Local shared autonomous vehicle services (LSAVs): benefits and risks to older people

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Local mobility services using fully autonomous vehicles

➢ Likely early implementations of AV technology

➢ Fully autonomous vehicles – operating at low speeds in campus and local neighbourhood environments (retirement complexes, airports, university campuses, hospitals etc.)

➢ Less complex, and 'safer' operating environment – with no, or very limited competing conventional traffic

➢ Being trialled now in the UK (Flourish, Capri) and worldwide (Voyage in the US, Aurrigo in Australia)

Videos of shuttle trials

Capri video: https://caprimobility.com/trial-2-qeop-summary-video

Flourish video Bristol:
https://www.youtube.com/watch?v=WacCUMdBboo&feature=emb_rel_end

Aurrigo video Australia: https://www.gcma.net.au/case-study/aurrigo

Findings from retirement village trials in Bristol

➤ Seen to offer enhanced mobility for those that need it

➤ Good for accessibility, local shops, social activities

➤ Older people happy to share in closed environments – could be important for economic case

➤ Potentially a deterrent to walking and cycling for some

➤ Concerns over vehicles sharing space with pedestrians and cyclists

➤ Concerns over safety, e.g. silent if electric

➤ Also concerns over 'control', where is the stop button, although less worry about privacy or hacking

Findings: reflections after a ride in the Flourish LSAV

"Hardest thing is knowing when to stop driving. You want to remain <u>independent as long as possible</u>…. from what I can see AV will be a godsend."

"I lost some of my sight after suffering from a stroke. I think driverless vehicles could be amazing…I'd love it, <u>to be able to do my own thing</u>."

"I would take the decision to not drive any more, if I was not safe to drive …. or had a medical condition that stopped me. <u>AV would be a solution for local journeys</u> - not sure about longer ones?"

"The <u>walking problem could get to be more of an issue in the future</u>. So I will move to an automatic vehicle, and then hopefully an AV" (within her lifetime)

Social acceptability of LSAV (Capri & Flourish)

Attributes of social acceptability	Implications for policy makers and operators (and older people)
Accessibility: Services should improve accessibility (even in small-scale environments like a retirement village), good to address isolation	Public / Private, who will fund services? Will they need to be commercially viable, or a service?
Social Equity: Services should offer mobility for those without – by cost, access, or ability. Older people seen as key users	Concessionary services? Accessibility of vehicles, digital divide issues.
Safety: Vehicles must be safe. Low speed acceptable, but concerns for other users in pedestrian spaces. Little appetite to mix with conventional vehicles	Where will they operate? On pavements, in pedestrian areas, in cycle lanes, on the road?
Environment: Expected to be better than current vehicles: Electric vehicles by default. Positive impacts on congestion – sharing.	Infrastructure, charging, safety (vehicle and personal). Willingness to share.