Pay attention to blind spots!

Analysis of the cyclist's perception from the point of view of HGV drivers

A live test

Dora Ramazzotti, Mauro Borioni – Società Reti e Mobilità SRM Bologna

THE BACKGROUND

THE BIKE PRIDE IN BOLOGNA

8th of May, 2016

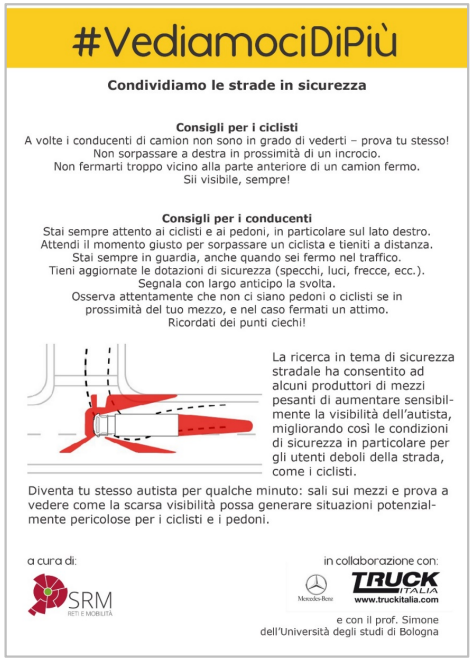
About 7,000 cyclists around the city

THE CONTRIBUTION BY MERCEDES

Actros

Econic

THE REASON



#VediamociDiPiù

Condividiamo le strade in sicurezza

Consigli per i ciclisti
A volte i conducenti di camion non sono in grado di vederti – prova tu stesso!
Non sorpassare a destra in prossimità di un incrocio.
Non fermarti troppo vicino alla parte anteriore di un camion fermo.
Sii visibile, sempre!

Consigli per i conducenti
Stai sempre attento ai ciclisti e ai pedoni, in particolare sul lato destro.
Attendi il momento giusto per sorpassare un ciclista e tieniti a distanza.
Stai sempre in guardia, anche quando sei fermo nel traffico.
Tieni aggiornate le dotazioni di sicurezza (specchi, luci, frecce, ecc.).
Segnala con largo anticipo la svolta.
Osserva attentamente che non ci siano pedoni o ciclisti se in prossimità del tuo mezzo, e nel caso fermati un attimo.
Ricordati dei punti ciechi!

La ricerca in tema di sicurezza stradale ha consentito ad alcuni produttori di mezzi pesanti di aumentare sensibilmente la visibilità dell'autista, migliorando così le condizioni di sicurezza in particolare per gli utenti deboli della strada, come i ciclisti.

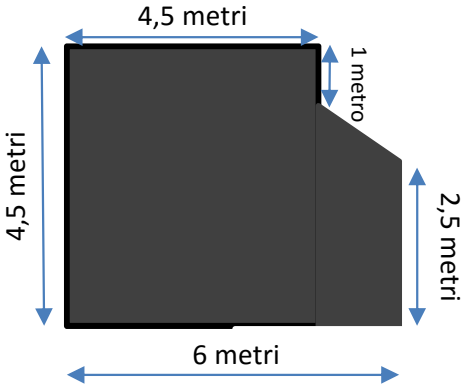
Diventa tu stesso autista per qualche minuto: sali sui mezzi e prova a vedere come la scarsa visibilità possa generare situazioni potenzialmente pericolose per i ciclisti e i pedoni.

a cura di: SRM RETI E MOBILITÀ

in collaborazione con: Mercedes-Benz TRUCK ITALIA www.truckitalia.com

e con il prof. Simone dell'Università degli studi di Bologna

THE ARRANGEMENT



THE TEST

CREDITS

SRM is leading the Transport Safety and Security WG in POLIS

The test was inspired by a initiative of TfL in the CLOCS project
www.clocs.org.uk

The test was achieved in collaboration with the University of Bologna – DICAM (Department of Civil, Chemical, Environmental, and Materials Engineering), that provided also the elaboration of the investigation results

THE INVESTIGATION

121 participants (cyclists…) were surveyed

The Actros ('traditional' model) was recognised as '**more dangerous**' by 119 participants, even by the only one that did not noticed the differences between the two lorries

120 participants noted differences between the two lorries:

69% noticed the height of the cabin

64% the size of the windows

23% of the overall dimensions

13% the size of the mirrors

7% the different arrangement of lights

Actros

Econic

92 participants judged the initiative "excellent"

26 "good"

THE INVESTIGATION

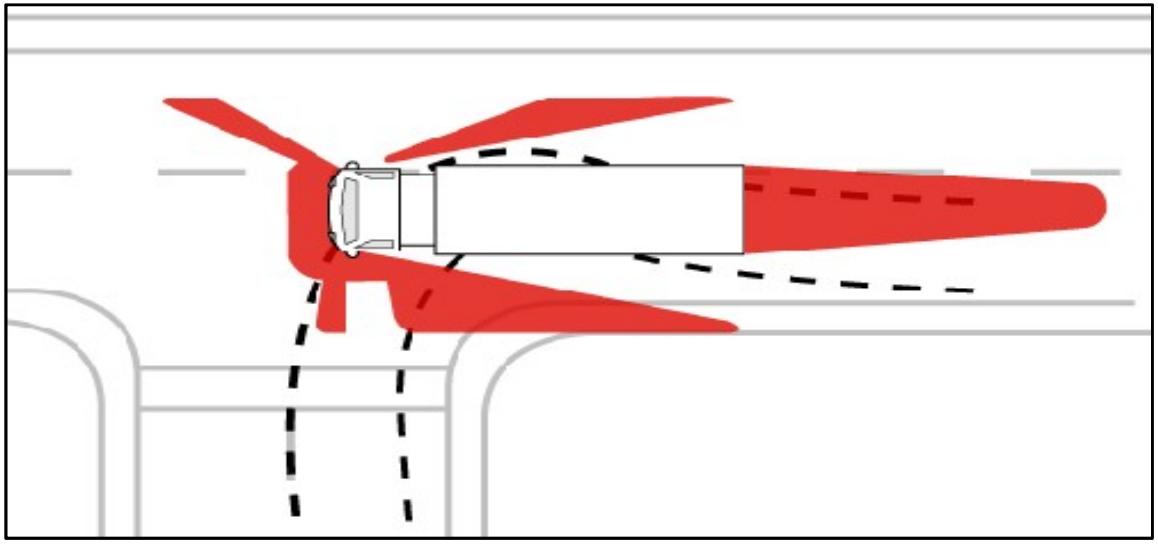
43% of respondents cycle ‘always’

34% at least 'once a week'

The 87% of the participants stated they are **aware of the dangers** in which incur while in close proximity of a lorry

Among those who use the bicycle ‘always’, the percentage rose to 90%

Among those who use it ‘once a month’, 80% said conscious



Source: London Fixed Gear and Single-Speed

THE INVESTIGATION

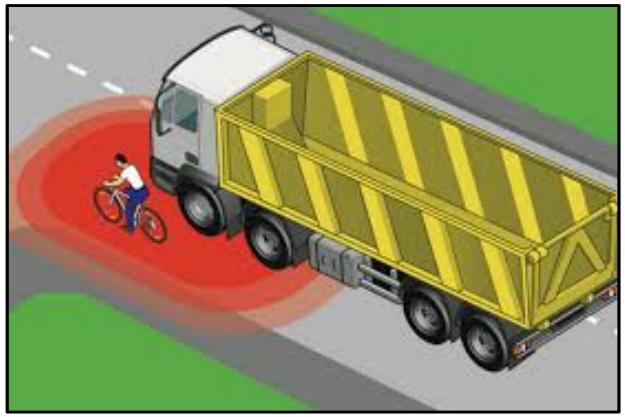
79% of the participants declared they **assume a different attitude** when in proximity of a light vehicle (e.g., car, van) or of a heavy one (e.g., lorry, bus). Between those who use the bicycle more rarely, the percentage rose to 86-87%

Participants were asked what position they take when approaching a heavy vehicle.

48% of cyclists position themselves in front of the heavy vehicle, on the right

40% of them remain behind of the heavy vehicle

12% of them get in front of the heavy vehicle, on the left



Source: CityMetric - London Cycling Campaign

Source: Construction Manager Magazine

THE INVESTIGATION

Participants were asked about which system they consider as the most effective for the safety of road users in urban areas:

A '**wider window**' was indicated as the first option by 39 participants, as second by 23

A '**low cab**' was listed as the first option by 35 participants, as second by 37

The adoption of '**acoustic sensors**' was the first option of 19 participants, the second of 31

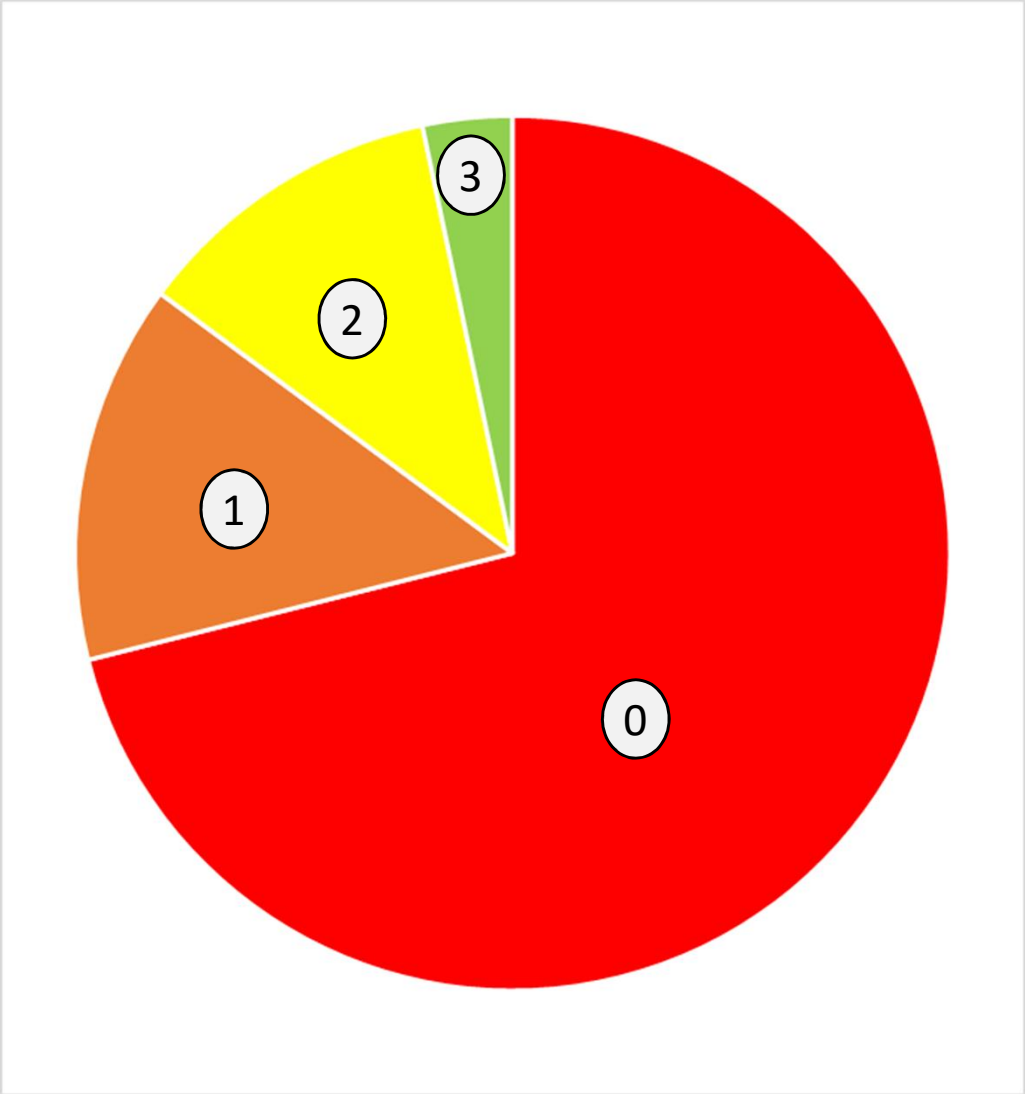
'**Dedicated cameras**' was shown as a first option by 20 participants, as second by 17

The '**mirrors improvements**' was the first answer of 8 participants, and the second of 13

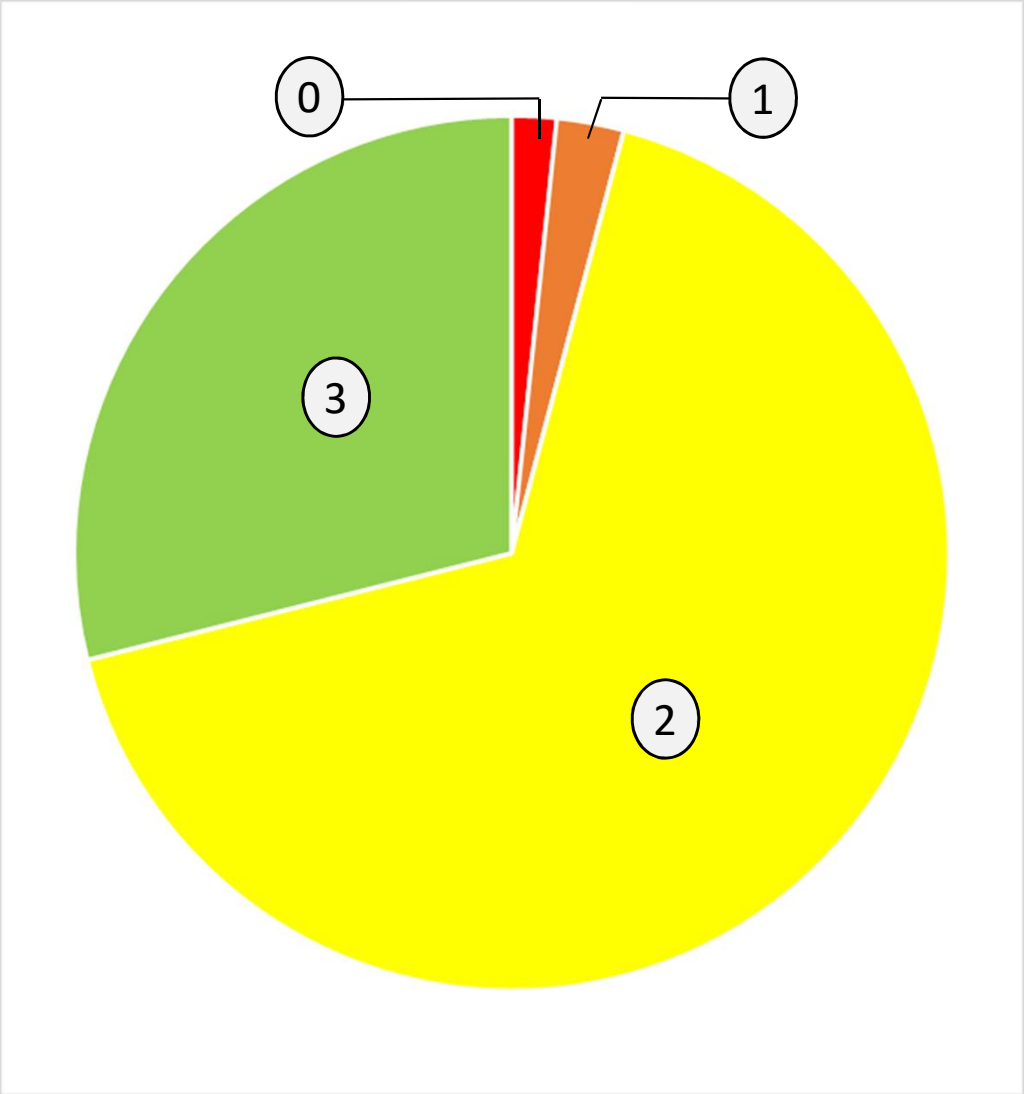
THE RESULTS

How many bikes do you see?

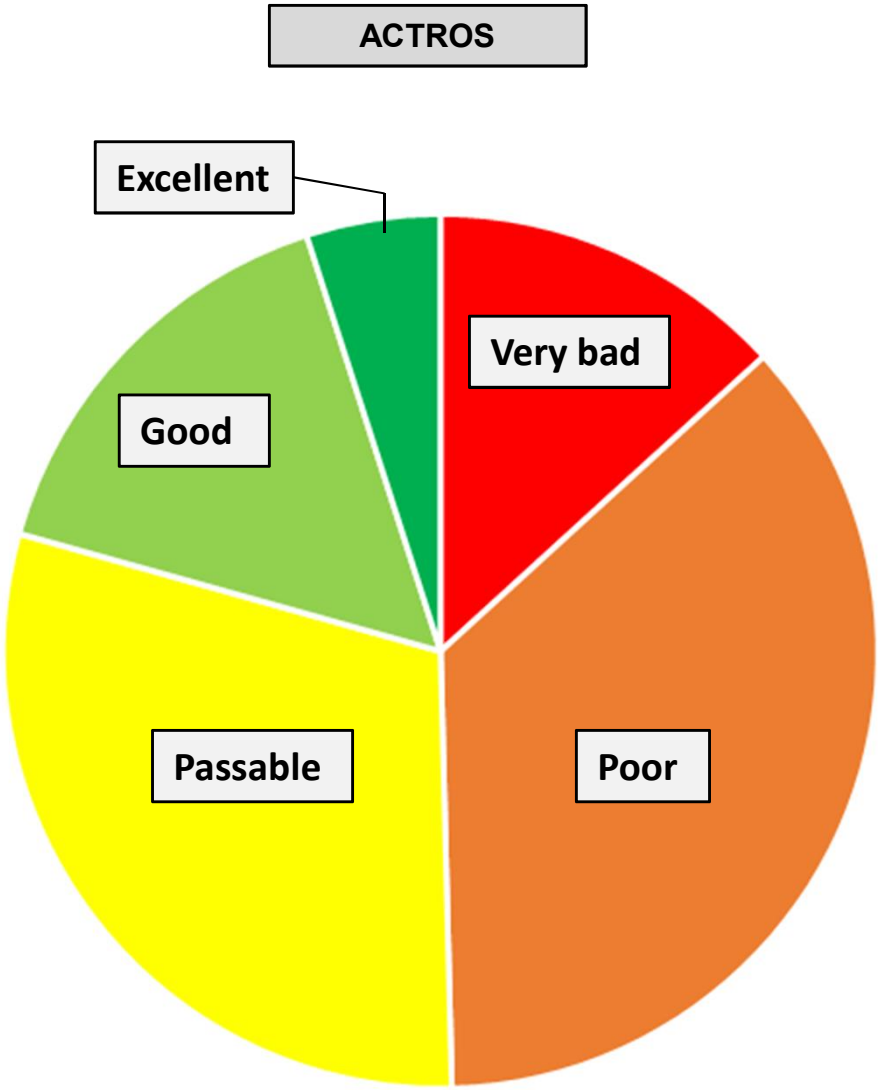
ACTROS

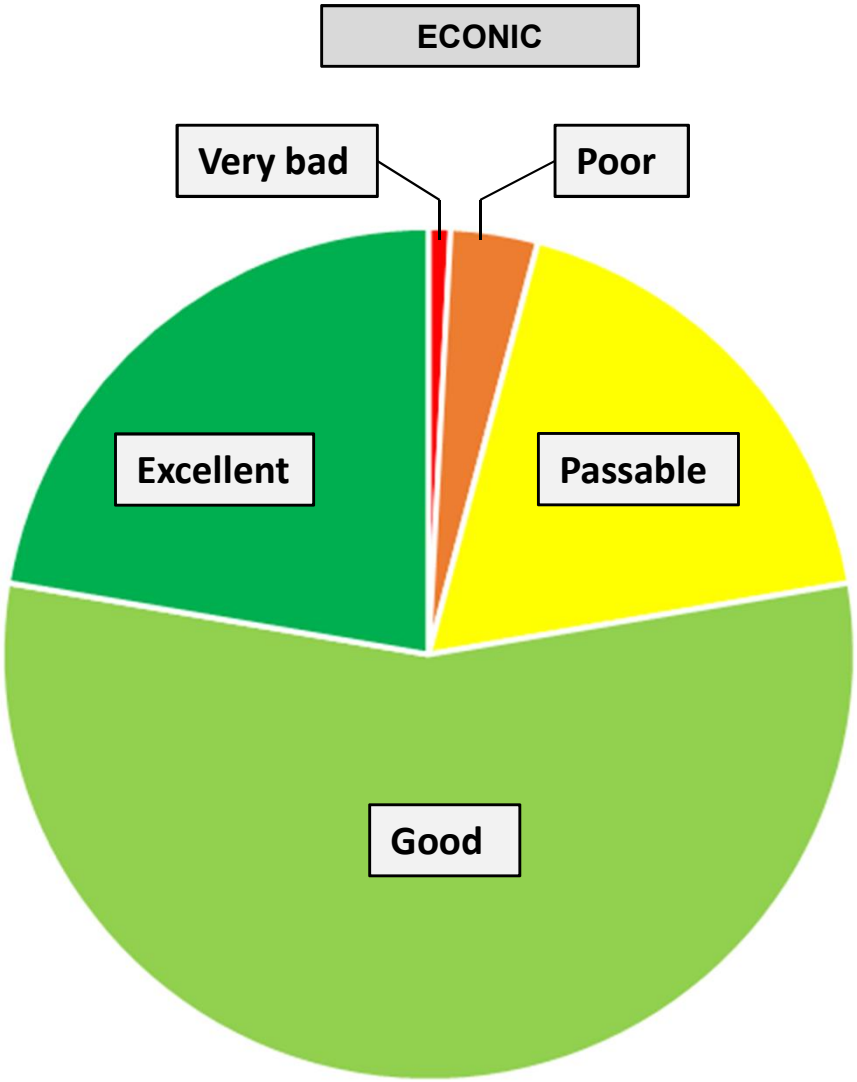


ECONIC



How do you perceive the external environment?

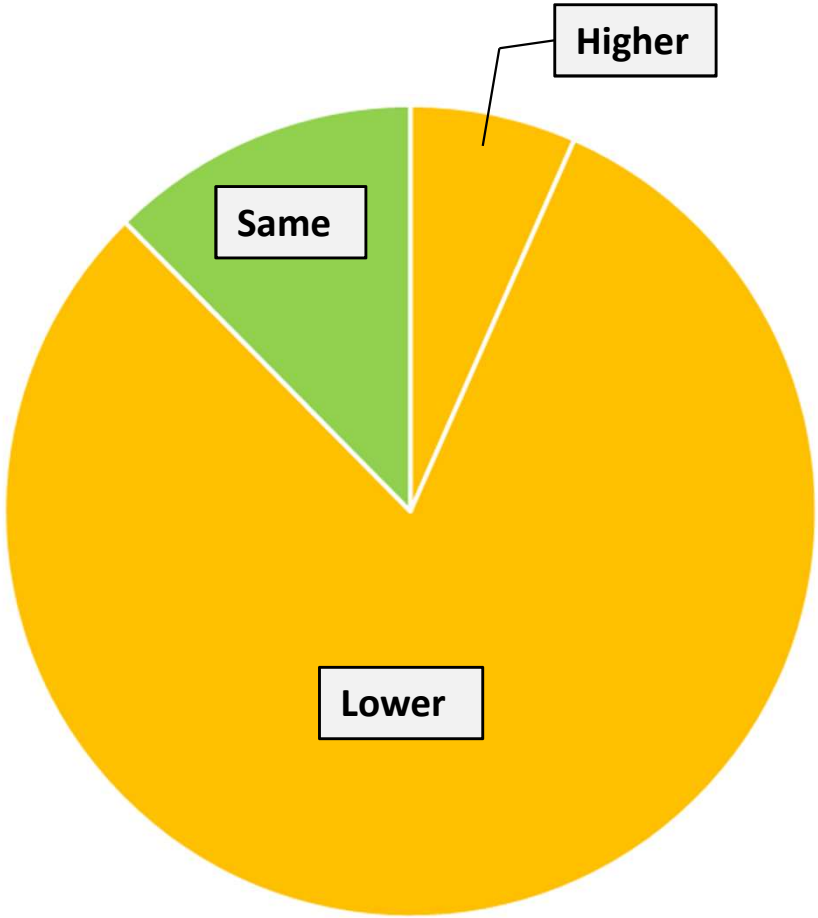




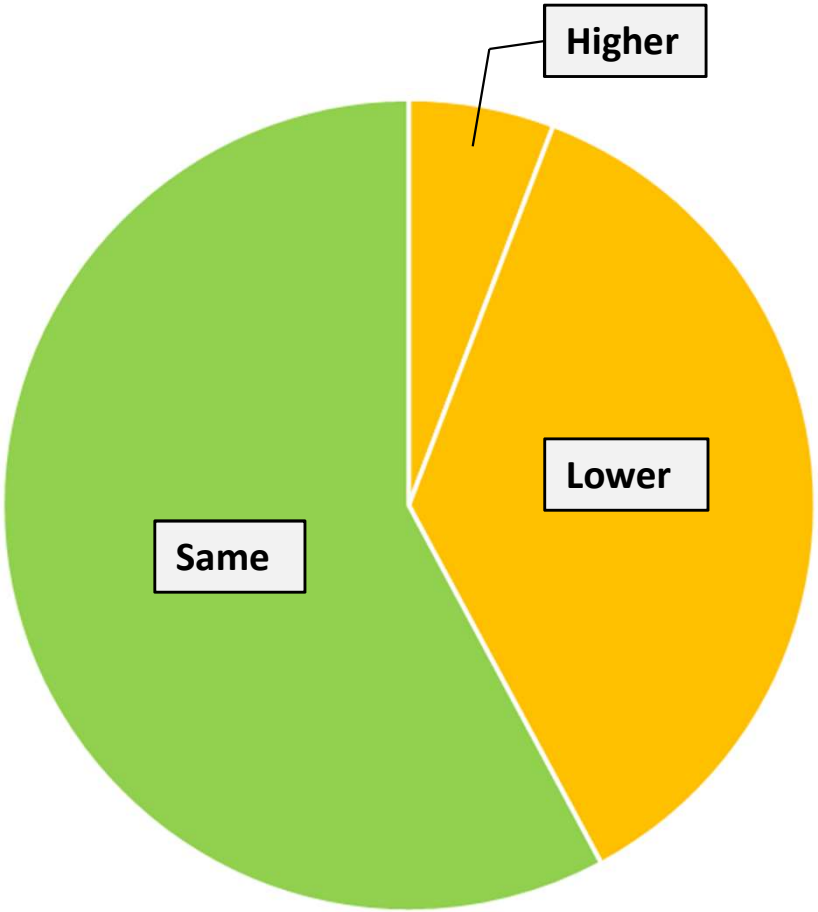
THE RESULTS

How high should the cabin be?

ACTROS

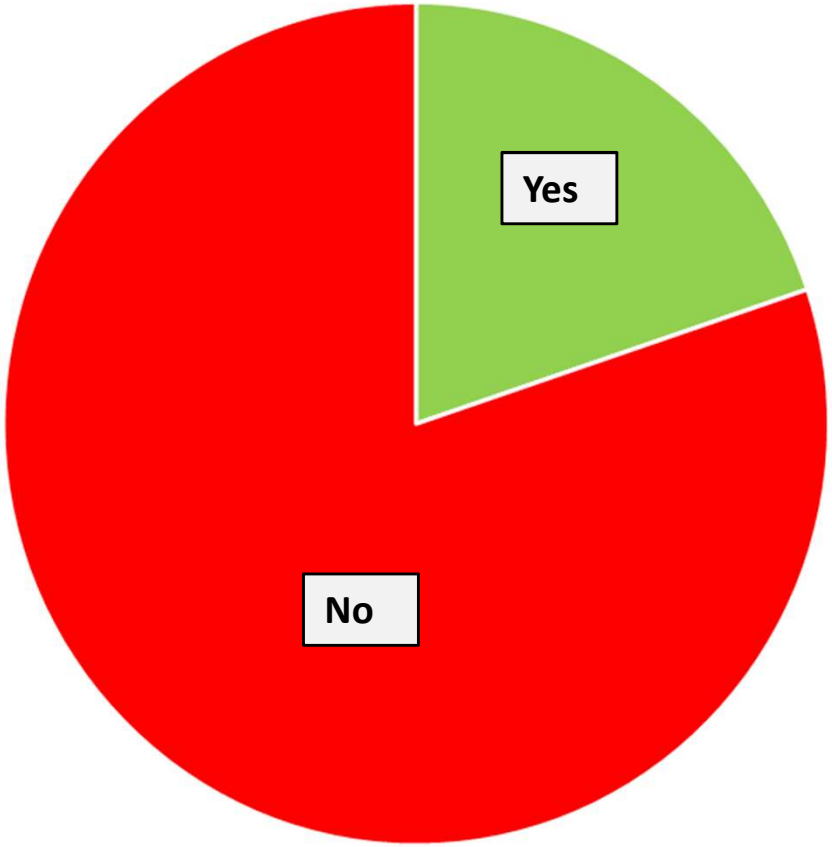


ECONIC

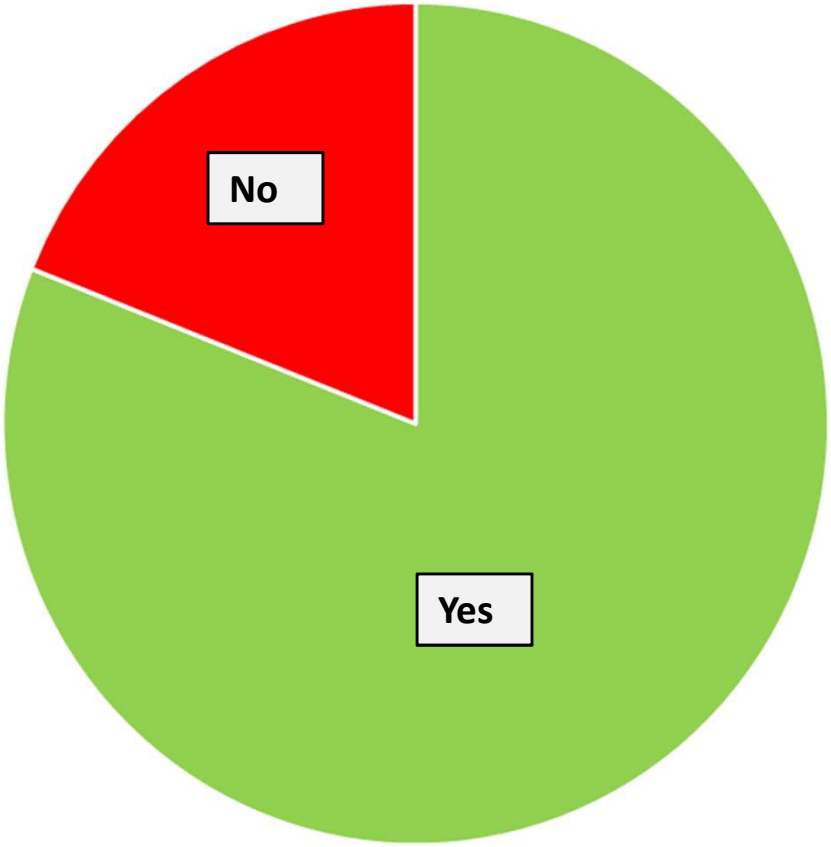


Is the front window wide enough to let driver see the road?

ACTROS

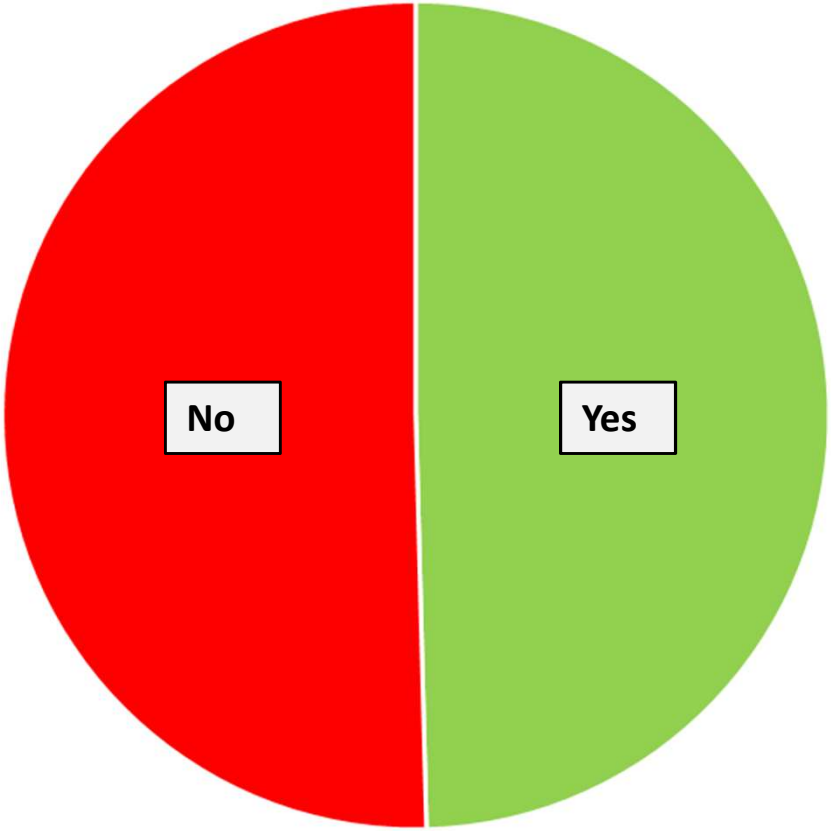


ECONIC

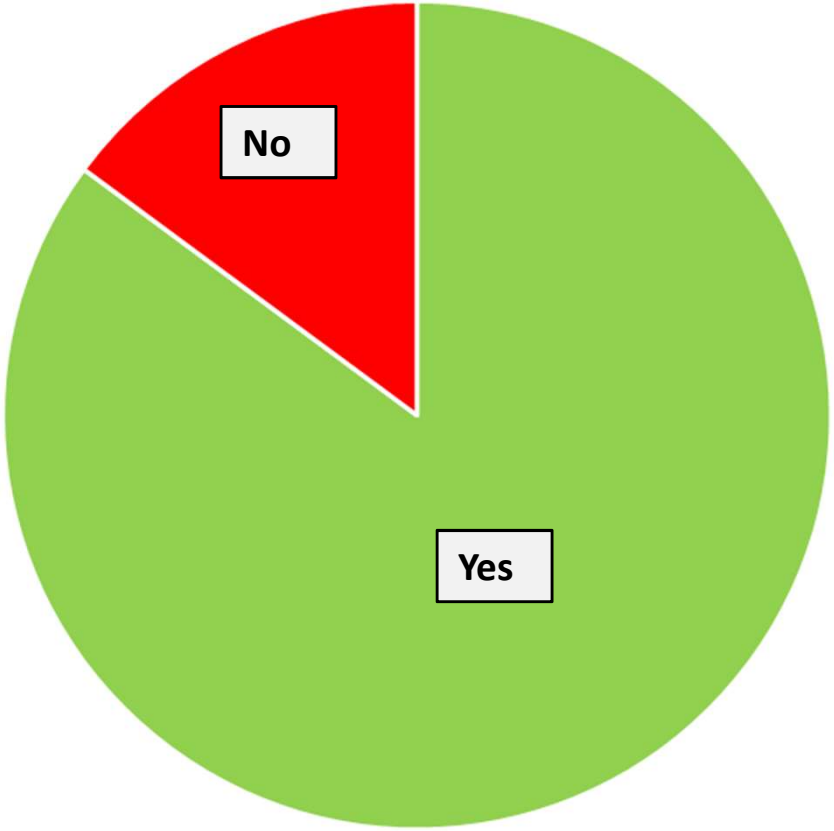


Is watching the mirrors easy and intuitive?

ACTROS



ECONIC



CONCLUSIONS

1. Consciousness exists

Heavy vehicles industry already produces more suitable vehicles for urban areas. The weak road users have validated the solution adopted in the case of the test.

2. The 'on the field' test may have a considerable impact (considering also the low cost)

Cyclists boarded the lorries were surprised by the low view they had by the cabin of the 'traditional' heavy vehicle, although many of them were already aware of the potential risk. Seeing (or better, not seeing…) the blind zones depicted on the pavement helps consciousness.

3. Inverse experiment should be tested

To perform and complete the exchange of roles, and raise awareness of all road users.

We're working on it…

https://youtu.be/zT74IMdBi3I

THANK YOU

for your attention

Mauro Borioni (SRM) – mauro.borioni@srmbologna.it