



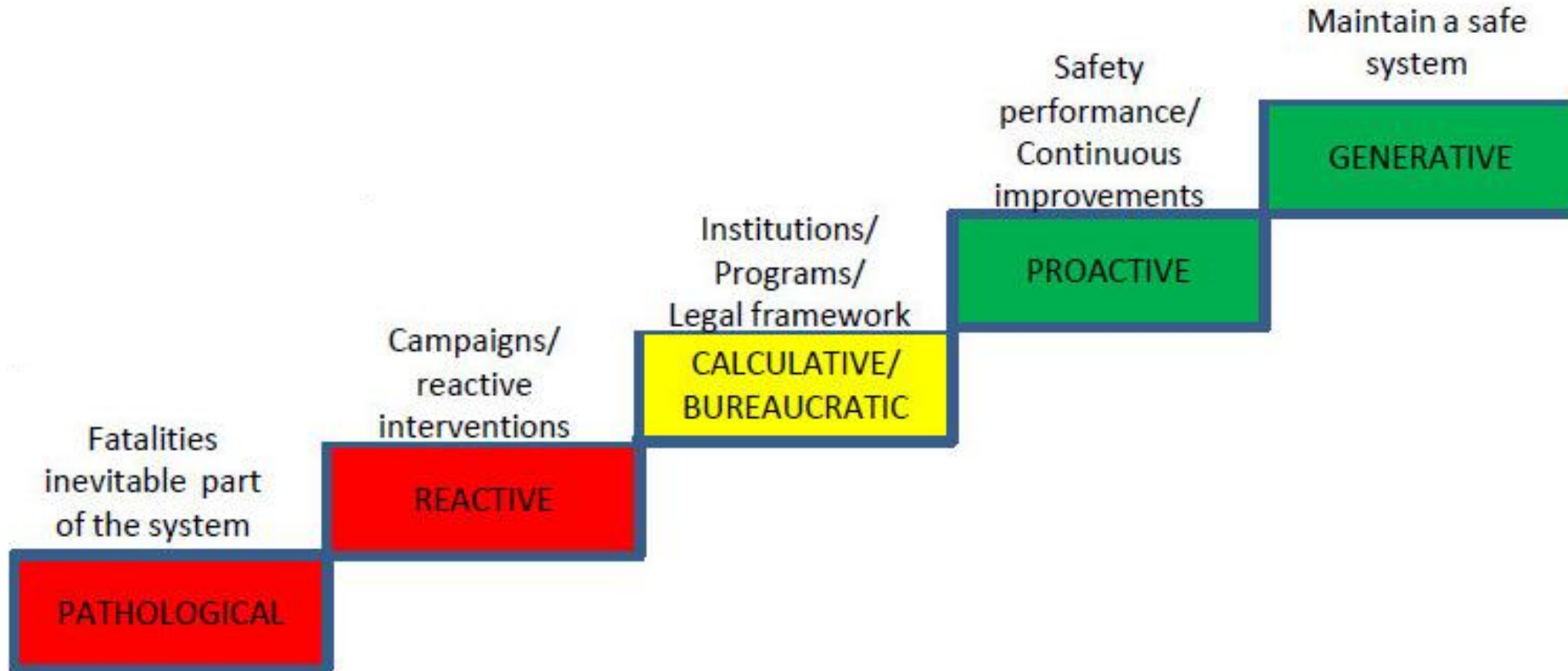
Future challenges for Finnish (and European) road safety

Pasi Anteroinen

Vision Zero is possible

91 %

The road safety ladder within society



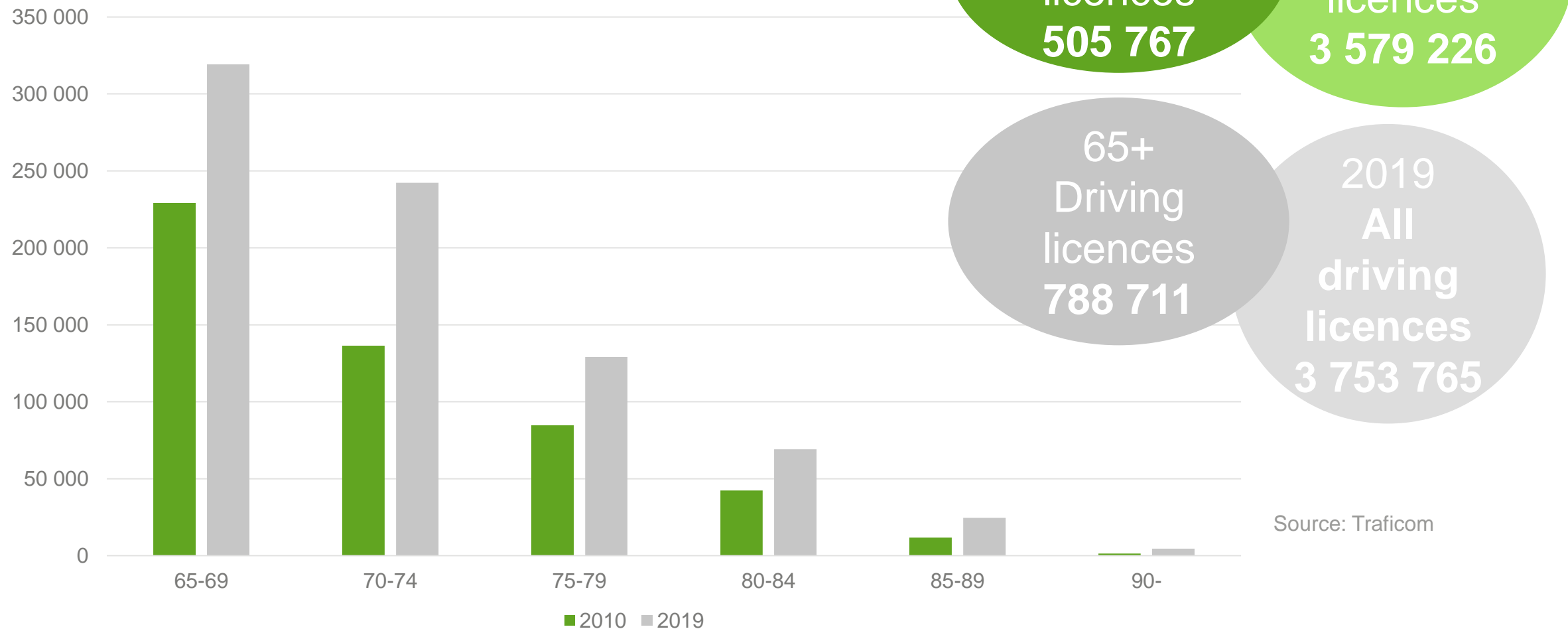
**We need to move from
reactive to proactive**

What are the benefits of a road safety action plan for vision zero?

Ageing



Driving licences in Finland for drivers over 65



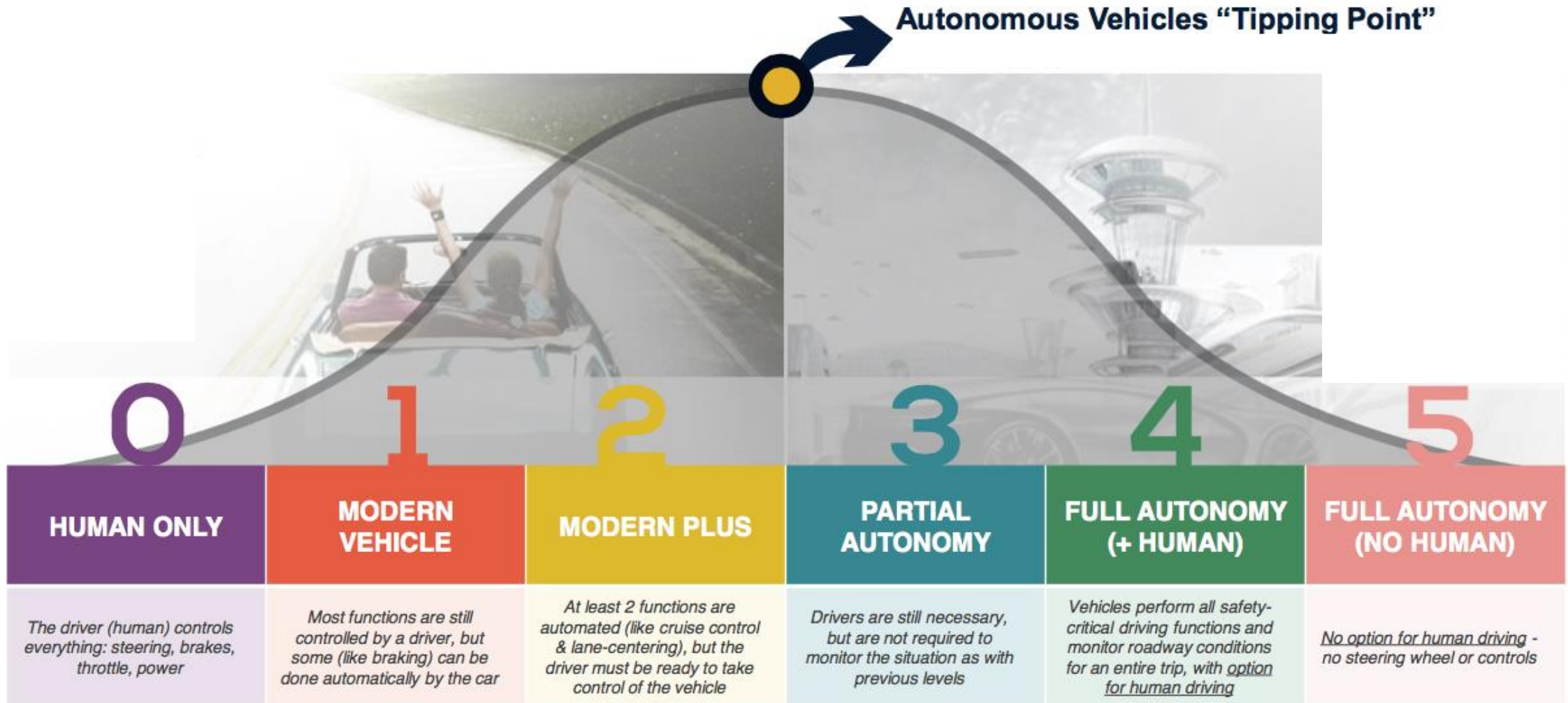
Source: Traficom

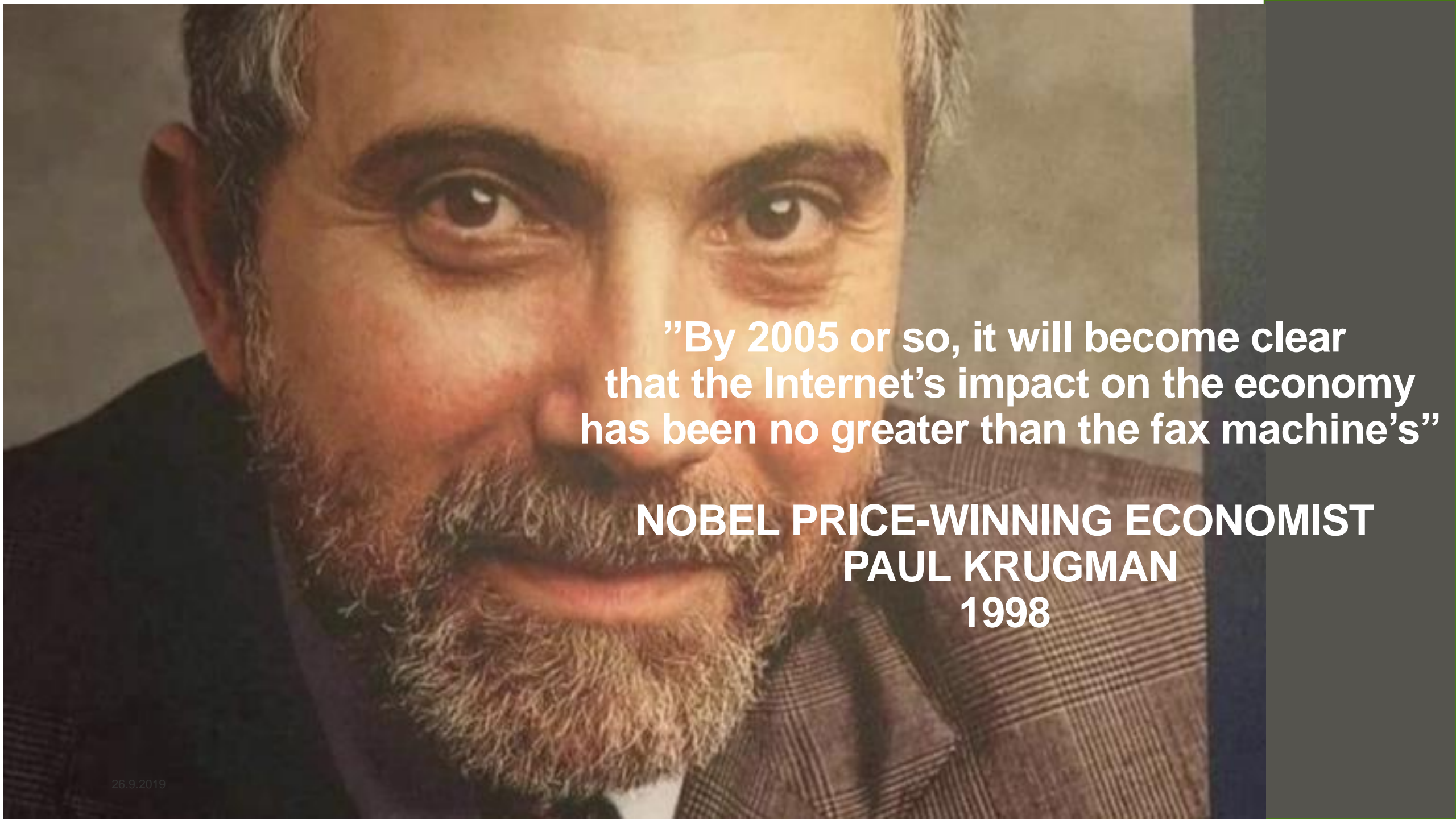
What solutions can a road safety action plan give to an ageing societies?

Automation



➤ The levels of Autonomous Vehicles



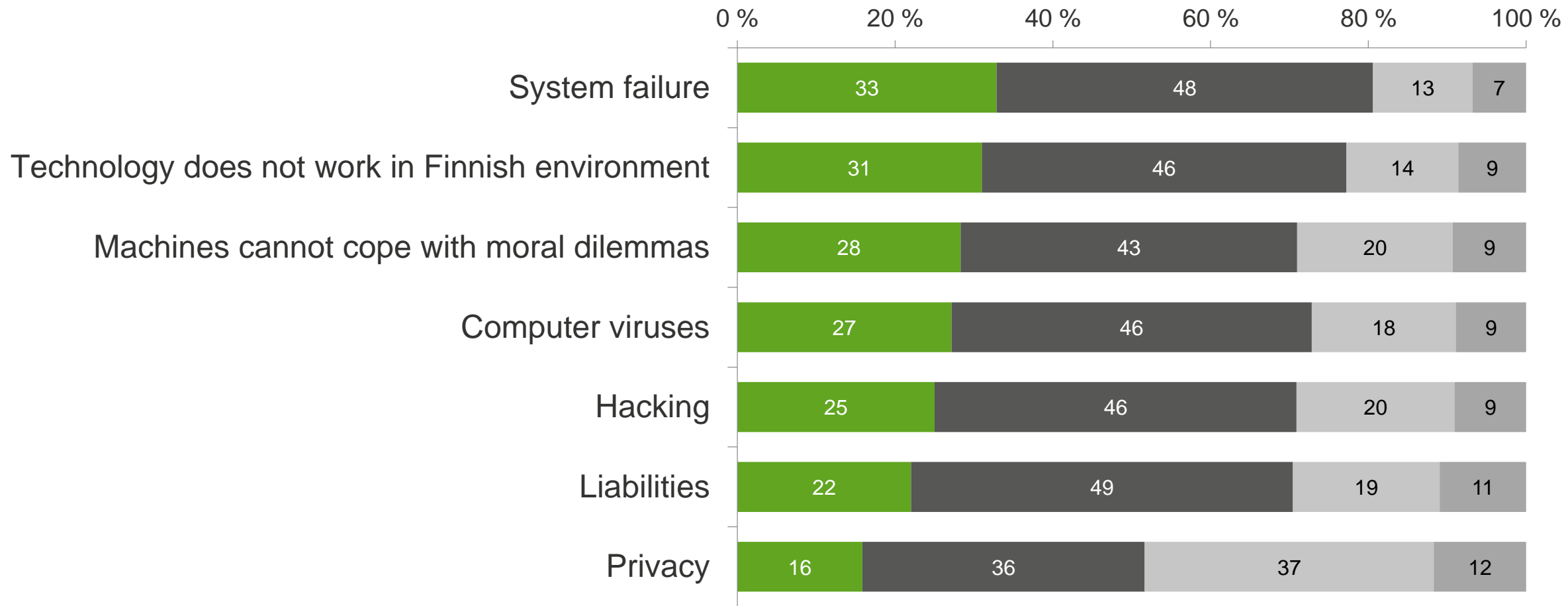
A close-up portrait of Paul Krugman, a man with a full grey beard and mustache, looking directly at the camera with a slight smile. He is wearing a dark suit jacket over a patterned vest and a light-colored shirt. The background is a neutral, light-colored wall.

**"By 2005 or so, it will become clear
that the Internet's impact on the economy
has been no greater than the fax machine's"**

**NOBEL PRICE-WINNING ECONOMIST
PAUL KRUGMAN
1998**



What are your concerns about self-driving vehicles?



Liikenneturva, TNS Kantar 2016
n.1238 car drivers

■ worries a lot ■ worries to some extent ■ doesn't worry at all ■ can't say

What does automation mean for road safety?

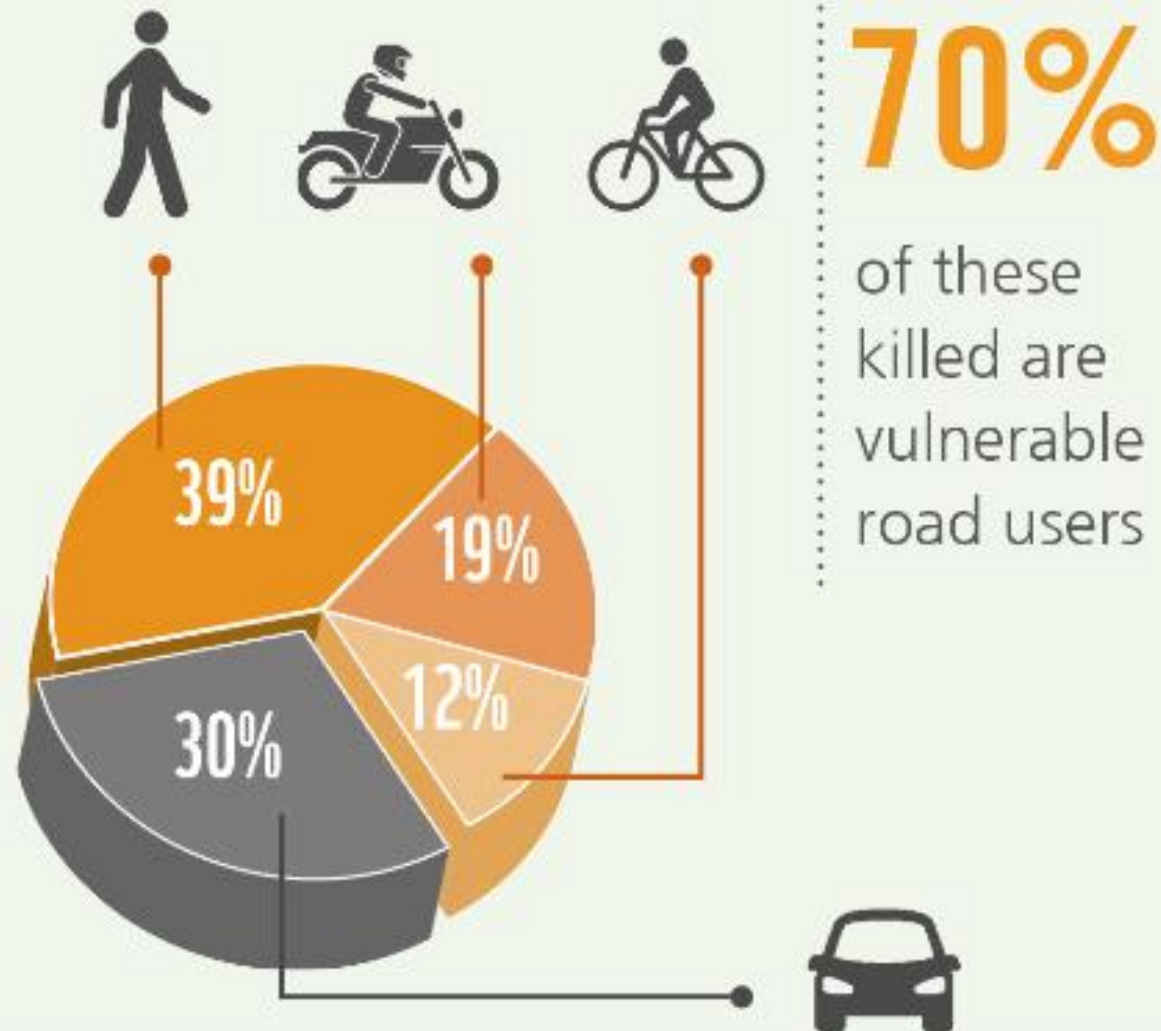


Urbanisation



Finland's goal is to grow the share of trips made by walking and cycling by 30% before the year 2030.

9500 PEOPLE KILLED EACH YEAR
ON URBAN ROADS IN THE EU



How do we make our cities safe for walking and cycling?

Micromobility



Picture source: VOI

Micromobility comes with risks

Injuries to the head and face were commonly found with e-scooter admissions...

Source: Craniofacial injuries seen with the introduction of bicycle-share electric scooters in an urban setting

Trivedi et al. Journal of Oral and Maxillofacial Surgery 2019

How do we plan for safe micromobility?

Drugs

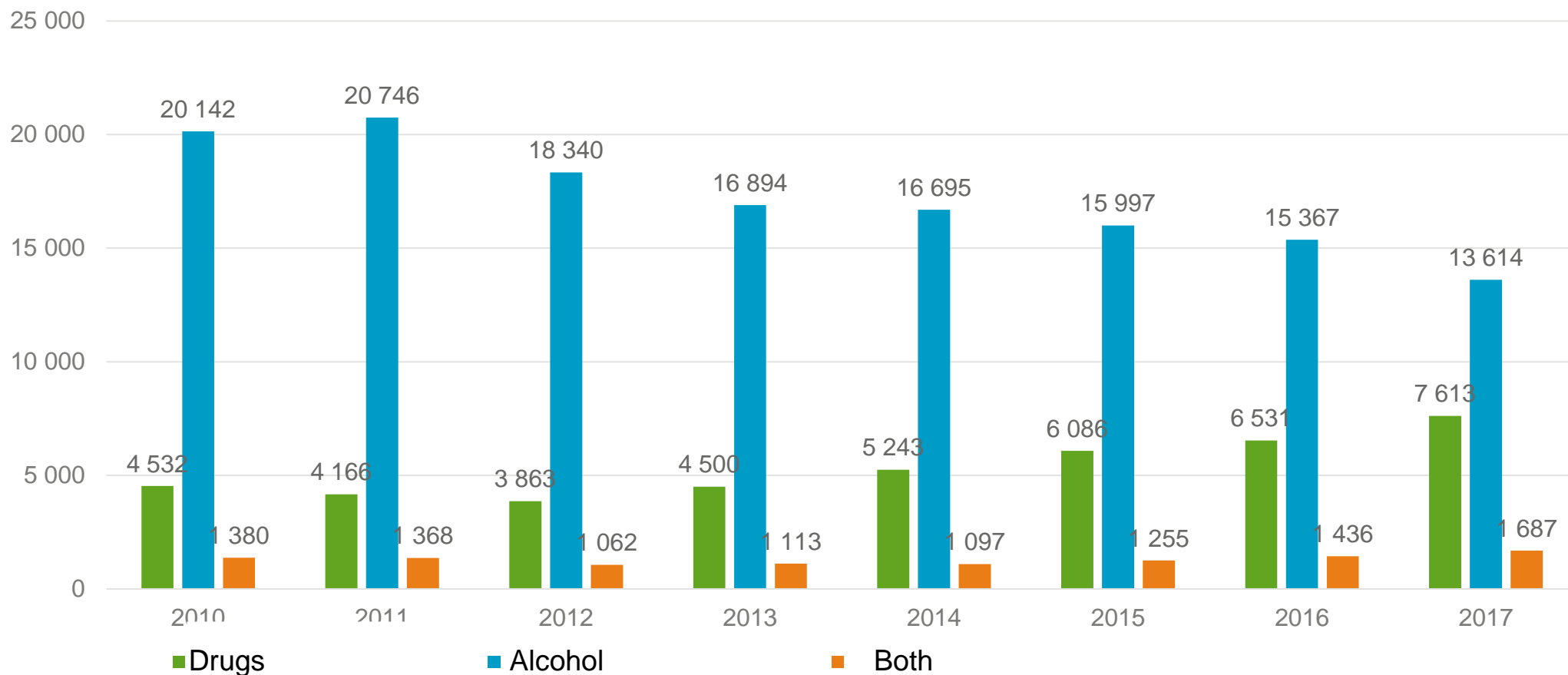
Drug related Accidents in Finland

34%

rise in drug involvement
2010-2014 compared to 2014-2016

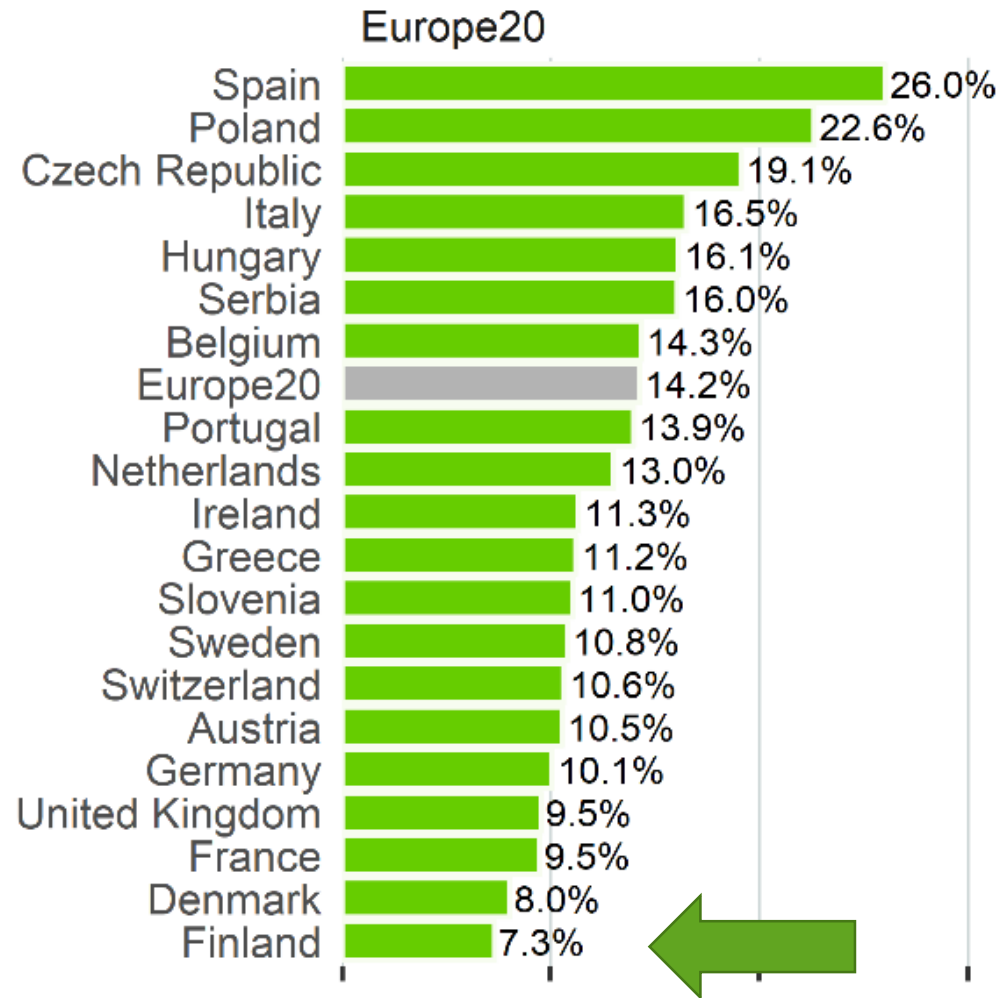
in accidents investigated by
The Finnish Crash Data Institute

Drink and Drugged Driving in Finland



Source: FINNISH POLICE /**LIKENNEJUOPUMUSTUTKIMUSTEN VUOSITILASTO**

Likelihood of being checked by the police for the use of illegal drugs



**Should we pay more attention to
drugged driving
and less attention to drink driving?**

A blue car is shown in motion at night, driving from left to right. The background is filled with horizontal light trails from city lights, creating a sense of high speed. Inside the car, a driver and two passengers are visible.

Human factors, vehicles and infrastructure

**Should we still use the paradigm of
human factors, vehicles and
infrastructure when we plan road safety?**



Science-based answers

Strong evidence to support cycling helmet use, but weak evidence supporting risk compensation

Olivier, J. & Creighton, P. (2016) Bicycle injuries and helmet use: **a systematic review** and meta-analysis. International Journal of Epidemiology, 1–15.

Høye, A. (2018a) Bicycle helmets – To wear or not to wear? **A meta-analyses** of the effects of bicycle helmets on injuries. Accident Analysis & Prevention Volume 117, 85–97.

Olivier, J., Esmaeilikia, M. & Grzebieta, R. (2018) Bicycle Helmets: **Systematic Reviews** on Legislation, Effects of Legislation on Cycling Exposure, and Risk Compensation. School of Mathematics and Statistics Transport and Road Safety (TARS), Sydney, Australia.

Hoye (2018b) Recommend or mandate? **A systematic review** and meta-analysis of the effects of mandatory bicycle helmet legislation. Accident Analysis and Prevention 120, 239–249.

Radun, I. & Olivier, J. (2018) Bicycle helmet law does not deter cyclists in Finland. Transportation Research Part F 58, 1087–1090.

Esmaeilikia, M, Radun, I., Grzebieta, R. & Olivier, J. (2019) Bicycle helmets and risky behaviour: **A systematic review**. Transportation Research Part F 60, 299–310.

How do we ensure that road safety action plans are evidence-based?