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16. Abstract <p>In this report we present an analysis of the potential for reduced vehicle ownership within households based on sharing of completely self-driving vehicles that employ a “return-to-home” mode, acting as a form of shared family or household vehicle. An examination of the latest U.S. National Household Travel Survey (NHTS) data shows a general lack of trip overlap between drivers within a majority of households, opening up the possibility for a significant reduction in average vehicle ownership per household based on vehicle sharing. This reduction in ownership and an accompanying shift to vehicle sharing within each household, in the most extreme hypothetical scenario, could reduce average ownership rates by 43%, from 2.1 to 1.2 vehicles per household. Conversely, this shift would result in a 75% increase in individual vehicle usage, from 11,661 to 20,406 annual miles per vehicle. (This increase in mileage does not include the additional miles that would be generated during each “return-to-home” trip.) However, given the number of current unknowns regarding sufficient gaps between trips, future self-driving-vehicle implementation, self-driving-vehicle acceptance, and possible vehicle-sharing strategies within households, these results serve only as an upper-bound approximation of the potential for household sharing of completely self-driving vehicles.</p>					
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