

Towards a safer road transportation thanks to V2X

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From the WHO, the road safety is a major stake

GLOBAL

30%



21%



6%



23%



21%



In 2021, 1.2 million deaths on road over the world

The VRU represents 50% of deaths and increases

In south east Asia, the VUR represents 75% of deaths, meaning 22% of global deaths

In Europe, rural and peri-urban areas are the most critical

| <i>Ratio rural and peri-urban : 55% pass.km</i> | | | |
|---|-------------------|--------------------------|-------------------------|
| <i>Personal accidents</i> | <i>fatalities</i> | <i>seriously injured</i> | <i>lightly injured*</i> |
| 47% | 70% | 69% | 39% |

| | <i>fatalities</i> | <i>seriously injured</i> | <i>lightly injured</i> |
|---------------------------------------|-------------------|--------------------------|------------------------|
| Pedestrians | 12% | 12% | 11% |
| scooters and assimilate | 1% | 1% | 3% |
| Bicycle | 7% | 8% | 7% |
| Electrically assisted bicycles | 1% | 1% | 1% |
| mopeds | 4% | 10% | 9% |
| Motorbike | 18% | 22% | 11% |

| <i>Urban : 10% pass.km</i> | | | |
|----------------------------|-------------------|--------------------------|-------------------------|
| <i>Personal accidents</i> | <i>fatalities</i> | <i>seriously injured</i> | <i>lightly injured*</i> |
| 37% | 12% | 18% | 42% |

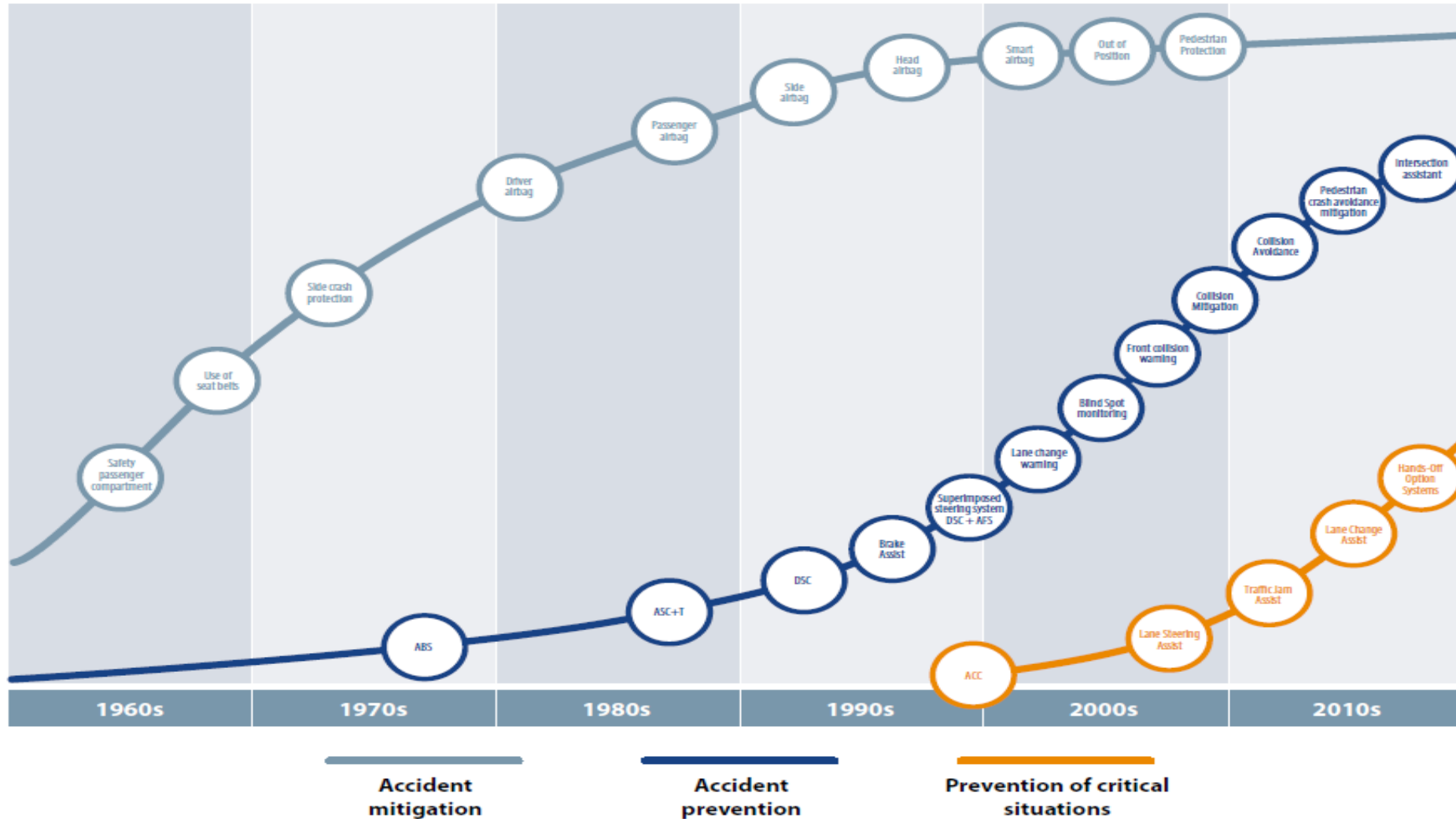
| | <i>fatalities</i> | <i>seriously injured</i> | <i>lightly injured</i> |
|---------------------------------------|-------------------|--------------------------|------------------------|
| Pedestrians | 26% | 24% | 19% |
| scooters and assimilate | 5% | 4% | 5% |
| Bicycle | 7% | 9% | 10% |
| Electrically assisted bicycles | 2% | 1% | 2% |
| mopeds | 4% | 10% | 9% |
| Motorbike | 27% | 30% | 19% |

The rate of VRU deaths is higher in city, but the number of VRU deaths is 2.5 higher in rural and peri-urban

Case of France

Automobile technology has highly improved the safety

Figure 1: Schematic representation of the cumulative effect of implemented safety systems



But these progresses only stabilized the fatalities

Fig. 7. WHO estimated global road traffic fatality rates per 100 000 vehicles, 2010–2021

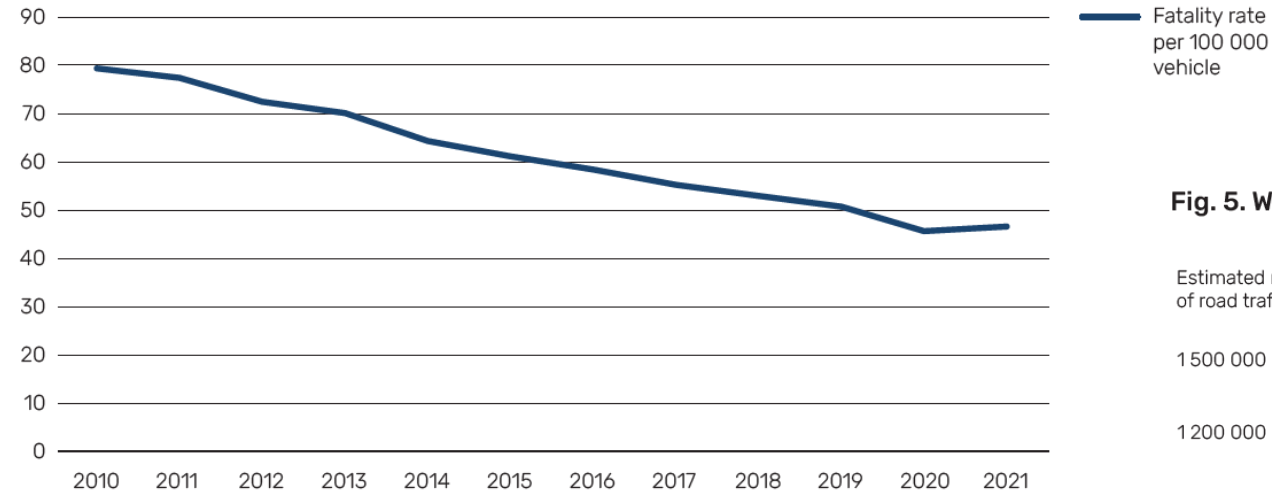
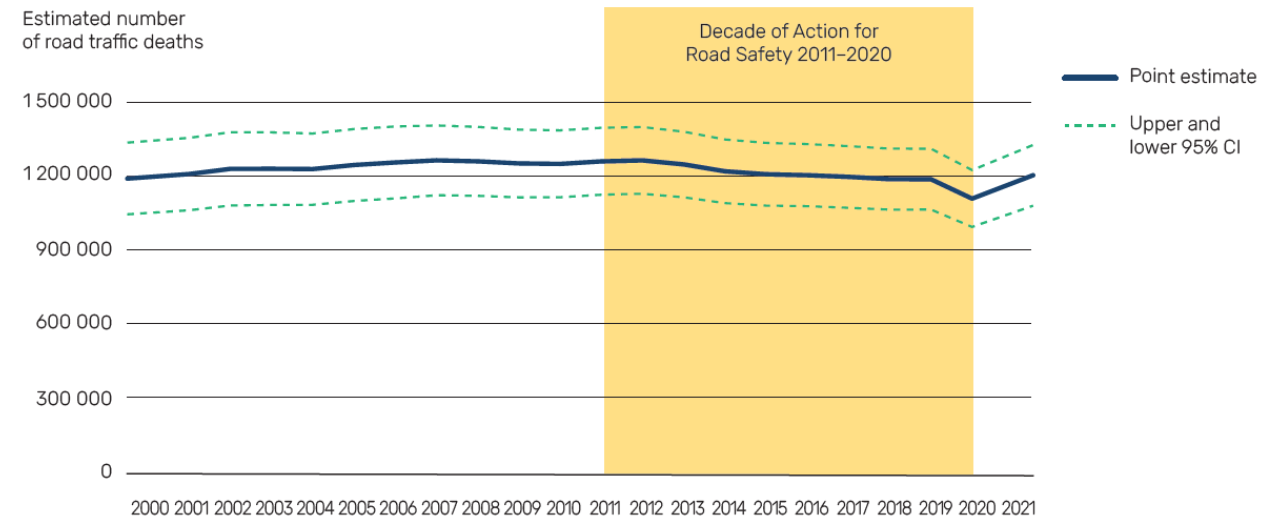


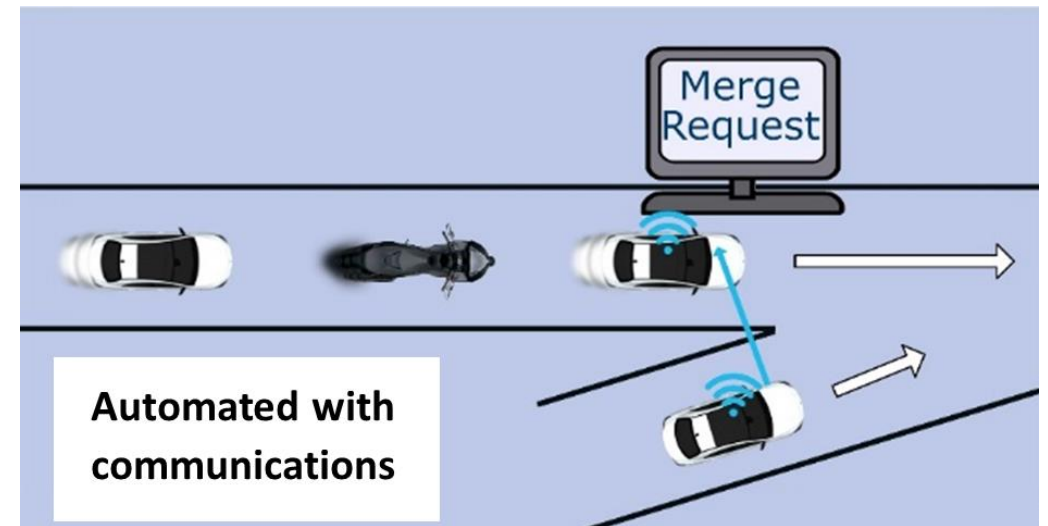
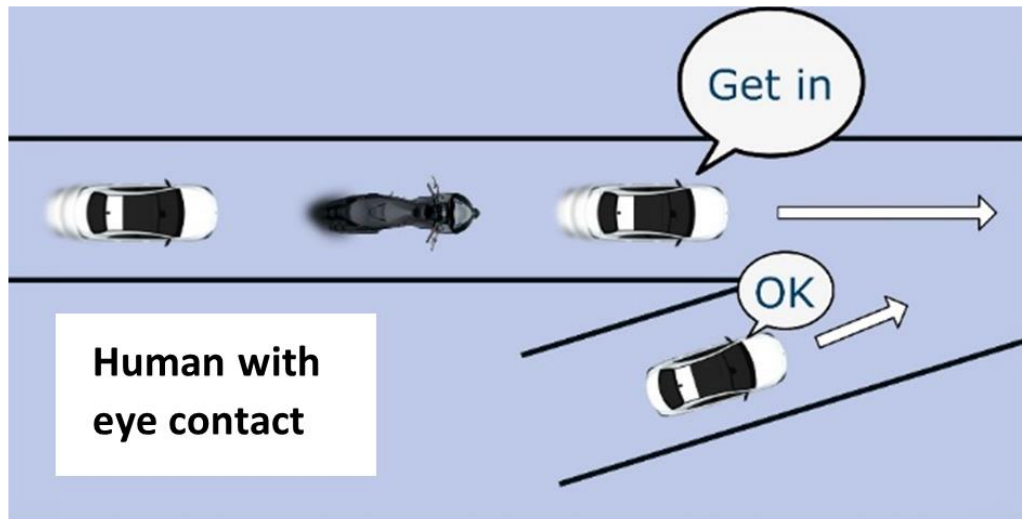
Fig. 5. WHO estimated number of road traffic fatalities, 2000–2021



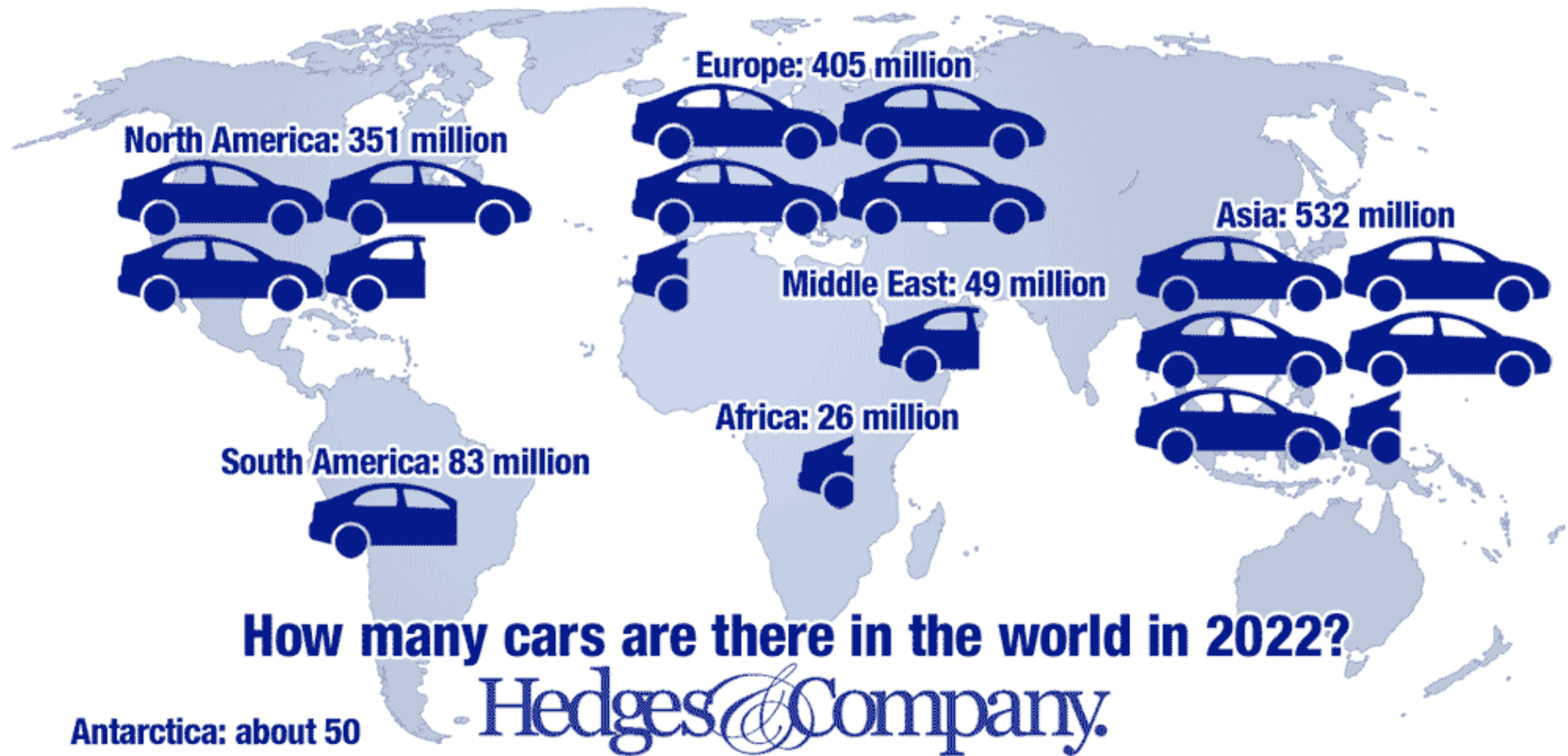
**In the last 10 years, the fatalities per 100000 veh. reduced by 38%
But the number of deaths stays around 1.2 million.**

Next steps of technology will move from ADAS to ADS

- ADAS has been improved along the last decades and the most recent are AEB that helped to protect VRU
- ADS is also emerging firstly on highways and will include urban highways.
- One of the toughest challenge is merging :



The global fleet of cars is 1450 million >20 times the annual market



The average age of the fleet is over 15 years

To succeed to reduce dramatically the fatalities on road, joining our forces between Automotive and Telecommunication industries is a very strong opportunity :

For that, we must focus on three challenges :

- To prevent the crash with VUR, considering the places where the occurancy is the highest (rural and peri-urban, and emerging countries)
- To contribute to the deployment of ADS by fixing the big issue of merging
- To ensure sustainable solutions, considering the lifetime of the cars that is beyond 20 years.

This means V2X solutions to place an additional “sensor” to the system.

This “sensor” must be available on the risky situation, reliable, cost effective and upgradeable all along the life of the vehicles

FISITA 

THANKS FOR YOUR ATTENTION

AND LET US JOIN OUR FORCES