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Transport and Older People

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Source: Fitt, H., Curl, A., Dionisio-McHugh, R., Fletcher, A., Frame, B., Ahuriri-Driscoll, A. (2018) Think Piece: Autonomous vehicles and future urban environments: exploring implications for wellbeing in an ageing society (Second ed.) National Science Challenge, Christchurch, New Zealand.
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Older people and autonomous vehicles

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Emerging transport technologies offer the exciting prospect of changing transport systems, so reducing car dependence, urban sprawl, segregation and associated public health concerns. This study presents four scenarios of autonomous vehicle (AV) adoption and outlines the potential impacts on travel behaviour, urban form and wellbeing of older people.

As people age, their ability to take part in social, economic and cultural life is increasingly influenced by the built environment, including transport systems. High car ownership and use mean that when people cease or limit their driving, they experience difficulties accessing important facilities. Reduced driving can negatively influence wellbeing through lost independence, decreased quality of life, increased feeling of isolation and being a burden. As the population ages, it is critical that the built environment and future transport systems are planned to facilitate the wellbeing of older people.

AV technology has the potential to trigger transformative change for built environments and communities. AV trials are underway around the world, and expert opinion varies on when highly AVs will be publicly available.

The social impact of technology adoption is unclear, but AV could contribute to the wellbeing of an ageing population by providing mobility and enduring social, cultural and economic participation. In contrast, expensive, complex and rapidly evolving technologies, coupled with dispersed urban form, could exacerbate the exclusion and isolation of a growing number of older people.

This study examines the implications of land-based AVs. It highlights the interconnected implications that AV might have for the future built environment, and the health and wellbeing of an ageing society.

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TRIMIS is an open-access information system to map and analyse technology trends, research and innovation capacities, as well as monitor progress in all transport sectors.

TRIMIS is developed and managed by the Joint Research Centre on behalf of the European Commission.

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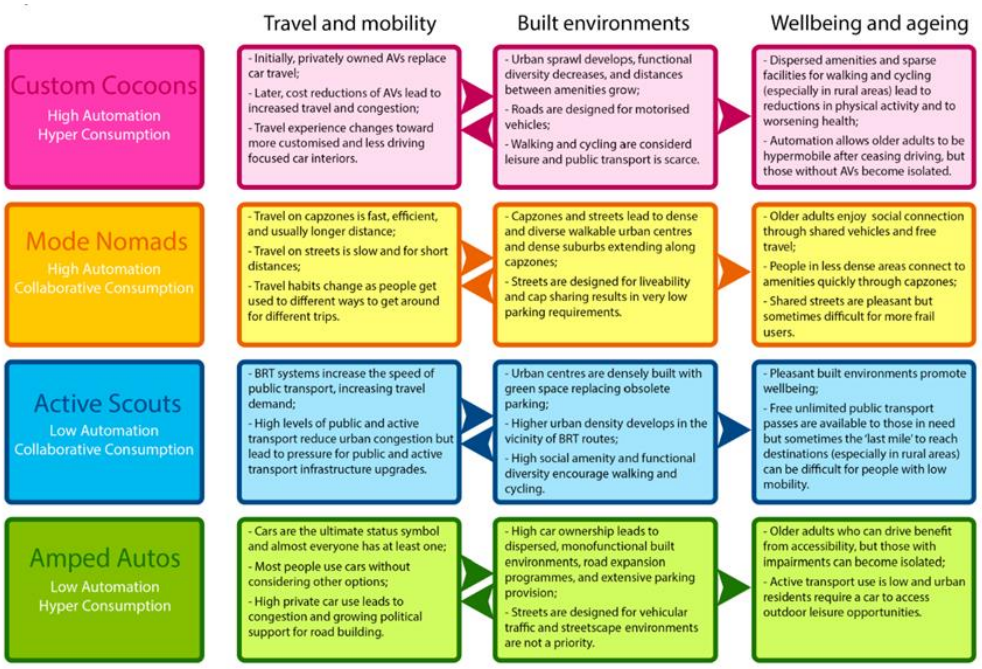
Stakeholder workshops with older people led to the development of four scenarios that outline plausible futures to trigger discussion of the implications of changes to the transport system. These four scenarios are:

1. **Custom Cocoons** (high automation, hyper consumption): almost everyone owns their own driverless vehicle.
2. **Mode Nomads** (high automation, collaborative consumption): people use driverless vehicles, often switching to walking and cycling in dense urban areas.
3. **Active Scouts** (low automation, collaborative consumption): people seek the best ways to travel, using a variety of different options such as bus rapid transit (BRT).
4. **Amped Autos** (low automation, hyper consumption): people love to drive.

These scenarios illustrate the different societies that could emerge from transitions towards automation and new economic models of access to transport. Depending on how such transitions occur, the implications for travel behaviour, urban form and wellbeing are different. The figure below summarises the potential impact of each scenario.



Source: Fitt et al. (2018)

The study shows there is a high degree of uncertainty regarding transport futures and that a transition to AVs would require a technological and social transition. While research has focused on the social change needed to facilitate a transition to AVs (e.g. public acceptance of AVs), there have been limited considerations of the social change that might result.

While AVs may support the mobility of older people, they are just one potential tool. Other strategies focused on different elements of the transport system or on urban planning may also be effective. Further understanding of the evolving complexities of AVs is needed as well as their impact in different places and groups.