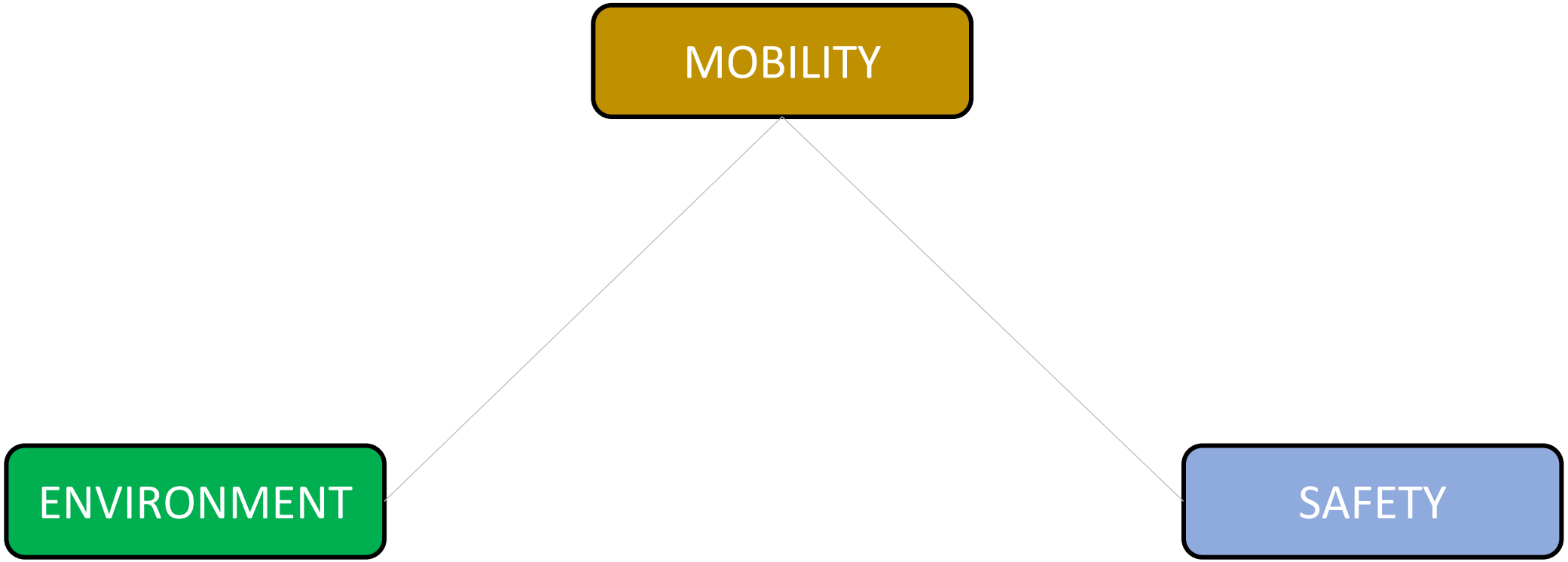
Net-zero policies for land transport: do they improve human health?

Paulo Anciaes

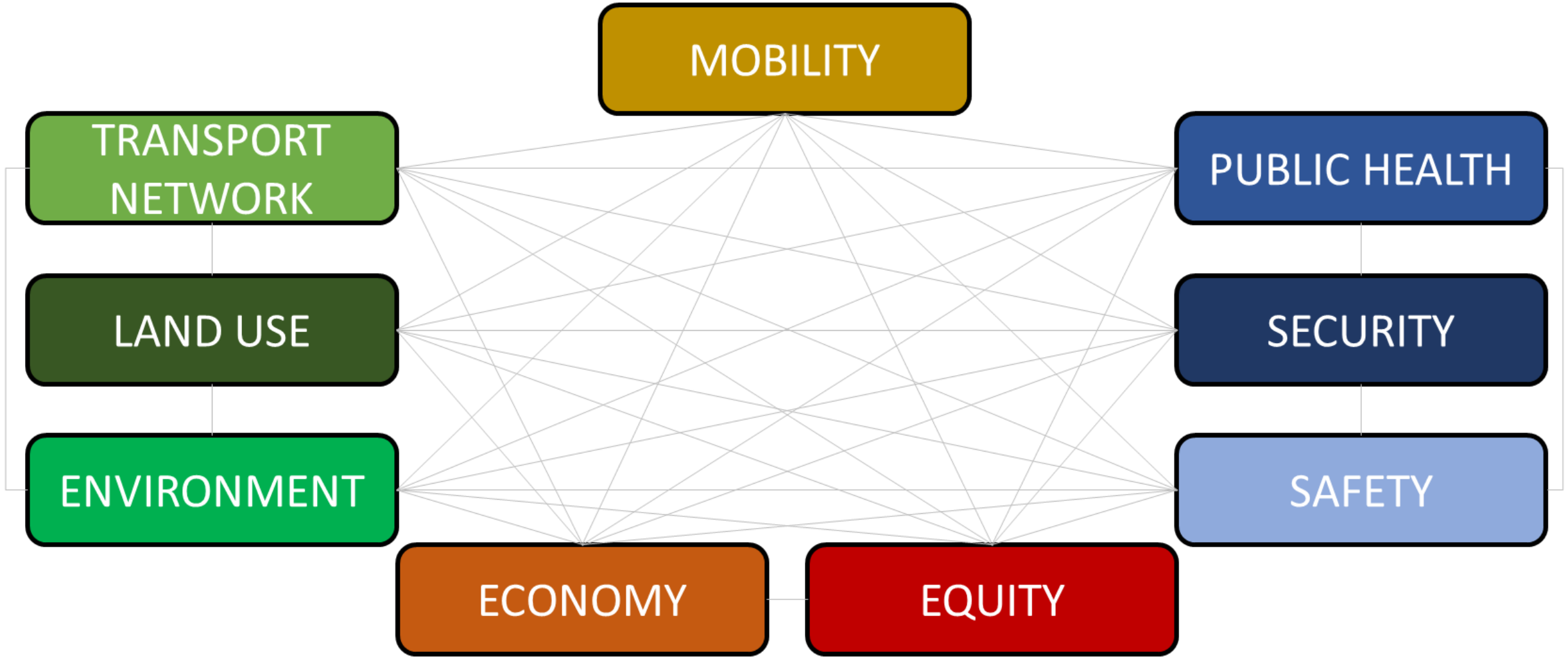
UCL (University College London)

AAPS Conference 2024, Bath
11/7/2024

What I think “sustainable transport policies” currently are



What I think they should be



What we need is not (only) faster, safer, and cleaner vehicles

It's also fewer vehicles!

1: Vehicles are a barrier to people, no matter how 'clean' they are

2: Improvements such as automation will probably result in even more vehicles on the road than what we already have

1

Vehicles are a barrier to people, no matter how ‘clean’ they are

Cross if you dare

It’s not only vehicles but also the infrastructure

This is bad

This is still bad

How do people think of, when they think of busy roads

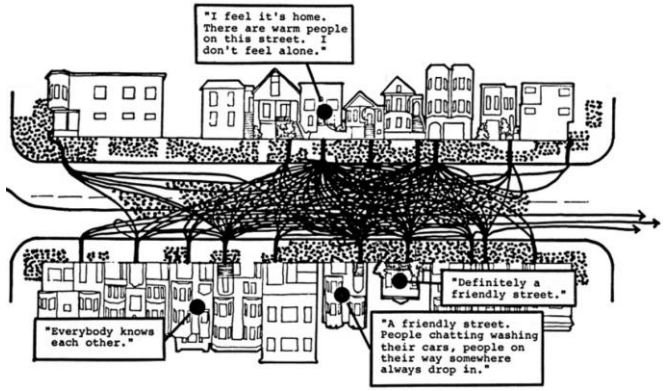
Busy roads kill social interactions

ROAD 1

2000 vehicles/day

3.0 friends/person

6.3 acquaintances/person

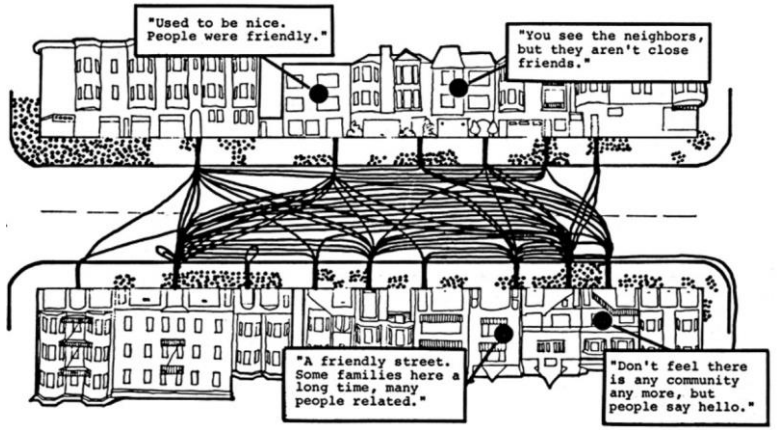


ROAD 2

8000 vehicles/day

1.3 friends/person

4.1 acquaintances/person

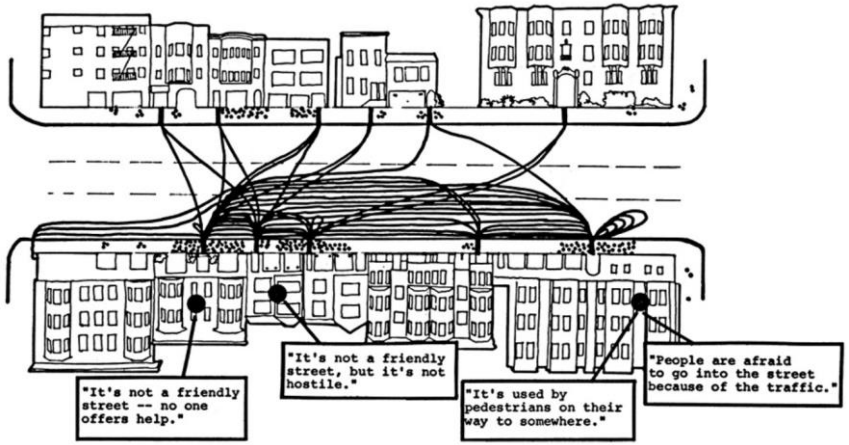


ROAD 3

16000 vehicles/day

0.9 friends/person

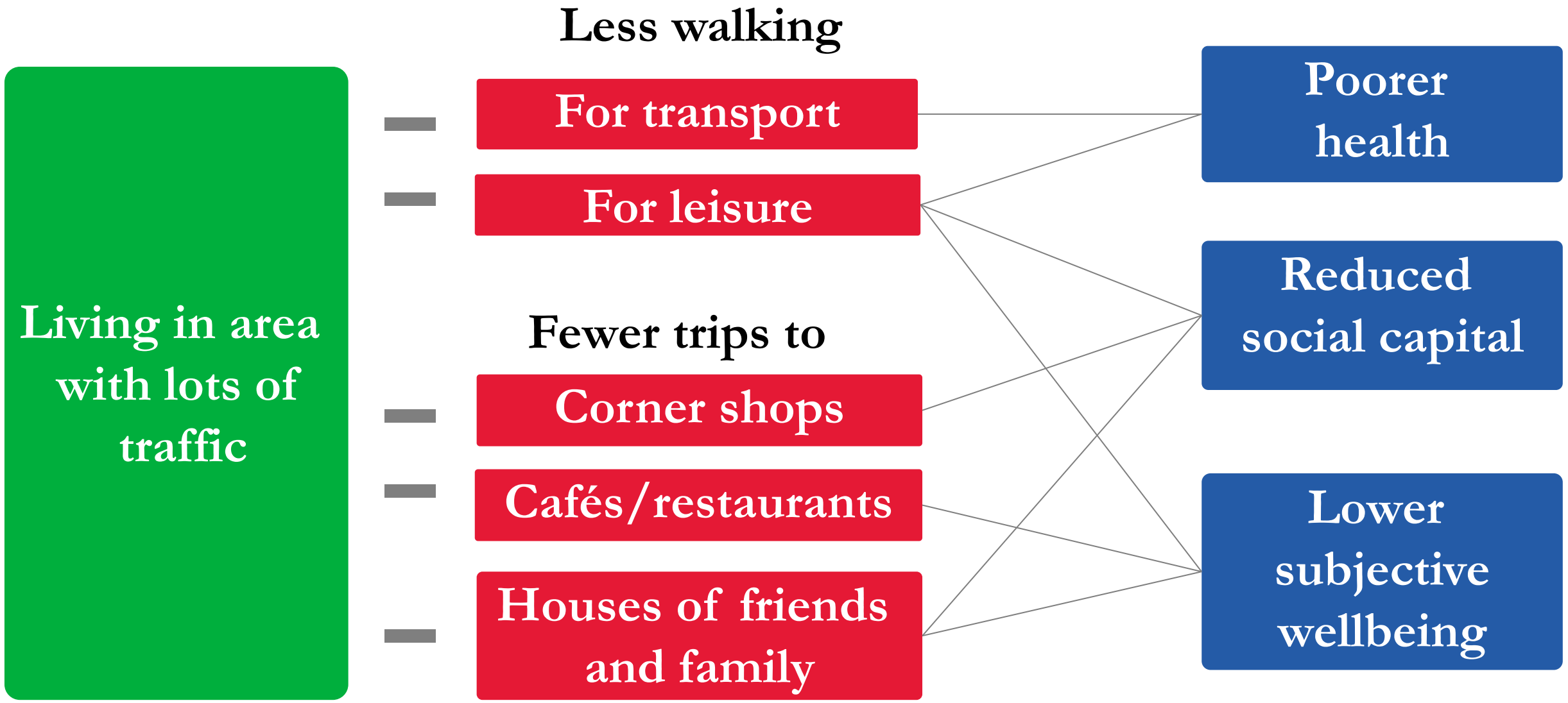
3.1 acquaintances/person



Appleyard and Lintell 1972 The Environmental quality of city streets. J American Institute of Planners, 38, 84-101.

Busy roads are bad for the health of people and communities

Findings of a UK study:



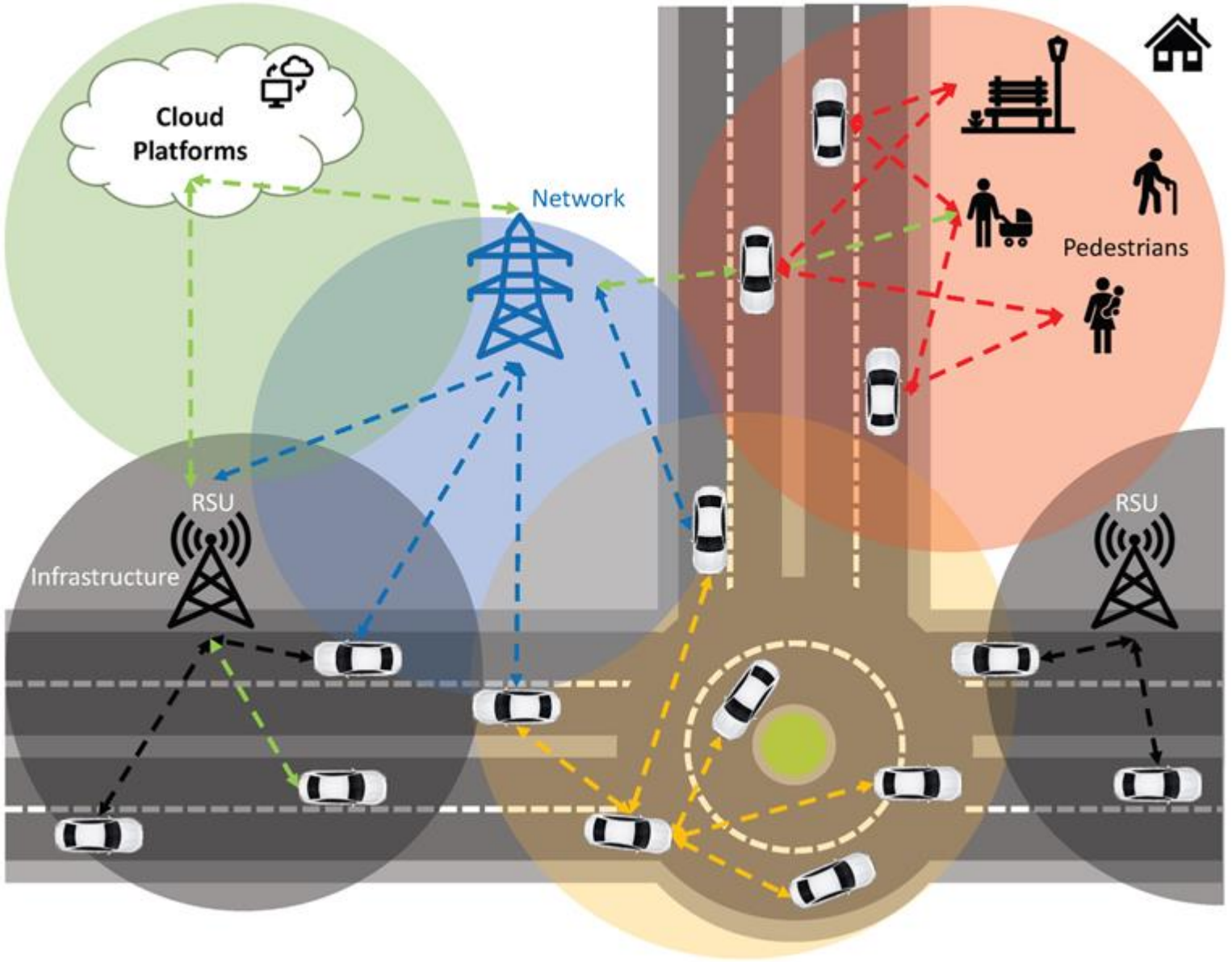
Anciaes, P., Jones, P., Mindell, J S., Scholes, S. (2022) The cost of the wider impacts of road traffic on local communities: 1.6% of Great Britain's GDP. Tr Res A: Policy and Practice 163:266-287.

2

Improvements such as automation may result in even more vehicles on the road

The self-driving vehicle revolution! Everything connected!

but pedestrians still need to cross 4 lanes to connect themselves with the other side



Vehicle to vehicle	Vehicle to infrastructure	Vehicle to pedestrian	Vehicle to network	Vehicle to everything

Is the self-driving vehicle revolution going to be this?

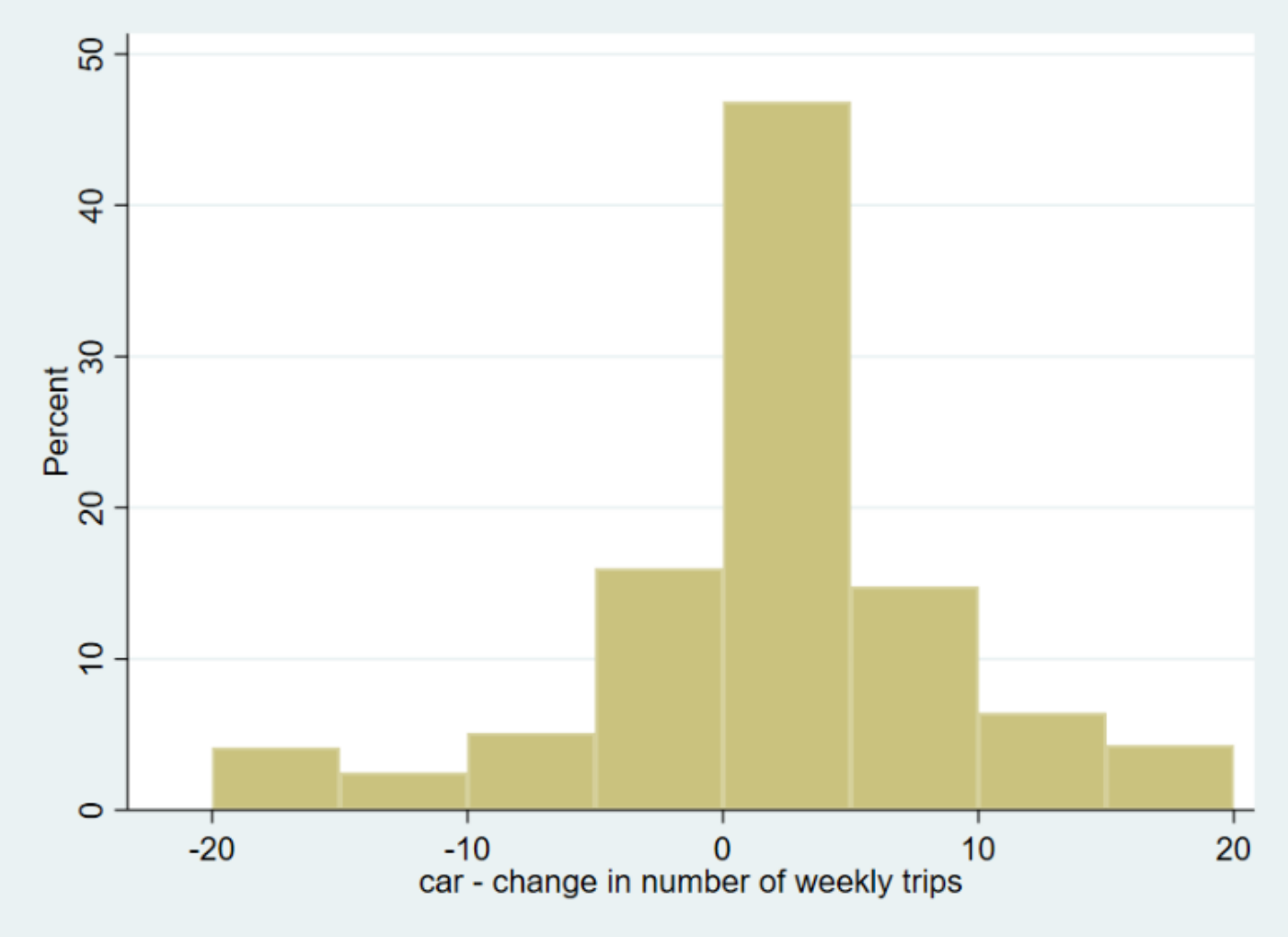
Or this?

Or even this?

Findings of a EU project

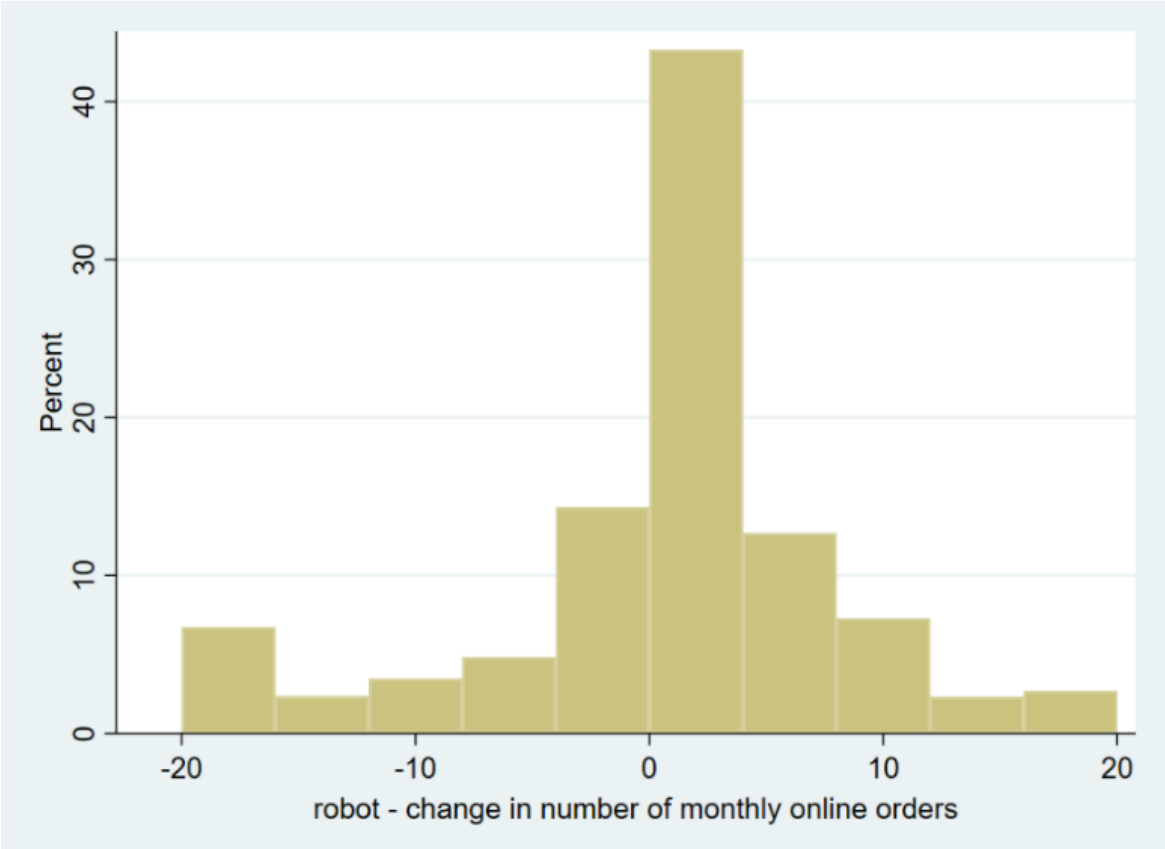
What do people think of when they think about autonomous vehicles: not really mobility or environment

When autonomous cars arrive, the average person will make more trips

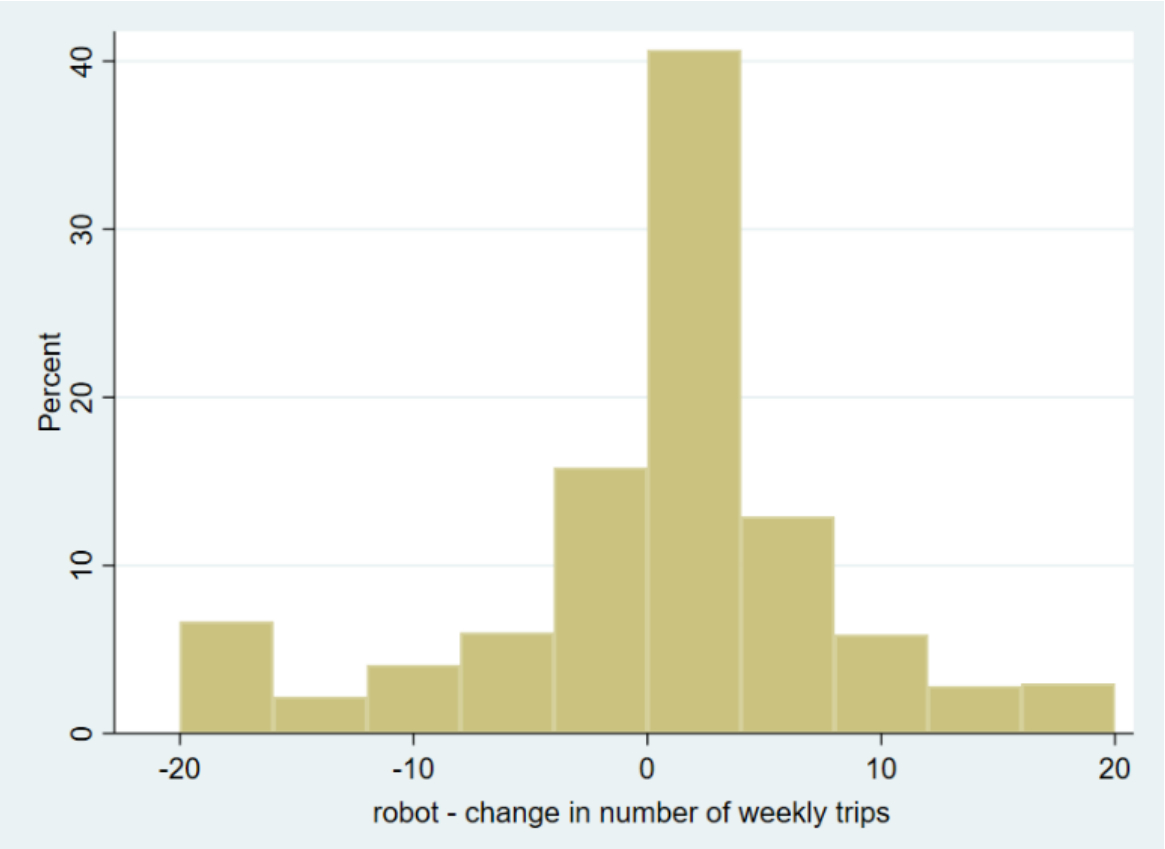


When delivery robots arrive…

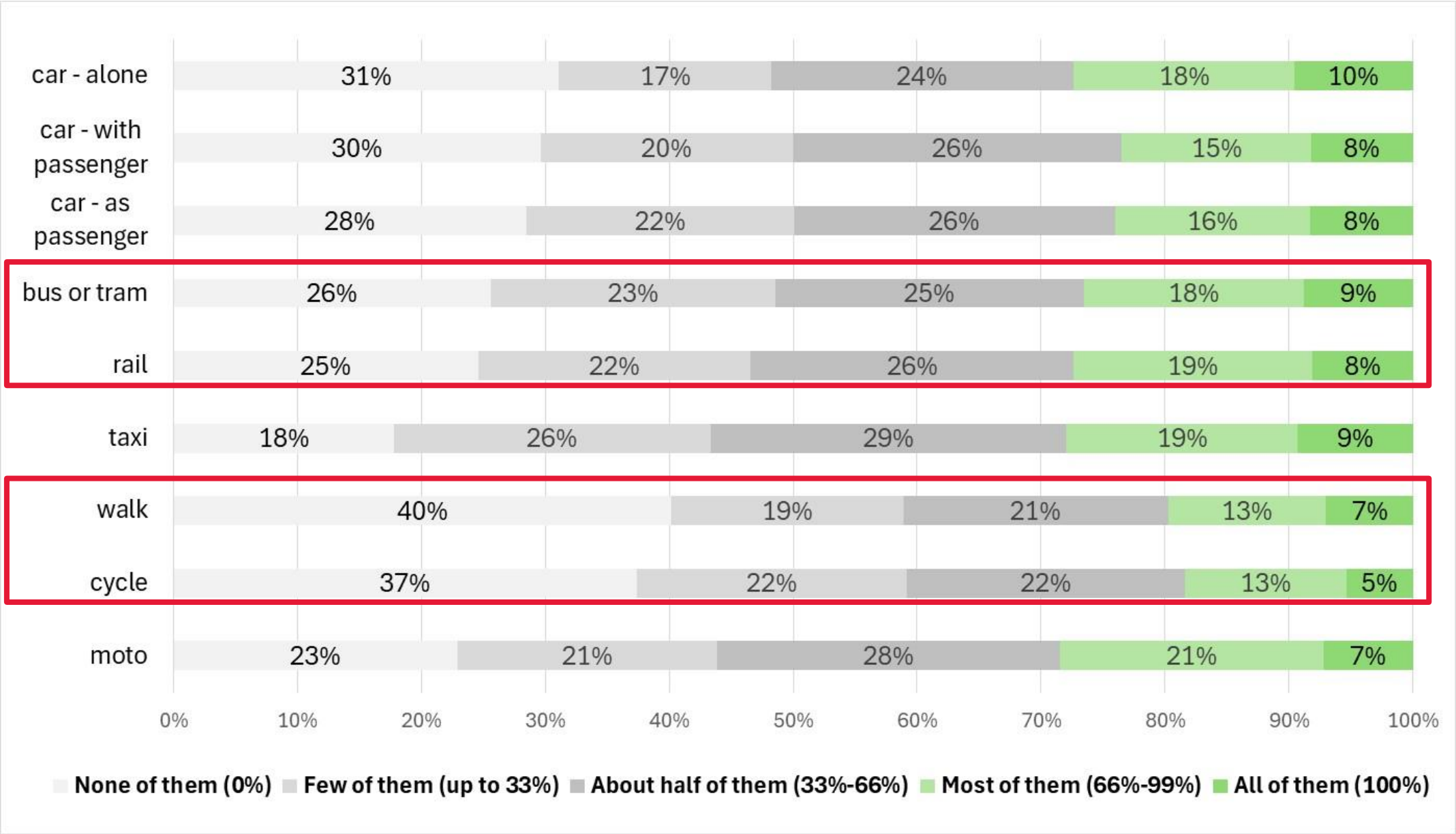
people will order more things online (so, more trips made by delivery companies)



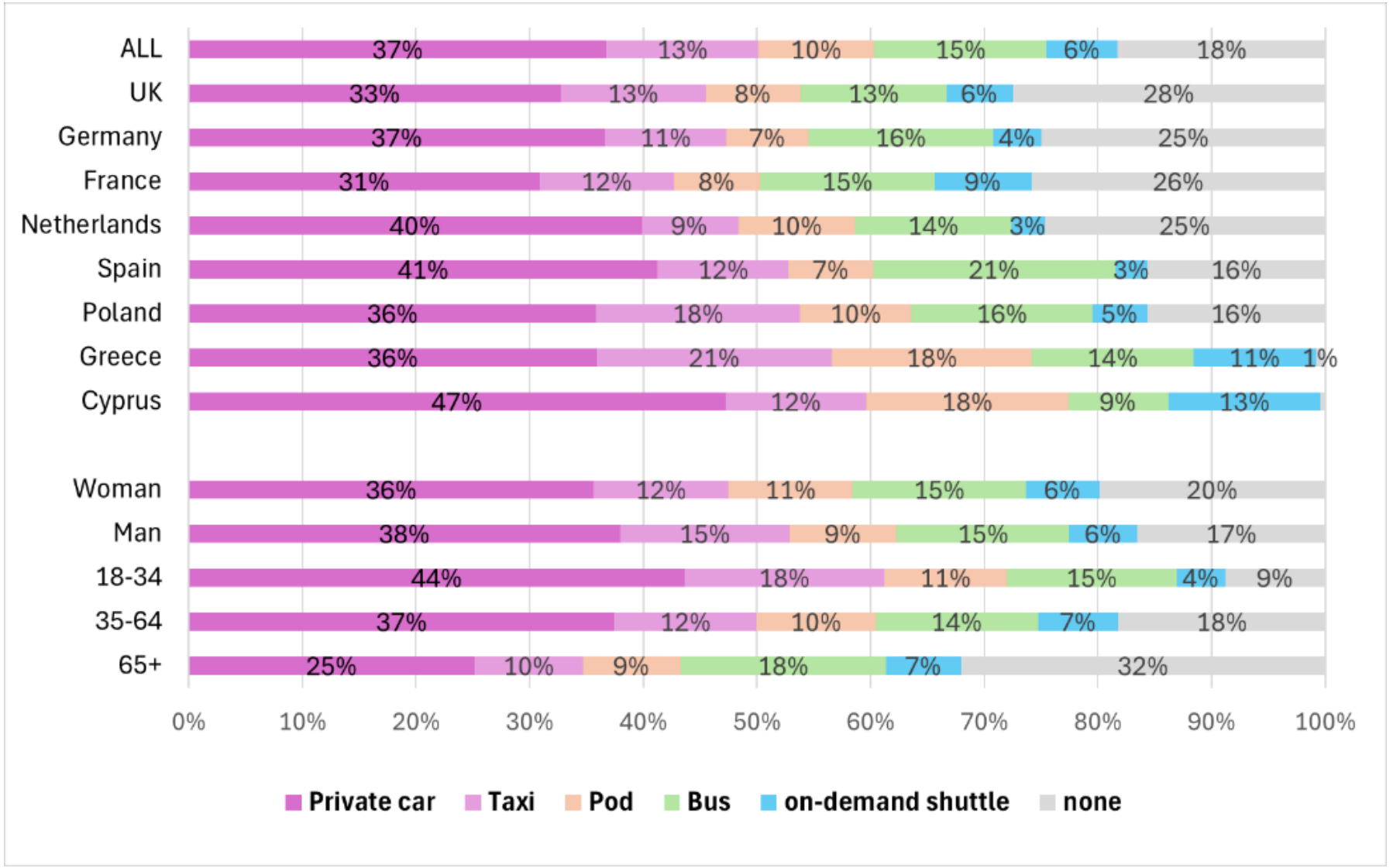
But people will also make more personal trips!



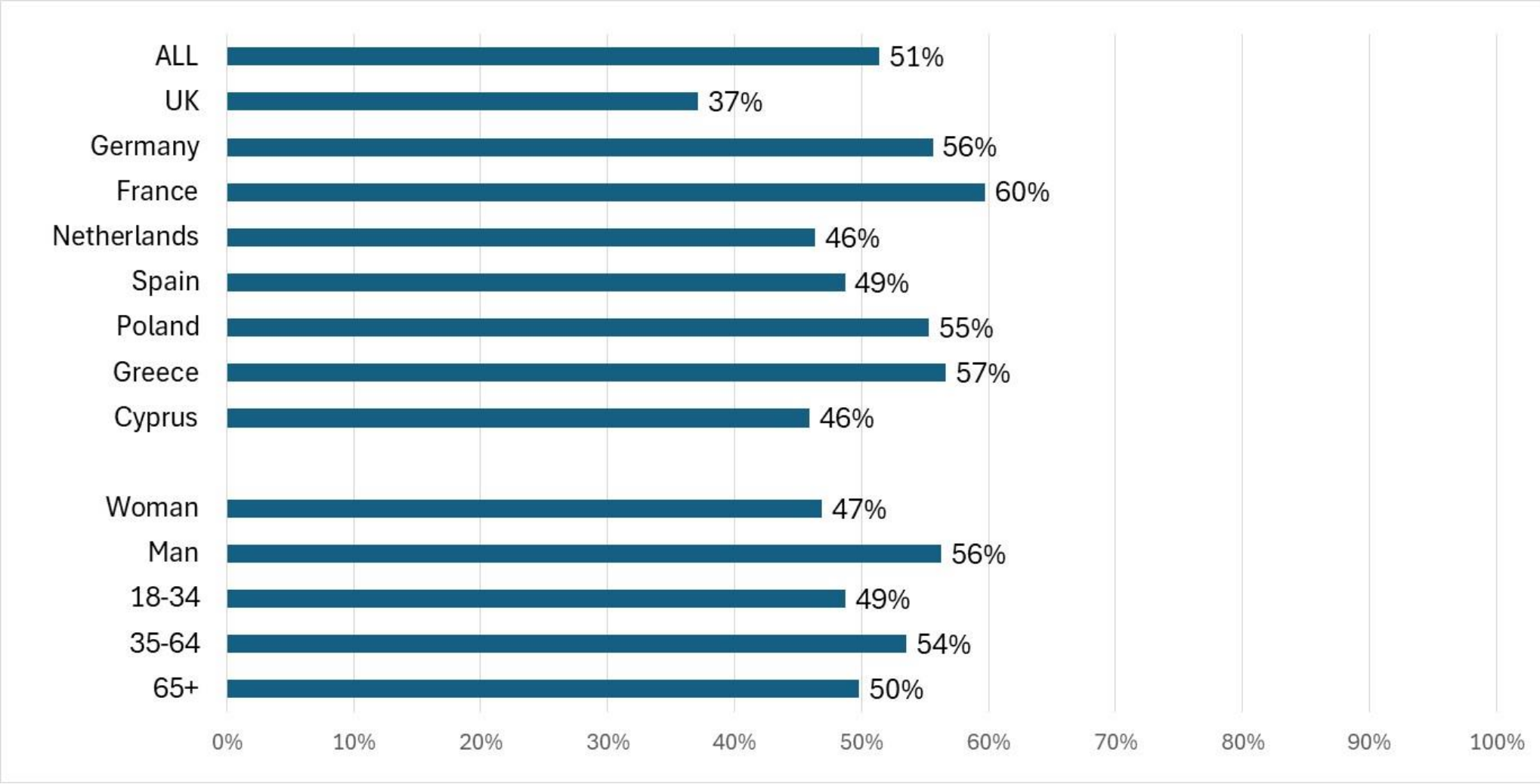
Trips that autonomous cars will substitute



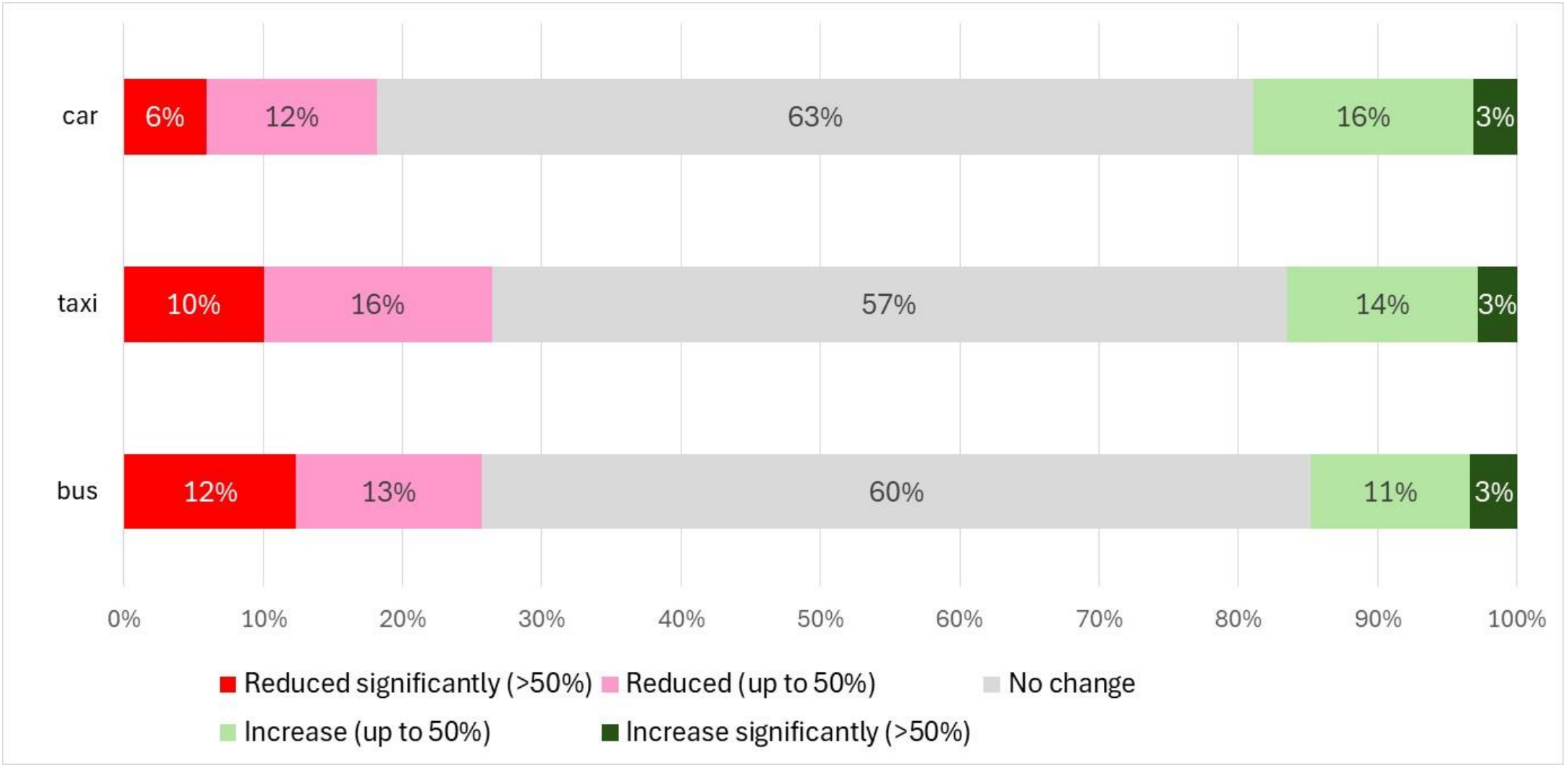
Preferred type of autonomous vehicle: the private car wins everywhere and for everyone



Willingness to share trips: not that high Especially in the UK…

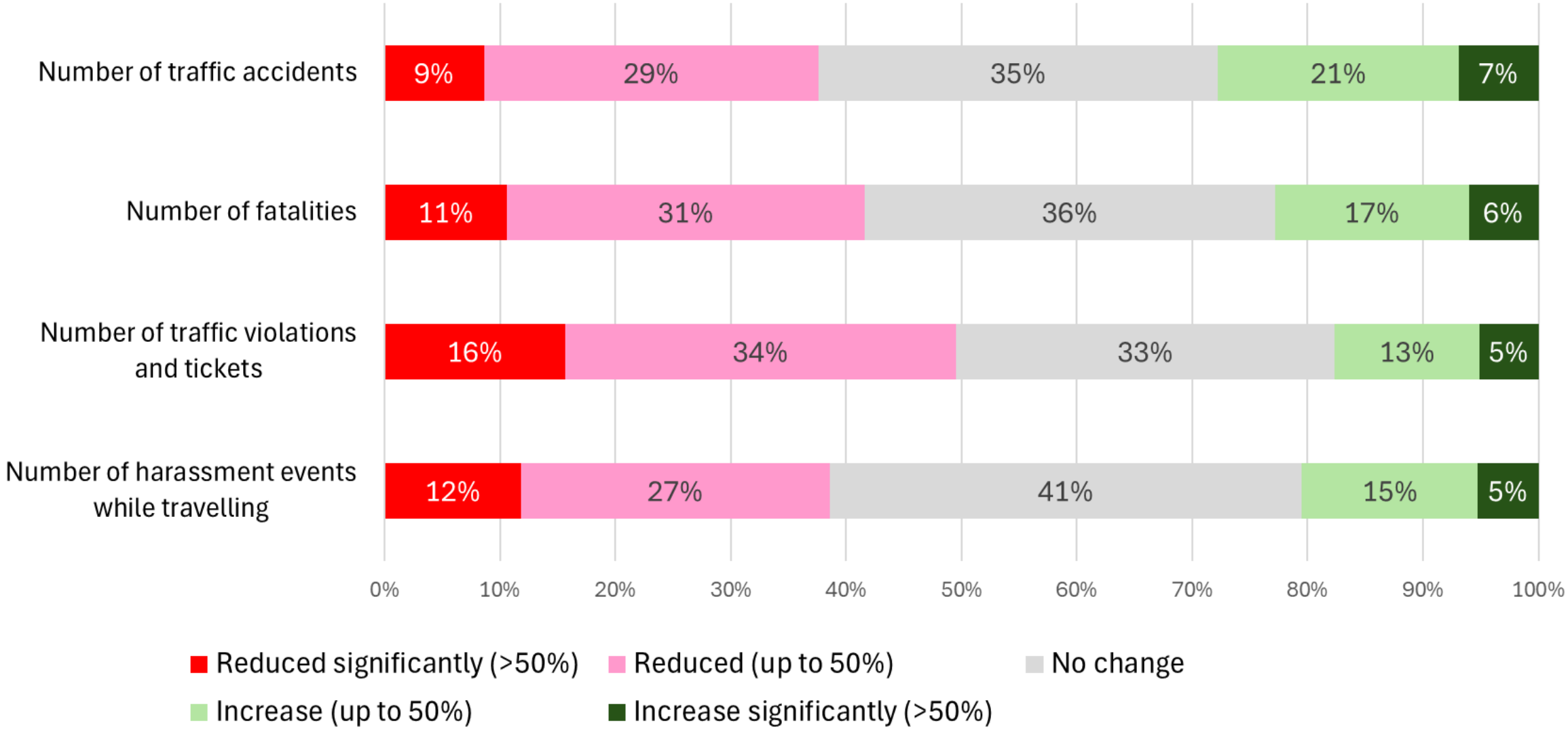


Quite a few people think they will need more parking space if they could use autonomous vehicles, even shared ones

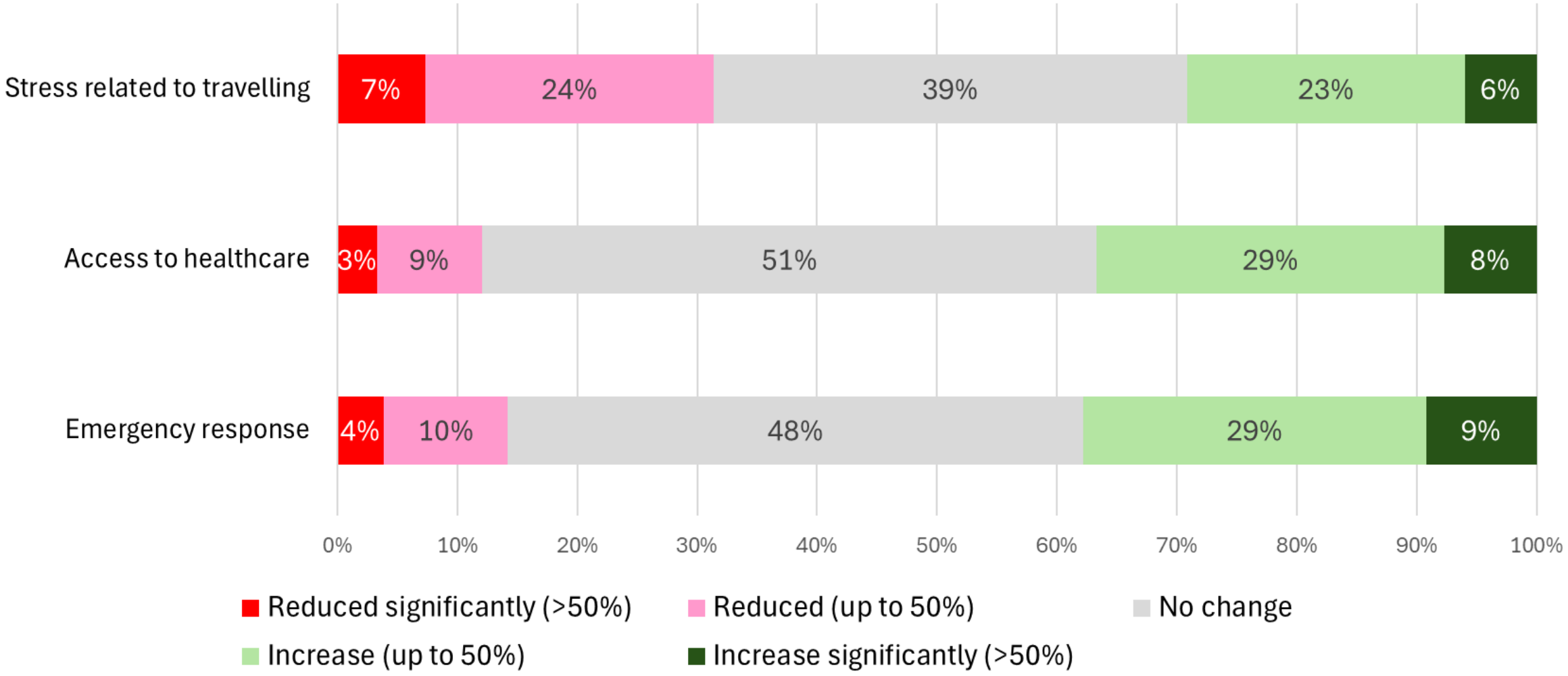


Accessibility is likely to increase - good

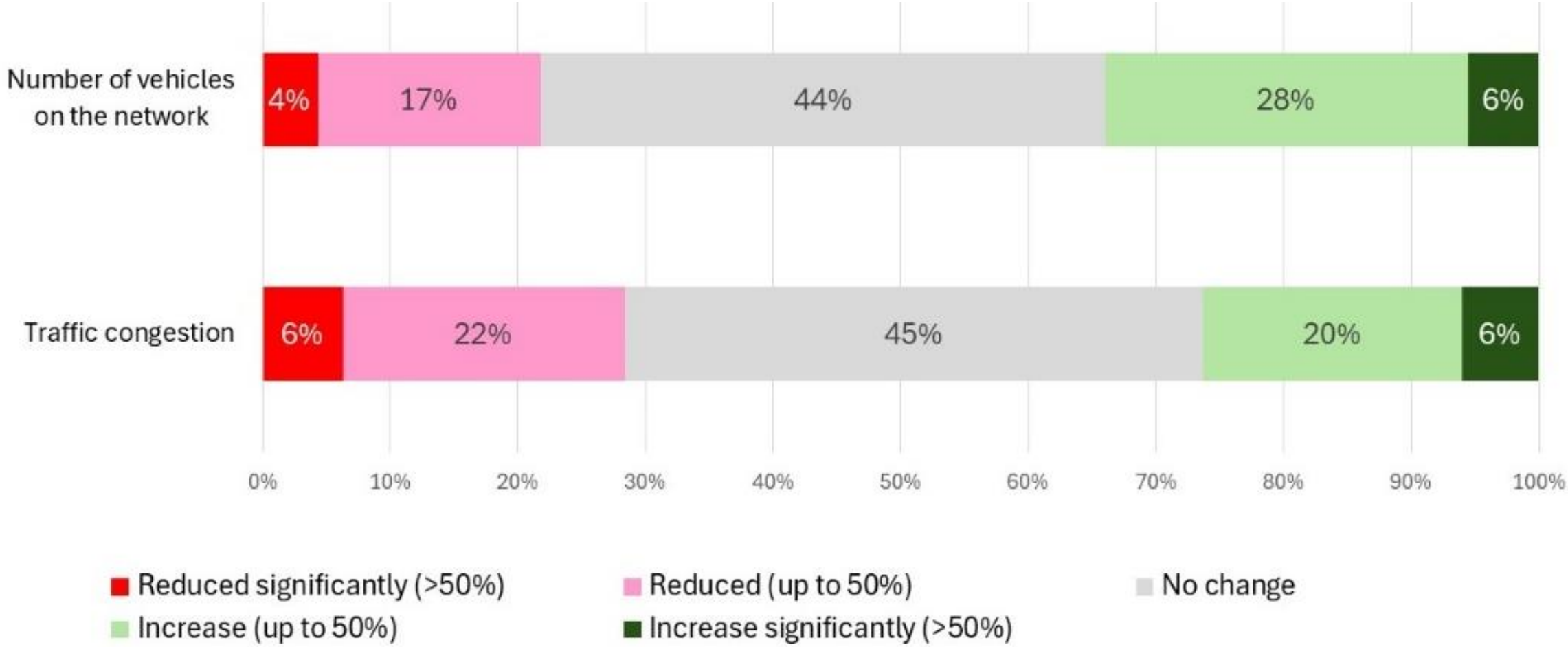
It will probably be safer to travel



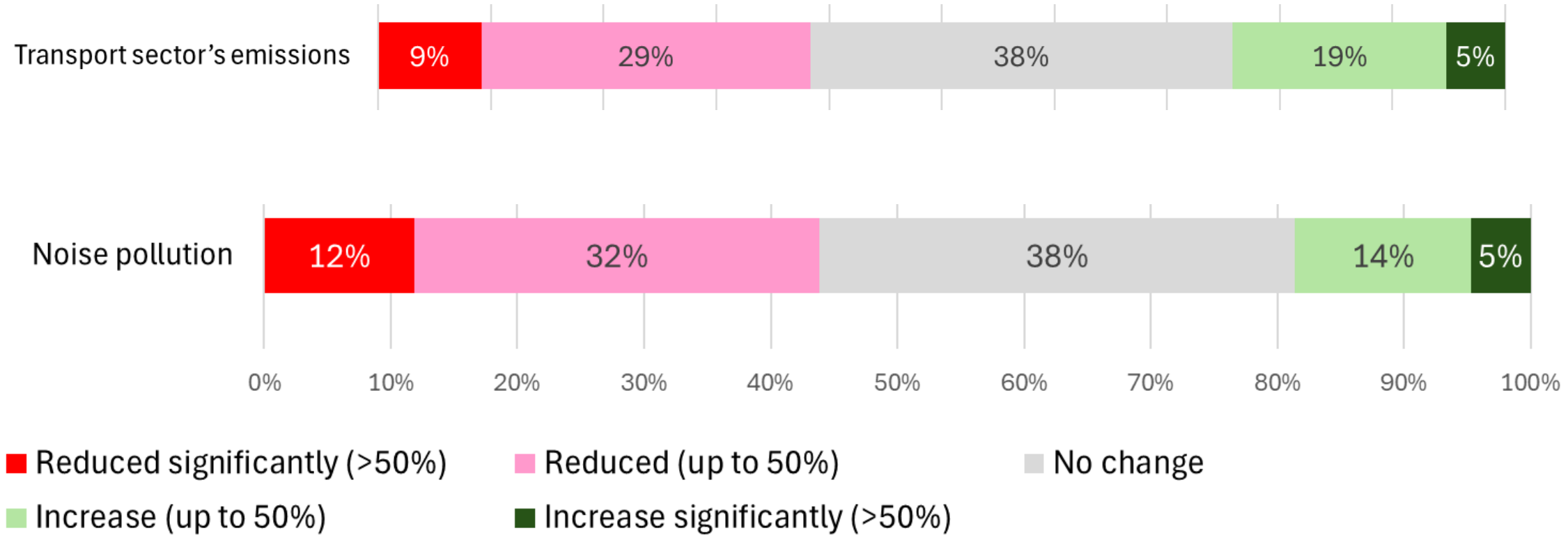
Some public health benefits – more accessibility
But not so sure about stress



And traffic and congestion may not improve. They can actually get worse

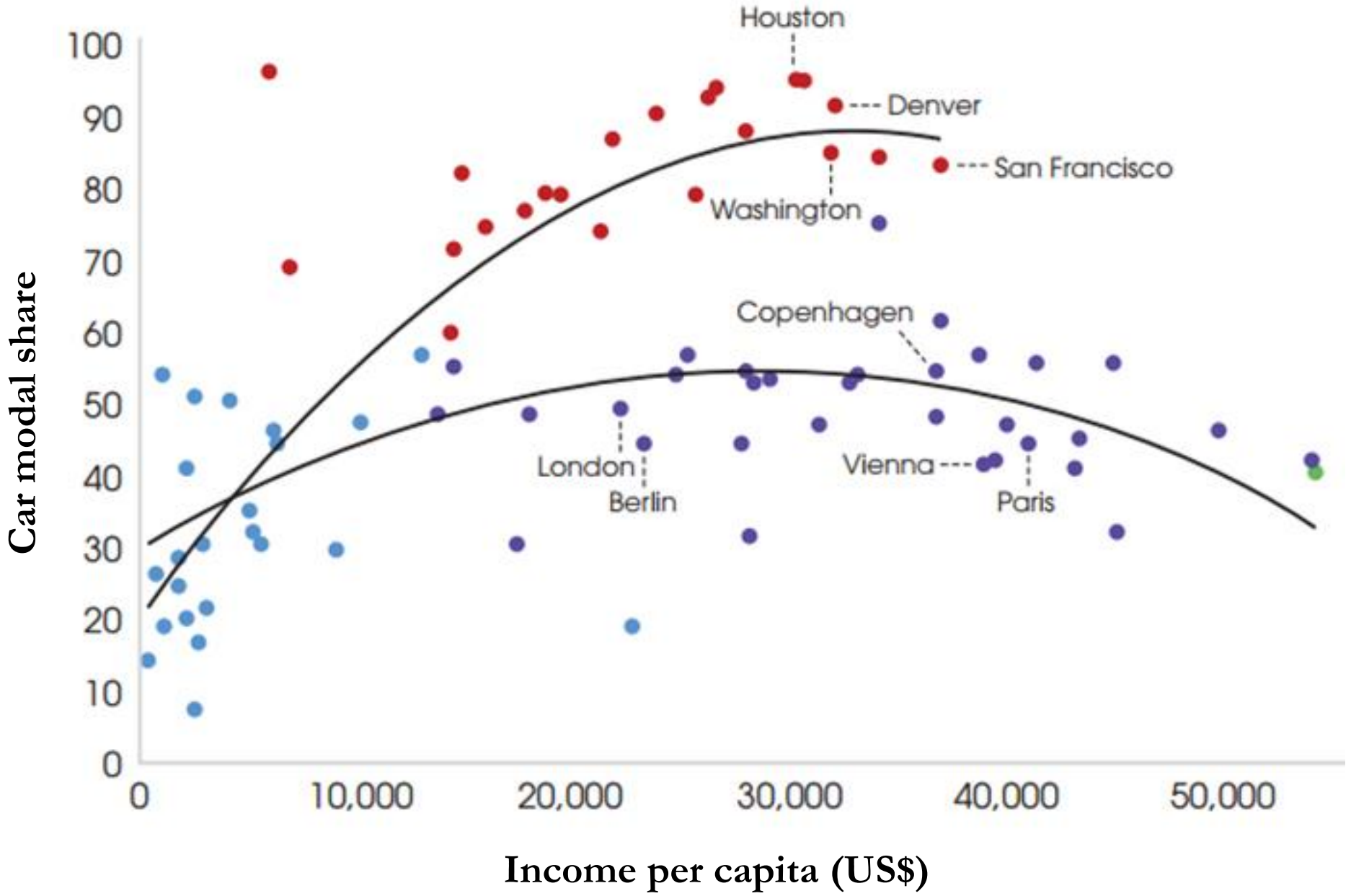


Quite a few people think automation will increase emissions and noise even though we're talking about electric vehicles



Europe: which way to go?

The right path we've been following, or the unhealthy path of other regions?



Teoh et al 2020 Urban mobility transitions through GDP growth: Policy choices facing cities in developing countries. J Transport Geography 88: 102832.

Thank you!

Work funded by UK Research & Innovation, as part of the UK government guarantee of the participation of UK partners on MOVE2CCAM, EU-funded project. Move2CCAM is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor CINEA can be held responsible for them