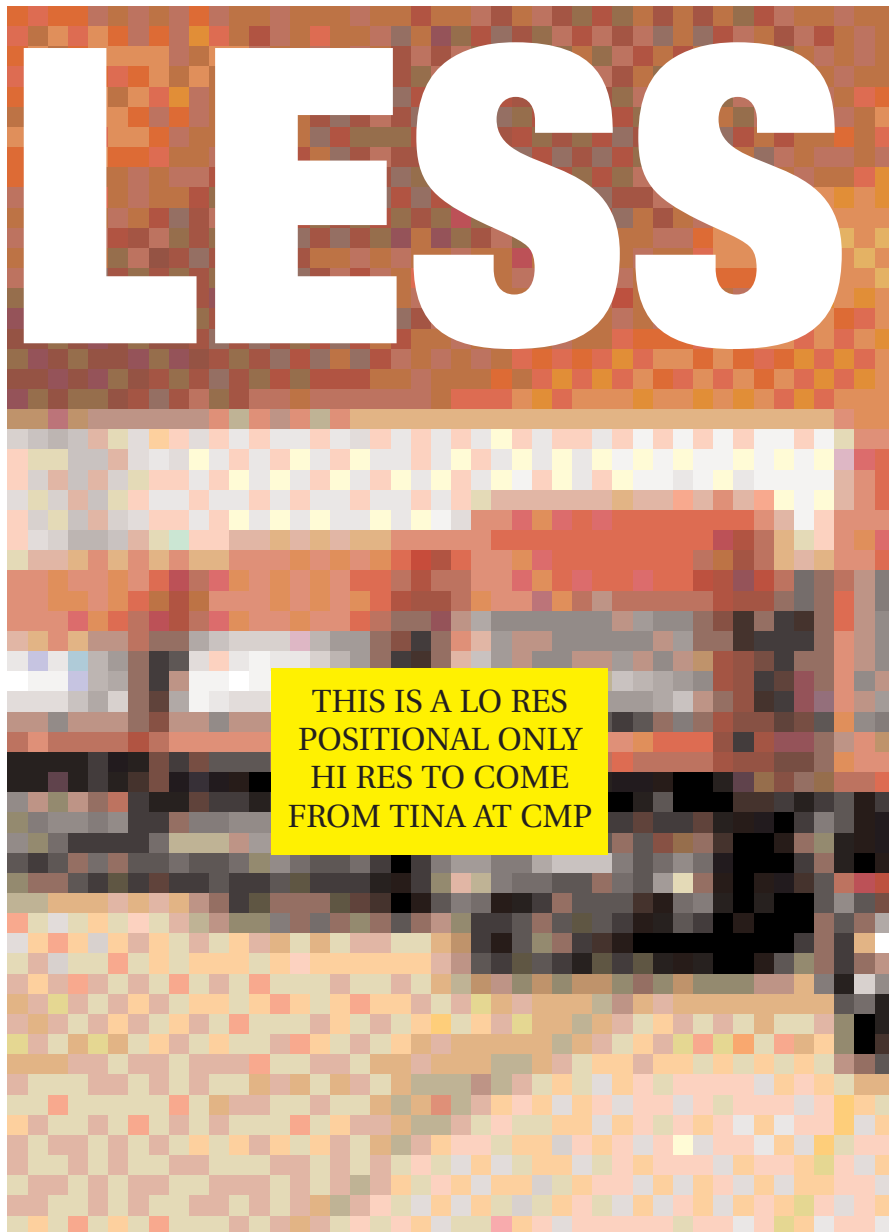


# Driving

Road safety is a major burden on global well-being, with World Health Organisation data suggesting that approximately 1.2 million of the 5 million global injury deaths each year are road safety-related. As more and more evidence and statistics are collected to demonstrate that many of those deaths involve, or are caused by drivers at work it is becoming clear that fleet and road risk management needs to be at the heart of the process to develop a positive safety culture.

**Dr Will Murray** and **Andy Cuerden** explain why.



**F**leet, or work-related road safety has grown in prominence in recent years as incidents have increased. These include people involved in crashes while working by the roadside, or driving as part of their work, either in their own vehicle, or a vehicle provided by their employer. Research undertaken in the UK and Australia<sup>1</sup> suggests that work-related road safety is most likely to be improved by the introduction of an integrated set of risk assessment-led measures based on the safety culture within the organisation. To achieve this, the researchers developed the WIPE process:

- Why focus on fleet safety?
- Initial and continuing status review.
- Pilot, implement and change-manage counter-measures.
- Evaluation.

### Why focus on fleet safety?

The reasons why companies and safety and health practitioners should pay

attention to work-related road safety are many, and can be grouped under the headings societal, business, legal and cost.

### Societal factors

At present there is only limited data on the true extent of the work-driver effect on road safety because few jurisdictions around the world maintain any 'purpose of journey' information in relation to road crashes. (The best data currently available is for Queensland in Australia, where at least 16 per cent of crashes resulting in hospitalisation and 24 per cent of fatal crashes between 1998 and 2002 involved someone driving for work.) Based on the information that is known about work-related road safety in the UK, the main societal arguments for improving it can be summarised as follows:

- 1 There have been more than 20 million people killed on world roads since 1885, including 3 million in the USA, which is twice as many as have been

killed in all the wars it has been involved in.

- 2 European Commission data suggests there are 1.3 million road accidents in Europe each year, including more than 40,000 fatalities and 1.7 million injuries. These are estimated to cost more than €160 billion, or 2 per cent of gross national product.
- 3 In the UK, road death is the most likely way for 4 to 44-year-olds to die. Recent police trials in England and Scotland indicated that about 30 per cent of the 9-10 road fatalities a day in the UK are work-related. This means that there are about four times more work-related road fatalities than non vehicle-based work-related fatalities in the UK. Company-owned vehicles account for just 14 per cent of the UK's 28 million vehicles. This excludes people driving their own vehicle for work, but is still massively disproportionate.
- 4 Purpose of journey data is limited, but business travel accounts for about 30 per cent of all UK travel,

# ONS

rising to more than 50 per cent if commuting is included. Fleets purchase between 50 and 70 per cent of new vehicles, which are normally sold on within three years, meaning the safety features they specify filter into standard production and to the general public relatively quickly.

- 5 Large goods vehicles (LGVs) make up approximately 1 per cent of vehicles registered, or 6 per cent of kilometres travelled, and are involved in more than 15 per cent of road fatalities in the UK. It is not known how many of these are actually caused by LGVs. Small goods vehicles (such as vans) are involved in about 300 fatalities a year, but remain outside strict regulations on drivers' hours, tachographs and licences.
- 6 Transport Research Laboratory (TRL) surveys suggest that company car drivers have about 50 per cent more accidents than ordinary drivers, even

## “Work-related road safety is a core activity, which cannot be isolated from the business overall”

after allowing for their higher mileages. Other TRL surveys show that drivers doing more than 80 per cent of their mileage on work business (23 per cent of all those who drive for work) had 53 per cent more injury accidents than those not driving for work.

- 7 Data from RoSPA suggests that driving 25,000 miles a year for work produces a greater annual risk of death than coal mining or construction.
- 8 Labour Force Survey data suggests there are approximately 77,000 road-related injuries a year to employees and the self-employed in the UK.

- 9 Insurance data shows that between 20 and 65 per cent of company cars are involved in an accident every year. During 2000, this equated to more than one million fleet vehicle insurance claims in the UK, costing almost £2 billion in claims. Each commercial vehicle averages approximately one crash a year in the UK.
- 10 Many crashes get 'lost' somewhere between the Police, insurers, the vehicle operator's own statistics, the Department for Transport (DfT), the Health and Safety Executive (HSE), the hospitals, and local authorities. As a result they go unrecorded, so the true extent of the problem can only be guessed at.

### **Business factors**

From a more general organisational or business perspective there is a clear link between safety, quality, customer service, efficiency and the environment through getting things right first time, better fuel efficiency, and reduced asset wear and tear. Work-related road safety is a core activity, which cannot be isolated from the business overall, and offers many marketing, business development, corporate social responsibility, staff wellbeing and brand enhancement or protection opportunities. At the most simple level, it is much better to be promoting a good news safety story, such as winning a safety award, than it is to have to suppress the outcomes of a major incident.

A proactive safety programme can also keep an organisation ahead of, and protected from regulations and legal requirements. Proactive organisations can also help shape and lead forthcoming regulations, which gives them a competitive advantage by being ahead of more reactive organisations. Many such companies have also used safety as part of their business development process and to help them diversify by promoting their safety systems to others.

### **Legal factors**

Legally, many jurisdictions around the world – including the UK, Australia and

New Zealand in the last year or so – have tightened up their occupational health and safety regulations to include work-related driving. In the UK, the joint HSE/DfT guidance on work-related road safety issued last year<sup>2</sup> suggests that this can be achieved by competent people in organisations taking a risk assessment-led approach to managing drivers, vehicles and the journeys they undertake. In many cases this is the safety and health practitioner, but a better approach in larger organisations is a multi-functional group, including the transport or fleet manager, personnel manager, operational managers and a finance or insurance person – ideally with a budget.

Although the joint HSE/DfT document is only guidance it should be seen as a minimum benchmark standard for organisations to work to. This means that not only do organisations have to ensure that their workers drive within the road traffic rules, but also the organisations themselves must have clearly risk-assessed and documented safe systems of work in place for their vehicles, drivers, journeys, sites and processes.

The guidance covers all forms of work-related transport, including cars, trucks, bicycles, buses, vans, construction plant and towing units, and clarifies that the Management of Health and Safety at Work Regulations on risk assessment do apply to work-related driving – even where people are using their own vehicle. Commuting to a normal place of work is excluded.

The guidance has also seen moves towards a closer relationship between the Police and the HSE in road accident

investigations, where questions the Police are asking include: “Was there a work element involved?” and “Did the organisation have appropriate management policies, procedures and audit trails in place?” Important legislation and guidance that organisations should make sure they are compliant with are:

- The Road Traffic Act (1991);
- The current edition of the Highway Code;
- The Association of Chief Police Officers Road Death Investigation Manual;
- The Health and Safety at Work, etc. Act (1974);
- The Management of Health and Safety at Work Regulations (1999);
- The Provision and Use of Work Equipment Regulations (1998);
- The Working Time Regulations (1998) and recent amendments;
- The ban on mobile phone use while driving, which came into force at the end of 2003;
- The Woolf reforms (1999);
- EU directives on issues such as compulsory driver training, the Motor Insurance Database (MID) and unlicensed driving.

At the very least, organisations should be developing fleet safety programmes as a way of being seen to be doing the right things to protect themselves in relation to the legislation.

**Cost factors**

From a cost perspective, the implications of work-related road safety can be massive, given the significant increases in insurance costs, ambulance chasing and personal injury costs in

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**Table 1: Work-related road safety counter-measures in a Haddon Matrix framework**

	Management culture	Journey	Road/site environment	Drivers and managers	Vehicle	Society/ community
<b>Pre-crash</b>	Policy and procedures; Organisational climate tools; Management structure; Board-level champion; OHS or quality-led; Safety committee; Safety pledge	Travel surveys; Purpose; Need to travel; Modal choice; Journey planning and route selection; Shifts/working time	Risk assessments; Guidelines; Site layouts; Road improvement	Select; Recruit; Induct; Handbook; Risk-assess; Train; Driving pledge	Selection; Maintenance; Checking; Intelligent Transport Systems (ITS) to monitor	Marketing program; Community involvement; Safety groups; Road Safety Week; Conference circuit; Media and public relations; Safety awards; External benchmarking; Regulator briefings and involvement
<b>At scene</b>	Emergency support to driver	-	Manage scene	Known process to manage scene	Crashworthy ITS to capture data	Escalation process
<b>Post-crash</b>	Report, record, investigate and evaluate; Change management	Debrief and review	Investigate and improve	Driver debrief; Counselling and support; Reassess/train	Investigate ITS data; Vehicle inspection and repair	Manage reputation and community learning process

recent years. Australian data<sup>1</sup> suggests that workplace injury costs are met 40 per cent by the employee, 30 per cent by the employer and 30 per cent by the community as a whole. In the UK, the HSE's Work-Related Road Safety Task Group estimated that business loses up to £2.7 billion a year owing to work-related road traffic accidents, and society approximately £1 billion.

Clearly, there are strong societal, business, legal and financial arguments in favour of government and industry taking proactive steps to improve work-related road safety, and this has led to some very positive initiatives in the UK and overseas.

If the evidence of a recent Norwich Union survey of its UK policy-holders is anything to go by, however, a great deal of work still needs to be done. The survey found that only 15 per cent of the respondents were implementing fundamental risk management, such as licence checks, driver handbooks, and investigating accidents, and that fewer than half of that 15 per cent were using any form of ongoing development programme to help improve their work-related road safety performance. This suggests that much more could be done by a large number of organisations.

### Initial and ongoing status review

Whatever the motivation for focusing on improving fleet safety, the first step is to gain a detailed understanding of the current situation. The Haddon Matrix<sup>3</sup> (Table 1) is a very useful self-audit tool: simply ask 'do we have the following in place?' for each of the statements in the matrix. Analysis of the available data (typically, insurance claims) allows the extent and full costs of the problem to be understood. Employee surveys and focus groups allow a consultation, involvement and pledging process to be developed.

Risk assessments are a key element of a status review, as they provide a needs analysis and ideas for improvement. Journey risk assessments allow questions such as "Do we really need to travel?" and "What is the safest practical mode and should we break the journey?" Vehicle risk assessments include pre-purchase vehicle selection, pre- and post-use checks, and high-quality maintenance.

People can be assessed at all levels in relation to safety. For example, driver assessment can focus on in-vehicle skills and behaviour, attitude, hazard perception, health, eyesight, alcohol and drug use, and a range of other issues. Site risk assessments and black-spot analysis are particularly useful for organisations that run regular trips on the same routes, or to the same specific locations. Start, stop and end-points are particularly important locations to risk-assess. The status review also allows a series of on-going targets, standards, or

key performance indicators (KPIs) to be developed, and identifies areas for change.

### Pilot and implement change

As well as being useful as a self-audit, the Haddon Matrix can also be used as a framework for classifying fleet safety improvement counter-measures to be piloted, implemented and change-managed. Pilot studies at one site, or with one team of drivers, help evaluate the effectiveness of a programme, make appropriate cost trade-offs, and develop the process for consultation, implementation, and change-management of any wider programme.

Having a proactive safety management culture has been a recurring theme in recent research and is a key element of the Haddon Matrix. Probably the decision not to travel, or to change mode would be the safest option listed. Where this is not practical, good journey planning can be used to manage fatigue and to specify and monitor the safest routes.

Selection, recruitment, induction, assessment and relevant training can all improve driver safety. For vehicles, selection, maintenance and checking are key issues. Risk-assessing the road environment is particularly important for developing driver guidelines, and improving site layouts and road design.

Managing the scene is a very important part of the fleet safety process – providing organisational support for the driver, and making sure that drivers have the correct processes and tools (including a camera, first-aid kit, bumpcard and crash report form). Crashworthy vehicles help reduce employee injury and, using intelligent transport systems (ITS) to capture data, they can support a more objective investigation process. Managing the scene also minimises the risk of further incidents and ensures that all the available evidence is recorded.

Post-crash reporting, recording and investigation should identify areas for improvement. Journeys must be reviewed and a process should exist for driver debrief, counselling, support and retraining. Vehicles should be inspected in detail before repair, and ITS data should be used as part of the investigation process. The road or site environment should be reviewed and risk-assessed to identify improvements.

Typically, operational managers have to make a trade-off between focusing time and resources on investigation or day-to-day operations. In many cases, maintaining the operation is seen as more important, so only minimal – if any – investigation actually takes place. It is therefore very important to understand all the cost trade-offs. Safety and health practitioners have a duty to take a major role in championing, implementing, leading and evaluating this process.

### Evaluation

To date, the programme evaluation element of the WIPE process has tended to be overlooked by many organisations. Monitoring KPIs should be a key component of a fleet safety programme. 'Best in class' organisations typically include an appropriate mix of lead and lag, or proactive and reactive indicators covering crash data, costs, qualitative achievements (such as awards, or PR outcomes) and programmes implemented. As a general rule the 'successful' organisations we have worked with over the past 15 years have been 'safe', and the 'safe' organisations have been 'successful'!

### Summary

Overall, work-related road safety is an important issue for government and industry for a range of societal, business, legal and cost reasons. A holistic, safety culture-based, risk assessment-led approach has been identified by the UK government and research from around the globe as an effective approach to managing the drivers, vehicles and journeys involved. The WIPE process provides a proactive, needs-based approach for safety and health practitioners to move towards achieving it. SHP

### References

- 1 Murray W, Newnam S, Watson B, Davey J and Schonfeld C (2002): *Evaluating and improving fleet safety in Australia*, Australian Transport Safety Bureau – visit [www.drwillmurray.com/ozreport.html](http://www.drwillmurray.com/ozreport.html)
- 2 HSE/Department for Transport (2003): *Driving at work – Managing work-related Road Safety* (INDG 382), ISBN 0 7176 2740 3, HSE Books
- 3 William Haddon is an American epidemiologist specialising in road traffic injuries. His original focus on the road, vehicle and driver has been extended here to include journey planning, management culture, and societal issues.

### About the authors

Will Murray is research director for Interactive Driving Systems (IDS) and a visiting senior research fellow at the Centre for Accident Research and Road Safety - Queensland, focusing on fleet and work-related road safety and risk management.

Andy Cuerden is European managing director of Interactive Driving Systems.

The authors welcome comments and general feedback on the contents of the article – e-mail [willmurray@roadrisk.net](mailto:willmurray@roadrisk.net)