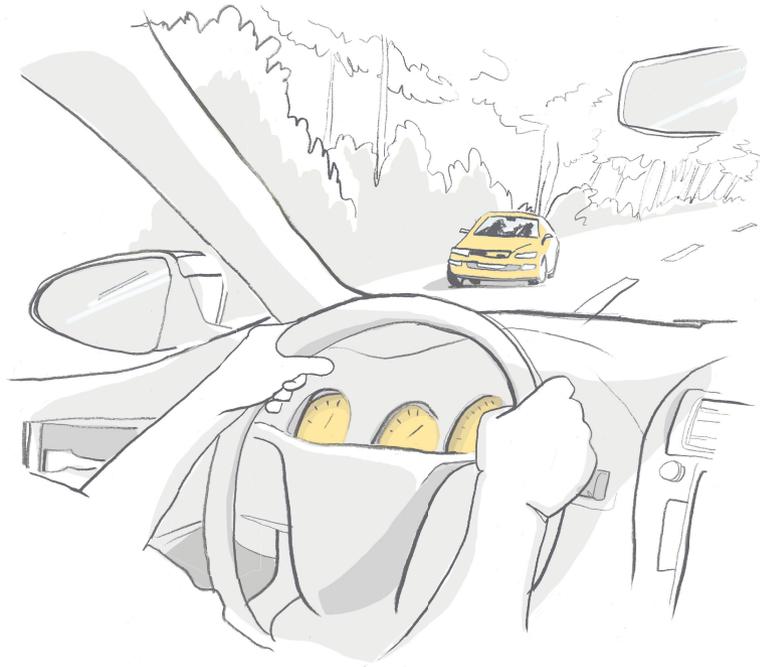


ROAD SAFETY

20 measures for 20



RACC



© 2016 Fundación RACC
Avda. Diagonal, 687
08028 Barcelona
www.fundacionracc.es

© on the texts, Fundación RACC and Ton Lladó
© on the graphics, Mercè Godàs
Art direction, design and layout: Digital Screen
Translation: Karen Brodersen

ROAD SAFETY

20 measures
for 20

RACC

Contents

Introduction.....	6
Vision Zero: An inalienable approach.....	8
Road accidents, a multi-faceted reality... but with very differentiated faces.....	10

20 MEASURES FOR 2020..... 14



THE PEOPLE

Young drivers, going deeper into the model of success.....	16
Elderly people, a key challenge for the future.....	18
Pedestrians, the fight against vulnerability.....	20
Bicycles, an opportunity to be boosted.....	22
Motorcyclists, a risk level that is still too high.....	24
Drivers, the core question.....	26



RISK FACTORS

Speeding, in the spotlight of the most serious accidents.....	28
Psychotropic substances, still too present in serious accident rates.....	30
Distraction, the most usual and treacherous risk.....	32



VEHICLES

A modern vehicle fleet is safer.....	34
--------------------------------------	----



INFRASTRUCTURES

Management and maintenance of infrastructures, a key for road safety.....	36
---	----

FOR NEW ETHICS IN MOBILITY.....	38
---------------------------------	----

Twenty measures to make safe mobility for people a reality

Road safety has experienced a deep transformation in recent times. 25 years ago, 131 people lost their lives every week in Spain in a road accident, and currently this figure has been reduced to 32. As it usually happens in most of the huge social changes, there have been several factors that have contributed to this. The obligation to use a helmet, the generalised use of the safety belt, the implementation of safety systems in vehicles, the increasingly responsible behaviour of users, the introduction of the points-based driving license and the improvement of the road network, have been key factors to reduce the number of road accidents in our country during the past decades.

However, this trend has slowed down since 2013. The measures that were determining for the reduction of the road accident rate are no longer enough to continue moving forward in the fight against road accidents. As a consequence, time has come to double our stake and to introduce new measures that will allow us to continue progressing.

In the 2030 horizon, a large part of the cars will probably be driving in a completely autonomous way, a fact that will favour a reduction of the number of accidents. But until then, there are several measures that can be introduced already, having an effect from now until 2020.

It is time to make microsurgery, to introduce improvements in each and every factor involved in the road accident rate: the people, the risk factors, the vehicles and the infrastructures.

- Considering the specific circumstances of young people, the elderly, the bicyclists, motorcyclists, pedestrians and drivers, promoting their coexistence.
- Reducing the incidence of the most frequent risk factors in accidents, such as speed, distractions or the consumption of alcohol and drugs.
- Modernising the vehicle fleet with safer vehicles, including safety systems as a standard.
- Improving infrastructures, setting quantitative targets to increase the safety level of the roads.

Our goal must be to position ourselves among the leading countries in terms of road safety, such as Great Britain, Sweden or the Netherlands, and to reduce the number of road fatalities by 50% by 2020, compared to 2010. But if this has to be our goal, our ambition must be to reduce road accidents to zero, because we are convinced that Vision Zero is achievable.

Therefore, RACC proposes twenty measures, the implementation of which is feasible and viable. We neither trust in magical formulae, nor in the inertia of the policies of the past. We believe in analysis, in rigour, and in the decision to act; because mobility without road accidents is possible, and with our implication, we can make it real starting today.

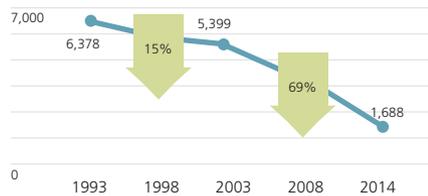
Josep Mateu
RACC President

Vision Zero: An inalienable approach

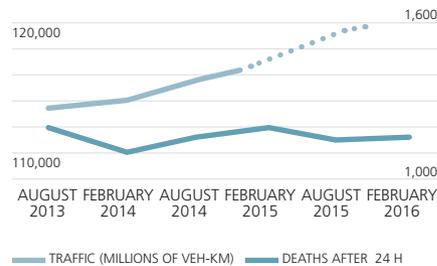
Few countries in the world have had such a positive evolution of their road accident figures as Spain and Catalonia in the past 15 years. In both cases, road fatalities have decreased by almost 70% since the year 2000, and this meant moving up from the rear positions in the classification of the European Union, to the top. It is true that in recent years there has been a stagnation in the reduction of the figures, which is probably due

to the increase in mobility as a consequence of the economic context. Therefore, we should ask ourselves: Is there still margin to continue improving the road safety figures, considering that it is likely that the economic activity will continue growing in the coming years? Is it possible to reach the target set by the European Union, to reduce the number of road fatalities by 50% by 2020, compared to 2010?

FATALITIES IN ROAD ACCIDENTS
DEATHS AFTER 30 DAYS



FATALITIES ON THE ROAD AFTER 24 HOURS
MOBILE AVERAGES OF 12 MONTHS

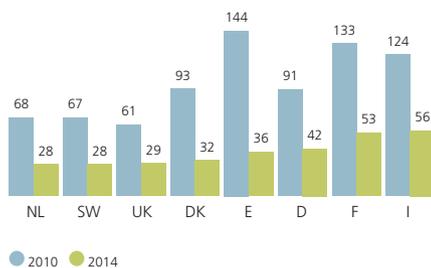


Achieving Vision Zero involves acting simultaneously on people, vehicles and infrastructures. The basic idea of this approach is that the human being makes mistakes, and that the system has to try first to reduce the probability of these mistakes to happen, and second to try to minimise the consequences whenever the mistakes happen.

With this document, RACC wants to put on the table 20 new measures to debate on; first of all in order to achieve the target marked by the European Union for the year 2020 and also to move with determination towards Vision Zero.

There is only one answer to these questions: It is possible to continue improving our road safety figures significantly, and we can achieve the European target, and this is because despite the progress in recent years, there are still countries ahead of us that were able to continue improving. The risk of dying in a road accident in the Netherlands, Sweden or the United Kingdom is currently one third lower than in our country. Thus, it is clear that there is a large margin left for improvement.

FATALITY RATE IN ROAD ACCIDENTS
DEATHS AFTER 30 DAYS PER MILLION OF INHABITANTS

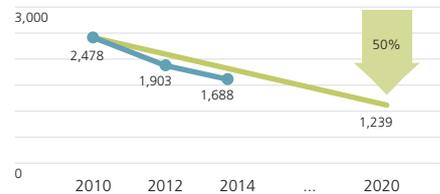


We shouldn't forget either, that these countries do not settle for the success they already achieved, but are constantly thinking about how to continue reducing their accident rates. This is how they are expressly embracing the so-called Vision Zero: A setting in which road accidents and road accident fatalities tend to disappear. If thirty years ago Vision Zero was an inspiring principle of road safety policies, today it has become an achievable target.

Spain and Catalonia should also take on Vision Zero as an express goal to work for. Only if we have ambitious targets and get the measures started in order to achieve them, we will be able to consolidate the success achieved in the past and continue reducing until eliminating the risk of having an accident on our streets and roads.

Achieving Vision Zero does necessarily involve the adoption of the so-called *Safe System Approach*, a holistic vision of road safety, that involves the simultaneous action on people, vehicles and infrastructures. The basic idea of this approach is that the human being will always make mistakes, and that the system has to try first to reduce the probability of these mistakes to happen, and second to try to adjust them (i.e. minimise the consequences) whenever the mistakes happen.

FATALITIES IN ROAD ACCIDENTS TARGET 2020
DEATHS AFTER 30 DAYS



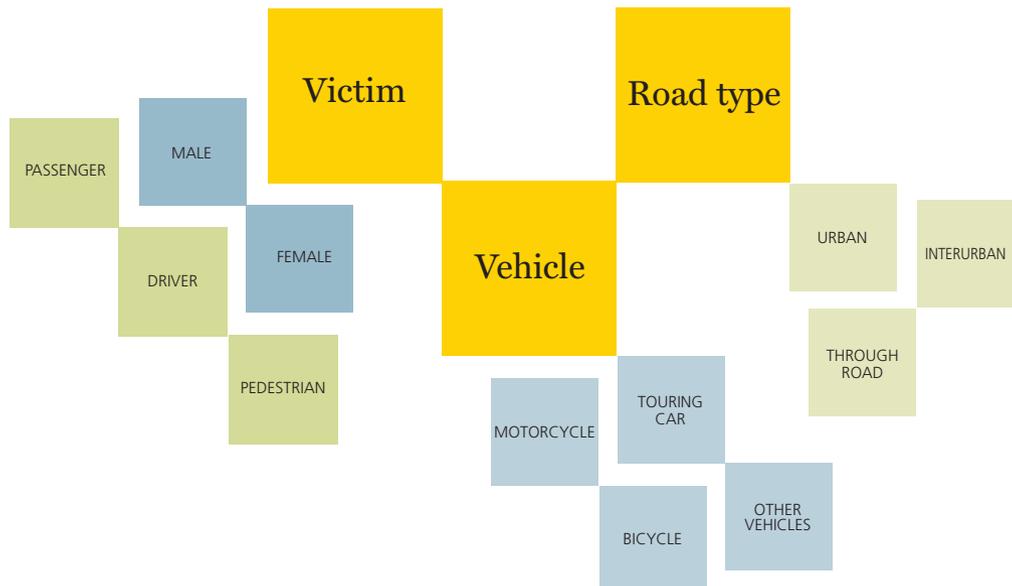
With this document, RACC wants to put on the table 20 new measures to debate on; first of all in order to achieve the target marked by the European Union for the year 2020 and also to move with determination towards Vision Zero. These are 20 new measures that complement those that have already been implemented. All of them are measures that are quite easily applied and therefore can have an immediate impact on the improvement of road safety.

Road accidents, a multi-faceted reality...

Road accidents are a complex reality, similar to those puzzles that have different cubes which can provide for different perspectives from one and the same reality. The victim can be a driver, a passenger or a pedestrian. At the same time, the accident can happen with a touring car, a bicycle, a motorcycle or any other vehicle, and it can happen anywhere: on open roads, built-up areas or in the streets. The accident can affect women and men of any age.

Thus, an accident has different faces and affects people depending on the moment and the situations.

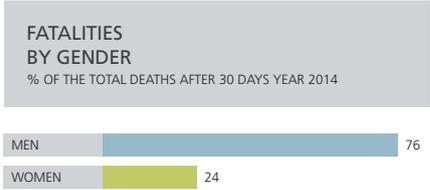
Facing the challenges set by the 2020 targets, we are forced to consider this reality from all of these perspectives, since any approach can show us which are the main focuses to have in order to improve road safety. Therefore it is essential to draw-up this road accident map from different perspectives.



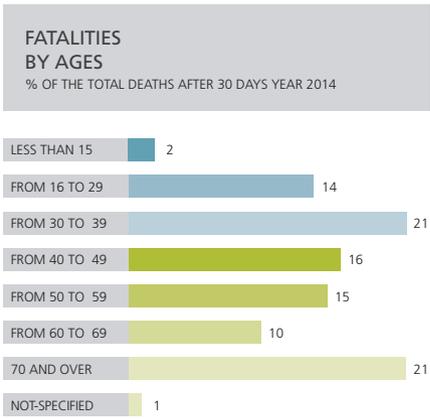
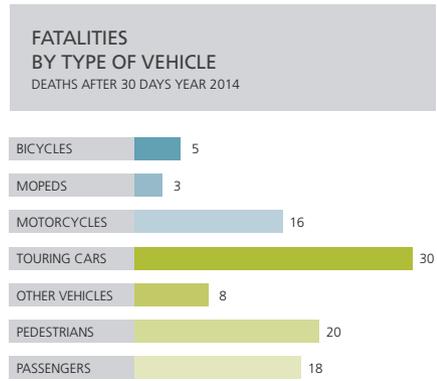
A first perspective shows the higher mortality rate among men. Exploring their behaviour patterns when driving and comparing them with female attitudes -more prudence, less speed or aggressiveness amongst others- may suggest a new path to follow: to promote a change of men's habits to reduce the problem.

Men represent 76% of fatalities.

Beyond the gender-related criteria, a view from the perspective of age provides us with a useful complementary perspective, just like the approach from the role of the person in an accident helps us to profile the problem. We shouldn't forget that most of the fatalities are drivers.

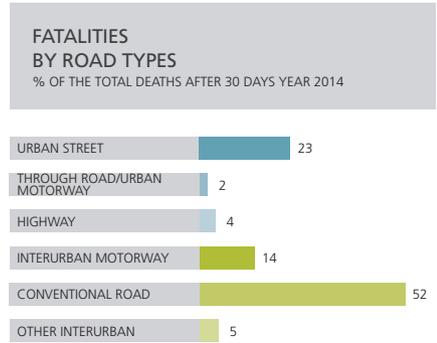


Touring car drivers, moped and motorcycle riders mean 49% of the fatalities.



Death on the road does not seem to make any discrimination by ages.

Conventional roads concentrate 52% of deaths.



The types of vehicles that had an accident or the type of road on which the accident happened are relevant as well. The significance as regards the victims on board the touring car or on a motorcycle, together with the concentration of fatalities on conventional roads are also key points for the analysis of the fatality rate.

On the following pages we analyse the pieces of this puzzle, which we have sketched in broad strokes in this page. This multi-faceted vision of the fatality rate will be surely essential to propose actions that will contribute to achieve the targets established in terms of road safety.



... but with very differentiated faces

Road fatalities affect the whole population; they are present in any type of vehicle or on any type of road. Likewise, the related risks vary according to the personal characteristics and the type of vehicle or road. One thing is the absolute number of victims and another the degree of risk of a certain group.

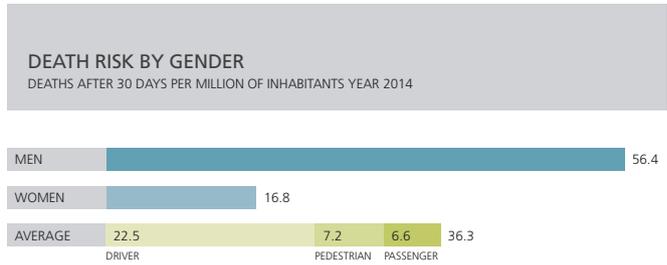
The higher this risk, the larger the margin for improvement. Therefore, the identification of the groups with a higher risk is a key element to

apply measures that will allow for a reduction of the fatality rate. Looking at the road accident rate from a multiple perspective will be of vital importance to face the existing challenges in this case as well.

As a consequence, we should have a look at each side of this complex prism, i.e. the road accident rate, in order to see the different situations and to establish which measures can actually be applied.

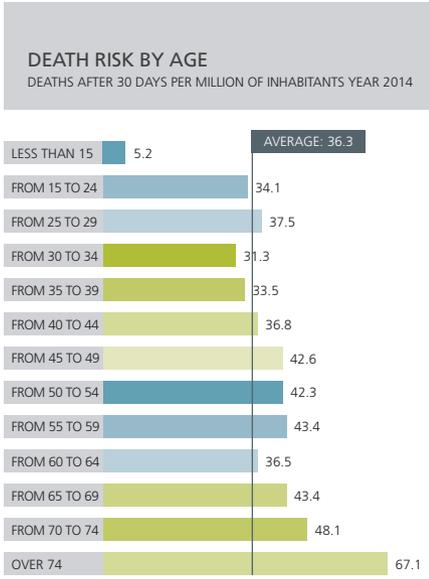
Men and drivers, the group with the highest risk.

Men lose their life more often in a road accident than women, much more than they should considering their weight in the population. The risk to die in a road accident is 3.3 times higher for a man than for a woman, considering drivers, passengers and pedestrians.



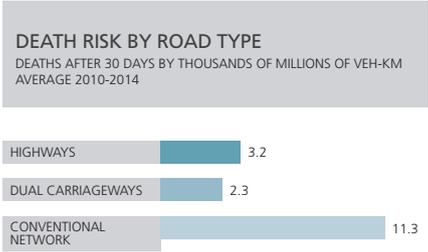
The overall risk to die in a road accident, as a driver, passenger or pedestrian, tends to increase with age, especially from 74 years onwards, which invites us to focus especially on this group.

Elderly people, more vulnerable.



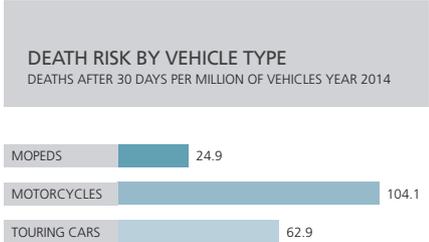
Conventional roads, the most dangerous.

The death risk is higher on conventional roads than on dual carriageways or toll highways, since the number of deaths by vehicle-kilometres covered on conventional roads is three times higher than on toll highways and almost five times higher on dual carriageways.



The means of transport is very relevant as well. Riding a motorcycle is more dangerous than driving a car. The death risk driving a touring car is only 60% of the risk of a motorcycle rider.

Riding a motorcycle implies much more risk.



20 MEASURES FOR 2020



THE PEOPLE

Young Drivers

1 Implementing a gradual access system for the driving license: accompanied driving from 17 years, and a system of progressive training, initially limiting the conditions for the use of the vehicle (limitation of night driving, of the number of passengers, etc.).

Seniors

2 To find a better balance between autonomy and safety in the mobility of elderly people, promoting self-assessment tests that provide for orientation as regards the convenience of driving, and improving the rigour of the psychological and cognitive skill tests made on people aged 75 years or older.

Pedestrians

3 To carry out massive awareness raising campaigns especially aimed at men aged 75 or older, especially in the city.

Bicyclists

4 Improving the infrastructure to make bicycle riding safer, opting for separated lanes, which are wide enough, whenever possible, and encouraging the implementation of one-direction cycle lanes to reduce the number of accidents with other road users.

5 Reinforcement of the enforcement levels of the traffic regulations, in order to make sure a good coexistence of bicycles, pedestrians and motor vehicles, and to improve the safety demands for cyclists, especially as regards the use of helmets.

6 To progressively introduce a system of compulsory third-party liability, in line with other European countries

Motorcyclists

7 To implement a selective system of partial exchange of fines for training courses to improve the attitude of drivers with a higher risk rate.

8 Implementing a low-cost ability-test for novice drivers B+3, monitoring the evolution of the accident rate of this groups much closer..

9 Awareness raising campaigns aimed especially at male adult motorcycle riders aged 40 years or more, who mainly drive on open roads.

Drivers

10 To establish a system of continuous training for drivers that will help them to improve their skills and attitudes at the wheel, as well as to move forward in the improvement of communication between traffic and health authorities to provide for a response that best adapts to the needs of the different groups of risk, always respecting the privacy of their personal data.



RISK FACTORS

Speeding

11 To make a systematic check of the speed limits, checking (to increase or lower) their coherence with the morphology of the road and the traffic it holds, improving the signposting.

Alcohol and drugs

12 To implement the 0-alcohol rate for professional drivers and during the first two years of the driving license for novice drivers.

Distractions

13 To promote the blocking of mobile phones while driving and to establish a certification system for apps that are compatible with driving vehicles which are connected to the Internet and smartphones.



VEHICLES

Fleet and technology

14 To remove the registration tax in order to promote the renewal of the fleet focussing car taxation on the use and less on possession.

15 To promote within the EU that the automatic emergency braking system becomes compulsory as a standard in all new cars.

16 To make the use of ABS in motorcycles of less than 125 cc compulsory to improve safety, as it was made for motorcycles with a higher cylinder capacity starting from 2017.



INFRASTRUCTURES

Service level

17 To set as a target for 2020 that 80% of traffic travels on 3-star roads or more, thus involving a change in the paradigm of the maintenance policy, shifting from a reactive to a preventive approach.

18 To carry out a systematic improvement policy to improve urban through roads, adapting the infrastructure to the functional use of the road.

19 To compulsorily divert heavy traffic from conventional roads to highways on those sections in which both roads run parallel.

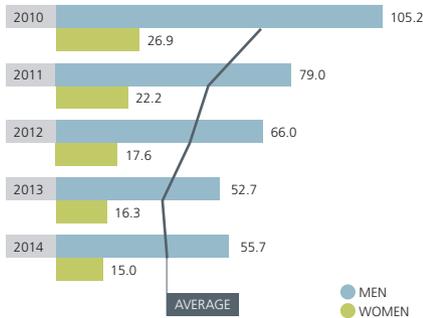
20 To start an integral and coherent signposting policy, with a first independent audit.



Young drivers, going deeper into the model of success

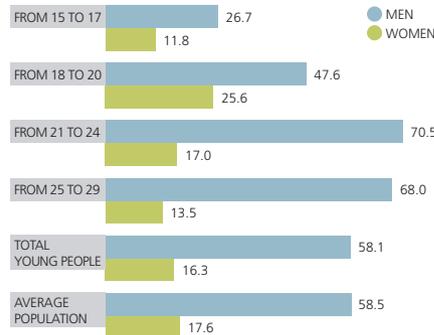
The intense reduction of the fatality rate of young people in road accidents is the confirmation of the success that road safety policies, if duly focussed, can have. It is true that the mobility of young people is different today than it was a few years ago, and the age of getting the driving license has been increased, but the achieved results go far beyond these circumstances. Reducing the number of fatalities among people aged 30 years or younger to 256 people in 2014 and position the risk rate at 35.7 cases per million inhabitants are very relevant progresses.

DEATH RISK OF YOUNG PEOPLE
DEATH AFTER 30 DAYS PER MILLION OF INHABITANTS AND GENDER



The favourable trend in recent years seems to have stopped in 2014. To be precise, in the case of young men aged between 15 and 29 years, who have a death risk that is 3.5 higher than in the case of women in the same age group.

DEATH RISK OF YOUNG PEOPLE BY AGE
DEATH AFTER 30 DAYS PER MILLION OF INHABITANTS AND GENDER.
AVERAGE 2012-2014



The gender is a decisive risk factor, especially among the age group from 21 to 29 years. The highest percentage of male motorists, especially motorcycle riders, explains only one part of this differential. The rest is probably due to attitude.



RACC Proposal

The reduction of the fatality rate of young people has been one of the biggest successes of the road safety policy in recent years, but the path to be followed is still long and complex, especially in the case of men.

The risk rate of young people, especially if we consider the kilometres actually covered, is still too high. Reducing it demands to work on the attitude and the skills, as well as to manage correctly the risk situations that can appear during the first years of driving.

Therefore, RACC proposes:

- 1 To implement a gradual access system for the driving license: allowing accompanied driving from 17 years, and a system of progressive training, initially limiting the conditions for the use of the vehicle (limitation of night driving, of the number of passengers, etc.).

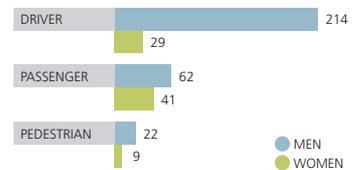


FOCUS OF ACTION THE PEOPLE

Male driver, prototype of a fatality among young people.

DEATHS BETWEEN 15 AND 29 YEARS BY POSITION IN THE ACCIDENT

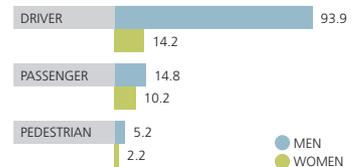
DEATHS AFTER 30 DAYS BY GENDER. AVERAGE 2010-2014



The risk is higher for men, regardless of whether they are drivers, pedestrians or passengers.

DEATH RISK BETWEEN 15 AND 29 YEARS BY POSITION IN THE ACCIDENT

DEATHS AFTER 30 DAYS PER MILLION OF INHABITANTS OR DRIVING LICENSES AND GENDER AVERAGE 2010-2014



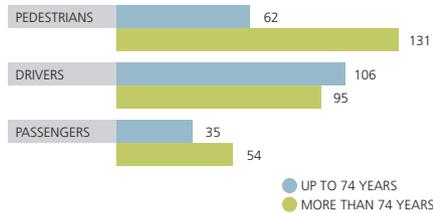


FOCUS OF ACTION
THE PEOPLE

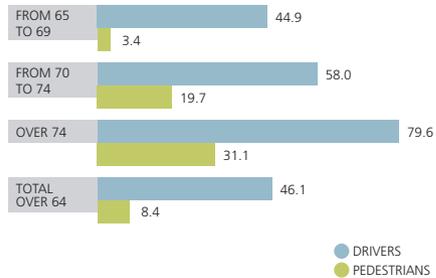
Elderly people, a key challenge for the future

The Spanish population is progressively ageing. The population projections of the National Statistics Institute forecast that in 2020, the population aged 65 years or older will be of 9,028,023 people, 700,000 more than in 2015 and that this progression will continue until reaching 10.3 million in 2025. The biggest part of this increase will be concentrated in the range under 80 years, which means a population with a still remarkable potential for activity and mobility.

FATALITIES AGED MORE THAN 64 YEARS BY POSITION IN THE ACCIDENT
DEATHS AFTER 30 DAYS AVERAGE 2010-2014



DEATH RISK OF DRIVERS AND PEDESTRIANS AGED OVER 64 YEARS
DEATHS AFTER 30 DAYS PER MILLION OF DRIVING LICENSES OR INHABITANTS. AVERAGE 2010-2014



In 2014, 477 people aged 64 years or older died in a road accident, mainly drivers and pedestrians, which means 28.3% of all deaths after 30 days. The consequences of the accidents are especially serious from 74 years of age onwards.

The risk of dying in a road accident for people over 65 years of age grows substantially with age. From 70 years onwards, and especially after the age of 74, the risks are much higher than for the average population, both for drivers and pedestrians.



RACC Proposal

A growing population and a death risk above the average are lethal ingredients to redirect the fatality rates among elderly people, and consequently, the total number of victims. Therefore we have to act firmly in order to have an impact on the risk rate of people over 65 years of age, regardless of whether they are drivers or pedestrians, if we want to achieve the targets. And this is not an easy task, considering the current risk of dying in an accident with more than 65 years: 56 people per million of inhabitants, far beyond the average figure we intend to reach.

Therefore, RACC proposes:

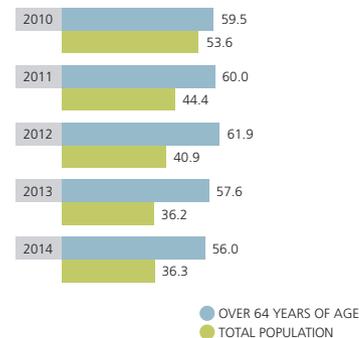
2 To find a better balance between autonomy and safety in the mobility of elderly people, promoting self-assessment tests that provide for orientation as regards the convenience of driving, and improving the rigour of the psychological and cognitive skill tests made on people aged 75 years or older.



FOCUS OF ACTION THE PEOPLE

The death risk among elderly people does not fall at the same pace as among the rest of the population.

DEATH RISK AT 64 YEARS OR OLDER
DEATHS AFTER 30 DAYS PER MILLION OF INHABITANTS



The bigger growth of the elderly population will be in the age groups with a larger potential for mobility.

PROJECTION POPULATION 65 YEARS AND OVER
THOUSANDS OF PEOPLE 2020 HORIZON





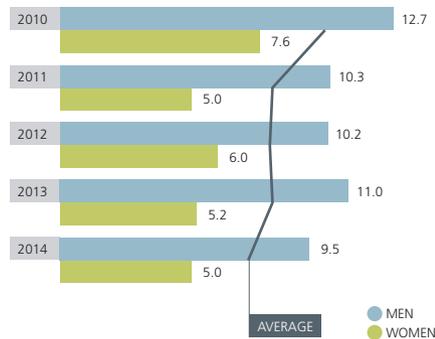
FOCUS OF ACTION
THE PEOPLE

Pedestrians, the fight against vulnerability

Pedestrians are among the most vulnerable users of the mobility system, and sometimes they are also reckless, just like the ones who hit them, in many cases. The number of pedestrians who have lost their life on the road has been reduced a lot in recent years, but the 336 people who died in 2014 (the lowest figure in history) are still a significant part of the total of victims: 19.9% of the total deaths after 30 days. As opposed to what should be expected, the fatality rate of pedestrians is not only an urban problem. Fatal accidents do also happen on open roads, to be precise, 40% of the pedestrian fatalities. In many cases, they are drivers who leave their vehicles in an emergency situation.

DEATH RISK AS A PEDESTRIAN

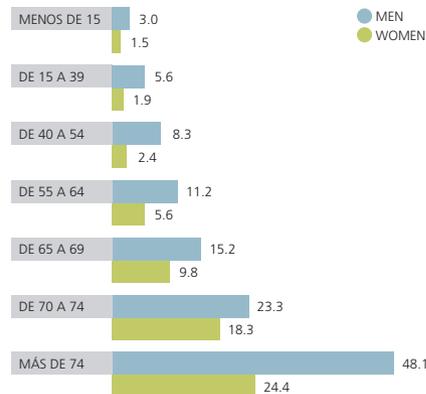
DEATH AFTER 30 DAYS PER MILLION OF INHABITANTS AND GENDER



The risk of dying as a pedestrian has been reduced significantly in five years, reaching the figure of 7.2 cases per one million inhabitants in 2014, and in the case of women, it is almost half as much as men.

DEATH RISK AS A PEDESTRIAN BY AGE

DEATH AFTER 30 DAYS PER MILLION OF INHABITANTS AND GENDER. AVERAGE 2012-2014



The risk of dying as a pedestrian is, for any age segment, higher among men than among women, and it grows exponentially with age. The higher fragility of the elderly may complicate the consequences of a hit, reaching limits that could not be reached by younger people.



FOCUS OF ACTION
THE PEOPLE



RACC Proposal

Pedestrians are among the most vulnerable and defenceless users in case of an accident involving a vehicle, motorised or not. Most of the times, fatalities result from the recklessness of drivers, but the recklessness of pedestrians, not respecting the regulations and even altering their perception ability, is often the cause of the accident as well.

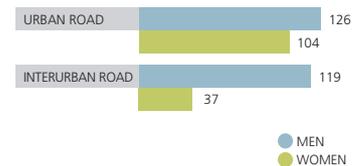
Pedestrians have been largely excluded from the priorities of road safety policies so far, and it is time for them to play the leading role they deserve.

Therefore, RACC proposes:

- 3** To carry out massive awareness raising campaigns especially aimed at men aged 75 years or older, especially in cities.

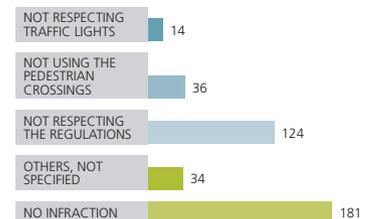
60% of pedestrians die in cities.

DEATH PEDESTRIANS BY ROAD TYPES
DEATHS AFTER 30 DAYS BY GENDER.
AVERAGE 2010-2014



Pedestrian do also commit infractions.

DEATH PEDESTRIANS AND INFRACTIONS
DEATHS AFTER 30 DAYS AVERAGE 2010-2014

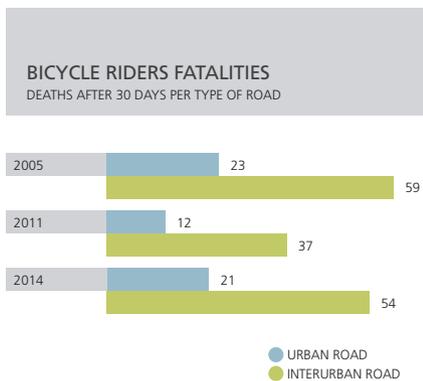




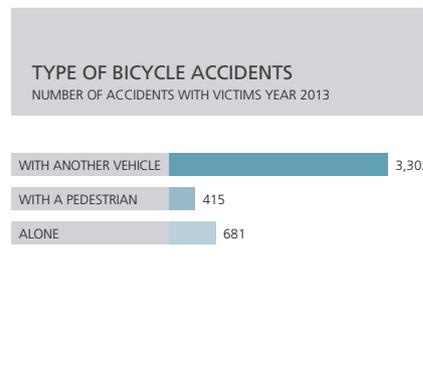
FOCUS OF ACTION
THE PEOPLE

Bicycles, an opportunity to be boosted

The bicycle is gaining significance within the framework of mobility, as a vehicle that is being used more and more, not only in the city, but also in the mountains and on open roads as a sports alternative. The fatality rate of bicycle riders is a problem with less relative significance, considering that the 75 road accident fatalities in 2014 meant 4.4.% of the total deaths after 30 days. However, as opposed to the general trend, the fatality rate of bicycle riders shows a noteworthy and alarming increase since the beginning of the crisis.



The fatality rate of bicycle riders is a growing problem, especially in the cities, although the number of victims on open roads is permanently more than twice as high as in the cities.



Bicyclists are vulnerable. 75% of the fatalities happen in accidents involving other vehicles. However, in certain cases, it is the bicyclist who is to blame, since in almost 31% of the accidents involving victims it was the rider who committed an infraction.



FOCUS OF ACTION
THE PEOPLE



RACC Proposal

The growing popularisation of the bicycle as a means of transport is a chance to improve the overall sustainability of mobility. But in order to achieve this, we have to make sure that there is going to be an adequate coexistence with the other road users: pedestrians, the most vulnerable, and those using motor vehicles, which may be dangerous for cyclists.

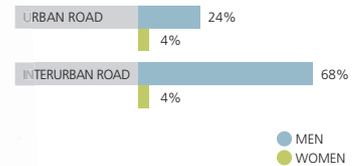
Therefore, RACC proposes:

- 4** Improving the infrastructure to make bicycle riding safer, opting for separated lanes, which are wide enough, whenever possible, and encouraging the implementation of one-direction cycle lanes to reduce the number of accidents with other road users.
- 5** Strengthening of the enforcement levels of the traffic regulations, in order to make sure that there will be a good coexistence of bicycles, pedestrians and motor vehicles, and to improve the safety demands for cyclists, especially as regards the use of helmets.
- 6** To progressively introduce a system of compulsory third-party liability, in line with other European countries.

92% of the dead cyclists are men.

DEATH CYCLISTS BY ROAD TYPES

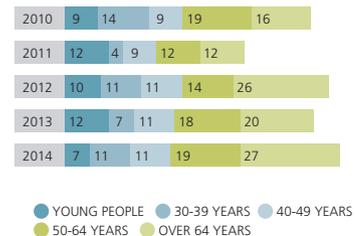
% BY ROAD TYPE AND GENDER. AVERAGE 2010-2014



More than 61% of the dead cyclists are over 50 years old.

BICYCLE RIDERS FATALITIES

DEATHS AFTER 30 DAYS BY AGE. 2010-2014

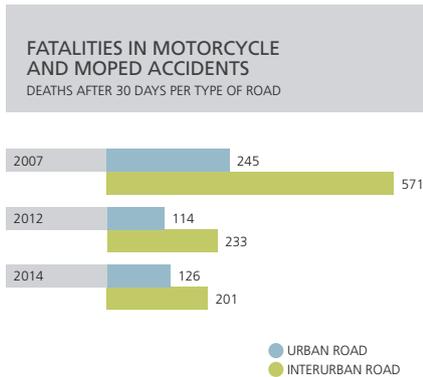




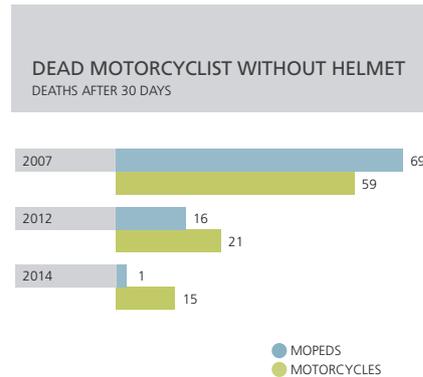
FOCUS OF ACTION
THE PEOPLE

Motorcyclists, a risk level that is still too high

The road accident rate of two-wheeled motor vehicles has a remarkable relevance, as it involves almost the fifth part of the fatalities. 327 people died in 2014, a total of 19.4% after 30 days. The percentage is higher than it was when the regulations were changed in 2004, allowing riding a motorcycle of up to 125cc three years after getting the B-type driving license. However, the overall figure of fatalities in 2014 was the lowest in history.



The city appears like an increasing risk scenario for motorcycles. Since 2012 the number of fatalities in the city has not stopped growing, as opposed to the situation on open roads, where there has been a gradual improvement.



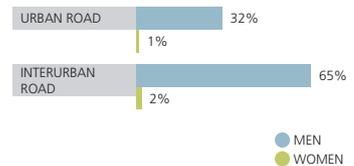
The improvement of the road accident rate balance in the case of motorcycles is attributable, among other factors, to the increased use of the helmet, which is not only due to the regulations which made the use compulsory in the early 1990s, but also to the awareness raising campaigns encouraging its use.



FOCUS OF ACTION
THE PEOPLE

97% of the motorcycle fatalities are men.

FATALITIES AS MOTORCYCLIST
BY TYPE OF ROAD
DEATHS AFTER 30 DAYS BY GENDER. AVERAGE
2010-2014



RACC Proposal

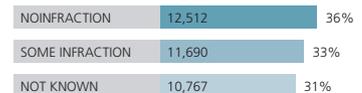
The reduction of the fatality rate among motorcyclists has been significant in recent years and there has been an advance in introducing preventive measures such as the use of helmets. However, the strong vulnerability of this means of transport compared to others, especially in the cities, the need of specific skills to ride a motorcycle as opposed to other motor vehicles and a more reckless attitude of the riders, turn the motorcycle into a particular means of transport that needs a particular treatment.

Therefore, RACC proposes:

- 7 To implement a selective system of partial exchange of fines for training courses to improve the attitude of drivers with a higher risk rate.
- 8 Implementing a low-cost ability-test for novice drivers B+3, monitoring the evolution of the accident rate of this groups much closer.
- 9 Awareness raising campaigns aimed especially at male adult motorcycle riders aged 40 years or more, who mainly drive on open roads.

Infractions, involved in 33% or the motorcycle accidents.

INFRACTIONS OF MOTORCYCLISTS
INVOLVED IN ACCIDENTS
YEAR 2014



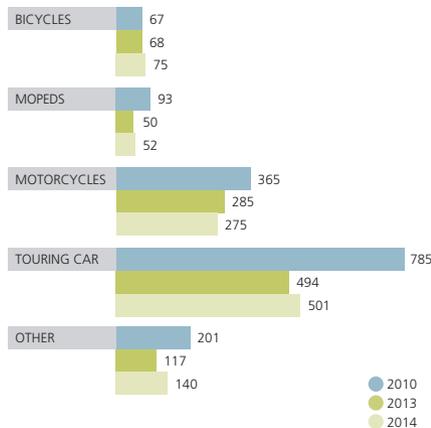


FOCUS OF ACTION
THE PEOPLE

Drivers, the core question

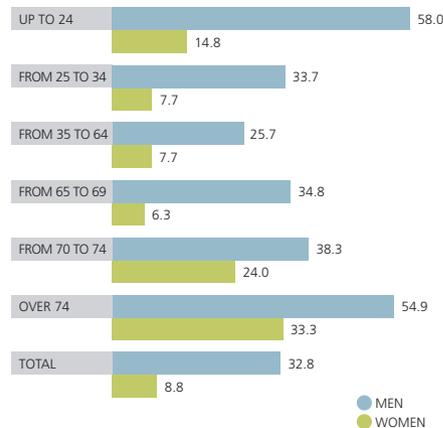
There is always a driver involved in the cause of a road accident, sometimes by chance, but usually as the cause. Drivers are most of the fatalities: 61.8% of the total deaths after 30 days in 2014, i.e. 1,043 people. 90% of them were men and 83% lost their life on interurban roads. The fatality rate among drivers has fallen a lot in recent years, as a consequence of a more responsible attitude by the people. However, since mid-2013, this trend has stopped, partly because of the increase in mobility.

**DEATH DRIVERS
BY TYPE OF VEHICLE**
DEATHS AFTER 30 DAYS

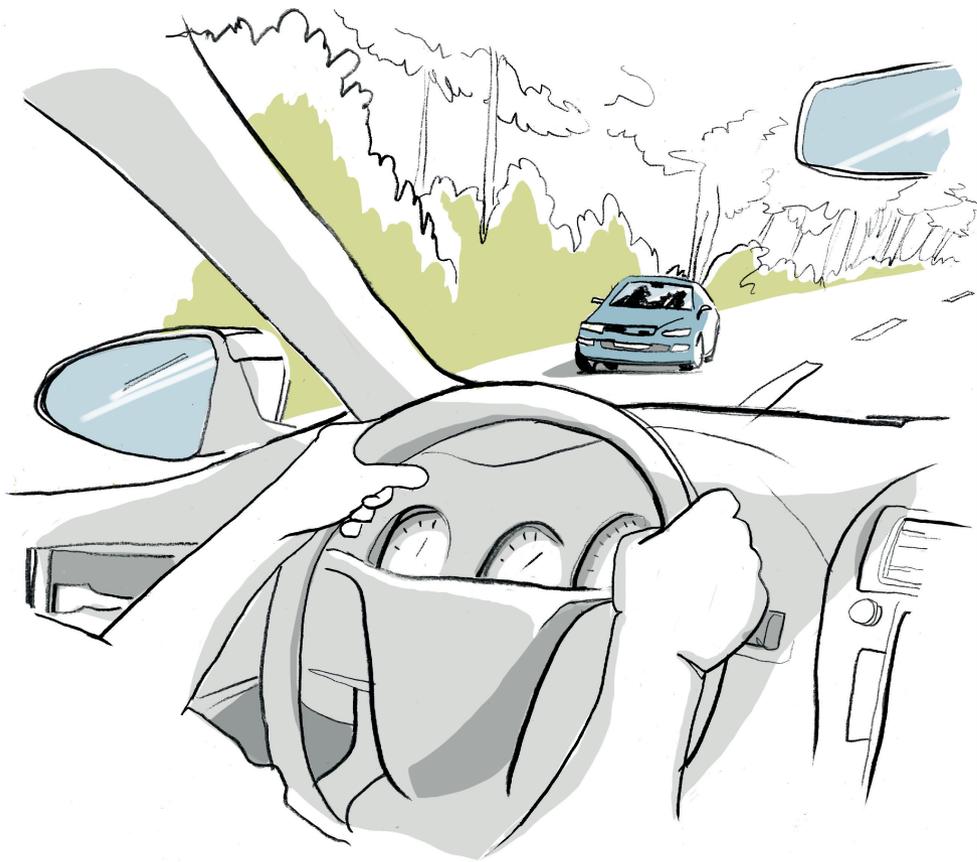


The increase of the number of dead drivers in 2014 was general for the different types of vehicles, except for motorcycles. Thus, the death risk of drivers increased to 39.8 cases per million driving licenses, but it was less that at the start of the decade (58.6 cases per million).

**DEATH RISK AS A TOURING CAR
DRIVER BY AGE**
DEATHS AFTER 30 DAYS PER MILLION OF DRIVING LICENSES AND
AGE. AVERAGE 2010-2014



The death risk rate for a touring car driver varies according to the age and especially the gender. The worst records are for young men and elderly people. Fatalities among bicyclists and motorcyclists are not included here, but their male percentage is huge.



RACC Proposal

Drivers are the core of the problem, although it is true that the risk level varies significantly depending on the gender or the age, there is a general margin improvement, both as regards the skills and the attitude of drivers when they take the wheel of a vehicle.

A regulated driver training cannot only be made during a certain moment of time (when getting the license). It has to be conceived as a continuous process, in which knowledge is updated and renewed periodically in time. This becomes even more important if we consider the fast inclusion of new technologies, which have a major influence on the way we drive.

Therefore, RACC proposes:

10 To establish a system of continuous training for drivers that will help them to improve their skills and attitudes at the wheel, as well as to move forward in the improvement of communication between traffic and health authorities to provide for a response that best adapts to the needs of the different groups of risk, always respecting the privacy of their personal data.

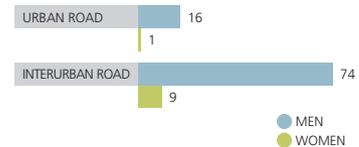


FOCUS OF ACTION THE PEOPLE

Men and interurban road, meeting points for a driver's death.

FATALITIES AS DRIVERS

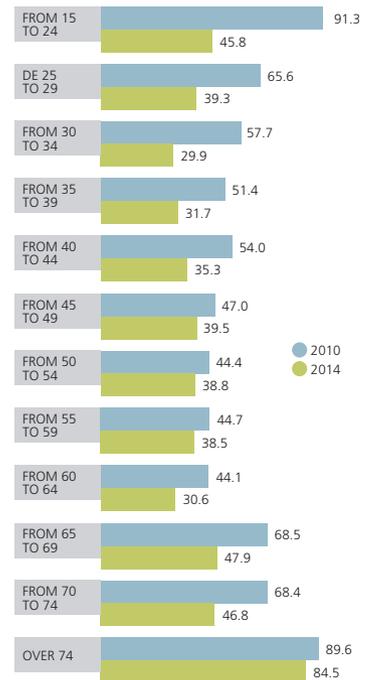
% BY ROAD TYPE AND GENDER AVERAGE 2010-2014



Elderly people have a higher risk as drivers.

DEATH RISK AS A DRIVER BY AGE

DEATHS AFTER 30 DAYS PER MILLION OF DRIVING LICENSES. YEARS 2010 AND 2014



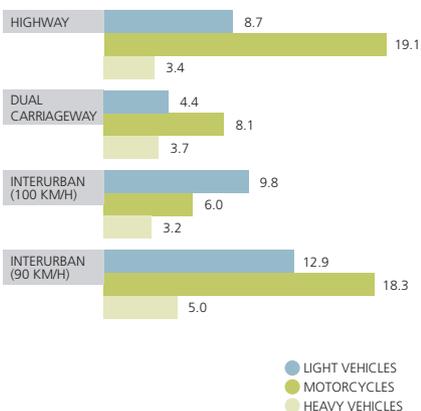


FOCUS OF ACTION
RISK FACTORS

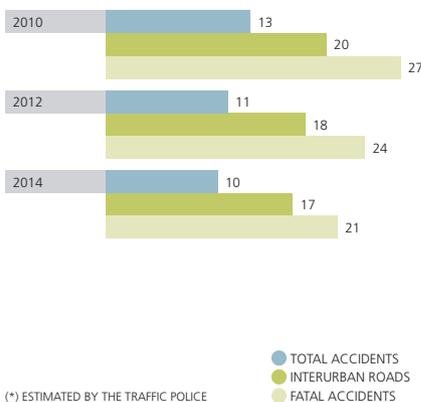
Speeding, in the spotlight of the most serious accidents

Speeding is still usual on Spanish roads and it is the cause of many accidents, especially those with the most serious consequences. Nevertheless, the significant fall of the fatality rate in recent years is also associated to a moderation of speeds, resulting both from the more responsible behaviour of drivers and the stricter enforcement. It is also true, however, that speeding is still a determining cause for too many deaths on the road.

VEHICLES THAT EXCEED THE LEGAL SPEED LIMIT BY MORE THAN 20 KM/H BY TYPES OF ROAD
% OF VEHICLES CONTROLLED DURING THE DAY. YEAR 2012



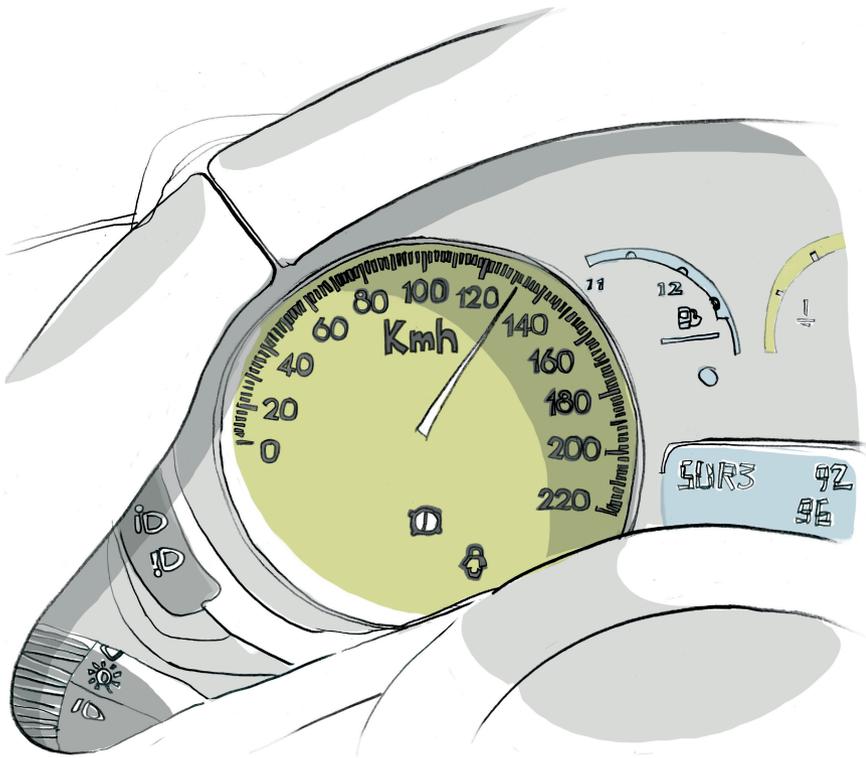
SPEEDING BY TYPE OF ACCIDENT*
% BY TYPE OF ACCIDENT IN SPAIN, EXCEPT CATALONIA AND THE BASQUE COUNTRY



(*) ESTIMATED BY THE TRAFFIC POLICE

The highest speeding is recorded on highways and conventional roads with a speed limit of 90 km/h. In general terms, the highest percentage of infractions are committed by motorcyclists; almost 20% exceed the legal limit by more than 20 km/h.

According to estimations made by the Traffic Police, speed has been losing significance as a direct cause of road accidents in recent years. Nevertheless, in 2014, this factor was identified as determining in 21% of the accidents involving fatal victims.



RACC Proposal

Speeding is defined as exceeding the legal limit established for each type of road. However, there is a difference between just exceeding the legal speed limit and exceeding it a way that can be considered as a serious or very serious infraction, which in certain occasions may be considered as an increase of the accident risk.

On the other hand, the general speed limit does not always coincide with the effective speed limitation due to the fix or variable signposting that may be established in certain places and at certain moments following non-specified criteria, which might partly explain the infringement degrees.

Nevertheless, and considering the capital importance of the need that drivers adjust their speed to the established limits and the traffic conditions,

RACC proposes:

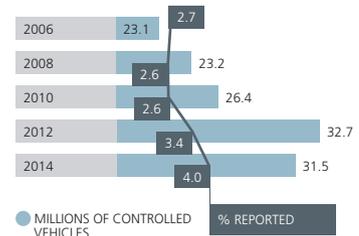
11 To make a systematic check of the speed limits, checking (to increase or lower) their coherence with the morphology of the road and the traffic it holds, improving the signposting.



FOCUS OF ACTION RISK FACTORS

Speeding reports are made to 4% of the controlled vehicles.

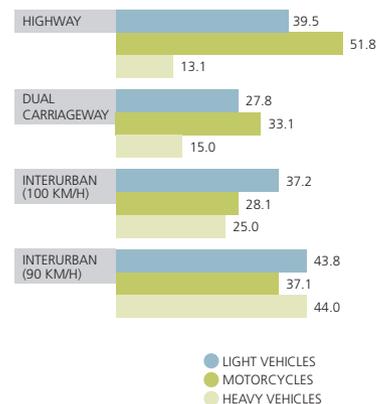
SPEED CONTROLS AND REPORTS MADE BY THE TRAFFIC POLICE* SPAIN, EXCEPT FOR CATALONIA AND THE BASQUE COUNTRY



*ATGC: TRAFFIC POLICE

Heavy infringement of the legal speed limits.

VEHICLES EXCEEDING THE LEGAL SPEED LIMIT BY TYPES OF ROADS % OF VEHICLES CONTROLLED DURING THE DAY, YEAR 2012



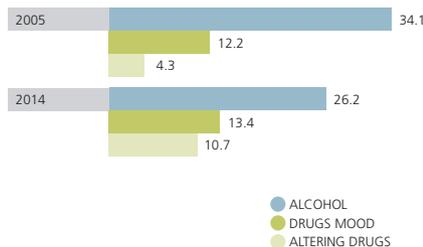


FOCUS OF ACTION
RISK FACTORS

Psychotropic substances, still too present in serious accident rates

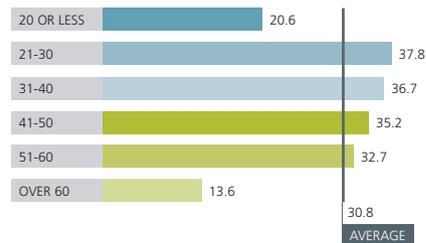
One of the most important risk factors in the field of mobility is the consumption of psychotropic substances, i.e. alcohol, drugs of different nature, mood-altering drugs or any combination of them, as they do change skills and attitudes of a person. And the truth is that the road accident rates are influenced by them, although it is difficult to know the true scope of the problem. Police controls on public roads provide us with information, as well as the information provided by the National Toxicology and Forensic Sciences Institute (INTCF), which analyses a high percentage (around 60%) of the fatal road accident victims, both drivers and pedestrians. In any case, these figures are an approach to the problem, and, above all, trend indicators.

CONSUMPTION OF EACH PSYCHOTROPIC DRUG, ALONE OR COMBINED WITH THE REST % OF DEATHS ANALYSED BY THE INTCF



According to the INTCF, 39.1% of the drivers and 44.1% of the pedestrians who lost their lives showed evidence of having taken psychotropic substances. Alcohol, alone or combined with drugs or mood-altering drugs, was the most frequent, as it affected 26.2% of the cases, followed by drugs (13.4%) and medication (10.7%).

DEATHS WITH POSITIVE BLOOD-ALCOHOL TEST BY AGE % OF POSITIVE TESTS OF THE TOTAL DEATHS ANALYSED AVERAGE 2010-2014



Alcohol as a factor for death is found in every age group and in similar percentages, except in extreme cases, although the latter figures may not be significant. Alcohol is especially lethal when the consumption levels are above 0.8 grams per litre of blood.

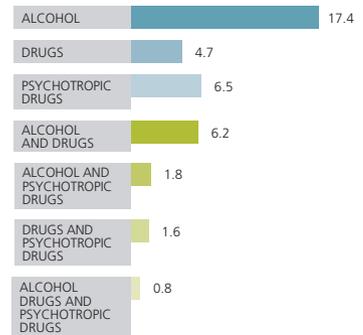


FOCUS OF ACTION RISK FACTORS

Alcohol, the most present substance in fatal victims.

PSYCHOACTIVE SUBSTANCES IN DEAD DRIVERS

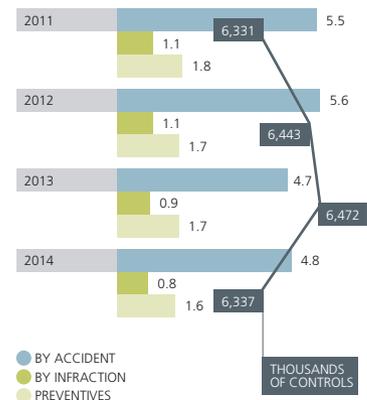
% OF DEATHS ANALYSED BY THE INTCF YEAR 2014



Less alcohol controls and stability in positive results.

ALCOHOL CONTROLS*

% POSITIVE ALCOHOL AN NUMBER OF CONTROLS



*CARRIED OUT BY THE TRAFFIC POLICE EXCEPT CATALONIA AND THE BASQUE COUNTRY

RACC Proposal

The consumption of psychotropic substances alters the perception and reaction skills of those who consume them, including their attitude facing risks. Both driving and walking need a state of consciousness and an attitude that are incompatible with the abuse of these substances.

In addition to continuing with the awareness raising campaigns alerting about the risks of psychotropic substances and driving, we should get deeper into the separation of alcohol and driving, which is the mostly used from all of the psychotropic substances.

Therefore, RACC proposes:

12 To implement the 0-alcohol rate for professional drivers and during the first two years of the driving license for novice drivers.



FOCUS OF ACTION
RISK FACTORS

Distraction, the most usual and treacherous risk

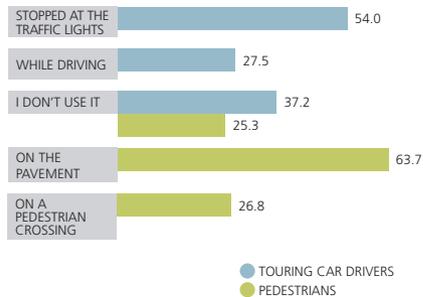
Distractions happen once a person or incident inside or outside the car calls the attention of the driver, who gets distracted from the task of driving. A distracted driver can have problems to control the sides, the speed, the safety distance or with the reaction time in case of something unexpected. Therefore, distraction is a risk factor, the most important of all, and probably the less noticed. There are many different types of distractions, but nowadays, the use of mobile devices is the most frequent.

DISTRACTION AS A DETERMINING FACTOR FOR ROAD ACCIDENTS BY TYPES OF ROADS
% OF DISTRACTIONS OF THE TOTAL NUMBER OF ACCIDENTS. YEAR 2014



Distraction was a determining factor in road accidents in 30% of the cases recorded in 2014 according to the Spanish Traffic Authority (DGT). The previous estimations, made by the Traffic Police, mentioned distractions as a concurrent circumstance but not necessarily determining, and the number of accidents in which distraction concurred was higher.

USE OF THE MOBILE PHONE AND INDIVIDUAL MOBILITY
% OF USERS ACCORDING TO THEIR SITUATION



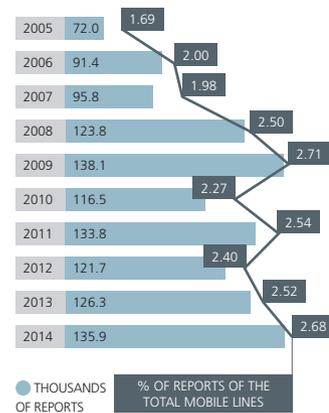
The mobile phone is a device largely used by drivers and pedestrians, even during the most critical moments of their mobility-related activity. Almost 30% declare to use it without a hands-free device while driving or crossing a road.



FOCUS OF ACTION RISK FACTORS

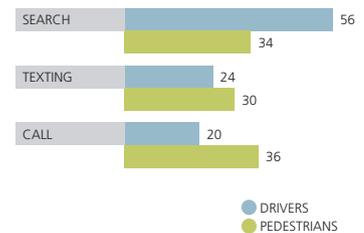
Reports for using the mobile phone increase

REPORTS FOR THE USE
OF MOBILE PHONES
THOUSANDS AND % OF REPORTS
OF THE TOTAL NUMBER OF LINES



Checking the mobile phone, the most frequent distraction.

THE USE OF THE MOBILE PHONE
BY FUNCTIONS
% OF POPULATION PERFORMING EACH ACTIVITY



RACC Proposal

A recent study by RACC showed how the use of the mobile phone, despite being a risk perceived by an immense majority of users, drivers or pedestrians, is almost inevitable in a surprisingly high number of cases, and in many cases, the use had been the cause of an accident or a mobility incident.

Reducing the impact of distraction on the road accident rate is a first order challenge. In order to tackle it, we have to continue with the awareness raising campaigns, warning about the danger of distractions, which have already been promoted by the administrations, involving telecom companies as well.

But, in addition, RACC proposes:

13 To promote the blocking of mobile phones while driving and to establish a certification system for apps that are compatible with driving vehicles which are connected to the Internet and smartphones.

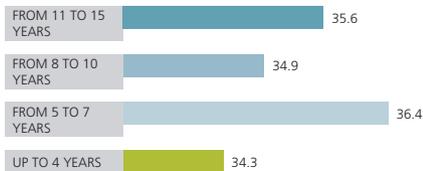


FOCUS OF ACTION
THE VEHICLES

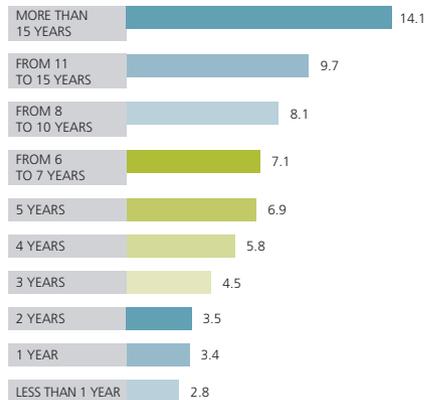
A modern vehicle fleet is safer

The constant innovation in the automotive sector has led to technological improvements that have made vehicles safer. Therefore, and regardless of personal factors or traffic conditions, newer cars do contribute to a safer system. The probability of an accident happening depending on the age of the vehicle is difficult to establish with rigour, as there is not enough information available. However, there is evidence that the older the vehicle, the higher is the probability that it will have some kind of anomaly that will have an influence on its risk to have an accident.

ACCIDENT RISK OF THE VEHICLE BY AGE
TOURING CARS THAT HAD AN ACCIDENTS PER 10,000 TOURING CARS. AVERAGE 2010-2014



% OF VEHICLES THAT HAD AN ACCIDENT WITH MECHANICAL ANOMALIES BY VEHICLE AGE
AVERAGE 2010-2014

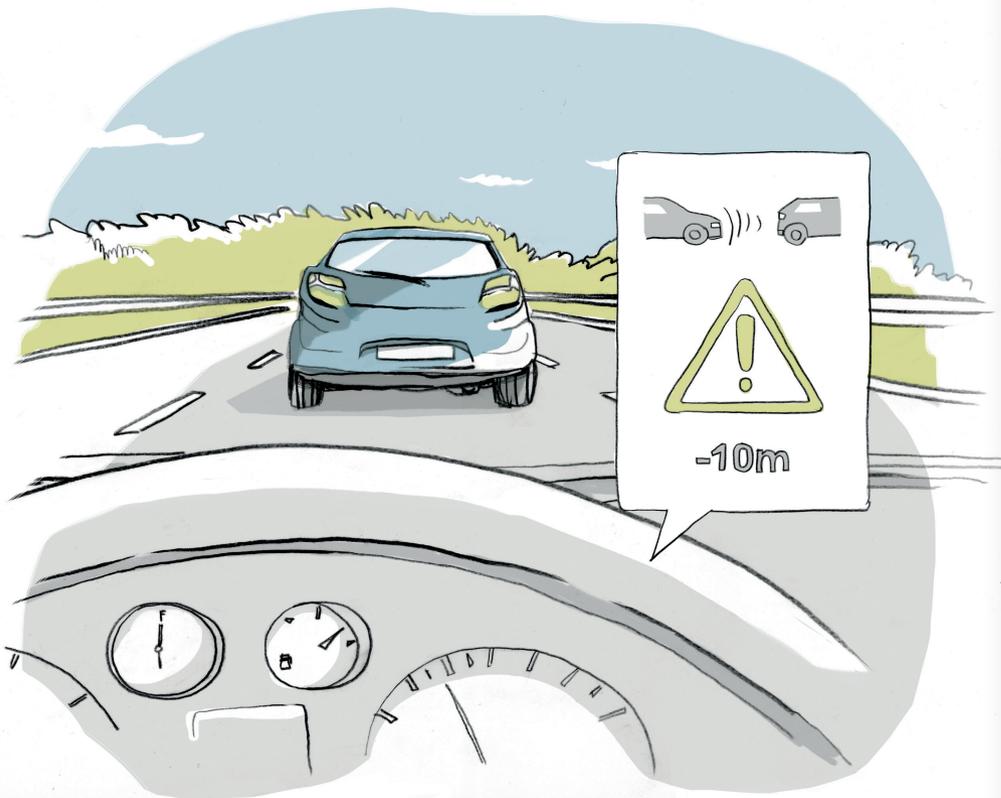


Newer touring cars have an apparent risk to have an accident with victims in 34.3 cases out of every 10,000, a figure that is not significantly different from the figure of older vehicles. Beyond the age of the vehicle, we have to consider other factors, such as the distances covered, in order to assess the risk of each of the vehicle groups.

The older the vehicle, the more mechanical anomalies they will have in case of an accident. This does not mean that the anomaly is the cause of the accident, but the age of the car does have an influence on the final quality of its maintenance and conservation. And this is obviously an additional risk.

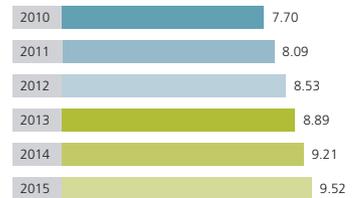


FOCUS OF ACTION THE VEHICLES



Strong ageing of the touring car fleet.

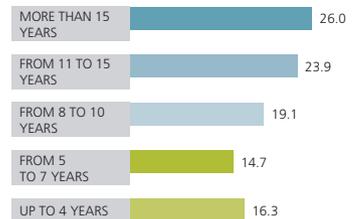
AVERAGE AGE TOURING CAR FLEET*
YEARS OF AGE



*TOURING CARS OF MORE THAN 20 YEARS ARE NOT INCLUDED.

Half of the touring car fleet is over 10 years old.

COMPOSITION OF THE TOURING CAR FLEET BY AGE
YEAR 2014



RACC Proposal

Considering that a vehicle fleet is safer the newer it is, and that in the case of Spain, the average age of touring cars has increased by almost two years in the past six years, reaching the figure of 9.5 years, due to the fall of the renewal degree, we need measures to revert this trend.

Likewise, we cannot give up on the implementation of the innovations that, as has already been proven, lead to an increase of the vehicle safety.

Therefore, RACC proposes:

14 To remove the registration tax in order to promote the renewal of the fleet focussing car taxation on the use and less on possession.

15 To promote at EU level that the automatic emergency braking system becomes compulsory as a standard in all new cars.

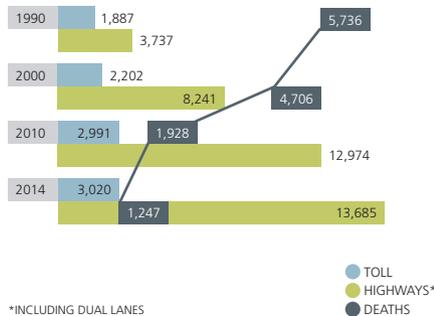
16 To make the use of ABS in motorcycles of less than 125 cc compulsory to improve safety, as it was made for motorcycles with a higher cylinder capacity starting from 2017.



Management and maintenance of infrastructures, a key for road safety

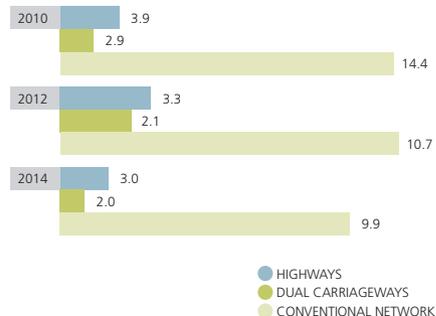
The improvement of the accident rate figures in Spain since the early 1990s is also related to the toll-free highways that in many cases replaced conventional dual carriageways. A quality infrastructure is a key for the system to work, but not the only one. Maintenance and adaptation of the network as regards the service needed by the traffic flow, efficient signposting and an active management of the road system are fundamental elements of the road safety map as well.

INTERURBAN ROAD NETWORK AND FATALITY RATE
KILOMETRES BY ROAD TYPE AND DEATHS AFTER 30 DAYS ON INTERURBAN ROADS



In 1990 the high-capacity roads, toll-free or not, had a total length of 5,624 kilometres and the fatal victims on the road were 5,736. In 2014, the high-capacity network had tripled (16,705 kilometres) and the fatal victims had been reduced to one fourth (1,247 on interurban roads).

DEATH RISK ON INTERURBAN ROADS
DEATHS BY THOUSANDS OF MILLIONS OF VEH-KM



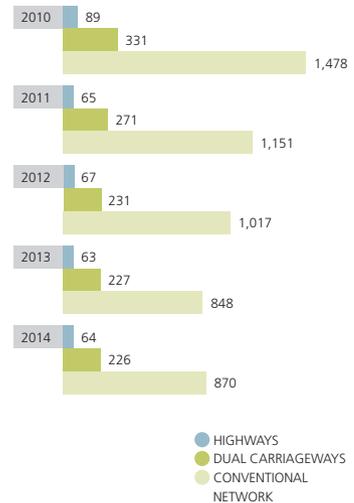
75% of the fatal victims on the roads happen on the conventional road network, where there is not only the largest part of the traffic, but also the highest danger rates. In 2014, the risk of dying on a conventional road by travelled kilometre was almost five times higher than on a toll-free highway and almost three times higher than on a toll highway.



FOCUS OF ACTION THE INFRASTRUCTURES

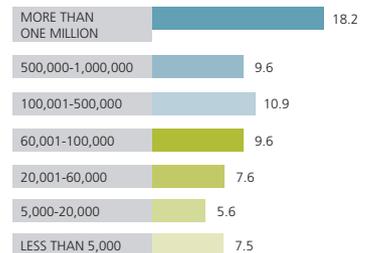
The conventional network records the highest number of victims.

FATALITIES ON INTERURBAN ROADS BY ROAD TYPES DEATHS AFTER 30 DAYS



Cities, the bigger, the more dangerous.

DEATH RISK IN THE CITY BY POPULATION CASES PER MILLIONS OF INHABITANTS



RACC Proposal

Considering that the accident risk is lower on fast roads than on conventional roads, measures have to be taken both to improve the quality of the conventional network and to manage the road system in an intelligent way. The improvement of the network quality is a wide concept related to the maintenance of the road, but also to an adequate management of the signposting. On the other hand, intelligent transport systems (ITS) have also turned out to be a decisive instrument as regards the improvement of the efficiency of the road network.

Therefore, RACC proposes:

17 To set as a target for 2020 that 80% of traffic travels on 3-star roads or more, thus involving a change in the paradigm of the maintenance policy, shifting from a reactive to a preventive approach.

18 A systematic policy to improve urban roads, adapting the infrastructure to the functional use of the road.

19 To compulsorily divert heavy traffic from conventional roads to highways on those sections in which both roads run parallel.

20 Implementing an integral and coherent signposting policy based on the performance of independent audits.

FOR
NEW ETHICS
IN MOBILITY

The mobility of the 21st century demands for new behaviour patterns. Safer infrastructures and vehicles are essential elements in order to achieve the road safety targets marked for the 2020 horizon and beyond. However, the essential pillars of road safety will continue to be **the people and their attitude** as regards mobility, regardless of whether they are drivers, pedestrians or passengers.

The personal attitudes are a reflection of the predominating system of values and it depends on multiple factors of social and cultural nature, especially **education** and the **response towards the regulation standards of the system**.

Facts show that, even in equal conditions, the risk of having an accident is much lower for women than for men, which leads to the conclusion, that the traditional role conferred to the genders may be a relevant explaining factor for the difference in the road accident rates of both genders. In some way, the feminine values of cooperation, prudence, respecting the rules or tolerance, do favour a safer mobility, as opposed to more competition-related behaviours, risk, playing down the rules or dominance, which are traditionally related to men.

Likewise the new mobility ethics has to become evident in the culture of the regulatory bodies. Rules are made to be complied with and authorities have to enforce them. However, the rules must be adapted to the demands of the system; they must be in line with the social situation and find the difficult balance between incentive and sanction.

We need new mobility ethics. From the perspective of attitudes, staking on the **feminisation of driving** seems to be a plausible alternative. From the perspective of regulations, the way are **incentives and re-education**, rather than economic sanctions, the magnitude of which are often out of proportion as regards the citizen's ability to generate income.

The challenge of the new mobility culture is for all of us: Administration, institutions related to road safety, and, obviously, the society. Promoting mobility ethics based on the values of personal, social and environmental responsibility, prudence and respect for each other, is the most direct way towards Vision Zero. This is the **safest way**.



www.fundacionracc.es