Knowledge for Leadership –
The Road Safety Performance Index
Assessing road safety performance across Europe

PIN Flash n.16

Tackling the three main killers on the roads

A priority for the forthcoming EU Road Safety Action Programme

ETSC
European Transport Safety Council

Road Safety PIN

Introduction

Speeding, drink driving and failure to wear a seat belt are the three main risk factors on the road. New PIN Country Rankings by relating to these dangerous behaviours provide an update of the rankings published in the 1st PIN Annual Report in 2007. This update comes at a crucial time when the EU is discussing its priorities for the forthcoming EU Road Safety Action Programme for the next ten years. This autumn the European Commission is expected to publish a new proposal for a Directive on Cross Border Enforcement of road traffic law taking into account the entry into force of the Lisbon Treaty.

Measures to tackle these dangerous behaviours behind the wheel have been at the core of road safety policy for decades and significant progress has been made since 2001. Experience from fast progressing countries shows that progress in fighting speeding and drink driving and increasing seat belt use can be fast and save thousands of lives. The European Union has also passed stricter legislation making the use of seat belts mandatory throughout the EU. The European Commission also published two relevant Recommendations, the 2001 Recommendation on maximum permitted blood alcohol content of 0.2g/l for novice and professional drivers and 0.5g/l for other drivers, and the 2004 Recommendation on enforcement in the field of road safety.

Still, there is a huge potential in addressing these three longstanding areas of road safety. If average driving speeds dropped by only 1 km/h on all roads across the EU, more than 2,200 road deaths could be prevented each year, 1,100 of them on urban roads, 1,000 on rural roads and 100 on motorways. Even if the number of deaths in accidents in which a driver is over the alcohol limit were no greater than is recorded in the accident statistics, at least 3,500 deaths could have been prevented in 2009 if drivers concerned had not drunk before taking the wheel. If, as estimated by the EC, 25% of road deaths occur in such accidents, then at least 7,500 could have been so prevented. Across the EU, an estimated 12,400 occupants of light vehicles survived serious crashes in 2009 because they wore a seat belt. Another 2,500 deaths could have been prevented if 99% of occupants had been wearing a seat belt, a rate that could be reached with seat belt reminders.

The 4th European Road Safety Action Programme is now awaited with great expectation by all Member States and beyond Europe. It should provide a strong case for fighting speeding, drink driving and the failure to wear a seat belt. It should encourage all Member States – and provide support for those facing the greatest challenges – to monitor indicators of these behaviours. Member States should be prioritising road safety measures, including stricter laws, more stringent enforcement and educational campaigns, tackling the three main killers on the roads and should set themselves targets for desirable compliance levels.

Content:

Part 1 | Progress in curbing driving speeds

Excessive and inappropriate speed is the number one road safety problem[1]. Speeding is a primary factor in about one third of fatal accidents and an aggravating factor in all accidents[2]. Exceeding the speed limits is widespread. In countries where data are available, in free-flowing traffic up to 30% of drivers exceed speed limits on motorways, up to 70% on roads outside built-up areas and as many as 80% in urban areas. Addressing illegal speeding therefore requires a large number of non-compliers to change their behaviour. Experience shows that there is not one single measure to reduce speed. It rather takes a combination of measures including credible speed limits, enforcement and education, combined with 'self-explaining' roads and vehicles[3].

Never drink and drive? But like to push the accelerator pedal? This is for you!

Drivers are usually aware of the increased risk of being involved in a fatal collision after drinking but largely underestimate the increased risk of being involved in a fatal collision when speeding. Driving with 0.5 g/l BAC increases the risk of a fatal crash by a factor of 5, the same as driving about 50% faster. The increased risk of driving at 75km/h on a 50km/h road, 135km/h on a 90km/h road or 180km/h on a 120km/h motorway is therefore similar to the risk of driving with a 0.5g/l BAC.

Driving above the legal alcohol limit is considered in most European countries a criminal offence and can lead drivers to prison. Sanctions are far more lenient for speeding, although the risk of driving at high speeds is similar to the risk of drinking and driving[4]. Speeding should be socially unacceptable, as is the case now for drink-driving in most EU countries.

Comparison between countries

Among the countries monitoring speed, drivers, in particular car drivers, have slowed down. **France** is the only country where speed reductions have been achieved on all types of roads between 2001 and 2009. The average speed of light vehicles on all road types taken together has decreased steadily by 10 km/h (or 12%) over the last eight years. **Great Britain** and **Austria** also recorded reductions in mean speeds on both urban roads and motorways. Drivers have slowed down markedly in cities in the **Czech Republic** and **Ireland**.

Best progress has been made on motorways, where 'only' about 30% of drivers now exceed the speed limit, the highest average level of compliance among the three types of roads. Most of this progress followed the introduction of extensive automated speed enforcement schemes based on safety cameras in **France, Switzerland** and recently **Spain,** coupled with stricter sanctions like penalty point systems including speed offences and higher fines (**France**, **Spain, Latvia, Czech Republic,** etc.).

Progress has been mixed on rural roads. Average speeds have decreased in some countries, but increased in others. Also, within some countries, average speeds have

[1] Aarts, L. & van Schagen, I. (2006). Driving speed and the risk of road crashes: a review, Accident Analysis and Prevention, vol. 38, issue 2, p: 215-24.
[2] OECD/ECMT (2006) Speed Management
[3] Wegman, F. and Aarts, L (2006), Advancing Sustainable Safety. National Road Safety Outlook for 2005-2020.
[4] OECD/ECMT (2006). Speed management.

decreased on some rural roads but increased on others. Compliance with speed limits is low in many countries. In 8 out of 11 countries monitoring speeds, the percentage of drivers exceeding the speed limit varies from 30% to 72%.

Average speeds have decreased also on urban roads in several countries. But, in comparison with motorways and rural roads, the proportion of cars travelling above the limit is highest on urban roads, roads where limits have been set at the lowest level to protect the most vulnerable road users - pedestrians and cyclists.

These findings are in stark contrast with the drivers' self-reported behaviour. In a survey carried out in 2002-2003 in 23 countries, drivers in all countries reported committing most violations on motorways and least violations in built-up areas. The percentage of car drivers that reported violating the speed limit 'often', 'very often' and 'always' in European countries[5] on different road types was 28% on motorways, 19% on main roads between towns, 13% on country roads and 7% in built-up areas (SARTRE 3, 2004).

The indicator

The mean speed and level of compliance of vehicles in free-flowing traffic (i.e. the proportion of vehicles exceeding the posted limit) are the two most commonly used speed indicators in European countries. The two indicators have different potential interpretations. While the link between mean speed and accident frequency is well-documented by research, the relationship between levels of compliance and accident occurrence is less well-known. Levels of compliance are, on the other hand, more closely linked to road safety interventions, e.g. enforcement. They are a useful tool for policymakers to monitor the effect of their actions.

A SafetyNet manual on road safety performance indicators[6] details the methodologies for countries to collect data in a uniform manner across the EU. But data collection procedures still vary substantially. Countries observe speeds for different vehicle types (all traffic together, cars and vans only) and different criteria are used to identify measurement locations and appropriate (uncongested) traffic conditions. This is why it is difficult to make comparisons between countries of levels of speed and speed limit violations. Countries are therefore compared with respect to changes since 2001 in mean speeds and in percentage of vehicle exceeding the speed limit on three different road types: motorways, rural roads and urban roads.

More countries were able to provide data on driving speeds than in 2007. **Great Britain**[7], **Austria**, **Finland** and **Switzerland** have a long tradition of monitoring speed in free-flowing traffic. **France** has been monitoring speed all year round since 2003 and publishes the results in its Observatory of Speeds[8]. **Belgium** also started monitoring speeds in 2003[9]. Some others have started more recently, such as **Estonia**, the **Czech Republic** and **Slovenia,** following SafetyNet recommendations. Others perform speed measurement occasionally, e.g. before and after major changes in legislation or in the speed limit. **Germany**, **Greece**, **Malta, Italy** and **Slovakia** do not currently monitor mean speeds which deprives them of important feedback on the effectiveness of their actions. In **Portugal**, measurements stopped in 2006. In **the Netherlands**, measurements are made only on motorways. **Sweden** has developed a *speed index* to monitor speed developments at 83 points on the rural road network between extensive speed surveys made every few years.

[5] Cauzard et al. (2004), European car drivers and road risk, Deliverable of the EU FP6 project SARTRE 3

[6] Hakkert, A.S and V. Gitelman (Eds.) (2007) Road Safety Performance Indicators: Manual. Deliverable D3.8 of the EU FP6 project SafetyNet.

[7] The UK Department for Transport publishes speed measurements for GB in an annual bulletin "Road Statistics: Traffic, Speeds and Congestion": http://www.dft.gov.uk/pgr/statistics/datatablespublications/roadstraffic/speedscongestion/roadstatstsc/roadstats08tsc

[8] L'Observatoire des vitesses, l'ONISR (Observatoire National Interministériel de Sécurité Routière)

[9] IBSR (2009), Mesure nationale de comportement en matière de vitesse (2003-2007), Belgium Road Safety Institute, http://bivvweb.ipower.be/Observ/FR/snelheid_fr_lowres.pdf.

1.1 Some progress on motorways

In the past few years, mean speeds on motorways have decreased appreciably in **France**, **Spain** and **Austria** (Fig.1a). In the other countries regularly monitoring speed, results have been mixed. In **Ireland**, the mean speed increased slightly by 1km/h between 2002 and 2008 but remains within the legal limit (Fig. 1b).

The most sustained reduction has been achieved in **France**, where cars and vans have slowed down by almost 10 km/h on average (from 126km/h in 2001 to 117km/h in 2009) on 130km/h motorways. The percentage of vehicles exceeding the speed limits dropped from 50% in 2001 to 25% in 2009 on the 130 km/h network and from 54% to 41% on the 110 km/h network (Fig.1c). In **Spain**, the measurements made since 2004 on 20% of the toll motorway network are showing encouraging signs of considerable progress. The mean speed which used to be 10km/h above the posted limit is now below the limit (Fig. 1b). The percentage of cars and vans exceeding the speed limit has been cut from 73% in 2004 to 35% in 2009 (Fig. 1c).

In **Lithuania**, the picture is one of contrasts. Mean speeds decreased on motorways limited to 100km/h but increased on those limited to 110km/h and 130km/h. Mean speeds decreased by 3km/h between 2005 and 2006 on the 100km/h sections following the installation of the first safety cameras. Mean speeds increased on the stretches limited to 110 and 130km/h (by 10 and 6km/h respectively), where large parts of the road surfaces were improved. The years 2001-2008 were also marked by an economical boom in Lithuania, during which people bought new cars that are safer bur are also capable of higher speeds.

"We followed closely the increase in speed on the networks with the highest speed limits. Fortunately, accident rates did not increase".
Vidmantas Pumputis, Ministry of Transport, Lithuania.

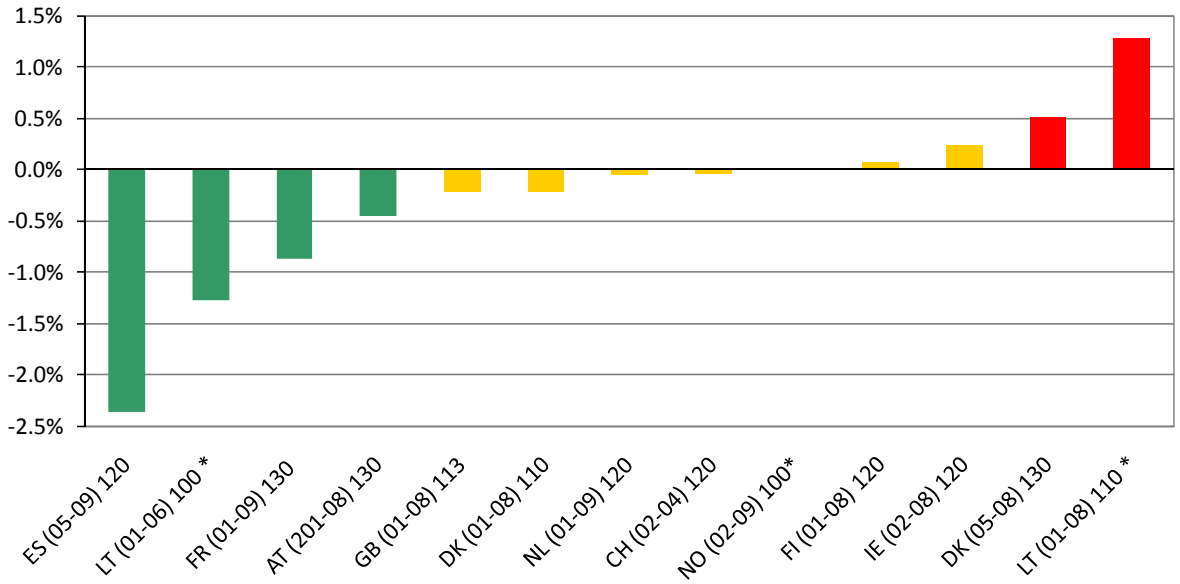

Fig. 1a: Yearly average percentage change in mean speed of cars and vans on motorways (from earliest available baseline to latest available year)[10]. ** All traffic*
Spain: data is available for only 20% of the toll motorways length in Spain.
Netherlands: 2009 provisional.
Finland: the speed limit is 120 km/h during summer and 100km/h during winter.

[10] The ISO 3166-1 alpha-2 codes for countries are used through this report.

In **Denmark**, speed limits were raised in 2004 from 110km/h to 130km/h on half of the motorway network after major infrastructure safety upgrades to reduce the problem of speed heterogeneity. Consequently, the mean speed increased slightly on the part of the network where the new limit of 130km/h was introduced. But the mean speed remains below 130 and only 30% of the drivers drive faster than the new speed limit. On the part of the network where the speed limit stayed at 110, the mean speed, which had been decreasing, has started to increase slightly since 2006 (Fig. 1b). The raising of the speed limit to 130km/h was accompanied with increased enforcement and awareness campaigns. But this level of enforcement could not be sustained. Therefore raising the speed limit to 130km/h seems to have had a small spill-over effect on the motorways where the speed limit was not changed and 70% of the drivers now drive faster than 110km/h (Fig. 1c).

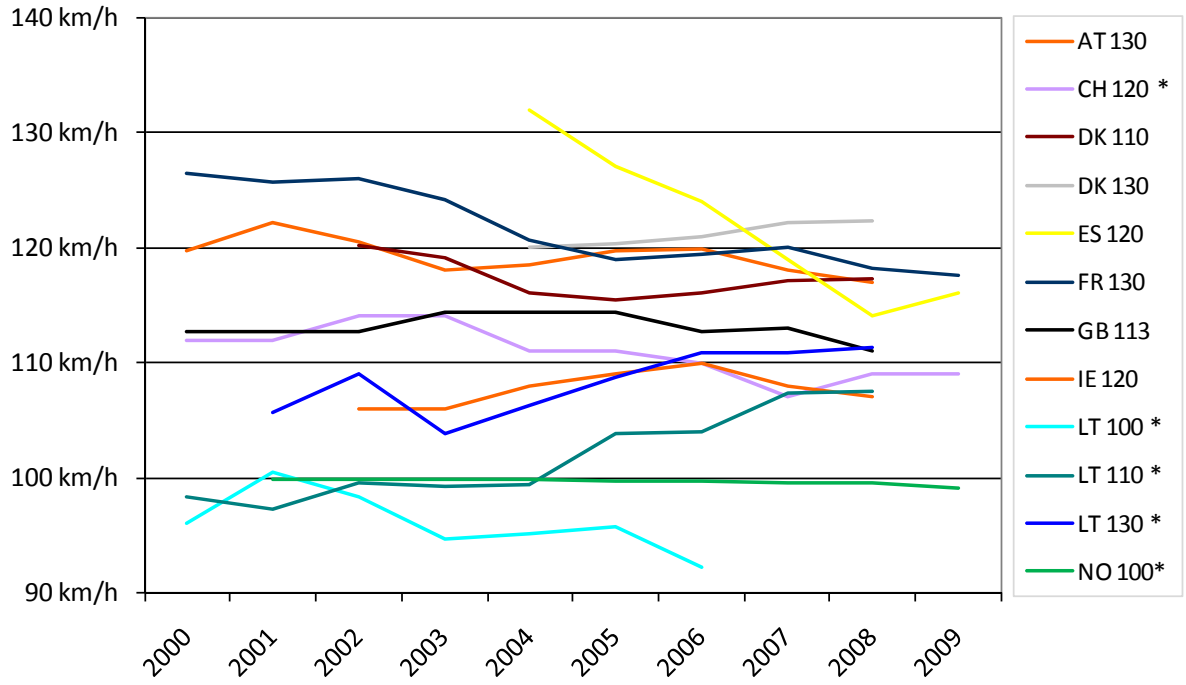

Fig. 1b: Mean speed of cars and vans on motorways for some EU countries (in km/h).
* All traffic.

In many countries compliance with speed limits is higher on motorways than on rural or urban roads. Still, in free-flowing traffic, up to 30% of the drivers exceed the speed limit on motorways in 2009 (Fig. 1c). The percentages of vehicles exceeding the speed limit are the lowest in **Ireland** (15%), **Lithuania** (17%), **Austria** (19%) and **Switzerland** (24%). It is the highest in **Hungary**, **Spain** and **Great Britain**.

In the **Czech Republic**, the percentage of vehicles exceeding the 130km/h speed limit tripled between 2004 and 2006. Plans from some Czech MPs and discussion in the media to raise the speed limit to 160km/h on some stretches of motorway might have encouraged more drivers to break the law.

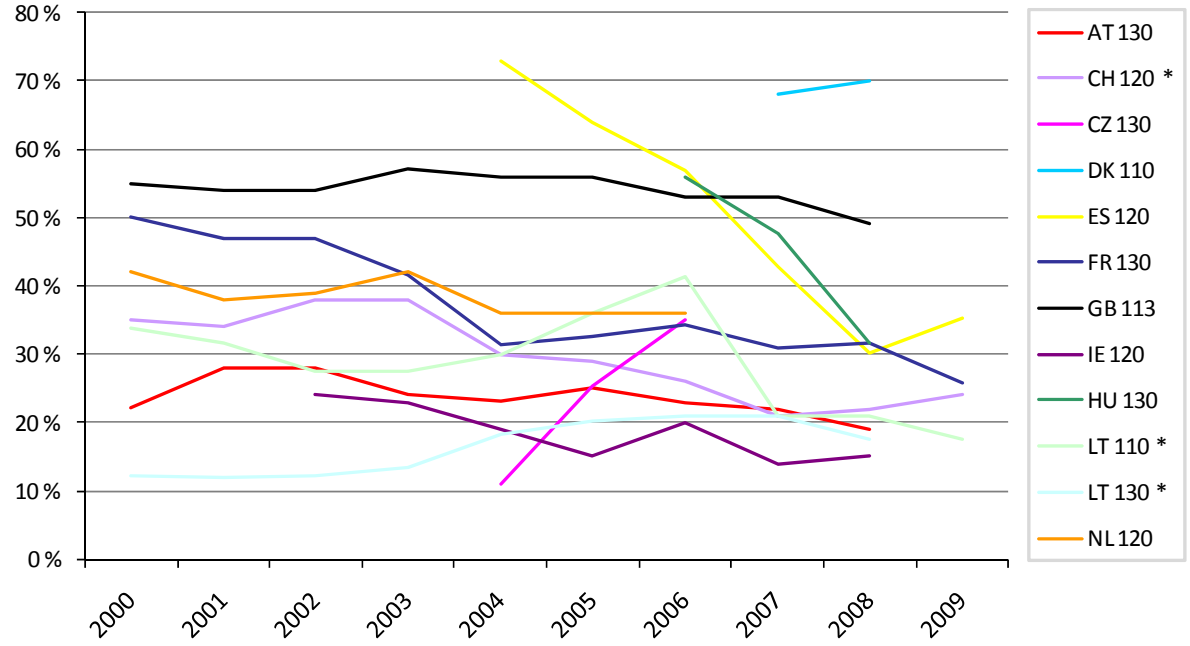

Fig. 1c: Percentage of cars and vans exceeding the speed limits on motorways. **All traffic*

1.2 Noticeable progress on rural roads

Mean speeds on rural roads have decreased in **France**, **Belgium**, **Ireland**, the **Czech Republic**, **Latvia** and **Austria** (Fig.2a). Best reductions were witnessed in **France**, where cars and vans slowed down by more than 10 km/h from 93 to 82 on 90 km/h roads. Most of the reduction took place between 2003 and 2007, as a result of the introduction of a fully automated safety camera system as part of a new strategy to "end drivers' impunity"[11] (Fig. 2b).

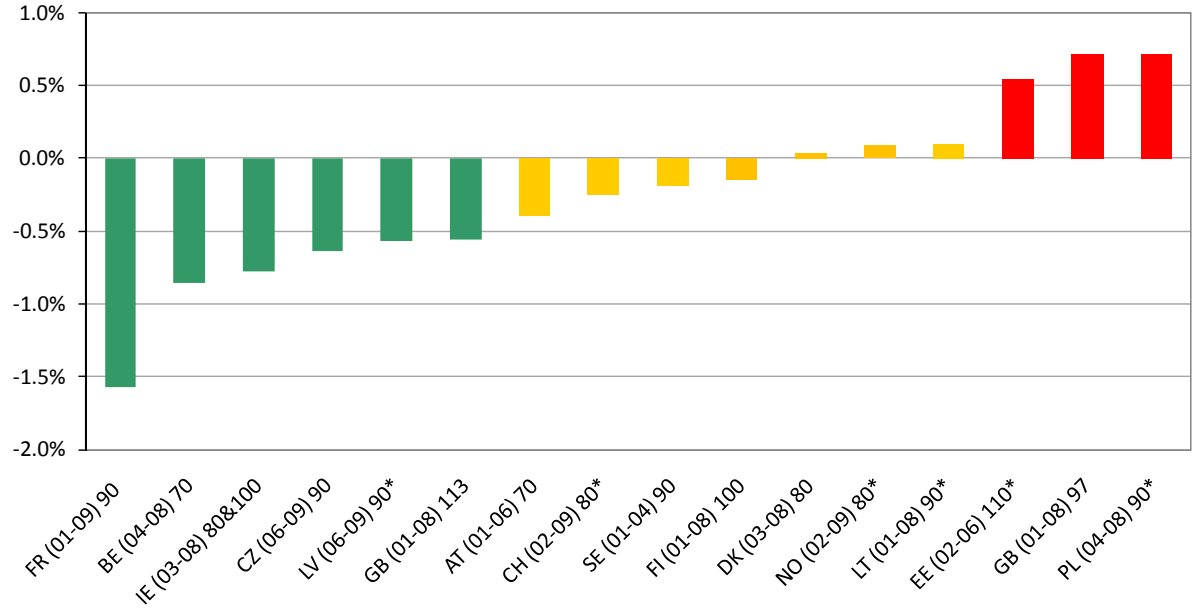

Fig. 2a: Yearly average percentage change in mean speed of cars and vans on rural roads (from earliest available baseline to latest available year). ** All traffic.*

[11] ETSC (2007), 1st PIN Report, Raising compliance with Road Safety Laws, p. 36

In **Great Britain**, the mean speed on 70 miles/h has dropped slightly while there has been a small increase on 60 miles/h roads, but the average speeds on these roads remain well within the limit. Mean speeds have increased by 2 km/h on 90 km/h rural roads in **Poland** and **Estonia** (Figs 2a & 2b). In these two countries, mean speeds are above the legal limit.

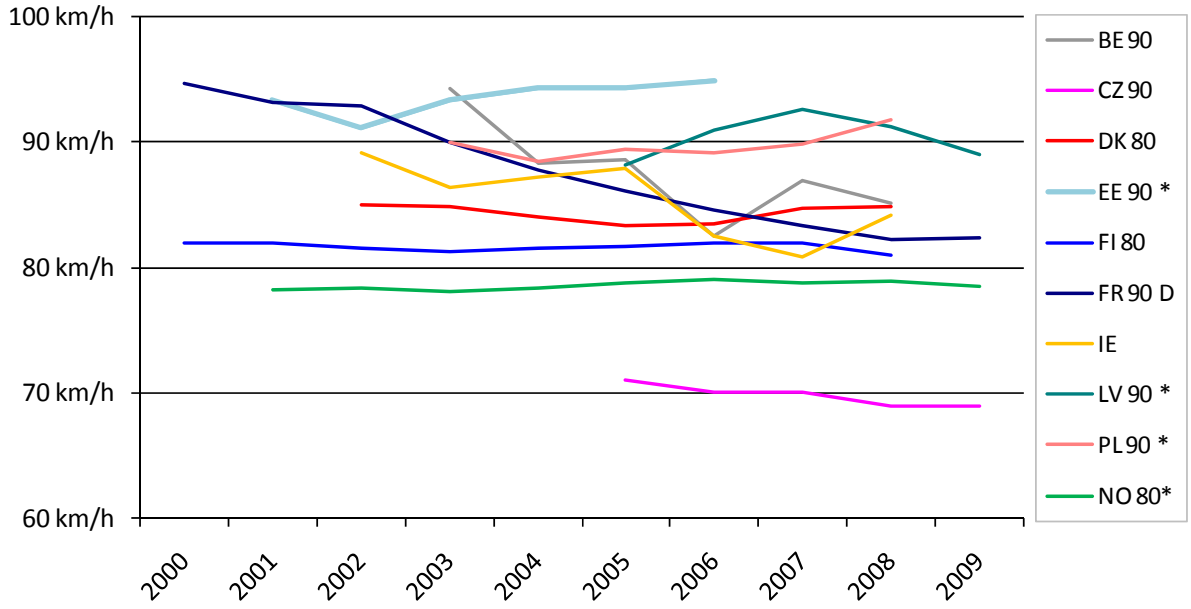

Fig. 2b: Mean speed of cars and vans on rural roads in some EU countries since 2000. ** All traffic*

In the **Czech Republic**, **Austria**, **France** and **Switzerland**, the percentage of drivers of cars and vans[12] exceeding the speed limit on rural roads is the lowest, lower than 30% (Fig. 2c). The percentage of drivers driving faster than the speed limit is the highest in **Denmark** and **Poland** and it has increased since 2007 reaching more than 70% of drivers breaking the posted limit.

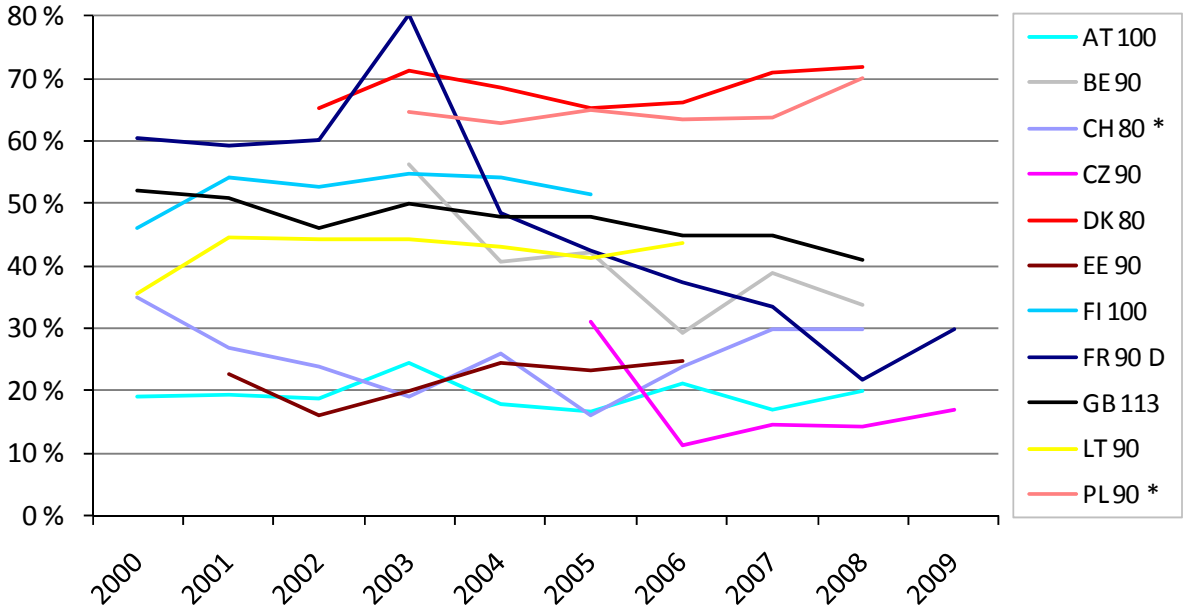

Fig. 2c: Percentages of cars and vans exceeding speed limits on rural roads. ** All traffic.*

[12] All traffic for Switzerland.

1.3 Good progress on urban roads

Best progress has been made in the **Czech Republic,** where average speeds on urban roads decreased by 10km/h in the last five years (from 51km/h to 41km/h or 4% per year) (Fig. 3a): 80% of drivers now obey the speed limit (Fig. 3c). In **Ireland** also, drivers slowed down markedly in cities. Mean speeds on urban roads taken together decreased by 13 km/h between 2002 and 2008 (almost 3% on average each year) (Fig. 3a). But the mean speed is still 54km/h with 53% of vehicles exceeding the limit (Fig. 3b). In residential areas, the mean speed is now 35km/h with only 4% of vehicles exceeding 50km/h, suggesting that there is scope to follow many other European cities by reducing the speed limit to 30km/h.

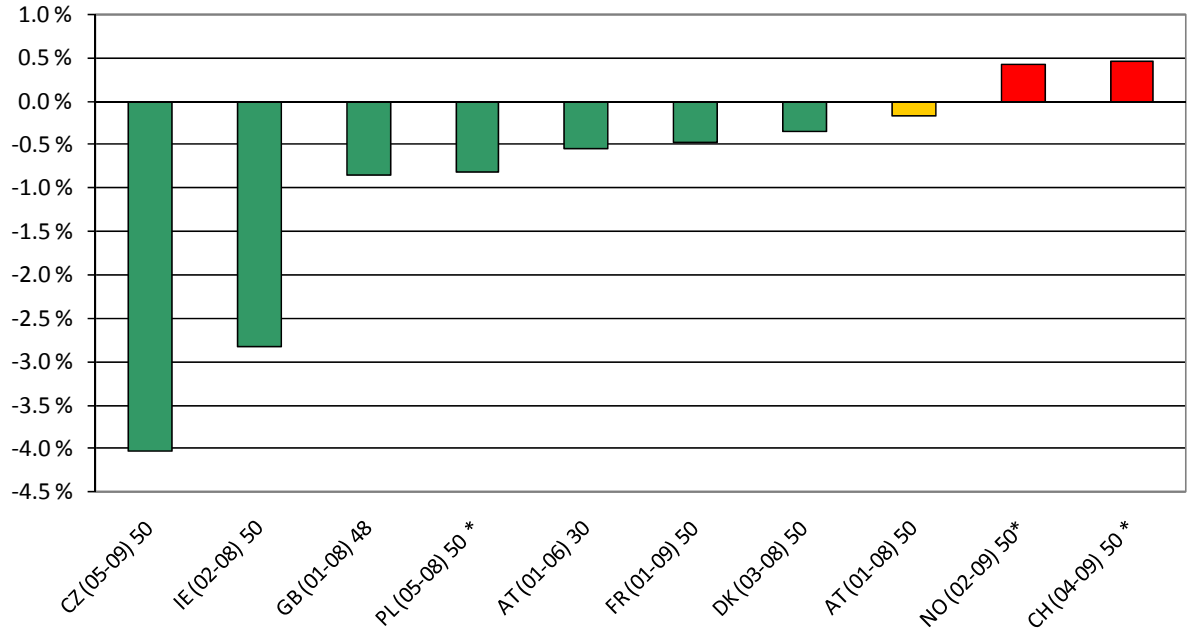

Fig. 3a: Yearly average percentage change in mean speed of cars and vans on urban roads (from earliest available baseline to latest available year)

*In Poland, in 2004, the speed limit in urban areas was lowered from 60 km/h to 50 km/h between 6am and 11pm (it remains 60 km/h from 11pm to 5am). * All traffic.*

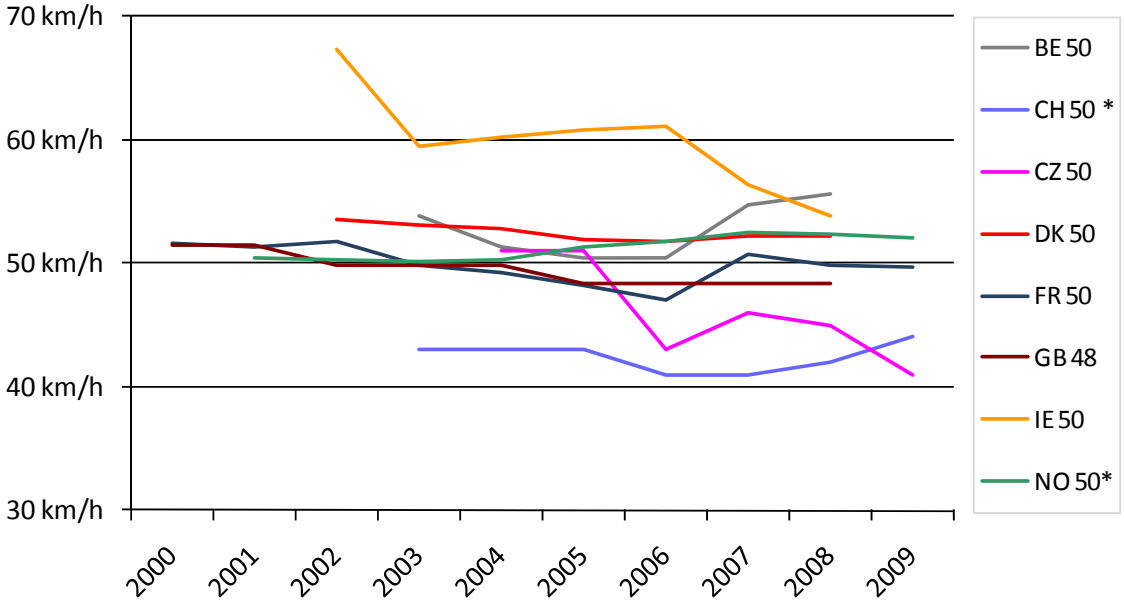

Fig. 3b: Mean speed of cars and vans on urban roads in some EU countries since 2000. ** All traffic*

After decreases in 2004 and 2005, mean speeds increased in **Belgium** in 2007 and 2008 to reach 55km/h on 50km/h roads in 2008. Mean speed increased by one km/h in **Switzerland** between 2003 and 2008, but remains below the 50km/h limit.

The proportion of cars travelling above the limit is highest in Poland at **80**% (Fig. 3c). In, Austria, 70% of vehicles exceed 30km/h in residential zones and 51% exceeded the limit on roads limited to 50km/h. By 2009 the **Czech Republic** and **Switzerland** recorded the lowest level of drivers travelling faster than 50km/h.

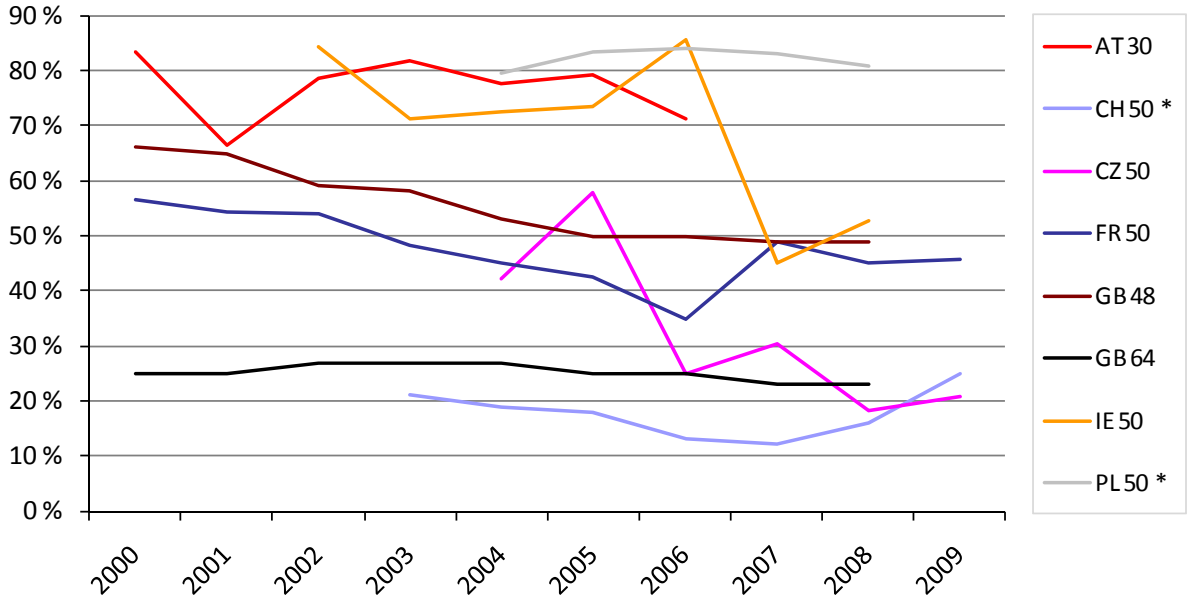

Fig. 3c: Percentage of cars and vans exceeding the speed limits on urban roads.
**All traffic.*

Other speed-related indicators

The Swedish "speed index"

"We used to do extensive speed surveys between 1996 and 2004 with more than 1,600 measurements per year. We will resume those extensive speed surveys in 2011 and two more will be done by 2020. Since 2004, however, we did not stop monitoring speed developments but we used a lighter system called "speed index" that allowed us to monitor speed developments at 83 points on our rural road network. We are happy to see that after being stable for some years, average speeds started to decrease since 2006."

Åsa Ersson, Swedish Transport Administration.

Switzerland uses a detailed indicator system to monitor developments in the fields of speed and drink driving. Indicators include the levels of speed-related injury collisions, police checks, violation rates and sanctions as well as the opinion of drivers.[13]

[13] http://www.bfs.admin.ch/bfs/portal/fr/index/themen/19/04/01/ind11.html

Effective speed management will lead to fast progress in reducing road deaths

Effective speed enforcement leads to a rapid reduction in deaths and injuries. Sustained intensive enforcement that is well explained and publicised also has a long-lasting effect on driver behaviour[14]. Speed cameras and section controls have proven to be a very useful tool to enforce speed limits.[15]

One important element of effective speed enforcement is the combined use of traditional and automated methods.[16] This has been shown to be the single most important factor in the recent **French** road safety success. The French Road Safety Observatory estimated that 75% of the 31% drop in road deaths between 2002 and 2005 can be attributed to improved speed management built around the new automated camera system. In a 2004 survey, drivers declared that they drove more slowly, and that the main reason for that was fear of enforcement[17].

> "*Still, if all drivers and riders had obeyed the speed limit, the mean speed would have further decreased by 4km/h and another 770 deaths (out of 4,275 or 18%) would have been prevented in 2008. As average speeds have been stable in 2009, the same number of deaths would have been prevented in 2009 as well.*"
>
> Jean Chapelon, road safety expert, France.

One km/h slower would prevent more than 2,200 deaths a year

While the risk linked to speed varies across road types, a sound rule of thumb is that, on average, a 1% reduction in the mean speed of traffic leads to a 2% reduction in collisions resulting in injuries, a 3% reduction in collisions resulting in severe injuries and a 4% reduction in fatal collisions. This is explained by the well recognised "Power Model" showing the exponential relationship between increases in speed and the probability of collisions and their severity (Aarts and van Schagen[18], based on Nilsson[19]).

Even minor reductions in mean speeds will therefore make an important contribution to reducing traffic deaths and injuries. 'Low level' speeding is often overlooked but has an important role on safety outcomes as it is far more common than driving at extremely high speeds.

Applying the "Power Model" to current numbers of deaths indicates that **if every driver slowed down by only 1 km/h, more than 2,200 road deaths per year could be prevented**, among them 1,100 on urban roads, 1,000 on rural roads and 100 on motorways.

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[14] ETSC (2006), *Traffic Law Enforcement across the EU, Time for a Directive.*

[15] PACTS (2003), *Speed cameras. 10 criticisms and why they are flawed*. http://www.slower-speeds.org.uk/files/10myths031220.pdf and SWOV (2009), *Speed cameras: how they work and what effect they have*. SWOV Fact sheet, http://www.swov.nl/rapport/Factsheets/UK/FS_Speed_cameras.pdf

[16] EC Recommendation on Enforcement (2004) and ETSC (2006), Traffic Law Enforcement: Time for a Directive.

[17] Arrouet, J.-P. (2004). Conducteurs Français, vous avez changé. In : Circuler autrement 121, May-June 2004.

[18] Aarts, L. & van Schagen, I. (2006). *Driving speed and the risk of road crashes: a review*, Accident Analysis and Prevention, 2006 Mar, vol. 38, issue 2, p: 215-24.

[19] Nilsson, G. (1982). The effects of speed limits on traffic accidents in Sweden. In: *Proceedings of the international symposium on the effects of speed limits on traffic accidents and transport energy use*. OECD, p. 1-8.

		Yearly speed tickets per thousand population		
Country	Code	2006	2007	2008
The Netherlands	NL	543	595	558
Austria	AT	327	458	456
Switzerland	CH	350	335	n/a
France	FR	114	127	138
Cyprus	CY	87	165	137
Slovenia	SI	n/a	n/a	72
Norway	NO	52	52	51
Romania	RO	n/a	n/a	51
Finland	FI	38	42	50
Latvia	LV	41	45	49
Denmark	DK	47	48	45
Spain	ES	17	27	44
Luxembourg	LU	48	49	42
Ireland	IE	n/a	45	40
Poland	PL	28	32	34
Greece	EL	34	32	31
Israel	IL	22	22	30
Hungary	HU	17	16	29
Sweden	SE	21	24	25
Slovakia	SK	25	21	24
Italy	IT	23	25	24
Bulgaria	BG	13	18	20
Czech Republic	CZ	30	21	17
Lithuania	LT	18	20	10
Portugal	PT	9	n/a	n/a

Fig. 4: Number of speed tickets per 1,000 inhabitants (both Police roadside checks and from speed cameras). Source: PIN Panellists based on Police data.

Ireland – 2009 provisional figures; Italy – Data from Polstrada and Polizia municipale; Portugal – Data from PSP (GNP still missing); Spain - No available data from Basque Country, Catalonia and urban areas.

Yearly numbers of speed tickets per thousand population are the highest in the **Netherlands**, **Austria** and **Switzerland,** where safety cameras and section controls have been used extensively. In contrast, being fined for speeding is rather the exception in **Portugal**, **Lithuania**, the **Czech Republic**, **Bulgaria**, **Italy**, **Slovakia**, **Sweden**, **Hungary, Israel** and **Poland**.

> *"At SWOV we believe that on average a driver passes a speed camera or speed check at least 300 times during one year of driving in the Netherlands."*
>
> Charles Goldenbeld, SWOV, the Netherlands.
>
> *"We have just started to install safety camera in Lithuania, with 150 in place so far on motorways and national roads and 30 in Vilnius and Klaipeda. We hope to be able to install more in the future and improve speed compliance among Lithuanian drivers."*
>
> Vidmantas Pumputis, Ministry of Transport, Lithuania.

In **Spain**, the number of speed tickets has increased substantially, following the installation of safety cameras on the national road network (from 197 in 2006 to 295 in 2009). In **Cyprus**, a small scale safety camera pilot scheme was implemented from October 2006 to September 2007. Tickets from violations in 2007 continued to be issued in 2008.

> *The number of speeding tickets issued in Israel is very low in comparison with many countries. Speed offences represent only 17% of all offences. Unsurprisingly, average speeds are not decreasing and are even increasing on some parts of the network. It is regrettable to see that too many politicians, even some road safety professionals and policemen, as well as the general public, enjoy speeding and have not yet understood the dramatic consequences of excessive and inappropriate speeding on the roads. We still have a long way to go to achieve a cultural shift in our country.*
>
> Shalom Hakkert, the Ran Naor Foundation for Road Safety Research.

Other elements of a good speed management system include safe and credible speed limits that are in line with the road infrastructure[20]. The use of **Intelligent Speed Assistance (ISA)** technology will help to achieve a high level of compliance with speed limits and thereby reduce road deaths substantially. The European PROSPER project estimated reductions in deaths of up to 50% for individual countries (Carsten et al. 2006).

Speeding motorcycle riders

Motorcycle riders and passengers have at least 18 times the corresponding risk for a car driver of being killed in a road collision for the same distance travelled. Motorcycles are not required to have a licence plate in front and therefore remain unidentified by safety cameras that photograph from the front.

In **France**, motorcyclists have reduced their speed since 2002, but not to the same extent as other road users (Fig. 4b). In 2008, more than 30% of motorcyclists were still riding at least 10km/h over the legal speed limit, against 12% for cars and heavy good vehicles. French Prime Minister François Fillon announced earlier this spring the adoption of new measures targeting motorcyclists. Safety cameras are progressively been replaced by new ones capable of catching motorcyclists from the rear. Dedicated police roadworthiness tests will deter engine tampering in mopeds and light motorcycles.

Governments should develop enforcement strategies targeted at motorcyclists. Riders should also be made aware of the difficulties other road users have in detecting power two wheelers and in evaluating their speed. The UK Association of Chief Police Officers has developed a national Motorcycle Enforcement Strategy since 2008[21].

[20] See experience from the Netherlands (Safe System Approach), Sweden, the UK and many others. ETSC (2008) *ShLOW Show me How Slow*.

[21] http://www.acpo.police.uk/asp/policies/Data/motorcycle_enforcement_strategy_website.doc.

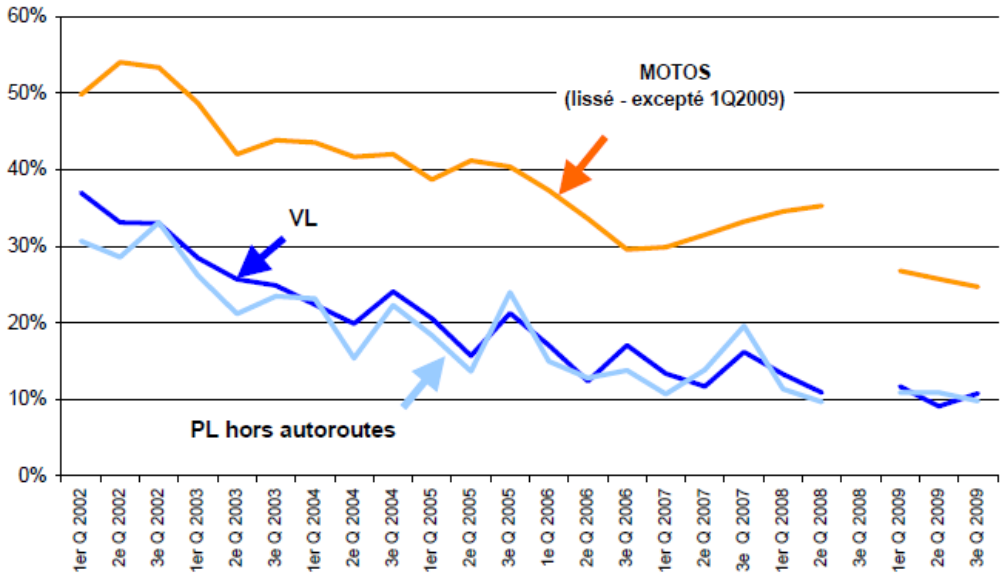

Fig. 4b: Percentage of vehicles travelling at least 10 km/h above the legal speed limit in France.[22]

Speeding and Heavy Goods Vehicles (HGVs)

Because of their mass, a collision involving a truck or a bus is likely to cause severe harm to other road users. Management of speeds of buses and trucks is therefore a vital aspect of road safety. Directive 2002/85/EC requires the use of speed limitation devices for all vehicles over 3.5tonnes[23]. HGVs' speed compliance is therefore high on motorways but speed limiters only prevent HGVs from exceeding the national maximum speed limit. Great Britain - among others (France, Finland) - regularly monitors speed of HGVs[24]. Speed measurements in Great Britain in 2008 show that over 85% of HGVs exceeded the speed limit on dual carriageways other than motorways and 77% on single carriageways outside built-up areas. Over a third exceeded the limit by 15km/h or more.

Speed reduction in occupational safety: the Swedish example of "Schenker-Ola"

The Swedish Transport Administration (former Swedish Road Administration) has been working intensively to engage private companies in road safety, in particular in encouraging their drivers to obey speed limits when driving for work. A working group called "Schenker-Ola" was created between the Swedish Transport Administration (STA) and the Swedish logistics' provider DB Schenker, and involving other actors as well such as the Swedish National Society for Road Safety (NTF). An in depth study of all serious collisions involving DB Schenker vehicles was carried out by STA. Twice a year, DB Schenker received results from the SRA's speed measurements of the company's vehicles. The measurements showed that speed was a problem, in particular on the roads with the lowest speed limits. The company adopted the objective of no excessive speeding by their drivers and committed to make sure that delivery schedules do not pressure drivers to speed.

See the Interview with Monica Jadsen Holmin in ETSC (2009), PRAISE Fact Sheet 1
http://www.etsc.eu/documents/PRAISE%20Fact%20Sheet1.pdf

[22] ONISR, Observatoire des vitesses, February 2010. There is a break in the series as speed measurements stopped during the last four months of 2008.

[23] http://ec.europa.eu/transport/infringements/directives/road_en.htm

[24] Department for Transport, Road Statistics 2008: Traffic, Speeds and Congestion, http://www.dft.gov.uk/adobepdf/162469/221412/221546/226956/261695/roadstats08tsc.pdf

Recommendations

Recommendations to Member States

- Share international best practices in the enforcement of speed limits, including experience in using safety cameras and 'section control' cameras.
- Promote the introduction of owner or keeper liability as opposed to driver liability to facilitate enforcement of speed limits.
- Install safety cameras able to detect speeding riders and enforce their compliance with speed limits.
- As well as fixed safety cameras, introduce 'section control' or 'time over distance' cameras in places where speeding over appreciable distances is a problem.
- Incorporate speeding offences in penalty point systems, and make sure that levels of penalty escalate as the level of speeding above a speed limit increases.
- Adopt 30 km/h as the maximum speed in residential areas and promote traffic calming measures.
- Monitor development of speed patterns (mean speed and 85 percentile) and publish regular overviews of change for different road users.

Recommendations to the EU

- Prioritise measures to reduce speed in the 4th Road Safety Action Programme
- Re-table Directive on Cross Border Enforcement and through it encourage Member States to introduce minimum requirements to achieve high standards in the enforcement of speeding legislation as set out in the Commission's Recommendation on traffic law enforcement.
- Enforce the implementation of the Directive on infrastructure safety in the Member States, in particular the less well performing ones.
- Propose a maximum speed limit of 120km/h for its TEN-T high speed network.
- Initiate a technical assistance programme to support less well performing Member States to develop and pilot a national strategy on speed management. The approach might also include technical exchanges and twinning with other better performing countries.

For further recommendations:

OECD (2007), Speed Management
ETSC Blueprint (2008), Road Safety as a Right and Responsibility for All
SUPREME (2007) Summary of Publications of best practice on Road Safety, EC funded project.
GRSP/WHO (2008), Speed Management: A Road Safety Manual for Decision-Makers and Practitioners

Part 2 | Progress in reducing drink driving deaths

Since 2001, deaths attributed to drink driving in the EU have decreased by about 5.7% on average each year, somewhat faster that other road deaths at about 4.2% per year (Fig.5)[25].

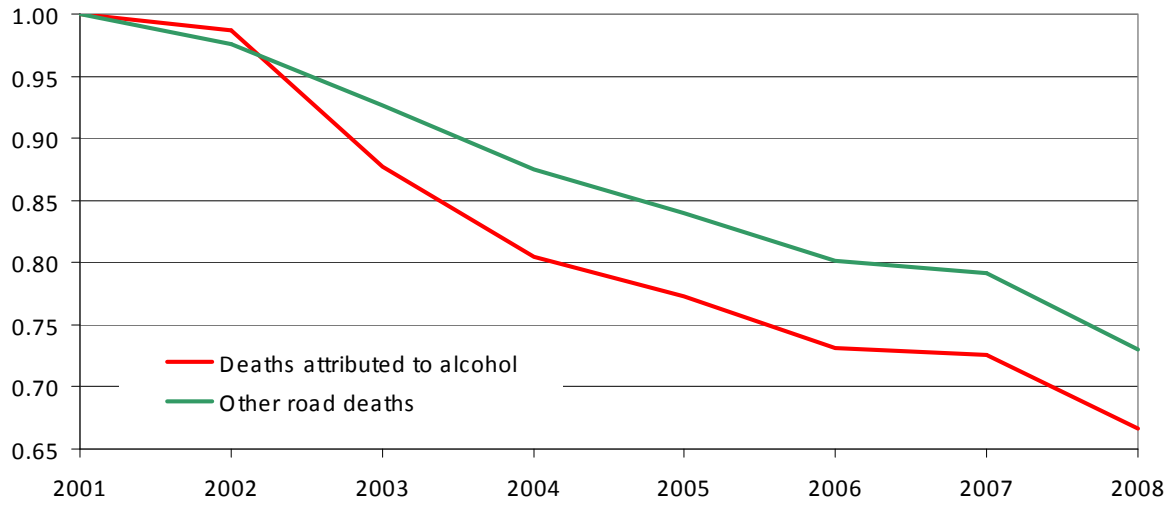

Fig.5: Relative developments in deaths attributed to alcohol and other road deaths in 24 EU countries taken together over the period 2001 to 2008. /2001 (average 2000-2002)/ =1.

Fig. 6 shows individual countries' progress in reducing deaths from drink driving collisions compared with progress in reducing other deaths, using each country's own method of identifying alcohol-related deaths. In half of the countries, progress in reducing drink driving has contributed more than its share to overall reductions in deaths. The **Czech Republic,** already ranking first for reductions up to 2005, keeps its leading position. Drink driving deaths were cut by ten percentage points faster than other deaths each year on average since 2001. Unfortunately the number of deaths attributed to drink driving increased in 2009. In **Slovakia** and **Bulgaria**, drink driving deaths fell by around 7 percentage points per year faster than other deaths. **Belgium**, **Greece**, **Lithuania**, **Germany**, **Switzerland** and **Poland** also reduced drink driving crashes appreciably faster than other road deaths.

In **Italy**, **Israel**, **Portugal**, **Romania**, **Finland** and **Estonia**, developments in drink driving deaths have appreciably slowed down overall progress in reducing road deaths. Governments of these countries need to attend to this trend and adopt a comprehensive strategy to tackle alcohol at the wheel.

> "*Since 2002, several measures have been taken to address the high level of drink driving in Bulgaria. Fines have been increased substantially and sanctions tightened up. Novice drivers, drivers of vehicles carrying dangerous goods and bus drivers caught driving after drinking face higher sanctions. The media has been helpful in passing on the message to the public*".
>
> Aleksi Kesiakov, Secretary of State, Bulgaria.

[25] Values estimated from data available for 24 EU countries.

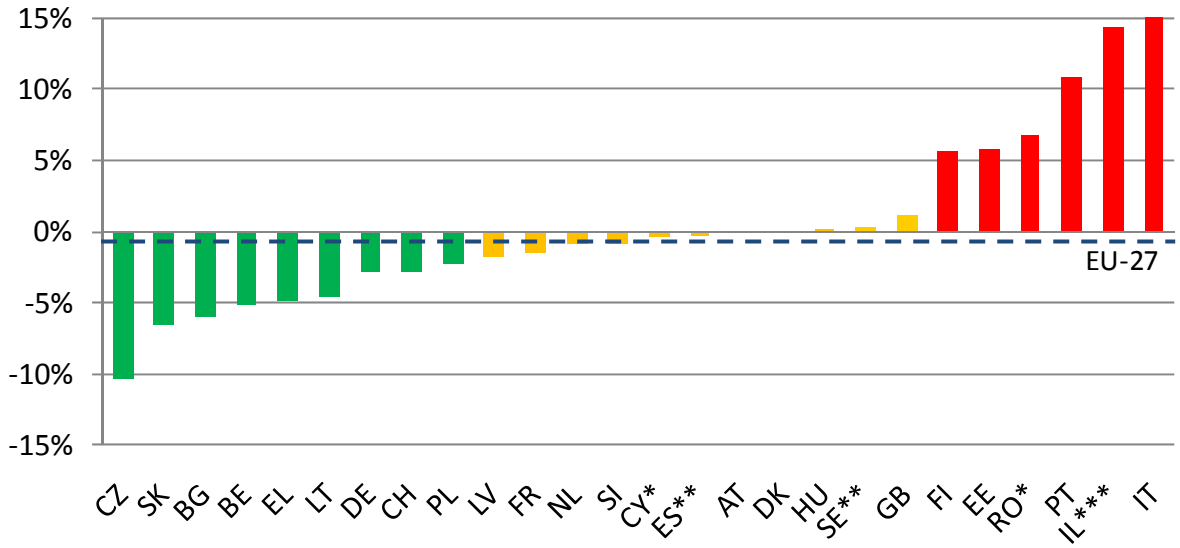

Fig. 6: Difference between the average annual percentage reduction in road deaths attributed to alcohol and the corresponding reduction for other road deaths over the period 2001-2008.

** CY (2004-2008), EE (2001-2005), RO (2005-2008), IL (2004-2008).*
*** Annual percentage change in driver deaths attributed to alcohol relative to total driver deaths (Spain, Sweden), Based on post mortem examinations.*
****IL: Since 2006, drivers involved in fatal crashes are systematically tested for alcohol (and cannot refuse to be tested) which could explain part of the increase in the number of drink driving deaths.*

" We reached our lowest level of drink driving deaths in 2007 with 41 deaths. Unfortunately deaths went up to 85 in 2008 and to 123 in 2009. Part of this increase can be most likely explained by the improvements in data collection during accident investigation. However, there should be no complacency towards tackling drink driving. This is why we introduced systematic breath testing in January 2010. All drivers stopped by the Police are now systematically breath-tested for alcohol."

Jindrich Fric, Czech Transport Research Centre (CDV).

" We have a zero blood alcohol limit in Slovakia. The message sent by this limit is very clear: "never drink and drive". Since 2005, awareness campaigns have been organised regularly together with visible police enforcement."

Karol Meliska, Ministry of Transport, Slovakia.

Indicator

Levels of deaths attributed to drink driving cannot be compared between countries, as there are large differences in the way in which countries define and record a '*road death attributed to drink driving*'. Researchers in the European research project SafetyNet recommend comparing the drink driving situations in European countries using the definition of "*any death occurring as a result of road accident in which any active participant was found with blood alcohol level above the legal limit*"[26]. In most EU countries, however, among all road users, only drivers are tested for alcohol following a fatal collision. The extent to which drivers are tested and results are known varies considerably among countries[27].

Countries are compared here on the basis of developments in deaths attributed to drink driving, relative to developments in other road deaths, using each country's own method of identifying alcohol-related deaths (Fig. 6). Countries are also compared in terms of developments in deaths attributed to drink driving (Fig. 7). Rates of change are comparable across countries in so far as procedures for recording deaths have remained consistent in the countries concerned during the reporting period. This ranking was first published in June 2007 in ETSC 1st PIN Annual Report available on www.etsc.eu/PIN-publications.php. The indicators used there were the same as those used here, but the method of estimation has been improved in detail.

Numbers of deaths attributed to drink driving were supplied by the PIN Panellist in each country. Estimates of numbers of deaths attributed to drink driving are not available in Ireland, Luxembourg, Malta, Norway, Spain or Sweden. For Spain and Sweden we used in their place the numbers of killed drivers who tested positive in post-mortem blood alcohol tests. National definitions as provided by Panellists are available in the Background Tables.

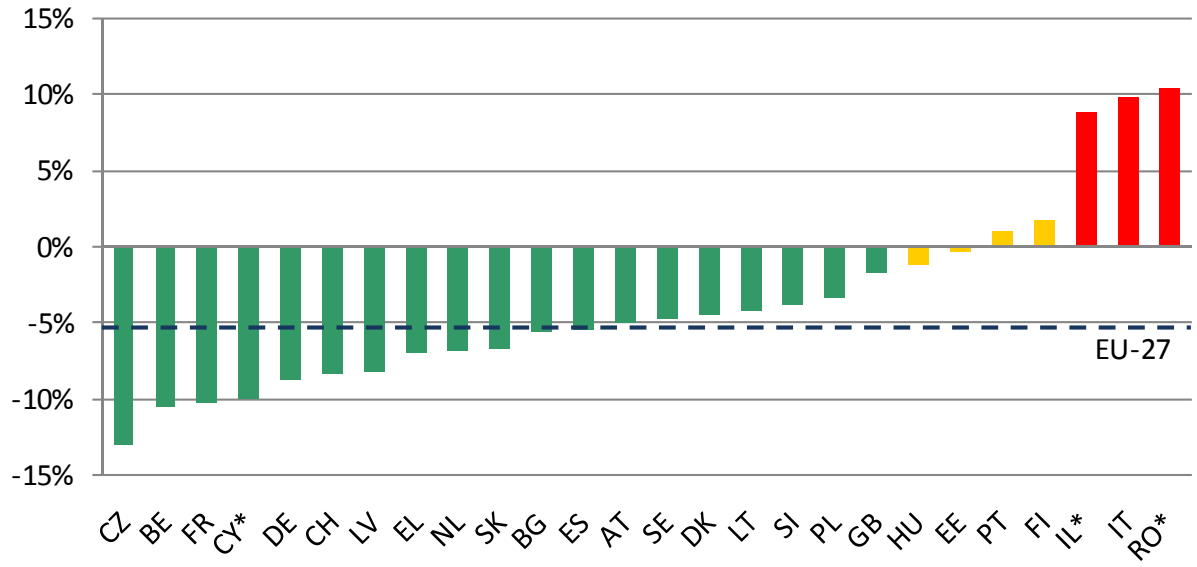

Fig. 7: Average annual percentage change in road deaths attributed to alcohol over the period 2001-2008.

** CY (2004-2008), EE (2001-2005), RO (2005-2008), IL (2004-2008).*

[26] Hakkert et al (2007) Road Safety Performance Indicators Manual, SafetyNet D.3.8: http://euroris.swov.nl/safetynet/content/safetynet.htm.
This Manual details each step for Member States to collect SPI in an harmonised way in the EU.

[27] Drivers killed on the spot might not be tested (the Netherlands, Germany, Belgium, etc) or testing might only occur when the Police suspects the presence of alcohol. ETSC (2007), 1st PIN Report, p. 27.

The reductions in deaths attributed to drink driving have been most impressive in the **Czech Republic**, **Belgium** and **France**, with reductions of more than 10% each year on average since 2000 (Fig. 7). On the contrary, in **Romania** and **Italy,** deaths attributed to drink driving have increased by about 10% on average each year. Even if some of this increase arises from improved reporting of drink driving deaths, as may well be the case in Israel, it still seems to be high.

> *"It is disappointing to see that official numbers of road deaths attributed to alcohol in Italy have increased. However we believe that these numbers fail to provide a complete picture of the size of the drink-driving phenomenon in the country, which is much more alarming. Nevertheless, the number of road-side alcohol Police checks has significantly increased lately and some progress is being made".*
>
> Giordano Biserni, ASAPS.

Fig. 7 shows that France performs better than Germany in terms of absolute reduction in drink driving deaths, whereas Germany performs better in terms of relative reduction in drink driving deaths compared to other deaths (Fig. 6). In France, deaths attributed to drink driving dropped by 10.3% each year on average. In Germany, this was 8.7%. However, as other deaths were cut by 8.8% every year in France, and by 5.9% in Germany, the difference between the two developments was greater in Germany than in France. This difference between the two trends is reflected in Fig. 6 in which Germany ranks before France.

Following the rolling out of an extensive enforcement programme, driving speeds decreased outstandingly in France. As a consequence, alcohol has become the number one contributor to road crashes in France. It is estimated that, if all drivers respected the 0.5g/l BAC limit, 26% of road deaths could be prevented in France. One third of people killed in drink driving related crashes in France are from the age group 18 to 24. The government has proposed that night clubs install 'alcotests' so that drivers have the opportunity to test their BAC level before driving. The sale of alcohol will be prohibited in all petrol stations round the clock.

High under-reporting of drink driving deaths

The actual numbers of people killed due to drink driving are not known but in-depth studies have shown them to be considerably higher than those reported in national statistics. Numbers of deaths involving drink driving are estimated to be as high as **29**% in France[28], **25**% in the Netherlands[29] and **17**% in Austria[30]. In **Ireland** where numbers of drink driving crashes are not available, an in-depth study of 2003 accident reports found that drink driving was a factor in 28% of all fatal crashes[31].

[28] ONISR (2009), La sécurité routière en France. Bilan de l'année 2008, p.99-107. http://www.securiteroutiere.gouv.fr/IMG/pdf/alcool_cle1125d1.pdf

[29] Among this 25% of drink driving deaths, around two-thirds involve alcohol alone and the remaining one-third a combination of alcohol and drug use. Mathijssen & Houwing (2005), SWOV.

[30] Machata, K. & Wannenmacher, E. Wie hoch liegt de Alkoholquote wirklich? Detailanalyse von Verkehrsunfällen mit Todesfolge im Land Niederösterreich. In Bartl, G. & Kaba, A. Alkohol im Strassenverkehr. Kuratorium für Verkehrssicherheit. Wien 1998.

[31] Health Service Executive, 2006

The European Commission estimates that across the EU at least **25**% of all road deaths are alcohol related[32], against 11.5% according to official statistics. At least **3,500** deaths could have been prevented if accident-involved drivers reported to be driving over the limit had been sober. On the same basis, however, the number of deaths that could have been prevented would be at least **7,500** if 25% of all deaths occur in collisions with a driver over the alcohol limit instead of the 11.5% attributed in official statistics.

According to Italian official Statistics based on Police data, the percentage of alcohol-related road deaths was only 4.3% in 2008 in Italy (208 drink-driving deaths compared to 4,739 total deaths). If the official definition of a drink driving death is "*any death occurring as a result of a road accident in which at least one driver was found with BAC above the legal limit*", it seems that deaths are often attributed to drink driving only when alcohol is considered by the Police officer to be the unique contributory factor of the fatal accident[33]. *Istituto Superiore di Sanità (ISS)* estimates that the number of drink driving deaths is much higher; representing around 30% of total road deaths[34].

Preventing drink driving

Lowering the BAC limit

The European Commission has recommended Member States to apply a maximum legal blood-alcohol concentration (BAC) not exceeding 0.5g/l for all drivers and 0.2 g/l for novice and professional drivers[35]. Only Ireland, Malta and the UK have a higher limit than 0.5 for all drivers. **Ireland** will hopefully soon fall in line with the majority of the EU. A bill has indeed been presented by Noel Dempsey, Ireland's Transport Minister, to the Irish Parliament to reduce the legal BAC limit from 0.8g/l to 0.2 for learner, novice and professional drivers and to 0.5 for all other drivers. This builds on Ireland's mandatory alcohol testing introduced in July 2006 which was followed by a 22% drop in total road deaths in the first 12 months. The Road Traffic Bill 2009 also introduces mandatory alcohol testing of all drivers involved in collisions.

The **UK** might be next in line. The UK Transport Minister has appointed a senior lawyer, Sir Peter North, to look at the legal framework around drink- and drug-driving and report to the government. The report will advise on the case for changes to the prescribed alcohol limit for driving, meaning either reducing the current limit, or adding a new, lower limit, with an associated revised penalty regime. The report will also inform the next Road Safety Strategy for the UK.

Several countries, such as **Switzerland** and **Austria,** have lowered their national legal limit in the past few years. The experience from these two countries shows that such a legislative change together with strong enforcement and campaigning brings about reductions in alcohol related deaths.

[32] http://ec.europa.eu/transport/road_safety/specialist/knowledge/alcohol/index.htm

[33] According to ASAPS (Associazione Sostenitori Amici Polizia Stradale), an NGO dedicated to improve road safety who supports the work of Traffic Police Forces.

[34] http://www.epicentro.iss.it/temi/alcol/alcol_ebp.asp. Istituto Superiore di Sanità (ISS) is the technical and scientific public body of the Italian National Health Service.

[35] EC Recommendation of 17 January 2001 on the maximum permitted blood alcohol content (BAC) for drivers of motorised vehicles. http://ec.europa.eu/transport/road_safety/topics/behaviour/fitness_to_drive/index_en.htm

Enforcement

Consistent and visible enforcement is a powerful deterrent to drink driving. Targeted breath testing coupled with publicity about enforcement increases drivers' subjective perception of the possibility of being caught. Unfortunately, in a majority of EU countries being checked for alcohol is rather exceptional: 71% of drivers declared in a driver survey carried out in 2002/2003 in 23 countries that they had not been checked for drink driving over the past three years, and the likelihood of being tested was estimated to be very low (SARTRE 3, 2004).

		2006		2007		2008	
Country	Code	Roadside police tests per 1000 population	Percentage above legal limit	Roadside police tests per 1000 population	Percentage above legal limit	Roadside police tests per 1000 population	Percentage above legal limit
Finland	FI	n/a	n/a	318	1.6%	385	1.3%
Norway	NO	n/a	n/a	n/a	n/a	338	n/a
Sweden	SE	264	0.9%	292	0.8%	287	0.8%
Slovenia	SI	162	8.0%	191	7.3%	200	5.8%
France	FR	186	3.2%	182	3.3%	190	3.3%
Cyprus	CY	90	6.2%	149	6.8%	182	5.9%
Greece	EL	118	3.4%	143	2.9%	135	3.1%
Hungary	HU	144	2.9%	143	3.2%	130	3.1%
Ireland	IE	n/a	n/a	113	4.1%	128	3.2%
Spain	ES	88	2.5%	96	2.2%	112	1.8%
Estonia	EE	76	0.9%	68	1.0%	95	1.1%
Austria	AT	56	9.4%	77	7.0%	87	5.8%
Israel	IL	4	16.5%	24	5.1%	69	2.2%
Portugal	PT	48	7.3%	56	5.6%	63	5.9%
Poland	PL	n/a	n/a	n/a	n/a	47	9.5%
Lithuania	LT	31	1.4%	34	1.6%	40	1.7%
Denmark	DK	n/a	n/a	n/a	n/a	36	n/a
Italy	IT	4	n/a	12	n/a	23	n/a
Great Britain	GB	10	17.4%	10	16.3%	NA	n/a

Fig. 8: Numbers of roadside alcohol breath tests (per 1,000 inhabitants) and percentage of those tested found to be above the legal limit.

Seventeen EU countries provided the number of roadside checks performed during one year by the police. The number of roadside police checks for alcohol per 1000 inhabitants is the highest in **Finland**, **Norway** and **Sweden**, where no less than 385, 338 and 287 drivers respectively per 1,000 population were checked in 2008. It is relatively high also in **Slovenia**, **France** and **Cyprus**. But, even in these countries, the chance of a driver being breath tested during one year is only about 1 in 5 on average.

The percentage of drivers found above the legal limit in these tests should be interpreted carefully because it is not clear how drivers are selected for testing, but it is lowest in **Sweden** and **Estonia**. In **Austria**, **Portugal**, and **Slovenia**, the percentage of checked drivers above the limit decreased as enforcement increased. Although enforcement increased also in **Cyprus**, the percentage of offenders there remains high.

"Before 2000 in Greece, only 1 out of 20 drivers was checked for drinking and driving in a typical year. After a systematic 5-year gradual intensification of breath tests performed by the police, since 2005, 1 out of 4 drivers passes a random breath test site in a typical year. As a consequence, the presence of the police has gradually been perceived by the drivers, who have started to change their behaviour. This is confirmed not only by the decrease of the related offences reported, but also by the significant reduction of the number of accidents and fatalities due to drinking and driving".

George Yannis, Associate Professor at National Technical University of Athens.

"*In Israel, alcohol checks have gone up from less than 30,000 in 2006 up to more than 507,000 in 2008 (4 per 1,000 population in 2006 to 70 in 2008). As a result, drivers caught over the limit went down from 16.5% in 2006 to 2.2% in 2008. This is a very positive move into a change of drivers' attitude towards drink driving in our country*".

Tsippy Lotan, Or Yarok, Israel.

Systematic breath-testing in all Police checks relating to driver behaviour

All drivers stopped by traffic police in Finland, Sweden, Norway, Lithuania, Austria, Cyprus, Hungary and Ireland are systematically breath-tested. The Czech Republic has joined this group in 2010[36]. Systematic breath testing increases deterrence by increasing probability of being breath-tested.

Sanctions and rehabilitation programmes

Deaths attributed to drink driving decreased in **Hungary** from 161 in 2007 to 111 in 2008 (or –31%). Part of this change is due to the introduction of a "zero tolerance" of drink driving in January 2008. Whenever a driver is found to be under the influence of alcohol the driving licence is withdrawn immediately. So far 7,500 driving licences have been withdrawn due to drink driving.

With 42.5% of the total points withdrawn in 2006 for driving with a BAC over the legal limit, illegal drink driving is the number one offence penalised by penalty points in Luxembourg.

Fines and sanctions for drink driving have been increased in a number of countries over the past few years, including Austria, Germany, Spain, Lithuania, Slovakia and Bulgaria[37]. Recidivists are also offered rehabilitation courses and alcolocks in rehabilitation programmes in an increasing number of countries to encourage a change of attitude towards drink driving. The introduction of alcolocks, in rehabilitation programmes and for fleet drivers, could help to bridge the gap of insufficient police checks and to tackle recidivist offenders.

[36] Overview of good practices in strategic planning and tactical deployment of traffic law enforcement, Deliverable 5 of EU funded project PEPPER, www.pepper-eu.org

[37] ETSC Drink Driving Monitors, http://www.etsc.eu/documents.php?did=2.

Campaigns and awareness raising

Since 1995, the Bob campaign has been present in Belgium and copied by a majority of other Members States. The Bob campaign promotes the designation of a driver (Bob) who will not drink and will drive friends home. In 2009, the State Secretary Etienne Schouppe launched the campaign together with the IBSR, the Police and with representatives of the campaign sponsors. Over six weeks, 210,000 drivers were checked by the police, of those more than 7800 (3.7%) had an illegal BAC.

Alcohol labelling

The Polish Brewers launched in 2008 a label to put on every beer can and bottle with the slogan: "*I never drive after I drink*".

EU Alcohol Strategy

The European Commission has adopted its first Progress Report on the implementation of the EU Alcohol Strategy of 2006. Roughly half of the Member States, most recently Germany and Luxembourg in 2007, have set a 0.2g/l or zero level for inexperienced drivers or certain groups of professional drivers. The application of random breath testing for surveillance of drink-driving, an example of good practice stated in the EU Strategy, has become more widespread in the EU since 2006. Examples of recent moves in this domain include the introduction of mandatory alcohol testing for drivers in Ireland (2006) and penalising refusal to take a test with imprisonment and loss of driving permit in Spain (2007). Other drink-driving countermeasures on the increase since the launch of the Strategy include prohibitions or restrictions on the sale of alcoholic beverages at petrol stations or at similar motorway services. In addition, the use of alcolocks, devices that prevent the vehicle from being started unless the driver passes a breathalyser test, has spread widely within the EU since 2006. Alcolocks have now been introduced as a safety measure in commercial or public service transport or as a component in rehabilitation programmes in roughly one third of Member States.

First progress report on the implementation of the EU alcohol strategy, Sept. 2009
http://ec.europa.eu/health/ph_determinants/life_style/alcohol/documents/alcohol_progress.pdf

Recommendations

Recommendations to Member States

- Apply international best practices in tackling drink driving, in particular as set out in the 2004 EC Recommendation on traffic law enforcement.
- Intensify enforcement of laws against driving after drinking by setting targets for minimum level of alcohol checks of the motorist population, e.g. 1 in 5 motorists should be checked each year.
- Introduce systematic breath-testing in all Police checks relating to driver behaviour
- Introduce obligatory testing for alcohol for all road users involved in fatal accidents, if not in all injury collisions dealt with by the Police.
- Consider adopting a lower limit for commercial and novice drivers thus stressing the seriousness of drink driving among these two target groups.

- Organise regular nationwide campaigns to raise the public's understanding that drinking and driving is never a good mix.
- Consider the launch of a nationwide initiative for commercial organisations to consider drink driving by their workforces within the context of their business model.
- Develop the use of alcolocks in rehabilitation programmes.
- Consider extending the use of alcolocks for certain categories of drivers (e.g. bus drivers transporting children) and fleet drivers.

Recommendations to the EU

- Re-table the Directive on Cross Border Enforcement and through it encourage Member States to introduce minimum requirements to achieve high standards in the enforcement of laws on drink driving as set out in the EC Recommendation on traffic law enforcement
- Work towards the adoption of standardised definitions of drink-driving and alcohol-related collisions and road deaths across the EU based on SafetyNet recommendations.
- Work on an EU-wide monitoring system to determine the prevalence of drink driving in the EU and rates of traffic deaths related to drink driving. This should include testing for alcohol for at least all drivers involved in fatal collision (if not all road users).
- Introduce harmonised standards for alcolocks in Europe.
- Consider adopting legislation making alcolocks mandatory for certain categories of drivers.

Sources: ETSC Blueprint (2008) Road Safety as a Right and Responsibility for All
GRSP/WHO (2007): Drink driving: A Road Safety Manual for Decision-Makers and Practitioners

Part 3 | Seat belt wearing after 50 years of the seat belt

2009 marked the fiftieth anniversary of the three-point seat belt. It is estimated that seat belts have saved more than one million people that would have died in a road collision if not belted, thus being the biggest life saver on the roads. The seat belt remains the single most effective safety feature in vehicles. We estimate that **12,400** occupants of light vehicles in the EU survived serious collisions in 2009 alone because they wore a seat belt. Another **2,500** deaths could have been prevented if 99% of occupants had been wearing a seat belt, a rate that could be reached with seat belt reminders on all car seats[38].

Despite the legal obligation to wear a seat belt in all the EU27[39], seat belt use in light vehicles in the EU is estimated to be only 89% (Fig. 9) for front seats and as low as 72% for rear seats (Fig. 10). If some progress has been made, Eastern and Southern European countries still underperform.

3.1 Seat belt wearing in front seats

Among the countries monitoring seat belt wearing regularly over recent years, **France**, **Germany, Sweden,** the **UK** and the **Netherlands** have the highest seat belt wearing rates with 95% or more drivers and front passengers buckling up (Fig. 9). In **Israel, Finland**, **Denmark, Norway** and **Ireland,** 90% or more drivers and front seat passengers wear their seat belt.

The **Czech Republic, Slovenia, Estonia, Austria, Switzerland, Portugal, Spain, Latvia** record rates between 80% and 90%. In **Poland, Cyprus, Belgium, Slovakia, Hungary, Greece** and **Italy,** rates are 80% or lower.

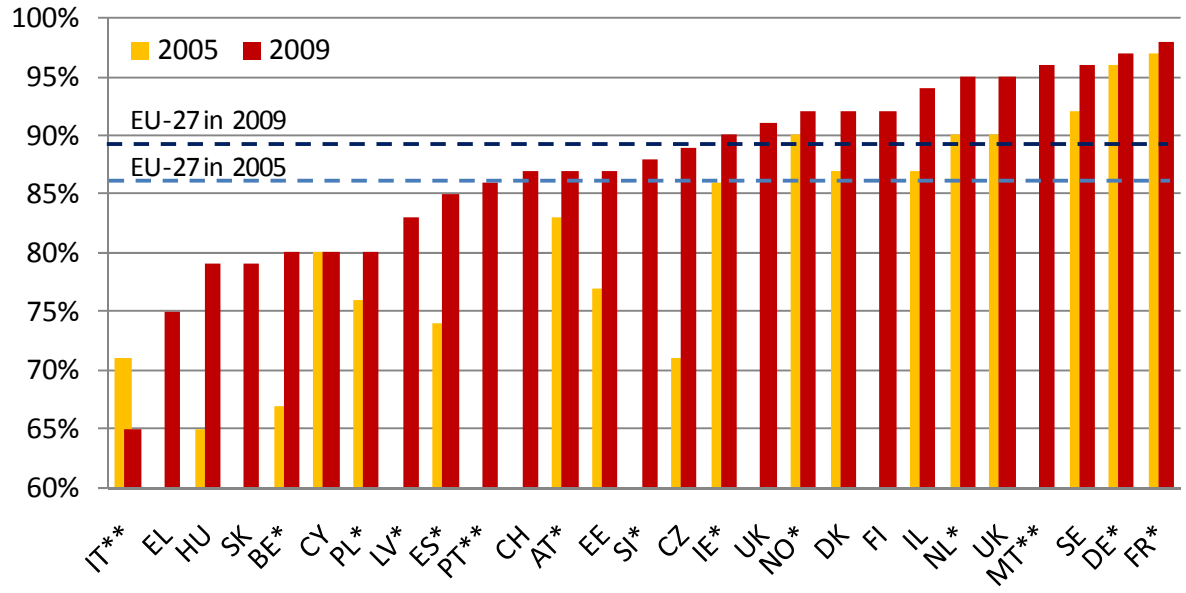

Fig. 9 Seat belt wearing rates on front seats of light vehicles (latest available year), with 2005 data for comparison.

* 2008. ** 2007.

[38] See PIN Flash 16 Methodological Note, http://www.etsc.eu/PIN-publications.php.

[39] EU Directive 2003/20/EC on the the approximation of the laws of the Member States relating to the compulsory use of safety belts in vehicles of less than 3.5 tonnes.

Progress has been made in both front seat wearing and rear seat wearing in all countries monitoring seat belt use. Greatest progress has been made in the **Czech Republic**, **Estonia**, **Spain**, **Belgium** and **Hungary**. Despite the progress, there is still room for huge improvement – notably in **Belgium, Austria** and **Italy, where** the actual levels are out of line with those in neighbouring countries.

> "*It is encouraging to see where good progress has been made, and disappointing when opportunities are missed. There is still a hard core of adults who do not wear their seatbelts every time, particularly if they are travelling in the rear seat of a vehicle. I am deeply concerned that we are still catching thousands of people every year who are not wearing a seatbelt*,"
>
> TISPOL President Javier Sanchez-Ferragut.

> "*In-depth accident investigations show that, in Finland, one in three people who are killed in vehicles was not wearing a seatbelt, and half of those people would have been saved had they worn one. In Finland alone,, that would represent 50 people each year who would still be alive today. Even the car equipped with the highest safety technologies will fail to protect its occupants if they are not belted. So, why do we tolerate 5 star EuroNCAP cars being used without a seat belt?*"
>
> Esa Räty, Finnish Motor Insurers' Center (VALT).

Indicator

The usage rates used in this ranking present a simplified picture of a much more complex phenomenon. In reality, there is no clear-cut division between users and non-users of seat belts. Many people use the seat belt sometimes but not at all times, depending for example on what speed they are travelling at, what sort of road they are using, whether they are undertaking a longer journey, and whether there are other occupants wearing belts.

The proportion of car occupants using seat belts (i.e. the wearing rate) is estimated through roadside counts. Observers are placed at selected locations on all road types (in urban areas, on rural roads and on motorways), where traffic characteristics allow this type of observation. Data for different road types are then aggregated based on traffic shares per road type.

The EU-funded research project SafetyNet has developed stringent criteria for comparability of seat belt wearing rates across countries, as well as requirements for their accuracy and reliability. This country ranking used combined wearing rates for front seats. For countries where only separate rates for drivers and front seat passengers were presented, so that combined rates were unavailable, we applied the rules established by the SafetyNet project. Where only the driver rate was available, the front seat rate was considered to be identical to this rate (Hakkert et al 2007).

Seat belt wearing rates are not regularly collected in **Bulgaria**, **Italy**, **Lithuania**, **Luxembourg**, **Malta**, **Portugal** and **Romania**. Seat belt rates in rear seats are not collected in **Belgium**, **Cyprus**, **Slovakia** and **Slovenia**. Seat belt wearing rates were provided by PIN Panellists and are available in the Background Tables.

3.2 Seat belt wearing in rear seats

For rear seat passengers the disparities between countries are much bigger: from above 80% in **Germany**, **Finland**, **UK**, **France**, **Spain** and the **Netherlands** all the way down to under 30% in **Cyprus, Greece, Malta**, and **Latvia** (Fig. 10).

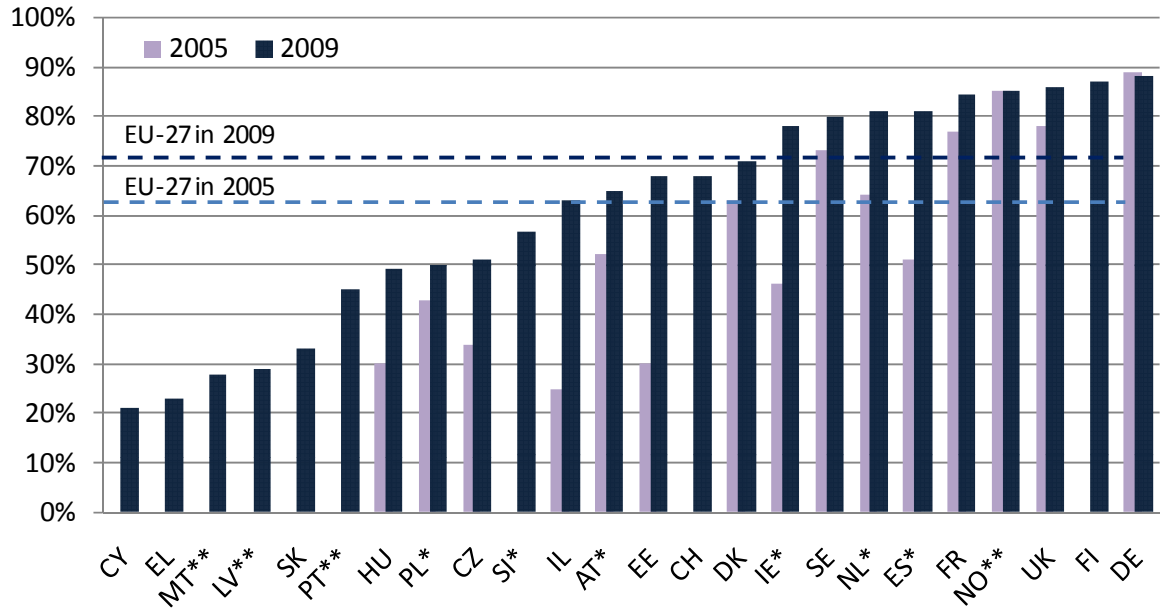

Fig. 10: Seat belt wearing rates in rear seats of light vehicles in 2009, with 2005 for comparison. (* 2008. **SafetyNet)

The consequences of not wearing belts in rear seats in cars are still widely underestimated. Unbelted rear passengers - who are thrown forward into the back of the front seats - significantly increase the risk of death for belted front-seat occupants.

Regional disparities

Seat belt wearing rates may differ substantially between regions. In Switzerland, the regional differences in seat belt wearing are well documented. Seat belt use in 2008 was 89% in the German-speaking region of Deutschschweiz, 82% in the French-speaking region of Romandy and 76% in the Italian speaking region of Tessin[40].

In Italy also, while some Northern regions record rates closed to 90% (Liguria, Lombardy and Veneto), rates in front seats are as low as 46% in the South. Rates are even lower in rear seats.[41]

Recommendations

Recommendations to Member States

- Apply international best practices in increasing the use of seat belt, in particular as set out in the 2004 EC Recommendation on traffic law enforcement, e.g. conduct intensive enforcement actions at least twice a year.

[40] BfU 2009, SINUS - report 2009

[41] Fondazione ANIA per la sicurezza Stradale on ASAPS data - www.fondazioneania.it

- Increase enforcement of seat belt use in both front and rear seats. Each driver stopped for whatever reason should be checked for seat belt wearing, as well as any passengers.
- Incorporate non-wearing of seat belt as an offence in penalty point systems.
- Collect yearly and monitor progress on seat belt wearing rates and use of child restraints based on SafetyNet standards.

Recommendations to the EU

- Adopt legislation to ensure that every new car has as standard equipment an enhanced seat belt reminder system for front and rear seat occupants.

Sources: ETSC Blueprint (2008): Road safety as a Right and Responsibility for All
FIA/WHO (2009): Seat belts and child restraints: A Road Safety Manual for Decision-Makers and Practitioners

Part 4 | Overview

The table presented here is not meant as a comprehensive summary. It is intended to give readers an indication of the areas where monitoring has shown a country's performance to be encouraging (green), moderate (yellow), disappointing (red), or where indicators are not yet monitored (grey). No country has a relatively good performance (green) in all nine indicators. All countries can improve, even the best performing ones. The format of this overview was inspired by the SUNflower+6 report.

		Speed on motorways		Speed on rural roads		Drink driving	Seat belt use in	Seat belt use in
		Level	Trend	Level	Trend	Trend	Level	Level
Austria	AT							
Belgium	BE							
Bulgaria	BG							
Cyprus	CY							
Czech Republic	CZ							
Denmark	DK							
Estonia	EE							
Finland	FI							
France	FR							
Germany	DE							
Greece	EL							
Hungary	HU							
Ireland	IE							
Israel	IL							
Italy	IT							
Latvia	LV							
Lithuania	LT							
Luxembourg	LU							
Malta	MT							
The Netherlands	NL							
Norway	NO							
Poland	PL							
Portugal	PT							
Romania	RO							
Slovakia	SK							
Slovenia	SI							
Spain	ES							
Sweden	SE							
Switzerland	CH							
UK	UK							

Relatively good performance
Moderate performance
Relatively poor performance

This specific set of data was not available

Speed on motorways	Level	Mean speed as percentage of speed limit for light vehicles on motorways with highest speed limit	< 90%	90-98%	> 98%
	Trend	Annual average change in mean speed on motorways with highest speed limit in recent years	<- 0,2% p.a.	-0.2 +0.2% p.a.'	> 0.2% p.a.
Speed on rural roads	Level	Mean speed as percentage of speed limit for light vehicles on rural roads with highest speed limit	< 90%	90-98%	>98%
	Trend	Annual average change in mean speed on rural roads with highest speed limit in recent years	< -0.5% p.a.	-0.5% +0.5% p.a.'	>0.5% p.a.'
Drink driving	Trend	Annual percentage change in the number of road deaths attributed to alcohol relative to the number of other road deaths over recent years	< -2% p.a.	-2% +2% p.a'	> 2%p.a.'
Seat belt use in front seats	Level	Daytime wearing rates in front seats of light vehicles	> 90%	80-90%	< 80%
	Trend	Annual average increase in level in recent years	> 3% p.a.	0-3% p.a.	< 0% p.a.
Seat belt use in rear seats	Level	Daytime wearing rates in rear seats of light vehicles	> 80%	80-80%	< 50%
	Trend	Annual average increase in level in recent years	> 9% p.a.	1-9% p.a.	< 1% p.a.

Sunflower study could be downloaded from http://sunflower.swov.nl

Part 5 | Interview

Police forces are on the forefront of the battle against the three main killers on the roads. TISPOL, the European Traffic Police Network, organises joint enforcement actions in which police from across Europe join forces to tackle one safety law offence at a time. The last enforcement action tackled failure to wear a seat belt. During a week-long campaign in February 2010 no fewer than 123,000 penalties issued. An enforcement campaign on speed is scheduled for late April and another one on drink driving in June, among others.

Javier Sanchez-Ferragut, Major of the Traffic Civil Guard in Madrid, Spain, is the current TISPOL President. He explained to ETSC how Police forces are engaged in preventing speeding, drink driving and the non use of seat belts.

The new PIN country rankings show some countries making good progress, some not. What do you think of those findings? Were you surprised by any of them?

We are committed to reducing deaths and serious injuries on Europe's roads. Of course it is encouraging to see where good progress has been made, and disappointing when opportunities are perhaps missed. Our task is to provide whatever assistance we can to the police forces and governments of every country. Those who have not emerged as the best performers particularly need our help, and this is central to our Lifesaver Project, which brings police officers together and encourages exchange of good practice. We are confident that one of the long-term effects of this activity will be to see more significant reductions in countries where the resources, legislative background and road infrastructure present particular challenges."

Seat belt use has increased (in some countries considerably) over the past few years. There is still progress to be made on the rear seats though. What can be done?

Although seatbelt compliance rates are high in many countries, there is still a hard core of adults who do not wear their seatbelts every time, particularly if they are travelling in the rear seat of a vehicle. I have seen figures to suggest that one in three people who are killed in vehicles is not wearing a seatbelt, and half of those people could have been saved had they worn a seatbelt. More than 123,000 people were caught not wearing a seatbelt in a week of checks earlier this year. The seatbelt is a vital safety tool, designed to protect drivers and passengers in the event of a collision. Despite continual safety warnings, I am deeply concerned that we are still catching thousands of people every year who are not wearing a seatbelt.

Seatbelts have saved countless lives since they were introduced on a wide scale in the 1970s. Large numbers of fatal or life-threatening head injuries and disfiguring facial lacerations are prevented or minimised by reducing the likelihood of car occupants colliding with the windscreen or being thrown from the vehicle in a crash. Not only are people who don't wear seatbelts breaking the law, they are putting themselves and other car occupants at higher risk of death, serious injury and lifelong disability. Wearing a seatbelt is easy, sensible and could save your life.

Some progress has been made in reducing mean speed in countries where data is available. But up to 30% of drivers still exceed speed limits on motorways, up to 70% on roads outside built-up areas and as much as 80% in urban areas. Which road safety actions can prioritise speed, one of the biggest killers on the roads?

As police officers, we try to stop a driver immediately after they have committed a speeding offence. There is a lot of merit in being able to confront a situation immediately, talk about it and then if necessary punish the offender. But that's not always possible. In some countries, automated enforcement improves the subjective chance of getting caught and TISPOL advocates the use of more automated systems – but to complement, not replace, police presence. The emphasis should still be on intelligence-led operations, the targeting of accident and incident hotspots and so on.
Automated speed enforcement will always run the risk of 'Big Brother syndrome' but I think we need to achieve a better balance. As I see it, there are the 'Three Es' to consider: Engineering, Education and Enforcement. Engineers all too often only consider enforcement right at the very end of a development process, and yet there's a lot to be learned from the front-end practitioners. That's where I see TISPOL stepping in: as well as promoting best practice across European police forces and influencing policy development at the European Commission level, it can provide systems designers and manufacturers with valuable insights.

Since June 2008 TISPOL is running a European campaign called Lifesaver. Can you tell us what you aim to achieve with this project and how this can help?

The Lifesaver project is a three year project from June 2008 to May 2011. It has benefits for all TISPOL member countries and will focus on six member states – Hungary, Poland, Portugal, Romania, Slovenia and Spain to assist them in their road traffic enforcement work to save lives. The project aims at an integrated approach to saving lives on Europe's roads. All three relevant levels of policing - the strategic, the tactical and the operational- are addressed.

What would you like to say to the Estonian Siim Kallas, who has, as new Commissioner for Transport, the responsibility to present the 4th European Road Safety Action Programme which will shape road safety activity for the next ten years?

The TISPOL Organisation urges that a challenging but achievable quantitative target be set for 2020 for reducing the number of people being killed on Europe's roads. If such a target is not set, we believe that some European countries will not give road safety the priority which they currently do nor will they devote the required resources in order to deliver improved road safety. At a time of great financial constraint, we have already seen evidence of cutbacks in the field of road safety. Without a target being set for 2020, we could see the economic situation having a more significant impact on road safety. It is also likely that road safety will not be given a priority in national plans and also in national policing plans and objectives. It is critical that road safety is included in those national plans so that reducing the carnage on Europe's roads is given the priority that it deserves in order to protect the citizens of Europe.

Javier Sanchez-Ferragut Andreu is the President of TISPOL and representative for Spain, where he is the Chief of the Commanding Secretary of the Traffic Civil Guard under direct orders of the Division General, Chief of the Traffic Civil Guard.

PIN Panel

Austria	Klaus Machata	Road Safety Board (KfV)
Belgium	Miran Scheers	Belgian Road Safety institute (IBSR/ BIVV)
Bulgaria	Valentin Pantchev	Ministry of Transport
Cyprus	George Morfakis	Ministry of Communications
Czech Republic	Fric Jindrich	Transport Research Centre (CDV)
Denmark	Jesper Sølund	Danish Road Safety Council
Estonia	Dago Antov	Tallin University of Technology
Finland	Esa Räty	Finnish Motor Insurers' Centre (VALT)
France	Jean Chapelon	Road Safety Expert
Germany	Jacqueline Lacroix	German Road Safety Council (DVR)
Greece	George Yannis	Technical University of Athens
Hungary	Péter Holló	Institute for Transport Sciences (KTI)
Ireland	Michael Rowland	Road Safety Authority (RSA)
Israel	Shalom Hakkert	Technion
Italy	Pietro Marturano & Luciana Iorio	Ministry of Transport
Latvia	Aldis Lama	Ministry of Transport
Lithuania	Vidmantas Pumputis	Ministry of Transport
Luxembourg	Guy Heintz	Ministry of Transport
Malta	Therese Ciantar	Ministry of Transport
The Netherlands	Peter Mak	Ministry of Transport
Norway	Rune Elvik	Institute of Transport Economics (TOI)
Poland	Ilona Buttler	Motor Transport Institute (ITS)
Portugal	João Cardoso	National Laboratory of Civil Engineering (LNEC)
Romania	Cristian Constantinescu	Road Authority
Slovakia	Karol Meliška	Ministry of Transport
Slovenia	Tomaž Pavčič	Ministry of Transport
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