



The  
Motorcycle  
Industry In  
Europe



## The safe ride to the future 2.0

The motorcycle industry's commitment to road safety

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# Abbreviations

## NOTE

Throughout this document, all references to “motorcycles” must be understood as references to L-category vehicles (i.e. mopeds, motorcycles, tricycles, light- and heavy quadricycles). The term “motorcycles” has been retained for the sake of convenience.

ABS	Anti-lock braking system
ACC	Adaptive Cruise Control
ACEM	European Association of Motorcycle Manufacturers
ADAS	Advanced driver assistance systems
AEBS	Autonomous emergency braking systems
AMVIR	Association of Motor Vehicles Importers Representatives (Greece)
ANCMA	Association of Manufacturers of Bicycles, Motorcycles and Accessories (Italy)
ANESDOR	National Association of Companies in the Two-Wheeler Sector (Spain)
C2CC	Car-to-car Communication Consortium
CBS	Combined braking systems
DVR	Deutscher Verkehrssicherheitsrat. German Road Safety Council
HMI	Human-machine interface
IRTAD	International Road Traffic and Accident Database
ITF	International Transport Forum
ITS	Intelligent transport systems
IVIS	In-vehicle information systems
MAI	Motorcycle approach indication
MCIA	Motorcycle Industry Association (UK)
MoU	Memorandum of understanding
OECD	Organisation for Economic Cooperation and Development
PPE	Personal protective equipment
PTW	Powered-two wheeler
PZPM	Polish Automotive Industry Association
TCS	Traction control systems
TPMS	Tyre pressure monitoring systems
V2I	Vehicle-to-infrastructure
V2V	Vehicle-to-vehicle

# Foreword by the European Commissioner for Transport, Adina Vălean



The Communication “Europe on the Move – Sustainable Mobility for Europe: safe, connected and clean” of May 2018 has confirmed safety must always be the top priority. As mobility continues to grow and is radically transformed by digitisation, decarbonisation and innovation, all opportunities to further improve safety performance must be seized.

The EU’s roads safety record is very good, but the EU and its Member States cannot afford to be complacent and must continue to strive for fewer casualties. A fundamental long-term goal is moving close to zero fatalities in road transport by 2050, and the same should be achieved for serious injuries. The Communication has also set new interim targets of reducing the number of road deaths by 50% between 2020 and 2030 as well as reducing the number of serious injuries by 50% in the same period, as recommended in the Valletta Declaration.

To help achieve these goals, the Commission is proposing a common framework that must be implemented by applying a “Safe System” approach. The core element of a “Safe System” approach is ensuring safe vehicles, safe infrastructure, safe road use and better post-crash care.

For the Safe System approach to work, application and monitoring are essential to improve the safety of vulnerable road users in Europe, including of course motorcyclists. Experience shows that achieving these ambitious goals requires the engagement and the commitment of all public and private actors, in a coordinated manner, at all levels.

Against this background, I welcome the motorcycle industry’s road safety strategy “The safe ride to the future 2.0”.

The motorcycle industry’s strategy covers advanced safety technology and future connectivity, as one would expect from vehicle manufacturers. It also goes beyond the vehicle, covering high quality post-licence training and seeking cooperating with all important stakeholders at European and national level.

The industry initiative “European Motorcycle Training Quality Label” has been strongly supported by the European Commission. High-quality safety training is a fundamental element in the safe system approach. This is one of the reasons why the Label received the Road Safety Charter Award in the category “voluntary commitments”, in 2019.

We commend the commitment of ACEM and fully support the call to national, regional and local policy makers to embrace inclusive motorcycle transport safety policies. Let’s continue to work together towards better road safety for all on Europe’s roads.

A handwritten signature in blue ink, reading 'Adina Vălean'. The signature is fluid and cursive, with a large initial 'A'.

**Adina Vălean**

European Commissioner for Transport



# Foreword by ACEM President, Stefan Pierer



The latest OECD data<sup>1</sup> show that motorcycle safety in Europe has substantially improved over the last decades. The number of fatal accidents involving powered two-wheeler users decreased from 7,612 to 4,246 between 2000 and 2018, a reduction of 44%. In parallel, the fleet of powered two-wheelers has been constantly growing, from about 28.3 million vehicles in 2000 to 38.8 million in 2018, an increase of 28.1%.

Although these statistics are certainly encouraging, further efforts are necessary to reduce road fatalities and serious injuries to meet the safety targets set by the European Commission and the United Nations for the next decade. To this purpose, our industry is committed not only to manufacturing safe and advanced vehicles, but also to lay the groundwork for the future, through initiatives in connected mobility, high quality training and strong cooperation with key stakeholders. This document showcases some of our most important initiatives in the area of motorcycle safety.

However, industry actions alone will never be enough. We need to take a Safe System approach towards motorcycle safety, simultaneously addressing the human, vehicle and road infrastructure elements. A stronger level of engagement from the public and private sectors and civil society is needed.

We also need to continue promoting policies that enhance motorcycle safety not only in Europe but beyond. Our industry is actively supporting all initiatives within the International Motorcycle Manufacturers Association<sup>2</sup> leading to safe motorcycling.

A combination of all these efforts will be instrumental not just in making Europe's roads safer, but they will also help reap the considerable benefits that motorcycling brings to society such as, better access jobs and services through affordable mobility, reduced traffic congestion levels as well as sport, leisure and tourism enjoyment.

A handwritten signature in black ink, appearing to read 'Pierer', written in a cursive style.

**Stefan Pierer**  
ACEM President, CEO of KTM AG

<sup>1</sup> The International Road Traffic Accident Database is an OECD initiative. It collects international accident, victim and exposure data on a continuous basis. 29 OECD countries, including 17 EU Member States, are covered in the database.

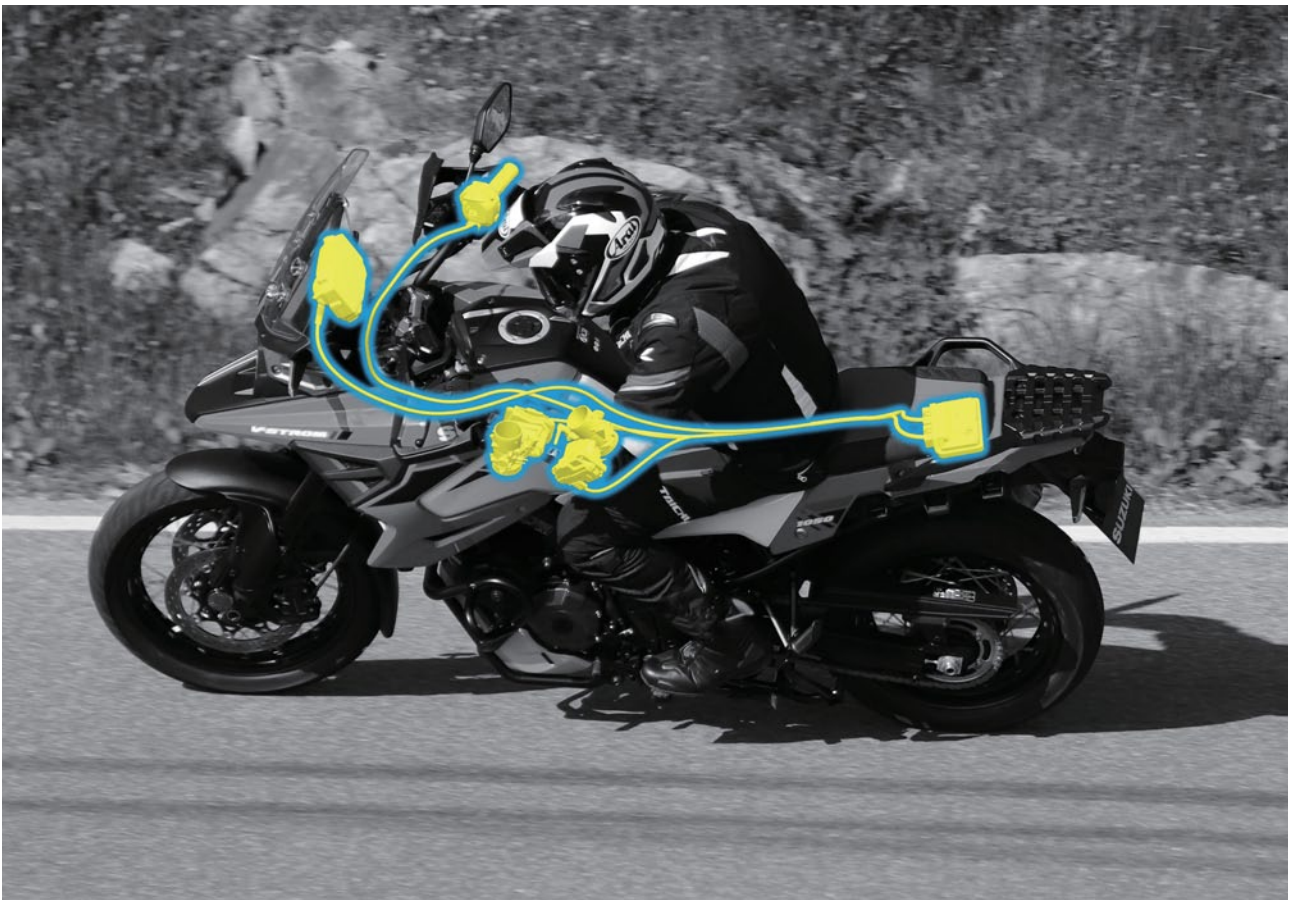
<sup>2</sup> IMMA is the association which represents the manufacturing industry of powered-two wheelers at the global level. The association deals with a wide range of areas including global technical regulations, road safety policy, and vehicle construction requirements.

# A long-standing commitment to road safety

The vehicles manufactured by ACEM members have already reached high levels of safety standards. Further to this, the motorcycle sector continues to invest in R&D operations to bring to market safety technologies that facilitate the integration of motorcycles into the transport system.

## Stopping right in time

As signatories of the European Road Safety Charter since 2004, ACEM members committed to progressively equip their street models with advance braking systems (ABS and/or CBS). Moreover, the motorcycle industry supported the introduction of ABS for new motorcycles over 125cc, by progressively introducing very significant number of models with ABS well before the requirements was mandated. Several ACEM members have decided to use ABS as a standard for all their models. The sector has also developed a wide range of technologies that can operate individually or in combination with others, such as cornering ABS, rear wheel lift-off protection, automatic brake force distribution, amplified braking systems and brake by wire.



Traction control systems help riders accelerate, brake and steer properly, efficiently making riding safer and easier.

## Seeing and being seen

Being detected by other road users is critical in motorcycle accident prevention. To make visual vehicle detection easier, ACEM members committed to equip all their vehicles with automatic headlamp on technology (AHO) as of 2003. Daytime running lights (DRL) and amber position lights (APL) are also used by the industry to make motorcycles more detectable for other road users.

Other relevant technologies available on the market include polyellipsoid headlamps, full LED lights (headlights, taillights and indicators), projector headlights and adaptive lights which automatically adjust headlights to curves, making night driving considerably safer.

## Suspension and stability systems

High-performing suspension systems allow vehicles to adapt to different road surface conditions. They are also necessary for smooth handling and braking, and to keep riders isolated from road bumps. Over the years motorcycle manufacturers have developed a wide range of innovative vehicle suspensions systems for different motorcycle usages.

They include electronic suspension systems, speed-sensitive electronic steering stabilisers, semi-active suspension systems (which adapt the response of the suspension to road conditions, vehicle speed and driving style) and self-regulating suspensions. All these systems allow maximum stability and increase users' control of the vehicle.



Vehicle stability systems combine stability control, traction control, ABS and dynamic power steering to improve the safety of the rider.



## Rider assistance systems for motorcycles

Rider assistance systems prevent accidents and contribute to collision reduction by supporting the riders in critical situations. They also enhance enjoyment and convenience by making life easier for riders. Relevant examples include: traction control systems (TCS), tyre pressure monitoring systems (TPMS), electronic adjustable suspension, electronic cruise control, gear shift assistant, fuel economy assistant, proximity activation systems (i.e. keyless riding systems), in-vehicle navigation systems, adjustable vehicle riding modes, side view assist, automatic stability control, etc.

It is important to understand that many advanced driver assistance systems were initially engineered for cars. However, they can be potentially dangerous if applied to motorcycles without a dedicated approach. This is why ACEM members work on specific engineering solutions for rider assistance technology.

## Advanced rider assistance systems: outlook

Recently some manufacturers have developed devices that provide for adaptive cruise control, forward collision warnings and even blind spot detection, all of which will contribute to increase the level of safety for motorcyclists.

The technology underpinning these systems is a combination of radar sensor, brake system, engine management and HMI (human machine interface). Some motorcycle manufacturers will include the new rider assistance systems in their models as of 2020.



Blind spot detection technology will contribute to increase the level of safety for motorcyclists across Europe.  
Copyright: Continental

## Looking into the future: connected, cooperative and automated mobility

In recent years, mobility has increasingly become more connected and automated. Vehicles that can communicate with each other and with the road infrastructure are reshaping the way people travel, making transport safer, more accessible and more sustainable. At the same time, technological progress creates important challenges that must be met.

### Cooperative Intelligent Transport Systems

One of the most frequent human errors in accident situations is failure to see motorcycles within traffic, either due to the driver's lack of attention, temporary view obstruction or low conspicuity of the motorcycle. This issue can be addressed by Cooperative Intelligent Transport Systems (C-ITS) which provide "digital conspicuity" to surrounding vehicles by warning drivers of oncoming motorcycles.

The motorcycle industry sees vehicle to vehicle (V2V) communication as a technology with a high potential to improve road safety across the EU and to lead to better integration of motorcycles in the transport system.

ACEM members have participated together with relevant national authorities in several road safety campaigns. These campaigns have focused on encouraging drivers to look for motorcyclists on the road. This is particularly important given that a high number of collisions are caused by car drivers noticing very late or even completely overlooking riders. Safety campaigns have also focused on the promotion of voluntary post-license training and of conspicuous and protective gear among riders.



Connectivity between vehicles would allow the possibility to warn drivers and riders of potentially dangerous situations. Source: Autotalks Ltd.



## From the Memorandum of Understanding on C-ITS to the Connected Motorcycle Consortium

In March 2014, the motorcycle industry adopted a Memorandum of Understanding on C-ITS. The objective of this MoU was to coordinate the deployment by industry players of safety relevant C-ITS technology on motorcycles in the European market. The Memorandum is an expression of individual and collective commitment of ACEM manufacturing members to realise a shared objective to the benefit of everyone.

In 2015, building on the MoU on C-ITS, motorcycle manufacturers, suppliers, researchers and associations joined forces to create the Connected Motorcycle Consortium (CMC)<sup>1</sup>. The main objective of this R&D platform is to define common basic specifications for motorcycle ITS in areas such as: triggering conditions, localisation accuracy, algorithms and communicated data, as well as rider interface and antenna performance.

These are very challenging problems from a technical standpoint. Specific engineering solutions are needed because ITS developed for cars are simply not transferable to motorcycles due to the differences in vehicle and dynamics. Basic specifications for an ITS motorcycle system are what CMC is trying to achieve, by focusing on evaluation, verification and requirements standardisation.

The CMC has made significant progress in this area and breakthrough results have been achieved in motorcycle approach indication, motorcycle approach warning and Day 1 applications<sup>2</sup>.



Established in 2016, the Connected Motorcycle Consortium brings together OEMs, suppliers, researchers and associations to make motorcycles part of the future of connected mobility.

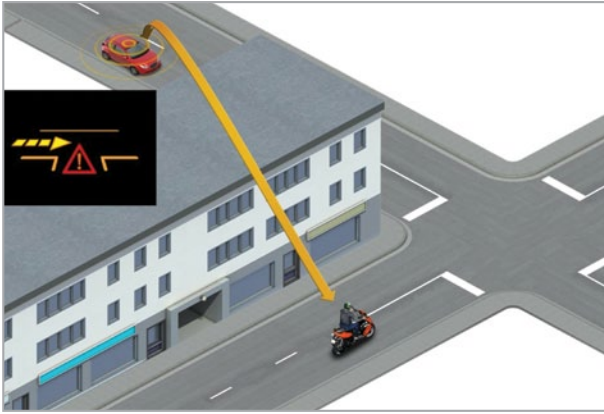
<sup>1</sup> [www.cmc-info.net](http://www.cmc-info.net)

<sup>2</sup> <https://www.cmc-info.net/safety.html>



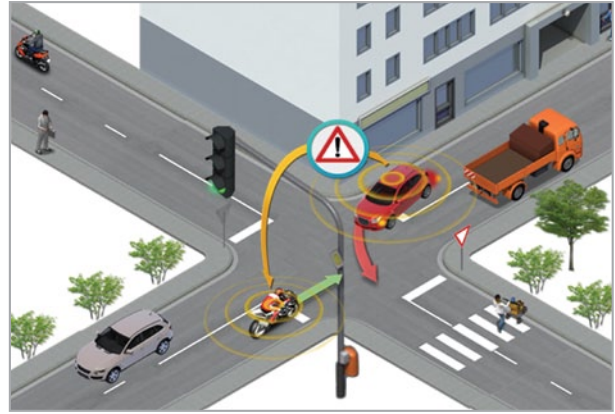
## Use case scenarios developed by the CMC

The CMC is working on around 30 'use cases' in which connectivity between vehicles would allow the possibility to warn drivers and riders of potentially dangerous situations. The use cases include motorcycle approach indication and warning features which help other vehicle drivers to detect motorcycles. The use cases also include dedicated applications for motorcyclists.



### Motorcycle approach indication

MAI informs a vehicle driver that an approaching motorcycle is nearby, even if the driver cannot see the motorcycle.



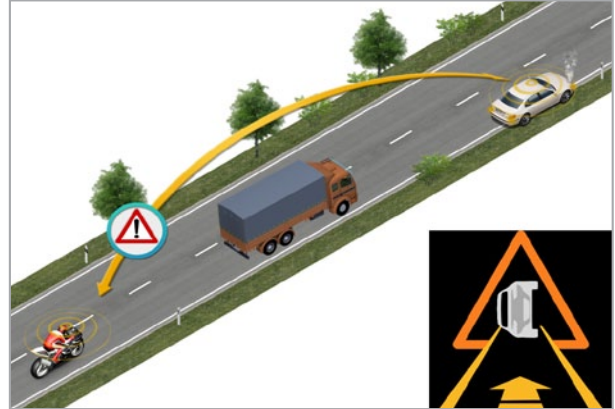
### Motorcycle approach warning (left turn assist)

MAW checks if vehicle drivers overlook an oncoming motorcycle, or incorrectly estimate its speed. It displays a warning to the driver if necessary.



### Adverse weather warning

AWW warns the rider about critical weather conditions ahead, particularly when they are hard to perceive in advance: fog, wind gusts, black ice, heavy rain etc.



### Broken down vehicle warning

BDVW warns that the motorcycle rider is approaching a vehicle with a defect that might be blocking a lane creating a potential safety risk.

Image source: C2C-CC toolkit

## Creating the conditions for market uptake of C-ITS

Certain C-ITS solutions may be suited for some types of models but not for others. Manufacturers implement technical solutions and optional features according to their vehicles' needs, within a competitive business environment, ensuring that core functions and interoperability are preserved. The industry is also committed to guarantee that safety related C-ITS are interoperable between motorcycles and other vehicles.

C-ITS equipped motorcycles will soon hit the European roads, but in order to ensure market uptake it is essential to complete ongoing standardisation activities, validation and field operational tests. Cooperation with other players, including the automotive sector, infrastructure organisations and public authorities, especially with regard to investments in infrastructure and the deployment of a clear legal framework.

## Cooperating with stakeholders in the field of C-ITS

ACEM works with stakeholders to ensure the successful deployment of ITS solutions in many ways. The industry actively participated in the European Platform for the Deployment of C-ITS, as well as in the newly established Single Platform for open road testing and pre-deployment of cooperative, connected, automated and autonomous mobility (CCAM) to make sure that motorcycles are considered in the pre-deployment scenarios.

Moreover, ACEM manufacturers have worked together with the car industry on a number of research projects aimed at developing V2V and V2I applications, such as the FP6 project Safespot, the CAR 2 CAR Communication Consortium, the SIM-TD and the Drive C2X projects.

Some ACEM members took part in demonstrations and test operational fields, such as 5GAA C-V2X Workshop and Demonstration Paris 2018, the Large Vehicle Alert System demonstration with CLAAS and "Automobile - Motorcycle" demo communication via C-V2X technology, at the last ITS World Congress.

## Towards an eCall system for motorcycles

As of 31 March 2018, all new models of cars and light commercial vehicles (M1 and N1 categories) must be equipped with 112 based eCall systems, emergency call devices that automatically alert rescue services in case of a car crash. eCall systems represent an opportunity to increase safety also for motorcyclists, that is why the industry is actively working to prepare the ground for its future deployment.

Between 2014 and 2017, some OEMs participated in the European project I\_HeERO, to investigate how an eCall system for motorcycles would work. The I\_HeERO project concluded that an eCall for two- and three-wheeled vehicles significantly differs from the one used in passenger cars. The project also defined the minimum requirements for a motorcycle-specific eCall system, embedded in the vehicle.

## The need for adequate and motorcycle-specific standardisation

On the basis of I\_HeERO project recommendations, the industry worked together with public authorities to adapt the existing CEN standards. As a result, CEN/TS 17249-5 (“eCall for UNECE Category L1 and L3 powered two-wheeled vehicles”) and the CEN/TS 17249-6 (“eCall for UNECE Category L2, L4, L5, L6 and L7 tricycles and quadricycles”) were published in 2018.

The current CEN technical specifications for eCall devices for motorcycles are now being assessed within the framework of the sAFE project, sub-activity 3.3. This EU-funded initiative brings together industry players and Public Safety Answering Points (PSAPs) to carry out real tests of the two CEN technical specifications mentioned above. At the end of the project, the consortium members will make concrete proposals to improve the current standards.



As part of the sAFE project, motorcycle companies and Public Safety Answering Points (PSAPs) are carrying out real tests of the two CEN technical specifications for motorcycle eCall devices.

3 The sAFE project runs between January 2019 and December 2020. The project partners are BMW Motorrad, KTM, Piaggio, Yamaha, Kawasaki (full partners); and BRP, Harley-Davidson, Honda, Suzuki, Triumph, and ACEM (associated partners).



## Ensuring that ADAS and future automated cars are safe for all road users

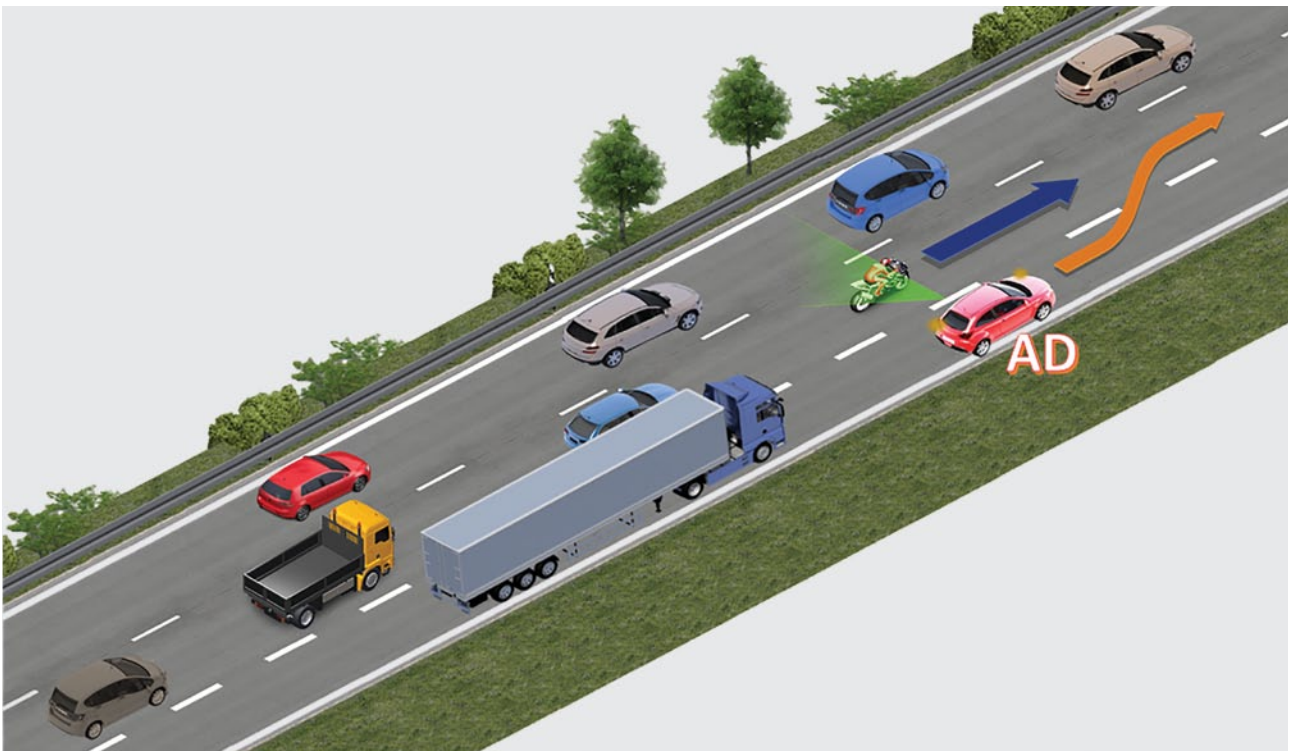
Cars equipped with ADAS (advanced driver assistance systems) are able to detect larger objects, with a defined or standardised shape, such as cars, trucks and traffic signs. However, the detection of smaller dynamic objects such as motorcycles still presents challenges to sensors and algorithms, just as it presents challenges to human perception.

Therefore, automated systems should significantly improve the detection rate of motorcycles. Statements such as, “the system may not detect small vehicles like motorcycles”, that can be found nowadays in some driver handbooks, are simply not acceptable from a safety point of view

Vehicles of automation level 3, expected to be introduced in the near future, will have to be able to recognize the complex manoeuvres commonly undertaken by motorcycles in ordinary traffic (e.g. lane utilisation, lean for cornering, lane splitting and weaving in traffic, etc.). Regardless of their degree of automation, passenger cars and other vehicles must be able to recognize motorcycles and their inherent complex manoeuvres and react accordingly.

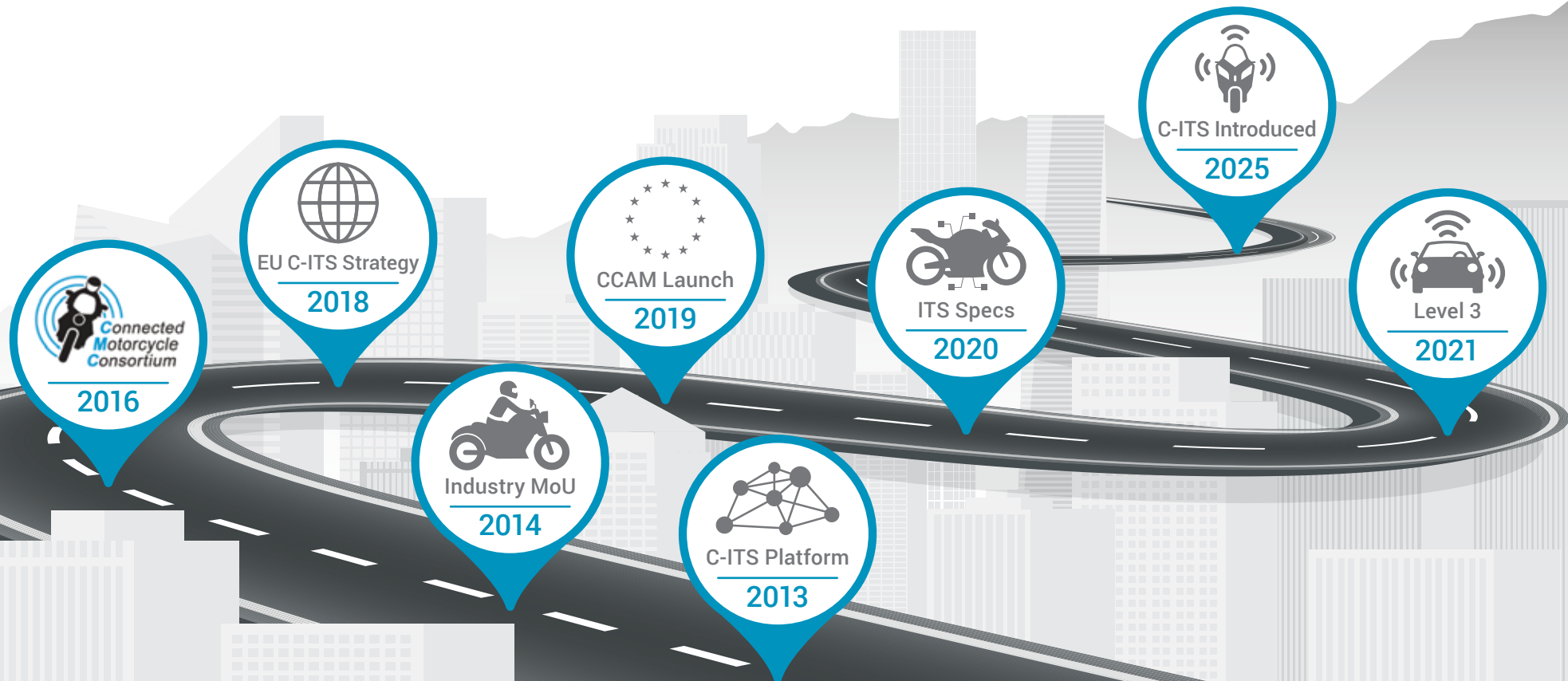
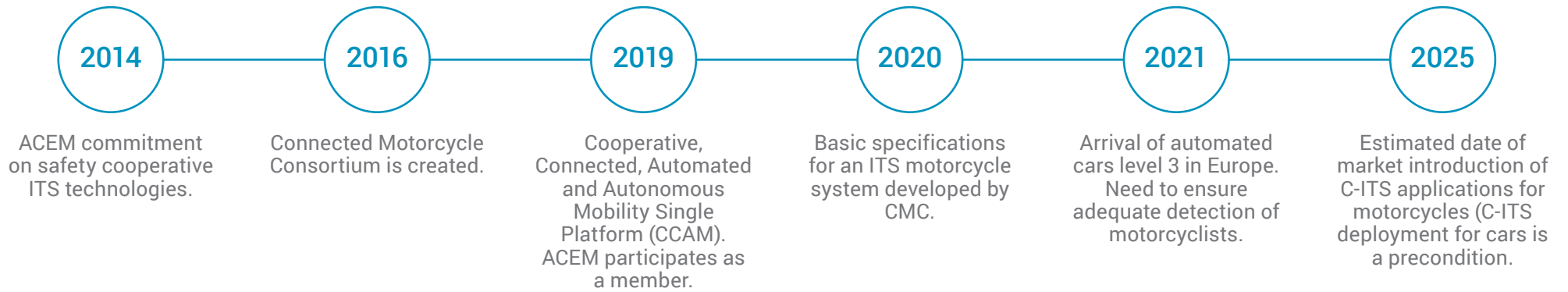
The motorcycle industry calls on policy makers to address this safety issue as a matter of urgency. Advanced drivers’ assistance systems and future automated cars must be able to identify and react to motorcycles in a safe manner.

Moreover, both the car and motorcycle industries must learn from each other and continue to cooperate in order to increase safety for all road users. A good example of this cooperation is the MUSE project, implemented in 2019 by UTAC-CERAM. ACEM was involved in this initiative which defined specifications that a target must meet to be considered representative of motorcycles. The project also developed testing tools for the evaluation of the sensors’ performance and testing protocols.



Automated systems in cars that handle lane changes but do not detect motorcyclists can result in serious road accidents. Image source: C2C-CC toolkit

## Milestones in the deployment of C-ITS solutions for motorcycles



## Motorcycling as a mobility solution. The need for more tailored safety policies.

Motorcycles are a solution to many transport and traffic challenges, particularly in urban settings. They offer real benefits in terms of reduced road congestion, improved air quality and affordable commuting. They can also help national, regional and local governments to meet strategic transport policy objectives.

### The case for specific motorcycle safety strategies

European Union rules on type-approval of L-category vehicles are directly enforced by national administrations and strictly followed by the European motorcycle industry. This results in very high safety standards of all vehicles circulating in the EU.

In spite of this, considerable disparities in terms of road safety remain between EU Member States, as the ETSC (European Transport Safety Council) and the European Commission have pointed out on several occasions<sup>4</sup>. The difference in safety levels for motorcyclists across the EU requires tailored and efficient motorcycle safety national strategies and specific interventions at national, regional and local levels.



Exchanges between policymakers and industry representatives are instrumental in improving motorcycle safety across Europe. In 2017 ACEM and ANESDOR organised a joint conference on motorcycle safety in Barcelona.

<sup>4</sup> See for example: European Commission. Road safety in the European Union. Trends, statistics and main challenges. Brussels, 2018. [https://ec.europa.eu/transport/road\\_safety/sites/roadsafety/files/vademecum\\_2018.pdf](https://ec.europa.eu/transport/road_safety/sites/roadsafety/files/vademecum_2018.pdf)



## The importance of motorcycle friendly infrastructure

The quality of infrastructure is a vital element of road safety. Carelessly designed- or poor-quality vehicle infrastructure can not only damage vehicles but also put road users at risk. In order to make transport infrastructure friendlier to powered two-wheelers, ACEM members have developed, in collaboration with other stakeholders, specific infrastructure guidelines<sup>5</sup>.

Further examples of best practices in infrastructure management can be found in the FEMA-ERF paper “Improving infrastructure safety for motorcycles”, which highlights the benefits of implementing cost-effective solutions for motorcyclists (e.g. adapted guardrails, use of skid resistance pavement, ensuring adequate maintenance of roads surfaces, etc.)<sup>6</sup>.

In order to increase riders’ safety in urban areas, the motorcycle industry has advocated for adapting infrastructure (e.g. pedestrian crossings with less paint to prevent skidding, to convert the first car parking space before a pedestrian crossing into motorcycle parking spaces to increase the visibility, advanced stop lines, etc.) as well as allowing the use of bus and taxi lanes.

Currently, motorcycle access to taxi or bus lanes is allowed in several European cities including: London, Birmingham, Madrid, Malaga, Cordoba, Seville, Athens, Thessaloniki, Genoa, Bologna, Venice, Stockholm, among other European cities.



More and more European cities allow motorcycles to use taxi and bus lanes. Copyright: Transport for London

<sup>5</sup> The ACEM “Infrastructure Guidelines Handbook” was prepared by industry experts, road and traffic engineers, and urban planners. They are available at <http://goo.gl/6uYe1D>.

<sup>6</sup> [http://www.fema-online.eu/website/wp-content/uploads/documents\\_library/ERF\\_FEMA\\_position\\_ptw\\_infra\\_2018.pdf](http://www.fema-online.eu/website/wp-content/uploads/documents_library/ERF_FEMA_position_ptw_infra_2018.pdf)

## Adapting protective equipment to different needs

Personal protective equipment (PPE) varies depending on the type and use of a vehicle. Riders who use their vehicle in a urban environment require different protective gear to those who drive more powerful motorcycles in rural environments, at higher speeds or in off-road activities. As of 2016, the new EU Personal protective equipment regulation introduces a modular approach towards PPE, allowing riders to select garments according to their size, comfort and level of activity.

The motorcycle industry actively encourages riders to wear appropriate safety gear by promoting initiatives such as campaigns offering back protectors with new motorcycle purchases or distributing tens of thousands of back protectors all over Europe. These efforts are also supported by national industry associations, which work closely with clothing manufacturers, insurance companies and national administrations. As an example, in 2019 the French association CSIAM together with the French Ministry of Interior and other stakeholders signed the “Airbag Charter”, with the aim to promote the use of airbag vests.

Further to this, the motorcycle industry has continued to carry out research with equipment manufacturers that has led to the development of new protective equipment products, including special clothing designed for hot climates and airbag jackets. Some motorcycle manufacturers have even designed and developed their own protective equipment, addressing riders’ specific needs.

Moreover, the industry has been one of the main contributors to the technical work in PPE done at the European Committee for Standardization (CEN). Industry efforts were instrumental in developing the EN 17092 standard for motorcycle rider protective clothing. This represents a major step in the development of high quality modular personal protective equipment for riders.

Also, the industry has contributed to the development of a new and better helmet standard. The Regulation ECE R22.06 will result in more resistant and safer helmets.



As of 2016, the new EU Personal protective equipment regulation introduces a modular approach towards PPE, allowing riders to select garments according to their size, comfort and level of activity.

## Working together with national authorities to achieve better road safety results

Countries such as Sweden, Spain, Norway and the Netherlands have set up national motorcycle safety strategies that have helped them to achieve high motorcycle safety levels. Conversely, countries that adopt restrictive policies or simply ignoring motorcycling reduce awareness from other road users and put riders at higher risk.

In 2017 and 2018 ACEM organized a round of motorcycle safety events in Barcelona, Madrid, Warsaw, Milan and Paris to raise awareness about the importance of safety policies targeting motorcyclists. These meetings brought together experts from different organisations including public authorities from the ministries of transport and infrastructure, law enforcement authorities, representatives from different user organisations, road safety non-governmental organisations, transport research institutes and insurance companies.

The main objective of these events, which built on the work done in 2015<sup>7</sup>, was to exchange experiences and good practices, and to identify opportunities for safety improvement, rather than prescribing off-the-shelf actions. Some of the key topics covered during the meetings included: motorcycle training, national regional and local motorcycling safety plans, infrastructure design and maintenance and enforcement of traffic regulations.

Several initiatives to improve motorcycle safety have been adopted as a result of this dialogue between key stakeholders. Other actions, although not directly a consequence of this country-specific approach, are fully supported by the sector.

## Examples of initiatives to improve road safety across the European Union

**Germany.** In 2015, with the support of the German Ministry of Transport, the Industry association IVM has started the “Motorcycling but safe” project on the Facebook community platform named “VivaLaMopped”, which developed into an online encyclopedia on motorcycle safety for riders and professionals.



A good example of the material available on the “VivaLaMopped” platform is a series of 12 episodes on advanced rider assistance systems that achieved 6 million views.

<sup>7</sup> In 2015 ACEM organized motorcycle safety workshops in five large European cities: Athens, Madrid, Milan, Paris and Warsaw



**France.** The Directorate for Road Safety and Traffic launched a pilot programme that will run until 2020 and that allows motorcyclists to split lanes under certain conditions. The goal is to assess whether this practice can enhance traffic fluidity whilst improving motorcycle safety.

**Greece.** AMVIR, the Greek motorcycle industry association, supported the Ministry of Infrastructure, Transport and Networks who developed an online platform that disseminates road safety education materials (e.g. books, courses, videogames), with the objective to promote safety awareness among high-school students, parents and teachers.

**Italy.** ANCMA-Confindustria, the motorcycle industry association, together with the Italian Motorcycle Federation and the Italian Ministry of Infrastructure and Transport launched the “Refresh” project that ran between 2015 and 2016. The project, organised across the country, included voluntary motorcycle training sessions specifically designed for riders who were returning to motorcycling after an extended period of time and for people who ride motorcycles of up to 125cc using their B license.

**Netherlands.** Relevant stakeholders (the Ministry of Transport, Police, the SWOV research institute, users’ organisations, RAI - the industry’s national association, the dealer organisation BOVAG, the Dutch Vehicle Authority RDW and road authorities) joined forces in “Motorplatform”. In 2018, they published the Dutch Motorcycle Safety Action Plan that includes recommendations on safety campaigns, training, infrastructure and ITS.

**Poland.** PZPM, the motorcycle industry association in Poland, worked together with public authorities and other stakeholders to develop an online road safety platform, which collects data and best practices on motorcycle safety.

**Spain.** ANESDOR, the Spanish motorcycle industry association, and the Catalan Traffic Service launched ‘Training 3.0.’ in 2015. This project, implemented in different parts of Catalonia and aimed at improving motorcyclists’ riding skills, has trained more than 2,200 motorcyclists who were evaluated by specialised motorcycle trainers and members of Mossos d’Esquadra, the Catalanian police. The project was so successful that it was replicated by national traffic authorities.



ANESDOR and traffic authorities work together to improve motorcyclists’ riding skills through the Training 3.0 project

## A continuous commitment to improving road safety across Europe

The industry will continue working with stakeholders at national level to improve motorcyclists' safety across Europe. Moreover, the sector will continue to support all the initiatives that promote riders' safety in the different European countries.

Exchanges between policymakers and industry representatives, such as the joint conference on motorcycle safety organised by ACEM and ANESDOR in Barcelona in 2017, are instrumental in improving motorcycle safety across Europe.



The industry invites national authorities to work together to achieve better road safety results



## The European Motorcycle Training Quality Label

European Motorcycle Training Quality Label helps motorcyclists to identify the best post-licence training programmes in their countries. The Quality Label is granted to programmes delivered by training schools that have undergone a rigorous and objective evaluation. This helps motorcyclists to ensure that they will get only the very best motorcycle training available.

### Better training, safer riding

The human factor is one of the most critical factors in accidents involving motorcycles. For this reason, the motorcycle industry is supporting life-long rider training for new and experienced motorcyclists, including pre-licencing and voluntary post-licencing training schemes.

Pre-licence training provides the basic skills and awareness needed for novice riders to use their vehicles safely on the road. Subsequently, advanced post-licence courses offer riders additional opportunities to increase their proficiency and safety as well as practice their hazard perception and risk awareness skills.

Post-licence training plays a key role in improving road safety, particularly for people who are upgrading to a more powerful motorbike, who are returning to riding after an extended period of time or for those who want to improve their riding skills and perception abilities. For many years, ACEM members have been offering high quality, tailored voluntary training options across the EU.



Launched in 2016, the European Motorcycle Training Quality Label has certified 30 motorcycle training programmes in Austria, Belgium, France, Germany, the Netherlands, Spain and Sweden.



## The European Motorcycle Training Quality Label

Most of the training courses available across the EU, both at pre- and post-licence level, vary considerably across countries and schools due to different training requirements, specific vehicle use and the different levels of trainer's qualifications, among other factors. Moreover, the quality of the thousands of different training schemes across the EU is heterogeneous and as there are so many options available, it is difficult for riders to identify the best ones and make informed decisions.

In order to address this information challenge, ACEM, the German Road Safety Council (DVR), and the International Motorcycling Federation (FIM) joined forces and launched the European Motorcycle Training Quality Label in 2016. The Label helps riders to clearly and easily identify high-quality post-licence training offers in their countries.

To learn more about the European Motorcycle Training Quality Label please visit: <https://motorcycle-training-label.eu/>

## Improving motorcyclists' safety across Europe: Results

To date, only 3 years after the European Motorcycle Training Quality Label launch, 30 training programmes operating in Austria, Belgium, France, Germany, the Netherlands, Spain and Sweden have been certified. Riders are now well-informed about the best training offers in these countries.

The figures below show the impact of some of the labelled programmes on motorcycle training:

- The Honda Safety Institute in Barcelona trained about 3,000 motorcyclists in 2017.
- The Swedish Association of Motorcyclists (SMC) trained more than 10,000 motorcyclists in 2018.
- ADAC trained about 21,500 motorcycle riders in Germany in 2018.



The advanced motorcycling course of the Honda Safety Institute in Barcelona received the European Motorcycle Training Quality Label in 2018.

## Institutional stakeholders supporting the Label: Recognition at EU level

In 2018 the European Transport Safety Council, the most important NGO in the field of road safety in Europe, acknowledged the importance of this initiative and joined the European Motorcycle Training Quality Label consortium as a supporter member.

In 2019, The European Commissioner for Transport, Violeta Bulc, released a video message that acknowledged the key role played by the European Motorcycle Training Quality Label in improving motorcyclists' safety across Europe: "We are grateful that the European Motorcycle Training Quality Label has been set up, responding to our call for voluntary commitments."

The same year, the European Motorcycle Training Quality Label received the European Commission Road Safety Charter Award, in the category "voluntary commitments". The award acknowledges inspirational and innovative initiatives that contribute towards improving road safety and saving lives on Europe's roads.



In October 2019 the European Motorcycle Training Quality Label received the Road Safety Charter Award in the "voluntary commitments" category.

The Label is an excellent example of how cooperation between industry, NGOs, motorcycle trainers and user organisations can deliver positive results in motorcycle safety.....The European Motorcycle Training Quality Label also creates a strong incentive for training centres to distinguish themselves. It stimulates them to raise their quality standards, which will result in better safety training across Europe.

## **Paving the way to high quality standards for motorcycle training**

In the medium and long-term the European Motorcycle Training Quality Label will increase the visibility of the best training programmes available, paving the way towards higher quality standards for training in Europe.

ACEM expects to have at least one certified training centre per member state within few years, with the ultimate goal to increase the number of riders attending voluntary safety-oriented courses and thus improve riders' safety performance in the European Union.

In the UK, for example, in 2013 the Motorcycle Industry Association (MCIA) developed MCIA RIDE, a scheme to raise the level of professionalism in the training industry and therefore give a better experience to those entering the world of PTWs for the first time.



# The European network of excellence for high-quality post-licence training



## 1. General policy recommendations

### Improving data gathering and research

- In-depth and naturalistic studies should be encouraged and implemented at European, national, regional and local levels. These studies provide valuable and detailed insight into normal riding tasks, near-missed accidents and accidents causation factors.
- National authorities should collect exposure data to develop sound motorcycle safety policies, in line with recommendations made by the European Road Safety Observatory.
- This would allow public authorities to devise more effective safety measures to minimise the risk of accidents as well as realistic policy objectives.

### Developing inclusive motorcycle policies

- Whilst vehicle safety has significantly improved over the years, and further developments are likely to follow as safety technologies evolve, a durable solution to motorcycling safety requires the involvement of public decision makers.
- Countries such as Sweden, Spain, Norway and the Netherlands have set up national motorcycle safety strategies that have helped them to achieve high motorcycle safety levels. Other European countries should adopt a similar approach. Adopting restrictive motorcycle policies or simply ignoring motorcycling, reduce the awareness of other road users and put riders at higher risk.



Public authorities must adopt transport policies that acknowledge the role of motorcycles in urban and leisure mobility across Europe.

## 2. Infrastructure-related recommendations

### Adapting road infrastructure to motorcyclists' needs

- Road infrastructure is at the core of road safety, especially for motorcyclists. Policy makers need to ensure that infrastructure is well maintained and invest the necessary resources to create a safer environment for all types of road users, particularly for vulnerable road users such as motorcyclists.
- Consideration of motorcycle safety at the road design stage is essential to ensure that infrastructure is motorcycle friendly. Relevant aspects of well-designed infrastructure include good motorcycle visibility, obstacle free zones, use of appropriate road surface materials and predictable road geometry.
- The characteristics and infrastructure requirements of motorcycles should be part of the basic training of road designers, and highway and traffic engineers. The standardisation of data collection procedures for infrastructure-related accidents and the identification of sections with high accident concentrations can also help to reduce the number of serious and fatal accidents involving motorcycle riders.
- The network-wide safety assessment (safety ratings) should be carried out by Member States by end 2024 in accordance with the revised EU Road Infrastructure Safety Management Directive. In a recently agreed revision of EU infrastructure safety rules, the EU has mandated risk mapping and safety rating for roads of the strategic Trans-European Transport Network (TEN-T), motorways and primary roads, with a specific focus on vulnerable road users including motorcyclists.
- The Safe System approach to road engineering involves matching road function, design, layout and speed limits to accommodate human error in a way that crashes do not lead to death and serious injury.



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### 3. Human factor-related recommendations

#### Encouraging high-quality post-licence training

- Safe vehicles must be driven safely. Public authorities should encourage riders with appropriate incentives to undergo voluntary post licensing training in order to keep their skills honed to a high level.
- Post-licence training plays a key role in improving road safety, particularly for people who are upgrading to a more powerful motorbike or who are returning to riding after an extended period of time. A list of some of the best post-licence training programmes is available at: <https://motorcycle-training-label.eu/>

#### Combining educational campaigns and effective law enforcement

- Higher compliance with speed, alcohol, licence and mobile use legislation can also bring substantial road safety benefits. The importance of achieving high levels of correct helmet wearing cannot be over emphasised<sup>1</sup>.
- Failing to see an approaching motorcycle is one of the most common errors. Training programmes for all types of licences should actively promote awareness about motorcyclists amongst other road users.
- Campaigns encouraging car and lorry drivers to pay attention to motorcyclists on the road can also make a positive contribution to improve road safety in Europe.

<sup>1</sup> Although all EU countries require both motorcyclists and passengers to wear helmets and wearing use in the EU is on average relatively high, there is room for improvement in some countries. According to the International Transport Forum of the OECD helmet wearing



Motorcyclists must be encouraged by public authorities to follow voluntary post-licensing training programmes to improve their hazard perception skills.

## 4. Vehicle-related recommendations

### Ensuring that automated technologies and vehicles are safe for motorcyclists

- Decision makers must ensure that advanced driver assistance systems (ADAS) and future automated vehicles adequately detect all road users, including motorcyclists.
- Automated systems and automated vehicles that do not always detect motorcyclists can lead to serious road accidents and to an increase in motorcycle fatalities.

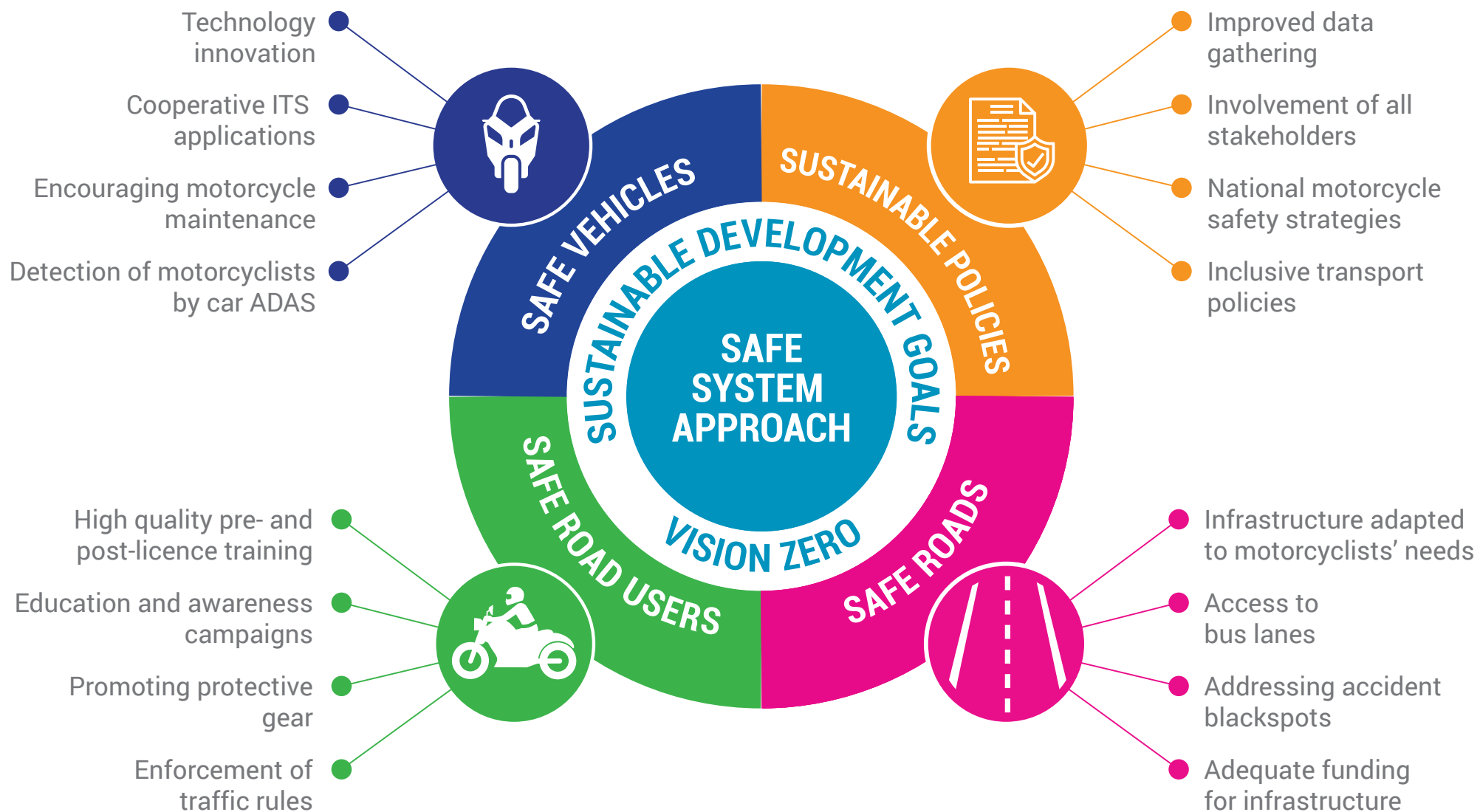
### Ensuring that vehicles are properly maintained

- Defective or poorly maintained vehicles can lead to a higher safety risk. However, only half of the EU Member States have set up compulsory periodic technical inspections for motorcycles.
- The establishment of these mandatory safety checks in these countries would enhance the maintenance and repair of vehicles, prevent safety failures due to inadequate maintenance (e.g. failures or poor condition of lighting, tyres or braking systems) and assist in the prevention of irresponsible tampering.
- National governments should reinforce roadside inspections of all vehicles in order to identify vehicles which could represent a hazard to traffic safety, when relevant safety requirements are not fulfilled.



EU Member States have to set up compulsory periodic technical inspections for motorcycles.

## Safe System approach towards motorcycle safety





**There are about 36 million motorcycles on Europe's roads. This number can be expected to continue growing in the coming years, probably at a faster rate as a response to urban mobility challenges in Europe. For this reason, it is essential to develop sound and inclusive transport and safety policies that fully take motorcycling into account.**

Europe is moving towards connected and automated mobility. Future traffic mix should cater for the needs of vulnerable road users including motorcyclists. Regardless of their degree of automation, passenger cars and other vehicles must be able to recognise motorcycles and their inherent complex manoeuvres and react accordingly.


















ACEM is convinced that advanced vehicle technology, including new ITS solutions, can make a valuable contribution to motorcycle safety, but this is not enough. Well-designed and properly maintained infrastructure as well as responsible and well-trained road users are also part of the solution. Only a genuinely safe system approach to motorcycle safety can deliver tangible and long-lasting safety improvements.

All stakeholders including policy makers, public authority, industry and user organisations are part of the solution. By working together, it will be possible to create a safer environment for motorcyclists across Europe.

















The motorcycle industry fully supports the 3rd Global Ministerial Conference on Road Safety declaration "Achieving Global Goals 2030" which calls «upon Member States to contribute to reducing road traffic deaths by at least 50% from 2020 to 2030 in line with the United Nations High-Level Political Forum on Sustainable Development's pledge to continue action on the road safety related SDG targets, and to set targets to reduce fatalities and serious injuries, in line with this commitment, for all groups of road users and especially vulnerable road users such as pedestrians, cyclists and motorcyclists and users of public transport.



## Manufacturers

					<b>Kawasaki</b>
					
					

## National Associations

 AUSTRIA	 AUSTRIA	 BELGIUM & LUXEMBOURG	 AUTOMOTIVE INDUSTRY ASSOCIATION CZECH REPUBLIC	 FINLAND	 FRANCE
 GERMANY	 GREECE	 IRELAND	 ITALY	 ITALY & FRANCE	 NETHERLANDS
 ROMANIA	 SPAIN	 SWEDEN	 UNITED KINGDOM		





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