Halving injury and fatality rates for cyclists by 2020

ECF Road Safety Charter
Founded in 1983, the European Cyclists' Federation (ECF) is the umbrella federation of the national cyclists' associations in Europe, reinforced by similar organisations from other parts of the world. Altogether we have 65 member groups in some 39 countries. On behalf of around 500,000 individual cyclists, we are pledged to ensure that cycle use achieves its fullest potential so as to bring about sustainable mobility and public well-being. To achieve these aims, the ECF seeks to change attitudes, policies and budget allocations at the European level. The ECF stimulates and organises the exchange of information and expertise on cycle related transport policies and strategies as well as the work of the cyclists' movement.

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ECF Road Safety Charter

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Foreword

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Foreword

Tripling cycling in Europe makes cities safer and more liveable!

The ECF is working on tripling cycling in Europe by 2020. It will make the cities in Europe safer. And we have a strong case for this: statistics prove that the more cycling you have in a city, the safer it is. In car-oriented cities people perceive cycling as an unsafe mode of transport. In pro-cycling cities people feel safer on their bikes: particularly when the infrastructure is cycling-friendly and when there are a lot of cyclists on the streets. In a city with a high share of cycling, car drivers adapt their speed and behaviour.

This charter is based on the best practice and expertise we have gathered from our member organisations and experts e.g. via the Velo-city conference series.

Cycling rates in our cities will increase substantially. The faster this happens the safer our streets will be. And the safer people feel on their bicycles the faster the growth of cycling rates. So, let’s cycle and let’s work for more and more road safety for cyclists in Europe!

Manfred Neun, ECF President
Preamble

The European Cyclists’ Federation and its 65 members in 39 countries call upon the European Union and all national, regional and local governments to make the coming 10 years a decade for more and safer cycling. The individual health benefits of cycling greatly outweigh any risks involved – not to mention the benefits to the environment and quality of life.

The current reality is that many people do not cycle at all because of safety fears. These fears need to be tackled now.

In particular the most vulnerable members of society – children, elderly, disabled – have been the victims of a transport system that has focused for too long on automobile mobility. What we need is a new culture of city and transport planning that fully respects everyone’s basic right to safe mobility. In this respect, governments at all levels should embrace the Safety in Numbers principle, recognising that cycling gets safer the more people do it.

The ECF and signatory cities of the Charter of Brussels ask the EU to set a target of at least 15% of the share of cycling in the modal share in trips in Europe by 2020. With more people cycling, authorities need to provide cycling infrastructure in urban areas ensuring continuity in the form of comprehensive and safe cycle route networks.

Although the EU’s target of halving road deaths by 2010 will not be reached, it has contributed to at least a 30% reduction in deaths over the past decade. We therefore strongly support renewed targets in the forthcoming Road Safety Action Programme (4th RSAP). Within this, ECF asks for a set of measures to be implemented in order to halve injury and fatality rates for cyclists between 2010 and 2020. While ECF also supports an overall target in absolute numbers for the forthcoming decade for all transport users, we stress that it is important to ensure that simple casualty and fatality reduction targets do not deter national and local authorities from pursuing the aim of more (as well as safer) cycling: the Safety in Numbers evidence shows that they can and should go hand in hand. Therefore, the forthcoming Road Safety Action Programme at European level should also set “rate-based” targets for cyclist safety, measured in number of km’s cycled (or per trip, or per hour).

Road safety is a shared European and national responsibility. All governments at all levels need to take their responsibility now!
Safety in Numbers

There is good evidence that cycling gets safer the more people do it. Many examples across Europe show that steep increases in cycling can even go with reductions in cycle casualties.

Possible reasons why the “Safety in Numbers” effect occurs:

- Drivers grow more aware of cyclists and become better at anticipating their behaviour.
- Drivers are more likely to be cyclists themselves, which means that they are more likely to understand how their driving may affect other road users.
- More people cycling leads to greater political will to improve conditions for cyclists.
- Higher cycle use often goes together with lower car use, decreasing the risk of conflict with motor vehicles, with consequent safety benefits for all road users.¹

The “Safety in Numbers” evidence clearly shows a non linear relationship between the amount of cycling and walking and the risks to cyclists and pedestrians. This means that the more pedestrians or cyclists there are, the lower the risk to each individual pedestrian or cyclist. This does not necessarily mean that increases in walking and cycling will always be accompanied by absolute reductions in pedestrian and cyclist casualty and fatality numbers. However, the key point is that walking and cycling still gets safer for the individual pedestrian or cyclist per kilometre (or per trip, or per hour) cycled.

With this in mind, we strongly urge that, in addition to overall road safety targets, the forthcoming Road Safety Action Programme at European level should also set “rate-based” targets for cyclist safety. We note that the UK Government is already proposing to adopt targets to halve the rate of cyclists killed or seriously injured (KSI) per km cycled over the 10-year period of its forthcoming Road Safety Strategy, and we urge the European Commission and national governments to adopt similar targets in the Road Safety Action Programme and national strategies respectively.
Halving injury and fatality rates for cyclists by 2020

Safety in numbers: European comparison

km cycled per person per year
Cycle fatalities per bn-km cycled

Spain: 105
UK: 29
France: 61
Austria: 56
Italy: 42
Finland: 41
Sweden: 20
Belgium: 41
Netherlands: 848
Denmark: 936

Cycle use
Cycle fatality rate

Image of cyclists on the road
A. Specific measures: People and Society

1) Cross-sectoral working

Road safety is a common effort, requiring cross-sectoral cooperation and involvement of all stakeholders. Safety fears are a major barrier to increased cycling, and must be urgently addressed if cycling and all its co-benefits for health, wellbeing, social cohesion, efficiency, better quality local environments, reduced reliance on fossil fuels and resultant GHG emissions are to be realised. An integrated approach is needed at EU, national and local levels, to ensure that all the policy areas to which walking and cycling can contribute are working together. This must extend beyond the transport community to encompass all relevant sectors, including the health, spatial planning, environment, economic and social sectors, all of whom have an interest in the co-benefits to be derived from achieving more and safer cycling. There is also a need for political leaders from all sectors to act as role models by visibly cycling on a regular basis.

2) Involvement of stakeholders

Experiences from national strategies show that their chances of succeeding are higher when stakeholders are involved from the very beginning. ECF therefore asks governments at all levels to involve cyclists’ user organisations when it comes to planning, implementing and assessing road safety strategies.

3) Reducing private motorised transport

Car use has been on a steady increase over the past decades in Europe. For many people it is their automatic choice of travel mode, whether their trip is for work (or school), for shopping, or to access leisure activities.

While motor vehicles have become safer for their users mainly due to new safety equipment and regulation, it remains the prime source for cyclist casualties, as UK figures for the years 2005 – 2007 show. Reducing private motorised transport is itself a very effective tool for improving road safety.
4) Education and awareness raising campaigns

Life-long mobility education is an essential part of improving road safety. Both cyclists and motorised road users should be educated on how to behave safely in traffic. However, education campaigns aimed at cyclists should not ‘dangerise’ cycling but should present it first and foremost as a healthy and enjoyable activity, in order to encourage more as well as safer cycling. The messages for both cyclists and drivers should emphasise mutual awareness and safe sharing of road-space. Children should ideally receive cycle training at school as mandatory part of their curriculum, and cycle training should also be available to adults. The schemes Brevet du cycliste/ Fietsersbrevet and Bikeability administered by ProVelo Belgium and Cycling England respectively are good examples of successful programmes funded by a member states’ regional or national government. Bikeability delivers off-road and on-road training at basic and advanced levels to children of different age groups, and is also available to adults. By 2012, half a million children are expected to have taken part in Bikeability training.3

EU legislation on driving licenses sets minimum requirements for theory and practical tests related to vulnerable road users, due to come into effect in 2013.4 The Commission should take steps to ensure timely transposition into national law, and monitor the effectiveness of these measures once implemented. Heavy vehicle drivers should receive regular training on how to use technical equipment correctly (e.g. blind spot mirrors). Their awareness should be raised by campaigns on safe driving. Many good practice examples exist at national level.

Additionally, any future guidelines on driver training and traffic safety education should place emphasis on reducing risks to vulnerable and unprotected road users.5

5) Statistics and research

Good and comparable data and statistics are the basis for taking appropriate measures in order to improve road safety. Absolute casualty figures per country are only helpful in identifying national trends. As mentioned above, linking the number of fatalities to the distance, number of trips or time travelled serves as a better measure in this respect. It links injuries and fatalities to traffic performance and allows comparison between different transport modes. This facilitates monitoring of how well member states are doing in maximising the Safety in Number benefits of more and safer cycling.

Apart from good statistics, we need independent research into the causes of cycle casualties, for example caused by blind spots, excessive speed levels, mobile phone use, etc. There is a particular need to research the causes and effectiveness of different solutions for casualties involving lorries.
B. Specific measures: Road Infrastructure

The creation of safe and attractive cycling conditions is clearly a key aspect of any strategy to promote cycle safety. It is essential that cyclists are being made to feel welcome on the road network. This is important for both the actual and perceived safety of cyclists and would-be cyclists, and also gives the message to drivers that they need to respect the presence of cyclists on the roads, particularly at intersections. 10% of the EU financial investment into transport infrastructure should be dedicated to cycling.

The details of how best to plan and design cycle-friendly road infrastructure will vary from country to country, depending on factors such the applicable traffic laws and cultural issues affecting driver behavior. Nonetheless, the following common principles can be identified:

The aim of cycle planning should be to provide a quality cycling environment which meets all cyclists’ travel needs. Networks of cycle routes should be comprehensive, coherent, safe, direct and attractive. However the creation of a quality cycling environment should not be limited to dedicated “cycle routes”, since cyclists’ destinations are as diverse as those of other transport user groups, and are dispersed throughout the road network. The aim must therefore be to ensure that all relevant destinations are accessible by cycle, with provision made both for confident experienced cyclists and for newcomers to cycling, for those who are nervous of sharing with motor traffic and for children. Hence the aim must be to create safe and attractive cycling conditions throughout the road network. Quality routes away from roads (e.g. through parks and open spaces, alongside rivers and canals, or using “cycle roads”) can provide extremely valuable advantages for cycles over motorised traffic, by opening up routes which are more direct, safer and attractive than those available to motor vehicles. However they should be seen as additional to and not an alternative to the creation of a cycle-friendly road network.

Cyclists can gain the greatest benefits from solutions which involve reducing either the volume or the speed of traffic, or both. These measures improve safety not just for cyclists but for pedestrians too. Moreover, by encouraging more walking and cycling, these measures can also have wider benefits for improving health, for reducing pollution, congestion and greenhouse gas emissions, and also have benefits for the economy, property prices and retail vitality of urban areas.
30kmh (or 20mph) speed limits should be promoted as the normal speed limit for built-up areas. Cities which apply these speed limits to typically 65% to 85% of the length of their street networks have higher pedestrian, cycle and public transport use, as well as vibrant economies and a quality environment for all.

The aim of reducing or maintaining low speeds should be supported by cycle-friendly traffic calming and/or quality street design. Vertical deflections (e.g. speed humps, tables or cushions) should have tapered or sinusoidal profiles to avoid creating discomfort for cyclists. Horizontal deflections (e.g. pinch-points and chicanes) should avoid forcing cyclists into conflict with drivers attempting to race them through the gap. Their use should therefore be limited to situations where they are maintaining low speeds (rather than slowing motor traffic down in the first place), or where cycle gaps can be provided without being obstructed by parked cars.

Junctions should be designed with cyclists’ needs in mind. Advance stop lines and/or separate cyclists’ traffic signals should be provided at signalized junctions. Roundabouts should be designed with tight entry angles and narrow circulating carryaways where capacity permits this. Junctions and crossings of motorways and other fast or busy multi-lane roads should be provided with convenient grade-separated crossings to permit cycle movement.

Cycles should generally be admitted to pedestrianised and vehicle-restricted areas in town centres. This is particularly important where the alternative involves forcing cyclists to follow motor traffic detours round vehicle-restricted city centres. Studies show that actual conflict between cyclists and pedestrians in such situations creates very few safety problems, with cyclists voluntarily dismounting when pedestrian volumes are high.

Cycle facilities where provided should be designed to a high standard. They should avoid creating conflict with pedestrians, particularly in the vicinity of bus stops and road crossings. They should be sufficiently wide for the volumes of cycle use. Above all, they should maintain cycle priority wherever possible at junctions, and should certainly avoid creating additional conflict at these locations.

The planning and management of major roads, developments and other transport infrastructure should seek to provide for good cycle accessibility, and avoid creating hazards or barriers to cycle movement. Cycle safety and accessibility should be incorporated into the planning and design of major transport and planning projects at the outset.

Road and path maintenance policies and practices should take account of cyclists’ needs. Cyclists suffer disproportionately from potholes and other maintenance defects, which can frequently cause very serious injuries. Cyclists’ needs should be reflected in highway authorities’ inspection frequencies, the standards adopted for deciding the severity of defects and timescales for carrying out repairs, procedures for inspecting and clearing vegetation and other obstructions from off-road routes, winter maintenance standards and procedures, and processes for members of the public to report maintenance defects of all kinds.
National traffic codes should reflect the basic principle of “more and safer cycling” as promoted by the ECF and its member organisations. Law-makers should therefore refrain from regulations that at first sight seem to improve safety for cyclists but eventually have the potential to deter people from cycling at all. One of these counterproductive laws comes from Romania, forbidding any person below 14 to cycle on any public road. ECF is also opposed to mandatory helmet laws.

1) No mandatory helmet laws

Making helmets compulsory has been asked for by politicians and health organisations in order to increase safety for cyclists. However, the story is more complex: wearing a helmet creates the image of cycling being an abnormally dangerous physical activity. While this may be the case for cycling as sports, it is not necessarily so for cycling as a daily means of transportation. Statistics show that the more cyclists are on the road the safer it is actually to cycle. Car drivers are more used to the presence of cyclists and tend to have cycling experience themselves. Taking this into account, ECF is not only absolutely against the mandatory wearing of helmets, but also against shock-horror helmet promotion campaigns.

The main effect of helmet laws has not been to improve cyclists’ safety but to discourage cycling, undermining its health and other benefits. We therefore call upon authorities to:
- focus on well-established measures to promote cycling and cyclists’ well-being;
- recognise that the benefits of cycling far outweigh the risks;
- refrain from promoting or enforcing helmet wearing without sound evidence that this would be beneficial and cost-effective compared to other safety initiatives.

2) Contra-flow cycling on one-way streets

An easy to implement but very practical solution to increase road-safety is 2-way cycling on one-way streets, as it improves visibility between cyclists and motorised transport users. By enabling cyclists to take shorter routes it is also a useful way to encourage people to adopt cycling as a convenient
3) Speed management

Road safety can be dramatically increased by reducing speeds to a level where accidents do not cause serious injuries. This should be the goal of speed management.

Translated into physical terms this means that the mechanical forces that come with accidents should not exceed a certain threshold the human body cannot tolerate. It is therefore imperative to set speed limits to a level commensurate with the inherent safety of the road system. Currently, illegal and inappropriate speed is the single biggest contributory factor in fatal road accidents.

30 kmh in urban areas:

30 kmh (20mph) should be the standard maximum speed limit in urban areas. Justified exceptions to this rule can be permitted. 30 kmh zones should be designed in a way so as to incite drivers to respect this speed limit. However, early evidence from the UK indicates that ‘signed-only’ 20 mph speed limits may be successful where previous average speeds were significantly above 20 mph, and may therefore be an appropriate option in some cases. Soft measures such as driver education and awareness-raising campaigns on speed reduction should also be widely deployed. The police need to monitor whether they are effective. If not, traffic codes should be enforced by stricter speed control measures. Also, equipping vehicles with ISA can be an effective tool to keep with maximum speed.

4) Adoption of an EU Cross-border enforcement Directive on Road Safety

The share of nonresident drivers in speeding offences is around 15% on average, while nonresidents represent around 5% of road traffic.7 The main reason is the feeling of going unpunished abroad for violations of the traffic code. ECF therefore asks the EU and national governments to re-start the process of adopting an EU Directive on Cross-border enforcement, stalled in 2008.

5) Stronger and better enforced traffic law

Road traffic policing is known to be highly effective both in enhancing road safety outcomes and in tackling crime more generally. For instance France has achieved significant improvements in road safety since declaring this a national priority in 2002. The country was previously responsible for 16% of Europe’s road traffic fatalities and it is now one of its leading performers on road safety. There are similar examples of the effectiveness of road policing from Australia and parts of the UK. The EU should collaborate with Member States and traffic police organizations to strengthen road traffic law for the benefit of vulnerable road users and to ensure that road policing has higher priority and resources.
D. Specific measures: Vehicle Design and Equipment

Improved vehicle design can contribute to preventing collisions and reducing the severity of injuries where collisions do occur. Priority should be given to former, with the latter as a secondary goal.

Accident prevention can be achieved by tackling speed, but also by tackling another major source of cyclist injuries and fatalities: vehicle blind spots.

1) Intelligent Speed Assistance

In real life, police forces are often understaffed in order to enforce the traffic code. According to figures by the European Road Safety Observatory, 40% to 60% of drivers exceed speed limits. Intelligent Speed Assistance (ISA), fitted into motorised vehicles, would be an effective tool to support compliance with speed limits.

Case-studies show that ISA is more effective the more restrictive the system is. ECF suggests a step-by-step approach, starting with the fitting of supportive ISA (a visual or auditory signal) into fleet cars, such as government cars, buses, private company cars, etc. In order to facilitate the deployment of ISA in the EU, the Commission also has an important role in encouraging the development of map databases across Member States. As a long-term goal (2020), ECF asks the EU to adopt legislation for mandatory fitting of cars sold at the EU market with intervening Intelligent Speed Assistance systems, as part of the type approval procedure for cars.

2) Blind Spot Mirrors and Detections Systems

The typical blind spot crash occurs where a heavy duty vehicle wants to turn (right or left, depending on continental or UK/Irish traffic code respectively) and overlooks the cyclist who intends to go straight ahead. This type of collision usually has serious consequences for the cyclist. Recent EU legislation on blind spot mirrors requires vehicles of more than 3.5
tons to be equipped with a front view mirror (or camera) and a convex wide angle mirror, and required existing heavy duty vehicles to be retrofitted before 31 March 2009. The Directive 2007/38/EC in question should be amended so as to take into account vehicles registered before 2000, which are now excluded.

Additionally, the EU should look into introducing detection devices, which detect the presence of a cyclist in the blind spot and give the lorry driver an audio warning signal. This system should be further tested, and if proven successful, EU legislation on “type approval of devices for indirect vision or of vehicles equipped with these devices” should be amended accordingly. Existing heavy duty vehicles should be retro-fitted.

3) Lorry cabin design: material of side-doors

Fewer blind spot accidents happen with busses than with heavy goods vehicles (HGV). It is thought this may be because bus drivers have better visibility of cyclists due to side-doors made of transparent glass. The EU should encourage and finance R&D of new HGV cabin designs and adopt respective EU legislation on “type approval of HGV.

4) Underrun protection

Due to the size and mass of heavy good vehicles, the problem of compatibility with other road users is a serious matter. Trucks are stiff, heavy and high and may pose a serious threat to the occupants of other vehicles and to vulnerable road users. EU requirements have been introduced mandating front, rear and side underrun protection for trucks with a gross weight over 3.5 tonnes. The current standards leave room for improvement.

5) Safe car fronts

Since the end of 2005, EU regulations have come into force, which impose measures to reduce collisions with pedestrians. More could be achieved if cyclists were also taken into account. Cyclists land on a different part of the vehicle: whilst pedestrians mainly land on the bonnet, cyclists usually hit the windscreen and its metal frame. Stricter test requirements are therefore required. One of the measures that would contribute to injury prevention is outer airbags on the windscreen.

This device could reduce fatalities from this sort of collision by 75 % and save the lives of hundreds of cyclists in the EU annually. ECF is calling on EuroNCAP to include cyclists’ safety in its protocol assessment. By 2015, the airbag system should be fully operational.
6) Adaptation of Daytime Running Lights

EU regulation mandates new cars and light vans to be equipped with Daytime Running Lights (DRLs) as of 2011. DRLs are meant to deliver “net benefits for Europe’s road safety record”.

ECF demands that after 3 years period (2014) a thorough analysis of accident and fatality statistics has to take place. If it appears that mandatory DRLs have been detrimental to unprotected and vulnerable road users’ safety, existing legislation should be amended.

7) Cycle lighting

The ECF would welcome binding technical minimum specification for cycle light products at European level, ensuring functionality and improving visibility of cyclists.

8) No megatrucks

ECF is concerned about proposals to amend existing EU legislation to allow the introduction of longer and/or heavier transport vehicles (LHV), commonly known as megatrucks or gigaliners. Such vehicles would bring significant safety risks: increased vehicle lengths bring greater risks from overtaking, longer clearance times at junctions, and reduced safety margins when turning, as departure from the carriageway cannot be avoided. This has particularly worrying implications for cyclists and pedestrians. At the same time, heavier vehicles greatly increase the severity of collisions. Megatrucks would also result in huge infrastructure costs and a shift of freight transport from environmentally friendlier rail and water to road. ECF will therefore strongly oppose any move to amend the current EU Directive laying down maximum authorised dimensions for road freight vehicles. 

8
Shared responsibility: What the EU can do to improve road safety for cyclists

Road safety is a shared European and national responsibility. Addressed to the European Union, ECF asks following measures:

- Set an overall target of halving injury and fatality rates by 2020, based on the “Safety in Numbers” concept;
- Promote modal shift: Less car use is an effective measure in improving overall road safety;
- Promote more and safer cycling by collecting and distributing best practice awareness raising campaigns and mobility education, e.g. by setting guidelines on (lorry) driver training and traffic safety education with emphasis in reducing risks to vulnerable road users;
- Set technical vehicle standards: This applies to safe car fronts, intelligent speed assistance, cycle lighting as well as the design and equipment of heavy goods vehicles, in particular to prevent blind spot accidents;
- Promote and finance cycle-friendly infrastructure: 10 % of the EU financial investment into transport infrastructure should be dedicated to cycling;
- Promote 30km/h as the standard maximum speed limit in urban areas;
- Promote best practice cycling traffic codes, e.g. contra-flow cycling on one-way streets;
- Provide statistics and finance research: We need comparable data at EU level on cyclist casualties (measured in km cycled, per trip or per hour) and further detailed research inter alia into the causality of cycle accidents and policies and interventions to improve cycle safety;
- Adopt an EU Cross-Border Enforcement Directive on Road Safety: to ensure that nonresidents cannot commit violations of the traffic code with impunity;
- Do not amend the current EU Directive laying down maximum authorised dimensions for road freight vehicles;
- Support EU Member States and police organizations in developing road traffic law and in providing more resources for its enforcement.
Notes:

1 Cyclists have a very low rate of involvement in injuries to others: every cycle trip that is a switch from car use means fewer injuries and deaths to others. See, for example, the statistics for England, reported in CTC (2009) Safety in numbers in England.

2 TRL (2009) Collisions involving pedal cyclists on Britain’s roads. PPR 445

3 Cabinet Office, Strategy Unit (2009) An analysis of urban transport


7 In France, 25 % of speed violations caught by speed cameras were committed by nonresidents.
