

# Road safety priorities for the EU in 2016

Memorandum to the Dutch Presidency of the Council of the European Union

January 2016

## Summary

In 2014 25,964 people were killed in the EU28 as a consequence of road collisions (decrease of just 0.2% compared to 2013). This represents the worst annual reduction in EU road deaths since 2001. An 8% annual reduction is now needed every year between 2015 and 2020 in order to reach the EU target for 2020 to halve the number of road deaths. The drastic slowdown in progress puts at risk the region's target of halving road deaths by 2020. As well as the unbearable human cost, road casualties cost 2% of European GDP.

In this briefing, ETSC outlines its recommendations on the key EU road safety policy dossiers to be steered by the Dutch Presidency of the European Union in the second half of 2015. These include preparing for the new EU roads package, including the safety aspects.

ETSC welcomes the Dutch initiative to put automated driving, including its safety potential, on their Presidency agenda. Safety must be an integral part of increasing take up of automated forms of transport. The upcoming revision of vehicle safety legislation has the potential to lay the foundations for automated driving and increased safety.

The briefing also examines the upcoming policy initiatives from the European Commission including progress towards the 2020 target with recommendations for maximising the results of road safety work.

## Context

The annual socio-economic cost of road traffic deaths and injuries was estimated to be equivalent to around 2% of GDP or EUR 250 billion in 2012<sup>1</sup>. Alongside legal and moral obligations there is also a strong economic case to include the prevention of road traffic deaths and serious injuries in EU health policy as well as transport policy.

The total value of the reductions in road deaths in the EU28 for 2014 compared to 2010 is estimated at approximately 11 billion Euro. If the EU countries had moved towards the 2020 road safety target through constant progress, the greater reductions in deaths in the years 2011-2014 would have raised the benefit to society by about 8 billion Euro to about 38.5 billion Euro over those years<sup>2</sup>.

Given the financial difficulties that many EU countries face due to the economic slowdown, the value to society of improving road safety should be taken into account in the policy and budgetary planning process, expressing in monetary terms the moral imperative of reducing road risk. The high value of societal costs avoided during 2011-2014 shows once more that the saving potential offered by sustained road safety improvements is considerable, making clear to policy-makers the potential for road safety policies to provide a sound investment.

The Dutch Presidency, together with the European Commission and the European Parliament, should acknowledge the strong return on investment of road safety improvements and prioritise life saving measures at EU and national level.

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<sup>1</sup> WHO (2004), World report on road traffic injury prevention.

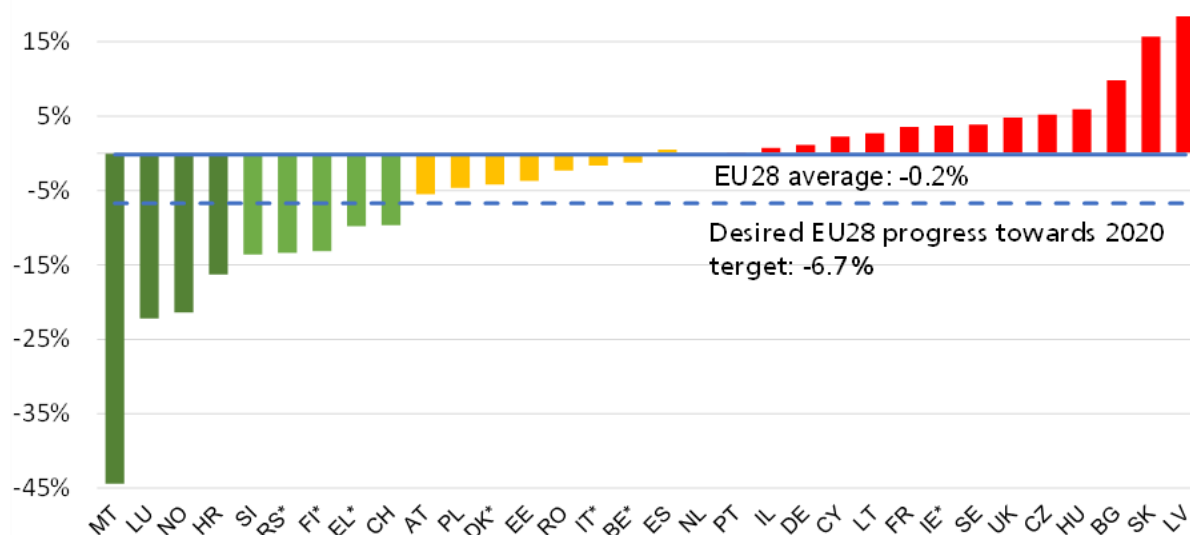
<sup>2</sup> ETSC (2015), 9<sup>th</sup> Road Safety Performance Index Report.

## Key priorities for the Dutch presidency

### Reversing the slowdown in reduction in road deaths and increase in serious injuries

2014 was a bad year for road safety: out of the 32 countries monitored by the PIN Programme, only 18 registered a drop in the number of road deaths between 2013 and 2014, 13 saw an increase while progress stagnated in the Netherlands (Fig.1). 2014 has seen the slowest pace in reducing the number of road deaths since the introduction of the first EU target in 2001. 25,964 people lost their lives on the EU roads in 2014, compared to 26,009 in 2013, representing just a 0.2% reduction. This follows an 8% decrease between 2012 and 2013<sup>3</sup>.

The number of road deaths increased in Latvia, Slovakia, Bulgaria, Hungary, the Czech Republic, Sweden, Ireland, France, Lithuania, Cyprus and the United Kingdom.

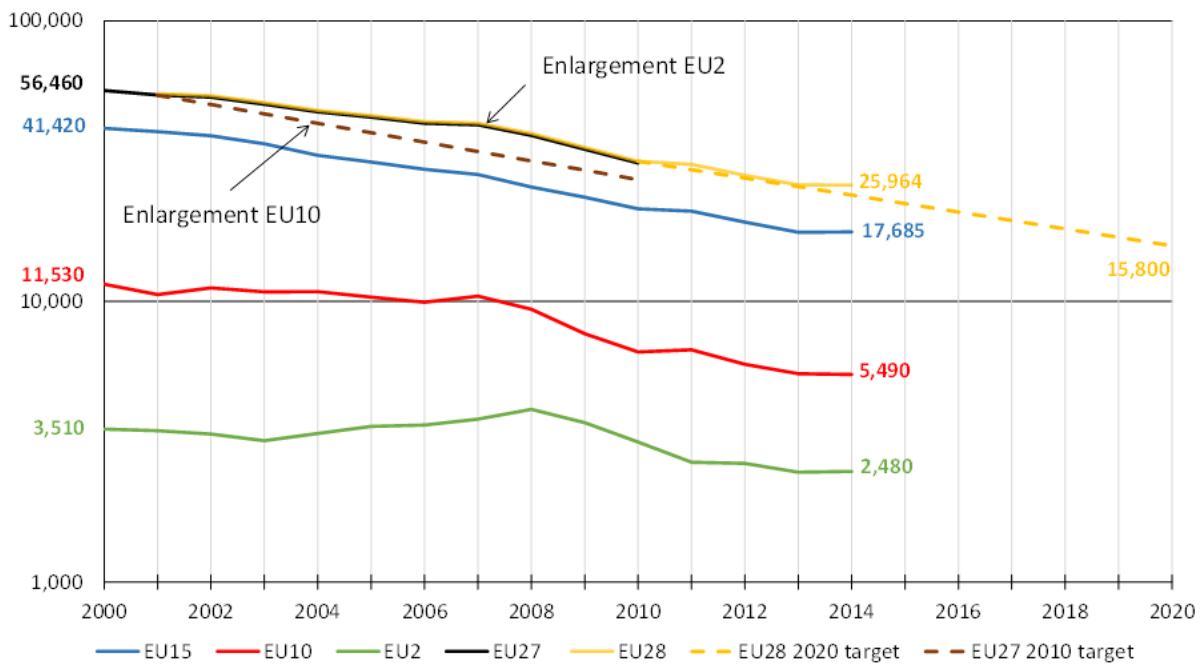


**Fig.1: Change in road deaths between 2013 and 2014.** \*National provisional estimates used for 2014, as the final figures for 2014 are not yet available at the time of going to print. Numbers of deaths in MT and LU are small and therefore subject to substantial statistical fluctuation.

Since 2010, the average annual progress in reducing the number of road deaths in the EU28 was 4.7%. A 6.7% year-to-year reduction is needed over the 2010-2020 period to reach the target through constant progress in annual percentage terms. Yet, since the slowdown in 2014, the number of road deaths over the period 2015-2020 now has to be reduced at a much faster pace of about 8% each year for the EU to be on track to meet the target. The EU target for 2020 is still reachable if combined efforts at both national and EU level are stepped up urgently<sup>4</sup>.

<sup>3</sup> ETSC (2015), 9<sup>th</sup> Road Safety Performance Index Report.

<sup>4</sup> Ibid.



**Fig.2:** Reduction in road deaths since 2000 in the EU28 (yellow line), the EU27 (black line), the EU 15 (blue line), the EU10 (red line) and the EU2 (Bulgaria and Romania, green line). The logarithmic scale is used to enable the slopes of the various trend lines to be compared.

### Increase in serious injuries

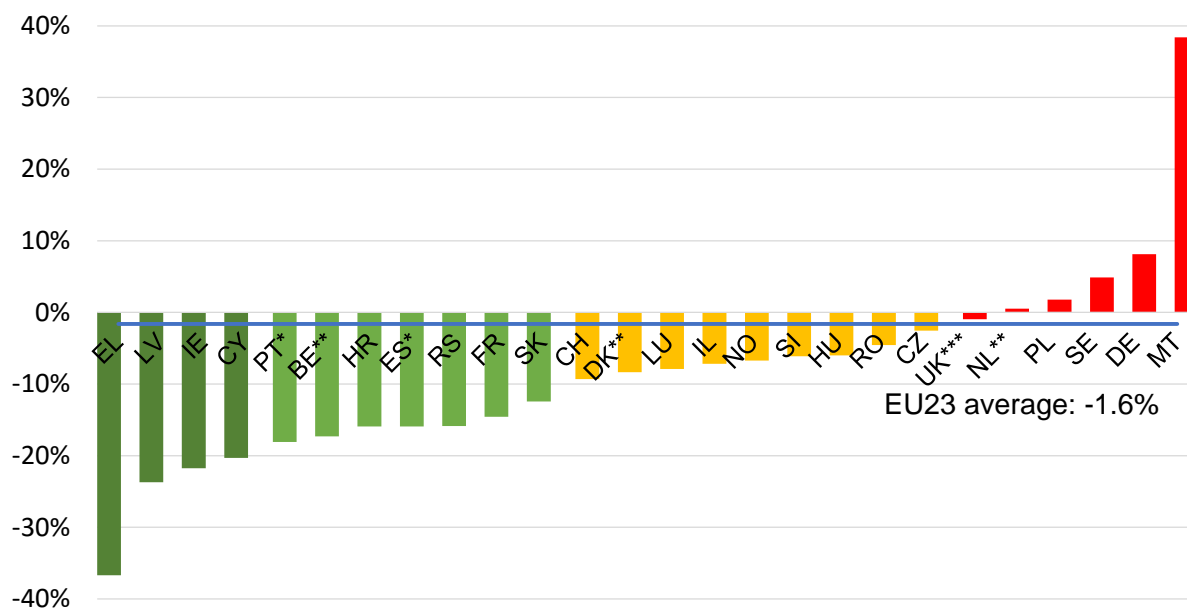
In 2014 more than 203,500 people were recorded by the police as seriously injured on the roads in the 23 EU countries distinguishing between seriously and slightly injured in their data, representing an increase of 2.6% compared to 2013.

Fig.3 shows the percentage change in the number of seriously injured over the period 2010-2014 using current national definitions of serious injury. National definitions supplied by PIN Panellists are available in the Annexes of the PIN Report<sup>5</sup>.

Collectively the number of serious injuries in the EU23 was reduced by 1.6% since 2010 compared to an 18% decrease in the number of road deaths in the same group of countries. ETSC continues to call on the EU to adopt a target of 35% reduction between 2014 and 2020 in the number of people seriously injured on the roads. A 35% reduction in the number of seriously injured over the period 2014-2020 would be similarly challenging for the Member States to the target to halve road deaths between 2010 and 2020<sup>6</sup>.

<sup>5</sup> ETSC (2015), 9<sup>th</sup> Road Safety Performance Index Report.

<sup>6</sup> ETSC (2014), 8<sup>th</sup> Road Safety Performance Index Report.



**Fig.3: Change in recorded serious injuries between 2010 and 2014.** \*Provisional serious injury data. \*\*2010-2013. \*\*\*UK data for 2014 is GB provisional total for year ending September 2014 and Northern Ireland total for the calendar year 2014. AT is excluded from the figure due to substantial changes in the police reporting system but its number of serious injuries is included in the EU average.

EU countries using a definition of seriously injured similar to having injuries requiring at least 24 hours as an in-patient: ES, BE, CY, CZ, DK, FR, DE, EL, IE, LU, PT, SK, UK, LV.

## Maximising the safety potential of automated driving

The Dutch Presidency of the EU is due to include the topic of automated and co-operative driving in their EU presidency. They will dedicate part of their informal EU Transport Council meeting to automated driving policy.

The EU has a long history of investing in research projects contributing to automated driving<sup>7</sup>. This is now turning into reality with a number of EU Members opening up their test tracks and even public roads to automated driving both in terms of enabling testing of new vehicles and running pilots<sup>8</sup>. Automated vehicles are those where at least some aspects of a safety-critical function (e.g. steering, throttle or braking) occur without direct driver input<sup>9</sup>. Automated vehicles may use on-board sensors, cameras, GPS, and telecommunications to obtain information in order to make their own judgements regarding safety-critical situations<sup>10</sup>. The main routes to automation cover the urban environment systems path (high automation in transit areas with low speed or dedicated

<sup>7</sup> ibid

<sup>8</sup> Overview of EU MSs Initiatives ERTRAC (2015) Automated Driving Roadmap and OECD/ITF (2015) Automated and Autonomous Driving: Regulation under Uncertainty.

<sup>9</sup> NHTSA (2013) Preliminary Statement of Policy Concerning Automated Vehicles.

<sup>10</sup> ibid

infrastructure<sup>11</sup>) and the automated vehicle path (building on use of advanced driver assistance systems to full automation for trucks and cars).

“Safety and the potential to reduce collisions caused by driver error” is one of the main drivers for higher levels of automated driving according to ERTRAC<sup>12</sup>. The report finds that increased levels of vehicle automation could contribute to eliminating or easing conflict situations in traffic<sup>13</sup>. A new OECD report argues that the real safety test for autonomous cars will be how well they can replicate the crash-free performance of human drivers<sup>14</sup>. Moreover, that there will be new challenges and new types of crashes which may emerge as autonomous technologies become more common – for instance crashes resulting from the car handing control back to the driver or from mixing autonomous and conventional vehicles.

ETSC expects that there could be a gain for road safety now as the interest in reaching the higher levels of automation may give a market, regulatory and testing push to in-vehicle safety technologies with a high life saving potential. Although the technologies which are needed for higher automation may not be the same as those needed for the greatest casualty reduction, for example there is relatively little support for technologies that address the highest accident risk factors of speed or alcohol within the context of automation<sup>15</sup>. Thus the challenge in terms of maximising the safety benefit within the automated driving context will be to target those key risk factors.

For automated driving to progress, infrastructure will also need to be improved dramatically as many semi-automated or fully automated technologies will rely on road infrastructure being readable for their applications. This will involve common standards and harmonisation<sup>16</sup>.

The repercussions of automation for road safety policy are far reaching for mobility and society. One of the other possible positive developments for automated driving is that it could enable some drivers who are limited to drive by health impairments or age reasons to continue or start to drive either with support within automated systems or within a fully autonomous mode<sup>17</sup>. This could bring benefits for high risk drivers by increasing or extending mobility whilst potentially reducing safety risks that they may pose to other road users.

## Cycle safety

As a strong and keen cycling nation, the Dutch Presidency should support the follow up of the Luxembourg Declaration on Cycling adopted in October under the Luxembourg

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<sup>11</sup> City Mobil2 in ERTRAC (2015) Automated Driving Roadmap.

<sup>12</sup> ERTRAC (2015) Automated Driving Roadmap.

<sup>13</sup> ibid

<sup>14</sup> OECD/ITF (2015) Automated and Autonomous Driving: Regulation under Uncertainty.

<sup>15</sup> PACTS Conference Report (2014) Driverless Vehicles: From Technology to Policy.

<sup>16</sup> ERTRAC (2015) Automated Driving Roadmap.

<sup>17</sup> ERTRAC (2015) Automated Driving Roadmap.

EU Presidency at their special Informal Council dedicated to the topic<sup>18</sup>. They should strongly encourage the implementation of one of the key elements: namely the creation of an EU Strategy on Cycling, including safety.

A recent report published by ETSC showed that safety must form an integral part of promoting healthier and more sustainable forms of transport<sup>19</sup>. ETSC reports that more than 2,000 cyclist deaths were recorded in traffic collisions in the EU in 2013 representing 8% of the total number of road deaths in those countries. But big disparities exist between countries. Moreover, deaths of unprotected road users have been decreasing at a slower rate than vehicle occupants. In the last ten years deaths among cyclists decreased by 37% compared to a 53% decrease for vehicle occupants. It is crucial that unprotected road users receive special attention from policymakers at the national and European levels. As active travel becomes more popular, the safety of walking and cycling in particular must be addressed urgently at EU level. This means adopting new vehicle safety standards to improve safety of those outside of the vehicle. Tackling speeding by introducing Intelligent Speed Assistance (ISA<sup>20</sup>) and investing in safe urban infrastructure must also be prioritised in upcoming reviews of relevant EU legislation<sup>21</sup>.

## Urban mobility

As more than 30 % of road fatalities and serious injuries happen in urban areas and often involve vulnerable road users (VRUs) and pedestrians, improving road safety in cities has been recognised as a political priority. ETSC welcomes the inclusion of the urban agenda on the Dutch Presidency's priority list and calls for an emphasis on road safety. A Eurobarometer survey also shows that a large majority of European citizens (73%) considers road safety to be a serious problem in cities<sup>22</sup>. ETSC welcomed the European Commission's initiative on Sustainable Urban Mobility Plans (SUMP) and the encouragement of their uptake through a number of measures including both financing and the setting up of a new platform to exchange best practice<sup>23</sup>. It is an important development that safety has been recognised an essential component of sustainable urban mobility and has been included in the proposal for a 'Concept for Sustainable

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<sup>18</sup> <http://www.eu2015lu.eu/en/actualites/communiqués/2015/10/07-info-transports-declaration-velo/07-Info-Transport-Declaration-of-Luxembourg-on-Cycling-as-a-climate-friendly-Transport-Mode---2015-10-06.pdf>

<sup>19</sup> ETSC (2015) Pedestrian and Cyclist Safety PIN Flash 29.

<sup>20</sup> ISA is the general term for advanced systems in which the vehicle "knows" the speed limit for any given location using a GPS database combined with cameras that read road signs. Drivers are then informed of the speed limit (advisory ISA), warned when they exceed the limit (supportive ISA), or actively aided to abide by the limit (intervening ISA) by an increased resistance of the accelerator pedal.

<sup>21</sup> See sections of the Memorandum on General Safety Regulation Review and Infrastructure Safety Directive Review.

<sup>22</sup> European Commission (2013) Attitudes of Europeans Towards Urban Mobility [http://ec.europa.eu/public\\_opinion/archives/ebs/ebs\\_406\\_en.pdf](http://ec.europa.eu/public_opinion/archives/ebs/ebs_406_en.pdf)

<sup>23</sup> European Commission (2013) Annex: A Concept for Sustainable Urban Mobility Plans to the EC, Communication: Together towards competitive and resource-efficient urban mobility.



Urban Mobility Plans<sup>24</sup> as a horizontal issue. Moreover, the specific EC document on road safety further outlines that SUMP should address issues such as *'safe urban infrastructure, especially for vulnerable road users, the use of modern technology for enhanced urban road safety, traffic rule enforcement and road safety education'*<sup>25</sup>. All of these are priorities for urban safety which ETSC can fully endorse<sup>26</sup>.

## New road safety initiatives from the European Commission in 2015

### Vehicle Safety

The European Commission is currently preparing a review of the General Safety Regulation 661/2009, a piece of legislation regulating vehicle safety and in-vehicle technology in the EU<sup>27</sup>. A major new study for the European Commission has identified a range of new vehicle safety technologies that are suitable for mandatory fitting as part of a review of EU vehicle safety legislation. The report, carried out by consultants TRL, names technologies including Intelligent Speed Assistance (ISA) and seat belt reminder systems in passenger seats as *'feasible in terms of the technology required'*, already available on the market and offering a positive benefit-cost ratio<sup>28</sup>. These represent the high priorities for ETSC as they are mature technologies that are ready for deployment. ETSC would also like to see uniform standards for alcohol interlocks in Europe which ensure that vehicle interfaces make it possible to easily fit an alcohol interlock. With this addition, the three high-risk behaviours that cause many deaths can be addressed: speeding, drink driving and non-use of seat belts. To mitigate pedestrian and cyclist deaths, ETSC also recommends mandating Advanced Emergency Braking (AEB) for all new vehicles. The General Safety Regulation includes the opportunity to mandate safety improvements to HGV fronts and their underrun protection, measures that ETSC fully supports for swift introduction and uptake and also received a green light in the report. A European Commission communication on the review of the *'General Safety Regulation'* (GSR) is expected during the Dutch Presidency, with a legislative proposal to follow.

The Dutch Presidency should take the initiative to promote the safety benefits of these in-vehicle technologies and promote their uptake in the EU with the context of the Review of the General Safety Regulation.

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<sup>24</sup> European Commission (2013) Annex: A Concept for Sustainable Urban Mobility Plans to the EC, Communication: Together towards competitive and resource-efficient urban mobility.

<sup>25</sup> European Commission (2013) Staff Working Document: Targeted Action on Urban Road Safety.

<sup>26</sup> ETSC (2014) ETSC Response to the European Commission's Urban Mobility Package. <http://etsc.eu/wp-content/uploads/ETSC-Response-to-Urban-Mobility-Package.pdf>

<sup>27</sup> ETSC (2015) ETSC Position on the GSR Revision. [http://etsc.eu/wpcontent/uploads/2015\\_03\\_gsr\\_review\\_pp.pdf](http://etsc.eu/wpcontent/uploads/2015_03_gsr_review_pp.pdf)

<sup>28</sup> <http://bookshop.europa.eu/en/benefit-and-feasibility-of-a-range-of-new-technologies-and-unregulated-measures-in-the-field-of-vehicle-occupant-safety-and-protection-of-vulnerable-road-users-pbNB0714108/?pgid=lq1Ekni0.1ISR00OK4MycO9B0000U5evn6Lv;sid=si2VJU9NoR-VBhpX6xQLgi1oEO7pde2Ozn0=?CatalogCategoryID=frMKABstzjYAAAEjvZAY4e5L>

## Pedestrian Protection

The European Commission is currently reviewing the Pedestrian Safety Regulation adopted in 2009. In the European Union, some 21% of all road deaths are pedestrians. The largest share of these are 65 years or over<sup>29</sup>. The current Regulation 78/2009 lays down type approval requirements with respect to the protection of pedestrians and other vulnerable road users. It provides for the mandatory installation of Brake Assist Systems on N1 and M1 vehicles in an attempt to compensate for the relaxation of certain parameters on passive safety performance tests. ETSC fought hard against the relaxation of the tests arguing that the benefits accident avoidance technologies offer should have been additional rather than substitutive<sup>30</sup>. There is now scope for further improving the current tests covering pedestrian upper leg and pelvis to bonnet leading edge tests and the adult head to windscreen test.

## Infrastructure safety

The European Commission is reviewing the Infrastructure Safety Directive adopted in 2008. A study commissioned by the European Commission has found that the impact has been positive for road safety in a number of key areas<sup>31</sup>.

ETSC supports the European Commission's recognition and findings of the study that much more benefit could be achieved by extending the principles of Directive 2008/96 to other parts of the road network, in particular rural roads, where many more road users are killed. Almost half of EU countries already apply the rules on some other parts of their national road networks<sup>32</sup>. The application of the infrastructure safety Directive to the TEN-T roads has been calculated to potentially save 600 lives and prevent 7000 serious injuries: if applied to all motorways and main roads, this rises to 1300 lives<sup>33</sup>. In the EC Policy Orientations 2011-2020, the EC recommended to EU Member States to extend these requirements to the secondary road network (i.e. beyond the main motorways). This has become even more of a priority given the new objective to reduce serious injuries. Investment should also be continued to be made in road maintenance, even in times of financial hardship.

Within the context of the EU Refit<sup>34</sup> programme to cut red tape, the tunnel safety Directive 2004/54 on minimum safety requirements for tunnels in the trans-European road network will be evaluated with a possible view to revise or repeal it. ETSC strongly supports the upholding of this important piece of EU road safety legislation and is looking forward to inputting its expert knowledge to this review process.

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<sup>29</sup> [http://ec.europa.eu/transport/road\\_safety/users/pedestrians/index\\_en.htm](http://ec.europa.eu/transport/road_safety/users/pedestrians/index_en.htm)

<sup>30</sup> ETSC, 2013, CARS2020 Position [http://etsc.eu/wp-content/uploads/2014/03/CARS\\_2020\\_ETSC-Contribution\\_May\\_2013.pdf](http://etsc.eu/wp-content/uploads/2014/03/CARS_2020_ETSC-Contribution_May_2013.pdf)

<sup>31</sup> <http://ec.europa.eu/transport/facts-fundings/evaluations/doc/2014-12-ex-post-evaluation-study-road-infra-safety-mgmt.pdf>

<sup>32</sup> ETSC (2015) Ranking EU Progress on Improving Motorway Safety (PIN Flash 28).

<sup>33</sup> Rosebud Project (2005).

[http://ec.europa.eu/transport/road\\_safety/pdf/projects/rosebud.pdf](http://ec.europa.eu/transport/road_safety/pdf/projects/rosebud.pdf)

<sup>34</sup> [http://ec.europa.eu/smart-regulation/refit/index\\_en.htm](http://ec.europa.eu/smart-regulation/refit/index_en.htm)

Ahead of the adoption of a new proposal the Dutch Presidency should support and accelerate these important developments in infrastructure safety.

## Further Reading

ETSC (2015) 9<sup>th</sup> Road Safety Performance Index Report

<http://etsc.eu/9th-annual-road-safety-performance-index-pin-report/>

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