

"PRAISE": Minimising In-Vehicle Distraction

PRAISE is a project co-funded by the European Commission and implemented by ETSC on Preventing Road Accidents and Injuries for the Safety of Employees (PRAISE). The project aims to advance work-related Road Safety Management and provide the know-how to employers who have to take on that challenge. It also aims to present the work-related road safety standards of EU Member States and carry out advocacy work at the EU level: work-related road safety is an area of road safety policy that clearly needs renewed political commitment.

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1. Introduction

This report aims at offering employers insight on how to minimise distractions, but to offer a clear and specific scope it will focus on 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). It aims to provide a source of information and recommendations to employers based on a recently completed longer study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles¹. Vehicles are increasingly becoming “moving offices”, an environment in which employees are likely to receive or make phone calls, check text messages or even check their emails, unappreciating the enormous road risk that this type of behaviour poses while driving for work.

2. Distractions on the roads

Distraction on the roads is a major source of concern. Driver distraction is thought to play a role in 20-30% of all road collisions¹. There is a long list of distractions that undermine the driver or the rider’s ability to perform the driving task. Distractions that concern pedestrians and cyclists² (listening to music players, making phone calls, etc.) is also a concern, especially as more people walk and cycle to work³. Research has shown that the use of devices whilst walking or cycling results in an increased crash rate. A survey amongst cyclists has indicated the use of devices increases the crash rate by a factor of 1.44⁵.

This report will focus on the risk associated with the use of electronic “nomadic” devices by drivers. However, the risks covered in this report are by no means an exhaustive list of the distractions employers should manage. 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), etc.⁶.

According to a recent study commissioned by the European Commission entitled “Study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles”, nomadic devices comprise all portable electronic devices for information, entertainment, or communication

that can be used outside of the vehicle and inside the vehicle by the driver whilst driving⁷. This report will look at information and communication devices including mobile phones, smart phones, and portable navigation devices. Employers are however reminded that they should not underestimate the risks also posed by entertainment devices including music or video players or the entertainment applications of smart phones, personal digital assistants or navigation devices, and a ban on the use of such devices for the sake of entertainment whilst driving should be included and clearly mentioned in driving for work policies. Employers should also know their drivers, and in particular identify those most at risk such as young drivers whose technology friendly lifestyles make them prone to distraction while on the road. For example a recent survey of young drivers showed that nearly 60% of young drivers said they had been distracted by adjusting an MP3 player while driving⁸.

The following Nomadic Devices Classification can be useful for employers in determining their purchasing and use policies⁹:

Definition	All types of information communication and entertainment devices that can be brought into the vehicle by the driver to be used while driving
Function	Primarily driving related NDs (e.g. PNDs) Non driving related NDs (e.g. mobile phones) Multifunctional NDs (e.g. Smartphones)
Distraction Form	Physical Visual Auditory Cognitive
Safety	Negative effects (e.g. mobile phones) Ambivalent effects (e.g. PNDs)

While there is research and road traffic collision statistics and investigations attesting to the negative safety effects posed by the use of nomadic devices (see section below), some devices have ambivalent safety effects (for example personal navigation devices), or even positive effects when used properly. Employers are therefore encouraged to adopt balanced policies based on clear scientific evidence and provide clear and easy to apply guidelines to their employees on acceptable use.

1 IGES Institut, ITS Leeds, ETSC (2010): Study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles. Study tendered by the European Commission, Berlin 2010. http://www.etsc.eu/documents/Report_Nomadic_Devices.pdf
2 Dews, F. A., & Stayer, D. L. (2009). Cellular Phones and Driver Distraction. In M. A. Regan, J. D. Lee, & K. L. Young, *Driver Distraction Theory, Effects and Mitigation* (pp. 169-190). CRC Press.
3 http://www.swov.nl/rapport/Factsheets/UK/F5_Use_of_media_devices_cyclists.pdf
4 <http://www.etsc.eu/documents/PRAISE%20Report%20%284%29.pdf>
5 Ibid
6 TAC 2008 http://www.worksafe.vic.gov.au/wps/wcm/connect/91b8fc004071f37b936cde1fb554c40/safe_driving_web.pdf?MOD=AJPERES
7 http://www.etsc.eu/documents/Report_Nomadic_Devices.pdf
8 AAMI (2007) Technology Drives Young People to Distraction: <http://www.aami.com.au/Resources/File.aspx>
9 GES Institut, ITS Leeds, ETSC (2010) Study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles: http://www.etsc.eu/documents/Report_Nomadic_Devices.pdf

2.1 Adverse effects of Devices

There are a large amount of scientific articles documenting the risks associated with distracted driving. In terms of the impact of nomadic devices we can list a number of risk factors. To start with, in contrast to some originally fitted devices (e.g. In-Vehicle Information Systems), retrofitted nomadic devices are most often not designed for use in vehicles due to e.g. small sizes of keyboard and displays¹⁰. The use of these devices while driving may increase driver distraction due to the additional workload to the (primary) driving task¹¹. Drivers can be distracted by the use of nomadic devices while driving in several ways¹²:

- **Physical distraction:** The driver has to use one or both hands to manipulate the device (e.g. dialling a number on the mobile phone) instead of concentrating on the physical tasks required for driving (e.g. steering, changing gear, etc.);
- **Visual distraction:** There are three different forms of visual distraction. The first form occurs when the driver's visual field is blocked by objects (e.g. a PND mounted on the windscreen) that prevent him/her from detecting or recognising objects on the road. The second type of visual distraction is caused by the amount of time that the driver's eyes are on the nomadic device and off the road (e.g. looking at the PND display). The third type involves a loss of visual "attentiveness", often referred to as "looking at the road but failing to see". This interferes with the driver's ability to recognise hazards in the road environment;
- **Auditory Distraction:** This form of distraction occurs when drivers momentarily or continually focus their attention on sounds or auditory signals rather than on the road environment. This can occur when the driver listens to e.g. the radio or when holding a conversation with a passenger, but is most pronounced when using a mobile phone;
- **Cognitive distraction:** This form of distraction involves lapses in attention and judgment. It occurs when two mental tasks are performed at the same time. Cognitive distraction includes any thoughts that absorb the driver's attention where they are unable to navigate through the road network safely and their reaction time is reduced. Talking on a mobile phone while driv-

ing is one of the most well documented examples of cognitive distraction; however it can also occur when trying to manipulate nomadic devices (e.g. operating a PND) or when paying attention to information conveyed by the devices.

2.1.1 Research Findings on Risks of Mobile Phone Use¹³

Much of the literature focuses on the safety implications of mobile phone use. Below are some of the main research findings:

- Redelmeier and Tibshirani¹⁴ (1997) estimated the effect of mobile phone use on the risk of being involved in a substantial property-damage-only crash. The conclusion was that phone use was associated with a fourfold increase in the risk of crash involvement.
- A simulator study carried out by TRL¹⁵ benchmarked use of a mobile phone while driving against impairment from alcohol. The overall conclusion was that driving behaviour is impaired more during a phone conversation than by having a blood alcohol level at the UK legal limit. Speed control (adherence to a target speed) and response time to warnings was poorest when using handheld phone, but even with a hands-free phone performance was worse than in the alcohol-impaired conditions. Drivers also reported that it was easier to drive when alcohol-impaired than when using a phone.
- The U.S. 100 Car Study conducted by Virginia Tech¹⁶ found that distraction was a major safety issue. Inattention was a contributory factor in 93% of the incidents with lead vehicles. Phone and PDA use was a major factor in the incidents.
- Also part of the 100 Car Study¹⁷, identified various types of inattention. Complex secondary tasks (tasks requiring multiple steps, multiple eye glances or multiple button presses) included dialing on a handheld device, locating/reaching for and answering a handheld device, operating a PDA and viewing a PDA screen were identified as increasing the risk of being involved in a crash or near-crash three-fold. Moderate secondary tasks (defined as those requiring up to two glances away from the roadway or up to two button presses) included talking on or listening to a handheld device

¹⁰ Gil-Castañeira, F., Chaves-Diéguez, D. & González-Castaño, F. (2009): Integration of Nomadic Devices with Automotive User Interfaces. In: IEEE Transactions on Consumer Electronics, 55 (1), pp. 34-41.

¹¹ Santos J., Merat, N., Mouta S., Brookhuis K. & De Waard D. (2005): The interaction between driving and in-vehicle information systems: Comparison of results from laboratory, simulator and real-world studies - Transportation Research Part F: Traffic Psychology and Behaviour, 8 (2), pp. 135-146.

¹² Young, K., Regan, M., Hammer, M. (2003): Driver Distraction: A Review of the Literature, Monash University Accident Research Centre Report 206. Breen, J. (2009): Car telephone use and road safety: final report. An overview prepared for the European Commission. Available at http://ec.europa.eu/transport/road_safety/specialists/knowledge/mobile/car_telephone_use_and_road_safety.pdf (retrieved 22 February 2010).

¹³ This is a summary of a longer overview of research which can be found in (IGES Institut, ITS Leeds, ETSC (2010) on pps 22-26

¹⁴ Redelmeier, D.A. & Tibshirani, R.J. (1997): Association between cellular telephone calls and motor vehicle collisions. In: New England Journal of Medicine, 336(7), pp. 453-458.

¹⁵ Burns, P.C., Parkes, A., Burton, S., Smith, R.K. & Burch, D. (2002): How dangerous is driving with a mobile phone

¹⁶ Dingus, T.A., Klauer, S.G., Neale, V.L., Petersen, A., Lee, S. E., Sudweeks, J., Perez, M.A., Hankey, J., Ramsey, D., Gupta, S., Bucher, C., Doerzaph, Z.R., Jermeland, J. & Knippling, R.R. (2006): The 100-car naturalistic driving study: phase II - results of the 100-car field experiment. Report DOT HS 810 593. National Highway Traffic Safety Administration, U.S. Department of Transportation, Washington D.C.

¹⁷ Klauer, S.G., Dingus, T.A., Neale, V.L., Sudweeks, J.D. & Ramsey, D.J. (2006): The impact of driver inattention on near-crash/crash risk: an analysis using the 100-car naturalistic driving study data. Report DOT HS 810 594. National Highway Traffic Safety Administration, U.S. Department of Transportation, Washington D.C.

were identified as doubling risk as compared with attentive driving.

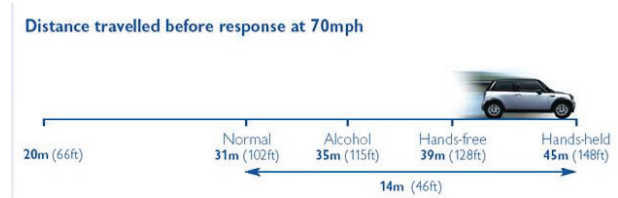
- A more recent naturalistic driving study focused on driving in trucks¹⁸. Texting was the most risky behaviour identified: it was calculated to increase risk of being involved in a safety-critical event by a factor of 23.2. Dialing on a mobile phone increased risk by a factor of 5.9, whereas talking on or listening to a mobile phone had a negligible and non-significant effect on risk. Use of or reaching for other electronic devices such as a video camera or two-way radio increased risk by a factor of 6.7. The results in terms of population-attributable risk were somewhat different: texting, while highly risky, was not all that frequent, being associated with only 0.7% of all events, whereas dialing on a mobile phone was associated with 2.5% of the events and interaction with a dispatching device with 3.1% of the events. This points out the need to ensure that texting does not become more prevalent.
- By combining estimates of increased risk from the use of mobile phones with observation data, it is possible to calculate the overall number of injuries attributable to mobile phones. Dragutinovic and Twisk¹⁹ (2005) carried out such a calculation for the Netherlands: in 2004, 585 traffic injuries and deaths were attributable to mobile phone use. This represented 8.3% of the total, and constituted 4.5 times the estimated number for 1995.

2.1.2 Hands-free also poses significant risk

Of particular interest is the fact that different research from around the globe has identified talking on the phone with “hands-free” systems as posing a very significant risk while driving. According to Noble and Riswadkar²⁰ (2009) a number of studies have tried to make a distinction between the use of hands-free versus hand-held and for the most part “simulator and on-road studies have concluded that the use of hands-free devices did not reduce the impact on reaction time and driver distraction”. This is because while hands-free may address the physical distraction, the interactive conversation on a mobile phone demands cognitive resources (this is the cognitive distraction mentioned above) “and this is believed to be primarily responsible for distracted driving”²¹. The same can be found in RoSPA’s mobile phone guidelines on driving for work concerning hands-free: “using a hands-free

phone while driving does not significantly reduce the risks because the problems are caused mainly by the mental distraction and divide attention of taking part in a phone conversation at the same time as driving”²². Below, a number of additional research conclusions that have investigated the effect of hands-free:

- Research from Western Australia, published in the British Medical Journal²³, found that driving while talking on a mobile phone – whether hand-held or hands-free – increases the risk of a collision by four times.
- In the UK the Transport Research laboratory (TRL)²⁴ identified the following stopping distances with different levels of impairment:



Distance travelled before response at 70 mph (113 kmph)

- More recent research by the University of Utah²⁵ shows that driving performance is dramatically impaired when using a hands-free mobile phone for 97.5% of drivers. Drivers on hands-free mobile phones took 20% longer to hit the brakes when needed.
- According to a survey undertaken in 2010²⁶ 20% of German drivers telephone whilst driving even whilst 90% were aware of the risks.

Very striking is the fact that talking on the phone, even with hands free, is identified as even more dangerous than drink driving which is now anchored in people’s minds as something that is not only illegal but also very dangerous and socially unacceptable. While it will take some time for the general population of drivers to accept and internalise in a similar way the risk posed by the use of telephones while driving, it is very important for employers to be made aware of this risk, both of hand held and hands free mobile phone use, and it should be reflected in their driving for work policies. There are already positive examples from companies who also ban the use of hands free.

18 Olson, R.L., Hanowski, R.J., Hickman, J.S. & Bocanegra, J. (2009): Driver distraction in commercial vehicle operations. Report FMC-SA-RRR-09-042. Federal Motor Carrier Safety Administration, U.S. Department of Transportation, Washington D.C.
 19 Dragutinovic, N. & Twisk, D. (2005): Use of mobile phones while driving – effects on road safety. A literature review. SWOV Institute for Road Safety Research Report R-2005-12. Leidschendam, 2005.
 20 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.
 21 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.
 22 RoSPA (2009) Driving for Work, Mobile Phones. <http://www.rospa.com/roadsafety/info/workmobiles.pdf>
 23 <http://www.bmj.com/content/331/7514/428.abstract>
 24 Burns, P.C., Parkes, A.M., Burton, S., Smith, R.K., And Burch, D. (2002). How dangerous is driving with a mobile phone? Benchmarking the impairment to alcohol. TRL Report TRL547. Crowthorne, UK. TRL Ltd.
 25 <http://www.psych.utah.edu/lab/appliedcognition/publications/supertaskers.pdf>
 26 http://www.dekra.de/de/pressmitteilung?p_p_lifecycle=0&p_p_id=ArticleDisplay_WAR_ArticleDisplay_WAR_ArticleDisplay_articleID=3607558

2.2 Benefits and ambivalent effects

2.2.1 Portable Navigation Devices

Overall, there is consensus about the negative impact of certain devices on road safety (e.g. mobile phones). In contrast, some nomadic devices may have benefits, or rather an ambivalent safety effect²⁷. When used properly, portable navigation devices (PND) for instance can have a positive impact, since these devices can ease the task of driving and the routes followed are shorter, so that stress and exposure to “danger” is reduced. However, they can have a negative impact if they are operated by the driver while driving or if the advantage of taking shorter routes is cancelled out if the shorter route follows roads with higher risk by directing traffic through small centers of habitation or along unsuitable roads (e.g. distributor roads)²⁸. The main safety benefits of PNDs are:

- Less exposure: the main purpose of navigation systems is to find a suitable route to one’s destination. The user can usually choose between the fastest and the shortest route.
- Less getting lost and more attention to traffic: a navigation system ensures that the user does not have to do as much searching for a route or street. As a result, they can devote more attention to the surrounding traffic and, moreover, drive more directly to the destination (less exposure). Both effects are good for road safety. A Dutch survey²⁹ notes that almost 60% of the respondents use the system because it “reduces the effort of driving”.
- Traffic information: navigation system with information on the current traffic situation can give the user early warning of upcoming traffic problems including congestion.
- Another new function allows receiving job instructions via the device. This reduces the need to phone from the vehicle (the jobs and messages on the device can be read aloud) and the administrative burden can also be reduced since mileage and working time may be monitored with a single tab on the screen, reducing the paperwork on the road.

What is most important however is for drivers to be aware that such devices should be used correctly, mainly this means not interfering with the device while driving. In another Dutch survey³⁰ a majority of

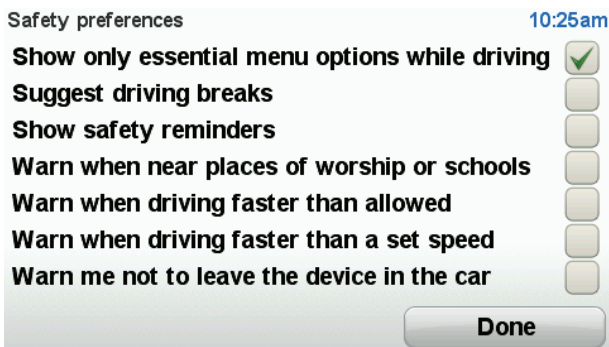
users considered it dangerous to adjust the system while driving yet 64% of them said that they did so sometimes or frequently. So despite the safety benefits of PNDs there also is a clear risk to manage. It is therefore not the devices in themselves that are safe or dangerous but it is the way users use them, and this is something that employers should manage. Proper use also includes frequently updating navigation systems, as out-of-date or incorrect information can lead to wrong decisions: undesirable or unsuitable routes (through traffic via streets in residential areas, heavy goods vehicles through town centres) or even incorrect routes (one-way traffic, physical obstructions, roadworks, roads with height limitations, viaducts and bridges unable to bear the vehicle’s weight). Nearly half of the respondents in the DVS study³¹ mentioned above knew how long ago their own map had been updated, however about 60% had not refreshed the map details in the past two years. Important reasons for not doing so were cost (36%) and that it was too much trouble (19%). Important reasons for doing so were notification of an available update (over 15%) and ‘it’s time to do so’ (over 25%). Incidents of taking the wrong route or receiving wrong advice were barely cited as reasons for updating. Another recent study by the BAST³² looked at the effects of new information technologies on driver behavior and ran a trial of an “information” manager which divided information into categories such as “driver-initiated or vehicle-initiated” or “safety relevant”. The large scale field test concluded that such an information manager can lead to a more “relaxed driving style” and higher levels of road safety. Finally, research shows that visual information will distract the driver’s attention from the driving task more than the audio information³³. This is therefore also probably something that should be told to drivers when managing the use of navigation systems.

2.2.2 ITS Services on PNDs for Professional Drivers

Under the ITS Directive the year 2013 will see the adoption of specifications for real-time traffic information systems and for systems to reserve available parking lots. ETSC recognises the potential benefits that this could have especially for HGV drivers who would be able to plan their routes and find a rest area without jeopardising their maximum driving time. Research shows that driver fatigue is a significant factor in approximately 20% of commercial road transport crashes³⁴. Better availability of parking and information as well as data exchange on this subject will help drivers plan and take their breaks more efficiently.

27 IGES Institut, ITS Leeds, ETSC (2010) Study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles: http://www.etsc.eu/documents/Report_Nomadic_Devices.pdf
 28 SWOV (2009). Safety of navigation systems. SWOV Fact sheet January 2009, Leidschendam
 29 DVS (2008). Analyse nadellige effecten navigatiesystemen op routekeuze. Gebruik en misbruik van egen; deel 2. Rijkswaterstaat, Dienst Verkeer en Scheepvaart, Delft.
 30 Oei, H.L. (2002). Mogelijke veiligheidseffecten van navigatiesystemen; Een literatuurstudie, enkele eenvoudige effectberekeningen en resultaten van een enquête. R-2002-30. SWOV, Leidschendam.
 31 DVS (2008). Analyse nadellige effecten navigatiesystemen op routekeuze. Gebruik en misbruik van egen; deel 2. Rijkswaterstaat, Dienst Verkeer en Scheepvaart, Delft
 32 BAST (2003) Auswirkungen neuer Informations-technologies auf das Fahrerverhalten http://www.bast.de/nm_42640/DE/Publikationen/Berichte/unterreihe-m/Functions/Berichte-M,param=3.html
 33 Verwey, W.B. & Janssen, W.H. (1988). Route following and driving performance with in-car route guidance systems. Report IZF 1988 C-14. TNO Institute for Perception IZF, Soesterberg
 34 <http://www.etsc.eu/documents/drivfatigue.pdf>

Example of a screen shot of a PND including possible safety features linked to fatigue, managing driving time and speed:



Another EC funded project has tackled this topic: the project Heavyroute³⁵ focussed on applying and combining existing and newly developed systems, technologies, databases and models to develop an advanced HGV management and route guidance system. It noted that the use of mapping systems based on satellite guidance has increased dramatically and is providing major benefits to professional drivers. However, drivers may find themselves on inappropriate routes for their vehicle. Working with all the major stakeholders, the Heavyroute project worked to provide the tools, the systems and the data collection and interpretation processes that will effectively link Europe's road infrastructure via electronic mapping systems to the truck operators and drivers. The project was completed in 2009.

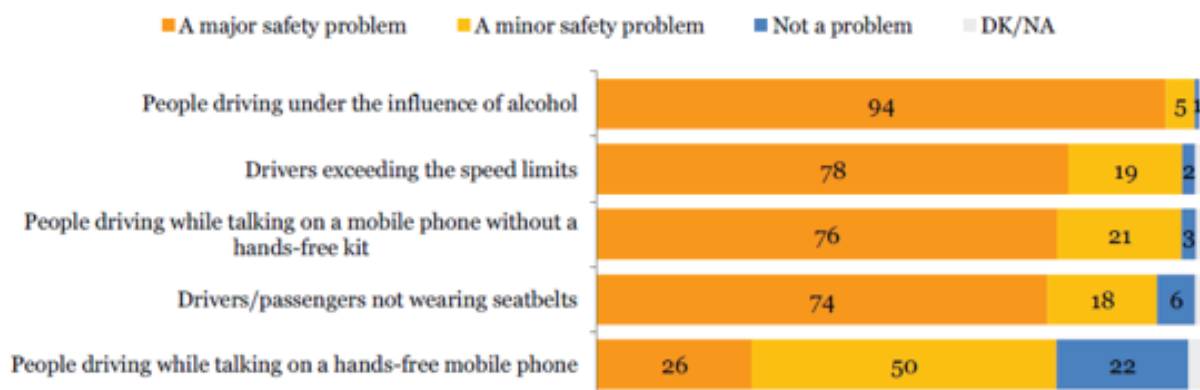
2.2.3 Mobile phones

There are good health and safety reasons for lone workers and staff who travel in areas where summoning help may be difficult³⁶ to have a mobile phone at hand. The most obvious positive safety/security effect of mobile phones regards the post crash phase. Clearly a road user is able to call emergency services more quickly if they have a mobile phone, especially if the crash occurs in an isolated environment. Over the long-term when vehicles gradually become equipped with systems such as eCall that automatically call emergency services in the event of a serious crash, this benefit of having a mobile phone might become less important.

2.3 Current situation: users' behaviour

As mentioned above, users are probably not aware of the risks associated with distracted driving as much as they are aware of other risks such as drink driving. A recent European 'Eurobarometer'³⁷ opinion poll survey demonstrates that while 94% of people considered "driving under the influence of alcohol" a major road safety problem, this number was 76% for talking on a mobile phone without hands-free, and as little as 26% for talking on a mobile phone with hands-free (see below).

Perceptions about the seriousness of road safety problems



Q2. In terms of road safety, do you feel the following constitutes a major safety problem, a minor safety problem, or is not a problem [IN OUR COUNTRY]?

Base: all respondents, % EU27

European Commission Road Safety Eurobarometer 2010

³⁵ <http://heavyroute.fehrl.org/?m=1>

³⁶ RoSPA (2009) Driving for Work, Mobile Phones. <http://www.rospace.com/roadsafety/info/workmobiles.pdf>

³⁷ http://ec.europa.eu/public_opinion/flash/fl_301_en.pdf

High mileage and company car drivers are also more likely than most to use a mobile phone while driving³⁸. Very often it is the employers who provide mobile phones or reimburse the cost of work-related calls made on private ones³⁹, this might reinforce employees' misconception that they are expected to be reachable at anytime.

Recently a survey by ING Car Lease⁴⁰ in the UK also concluded that the recession is encouraging more company car drivers to take calls when behind the wheel. The survey found that while 61% of company car drivers questioned felt under greater pressure to take or make calls while driving, 39% of respondents admitted to having previously texted or emailed while behind the wheel. Further, 16% did not know whether the company had a mobile phone policy. If the figure in the survey is an accurate representation of all company car drivers in the UK, then as many as 1,755,000 drivers could be texting or emailing behind the wheel, calculates ING⁴¹.

According to a recent survey⁴² by the Austrian Road Safety Board (KfV) almost every third driver reads text messages whilst driving. A total of 14 % of the 1,000 respondents admitted to writing SMS behind the wheel. When writing a short message it takes the driver five seconds to react to a hazard. The same study found 78 % of respondents said they occasionally make phone calls whilst driving. The understanding of the risks amongst motorists is low: 15 % of respondents believe the ability to drive whilst using a mobile phone would be little or not affected.

3. How to manage the risks?... without losing the benefits

Distracted driving, including the use of electronic devices while driving, should be a particular source of concern for employers and a risk that is managed properly within driving for work policies.

3.1 Adopting a Policy for managing distracted driving

Business Case

Duty of care and health and safety compliance are legal necessities in most EU Member States, and an essential consideration for employers. Employers should also make sure that their employees are able to comply with the law for example on using work equipment in a safe manner. But equally important, it makes sound business sense to draw up and implement a safe driv-

ing for work policy. This should include measures to manage distracted driving. If 'driving for work', being 100% focused on the driving task should be an expected part employee behaviour. The business case for adopting a policy for managing distracted driving should cover the following benefits:

- Fewer working days lost due to death and 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;
- Reduced insurance costs;
- Reduced vehicle downtime;
- Reduced vehicle repair costs;
- Improved residual value of vehicles;
- Image of company shown to care for employees;
- Fewer missed orders and business opportunities;
- Reduced damage to company brand and risk of losing the goodwill of customers;
- Focus on driving tasks leading to more efficiency;
- Less chance of key employees being banned from driving.

The risk associated with distracted driving and the use of mobile phones and electronic devices should clearly be reflected in driving for work policies, and employers should also 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 policy⁴³ (Noble & Riswadkar, 2009). Best practice is to ask employees to undertake comprehension checks – this forces 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 the 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 (see section 3.2).

38 RoSPA (2009) Driving for Work, Mobile Phones. <http://www.rospa.com/roadsafety/info/workmobiles.pdf>

39 *ibid*

40 <http://www.roadsafe.com/news/article.aspx?article=1023>

41 *ibid*

42 <http://www.kfv.at/kuratorium-fuer-verkehrssicherheit/publikationen/studien/verkehr-mobilitaet/>

43 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.

A number of samples of distracted driving / mobile phone/ electronic device policies and guidelines are available on-line for employers to draw from⁴⁴. Employers can either adopt or adapt such policies to suit their needs. One important consideration is to what extent driving for work policy will cover employees driving employer owned vehicles or their own vehicles whilst on business (grey fleet). Employee responsibility for their own vehicle, phone and electronic devices 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 and equipment for work purposes. Large employers can also influence policies in Small and Medium Enterprises [SME's] 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. Main elements of a policy for mobile phones or electronic devices should typically include the following (adapted from RoSPA, 2009; TAC, 2008:

- Employees must not make or receive calls whilst driving for work.
- The golden rule “**Engine on, phone off**”: if it is necessary to make a call, stop in a safe place that does not pose a hazard for other road users.
- Allow calls to go on “**voicemail**” with a message such as: “You have reached Mr Smith. I’m sorry I can’t take your call because I’m driving my car or am otherwise engaged. It is my company’s policy not to use mobile phones while driving for work. I will call you back as soon as I am free and it is safe to do so. If your call requires an immediate response, please call... [customer service number or an alternative designated number].”
- Plan journeys ahead to include stops that also provide opportunities to check messages and return calls.

Other members of staff must also know about the policy and not call a colleague when they know that they are likely to be driving. The caller should check if the person is driving and if they are, hang up.

Swisscom Schweiz AG

Swisscom a large telecommunications company in Switzerland has launched a fatigue and distraction campaign in 2010 targeting all employees all staff and

including the drivers (4,000 fleet cars). This fits into its Vision 0 serious and fatal accidents. The goals are to improve road safety of employees; prevent damage to their image and operational disturbance and reduce vehicle damage. The measures adopted include disseminating information to all employees, sending a newsletter fleet car drivers, education and instruction of multipliers. This includes branch managers, safety agents and superiors. Exhibition with panels in 32 buildings are also arranged as are quizzes and prizes, involving all employees and apprentices, some of whom attend the exhibition. The campaign was evaluated using different criteria such as numbers of clicks on the staff intranet pages, newsletters sent, participants in training sessions. Direct text messages to mobile phones were also sent this was also seen as an important method as these are opened and read by almost everyone as the message was short and to the point. The results have been very positive. There was a high number of competition participants - newsletter to drivers, almost one in four drivers read the newsletter in order to complete the competition entry form.

Chemical Company, UK⁴⁵

A chemical company based in the UK, with a small pan-European car fleet for the sales force, decided in the mid 1990's to implement a ban on using hand-held and hands-free telephones whilst driving. The Sales Director was concerned that this would lead to a loss of business, so measures were put in place to ensure that this did not happen. The back office team was strengthened and customers were told about the new policy and advised to call the office with any queries. In parallel, the employees were shown how their own driving deteriorated, in an off-highway setting, to foster buy-in from them.

When the organisation’s customers were asked what they thought of the service they were getting, they actually reported that it had improved following the ban on the sales team using their telephones whilst driving. This was because the most usual enquiry was concerning their orders which the back office team were able to answer more quickly, eliminating the need for any intermediate calls to the sales person. The sales team also reported that their driving was less stressful, and that they were able to respond to calls more professionally when parked-up as this gave them time to think exclusively about the issue without the distraction of driving. As an added benefit, the monthly mobile telephone bills were reduced by approximately 20%.

⁴⁴ Examples include: <http://www.rospa.com/roadsafety/info/workmobiles.pdf>, http://www.tacsafety.com.au/upload/Safe_Driving_Policy.pdf, Shell E&P Ireland Ltd (SEPL) “The use of mobile phones - even with hand-free kits - is prohibited <http://www.erscharter.eu/signatories/profile/17600>”

⁴⁵ Example given by Andrew Price now at Zurich Financial Services

3.1.1 Communications and Time Management

Senior managers should be expected to lead by example: they must never make or receive a call on a mobile phone while driving for work or expect their colleagues to do so. It is the role of the top management to make sure that systems of work do not pressurise staff to use a mobile phone while driving for work. This includes looking at employee to employee communication systems in place. These may have to be dramatically changed, for example back office staff will no longer automatically put clients through to employees who may be engaged in the driving for work task. Following an analysis of the way the working day is structured this may also be changed to enable those who are driving for work to integrate time for catching up with phone calls and emails. This can also link with an organisation's fatigue management policy – best practice is to take a 15-20 minute break from driving every 2h, or sooner if one feels tired. Whilst the driver should get out of their vehicle and stretch their legs, this is also an excellent opportunity to catch up on messages and make calls. Structuring the day also includes for example not scheduling phone conferences during commuting (driving) time. Managers should also be held accountable for policy enforcement.

3.1.2 Recommendations to employers

- Senior managers to take the lead by respecting the distracted driving policy.
- Adopt a clear policy against distracted driving / use of mobile phones and other electronic devices while driving for work, including as a minimum: "engine on, phone off" and asking staff to put their phone on voicemail with an appropriate message.
- Undertake a review of communication strategies and tools in place.
- Communicate to staff the reasons why policies are in place: hands-free can be as dangerous as hands-held, and having a mobile phone conversation while driving is as bad or even worse than drink driving in terms of risk.
- Ensure there is a mechanism in place to verify such as a training session to ensure that employees including management level are aware and understand existing driving for work policies.

- Create a safety culture: management should ensure work practices that do not pressurise staff to use a mobile phone or another electronic device while driving.
- Lead by example: top executives should lead by example and never make calls / text/ check emails devices while driving for work.
- If mobile phones are given to staff or calls reimbursed, staff should be clear that this is subject to employees respecting company policies.
- Regarding Navigation Devices: ensure that HGVs are equipped with adequate tailor-made navigation systems; ensure navigation systems are updated regularly to minimise the risk of wrong information; purchase head-up display for speed and navigation information; consider buying and installing navigation devices where manual interaction is not possible when the vehicle is moving
- otherwise prohibit interaction with the devices while driving for work; advise drivers to rely more on audio rather than visual information, inform employees on correct location for mounting PND devices.

3.2 Employer led Approaches through Technology and Telematics

Legislation against distracted driving and the use of nomadic electronic devices is hard to enforce by traditional means (traffic police, more on this in section 4). Unless the enforcement is strong enough, laws are not likely to discourage drivers from using a mobile phone while driving, for example⁴⁶. Further, the primary goal of company policies should be to prevent an undesired outcome for the organisation, but having a policy in place does not necessarily guarantee a successful defence in every case⁴⁷. So reducing the risk does not only mean developing a policy, but also managing the risk proactively and uniformly through collective and individual measures across the company by setting up a monitoring process as part of the company safety management system, for example through technology or using telematics. Promotion of safety policy can range from very simple measures, for example some companies have chosen to place a warning sticker on company-provided phones reminding individual employees about the dangers of distracted driving⁴⁸, to much more advanced solutions. Suckling Transport for example, a company specialised in the transport of fuel by road, as a collective measure, introduced an

⁴⁶ 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.

⁴⁷ ibid

⁴⁸ ibid

interlock between a fixed mobile telephone in the cab of the vehicle to the handbrake, to ensure the telephone can only be used when a vehicle is stationary⁴⁹.

Telematics providers can also offer their customers the possibility to enforce their policies by using mobile phone records in conjunction with telematics reports to identify occasions when drivers are using their telephones whilst the vehicle is in use. With driver safety forming a larger and more comprehensive part of any fleet management solution, there has been an increase in companies looking for in-vehicle telematics to support behaviour-based reporting. With lone worker legislation on the rise and the onus put squarely on the employer to protect both his mobile employee and those he/she may come in contact with, it is imperative to be able to identify any potential risk. One provider, Trimble⁵⁰ has recently launched a Driver Safety solution that can measure and benchmark the driving of an individual to allow organisations to understand the risk associated with their drivers' style, thus allowing them to mitigate poor behaviours using methods such as training and incentives.

Offering GPS location information as well as behaviour data such as harsh braking, acceleration, speeding and cornering, the solution provides high level and detailed reporting of those drivers displaying dangerous driving behaviour and therefore most likely to be in an accident. With mobile phones proven to be a hazardous distraction while in the vehicle, this telematics driver-style information can now be matched to loaded mobile phone usage records to determine where a driver was when they used their phone, if they were in motion and then if this usage was associated with poor driving style or inappropriate behaviour. The reports can be sent to a number of different stakeholders from Fleet Managers to HR who can then determine the action to be taken. To gain maximum benefits from this tool, experience shows that if used, it should be used as part of an integrated driving for work distraction policy always in conjunction with employers and employees.

4. National level

Much can be done to tackle distracted driving at a national government level both in terms of targeting the general population and those drivers driving for work.

4.1 Awareness

Traffic law enforcement is not only about identifying

and apprehending offenders. What guides people's behaviour is not only the fear of being caught but also their understanding of the road safety rules themselves and of the risk related to breaking these rules. The majority of road users want to comply with these rules not to avoid fines but simply to abide by the law⁵¹. Awareness about the existing legislation and the risks associated with mobile phone and PND use seems to vary. Firstly, governments should clearly communicate the legal requirements covering both mobile phone and PND use. According to a recent questionnaire of citizens in 5 EU MSs (Spain, UK, Italy, Sweden and Poland)⁵² (conducted by IGES Institut, ITS Leeds, ETSC 2010) citizens show a lack of awareness about legislation. The area they were most informed about was mobile phone legislation. Ownership of a nomadic device did not affect knowledge about the legal requirements of their use. Secondly, as part of this information campaign, governments should also explain what are the risks of driver distraction. To maximise the impact of such awareness raising campaigns these should be carried out in parallel with traffic law enforcement⁵³. Researchers also underline this and stress that enforcement must be highly visible and publicised and indicate that it is the drivers' subjective risk of being caught that must be increased if enforcement is to be successful⁵⁴. Communication campaigns linked to police enforcement are very important in doing this.

4.1.2 National Level Campaigns

UK "Kill the Conversation"

In May 2009, THINK! launched a multimedia campaign to show the dangers of using mobile phones while driving⁵⁵. The campaign was aimed at all drivers with particular emphasis on young/new drivers. It was also aimed at callers and people who text while driving. This was a high-profile multimedia campaign using TV, online, radio and press. The television commercial 'Split Screen' was originally run in March 2007 and showed a wife calling her husband on his mobile phone and the repercussions of her actions. The aim was to broaden the responsibility to the caller and promote the message to 'Kill the conversation'. Online the 'driving challenge' game was launched in June 2008 and demonstrated how using a mobile phone at the wheel causes unintentional blindness. The game promoted the message to 'Switch off before you drive off'. A radio campaign was also launched warning young drivers of the dangers of texting while driving. The radio campaign promoted the message 'Don't use your mobile when you're driving'. The campaign also advised those who needed their phones for work to switch their phones to voicemail and pick up messages when safely parked.

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

50 www.trimble.com/ukmrm

51 Goldenbeld, C., Heidstra, J., Christ, R., Mäkinen, T. & Hakkert, S. (2000): Legal and administrative measures to support police enforcement. Deliverable 5 of the ESCAPE (Enhanced Safety Coming from Appropriate Police Enforcement) project. Available at <http://virtual.vtt.fi/virtual/proj6/escape/deliver.htm>

52 IGES Institut, ITS Leeds, ETSC (2010): Study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles. Study tendered by the European Commission, Berlin 2010.

53 In line with the EC Recommendation of 2004 on enforcement of traffic law

54 ESCAPE <http://virtual.vtt.fi/virtual/proj6/escape/deliver.htm>

55 http://www.dft.gov.uk/think/focusareas/invehiclesafety/mobilephones?page=Campaign&whoareyou_id=

Belgium “No Phone at the wheel”

During the summer of 2010 the Belgian Road Safety Institute (IBSR/BIVV) ran a campaign to highlight the risks associated with mobile phone use while driving⁵⁶. The poster is illustrated with a cell phone destroyed on the screen, a picture of a child and the slogan “Dad, it was cut ...”. The goal is to educate drivers on the consequences of distraction while playing on the emotional aspect. The simple slogan “no mobile phone whilst driving” makes clear the rule that drivers must observe to avoid such a situation. A second version of this poster is particularly aimed at young male drivers. It consists of a photo of a young woman and the text “Loulou, why did you hang up?”. In this case also, the context is clear. The poster campaign is run along the main roads and posters in smaller format were displayed in public services, youth centers, cultural centers, and businesses. Besides the poster, the campaign message will also be broadcast via variable message signs (VMS) in tunnels in Brussels, but also on highways in Wallonia.

Germany “Who is driving?”

The German Road Safety Council organises every year in cooperation with the Berufsgenossenschaften (Statutory Accident Insurance) from different industrial sectors a quiz focusing on one specific topic. As employers are members of these statutory accident insurances they receive a package of materials (posters, leaflets) to disseminate them in their companies. Employees are invited to take part in a quiz. In 2002, the topic was distraction and a billboard was designed and put also along the German Autobahns to support this company-related actions.

... und wer fährt?



<http://www.dvr.de/site.aspx?url=html/presse/plakate/478.htm&mode=2>

ANIA Foundation communication campaign on distracted driving

In 2010, Ania Foundation for Road Safety chose distraction as its annual social campaign topic. The idea came from the result of a survey carried out in Italy by Ipsos (a worldwide organisation specialized in making survey-based research) on the behaviour of Italian drivers in their cars. The results of the survey showed that 51% of Italians behind the wheel admitted they've been involved in a vehicle collision due to distraction. Amongst the most dangerous activities mentioned that they engage in: using laptops (90%), eating or drinking (82%), smoking (60%), using mobile phones (50%), texting (76%), or dialling a phone number (45%). On the 6th of July 2010, ANIA Foundation launched its communication campaign called Mind on driving (Pensa a guidare), the message was spread with the publication of leaflets, posters, and broadcasting of a number of radio and TV spots. Furthermore, on the 13th and 14th of November the involvement of famous football players within the ANIA campaign helped raise awareness amongst the national audience. Two spots were shot with two famous Italian goalkeepers to promote the “Mind on driving” campaign and are available on the ANIA Foundation website. (http://www.fondazioneania.it/Fondazione_Ania/PENSA_A_GUIDARE.html)

4.2 Legislation

Legislation on mobile phone and nomadic devices differs in the EU.

4.2.1 Mobile Phone Use

All EU Member States, apart from Sweden⁵⁷, have specific legislation on mobile phone use⁵⁸. They also stipulate the use of hands-free equipment. With regards to hands-free, most commonly a headset or wireless equipment (e.g. Bluetooth) is considered sufficient, as long as the driver doesn't hold the phone in their hands while driving. However, some countries additionally require that the phone must be fixed in a mounting. Furthermore, some countries (e.g. Luxembourg, Slovenia, and Greece) have even more specific regulation in place that restricts using mobile phones or mounting mobile phone cradles in several ways. In these countries, for instance, the use of additional phone functions (e.g. texting) is prohibited. In some countries, (e.g. Germany) hands-free devices must be used for using any function of a mobile phone (e.g. GPS). In only ten countries is it explicitly forbidden to use the texting function.

⁵⁶ <http://www.ibsr.be/main/OnzeCampagnes/Archief/DetailCampagne.shtml?detail=900203656&language=fr>

⁵⁷ In Sweden, legal requirements on the use of mobile phones while driving are derived from a general caution “to avoid accidents, road users shall observe care and attention that the circumstances demand”.

⁵⁸ IGES Institut, ITS Leeds, ETSC (2010): Study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles. Study tendered by the European Commission, Berlin 2010

Country	Legislation requires		Hand-held phone is prohibited if		Requirement to use		Hands-free required when using		Forbidden to use			Requirements concerning	
	complete ban	use of hands-free equipment	engine is running	vehicle is moving	headset/Bluetooth	additionally fixed phone	phone function	other function	texting function	all functions that involve continuous handling	headphones	location of mounting	way of fixing
AT		X		X	X		X						
BE		X	X		X		X	X					
BG		X		X	X		X	X					
CY		X		X	X		X		X				
CZ		X		X	X		X	X					
DE		X	X		X		X	X	X				
DK		X	X		X		X	X					
EE		X		X	X		X						
EL		X		X		X	X	X	X				X
ES		X	X				X			X			
FI		X		X	X		X	X		X			
FR		X		X	X		X	X	X				
HU		X	X		X		X						
IE		X	X		X		X						
IT		X		X		X	X	X	X				
LT		X	X		X		X	X		X			
LU		X		X		X	X		X	X			X
LV		X		X	X		X		X				
MT		X		X		X	X						
NL		X		X	X		X	X					
PL		X		X	X		X	X					
PT		X		X	X		X	X	X	X			
RO		X		X	X		X						
SE													
SI		X		X		X	X	X	X	X			
SK		X		X	X		X	X					
UK		X	X		X		X	X					
CH		X		X	X		X	X	X				
IS		X	X		X		X						

Table: Legislation on mobile phone use⁵⁹

59 IGES Institut, ITS Leeds, ETSC (2010): Study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles. Study tendered by the European Commission, Berlin 2010.

4.2.2 PND use and Mounting Legislation

This area is less regulated than mobile phone use⁶⁰. Only 12 EU countries have general legislation in place that applies to some extent to mounting and using PNDs. Where there is legislation these countries indicate that manual interaction with the device is prohibited when the vehicle is moving. This restriction can either be derived from general articles on driver behaviour (e.g. driving without due care and attention) or general articles on vehicle condition (e.g. vehicle's front window/windscreen must allow a clear view). For some countries it is not fully clear to which extent these general articles apply to the use of PNDs. For instance in Sweden, the relevant general articles on driver behaviour do not stipulate a concrete prohibition for the driver to manually interact with a PND when driving, as long as no other road user or traffic is endangered or the driver doesn't behave recklessly. Other countries (e.g. France, Italy, Slovenia) have ruled from these general articles on driver behaviour that manual interaction with a PND is not allowed.

Country	Legislation requires		Manual interaction prohibited if		Prohibited to use		Requirements concerning	
	complete ban	use restriction	engine is running	vehicle is moving	media player function	other functions	location of mounting	way of fixing
AT								
BE								
BG								
CY		X					X	
CZ		X					X	
DE		X				X	X	X
DK		X					X	
EE								
EL		X		X		X		X
ES		X		X		X	X	
FI		X		X			X	X
FR		X		X	X		X	
HU								
IE								
IT		X		X	X		X	
LT								
LU		X					X	X
LV								
MT		X					X	
NL		X					X	
PL								
PT		X		X				
RO								
SE								
SI		X		X				
SK		X		X			X	
UK		X			X			
CH		X		X			X	
IS								

Legislation on PND use (IGES Institut, ITS Leeds, ETSC 2010)

60 IGES Institut, ITS Leeds, ETSC (2010): Study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles. Study tendered by the European Commission, Berlin 2010.
61 IGES Institut, ITS Leeds, ETSC (2010): Study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles. Study tendered by the European Commission, Berlin 2010.
62 IGES Institut, ITS Leeds, ETSC (2010): Study on the regulatory situation in the Member States regarding brought-in (i.e. nomadic) devices and their use in vehicles. Study tendered by the European Commission, Berlin 2010.

Many countries have general articles in place stipulating that the vehicle windows/windscreen must allow a clear and undistorted view⁶¹. In some countries legal requirements have derived from these rather universal articles. Countries with rather specific legislation on PNDs include Spain and Luxembourg. In Luxembourg, legislation states that mounting any accessory devices such as PNDs is only allowed on the lower left side of the windscreen. In Spain, the Road Safety Law (Ley de Seguridad Vial) introduced in 2009 contains a specific article 65.4.g on the use of PNDs. It is prohibited to operate the device when the vehicle is moving and the device must be mounted where it can be easily seen by the driver without obstructing the field of view.

4.2.3 Consumer Information

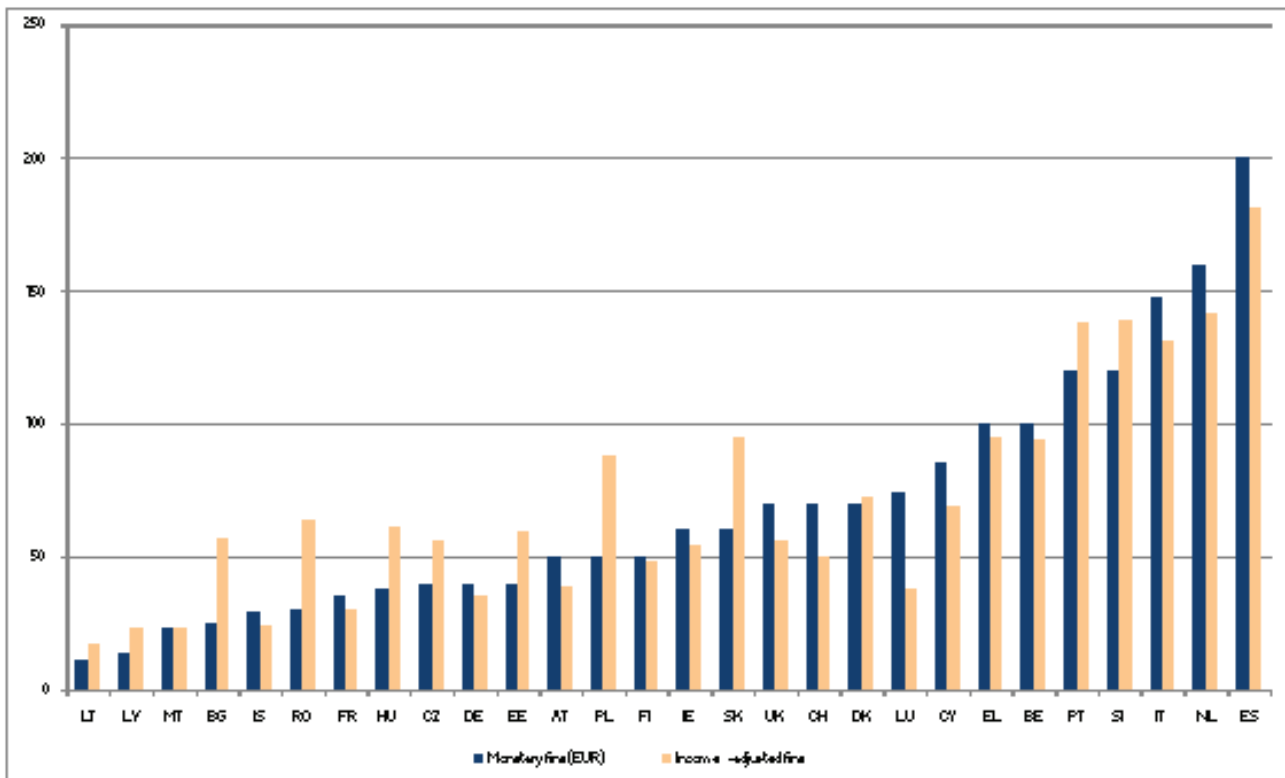
National level governments could legislate for producers of mobile phones and PNDs to inform consumers about the risks of using them whilst driving. Moreover they could legislate that manufacturers of devices publish safety information for their customers on using PNDs especially adapted to their use whilst driving for work. Member States should insist that producers should also include information on proper mounting for PND and include this information in the manual supplied with the PND. Some manufacturers are already doing this, this should be the norm.

4.3 Enforcement

Enforcement is a means to prevent collisions from happening by way of persuading drivers to comply with the safety rules. It is based on giving drivers the feeling that they run too high a risk of being caught when breaking the rules. Sustained intensive enforcement that is well explained and publicised also has a long-lasting effect on driver behaviour. The enforcement of nomadic device related legislation can be technically more difficult compared to other offences such as speeding for example. Visual or sound distraction is practically impossible to assess from outside the vehicle, while the miniaturisation of devices makes it difficult to visually detect if the device was used inside the moving car. The use of nomadic devices behind the wheel is nowadays exclusively subject to non-automated enforcement by police officers in vehicles, on motorbikes, or on the roadside. A driver can be stopped after committing an offence, where the offender receives immediate feedback and the police officer has the opportunity to explain why they are enforcing relevant legislation⁶².

According to a recent study⁶³, legislation on the use of nomadic devices is enforced by national police forces in Member States with different intensity. In about half of countries, targeted checks are applied, meaning that the Police dedicate the full attention to the improper use of nomadic devices, typically of the mobile phone. This could take a form of a Mobile Phone Day of Action run in the UK, or specialised motorbike Police enforcement units operating in Austria. The

broadest scope of checks in respect to the use of nomadic devices causing distraction is currently applied in Spain. This is thanks to its most comprehensive legislation covering several different devices. In some countries such as Poland, or Portugal, Police report to perform both targeted and general checks of driving population. However, in about one third of countries, no specific targeted checks are performed (e.g. EL, IE, IT)⁶⁴.



Income-adjusted monetary fine levels for a mobile phone offence in Europe⁶⁷ (in EUR)

4.3.1 Sanctions

Research has also found that long-term behavioural effects from enforcement are only achieved if the detection of a violation is followed by immediate feedback or sanction⁶⁵. It is however important that the level of sanctions is according to the risk related to non-compliance. This is also important to motivate police officers in their work, although research has found that higher sanctions have less of an impact on safety than the level of enforcement⁶⁶. Monetary sanctions for using a mobile phone differ in the EU. The fine level varies from 11 EUR in Lithuania to 200 EUR in Spain. The following table shows these values that can be interpreted as monetary fines with standardised capacity to pay. The table also shows that the adjusted fine levels in some Central and Eastern

European countries are actually higher than the absolute fines.

Although having general penalty point systems in place, several countries don't sanction mobile phone offences with penalty points. Where countries do have a penalty point system introduced that covers also mobile phone offences, the relative points for a mobile phone offence (i.e. percentage of points until licence withdrawal) vary between 6 per cent in Germany and 25 per cent in the Czech Republic, Italy and the UK⁶⁸.

4.3.2 Rehabilitation Courses

In some cases it has been found to be more effective to impose a remedial measure in combination with a

63 *ibid*

64 *ibid*

65 ESCAPE <http://virtual.vtt.fi/virtual/proj6/escape/deliver.htm>

66 SUNflower (2002): A comparative study of the development of road safety in Sweden, the United Kingdom and the Netherlands. Final report. Leidschendam.

67 http://www.etsc.eu/documents/Report_Nomadic_Devices.pdf

68 http://www.etsc.eu/documents/Report_Nomadic_Devices.pdf

sanction. So far most rehabilitation courses have either been general or specifically targeting drink drive or speeding offenders.

In the UK, three regions (Hampshire, Thames Valley and Suffolk) have begun offering driver rehabilitation courses for driver distraction and/or using a mobile phone while driving. The Call Divert Scheme in Thames Valley and Suffolk provides drivers with the opportunity to take part in an educational course instead of receiving a fixed penalty fine and points on their driving licence. "Call Divert" run by AA DriveTech typically targets drivers who were driving a motor vehicle, or supervising a provisional licence holder, while using a hand-held mobile phone or other interactive communication device. The Scheme aims to raise the awareness of the potential consequences of using a mobile phone while driving or supervising a provisional licence holder. The Course provides a framework for discussion and debate and explains, with examples, the UK law regarding using a hand-held mobile phone while driving or supervising a provisional licence holder. It shows how using a hands-free or hand-held phone while driving affects driving decisions and discusses the tragic consequences if it all goes wrong. Since the Call Divert Courses started in 1997, over 15,000 drivers have successfully completed the programme across the UK. Key to the success of the Course is an acceptance that the mobile phone is an integral part of life in general and work in particular but it is a major distraction while driving. Therefore, drivers need to be offered realistic, pragmatic and truly practical 'coping strategies' that empowers them not to make or receive any calls while driving.

In Germany, novice drivers who have been detected using a mobile phone while driving have to -beside paying a fine - attend a rehabilitation course and their probationary period is extended for additional six months.

4.4 Road traffic death investigation establishing distraction

The use of nomadic devices, or distracted driving, are reported in police road traffic death investigation forms in a majority of Member States, but the level of detail and presumed underreporting make the data unreliable and incomparable between countries⁶⁹. The elementary problem is the impossibility to verify whether the driver was using (improperly) a nomadic device at the crash event. An increasing practice is accessing mobile phone records and linking this with the time of the collision to establish if the driver was

distracted prior or during the collision. The UK's ACPO "Road Death Investigation Manual"⁷⁰ includes mobile phone use as one of the possible sources for distraction causing dangerous driving. It is included as one of the contributing or precipitating factors in the template used for road traffic death investigation.

4.5 Driver Training

Driving schools could play a primary role in providing necessary information on the risk of distracted driving. Beyond the initial driver training, governments could also insist that driver education programmes include distracted driving in driver training (including for professional drivers) such as the new Directive 3003/59 (see PRAISE Report on Driver Risk Assessment and Training)⁷¹ and that special programmes and initiatives run by employers and insurance companies cover distracted driving risks. In some EU Member States such as Germany and Italy drivers who have lost their driving licences due to a driving ban must complete a general rehabilitation training programme including different topics on road safety, this should also include the risks of distracted driving and tools to manage communication.

4.6 Public Procurement

Governments can bring about change by setting an example. They can influence demand through their own public procurement policies. All non-private customers, such as governmental bodies, local authorities and companies can play an important role by including specific requirements on minimum safety levels in their in-vehicle technology purchase policies. In this case they could only purchase PNDs which have high safety standards and features. Also, when they are subcontracting out their services they could only do so to transport providers who also have a mobile phone and PND policy restricting or banning use for safety reasons.

4.7 US Government Ban on Texting by Employees

In October 2009, the US Federal Government demonstrated leadership in reducing the dangers of text messaging while driving for its near 3 million civilian employees when President Barack Obama issued an Executive Order using his presidential prerogative to prohibit the use of text messaging while driving on official business or while using Government-supplied equipment⁷². Every day, Federal employees drive on official Government business, and some Federal employees use Government-supplied electronic devices

⁶⁹ http://www.etsc.eu/documents/Report_Nomadic_Devices.pdf

⁷⁰ http://www.acpo.police.uk/asp/policies/Data/road_death_investigation_manual_18x12x07.pdf

⁷¹ <http://www.etsc.eu/documents/PRAISE%20Report%202.pdf>

⁷² http://www.whitehouse.gov/the_press_office/Executive-Order-Federal-Leadership-on-Reducing-Text-Messaging-while-Driving/

to text or e-mail while driving. Extending this policy to cover Federal contractors is designed to promote economy and efficiency in Federal procurement. Federal employees, Government Contractors, Subcontractors, and Recipients and Sub-recipients shall not engage in text messaging (a) when driving government or privately owned vehicles while on official Government business, or (b) when using electronic equipment supplied by the Government while driving. All government agencies were asked to take appropriate action within the scope of their existing programs. This included, considering new rules and programs, and re-evaluating existing programs to prohibit text messaging while driving, and conducting education, awareness, and other outreach for Federal employees about the safety risks associated with texting while driving. These initiatives should encourage voluntary compliance with the agency's text messaging policy while off duty.

4.8 Recommendations to EU Member States

- Run regular targeted information campaigns for those driving for work linked to enforcement on the risks of using a mobile phone or PNDs whilst driving.
- Adopt clear and strict legislation banning the use of mobile phones, including hands free, whilst driving.
- Adopt legislation restricting the use of PNDs whilst the vehicle is moving.
- Inform employers of the legal situation in different EU MSs.
- Promote the business case to employers and link financial and non-financial sanctions to risk associated with the offence.
- Communicate the legal restrictions for using a mobile phone and PNDs to citizens and target employers as a specific group.
- Include distraction by use of mobile phone or other PNDs in road traffic death investigation by statutory bodies and communicate this to the public guidelines.
- Include driver distraction policy requirements in public procurement.
- Integrate distracted driving into driver training

(citizen and professional) and education including driver rehabilitation courses.

- Integrate distracted driving into training and education for transport managers.
- Mandate safety information (including mounting information) to consumers by manufacturers of PNDs and mobile phones.

5 European level: what can the EU do?

5.1 Information, Training and Enforcement

Following on from the overview of what is being undertaken at a national level the EU can certainly fulfill a number of different roles. One is a very simple one of information. It could communicate to employers and citizens the different legal requirements on mobile phone use and the use of PNDs. There is also a need for more information on their use and the impact on road safety so the EU could also invest in research and surveying this use and associated risks in the EU. According to a study, better data are needed to more accurately characterise and quantify the problem. The report showed that several EU countries do not carry out regular programmes to monitor the prevalence of mobile phone or other nomadic device use whilst driving. In many EU countries, there is currently a lack of data on the extent to which driver distraction due to the use of nomadic devices is a contributory factor in road traffic deaths. Even if data are recorded, differences in road traffic death reporting and data collection make it difficult to compare data between EU countries.

5.1.1 Enforcement

Within the EU's new "Road Safety Policy Orientations" under Objective 2 on enforcement the European Commission stressed the need to increase coordination and sharing of best practice to help make enforcement and controls more efficient. They also stressed the importance of linking enforcement to user information and supporting information actions and awareness raising. The Commission will also prepare a common road safety enforcement strategy. They could also integrate the need to enforce sources of distractions including mobile phone and PND use in this strategy and include it as a point for Police forces in the different Member States to exchange best

practice on. Moreover with the upcoming Directive on Cross Border Enforcement of road safety related traffic offences use of mobile phones should also be included in the priority list of sanctions.

Occupational Safety enforcement bodies also have a role to play in enforcing statutory provisions with employers. Work related road safety risks need to be prioritised by EU and information provided to empower employers to act more responsibly and exercise their duty of care to those employees who drive for work, including managing in vehicle distraction risks.

5.1.2 Driver training

As mentioned above the risks of distraction from mobile phones and PNDs should be integrated into citizen and professional driver training. As the European Commission is due to review both the Driving Licence Directive (2006/126) and the Directive on Initial Qualification and Periodic Driver Training of drivers of certain vehicles (2003/59) in the near future they could also look to see how these could be included in the curricula.

5.2 Driving for Work Road Safety Policy

The EU is in the process of developing its driving for work road safety policy. Although driving for work road safety was not included in the EU's "Road Safety Policy Orientations" as such, the European Commission does include integrating road safety into other policies including employment. The EU's Transport Ministers also identified at the Transport Council in December 2010 that employers should be encouraged to adopt road safety action plans⁷⁴. Moreover, within the field of employment policy the EU also adopted "Improving Quality and Productivity at work: Community Strategy 2007-2012 on Health and Safety at work". Although driving for work is not included there is the possibility that specific measures focusing on reducing death and injury whilst driving for work could be included in the next Community Health and Safety at Work Strategy. The need to address the risks of distracted driving should also be included in the development of the EU's driving for work road safety policy.

5.3 Consumer Policy

Within the context of the EU's consumer policy there is a Directive (97/55 EC) on misleading advertising. The EU should also encourage Member States when implementing this Directive to make sure that there

is no misleading information as regards the safe use of mobile phones and accompanying equipment for hands free and PNDs.

5.4 EU ITS Action Plan and Directive

The EU ITS action plan and Directive lay down the framework for the implementation of ITS stressing that they can contribute to making transport safer, more efficient and competitive, more sustainable and more secure. Actions also of relevance to this PRAISE report include technologies such as driver assistance and calculation of itineraries. The development of PNDs attached services and their placement in vehicles will be influenced by these new actions. The ITS Directive states that specifications and standards for an optimal use of road, traffic and travel data should include multimodal and real-time traffic information. Both are important for the development of PNDs. Specifications will also be developed for the collection of these data by relevant public authorities and/or private sector. Specifications are foreseen for the definition of the necessary requirements to make road, traffic and transport services data used for digital maps accurate and available to digital map producers and service providers. Especially of relevance is that the definition of minimum requirements for road safety related 'universal traffic information' are provided, where possible, free of charge to all users. The year 2013 will see the adoption of specifications for real-time traffic information systems and for systems to reserve available parking lots.

In the ITS Action Plan the definition of the on-board Human-Machine-Interface and the use of nomadic devices to support the driving or transport operation as well as the security of the in-vehicle communications will also be covered (priority area III). This will be built upon on the European Statement of Principle on safe and efficient in-vehicle information and communication systems. The development of consumer information on nomadic devices could also be considered in particular by setting up a scoring system based on safety performance such as EuroNCAP. The HASTE project was close to developing such a scoring system⁷⁵.

5.5 Support for Research and Development of Nomadic Devices

The European Commission is supporting the research and development of nomadic devices including the safety aspects. There are currently a number of projects underway whose research outcomes will be important in informing next steps.

⁷⁴ http://ec.europa.eu/danmark/documents/alle_emner/transport/101202_raadet_en.pdf
⁷⁵ HASTE Project Deliverables <http://www.its.leeds.ac.uk/projects/haste/deliverable.htm>

5.5.1 Project “Interaction”

Interaction is focusing on understanding driver interactions with In-Vehicle Technologies⁷⁶. The project aims to collate knowledge that will enable the definition of actions to strengthen drivers’ awareness on the use of these technologies and for the consequences that such use has or may have. The project will also come up with recommendations for the design of future systems and of appropriate instructions for drivers that will use them to favour a safe use of In-Vehicle Technologies by European drivers.

5.5.2 Support of Field Operational Trials of ICT

The European Commission is also supporting FOT-NET⁷⁷: Networking for Field Operational Trials. This is a large scale test programme aimed at providing a comprehensive assessment of the efficiency, quality, robustness and acceptance of ICT solutions for transport. The FOTs try to understand important questions such as: how the driver uses the system, what the short and long term effects are and how can the systems’ performance be improved. A common European FOT methodology has been developed and the GESTA project also funded by the European Commission has developed a handbook on FOT methodology.

5.6 Recommendations to the EU

- Support awareness information campaigns on the risks of distracted driving.
- Ensure broad information to EU employers and citizens about the legal overview of use of mobile phones and PNDs in the different EU Member States for example by publishing these information on their website.
- Assess the possibility to develop guidelines on how the usage of mobile phones in road traffic should be assessed. The methodology developed in the area of seat belt use within the 6th FP project SafetyNet could serve as a template for this.
- With regards to road traffic death investigation, develop methods to enable better assessment of the role of distraction in road traffic deaths, including a review of existing reporting systems. Road traffic death data systems on nomadic device use should be improved, including type of device and the context in which it was being used when the crash occurred.

- Undertake a survey of the use of PNDs in the “driving for work” context.
- Include mobile phone and PNDs in the upcoming road safety enforcement strategy and Cross Border Enforcement Directive and facilitate exchange of best practice on enforcement between the different police forces.
- Include managing risks associated with mobile phone use and other PNDs in driver training.
- Include the risks of mobile phone and PNDs use in the EU’s driving for work road safety strategy.
- Ensure that the Directive on misleading advertising is respected as regards mobile phones and PNDs.
- Continue to support the field operational trials of mobile phone and PND technology and apply lessons learnt to address risks and benefit from safety services.
- Support the research and development of PNDs and their services to support safety applications as a matter of priority.
- Develop consumer information on nomadic devices including setting up a scoring system based on safety performance such as EuroN-CAP.

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⁷⁶ <http://interaction-fp7.eu/>

⁷⁷ http://www.fot-net.eu/en/about_fot-net/about_fot-net.htm

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