How to make people travel less by car and plane?

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Mobility trends in Europe Depending on urban-rural and density highway network





Travel time ratio PT/car determines share PT Personal preferences differ somewhat





PT takes door-to-door mostly more time than the car Nine times more trips by car than by PT





Travel time ratio train/plane determines share train Personal preferences differ somewhat





70% of intra-European air travel is > 1000 km or island trip 10-15% of intra-European aviation can be avoided by better rail





Speed causes mobility growth Constant travel time: average 1.1 h per person per day





Higher speed generates new mobility Besides a modal shift





Average car speed constant for 20 years Leads to end of car growth





Rise and stagnation of car mobility Speed explains most





Environmental Assessment Agency et al, 2020

Stagnation of car mobility Selected countries, regions and London





Urbanization determines mobility behavior Low car speed, good PT, short distances, cycling and walking

	METROPOLIS	MAJOR CITY	RURAL AREAS	COUNTRY AVERAGE
Trip distance	5 km	10 km	15 km	10 km
Commuting distance	10 km	15 km	20 km	15 km
Speed	15 km/h	25 km/h	35 km/h	30 km/h
Car speed	20 km/h	35 km/h	50 km/h	45 km/h
Trip share of car	15%	50%	70%	60%
Car-kilometres	10 km/day	25 km/day	35 km/day	25 km/day



By car, people go everywhere; by PT to city centers Urban density around stations





Urbanization determines mobility behavior Each mode has its own spatial pattern





Bleijenberg, 2017

How to make people travel less by car?



How to make people travel less by plane?





Thanks for your attention

Questions? Discussion!

More reading

Paper '<u>The transport-urbanization dialectic</u>' Study <u>'Air2Rail'</u> Book <u>'New mobility – beyond the car era'</u> Article <u>'Speed – it's what drives mobility'</u>

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