Policy Brief 2/2020

The need for reform of mobility choices is urgent – here is how it can succeed

Metropolia

UNIVERSITY OF EASTERN FINLAND

Six observations to aid the transition to more sustainable mobility choices:

1. Finns base the changes they make in their mobility choices on the improvement of their own wellbeing.

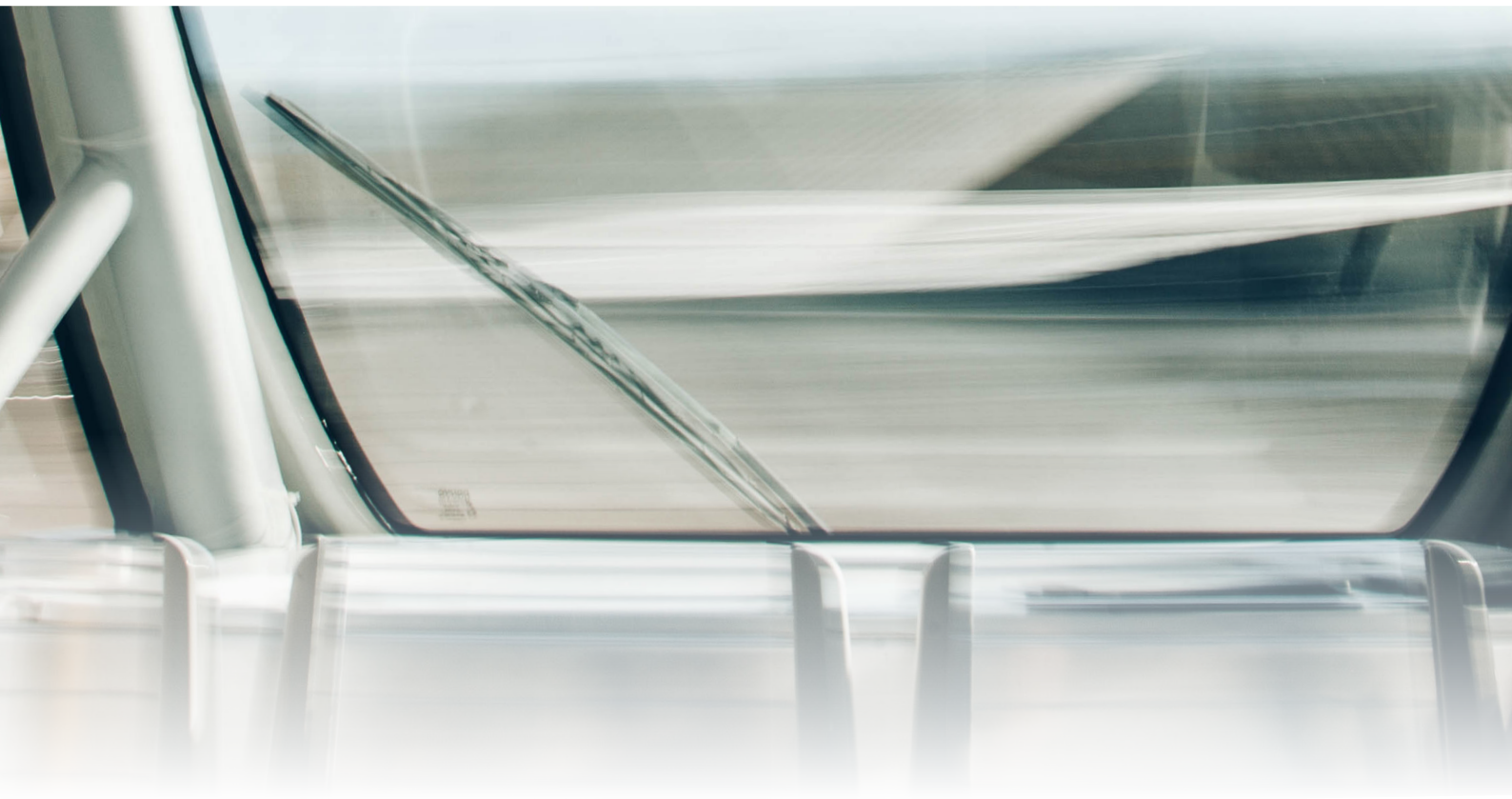
2. Lowering the speed limit in urban centres makes alternative mobility choices attractive, as it narrows the gap between different modes.

3. Investing in experimentation is worthwhile, but the practicality of a new mobility choice is the most essential factor in its attractiveness.

4. It is more and more seldom that the transition to sustainable mobility choices involves the experience of abandonment, since the benefits of new mobility choices are increasingly better known.

5. The smoother integration of different modes of mobility is key to a more sustainable society.

6. Different mobility choices complement each other, and wellbeing is becoming an increasingly important selection criterion for modes of mobility.



Appeals to the improvement of wellbeing are successful.

Finns base their changing mobility choices on the improvement of their own wellbeing. This is why focusing attention on wellness benefits helps in increasing the amount of walking, cycling and public transport usage. Justifications based on environmental benefits also work, but considerably less than relying on the immediate benefits to the person's own wellbeing.

The collective analysis of societal benefits and disadvantages calls into question the personal car-centred mobility culture. In the European Union, every kilometre walked produces an average of 37 cents for the benefit of society, and cycling produces an average of 18 cents. Every kilometre driven by privately owned car, on the other hand, creates an average cost of 11 cents to society.

Lowering speed limits levels out the differences between mobility choices.

Cycling and walking will become even more attractive as the lowering of speed limits in many cities lessens the time differences between modes of mobility in getting from place to place. For example, in Helsinki travel by bicycle is on average the fastest means of transport within a radius of several kilometres of the city centre.

The practicality of new mobility choices is crucial.

Trust in self-driving vehicles increases even after a short drive. As a result, experiments have a key role to play when it comes to changing mobility choices.

The passenger experience with self-driving vehicles is comparable to the use of rail transport. The vehicle moves with a predictability similar to that of a tram, which is likely to increase the passenger's sense of security and trust.

Even in snowy conditions in Muonio, Finnish Lapland, those who were passengers in the self-driving car we tested in wintry conditions showed trust in this new form of mobility.

The rapid increase in the usage of shared urban bicycles and the positive experiences of self-driving vehicles indicate the potential for new kinds of solutions to become mainstream. If a new mobility choice is natural, reasonably priced and meets a real need for mobility, there seems to be no significant obstacle to its introduction. Finns are very practical in terms of their mobility choices.

Sustainable lifestyles do not require the experience of abandonment.

Finns are increasingly ready to switch from owning vehicles to the use of mobility services. In urban centres in particular, owning a car is beginning to be more of a burden than a factor that increases the owner's freedom. Having the right kind of car available, for the right purpose, when it is needed is on average better than having one's own parked car.

Sustainability efforts, such as the transition to a climate-neutral society, is not a matter of abandonment but rather a question of increasing people's satisfaction. According to our research, satisfied Finns are those who either a) walk more often from place to place instead of travelling by car or public transport; (b) minimise the use of their own car; (c) use public transport even when they have the possibility to use their own cars for journeys; or (d) cycle whenever the weather permits.

Modes of mobility must be combined flexibly.

It is possible to safeguard the present opportunities for mobility more affordably and with less harmful emissions than at present through flexible and convenient combinations of different modes of mobility. Open data plays a decisive role in the smooth combination of different modes of mobility. Self-driving vehicles are not the only application of artificial intelligence – it can also be utilised for seamless switching between different modes of mobility as well as ride sharing and shared use of vehicles.

In the future, trunk lines for large numbers of people will continue to be based on rail transport, but in the long term, vacuum tube technologies are promising because of their very high energy efficiency, speed and capacity. In the future, bus transportation will complement rigid rail transport by adapting flexibly to actual needs. Self-driving, shared cars will complement the gaps in mobility services that are left by the rigidity of the trunk lines.

Different mobility choices complement each other: wellbeing is an increasingly important selection criterion.

Safe, affordable, congestion-free and low-carbon mobility requires a holistic approach and cooperation between different sectors. Environmentally harmful propulsion solutions are uneconomical, not only because of their

effects on health but also because of their contribution to climate change. Cars parked in garages and open parking areas take up space, which is increasingly scarce in towns and cities. Car noise is a problem, and traffic congestion is hazardous to health.

The hierarchy of mobility decisions is formed from everyday mobility decisions as follows, depending on the region and each person's own opportunities:

1. I walk.
2. I cycle if walking is not possible.
3. I travel by rail if walking is not possible.
4. I travel by bus if the other options are not possible.
5. I travel by car, with passengers on board; I lend my car; I take a taxi.

Research project publictions:

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Höysniemi, S. & Salonen, A. (2019). Towards Carbon-Neutral Mobility in Finland: Mobility and Life Satisfaction in Day-to-Day Life. Sustainability 11(19), 5374

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These policy recommendations are based on five scholarly articles published in international journals on the digital transformation of transport as well as on academic research on the services market in the period from November 2016 to October 2019. The study was jointly conducted by researchers at Metropolia University of Applied Sciences and the University of Eastern Finland. The research project was led by Arto O. Salonen, who also wrote these policy recommendations. The research project was facilitated by the Ministry of Transport and Communications and the Finnish Transport and Communications Agency Traficom.

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