



# Preventing Road Accidents and Injuries for the Safety of Employees

## Work Related Road Safety Management Programmes

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## PRAISE Thematic Reports

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## Work Related Road Safety (WRRS) Management Programmes

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## Overview of the report

The report presents the main elements of Work Related Road Safety (WRRS) management as a means of addressing work-related road risks. It commences by outlining why employers should address WRRS and by giving ideas on where to begin within individual organisations. Part of this is making the business case for managing road risk and demonstrating where savings can be made by investing proactively in road safety by employers. The third section looks at the importance of leadership in introducing a WRRS programme and integrating that into a management structure. Different models of management are presented briefly with structures aimed at managing risk. The following section focuses on risk assessment explaining how ultimately this aims to eliminate risk altogether and, if this is not possible, looking at how to minimise it. It presents the approach to risk assessment and then applies it specifically to transport. The report then looks at which indicators should be monitored and evaluated and gives suggestions on how this should be undertaken. The report underlines the need to consider the driver, the journey and the vehicle. Driver management and internal communication is presented alongside an introduction to journey

management. The importance of preparing a work-related road safety policy is discussed and a possible sample is included. The report also includes a summary of key measures to tackle common risk areas for WRRS such as speed, alcohol, drugs and medicine, fatigue and distraction. The final part looks at what should be dealt with in the area of vehicle management and maintenance. A recent review stressed the need to raise levels of evaluation of the management approach to work related driver safety to support the interventions at the organisational level<sup>1</sup>. The report refers extensively to the other reports prepared in the context of the PRAISE project<sup>2</sup>.

### Part 1 Where to start?

Taking responsibility to improve WRRS will improve road safety as a whole in Europe; 31,000 lives were lost on European roads in 2011, of those a large percentage were related to driving for work or commuting. Figures show that road traffic collisions<sup>3</sup> accounted for nearly 40% of incidents at work resulting in death<sup>4</sup>. Furthermore, it makes sound business sense to draw up and implement a WRRS management programme as will be examined in this PRAISE Thematic Report.

Country (data for 2007, except Germany 2006)	Austria	Belgium	France	Germany	Spain
Total deaths	192	175	1,029	1,117	1,167
% of which on the road	54	53	48	61	40
Total deaths at-work	130	96	622	642	826
% of which on the road	32	32	23	34	20
Total deaths commuting accidents	62	79	407	475	341
% of which on the road	100	81	86	97	89

Figure 1: Road collisions while working and commuting<sup>5</sup>

Duty of care, occupational health and safety and road safety compliance are legal necessities in all EU Member States, and are an essential consideration for employers. The European Framework Directive 89/391/EEC on the health and safety of workers<sup>6</sup> requires every employer in Europe to undertake a risk assessment according to the principles of prevention. This should include employees

travelling for work. Some Member States have supplementary legislation detailing employers' obligations to eliminate risks related to driving for work. Member States have also developed specific guidance on applying the Framework Directive to WRRS. Employers must ask themselves if they are compliant with this EU and supplementary national level legislation.

1 Grayson, G. B. and Helman, S. (2011). Work related road safety: a systematic review of the literature on the effectiveness of interventions. Research report 11.3. Institute of Occupational Safety and Health.

2 <http://etsc.eu/PRAISE-publications.php>

3 European Commission (2005) Causes and Circumstances of Accidents at Work in the EU.

4 This refers to the 'transport branch' and fatal Road Traffic and Transport Accidents in the Statistical Classification of Economic Activities in the European Community. The data do not include commuting nor do they include Ireland or the UK.

5 Eurogip (2009). Le risque routier encouru par les salariés en Europe. Actualisation du rapport Eurogip-05/F publié en 2003 August, Eurogip-40/F, [www.eurogip.fr/en/docs/Eurogip\\_risque\\_routier\\_2009\\_40F.pdf](http://www.eurogip.fr/en/docs/Eurogip_risque_routier_2009_40F.pdf)

6 Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work.

A new ISO international standard ISO 39001 for road traffic safety management (due to be published in December 2012) will provide a useful framework for the continual improvement of road safety work. For those looking to begin the process the following steps should be undertaken:

- "identify its role in the road traffic system;
- identify the processes, associated activities and functions of the organisation that can have an impact on road traffic safety;
- determine the sequence and interaction of these processes, activities and functions."<sup>7</sup>

In addition every employer should ask themselves the questions set out in the table below to assess if they need to manage WRRS and what types of transport activities they are engaged in<sup>8</sup>. It is important to identify transport needs, and the level of risk exposure for motorised and non-motorised users<sup>9</sup>.

### Recommendation to Employers

- Undertake a first needs analysis to manage work related road risk in the organisation.



## Part 2 The Business Case

There are convincing economic arguments in preparing and implementing a WRRS management programme. Many employers focus only on fleet safety as a reactive response to being involved in a collision or death. A more holistic approach may bring benefits also in other areas, as safety is closely linked to quality, customer service, efficiency, environmental programmes and becoming more efficient<sup>10</sup>. In terms of efficiency this may lead to better fuel efficiency<sup>11</sup> as well as less downtime due to different scheduling<sup>12</sup>. Another positive effect is

likely to be reduced wear and tear of vehicles<sup>13</sup> and enhanced residual value. Furthermore, an element often forgotten is that, in case of a collision that may result in lost orders, then the reputation of an employer may be affected beyond that one day or week of lost business.

The benefits can be reflected in different ways:

- Reduced running costs through better driving standards (fuel consumption/vehicle maintenance costs);

7 ISO 39001 Draft International Standard 39001.

8 Shaw, K., Global Road Safety Partnership (2009) Draft Fleet Safety Manual Part 1.

9 ISO 39001 Draft International Standard 39001.

10 Murray, W. CARRS-Q, Evaluating and improving Fleet safety in Australia (2002).

11 See PRAISE Thematic Report 8 on Speed including the section on Eco driving. <http://etsc.eu/documents/PRAISE%20Thematic%20Report%208%20Driving%20for%20Work%20Managing%20Speed.pdf>.

12 See Thematic Report 8 on Speed and also Thematic Report 7 on Fatigue, Section on Journey Planning.

13 See section of this report on vehicle procurement and maintenance.

- Fewer working days lost due to injury;
- Reduced risk of work-related ill health;
- Reduced stress and improved morale/job satisfaction;
- Less need for investigation and paperwork;
- Less lost time due to work rescheduling;
- Fewer vehicles off the road for repair;
- Fewer missed orders and business opportunities, reduced risk of losing the goodwill of customers;
- Less chance of key employees being banned from driving<sup>14</sup>.

Most employers may look at the cost of their insurance premium and any excess but the far bigger financial implications are the hidden costs associated with every work related incident/collision. Research shows

that typically workplace injury costs are met 40% by the employee, 30% by the employer and 30% by the community as a whole<sup>15</sup>. The International Loss Control Institute (ILCI) states that for every 1 euro paid out by an insurance company there are 8-53 euros in uninsured losses, depending on the severity of the collision<sup>16</sup>. Research undertaken by the UK Health and Safety Executive<sup>17</sup> identified that the 'below the water line' 'iceberg' costs can be 8 to 36 times greater than the visible 'above the water' 'iceberg' costs.

Collisions most often have financial implications on a business that stretch well beyond reported costs. This can be illustrated by the following model of a collision's costs<sup>18</sup>:

Item of cost	Sample data
Own damage costs	€1,200 (£1,000)
Third party vehicle damage costs	€1,200 (£1,000)
Third party injury costs (eg Whiplash)	€1,200 (£1,000)
Reported cost of collision	€3,600 (£3,000)
Total cost of collision (including hidden costs at 2 times reported costs)	€7,200 (£6,000)
Revenue required to fund a single collision at 10% return on Sales	€72,000 (£60,000)
Product sales (at 50p) required to fund fleet safety costs	€144,000 (£120,000)

For this one incident a conservative decision to multiply by 2 the € 3,600 figure to identify hidden costs was taken. To cover a €3,600 collision cost, €72,000 of revenue would be required, equating to sales of 120,000 units of this hypothetical company's product. The company therefore needs to ask itself: "is it easier to sell 120,000 units of our product or be more proactive in preventing this collision" In the current economic climate, such models are needed to justify up-front investments in safety programs. They can also be used to project long-term costs and potential returns on investment from adopting a proactive fleet safety policy.

Some organisations have worked out how many of their main product or service they have to sell

in order to be able to fund these uninsured losses associated with the collisions they are having. According to Nestlé, in order to fund the uninsured losses that are associated with their European fleet's annual (2006) collisions, they have to sell 235,000,000 Kitkats.

Targeting risk through the business case is also a new development detailed in "Why is motor fleet safety important?<sup>19</sup>". Risk financing means looking at funding from:

- Detailed, costed, internal business case to the board.
- Asking insurer, leasing company or vehicle supplier to provide joint funding support for risk management.

14 Murray, W (2010) Sustaining work-related road safety in hard times: understanding collision costs. Unpublished guidance on fleet safety costs. Interactive Driving Systems.

15 Murray, W et al (2003) Evaluating and improving fleet safety in Australia. Canberra: ATSB.

16 ILCI cited in Zurich Risk Engineering Managing Work Related Risks (2008).

17 HSE (1993) The costs of accidents at work, Health and Safety Executive Publications, Sheffield.

18 Murray, W (2010) Sustaining work-related road safety in hard times: understanding collision costs. Unpublished guidance on fleet safety costs. Interactive Driving Systems.

19 Murray, W. (2011) The Work-Related road safety business case: Societal, business, legal and cost factors", <http://www.drivingforbetterbusiness.com/pool/business-case-w-murray-070109.pdf>

- Focusing attention on uninsured loss recoveries and using the money's clawed back from third parties to invest in risk programmes<sup>20</sup>.

This approach is covered in more detail below in the risk insurance management model in Part 3.

Having a WRRS programme can also boost staff morale and avoid having a high turnover of staff. See also PRAISE Report 3 on Fitness to Drive<sup>21</sup> that explains the benefits, financial and otherwise, of 'Workplace Health Promotion'. For example, research shows investment in WHP yields a return on investment of one to 2.5 – 4.8 in reduced absenteeism costs.

## 2.1 Competitive Advantage – “Standing Above the Rest”

Private companies also cite high standards in road safety management as an area that can give them a competitive advantage over others offering the same services in their sector. Road safety procedures should be included in other management areas such as quality certification, marketing promotions and thus a commercial benefit can also be accrued from them<sup>22</sup>. This is especially important in the case of a smaller company providing a transport service to a larger contractor that is specifically citing road safety as criteria for choosing a sub-contractor. Especially in a tough business climate companies are looking for ways to stand out from the rest and offer supplementary standards including safety approaches. A proactive road risk program can also keep organisations ahead of and protected from regulations and legal requirements and gain a competitive advantage compared to more 'reactive' competitors. Some companies have even used safety as part of their business development process and helped them diversify by promoting their safety systems to others<sup>23</sup>. Others explain that a strong standard of safety also gives customers reassurance<sup>24</sup>.

## 2.2 Corporate Social Responsibility

An increasing number of European companies are promoting Corporate Social Responsibility (CSR) as a response to a variety of social, environmental and economic pressures and in doing so, companies are investing in their future and they expect that the voluntary commitment they adopt will help to increase their profitability. For businesses there is a clear link between safety, quality, customer service, efficiency and the environment. As a result CSR also takes on the issue of occupational health and safety including road safety. Some employers involved in transport specifically reported that their stakeholders were interested in road safety performance indicators being included in CSR reporting<sup>25</sup>. Being socially responsible means going beyond legal compliance and investing 'more' into human capital, the environment and relations with stakeholders. Road safety has a massive impact on society, and for this reason can play a major role in improving – or damaging - organisations' CSR. One high profile collision involving a company owned vehicle bearing a company logo can have a long lasting negative impact on a company's image. The reputation of a company is hard to generate and easy to lose. At the other end of the scale being recognised externally for performing well in fleet safety can be an effective marketing tool.

## 2.3 Procurement

Incentives to raise safety as criteria for contracts should also be included in public procurement. Liability responsibility for WRRS and appropriate risk management and preventative measures must be extended through the supply chain<sup>26</sup>. Transport services can be subcontracted but responsibility for this cannot be outsourced. This principle is already included in legislation governing driving and resting hours and must not result in lower levels of safety. It states that consignors, principal contractors, sub-contractors and driver employment agencies must ensure that transport time schedules comply with the provisions on drivers' hours. Sweden has set up a system to promote safety and sustainability in transport contracting<sup>27</sup>.

20 *ibid*

21 <http://etsc.eu/documents/PRAISE%20Report%203.pdf>

22 EU OSHA FACTS 18 Preventing Road Accidents Involving Heavy Goods.

23 Murray, W. (2011) The Work-Related road safety business case: Societal, business, legal and cost factors", <http://www.drivingforbetterbusiness.com/pool/business-case-w-murray-070109.pdf>

24 <http://etsc.eu/documents/PRAISE%20Fact%20Sheet1.pdf>

25 <http://etsc.eu/documents/FACTSHEET7.pdf>

26 This is covered in PRAISE Thematic Report on social rules and fatigue.

27 This is covered in more detail in our PRAISE Thematic Report on Speed Management. <http://etsc.eu/documents/PRAISE%20Thematic%20Report%208%20Driving%20for%20Work%20Managing%20Speed.pdf>

## 2.4 Partnership Working

Engagement and partnership should go beyond drivers and employees and include looking for support and ideas from insurers, peers, Health and Safety organisations, the enforcement community including the Police and road safety organisations<sup>28</sup>. Organisations should consult claims data from their insurers, Police reports and information from trade union organisations. Some trade unions have developed guidance material to manage work related road risk<sup>29</sup>.

## 2.5 Peer to Peer Exchange

Although competition is a big incentive, proactive employers taking a dedicated interest in improving their work related road risk can also benefit from exchanging their experiences with their peers. At a national level there are some fleet forums that are run with this aim. A good example from the UK

is the Driving for Better Business Programme<sup>30</sup>. It uses advocates drawn from these communities to promote the business benefits of managing road risk effectively. Business champions, some of whom are featured in the PRAISE project, constitute the central element of the Driving for Better Business campaign. They are those firms that are prepared to step forward to champion good practice in WRRS by taking a business message to business. Each Champion makes public a case study to demonstrate how driving on business is managed.

## 2.6 Business Case Examples

### British Telecommunications (BT)<sup>31</sup>

A culture of safe driving has been developed within the workforce with a beneficial impact on long term statistics and costs, with claims reducing from 59 to 31 per 1,000 vehicles and annual costs by over £12 million during the period 2001-11.

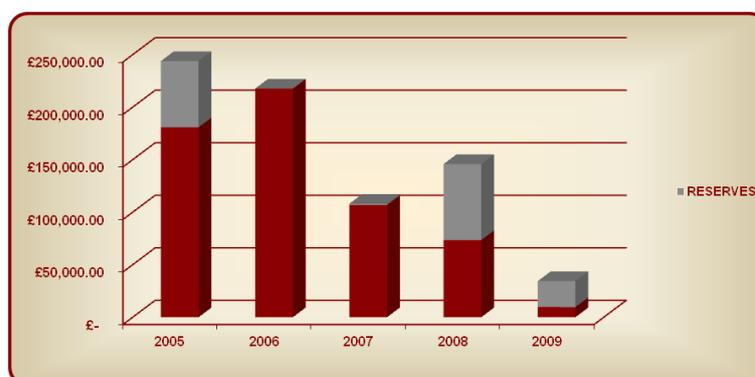
Year	Claims	Costs	Vehicles	Claims/1k vehs	Cost/ claim	Cost/ vehicle
2001-2	32,610	25,583,981	46,028	59	785	556
2002-3	28,142	20,889,596	45,608	51	742	458
2003-4	26,556	17,173,742	45,188	51	647	380
2004-5	17,001	11,682,083	44,768	32	687	261
2005-6	17,170	18,227,418	44,280	32	1062	412
2006-7	19,017	19,261,503	43,800	36	1013	440
2007-8	15,626	15,362,492	43,320	30	983	355
2008-9	15,449	12,980,332	41,616	31	840	312
2009-10	14,706	14,562,135	37,488	33	990	388
2010-11	12,623	11,706,037	34,558	30	927	339

BT Collision and cost reductions 2001-2011

### Suckling Transport

Suckling Transport<sup>32</sup> specialises in the transport of fuel by road. It launched its Zero Incident Project (ZIP) in 2008 which aims to eliminate collisions, or crashes, completely. The three main areas examined

by the project were technological developments, driver training and procedures. The graph below shows an 80% reduction in the severity of collisions. The average cost of motor vehicle insurance claims amounted to £180,850 per annum in the 4 years prior to 2009. Claims fell to just £34,437 in 2009.



28 EU OSHA Delivering the message – Programmes, initiatives and opportunities to reach drivers and SMEs in the road transport sector (2011).

29 A good example is the Work Related Road Safety Guidance developed by the TUC in the UK. <http://www.tuc.org.uk/extras/roadsafety.pdf>

30 <http://www.drivingforbetterbusiness.com/>

31 Wallington D, Murray W, Darby P, Raeside R & Ison S. Work-Related Road Safety: Case Study of British Telecommunications (12-1196). Paper presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012.

32 <http://etsc.eu/documents/PRAISE%20Fact%20Sheet%202.pdf>

## TNT Express

TNT Express has had obvious economic benefits as the direct and indirect costs of collisions are well documented and understood. Improved management of road safety risks has led to reduced vehicle damage costs, reduced repair and maintenance costs and reduced insurance premiums. It has also led to other associated benefits such as reduced fuel costs and improvements in operational efficiency. TNT UK & Ireland provides a very good example - between 2007 and 2010 they were able to demonstrate the following performance improvements: 20% reduction in collision rate and 25% or £730,000 reduction in paid and estimated cost<sup>33</sup>.

## KTL

KTL which operates in the telecom, renewable, transmission and power sectors within Ireland employs 170 staff<sup>34</sup>. KTL has set out and implemented a number of safety initiatives, processes and measures to tackle WRRS issues. The economic improvements for KTL have been a reduction in insurance premium due to fewer insurance claims, reduced fuel consumption and CO<sub>2</sub> emissions, increased fuel efficiency, longer life span<sup>2</sup> of vehicles due to a rigorous maintenance programme, depreciation of vehicles reduced due to good maintenance and new vehicles being bought to replace old high mileage vehicles and less collisions which reduces the number of lost days, reduced medical expenses. These improvements have led to KTL becoming more efficient which has allowed them to win new contracts and, as a result, has increased the volume of work.

## Recommendations to Employers

- Calculate the business case of investing in a WRRS programme for your organisation.
- Look to seek support from others such as their peers, Health and Safety organisations, Trade Unions and the enforcement community.
- Look to include safety as criteria for public procurement contracts and apply this throughout the supply chain.
- Recognise the benefits of a WRRS programme for CSR and that it can give a competitive advantage.

33 <http://etsc.eu/documents/FACTSHEET7.pdf>

34 [http://etsc.eu/documents/PRAISE\\_Fact\\_Sheet\\_8\\_KTL.pdf](http://etsc.eu/documents/PRAISE_Fact_Sheet_8_KTL.pdf)

35 Price, A., et al, Building work-related road safety into organisational DNA: Case study of Vauxhall. Draft paper, currently in review process for Journal of the Australasian College of Road Safety.

36 <http://etsc.eu/documents/FACTSHEET7.pdf>

37 [http://etsc.eu/documents/PRAISE\\_Fact\\_Sheet\\_8\\_KTL.pdf](http://etsc.eu/documents/PRAISE_Fact_Sheet_8_KTL.pdf)

38 Zohar 2002 in Newnam et al Occupational driver safety: Conceptualising a leadership based intervention to improve safe driving performance, 2011.

39 Shaw, K., Global Road Safety Partnership (2009) Draft Fleet Safety Manual Part 1.

40 Ibid

41 See PRAISE Fact Sheets: KTL and Suckling Transport.

42 Adapted from ISO 39001 Draft International Standard 39001.

## Part 3 Management and Leadership

### 3.1 Leadership

Commitment of leadership (top management) is crucial for the successful introduction and implementation of a WRRS management programme by an employer. The level of their involvement depends on the size of the organisation. The CEO must be convinced of the added value and involved in the process. This shows that the issue is being taken seriously and can help smooth away resistance<sup>35</sup>. "Lead by example<sup>36</sup>" and "Lead from the Top<sup>37</sup>" are catch phrases of many employers who have introduced successful WRRS programmes. Additionally, research has also considered that effective supervisory safety practices have been found to be associated with an increase in group-level safety climate perceptions (i.e., the priority given to safety over competing task demands) and a reduction in injury rates<sup>38</sup>. Those with leadership responsibility need to be kept updated of progress at regular intervals. It is suggested that the CEO must assume overall responsibility for managing fleet safety and driving at work and delegate this to a specific individual not more than one level down the organisation<sup>39</sup>. This will provide for the appropriate authority for the approval of plans and allocation of resources for action<sup>40</sup>. Depending on the size of the organisation the CEO can also be involved in some of the frontline behavioural and safety assessment to demonstrate this commitment<sup>41</sup>.

Demonstrating leadership can be shown by:

- motivating and empowering persons to contribute to the effectiveness of the WRRS management system
- establishing and supporting unity of the WRRS purpose and direction for the organisation
- reinforcing organisational accountability for WRRS results
- creating and maintaining the internal environment in which persons can become fully involved in
- achieving the organisation's WRRS objectives
- leading by example.<sup>42</sup>

### 3.2 Work Related Road Safety (WRRS) – Whose Responsibility?

Commitment to managing WRRS must be carried out from the leadership (top management) level and be linked in throughout the organisation's management chain. Committed management champions at all levels have been important in overcoming the many potential barriers that exist to improving safety<sup>43</sup>. Size of the organisation of course is a clear point in deciding how this is managed. The roles and responsibilities for implementing the WRRS policy have to be clear to all involved. One question that often comes up is at whether the responsibility for the issue sits with a dedicated health and safety manager or with the fleet manager. The recommended approach is for responsibility for road safety to be by the operational or executive line within an organisation. The health and safety function provides the necessary advice and may very well set out the policy, standards and requirements for fleet safety; however this should be executed through the executive line via accountable operational management. The dedicated person accountable for fleet safety needs to ensure that the subject is included in the organisation's mission statement, and that key performance indicators are in place and included on the agenda at all regular board meetings<sup>44</sup>. Another point to be taken into account is to make sure that the WRRS programme does not depend too much on one key personality. This becomes especially important if that key person leaves the organisation and their commitment is lost.

Another important part is making sure that the dedicated person has the skills to carry out the job. If they do not have them then resources must be earmarked to coach and support the person and upgrade them for this additional task. A key element is so called 'ownership' of the WRRS issue. Research of organisational practices related to this shows that "greater sharing of safety ownership is associated with greater development of WRRS practices"<sup>45</sup>. Furthermore this research recommends that employees and managers should be educated about workplace health and

safety responsibilities and that these tasks should be stated in the relevant job description<sup>46</sup>.

### 3.3 Safety Culture

As well as an engaged leadership, safety culture should also be diffused throughout the organisation. Safety culture 'characteristics' include safety policies and procedures issued by senior management, the commitment to implementing safety policy shown by line management and the willingness to comply with safety rules shown by the workforce<sup>47</sup>. Safety culture can also be defined as shared attitudes, values, beliefs and behaviours related to safety. The adoption of a safety culture also involves a proactive rather than reactive approach to safety. The approach is data-driven with procedures for collecting and analysing data which is then used as a basis for managing risk<sup>48</sup>. The use of data and base line analysis and evaluation and review is looked at in more detail later in this report.

### 3.4 Management Models

There are different models which are useful to aid employers start off with introducing a management framework for road safety, a number of which are presented briefly here. All of them stress that WRRS is a core activity and cannot be seen in isolation from business overall<sup>49</sup>.

#### ISO International Standard 39001 Road Traffic Safety Management System

A new ISO international standard 39001 for road safety management (due to be published in December 2012) will provide a useful framework on continual improvement in road safety work. Any player with an influence on road safety should be able to use the standard as a complementary guidance in its efforts of contributing to safe road traffic. ISO management systems are based on the Plan-Do-Check-Act methodology which is a cyclical approach involving several steps and requires strong leadership and commitment from top management<sup>50</sup>. A management system is defined as "a set of integrated or interacting elements of

43 Wallington D, Murray W, Darby P, Raeside R & Ison S. Work-Related Road Safety: Case Study of British Telecommunications (12-1196). Paper presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012.

44 ibid

45 Banks, T. et al (2010) Ownership of Safety Responsibilities is Associated with Work Related Road Safety Practices

46 ibid

47 ERSO (2007). [http://ec.europa.eu/transport/wcm/road\\_safety/erso/knowledge/Fixed/60\\_work/work\\_related\\_road\\_safety.pdf](http://ec.europa.eu/transport/wcm/road_safety/erso/knowledge/Fixed/60_work/work_related_road_safety.pdf)

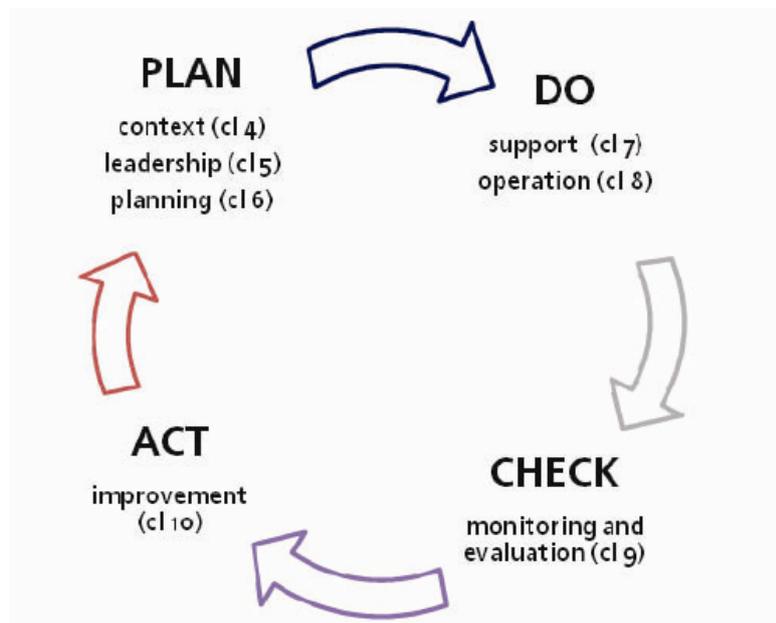
48 See also PRAISE Thematic Report 7 on Fatigue Part 4. [http://etsc.eu/documents/Report7\\_final.pdf](http://etsc.eu/documents/Report7_final.pdf)

49 Murray, W. (2011) The Work-Related road safety business case: Societal, business, legal and cost factors".

50 ISO 39001 Draft International Standard 39001.

an organisation to establish policies and objectives and processes to achieve those objectives"<sup>51</sup>. The diagram below shows this approach and makes

references to the difference clauses in the ISO standard.



The first step covers planning and includes identifying the impact of the organisation (clause 4). Part of this also includes establishing leadership commitment and setting up a WRRS policy (clause 5). The WRRS policy should include measurable targets and objectives (clause 6). The next step "do" covers implementing the system which relies on coordination, budget, competent human resources, awareness-raising including internal and external communication (clause 7).

Monitoring is under "check" and should ensure regular analysis and evaluation of performance against the set objectives and targets (clause 9). "Act" is improving the management system on a continual basis (clause 10).

### Risk Insurance Model

Insurance and driver risk based models, including one elaborated by Zurich Risk Engineering/ Zurich Financial Services,<sup>52</sup> recommend three phases.



The first is to assess, analyse and understand the risks faced by the organisation. This would cover organisational risks, proven risks and theoretical risks, the latter covering the three areas of work-related road safety: the driver, the journeys they make and the vehicle. It suggests through an assessment of the driver's core competencies that

the company will come up with a comprehensive risk profile of all employees who make work related journeys. The second phase points to implementing selected control measures linked to the risk profile and the risk areas of particular concern as well as the role and exposure of that particular employee. They stress that interventions

51 ibid

52 Zurich Risk Engineering Managing Work Related Risks (2008)

should be taken at an appropriate management or individual level. Also that management interventions should be given preference as these are more likely to give a sustainable reduction in the risk profile and hence the collision rate. The last part of the insurance approach is to maintain, monitor and review. Monitoring the process involves measuring key performance indicators. Reviewing makes sure that any changes that have been introduced are keeping up with other changes for example in technology, legislation or in operating practices of the employer.

### The Haddon Matrix

The Haddon Matrix is particularly useful as a framework for undertaking an overall review of the organisational safety context. Haddon provides an all-encompassing pre-crash, at-scene and post-crash systems-based framework for fleet safety. As well as classifying improvement interventions to be piloted, implemented and embedded, it can be used as a gap analysis and investigation tool<sup>53</sup>. A safety project plan<sup>54</sup> has also been developed

which is flexible and can be adapted to different needs: it includes a timetable that stretches 24 months and approximately 5 phases. It starts with safety gap analysis under phase one which looks at safety culture and covers identifying which criteria are being met and which not. The second covers risk assessment with then is followed by phase 3 of performance management. The next phase looks at risk reduction and interventions and culminates in risk review and planning under phase 5.

The starting point lies firmly at the top of the Management culture column of the matrix, as follows:

- Identify, obtain and analyse available data (e.g. insurance, licence & telemetry) on the extent of the problem.
- Use this to make a business case to relevant senior managers in the organisation.
- Focus on the other areas shown under Management culture first to ensure appropriate systems are in place.

	Management Culture	Journey	Road / Site Environment	People - Drivers & Managers	Vehicle	External / Societal / Community / Brand
<b>Pre-Collision or Pre-Drive</b>	Business case Legal compliance Safety audit, claims analysis & focus group discussions Benchmarking Board level champion Pilot studies & trials Goals, policies & procedures Safety culture / climate Management structure Fleet safety committee Safety leadership by example and commitment Communications programme Contractor standards Grey fleet (own vehicle) policy	Travel survey Travel policy Purpose Need to travel Modal choice Journey planning and route selection Route risk assessment Journey scheduling Emergency plan Shifts / working time Fatigue management	Risk assess Observation Guidelines & rules Site layouts & signs Work permits Delivery & collection procedures Road improvement Black-spot mapping and hazard assessments Engage local and national agencies	Select Recruit Contract Induct Licensed & qualified Handbook Risk assess Train Work instructions Engage & encourage Equip e.g. high viz Communicate Driving pledge/ Code of Conduct/ Risk Foundation Health & wellbeing Monitor Correct	Risk assessment Selection Specification Active and passive safety features Standards Servicing Maintenance Checking Use policy and legal compliance e.g. loading Mobile communication and navigation policy Telematics to monitor Wear and tear policy Grey fleet standards	Regulator / policy engagement Insurer engagement CSR External benchmarking External communications Family members programme Community involvement Engaging other road users Road safety weeks / days Safety / ECO groups European Road Safety Charter Road safety conference presentations Media / outreach / PR Safety & environmental achievement awards

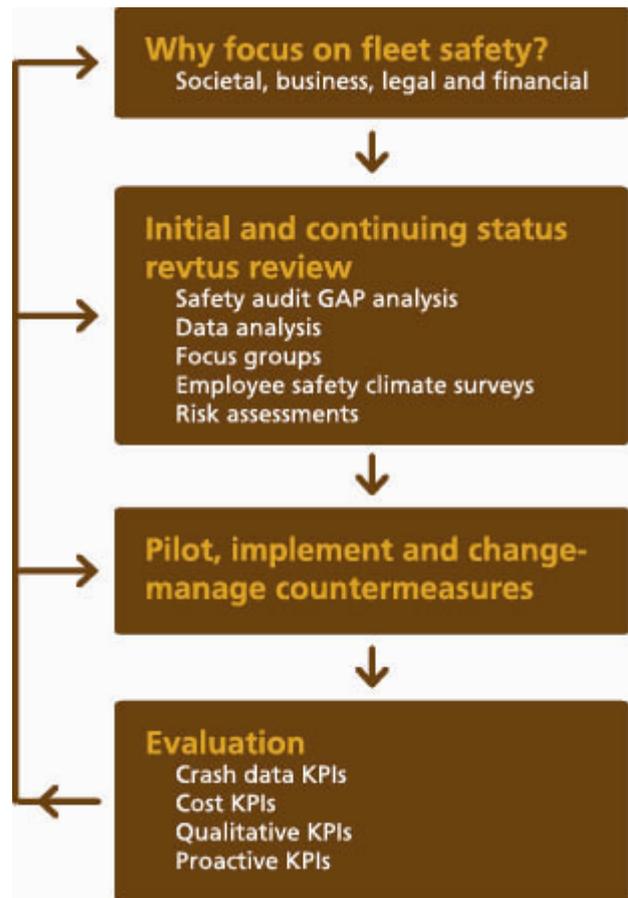
53 Murray, W., Pratt, S., Hingston, J. & Dubens, E. (2009). Promoting Global Initiatives for Occupational Road Safety: Review of Occupational Road Safety Worldwide (Draft).

54 Virtual Risk Manager (2011) Safety Project Plan.

	Management Culture	Journey	Road / Site Environment	People - Drivers & Managers	Vehicle	External / Societal / Community / Brand
At Scene	Emergency support to driver	Engage local investigators	Manage scene	Known process and 'crash pack / bumpcard' to manage scene	Reactive safety features Crashworthy Telemetry data capture	Escalation process
Post-Collision	Policy and process to report, record & investigate incidents Change management process Ongoing claims data analysis Data warehousing & linkages Evaluation, KPI benchmarking & programme development	Debrief and review Review journey elements of collision data Ongoing journey management review	Investigate and improve Review site / road elements of collision data	Reporting and investigation process Driver debrief and corrective action Review people elements of collision data Counselling, trauma management & support Reassess / train	Strong open able doors Investigate telemetry data Vehicle inspection & repair Review vehicle elements of collision data Review vehicle selection & use	Manage reputation and community learning process

### WIPE Fleet Safety Process Model

The WIPE<sup>55</sup> fleet safety process model was included in the NIOSH report integrating occupational health and safety, fleet management and road safety research<sup>56</sup>. The first stage is to investigate the reason for focusing on fleet safety taking into account the impact on society and business, legal considerations and costs. The second stage involves undertaking an initial and continuous status review and gaining understanding of the current situation of the organisation. The next stage involves piloting, implementing and managing the initiatives. The final stage is evaluating the programme by monitoring key performance indicators.



### Managing Occupational Road Risk (MORR)

A risk management cycle within managing occupational road risk (MORR<sup>57</sup>) has been proposed to manage work-related road safety by the Royal Society for the Prevention of Accidents (RoSPA). The cycle is suggested to incorporate continuous improvement for occupational road risk. AN initial status review is undertaken to develop an

55 First proposed in, Murray, W., Newnam, S., Watson, B., Davey, J. & Schonfeld, C. (2003). Evaluating and improving fleet safety in Australia. Canberra: ATSB. [www.infrastructure.gov.au/roads/safety/publications/2003/eval\\_fleetsafe.aspx](http://www.infrastructure.gov.au/roads/safety/publications/2003/eval_fleetsafe.aspx)

56 Murray, W., Pratt, S. & Dubens, E. (2011) Occupational Road Safety: Review of Work related Road Safety Research, Policy and Practice Worldwide (Draft) in Husband, P. Work Related Drivers 2011 <http://www.devon.gov.uk/workrelateddriversfinal.pdf>

57 RoSPA Managing Occupational Road Risk the RoSPA Guide 2003, in Husband, P. (2011) Work Related Drivers <http://www.devon.gov.uk/workrelateddriversfinal.pdf>

understanding of the current performance and collision risk associated with the organisation. Recommendations are developed through this consultation period to reduce the number of collisions and associated costs for the organisation. A management system approach considers a proactive rather than reactive approach to managing risks.

### Recommendations to Employers

- Demonstrate leadership in taking on the responsibility of WRRS programme at level of CEO.
- Identify clear roles for implementing the WRRS programme within the organisation.
- Promote a 'safety culture' as an integral part of the WRRS programme.
- Introduce a model for the WRRS programme.

### Part 4 Risk Assessment, Monitoring and Evaluation

All of the aforementioned models include conducting a risk assessment; this is also required by law. The European Framework Directive 89/391/EEC<sup>58</sup> requires every employer in Europe to undertake a risk assessment according to the principles of prevention of the safety and health of their workers. This Directive provides a minimum requirement and has also been supplemented by national legislation. It is also supported by a number of other Directives on workplace safety<sup>59</sup>. Risk assessment can be defined as:

"The process of evaluating risks to workers' safety and health from workplace hazards. It is a systematic examination of all aspects of work that considers:

- what could cause injury or harm
- whether the hazards could be eliminated and, if not,
- what preventive or protective measures are, or should be, in place to control the risks<sup>60</sup>."

The European Commission together with the Advisory Council of Health and Safety at Work has also prepared a Guidance document<sup>61</sup> on applying the Directive 89/391/EEC. This covers key definitions of risk assessment and methodology

on how and where to revise and review the risk assessment. The Guidance includes a section dedicated to risk assessment steps for SMEs including a step by step approach summary in the Annex. Specific Guidance for Reducing Work Related Vehicle Risk is due for development in the coming years.

Risk assessment aims to identify potential hazards, prevent occupational risks, provide information and training to workers and provide the organisation with the means to implement the necessary measures<sup>62</sup>. Moreover, where elimination of risks is not possible, the risks should be reduced and the residual risk controlled. At a later stage, as part of a review programme, such residual risk will be reassessed and the possibility of elimination of the risk, perhaps in the light of new knowledge, can be reconsidered<sup>63</sup>. The European Guidance document stresses that there is no right way of going about risk assessment and that different approaches are required in different circumstances. Factors to be taken into account when deciding on how and what to risk assess depend on the nature of the workplace (fixed or moving), the type of process and the task performed and its frequency and technical complexity. The document lists a ten step process<sup>64</sup> that can also be simplified into 5 simpler steps.

These include:

**Step 1.** Identifying hazards and those at risk – look for those things at work that have the potential to cause harm, and identify workers who may be exposed to the hazards.

*For transport this may include use of the road.*

**Step 2.** Evaluating and prioritising risks -Estimating the existing risks (the severity and probability of possible harm...) and prioritising them in order of importance.

*For transport this may include identifying fatigue for long distance or high mileage/kms drivers.*

**Step 3.** Deciding on preventive action -Identifying the appropriate measures to eliminate or control the risks.

*For transport this may include undertaking a journey planning exercise resulting in planning rest stops.*

58 Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work.

59 Overview of Occupational Health and Safety Legislation [http://osha.europa.eu/en/legislation/index\\_html/directives](http://osha.europa.eu/en/legislation/index_html/directives)

60 <http://osha.europa.eu/en/topics/riskassessment/definitions>

61 <http://osha.europa.eu/en/topics/riskassessment/guidance.pdf>

62 <http://osha.europa.eu/en/topics/riskassessment/purpose>

63 ibid

64 For the full unabridged 10 Steps see [http://osha.europa.eu/en/topics/riskassessment/carry\\_out](http://osha.europa.eu/en/topics/riskassessment/carry_out)

**Step 4.** Taking action-Putting in place the preventive and protective measures through a prioritisation plan.

*For transport this may include implementing a different driving and resting regime.*

**Step 5.** Monitoring and reviewing -The assessment should be reviewed at regular intervals to ensure that it remains up to date<sup>65</sup>.

*For transport this may include looking at the outcome of the changed journey times and impact and add still additional changes.*

## 4.1 Risk Assessment of Transport

Specific to transport is the risk assessment of three key elements: the road user, the journey and the vehicle. Occupational road risk has been divided into four areas by a report looking at 'Causes and Circumstances of Accidents at Work in the EU'. These include firstly, road travel management and planning. One of the first questions here is, "Is the trip necessary?" and "Is it possible to use other means of transport?" Secondly, if the trip is necessary, then it should be asked "What can be done to reduce the exposure to risk while driving?" – this means, for example, setting limits on time spent on the road. Thirdly, organisations should look at implementing a new organisation of work such as for example integrating safety considerations into defining deadlines for delivery<sup>66</sup>. Finally introducing a policy looking at vehicle use, procurement and maintenance is needed. This will be covered in more detail in section 9.

Specific to the road transport aspects of risk assessment Murray & Dubens<sup>67</sup> and Murray<sup>68</sup> suggested a following 6 step approach to implement an assessment, monitoring and improvement program which has been adapted to reflect the legal requirements under the Directive 89/391/EEC:

1. Review existing transport needs in the organisation using a detailed framework such as the Haddon Matrix, a fleet gap analysis or the forthcoming ISO 39001. This should also be in line with the general principles of prevention as set out in Directive 89/391/EEC Article 6.3.
2. As a result of the assessment of the occupational

risks, managers, supervisors, driver assessors, work schedulers, shop stewards and any other potential users must undertake the assessment themselves including assessing the tasks they must carry out as well as the skills they possess. This shows their commitment to safe driving and helps to sell the concept to the rest of the workforce, as well as learning how to use the system and the data outputs from it. Actually this phase should be more than just "showing their commitments". The assessment should contain also "organisational level". This organisational level is the most important one in safety as also set out in Directive 89/391/EEC Article 6.3a.

3. All existing drivers should then undertake the assessment again covering their tasks, possibly at one site initially, to build up a benchmarking database of existing company norms and standards.
4. The output must be used to identify the needs of existing staff and set appropriate targets for all new drivers to achieve (Article 12 of 89/391/EEC Directive).
5. Utilise the assessment process for a range of pre-employment, current staff and other purposes (Article 12 of 89/391/EEC Directive).
6. Reassess to identify and evaluate improvements as per Directive 89/391/EEC Article 12.

Risk assessment of transport should return to some of the questions covered at the start and include the basic information such as: what journeys have to be taken by our employees? Which modes would represent the lowest risk? What vehicles do you have? Who are they driven by? Where are they driven? What type of drivers do we have? How long have they been driving? What are we asking them to do apart from driving? The driver needs to be checked but so does the supervision and management level. The risk assessment should identify key performance indicators which should be monitored and evaluated.

Risk can be reduced through a reduction in the amount of road use by employees<sup>69</sup>. Also steps taken to reduce travel by the riskier road modes such as driving and cycling (for example by using teleconferences, and taking public transport – bus and rail-where travel is necessary) have the best chance of proving effective at reducing road injuries<sup>70</sup>.

65 ibid

66 European Commission (2005) Causes and Circumstances of Accidents at Work in the EU.

67 Murray W & Dubens E Driver assessment including the use of interactive CD-ROMs, Paper presented at the 9th World Conference on Transportation Research, Seoul, 24-27 July 2001.

68 Murray, W. 2004, The driver training debate. Roadwise: Journal of the Australasian College of Road Safety, Vol 14 (4), May 2004, pp. 3-5.

69 Grayson, G. B. and Helman, S. (2011). Work related road safety: a systematic review of the literature on the effectiveness of interventions. Research report 11.3. Institute of Occupational Safety and Health.

70 ibid

Risk assessments are limited by the level of knowledge that the assessor has. So if the level of knowledge within a company is an issue, it will be worth involving an external expert, if only to act as a challenger to review with the organisation its own internal assessment.

## 4.2 Risk Assessment Tools

### Online interactive Risk Assessment tool (OiRA)

EU-OSHA has developed a comprehensive, easy to use and free web application, the OiRA - Online interactive Risk Assessment tool launched in September 2011<sup>71</sup>. This enables any employer, specifically SMEs, to put in place a thorough step-by-step risk assessment process. It aims to increase the number of SMEs assessing and managing their occupational risks and thus contributing to an improvement of working conditions. It also aims to encourage sectors (via the social dialogue at EU and Member State level) to develop, implement and keep updated sectoral specific OiRA tools. The tool starts with the identification and evaluation of workplace risks, through to the decision making on preventive actions and the taking of action, to monitoring and reporting. The Project currently involves some 15 European Member States (national governments, social partners, and research organisations). They are developing sectoral tools in their own languages and piloting them among micro and small businesses.

### Risk Assessment for Organisational Mobility (GUROM)

The risk assessment tool and danger awareness tool on organisational mobility (GUROM<sup>72</sup>) has been developed for use by individual employees and whole organisations by the University of Jena and the German Road Safety Council. As risk assessment is obligatory by law this new tool gives a systematic application of carrying this out. The project aims to develop risk assessment specifically for transport. It comes up with measures to increase the safety of an individual person or an entire organisation. The project looks at the scientific outcome of the effectiveness of the measures to prevent collisions. It is based on the principle of TOP: Technology/transport context, Organisation and Person<sup>73</sup>. It links into the circular process of risk

assessment presented earlier. Those who would like to evaluate their risk fill out a questionnaire about their risk when travelling both for work and on the commute to and from work. This is done on the dedicated and data protected project website. The questions cover a number of issues related directly and indirectly to safety. Users are also asked about their choice of mode, their job and personal life. They will receive an individual response about their level of risk together with recommendations and tips on reducing their risk in transport.

The suggested measures are based on interventions validated by the German Social Accident Insurance and the German Road Safety Council. At present this includes an inventory of 400 measures. The measures are categorised depending on the target groups and effectiveness for individual risks. This database is being adapted and enlarged constantly. Also their data will be compared with other participants so that they can form a better picture about their own level of risk. Entire organisations can also be evaluated as a whole to create a general profile. Data protection is respected in both cases of a general organisational evaluation or a personalised one.

At a national level, Germany has also developed a database<sup>74</sup> that includes over 1,000 practical risk assessment aids to carry out risk assessment. These are either of a general nature or they may relate to certain sectors, workplaces and types of risk. The database can be searched for specific providers and sectors and types of hazard.

The German Road Safety Council offers a service to employers which aim to improve quality, efficiency and safety through external expert consultancy<sup>75</sup>. The concept aims to offer a holistic solution to operational problems. A DVR counsellor is invited in to the organisation to undertake a consultation on WRRS. A DVR counsellor will discuss the issues first together with management and they will look at ways to implement the concept. Employees are also involved, as they often know the weaknesses in the operational process best. The DVR counsellor will then submit to the employer their recommendations for improving the road safety of the organisation. External input has also been found to be helpful.

71 <http://www.oiraproject.eu/#mainContent#title>

72 [www.gurom.de](http://www.gurom.de)

73 Gregersen N P, Brehmer B and Morén B. Road safety improvement in large companies. An experimental comparison of different measures. *Accident Analysis & Prevention* 1996; 28: 297–306

74 <http://www.gefaehrungsbeurteilung.de/en/handlungshilfen/datenbank>

75 [http://www.dvr.de/betriebe\\_bg/beratung/vs\\_arbeit.htm](http://www.dvr.de/betriebe_bg/beratung/vs_arbeit.htm)

## Risk Assessment for SMEs in Spain

The Spanish National Institute for Occupational Health and Safety (INSHT) has prepared a guide<sup>76</sup> which sets out the most frequent and dangerous risk situations in public transport, in order to facilitate the assessment of risk in transport SMEs who transport passengers. The information contained in the guide enables the employer, in collaboration with employees, to assess risks in their company by themselves. External experts are only required for those risks where assessment requires particular specialist knowledge. The guide sets out the measures and procedures to be put into place to reduce risks and the cases in which it is necessary to provide specific training for workers. The guide also includes all the legal references relating to the prevention of individual risks. All the information is supplied in a clear and simple form that can be easily understood by anyone who, as often happens in small companies, does not have specific knowledge regarding safety.

### Zurich Risk Engineering Assessment Example

One example of applying the risk approach to employees is cited in the Zurich Risk Engineering Guide<sup>77</sup> and is based on an outcome of an assessment showing that for an employee driving 60,000km per year, the risk reduction strategy would be, in this order:

1. Eliminate some of the exposure, which is generally a management initiative. As an example, sales territories could be reorganised.
2. Substitute some of the journeys for ones on public transport, which is also generally a management initiative. Air and train travel are both significantly safer than travelling by road.
3. Ensure you have robust policies on fatigue management, also a management initiative.
4. Raise awareness about fatigue issues and provide practical suggestions on how to manage this, also as a management intervention.
5. Provide guidance and training on effective route planning, to ensure journey times are minimised.
6. Provide guidance and training on effective schedule setting to ensure journeys are planned effectively.
7. Provide guidance and training on how to attain the correct seating position, as incorrect posture will lead to the early onset of fatigue.

## Recommendations for Employers

- Undertake a risk assessment that applies to the road user, journey, vehicle and management systems in compliance with the European Framework Directive 89/391/EEC.

### 4.3 Monitoring and Evaluation

Monitoring allows for the identification of changes over time and is a critical part of the ongoing risk management process which involves measuring key performance indicators. Deciding what is required in terms of monitoring should be linked directly to the risk assessment process, its outcomes and the measures identified to manage risk. Monitoring and evaluation will help to identify how effective the road safety management programme is at managing and reducing risks and also help to develop future standards, objectives and targets. Monitoring is useful not only in identifying significant achievements but also in recognising when measures are not working or targets are not being met. This can also inform the business case for WRRS within an organisation, allow organisations to properly target resources, to prove that they are complying with legislation or standards, and contribute to motivating both management and other staff by highlighting positive outcomes. At a broader level monitoring can also provide an opportunity for benchmarking between organisations of similar size in the same sector.

'There are two key components of monitoring systems:

- Active monitoring, monitoring before things go wrong. It involves regular inspection and checking to ensure that your standards are being implemented and management controls are working. You will be able to answer the question - are you achieving the objectives and standards you set and are they effective?
- Reactive monitoring, monitoring after things go wrong. This involves learning from mistakes and incidents, whether they have resulted in injuries and property damage or near misses.'<sup>78</sup>

76 [http://www.insht.es/InshtWeb/Contenidos/Documentacion/TextosOnline/Guias\\_Acc\\_Preventiva/Ficheros/gap\\_020.pdf](http://www.insht.es/InshtWeb/Contenidos/Documentacion/TextosOnline/Guias_Acc_Preventiva/Ficheros/gap_020.pdf)

77 Zurich Risk Engineering Managing Work Related Risks (2008).

78 Shaw, K., Global Road Safety Partnership (2009) Draft Fleet Safety Manual, Part 1.

Organisations should carry out both active and reactive monitoring and procedures should be identified to facilitate this. The table below

suggests actions that should be carried out at the monitoring and evaluation stage.

	ACTIONS <sup>79</sup>
Monitoring & Evaluation	<ul style="list-style-type: none"> <li>• Determine personnel responsible for monitoring and evaluation</li> <li>• Examine aims and objectives of all of the initiatives</li> <li>• Develop monitoring and evaluation structures for each of the initiatives</li> <li>• Analyse the amount safety culture has been integrated into the organisation</li> <li>• Provide reports on progress of the work-related road safety initiatives</li> <li>• Use outcomes from reports to inform business case</li> </ul>

In order to monitor effectively, organisations should identify quantitative or/and qualitative indicators across the areas that influence the road safety performance of the organisation namely:

- Employees (Drivers, Managers)
- Journeys Vehicles
- Business / Operating Environment including Contractors (especially for road transport services)
- Incidents

The type of indicators will depend largely on the specific characteristics of the organisation, its resources and ability to collect and analyse data. Useful information and data sources that can be developing into indicators should already have been identified as part of the risk assessment process which would include gathering information on the current situation within the organisation. The table below suggests some basic indicators that could be used.

#### Suggested key performance indicators:

	Indicators
Employee	Number and types of driving violations Insurance claims per employee Complaints from members of the public Number of days absent due to illness Employee hours, shift pattern Health, eyesight and wellbeing checks Staff risk assessed
Journey	Mode of travel to work Mode, journey type and kms travelled High risk locations on regular routes
Vehicles	Number, type, characteristics of vehicles Number, type and severity of collisions Insurance claims per vehicle Fuel Consumption Number of maintenance checks per vehicle Vehicle faults identified Maintenance costs
Business/Operating Environment	Budget for (road) safety Staff resources for road safety Number of safety meetings/toolbox talks Number of compliance checks, audits and management reviews
Incidents	Number of near missed by kms travelled Number of incidents by kms travelled Incident location Cost of incidents Involvement of third parties Number of crash free days

79 <http://www.devon.gov.uk/workrelateddriversfinal.pdf>

Technological development, in terms of telematics and intelligent transport systems, are increasingly offering new avenues for data collection and monitoring in relation to driver behaviour and driver safety. There is also an element of driver self-improvement in some systems that provide immediate in-vehicle feedback for the driver following a high risk manoeuvre (such as cornering, accelerating, braking and speeding). Such advances are particularly relevant to the commercial road transport sector and can offer organisations support with driver behaviour-based reporting. With lone worker legislation on the rise and the onus put squarely on the employer to protect both their mobile employee and those they may come in contact with, it is imperative to be able to identify any potential risk. If telematics are utilised their introduction should involve staff consultation and their purpose should be clearly explained.<sup>80</sup>

Routine, systematic monitoring should be part of the day-to-day operation of the organisation. This should include compliance checks which are carried out on a regular basis 'to test how well safety rules and standards are being implemented and adhered to by staff'. These checks can also act as a helpful tool to reinforce rules, policies and standards amongst staff.

Compliance checks might include:

- Checking documentation including licences, driver training records, fitness to drive records, driving/working hours.
- Random checks on the road to check compliance with rules such as seatbelt wearing, mobile phone usage, speeding, tailgating.<sup>81</sup>
- Checking that employees have actually read and understood all of the key policies/procedures/guidance in driver handbooks.

Compliance checks need to be supplemented and reinforced by more extensive reviews (or audits) of the overall performance of the road safety management programme. The Draft ISO 39001 defines an audit as a 'systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled.'<sup>82</sup> A review or audit can be an internal or an external process. However, either way it should

be independent and objective and therefore not led by management or the person(s) responsible for the area being reviewed. Checks of this nature should be carried out at least once a year. A number of gap analysis online tools have been developed to assist with this process.<sup>83</sup>

In order for the monitoring, compliance checks and audits to be truly effective it is important that management fully consider the findings of such processes on a regular basis and ensure that resulting recommendations are implemented. Management should carry out a comprehensive review, at least annually, that should:

- 'Ensure compliance with standards.
- Assess suitability and effectiveness of standards.
- Ensure the adequacy of risk controls.
- Update inadequate procedures from new information, including an updated review of hazards and risks.
- Monitor achievement of targets and objectives.
- Investigate causes of incidents.
- Identify possible trends and issues.
- Identify improvements required.
- Reward improved performance and achievement of significant milestones.
- Discuss audit results.'<sup>84</sup>

The audit and review processes should be linked into the general operation of the organisation and to external influences. For example, changes in legislation in the health and safety area may require organisations to look again at their existing road safety management systems. Similarly, if major changes are envisaged on the business side, such as significant expansion of the fleet or decisions to subcontract work, there is likely to be a knock-on effect on risk that will need to be reassessed. 'As such, the review process must identify these changes and prompt re-alignment of the management systems to take account of the changes and maintain the focus on identified risks.'<sup>85</sup>

## Recommendations to Employers

- Identify quantitative or/and qualitative indicators, based on the outcome of the risk assessment, covering drivers, journeys, vehicles, incidents and operational environment.

80 PRAISE Thematic Reports 5 Minimising In-vehicle Distraction & 8 Driving for Work, Managing Speed. <http://www.etsc.eu/PRAISE-publications.php>

81 Shaw, K., Global Road Safety Partnership (2009) Draft Fleet Safety Manual.

82 Draft ISO 39001.

83 [www.fleetsafetybenchmarking.net](http://www.fleetsafetybenchmarking.net) and <http://www.roadsafetyatwork.ca/>

84 Ibid

85 Zurich Risk Engineering (2008) 'Managing Work Related Road Risk'.

- Set up clear procedures and lines of responsibility for carrying out the monitoring/ data collection in each of the areas identified.
- Build monitoring and evaluation into the day-to-day operations of the organisation
- Set up clear, standardised incident and collision reporting and investigation mechanisms.
- Utilise technology where possible by monitoring and reviewing important data such as tachograph records, telemetry data.
- Set up procedures for, and facilitate, systematic compliance checks on regular basis.
- Set up procedures and facilitate audits and management reviews.

## Part 5 Work Related Road Safety (WRRS) Policy

A WRRS policy is a clearly written statement of intent setting out the organisations commitment in terms of WRRS encompassing the basic aims of reducing road risk, collisions and injury and upholding the law. The policy provides a framework for action, for the setting of objectives and targets and guides the implementation of the overall management programme.<sup>86</sup> The policy should clearly outline the roles and responsibilities of both employees and management including

signed and dated declarations to comply with it. A comprehension check should be carried out to ensure that the policy has been read and understood. In this regard it is crucial that the policy is led or strongly influenced by the head of the organisation.

Research suggests that, in terms of policy development, organisations 'have tended to adopt a 'one size fits all' approach. However, in order to focus on the particular issues of an organisation it is important to undertake a needs analysis to establish the issues within an organisation'<sup>87</sup> and gain an understanding of the current situation. This will allow organisations to tailor their policy to their own specific characteristics (including operations and activities), structure (management structure, relationship with external organisations), needs and main risks identifying through a risk assessment. Such an approach can foster a better understanding of the relevant work related road risks as well as helping to ensure that action and resources are appropriately and effectively targeted. The table below suggests actions that should be taken in the preparation of a WRRS policy in order to make sure that it is relevant, targeted and appropriate.

	ACTIONS <sup>88</sup>
POLICY	<ul style="list-style-type: none"> <li>• Examine current work-related road safety policy in the organisation</li> <li>• Examine health and safety policy within the organisation</li> <li>• Research and determine relevant road safety policies from external influential bodies</li> <li>• Determine legal standards for work-related safety nationally and worldwide</li> <li>• Develop policy from research including processes to report and examine work-related road collisions</li> </ul>

The policy should make it clear what is expected of each and every employee in terms of their road safety responsibilities. 'The organisation's safety policy needs to be written to influence all of its activities to improve fleet safety, including organisational design, selection of people and drivers, vehicles and equipment, and the way that driving work is carried out and managed to provide continuing high safety performance.'<sup>89</sup> The policy should include the organisations' aims and commitments in the three key areas of WRRS namely drivers, journeys and vehicles both at the level of the organisation and of the individual.

Based on the current baseline situation in the organisation and on the findings of a risk assessment, statements of intent or commitments can be formed under each of these three areas. Given that work-related road use is both a road safety and occupational safety issue it is important that WRRS policy is linked into broader health and safety policies of the organisation and to business policies. 'This should include human resources or employment policies such as contracts of employment, codes of conduct, drugs and alcohol policies, and health & safety requirements.'<sup>90</sup>

86 Draft ISO 39001, Road Traffic Safety Management Systems with Guidance for Use.

87 <http://www.devon.gov.uk/workrelateddriversfinal.pdf>

88 Ibid

89 Shaw, K., Global Road Safety Partnership (2009) Draft Fleet Safety Manual.

90 Ibid

The Road Safety Authority and Health and Safety Authority in Ireland recommend that 'a good policy should include the following:

- Clearly state the main aims of the policy
- Show that management is committed
- Refer to relevant driving for work legislation
- Explain how you are managing driving for work and its three key elements – drivers, journeys and vehicles
- Give details of resources<sup>91</sup>

Depending on the needs of each organisation specific policies can be developed in relation to the main risks, for example, if many employees use their own cars for work purposes (grey fleet) or if employees occasionally use a shared pool car for work purposes specific policies may be required to manage the risk in these areas.

'One important consideration is to what extent driving for work policy should cover employees driving employer-owned (or employer-leased) vehicles or their own vehicles whilst on business (grey fleet). Employee responsibility for their vehicle needs to be clearly outlined in the policy. Employers can have a huge influence in fostering improved road safety compliance for employees using their own vehicles for work purposes. Large employers can also influence policies in Small and Medium Enterprises (SMEs) when they subcontract out work further along the supply chain by insisting that subcontractors adopt the same conditions and standards in relation to driving for work.<sup>92</sup> Large employers should be encouraged to also share their good practice with smaller companies who may not have the facility of human resource management found in many larger companies.<sup>93</sup>

Consultation and buy-in are critical in developing a successful WRRS policy. 'Employers should ensure that the policy is clearly articulated and broadly communicated so that employees are aware of the existence of the policies (for example by reading the policy out loud with the employee upon employment or getting the employee to sign a declaration or a 'pledge', rather than simply handing out a few pages for the employee to read). If a company is providing mobile phones,

at the very least employees should be required to sign and acknowledge that they have received, understood and will comply with the company policy.<sup>94</sup> Best practice is to ask employees to undertake comprehension checks – this compels them to read the material at least once, and increases the chance that they will follow the advice given – it also provides a very robust audit trail for the employer as not only can they prove that they have given these documents to the employee, but that they have also read and understood them. Policies should also be uniformly enforced<sup>95</sup>.

Rules and procedures should be put in place to ensure that the policy is implemented. These written rules should clearly show what is permitted at work and explain procedures in case of breaking the rules and presenting solutions in case of problems. Finally the policy should be evaluated, followed and adjusted according to suggestions and also experience. This is discussed further later in this report.

An example of WRRS Policy can be found in Appendix 2.

## Recommendations to Employers

- Adopt a clear policy setting out the organisations commitment in terms of WRRS.
- Clearly outline the roles and responsibilities of both employees and management (all staff should be required to complete signed and dated declarations that they agree to comply).
- Communicate to staff the reasons why policies are in place: the risks posed to employees and others.
- Ensure sanctions are in place to deal with unsafe behaviour and rule contraventions commensurate with the nature and impact of the act. Also ensure reward and recognition is given to employees who comply with the rules and display safe behaviours.
- Ensure there is a mechanism in place to verify the policy such as a training session to ensure that employees, including management level, are aware and understand existing policies.
- Make sure senior managers take the lead by respecting the policy.

91 [http://www.hsa.ie/eng/Vehicles\\_at\\_Work/Driving\\_for\\_Work/Driving\\_for\\_Work\\_CD\\_Rom/](http://www.hsa.ie/eng/Vehicles_at_Work/Driving_for_Work/Driving_for_Work_CD_Rom/)

92 PRAISE Thematic Report 5, Minimising In-vehicle Distraction. <http://www.etsc.eu/PRAISE-publications.php>

93 PRAISE Thematic Report 8 Driving for Work; Managing Speed. <http://www.etsc.eu/PRAISE-publications.php>

94 Noble, J. & Riswadkar, A.V. (2009), Cell Phone Liability for Employers. The John Liner Review, quarterly review of advanced risk management strategies 23 (1). PP 73-79.

95 PRAISE Thematic Report 5, Minimising In-vehicle Distraction. <http://www.etsc.eu/PRAISE-publications.php>

## Part 6 Common risks and how to manage them

The main causes of road traffic collisions include speed, drink and drug driving and, especially whilst driving for work, higher levels of fatigue. Recent research also suggests that driver distraction is increasingly contributing to collisions on the roads. These are risks that typically need to be managed in the WRRS context. Furthermore, organisations may find that they are faced with other risks, beyond the scope of this list, resulting from the specific nature of their business or work practices. The extent to which measures to tackle these risks will need to be developed and implemented will depend on the specific characteristics of the organisation, the outcome of risk assessment and the commitments contained in the organisations WRRS policy. High risk areas and immediate risks should be addressed first before moving on to tackle lower and more remote risk; all risks should eventually be addressed in order to continually improve on overall WRRS. Measures can be implemented either at an organisational level, for example changing work practices by implementing new journey planning rules, or at the individual level, such as providing training for employees with regards to a new vehicle they will be expected to drive. In tackling common risk areas employers should consider employees, vehicles and environment in order to develop effective measures.

The common purpose of all measures introduced is to achieve the organisations WRRS policy; at a minimum managing (eliminating or reducing) road risk to employees and others and upholding the law. Where possible, 'undertaking pilot studies at one site, or with one team of drivers, is a very useful exercise because it helps to evaluate the effectiveness of a program, make appropriate cost tradeoffs and develop the process for implementation of any wider program.'<sup>96</sup>

### 6.1 Speed

'Speeding can be defined as driving in excess of legally set speed limits and/or driving at speeds which are inappropriate to the prevailing conditions. Speeding is the main cause of road traffic collisions, deaths and serious injury. Loss of control of the driving task, and thus potentially of the vehicle, arises when the demands of the driving task exceed the available capability of the driver. As speed increases the task

demand rises and the driver's capability is reduced. Employers have a clear responsibility to reduce incentives to speeding and to raise understanding of the serious consequences it can have.'<sup>97</sup> Drivers travelling for work are often under pressure to meet tight deadlines and this means that they are a group that are often likely to speed. A British study found that speeding amongst company car drivers was common for over half the sample, and excessive speeding was common for 13% of the sample. The most important reason was the desire to arrive at meetings on time, even if this meant breaking the speed limit combined with a reduced perception of excess speeding as an important collision risk factor and lower driving experience.<sup>98</sup>

Thematic report 8 offers employers an insight into tackling speeding amongst employees driving for work. The second part focuses on management issues covering topics from journey planning to payment schemes with advice on how such practices can help to manage speeding in the work context. The third part of the Thematic Report looks at what employers can do from risk assessment of potential speeders and identification of training - including also eco driving synergies - to the promotion of safer and more economic driving. It also looks at what can be done to rehabilitate speeding offenders. The final part looks specifically at different speed management technologies which can also be a useful additional tool in managing speed. A policy mix is needed to effectively tackle speeding and the report aims to present recommendations to reduce speeding across the board amongst those who are driving for work.

### 6.2 Alcohol and illegal and Medicinal Drugs

Employers have an important role to play in increasing the awareness of drivers about the risks of drunk driving and driving under the influence of both illegal and medicinal drugs. 'Employers and fleet operators should be strongly encouraged to set up their own initiatives. This should form part of a holistic approach in setting up a road safety programme. One helpful set of guidance is set out in the ILO's Code of Practice on Management of Alcohol and Drug-Related Issues in the Workplace.'<sup>99</sup> This recommends that every employer should, in cooperation with employees and their representatives, develop in writing the organisation's policy on alcohol and drugs in the work place.

96 Murray, W., et al., (2003). Evaluating and improving fleet safety in Australia. Canberra: ATSB. [www.infrastructure.gov.au/roads/safety/publications/2003/eval\\_fleetsafe.aspx](http://www.infrastructure.gov.au/roads/safety/publications/2003/eval_fleetsafe.aspx)

97 PRAISE Thematic Report 8 Driving for Work; Managing Speed. <http://www.etsc.eu/PRAISE-publications.php>

98 Adams-Guppy, J. and Guppy, A. (1995) Speeding in relation to perceptions of risk, utility and driving style by British company car drivers. *Ergonomics*, 38, 12, 2525-2535.

99 [http://www.ilo.org/public/libdoc/ilo/1996/96B09\\_297\\_engl.pdf](http://www.ilo.org/public/libdoc/ilo/1996/96B09_297_engl.pdf)

Thematic report 3 focuses on Fitness to Drive in the work-related context looking at general Workplace Health Promotion (WHP) including dealing with alcohol, illegal drugs and medicines. Thematic Report 1 also discusses the potential of in-vehicle safety technologies for improving WRRS and includes a section on managing alcohol with the use of alcohol interlocks.

### 6.3 Fatigue

Another major risk factor affecting driving for work is fatigue. Research shows that driver fatigue is a significant factor in approximately 20% of commercial road transport crashes. Surveys show that over 50% of long haul drivers have fallen asleep at the wheel. Increased crash risk occurs at night (peak levels at night can be 10 times daytime levels), the longer the working day and with irregular hours. Those fatigue factors that have been shown to influence road safety need to be better controlled in regulation policy and risk management. The most important factor that will ensure safety is to effectively implement and enforce regulation.

Thematic Report 3 focuses on managing fatigue or sleepiness in the work-related context. Thematic Report 8 focuses more specifically on tackling fatigue amongst HGV drivers including an overview of EU legislation on driving and resting times in the context of road safety. The report also looks specifically at what employers can do to tackle fatigue. An employer's 'safety culture' which integrates fatigue policy across its supply chain can support compliance with existing EU legislation.

### 6.4 Distraction

'Distraction on the roads is a major source of concern. Driver distraction is thought to play a role in 20-30% of all road collisions.'<sup>100</sup> There is a long list of distractions that undermine the driver or the rider's ability to perform the driving task. Employers should identify and manage all distractions linked to driving for work and ensure that drivers reduce risks by, for example, not eating or drinking while driving; presetting music/radio and climate controls; securing any loose objects; pulling over to adjust equipment, check maps or attend to personal grooming; asking passengers to help with tasks (e.g. checking maps).<sup>101</sup>

Increasingly, distractions are becoming more technology focused as vehicles are becoming "moving offices". They are often environments in which employees are likely to receive or make phone calls, check text messages or even check their emails, not appreciating the enormous road risk that this type of behaviour poses while driving. Thematic Report 5 offers employers insight on how to minimise in-vehicle distractions associated with the use of electronic devices or so-called "nomadic devices" including mobile phones, smart phones, music players and portable navigation devices (PNDs). The report looks at the positive and negative impacts of such devices in the work-related road safety context and discusses measures to minimise risk in this regard including employer policies, communications and general business practices.

### Recommendations to Employers

- Develop measures in direct response to the outcome of risk assessment.
- Address high risk areas and immediate risks first before moving on to tackle lower and more remote risk; all risks should eventually be addressed in order to continually improve on overall WRRS.
- Implement organisational level measures before implementing individual level measures.
- In tackling common risk areas consider employees, vehicles and environment in order to develop effective measures.

### Part 7 Journey Management and Planning

The planning and management of journeys plays a central part in influencing work related road risk and preventative measures in this area should be developed as part of an organisations' road safety programme. Journeys should be optimised to minimise the need to travel. Journeys should also be shared or consolidated as far as possible and public transport should be used wherever practical and appropriate (i.e. attending business meetings).

At the organisational level managers and human resource staff within organisations should work to ensure that current employment contracts, shift patterns and work schedules do not contribute to driver sleepiness and stress. As a minimum work patterns and journey schedules must enable drivers to stay within the law.

100 PRAISE Thematic Report 5, Minimising In-vehicle Distraction. <http://www.etsc.eu/PRAISE-publications.php>

101 Ibid

Journey planning software can be used to optimise journeys. Route planning of commuting could then identify and evaluate issues such as terrain and infrastructure. Traffic conditions (which can vary as regards time of day) should also be taken into account. Moreover, weather conditions and seasonality (such as light and darkness) are also issues to be considered when choosing the route.

All employees who drive for work whether they be 'grey fleet', company car drivers responsible for their own work schedule or professional drivers of HGVs with logistics managers, can utilise journey planning and ITS to help ensure that their speeds are appropriate. Ensuring 'that journey schedules, distances and plans allow sufficient time for drivers to complete their journeys (including delivery stops, rest breaks and foreseeable weather and traffic conditions) safely is critical. Those responsible for journey planning or scheduling including the transport operators have a responsibility to take all such factors into account. With better logistics planning employers should consider introducing buffer times in the supply chain: the drivers are thus relieved from time pressure and can concentrate more on safety and energy-saving issues.'<sup>102</sup>

### Recommendations to Employers

- Ensure that employment contracts, shift patterns and work schedules do not contribute to putting employees under time-management pressures.
- Review scheduling, rostering and load route planning arrangements and proactively address driver stress in the context of a health and safety plan.
- Provide journey planning capabilities to facilitate realistic scheduling of trips and contribute to appropriate time management.
- In dealing with clients, avoid making any concessions that might adversely affect road safety, such as commitments to deliveries or completion of work packages that set unrealistic time constraints.
- Establish schedules, including those for sub-contracting chains, which allow drivers enough time to obey speed limits and avoid peak hours driving. These should be flexible and adaptable to changes such as the weather.

## Part 8 Employee Management and Internal Communications

Employees or drivers are a key element of an organisation's road safety programme that should also focus on issues such as management culture, journeys, vehicles and safety of sites (see Haddon Matrix). Employee management can include any process or activity designed to ensure that WRRS policies and practices are being consistently followed. Organisations should develop procedures that allow them to effectively manage the risk faced by employees at both the organisational and individual level. Employees themselves also have a responsibility to behave in a way that minimises risk for themselves and others. Employees should be informed of and involved in all stages of the development and implementation of road safety management programmes for their organisation.

### 8.1 Communications and Involvement

Consulting with the workforce is a legal requirement where health and safety is concerned.<sup>103</sup> Framework Directive 89/391/EEC expressly requires employers to consult workers and/or their representatives and allow them to take part in discussions on all questions relating to safety and health at work; proactive organisations consult their drivers from the outset.

In their Guide on Worker Representatives<sup>104</sup>, the European Agency for Safety and Health at Work also suggest that it may be useful to designate a 'worker representative'. 'The role of the worker representative is to ensure that workers have an input into managerial decision making when preventive and protective measures are being developed, by reflecting their views, concerns and ideas. This role is distinct from employees such as supervisors whose job description includes tasks to help manage health and safety.' 'Depending on national legislation, consultation may be direct or through a worker representative'; however a combined approach that integrates health and safety into everyone's roles is the most effective approach.<sup>105</sup>

Using employee knowledge helps to ensure risks are correctly identified and assessed and that workable solutions are identified and implemented. A WRRS management programme

102 PRAISE Thematic Report 8 Driving for Work; Managing Speed. <http://www.etsc.eu/PRAISE-publications.php>

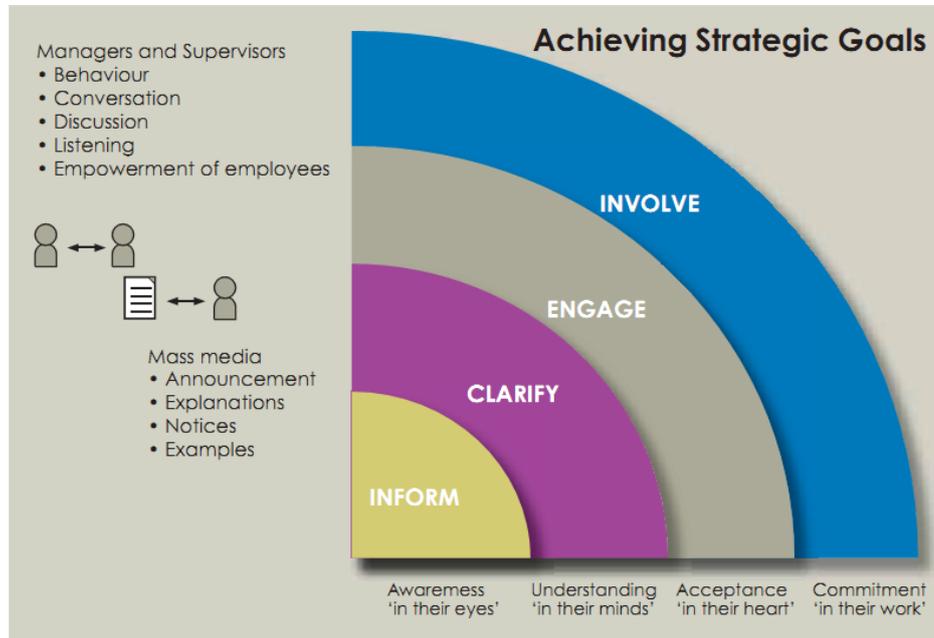
103 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31989L0391:EN:NOT>

104 European Agency for Safety and Health at Work, (2012) 'Worker Participation in Occupational Safety and Health A PRACTICAL GUIDE'.

105 European Agency for Safety and Health at Work, (2012) 'Worker Participation in Occupational Safety and Health A PRACTICAL GUIDE'.

will require the development of a communication strategy to ensure that all relevant people, both externally and internally, are aware of it and what it requires of them and the organisation. More importantly, communications can help to ensure buy-in and contribute to changes in behaviour and attitudes. The diagram below illustrates various states in the 'communications'

process – one which is ongoing. As with all aspects of the programme the extent and nature of the communications required should be tailored to the specific characteristics of the company (number of employees, work patterns, types of communications already used within the business) and their road risk.



Source: K Shaw, *Global Road Safety Partnership Draft Fleet Safety Manual*

It is important that employees are involved from the outset and continuously in order that reducing work related road risk becomes inherent in their every approach to work. The communication methods used will depend on what is trying to be achieved and how embedded the concept of reducing road risk is within the organisation. In the initial stages simple awareness raising activities are likely to be required to make employees think about road risk and why it is an issue for them. Communication may simply take the form of emails from management that they intend to take action on WRRS. Later this should be developed into clarifying the exact nature of risks faced and engaging employees in developing solutions during which more interactive communications methods are likely to be more effective such as team discussions. The process is continuous and should 'drip-feed safety information to all employees who make work-related road journeys, in order to develop the on-road safety culture in business.'<sup>106</sup>

'There are many ways of engaging and communicating with staff using both direct and indirect channels of communication. Some

examples are provided below:

- Direct communications:
  - Workshops for managers and implementation teams
  - Staff briefing sessions or 'toolbox' chats
  - Driver training
  - Staff induction courses
- Indirect communication: Placing fleet safety information in other documents or media:
  - Safety manuals
  - Driver handbooks
  - Driver passports
  - Organisational newsletters
 Placing fleet safety awareness information on:
  - Notice boards
  - Posters
  - Websites
  - Emails'

Safety should be a regular item on the agenda of not only management but also team meetings providing opportunities to discuss emerging issues or risks and offering a positive environment through which safety concerns can be raised.

<sup>106</sup> Zurich Risk Engineering, Managing work-related road risks - A strategic must-have.

The outcomes should be fed back to operational managers and drivers through discussion. 'To really achieve acceptance and commitment managers and supervisors must be personally and deeply involved in the process. It will take time and effort to do, however, this is essential to realise the benefits.'<sup>107</sup> It is important that management lead at all stages in the communications process and that there are clear structures via which all levels of employees can have a voice. Employees also have a duty to communicate and cooperate with their employers in contributing to identifying and reducing risk. In order to facilitate this interaction, management should ensure that proper systems are in place which provides adequate opportunity for communications, proactive discussion surrounding risks and the reporting of incidents.

The European Agency for Safety and Health at work underlines ways in which employees can act to effectively utilise communication systems provided by their employers. The following are highlighted:

- 'asking questions, raising issues and making suggestions during meetings, team talks, training sessions, one-to-one talks with supervisors or managers;
- taking part in any consultation activities;
- being involved in trials, e.g. selection trials for personal protective equipment;
- volunteering to take part in occupational safety and health activities such as working groups;

- reporting accidents, near misses or anything else they think could be unsafe, unhealthy or obstructive, but also pointing out any ideas for improvements;
- speaking with their worker representative, if they have one, and participating in any activities they organise (meetings, surveys, etc.). Consider volunteering to be a worker representative;
- contributing to health and safety news in the company newsletter;
- applying the knowledge received in training to work tasks;
- setting a good example to new recruits and helping them on the health and safety aspects of their work.'<sup>108</sup>

### Good Practice Case Studies

#### Vauxhall<sup>109</sup>

Improved driver awareness is seen as critical. For this reason, on-going communication to drivers is a key element of Vauxhall's strategy using as many methods as possible. Most communications are either sent in the name of, or endorsed by, the Managing Director. Guidance is regular, targeted and where possible to use real life examples, including serious or costly collision details being shared with other drivers to prevent re-occurrence. Some of the measures adopted are described in Figure 3, which summarises the Driver Handbook and other communications.

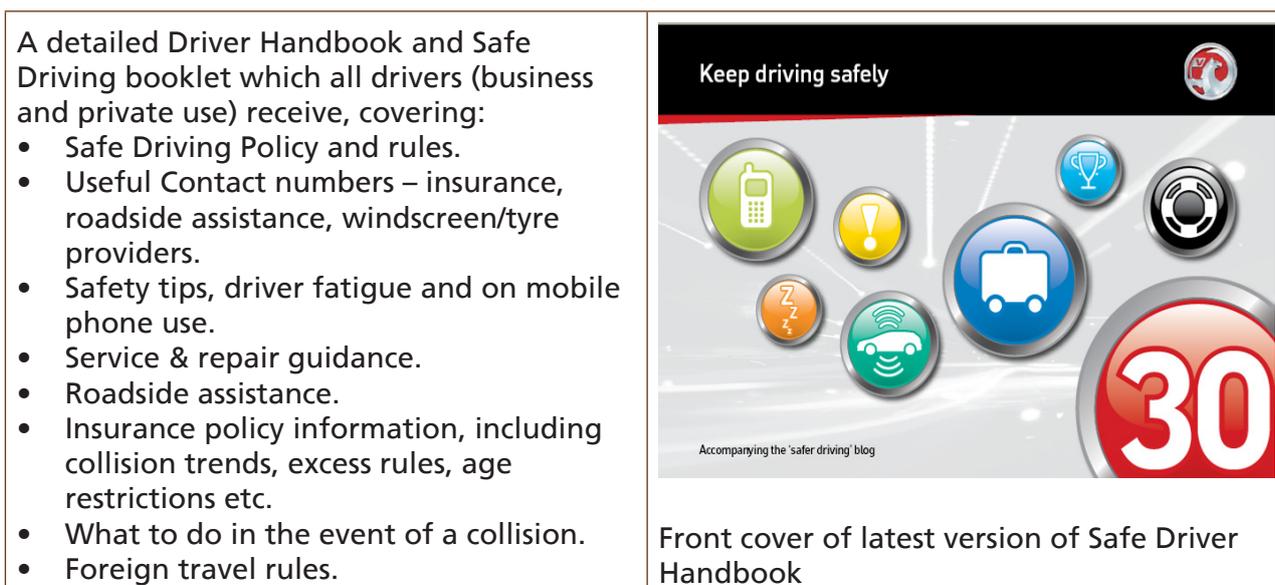


Figure 3. Summary of Vauxhall driver communications and handbook

107 Shaw, K., Global Road Safety Partnership (2009) Draft Fleet Safety Manual.

108 European Agency for Safety and Health at Work, (2012) 'Worker Participation in Occupational Safety and Health A PRACTICAL GUIDE'

109 Price, A., et al., Building work-related road safety into organisational DNA: Case study of Vauxhall. Draft paper, currently in review process for Journal of the Australasian College of Road Safety.

The Safe Driver Handbook is personally endorsed by the chairman of Vauxhall and goes to all employees. The latest version, published in the autumn of 2010, includes sections on the risks associated with fatigue, using a mobile phone whilst driving and speeding, along with information on how the fleet is performing and details on some of the activities that are taking place as part of the risk management program. This is supported by an integrated communications strategy including:

- Quarterly driver bulletin, with safety articles, repeat messages, trends and statistics.
- Email, web and paper-based reminders on key issues including mobile phone use, fatigue, defensive driving and the ergonomics of 'How to sit safely'.
- Safe Driving pamphlet to all drivers, online and hard copy, endorsed by the MD.
- Road safety awareness posters in fleet management centres.
- Comprehension checks of the handbook are also carried out and the pass mark set at 100% to ensure complete understanding.

### **Cummins<sup>110</sup>**

To ensure the sustainability of their program, Cummins developed a very robust, technology-driven communication strategy. By using their

internal website (MyCummins), a driver safety webpage, viewable by the global population, was created. The page includes relevant details such as: translated versions of the global policy, frequently asked questions, vehicle audit forms, links to the online training package, instructions on how to report vehicle incidents/claims, an archived collection of Cummins' monthly driver safety topics, as well as an avenue to deploy periodic communications from key Cummins leaders from within the organisation. In addition to the creation of the webpage, Cummins also developed and deployed monthly driver safety communications, via company email, to provide employees with general tips and strategies to enhance their driver safety knowledge, and ultimately their driving performance. These topics included: cell phone use while driving, eco (green) driving, seat belt safety, impaired driving, adverse weather driving, motorcycle safety, night driving, holiday driving, super bowl driving, road construction safety, and tips to avoid/prevent rear-end collisions.

### **British Telecom**

This is an example of BT's annual communications calendar. Typically each safety message is approximately 400 words in length and is written to show the extent a particular problem, and to provide best practice tips.

Month	National Road Safety issues	Organisational level issues
January	Fatigue	Why fleet safety is important
February	Driving in snow	Program launch
March	Mobile phones	Reducing rear end collisions
April	Seatbelts	Slow speed manoeuvring
May	Drugs and driving	Vehicle checking
June	Summer driving	Safe parking / Hit whilst parked incidents
July	Young driver road safety	Incident reporting
August	Speed	Online interventions launch
September	Holiday driving / child restraints	Fire, theft and vandalism
October	Flexible	Family member safety
November	Winter driving Using	ABS brakes
December	Drink driving	Road safety and the Christmas party

### **Finland**

Simo Salminen of the Finnish Institute of Occupational Health has described a promising group discussion intervention based on Group decision Theory. A social psychological discussion method was used with 172

electricians. This study was carried out in a company responsible for the building and maintenance of the electricity network in the Helsinki capital area of about one million inhabitants. All 172 electricians participated in the study. They drove company vans and lorries an average of 278 km per week.

110 Adapted from PRAISE Awards Application 2011.

Each subject participated in three small group meetings of 7–14 drivers from the teams in which they normally worked. In the second intervention, 179 employees of another electric company participated in a 1-day course of anticipatory driving. In the first discussion round, the 19 teams reported 183 problems in work-related traffic. During the second round, the teams produced 594 suggestions to solve the problems. In the third round, the electricians made decisions on 53 commitments to change their driving behaviour. Evaluation data suggested that the number of occupational accidents increased by 15% during the eight-year follow-up period, while the number of traffic-related collisions decreased significantly by 72%.

## 8.2 Sanctioning or Incentivising Employees

It is also important that there are clearly defined enforcement and sanctioning measures within individual organisations for ensuring compliance with their WRRS policies and legal requirements in this area. However, it is important to note that whatever form sanctions take, they should only be considered once all possible organisational and management root causes for the inappropriate behaviour have been eliminated. As an example, someone who has more than one speeding offence may have been put under undue pressure to speed to meet the objectives set by their employer—this also raises the issue of who should determine whether it was the employee at fault for the incident(s), as it may actually be the manager who is investigating them that is the root cause of the problem.

The circumstances of individual's failure to comply with health and safety procedure or commitment of driving violations should form part of an individual employee's performance appraisal, leading, where appropriate, to new personal performance targets.<sup>111</sup> 'In the first instance, the approach should be positive and helpful, rather than punitive, although it should be made clear that repeat offending may lead to disciplinary procedures' which could include the loss of authority to drive.<sup>112</sup>

'From psychological theories on learning and motivation it is known that rewarding good

behaviour is at least as powerful as a behaviour modification tool as punishing bad behaviour. In road safety theories, rewarding has not received that much attention. However, research has indicated that it can indeed have a positive effect on traffic behaviour.<sup>113114</sup> While this may be difficult at the national level, at the organisational level such an approach is less problematic as new technologies such as telematics allow for driving to be continuously monitored. This gives employers the potential to incentivise employees in relation to their behaviour. Incentives could be in the form of vouchers or bonuses. It should however be highlighted that these programmes are difficult to implement in practice and there is not yet much evidence on their cost-effectiveness.<sup>115</sup>

## 8.3 Recruitment and Fitness

When driving for work is required (whether it be as a professional driver or occasionally in order to complete the main role of the job) employers should consider this as part of the recruitment process. It is possible for employees to request a minimum amount of driving experience or/and specific experience with handling certain types of vehicle as part of job descriptions. During the application process it is also important to ask whether or not driving violations are held and, to check that employees are physically and mentally fit to carry out the job and to ensure that they understand their legal requirements in relation to driving for work.

'Driving is a demanding task and the risk of crash is high when individuals are not physically or mentally fit to drive. This is especially true when looking at work related driving, since conditions such as work related stress or sleepiness resulting from driving long hours come to play a role.<sup>116</sup> In this regard, employers should ensure that all employees are mentally and physically fit to drive. 'A minimum 'fitness to drive' standard must be set, and procedures should be in place to ensure that these are met.<sup>117</sup> Furthermore, drivers should be aware that it is their responsibility to refrain from driving if they recognise that they are impaired. Employees should also be expected to inform their employer if they are under medication or experiencing ill-health that could temporarily impair their driving. PRAISE Thematic Report 3

111 Adapted from RoSPA <http://www.rospace.com/roadsafety/info/workspeed.pdf>

112 Ibid

113 Hagenzieker (1999) in OECD (2006) Speed Management <http://www.internationaltransportforum.org/Pub/pdf/06Speed.pdf>

114 See also Grayson, G. B. and Helman, S. (2011). Work related road safety: a systematic review of the literature on the effectiveness of interventions. Research report 11.3. Institute of Occupational Safety and Health.

115 PRAISE Thematic Report 8 Driving for Work; Managing Speed. <http://www.etsc.eu/PRAISE-publications.php>

116 PRAISE Thematic Report 3 Fitness to Drive.

117 Shaw, K., Global Road Safety Partnership (2009) Draft Fleet Safety Manual.

looks in detail at this issue focusing on Workplace Health Promotion (WHP) and three areas that pose specific challenges: sleepiness, alcohol, and illegal drugs and medicines and covering existing legislation and initiatives that employers can utilise in this area.

For posts where a significant proportion of driving is required or driving of certain vehicle types it may also be advisable to check the competence and ability of the potential employee as part of the recruitment process. As with hiring a new employee for any type of post it is important to check references from previous employers; where appropriate the request for references should include commentary on previous driving history. The Health and Safety Authority UK suggest that the recruiters ask themselves the following when looking for new employees:

- What skills and knowledge does the person need?
- How will we assess their competence before they start work?
- What certificates and qualifications do they need for the vehicle they are operating?
- How will we check that these are valid and up-to-date?
- Will the person need additional training?
- What safety signs and signals do they need to know?
- Can they understand and follow instructions for safe working?<sup>118</sup>

For those with more time and resources, exploring peoples' perception of risks and their attitudes towards driving may assist in identifying and recruiting safer drivers. 'Research has highlighted the potential scope for recruitment of safer drivers based on personality profiles, risk perception, experience, age, and medical screening. Little evaluation, however, seems to be available of driver selection strategies.'<sup>119</sup> 'A number of driver selection strategies have been proposed to improve fleet safety. Their general focus has been on trying to identify potentially risky drivers on the basis of their previous driving record. It has been noted, however, that while this may identify a small number of highly risky drivers (e.g. disqualified drivers or repeat drink drivers), it may not be predictive of later crash involvement for the majority of drivers'<sup>120</sup> Despite this it is possible to include some simple questions surrounding perception.

When a new employee is hired it is critical that their induction process include all aspects of health and safety (including WRRS), the organisations expectations and culture in general as well as elements relevant to their specific role.

This is likely to include that they understand the following:

- Legal requirements under health and safety and road safety legislation.
- Organisations health and safety and road safety policy including employer and employee responsibilities.
- The role of risk assessment and procedures for monitoring and evaluating risk.
- Procedures for reporting incidents.
- Implications of not complying.
- Other requirements specific to their role (including vehicle familiarisation checks and more in-depth training regarding use of specific vehicles or machinery).

## 8.4 Training

There is a requirement for compulsory training on safety and health issues (Article 12 of Framework Directive 89/391/EEC). A screening process should also be undertaken to determine which drivers need, apart from the compulsory safety and health training, to undergo specific and targeted training. This should be carried out during the induction process and also again during employment, as deemed appropriate through risk assessment and monitoring. Whatever type and level of training is chosen, it should always be based on a needs analysis. Undoubtedly driver training can be an important tool to reduce work-related road risk. However, much care should be given by employers in identifying whether driver training is a tool that suits their needs, and when it is the case which type of training they should opt for.<sup>121</sup> Carrying out continuous risk assessment provides the basis for identifying appropriate training requirements. 'It should also be borne in mind that driver training is of course intended as a mean to reduce collisions and casualties, but it also has other goals such as mediating more general responsibility, generating interest in safety issues, team-building, quality assurance.'<sup>122</sup> It is also important that the effectiveness of training is assessed. Thematic Report 2 discusses these issues in detail looking at risk assessment as a basis for training and how this can improve WRRS.

118 <http://www.hse.gov.uk/workplacetransport/personnel/recruitment.htm>

119 [http://ec.europa.eu/transport/wcm/road\\_safety/erso/knowledge/Fixed/60\\_work/work\\_related\\_road\\_safety.pdf](http://ec.europa.eu/transport/wcm/road_safety/erso/knowledge/Fixed/60_work/work_related_road_safety.pdf)

120 [http://ec.europa.eu/transport/wcm/road\\_safety/erso/knowledge/Fixed/60\\_work/work\\_related\\_road\\_safety.pdf](http://ec.europa.eu/transport/wcm/road_safety/erso/knowledge/Fixed/60_work/work_related_road_safety.pdf)

121 PRAISE Thematic Report 2 Fit for Road Safety From Risk Assessment to Training.

122 Ibid

## Good Practice Case Studies

### *nkl Automotive*<sup>123</sup>

nkl Automotive recognise that a comprehensive driver selection process is an essential part of assisting the company in minimising risk faced by their drivers. Before any potential nkl driver is employed, they undergo a stringent selection process which consists of three phases. Initially applicants complete a job application form that also includes a medical questionnaire. This is a comprehensive statement regarding the past and present health state of the applicant and includes a section on eye-sight. nkl require eye tests at least every two years. A driving history declaration including driving licence information and collision history is also required. Any applicant with an excess of six penalty points on their driving licence will be automatically rejected at this point<sup>124</sup>. All application forms are assessed by a senior operational manager who will have many years of experience and can accurately assess an applicant's suitability for this role. Those who successfully pass through this selection gate are sent a comprehensive job prospectus laying out fully all the roles and responsibilities of the position and are invited for a face to face interview. These structured interviews are always conducted by a senior member of staff. Both parts of the driving licence are required to be produced at interview for examination. Those who pass through are invited to an nkl driver induction day where the potential employees undergo specific assessment and job training. Finally, the new employees spend some time undergoing 'on the job' training with their Mentor. The Mentor is an experienced member of the driving force who does not 'sign-off' the new employee until they are satisfied with all aspects of their work including their road safety.

### Recommendations to employers

- At the interview stage explore past collision or prosecution history and attitudes towards road safety.
- Undertake employee assessment on recruitment. This should also include checking documentation, licences, driver training records and fitness to drive records and assess driving competence and attitudes.
- Comply with the requirements of the Directive

on Health and Safety at Work in ensuring that proper training is given linked to the needs of the employees including the use of transport vehicles.

- Subject drivers using their own vehicles to the same recruitment, induction and risk assessment and reduction procedures as company-car drivers.
- Integrate road safety relevant themes into the professional development of other staff such as schedulers, vehicle purchasers and of course management and leadership.

## Part 9 Vehicle Management

Vehicles have a critical role to play in influencing road safety and choices in this regard offer both opportunities and risks for improving safety. As such, vehicles should be a central consideration in any organisations work-related road safety programme. Vehicle management processes and initiatives should be developed in the context of the outcomes of a risk assessment.

'Key aspects to be addressed under the heading of vehicle management include:

- Vehicle selection and specification
- Additional safety equipment
- Vehicle maintenance
- Vehicle checks
- Vehicle defects
- Use of privately owned vehicles'<sup>125</sup>

Vehicle management should address not only vehicles owned by the organisation, but also the grey fleet and contract vehicles. There are additional concerns that need to be considered here. Employers should (through internal policies and/or contracting arrangements) ensure that such vehicles are 'fit for the task': this means also that they should be fully insured, serviced and maintained to a high standard. This should also include ergonomic issues which will be determined by the tasks the employee has to do in relation to driving. Regardless of ownership, employers could also specify minimum standards of vehicle safety features, such as maximum age, if they are being driven for work-related purposes. The development of a policy (as part of or interlinked with an overarching WRRS policy) setting out the organisations' commitments and procedures in these areas would be beneficial.

123 Adapted from PRAISE Award Application 2011.

124 In the UK Penalty Points are accrued and once twelve points are reached the driver is liable for disqualification.

125 GRSP Draft Manual, Part 2.

## 9.1 Selection and Procurement

Over 50% of new vehicles are initially purchased for commercial purposes. Purchasing safe vehicles is therefore an excellent way for employers to provide a safe working place for their employees. At a basic level, those responsible for procuring vehicles in an organisation need to communicate closely with the employees who will be utilising the vehicles to ensure that they will be fit for purpose and appropriate for the required job. There is also a need to link fleet safety and vehicle procurement with broader business management, planning and operations. Proposed changes to a business may have an impact on the suitability and therefore safety of the existing fleet.

The draft ISO international standard 39001 for road traffic safety management discusses how organisations can influence road safety through vehicle selection highlighting four areas where this has an impact namely, the protection of occupants in crashes, the capability to avoid or mitigate crashes, the protection level given by the vehicle for unprotected road users, and the vehicle's compatibility with other vehicles.<sup>126</sup> These issues should be considered at the procurement stage in the context of the nature of the business and the type of vehicle required. The findings of the risk assessment should inform this process and will assist organisations in identifying the vehicle type and specifications most appropriate for them.

'Generally the safety aspects of vehicles are legislated and most new vehicles deliver safety beyond legislation. This leaves considerable room for organisations to make informed decisions about the level of safety they seek in the vehicles which they use. To assist in these decisions, consumer programs test and publish safety ratings for many

vehicle types and models, which influence vehicle design and equipment.'<sup>127</sup>

Employers should be aware of the various types of vehicle technologies on the market that can assist risk management and should include the most appropriate of these as standard requirements when purchasing or leasing vehicles. 'It's important to specify and then select vehicles that are suitable and safe for employees and the type of trips they are expected to undertake, and consider body style, ergonomics, equipment and visibility to ensure the selected vehicle is fit for its purpose.'<sup>128</sup> In 2009 the European New Car Assessment Programme (EuroNCAP) introduced a new element in its star ranking called "Safety Assist". Euro NCAP rewards manufacturers for the fitment of a speed limitation device, as well as electronic stability control, and intelligent seat belt reminders. Employers should specify minimum standards of vehicle safety features and EuroNCAP star rating. Vehicle safety features can reduce the incidence and severity of crashes and the vehicle supply industry developed many technology-based interventions for fleet operators to consider in vehicle specification and procurement decisions. PRAISE Thematic Report 1 presents how in-vehicle safety equipment can improve and manage WRRS and discusses the various types of equipment or measures that can help to address risks such as speeding, drink driving and failure to wear a seatbelt. In terms of safety technologies available, passive measures are those that protect individuals automatically without any action on their part, including vehicle design changes. Active measures require individuals to actively participate in their own protection<sup>129</sup>. The table below lists a range of technologies or measures that can be considered by employers in the context of the roads risks that they are faced with. Many of these measures are discussed in more details in PRAISE Thematic Report 1.

126 ISO International Standard DRAFT ISO 39001, (2012) Road traffic safety (RTS) management systems – Requirements with guidance for use.

127 Ibid

128 GRSP Draft Manual, Part 2.

129 Murray, W., Pratt, S., Hingston, J. & Dubens, E. (2009). Promoting Global Initiatives for Occupational Road Safety: Review of Occupational Road Safety Worldwide (Draft). [www.cdc.gov/niosh/programs/twu/global](http://www.cdc.gov/niosh/programs/twu/global)

	Passive (protect drivers automatically)	Active (involves driver participation)
<b>Proactive/ Primary actions to avoid crashes</b>	Speed limiter/intelligent speed adaption Electronic Stability Control (ESP) Wired in daytime running lights Visible colour Alcohol ignition interlock Self checking/inflating tyres Stronger/safer seats Mobile phones confiscated Automatic ventilation control Automatic reversing brakes EDR vehicle monitoring	Cruise control Antilock braking systems (ABS) Daytime running lights High mounted rear centre brake lights Alcohol policy and testing Tyre check policy Ergonomic seat adjustment Mobile phone use banned Air conditioning Reversing warning devices & cameras Driver near hit reporting
<b>Reactive/ Secondary/ At-scene</b>	Airbag including side/head protectors Seatbelt interlock/reminder Crashworthy vehicle (NCAP rating) Heavier vehicle Anti whiplash protection Crush zones and safety cages Fire resistant vehicle interiors Cargo barrier/load restraint Side and frontal impact protection EDR including crash recorders, forward/cab facing cameras and accelerometers	Front and rear seatbelts Seatbelt wearing Strong, easy to open doors Seat and head restraint positioning Correct head restraint use Child restraints Fire safety equipment

## 9.2 Vehicle and Driver

'Organisations should have very clear requirements for who can use what vehicle on what roads and reinforce the importance of compliance with these requirements.'<sup>130</sup> This should be linked to driver risk assessment with vehicle use induction or specific training as required. 'Employers should ensure that the performance characteristics of vehicles are matched to the competence level of their drivers and try to offer a choice including smaller-engine vehicles.'<sup>131</sup> It is important that employees fully understand the purpose and benefits of any safety equipment installed in vehicles as well as knowing how to use it properly. Again, a proper induction programme supplemented with ongoing information sessions and training can assist in this regard. Methods for successfully communicating with drivers are discussed in more detail in Part 8 of this report. 'Safe usage is not only dependent on the vehicle and driver characteristics, but also on vehicle management systems that can offer added support to the driver, for example, to monitor and log the use of a vehicle.'<sup>132</sup> In this regard, monitoring of vehicle use and condition is critical.

## 9.3 Inspection and Maintenance

Organisations should ensure that processes are put in place for regular inspection and maintenance of all vehicles used for work purposes as it is their responsibility to ensure roadworthiness at all times. At a minimum, maintenance regimes recommended by vehicle manufacturers need to be adhered to and more regular checks by drivers should also be required.

Guidance from the Health and Safety Executive in the UK suggests that the following questions need to be answered by organisations in assessing whether or not their vehicles are maintained in a safe and fit condition:

- 'Do you have adequate maintenance arrangements in place?
- How do you ensure maintenance and repairs are carried out to an acceptable standard?
- Is planned/preventative maintenance carried out in accordance with manufacturers' recommendations?
- Do your drivers know how to carry out basic safety checks?

130 ISO International Standard DRAFT ISO 39001, (2012) Road traffic safety (RTS) management systems – Requirements with guidance for use.

131 <http://www.rosipa.com/roadsafety/info/workspeed.pdf>

132 ISO International Standard DRAFT ISO 39001, (2012) Road traffic safety (RTS) management systems – Requirements with guidance for use.

- How do you ensure that vehicles do not exceed maximum load weight?
- Can goods and equipment which are to be carried in a vehicle be properly secured, eg loose tools and sample products can distract the driver's attention if allowed to move around freely?
- Are windscreen wipers inspected regularly and replaced as necessary?'<sup>133</sup>

Maintenance should also be regularly assessed to ensure it is of an appropriate high standard and to ensure approved replacement parts are used on vehicles, particularly for safety-critical elements such as brakes and tyres.<sup>134</sup>

Part of the vehicle maintenance procedures should include carrying out vehicle checks as part of the daily driving routine. It is important to fully clarify what the organisation regards as fundamental defects under which a vehicle should not be used. In deciding if a vehicle is fit for use a range of factors should be considered including its suitability for the job, its condition, ergonomic factors, required safety equipment.<sup>135</sup> The Road Safety Authority and Health and Safety Authority in Ireland have devised a sample 'Daily Work-related Road Vehicle Checklist'<sup>136</sup> as a simple tool to assist drivers in this regard.

The European Agency for Safety and Health at Work have also produced a useful summary Factsheet on this topic that suggests using the word 'POWER' as a way of helping drivers to remember necessary basic checks that are required. This stands for Petrol, Oil, Windows, Electrics, and Rubber.<sup>137</sup>

## Good Practice Example

### *Swedish Transport Administration*<sup>138</sup>

In Sweden the Swedish Transport Administration, a government body, are leading the way in terms of improving vehicle safety by passing a law<sup>139</sup> that has set high vehicle requirement standards for government fleets. Recommended minimum traffic safety requirements have been developed, not only for government owned vehicles but

also for lease vehicles, short-term rental vehicles and private vehicles used for work purposes. A Swedish law, passed in 2009, requires all government bodies to buy or rent only 5-star Euro NCAP cars for occupant protection ("government specification" as is the case for environment standards).

- Cars rented for less than 6 months need to be equipped by the following safety requirements:
  - **Crashworthiness** that is awarded 5 stars by Euro NCAP
  - **Seat Belt Reminder (SBR)** at front seats that meets Euro NCAP requirements (2 points)
  - **Whiplash protection** that meets Euro NCAP requirements (2 points)
  - **Pedestrian protection** that meets Euro NCAP requirements (14 points)
  - **Head support and three points seat belt** on all seats used
  - **Electronic Stability Control (ESC)** system
- Additional requirements for cars rented for more than 6 months. Cars need to be equipped with:
  - **Alcohol ignition interlock**
  - **Intelligent Speed Assistance (ISA)** system
- Minimum requirements for usage of the grey fleet. For regular use of your own car in work the following requirements needs to be fulfilled:
  - Be **registered** later than or at 1 January 2001
  - Be within the **weight** interval 900 kg to 1900 kg
  - Be equipped with **Occupant** protection: Euro NCAP 4 stars if tested before 2009, 23.5 points in occupant protection if tested 2009 or later (front, side and pole collision protection)
  - Be equipped with **Seat Belt Reminder (SBR)** at front seats that meets Euro NCAP requirements (2 points)
  - Be equipped with **Head support and three points seat belt** on all seats used
  - Be equipped with **Electronic Stability Control (ESC)** system

In Sweden it is recognised that the highest Euro NCAP standards should be aimed for and this is a moving target with room for continual technological improvements.

133 <http://www.hse.gov.uk/pubns/indg382.pdf>

134 GRSP Draft Manual, Part 2.

135 <http://www.rsa.ie/PageFiles/2895/drivingforwork.pdf> RSA/HSA Ireland

136 pdf Version (size 6.2 MB) [http://www.hsa.ie/eng/Vehicles\\_at\\_Work/Driving\\_for\\_Work/Driving\\_for\\_Work\\_CD\\_Rom/Daily\\_Work\\_Related\\_Road\\_Vehicle\\_Checklist.pdf](http://www.hsa.ie/eng/Vehicles_at_Work/Driving_for_Work/Driving_for_Work_CD_Rom/Daily_Work_Related_Road_Vehicle_Checklist.pdf) Word Version (size 17.0 KB) [http://www.hsa.ie/eng/Vehicles\\_at\\_Work/Driving\\_for\\_Work/Driving\\_for\\_Work\\_CD\\_Rom/Daily\\_Work\\_Related\\_Vehicle\\_Checklist\\_Word\\_Version\\_docx](http://www.hsa.ie/eng/Vehicles_at_Work/Driving_for_Work/Driving_for_Work_CD_Rom/Daily_Work_Related_Vehicle_Checklist_Word_Version_docx)

137 <http://osha.europa.eu/en/publications/e-facts/e-fact-56-maintenance-and-work-related-road-safety>

138 Anders Lie, The Swedish National Road Administration, Traffic Safety Division, presentation 2010.

139 Government Decree (2009:1) Environmental and Road Safety.

## Recommendations to Employers

- Develop policies and procedures for the management of vehicles
- Include safety criteria when purchasing vehicles, including 5 star EuroNCAP cars and vehicles using in-vehicle safety technologies.
- Communicate vehicle safety technologies purpose (i.e.: "This is for your own good and we value you and are concerned for your wellbeing!") to employees and train them to use equipment properly.
- Work closely with suppliers, equipment manufacturers, insurers and customers to develop appropriate safety solutions.

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## Appendix 1

A list of possible costs:<sup>140</sup>

<b>Vehicle costs</b>	<b>Recoverable/insured</b>
Recovery and storage	Yes/no
Repair of vehicle	Yes/no
Vehicle downtime and replacement vehicle	Yes/no
New vehicle if written off	Yes/no
Reduced resale value	Yes/no
Leased vehicle life costs if written off	Yes/no
Increased insurance excess and premiums	Yes/no
<b>Driver costs</b>	<b>Recoverable/insured</b>
Loss of expertise	Yes/no
Personal injury compensation	Yes/no
Lost productivity due to injury absence	Yes/no
Replacement driver - overtime, temporary driver	Yes/no
Medical and welfare	Yes/no
Counselling	Yes/no
Reassessment and training	Yes/no
<b>Third party costs</b>	<b>Recoverable/insured</b>
Vehicle damage	Yes/no
Vehicle downtime and loss of earnings	Yes/no
Property damage	Yes/no
Personal injury compensation and rehabilitation	Yes/no
Hospital fees	Yes/no
Inconvenience	Yes/no
Disbursements including expert witnesses, police reports, post-mortem if fatality and GP notes or reports	Yes/no
Legal, court issue setting down and specialist report fees	Yes/no
Fines	Yes/no
<b>Other costs</b>	<b>Recoverable/insured</b>
Redelivery	Yes/no
Missed/late delivery penalties	Yes/no
Customer service/good will/missed sales	Yes/no
Damaged/lost stock	Yes/no
Own property damage	Yes/no
Investigation time	Yes/no
Management and administration time	Yes/no
Image/reputation/PR	Yes/no
Increased congestion	Yes/no
Extra tax to cover road safety improvements	Yes/no

140 Murray, W (2011) Sustaining Work-Related Road Safety in Hard Times: understanding collision costs.

## Appendix 2

### Example A

#### XXX Fleet Safety Policy

XXX recognises that there are risks to the health, safety and welfare of all employees who are required to drive on Company business. The company recognises its responsibility to provide, so far as practicable, for the health, safety and welfare of all employees and others that may be affected by our activities.

Our aim is to further the knowledge, develop the attitude and influence the driving behaviour of all employees in order to eliminate vehicle incidents from our business. We will measure our achievement of this policy through quarterly reviews of our key performance indicators.

In order to ensure the health and safety of vehicle fleet drivers, this policy sets out Company objectives and driver responsibilities. These objectives and responsibilities are in addition to those set out in the Company's General Policy Statement.

The Company objectives are to:

- Continuously improve fleet safety management practices.
- Monitor to ensure that employees or agents (agency drivers) who drive on Company business are legally entitled to drive with a current valid licence for the relevant class of vehicle.
- Assess the risks relating to the use of Company vehicles.
- Operate vehicles in a safe efficient manner and to strive for continual improvement in occupational road safety performance by minimising risk to those affected.
- Implement consistent practices with regard to fleet safety: consult with employees, and update policies and practices accordingly.
- Annually review the safety of both the commercial and car fleets through analysing data such as maintenance and incident records.
- Provide a vehicle handbook and/or advice about road safety to anyone who uses a vehicle on Company business.
- Monitor to ensure that the Company vehicle fleet is mechanically safe, and vehicle defects reported by employees are rectified promptly.
- Assess driving abilities, and provide driver training for employees who fall below the required standard, or as otherwise required.
- Ensure as far as is reasonably practicable that all drivers are fit to drive.
- Provide training for employees on how to carry out vehicle checks, and ensure that these checks are carried out.

Employees have a duty to co-operate in the operation of this policy by:

- Adhering to Company policies, advice and guidelines relating to road safety, and abiding by the provisions of the Rules of the Road.
- Carrying out vehicle checks as specified by the Company and vehicle manufacturer's instructions.
- Allowing adequate time for journeys, including time for breaks on long journeys.
- Reporting all accidents or damage to a vehicle immediately to your manager
- Ensuring they are fit to drive before undertaking a journey.
- Reporting vehicle defects or safety concerns immediately to management and not using the vehicle until the defect is rectified.
- Showing consideration for the safety of passengers and other road users, including drivers, cyclists and pedestrians.

## Example B

### Example Fleet Safety Policy Statement

In [Name of Organisation], we are committed to:

- Safeguarding people
- Protecting our movable and immovable property
- Managing fleet safety as any other critical business activity

We will strive to achieve this through:

- Compliance with the law related to road safety
- Continuous improvement in our road Safety performance
- A systematic approach to road safety management by establishing minimum standards and processes for –
  - Driver Management
  - Vehicle Management
  - Journey Management
- Training, education and motivation of all our employees to follow safe work practices
- Conducting planned inspections and audits on a regular basis to identify and eliminate sub-standard working conditions and practices
- Reporting and conducting thorough investigations of all road incidents
- Reporting and learning from near misses and potential incidents
- Communicating this policy to all employees, customers and other relevant stakeholders

To be signed and dated by: Executive Director / Secretary General

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