



How to enhance the safety of the riders?

Hearing on “Clear Internal Market Rules for Mopeds, Scooters and Motorcycles” - European Parliament, 22 March 2011

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WEAR. BELIEVE. ACT.
DECADE OF ACTION FOR ROAD SAFETY 2011-2020

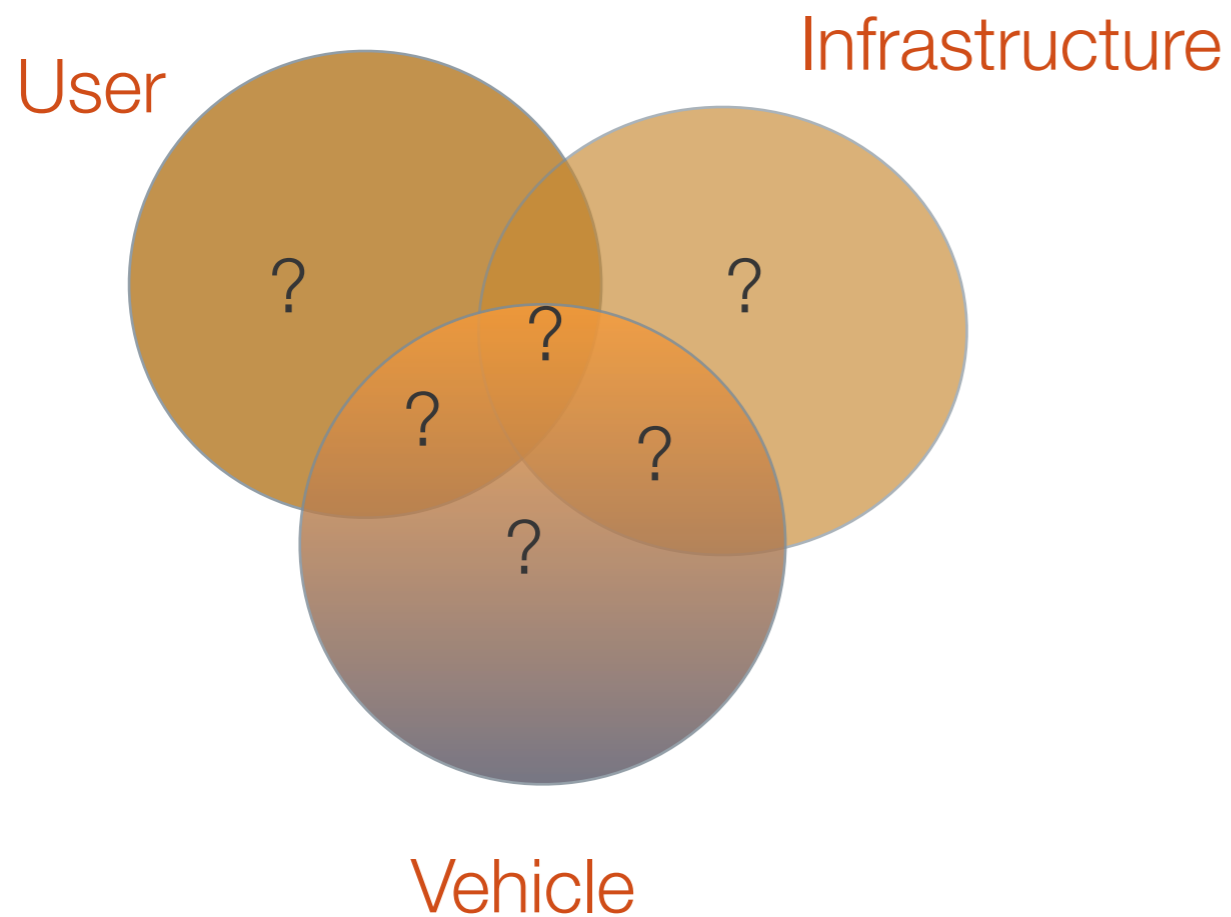


Summary

1. The safe system approach
2. How to address the problem of safety of PTW users
3. eSAfety technologies: the potential of ABS in PTW
4. Recommendations

1.

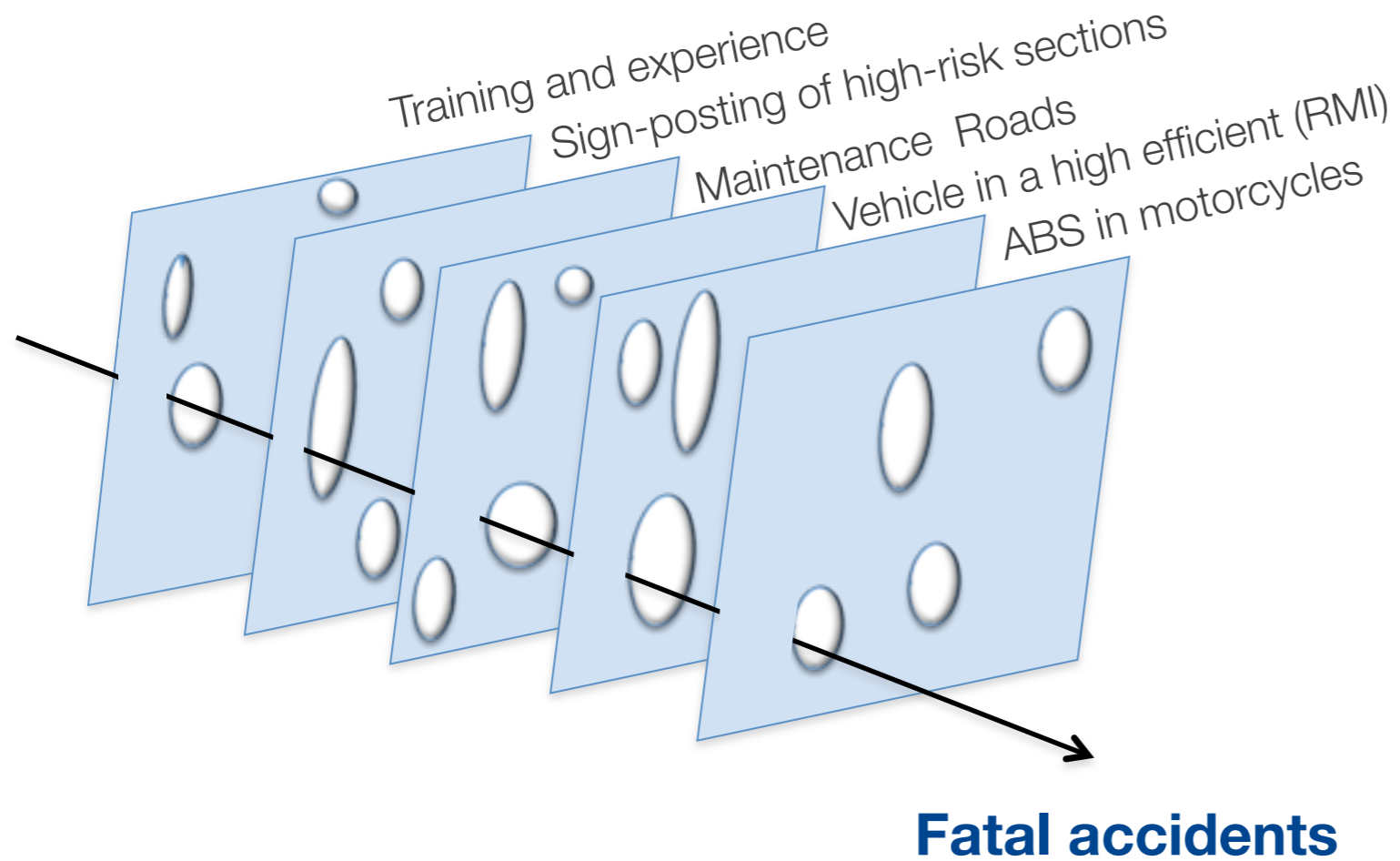
The safety system approach



The Safe System aims to reduce road injury by acting on:

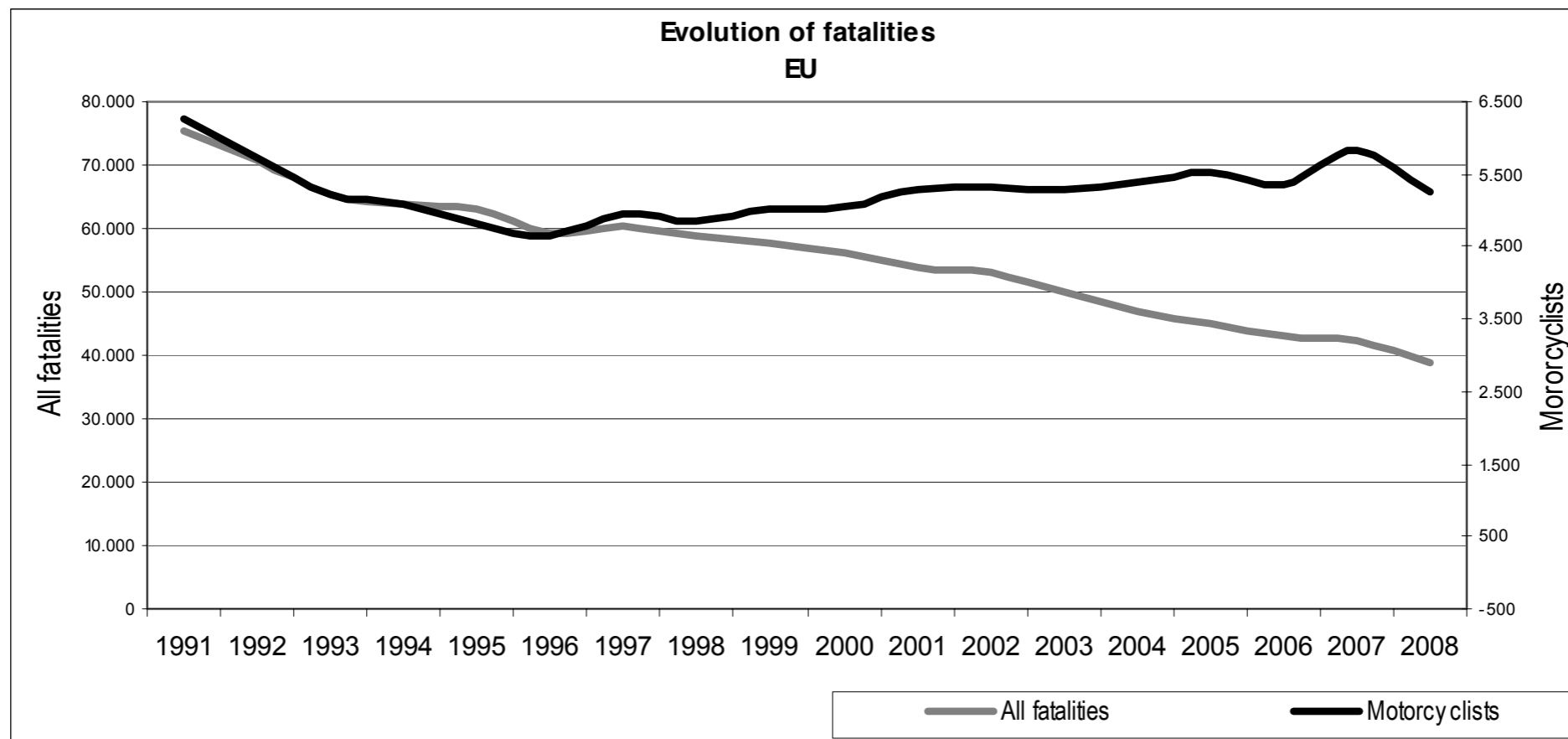
- the road user
- the vehicle
- the road infrastructure

The risk of human error is anticipated and 'tolerated' by a 'forgiving' system that has been designed to ensure that the consequences of human error are non fatal as far as possible.



To reduce risk of injury we need five star drivers,
in five star cars on five star roads

2. How to address the problem of safety of PTW users



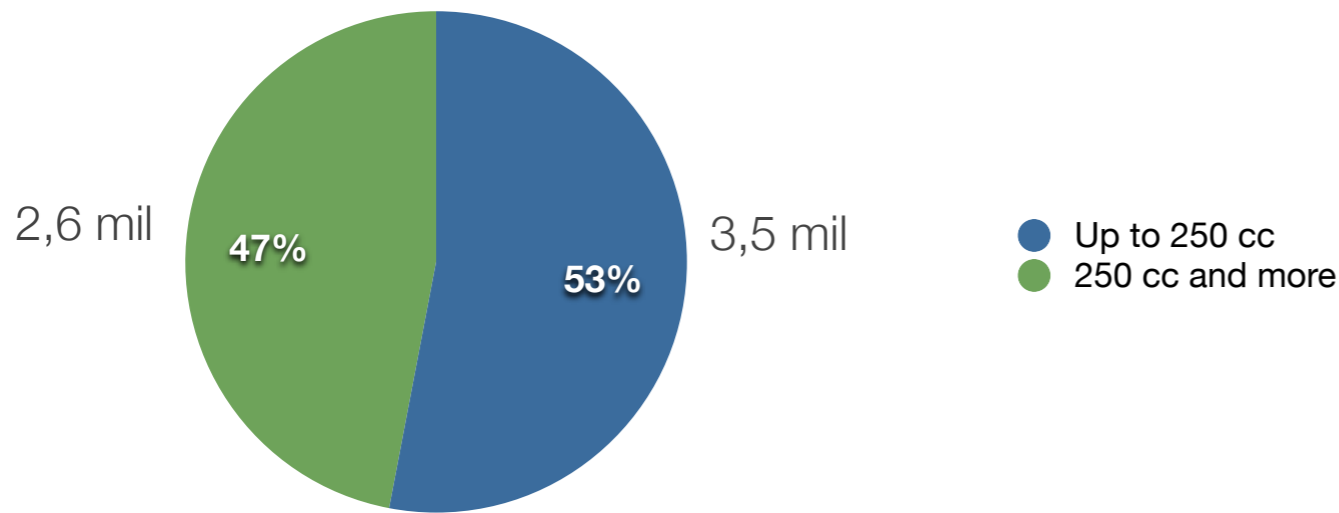
Sources: EC, Towards a European road safety area: policy orientations on road safety 2011-2020

Eg. Italy:

30% (about 1.000) of all road deaths were people riding a motorcycle (but bikers represent 13% of all vehicles involved in a road accidents)

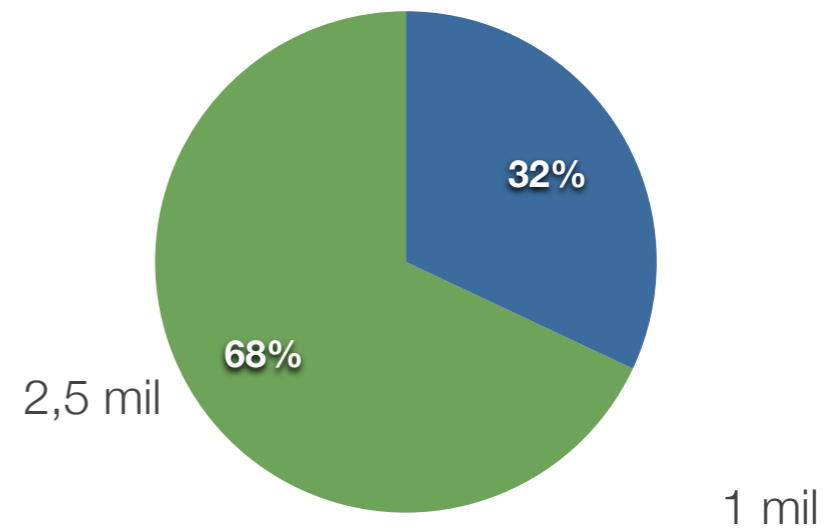
PTW by cc-class case studies

ITALY (about 6,1 million PTW)



Source: ACI, 2009

GERMANY (about 3,8 million PTW)



Source: Neuzulassungen Kraftraeder, 2009

IS THIS (more) URBAN MOBILITY?

86,1% use PTW for systematic trips (work or study)
 70% of interviewees use PTW only for urban trips
 (Survey in Rome, 2009 - source: ACI)

IS THIS (more) LEISURE MOBILITY?



Different Accidents? Different risk groups?

case Germany

- ▶ Nearly 70% of fatally injured motorcyclists die on extra-urban roads where intersections or junctions pose a risk
- ▶ 20% are male, 25 - 35 years, 40% are male, 35 - 55 years

Source: ADAC

case Italy

- ▶ Accidents happen mainly inside urban areas (87%)
- ▶ PTW users dead on urban areas 40,5%; extra-urban 36,6%; highway 4,7%; 18,2% “commuting roads”

Source: ACI

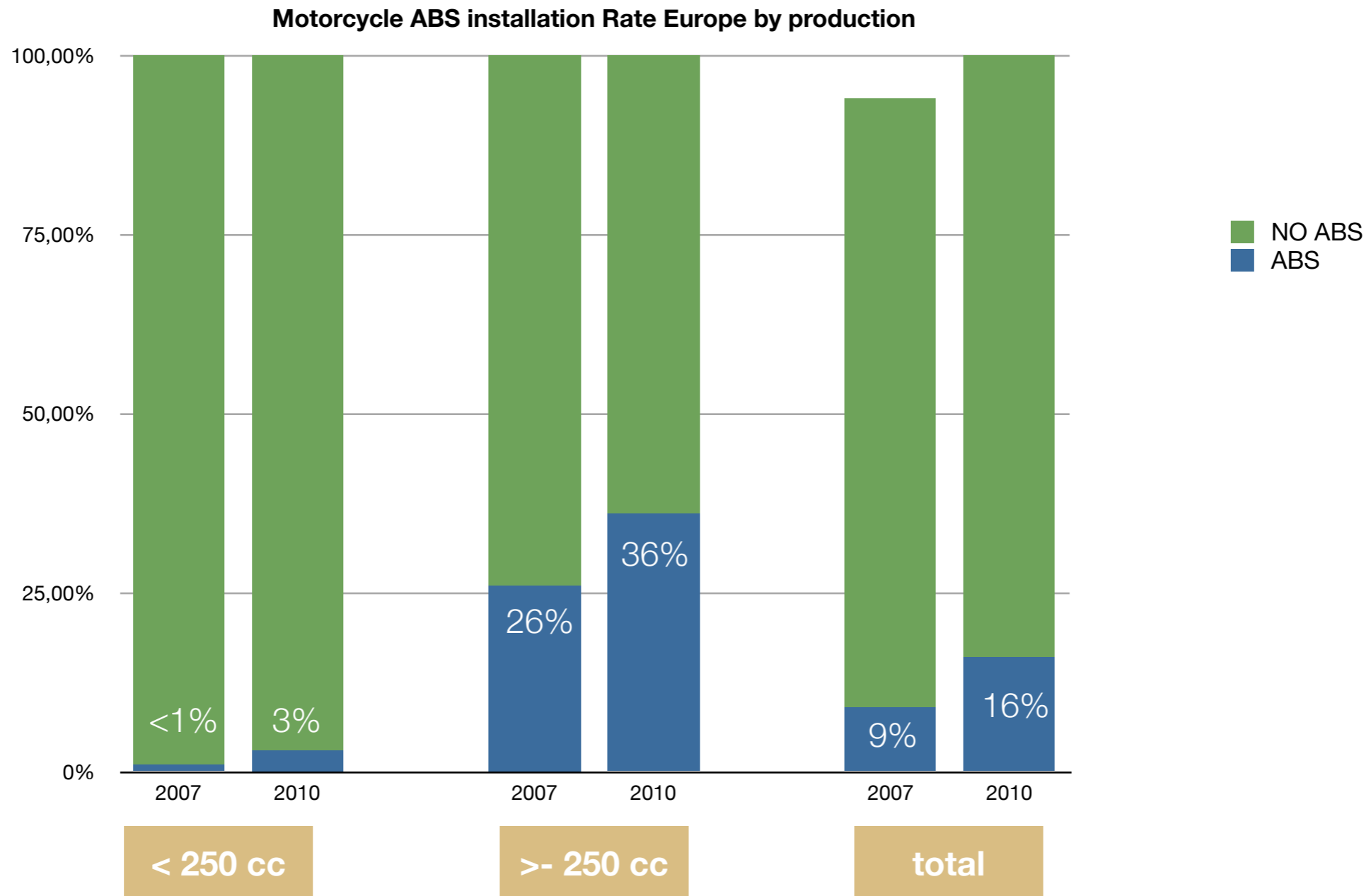


3. eSAfety technologies: the potential of ABS

- According to consumer tests carried out by European Automobile Clubs, Antilock Braking System (ABS) has demonstrated:
 - better driving stability during braking
 - a reduction of emergency braking distance
- It can be estimated that a ABS has a great potential in terms of avoiding (or definitely influencing) road accidents

- ABS for motorcycles does not automatically enhance safety: only thorough ABS driving and braking practice there will be real improvement on safety.
- Terminology: the term ABS (Antilock Braking System) must be defined to cover only systems which are able to efficiently prevent wheel lock under braking (Advance Braking System or Combine Braking System are different technologies)
- Today ABS is in general only available for premium class motor bikes, not as a series equipment but as a quite accessory

ABS: market penetration - slow progress



Source: Bosh, 2011

ABS: market penetration - case study

Availability of ABS on the Italian market

Brand	num models with ABS	num models without ABS	Total	% with ABS	% without ABS
APRILIA	6	27	33	18.18	81.82
BENELLI	0	16	16	0.00	100.00
BETA	0	21	21	0.00	100.00
BIMOTA	0	8	8	0.00	100.00
BMW	3	20	23	13.04	86.96
BUELL	0	8	8	0.00	100.00
CAGIVA	0	2	2	0.00	100.00
CR&S	0	2	2	0.00	100.00
DERBY	0	14	14	0.00	100.00
DUCATI	8	24	32	25.00	75.00
GARELLI	0	3	3	0.00	100.00
GAS GAS	0	16	16	0.00	100.00
GHEZZI BRIAN	0	2	2	0.00	100.00
GILERA	0	7	7	0.00	100.00
HARLEY DAVIDSON	16	12	28	57.14	42.86
HM	0	20	20	0.00	100.00
HONDA	20	34	54	37.04	62.96
HUSABERG	0	7	7	0.00	100.00
HUSQVARNA	0	14	14	0.00	100.00
HYOSUNG	0	18	18	0.00	100.00
KAWASAKI	5	19	24	20.83	79.17
KL	0	3	3	0.00	100.00
KEEWAY	0	7	7	0.00	100.00
KTM	3	27	30	10.00	90.00
KYMCO	1	24	25	4.00	96.00
MALAGUTI	0	13	13	0.00	100.00
MONTESA	0	2	2	0.00	100.00
MOTO GUZZI	6	15	21	28.57	71.43
MOTOM	0	7	7	0.00	100.00
MV AGUSTA	0	7	7	0.00	100.00
PEUGEOT	7	27	34	20.59	79.41
PIAGGIO	0	41	41	0.00	100.00
POLINI	0	2	2	0.00	100.00
RIEJU	0	12	12	0.00	100.00
SCORPA	0	3	3	0.00	100.00
SHERCO	0	10	10	0.00	100.00
SUZUKI	4	33	37	10.81	89.19
SYM	0	17	17	0.00	100.00
TGB	0	4	4	0.00	100.00
TM	0	19	19	0.00	100.00
TRIUMPH	7	21	28	25.00	75.00
VICTORY	1	14	15	6.67	93.33
YAMAHA	6	46	52	11.54	88.46
TOTALE	93	648	741	12,55	87,45

It's a problem of **cost**?
(Mandatory ABS should drive a a sensible reduction in the price)

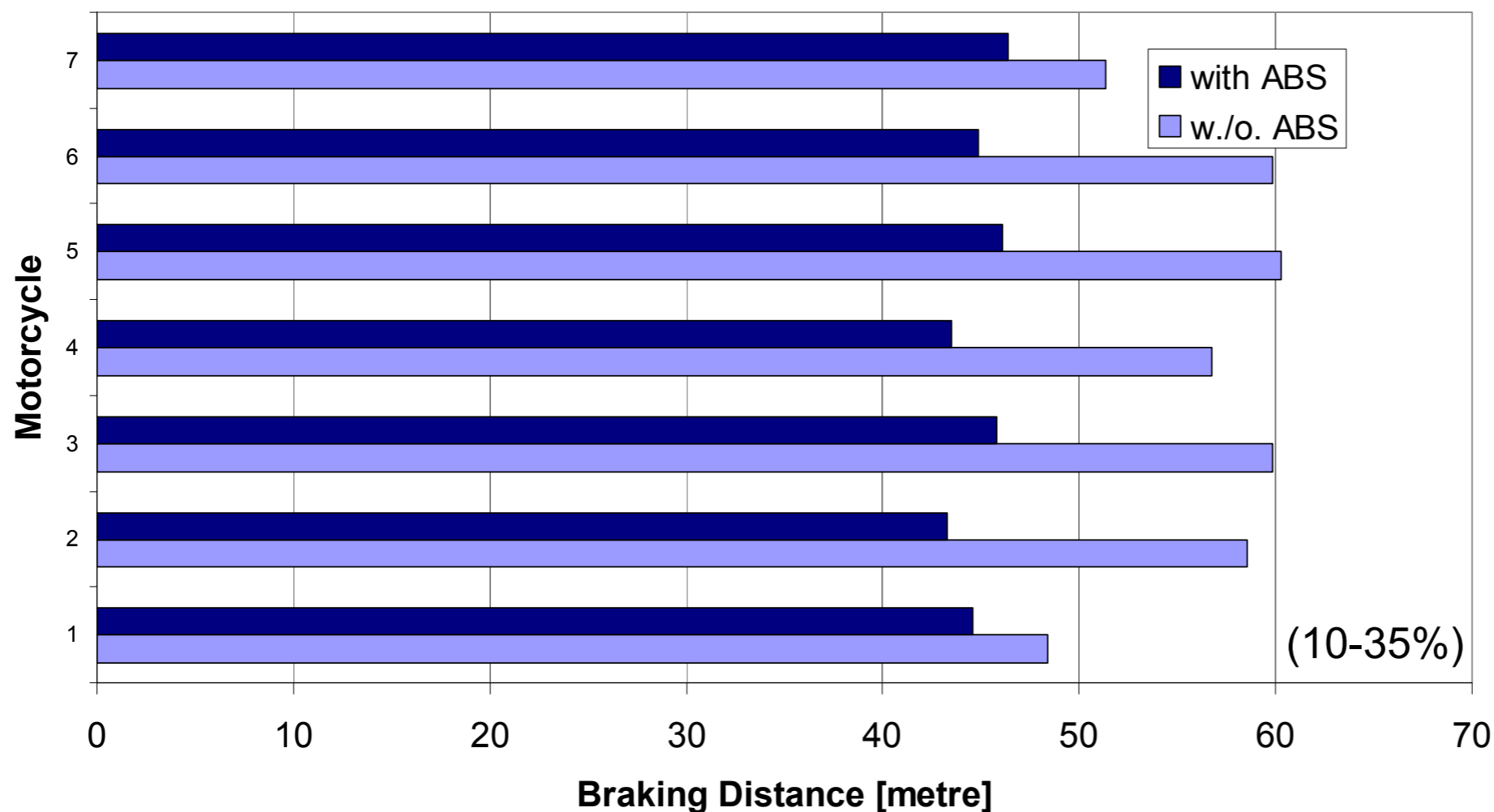
It's a problem of lack of **awareness**?
(Promoting ABS training skills among users)

Its' a problem of **information**?
(consumers need to be informed on the benefits of ABS)

Average Reduction of Braking Distance 25%

Many factors contribute to motorcycle crashes, but improper braking was identified as a major pre-impact factor in studies of motorcycle crash causation

Braking Distance with and w./o. ABS on wet road with 100 kph



Role of ABS

increases the achievable **deceleration**

improves **stability** in emergency situation

ABS: avoiding accidents

Potential of ABS reduction on fatal PTW crashes

Would ABS have influenced the crash?	Head On	Single	Intersection	Rear end	TOTAL
Definitely not	234	190	21	21	467
perhaps	119	67	61	10	258
probably	58	34	45	31	168
definitely	0	63	56	21	140
ABS would have avoided the crash	0	19	83	21	122
PTW users: total fatal accidents in Italy, 2008	411	373	267	104	1155

Source: ACI on Rizzi M, Strandhorth J. Tingvall C. "The effectiveness of ABS on Motorcycles" in Traffic Injury Prevention n.10

ABS: avoiding accidents

- According to the potential of ABS to reduce fatal motorcycle crashes it is possible to evaluate that 23 % of crashes which happened in Italy (2008) could have been avoided or definitely influenced by ABS.
- Similar analysis conducted in Germany by the ADAC gives very similar results: ABS would have prevented or mitigated the consequences of 21% of all motorcycle accidents.
- Dekra study based on 87 in-depth investigation on PTW accidents gave more a optimistic prevision: from 25 to 35% of possible reduction

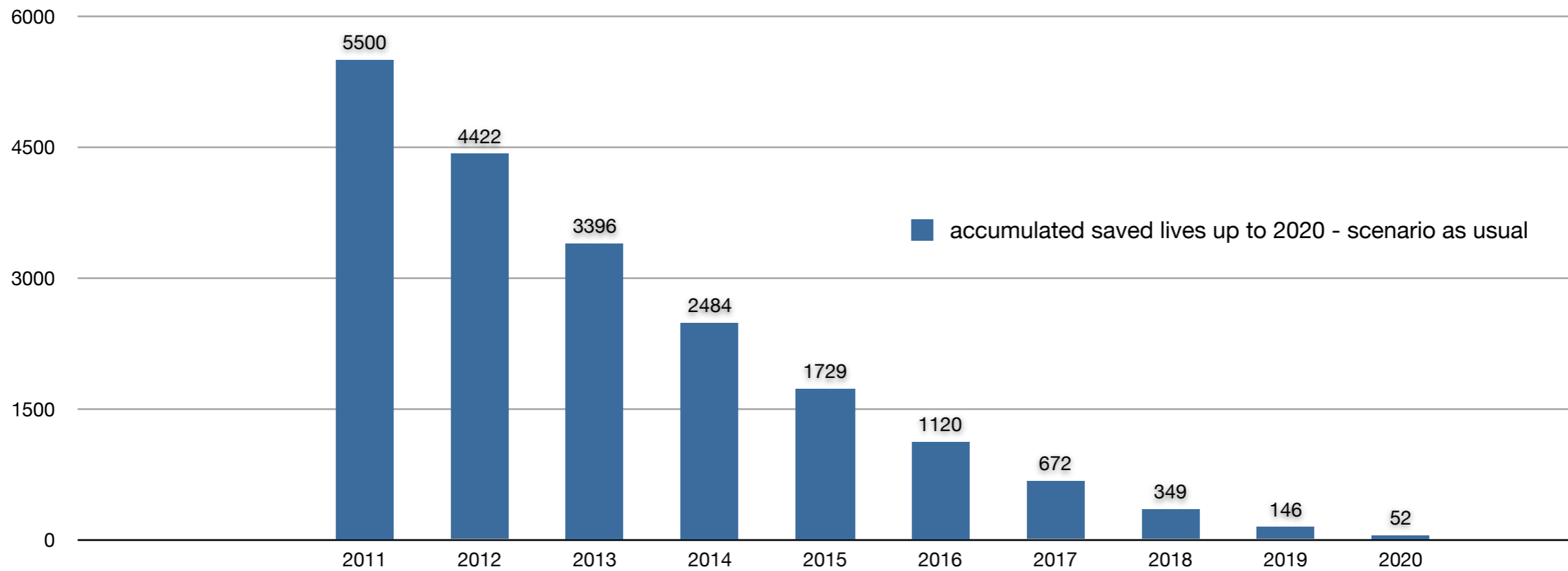
3. Recommendations

- Proper **training**, accompanied by specific information campaigns are indispensable elements for the education of drivers.
- Different technologies are available. But Combined Braking System (CBS) or Advanced Braking System do not have the same **safety performance of ABS**.
- “Medium-performance motorcycles (> 125 cc, max 35 kW) and “High-performance motorcycles (> 125 cm³, over 35 kW) should be equipped with **Antilock braking system (ABS)** “as soon as possible”

- For **Mopeds** (up to 50 cc) and scooters up to 125 cc other possibilities (Advanced Braking System or Combine Braking System) should be explored, and in case ABS can be proposed to the consumers as an option (**role of training and awareness on risk behaviors is particularly important for moped**).
- Consumers should be **clearly informed** on the safety-technologies available and on their specific benefit.
- Riders are not always ‘fully skilled’, particular those who use the motorbikes for urban mobility: rider **safety training** to improve braking and ABS-handling skills should be promoted and encouraged.
- **ABS mandatory** in 2017? What about “as soon as possible”?

Saving lives...

Accumulated saved lives up to 2020



Year of mandatory introduction of ABS

Source: ADAC, 2010



Fédération Internationale de l'Automobile

“I call on Member States,
international agencies, civil
society organizations, business
and community leaders to
ensure that the Decade leads to
real improvements”

Mr Ban Ki-moon, UN Secretary-General



Thank you for the attention

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