


Basic dilemmas and the new technologies

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Basic dilemmas and the new technologies

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Dilemma of transport policy

Accessibility \sim Productivity \sim Social welfare

Car accessibility \sim Car ownership \sim 1/Committment to transit use

Accessibility \sim VMT \sim CO₂ emission for current fleet technology

Accessibility \sim Sprawl \sim VMT

Accessibility

Accessibility ~ Productivity ~ Social welfare

Accessibility ~

Density of opportunity,

~ wealth

~ 1/spatial equity

~ 1/sustainability

1/Generalised Costs, i.e. mostly travel time

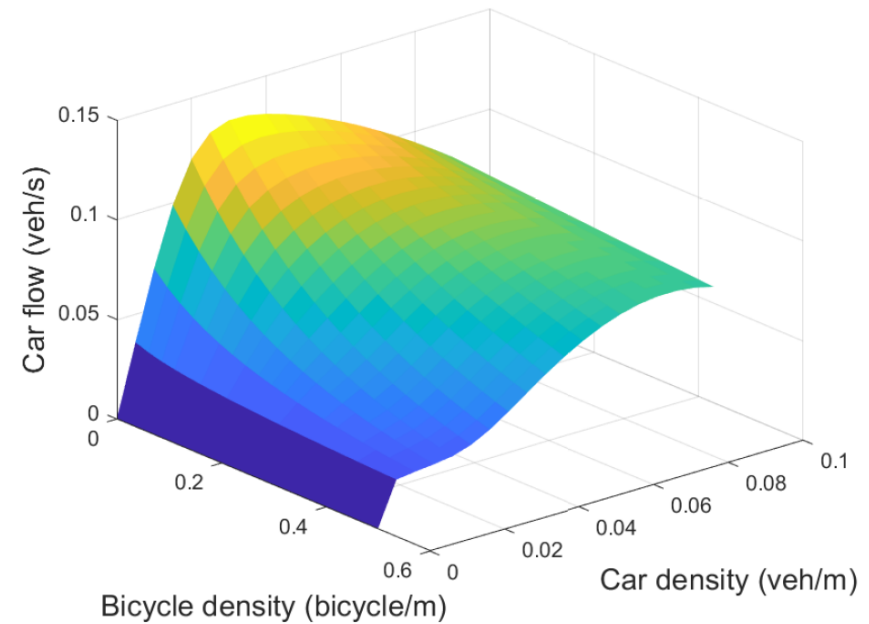
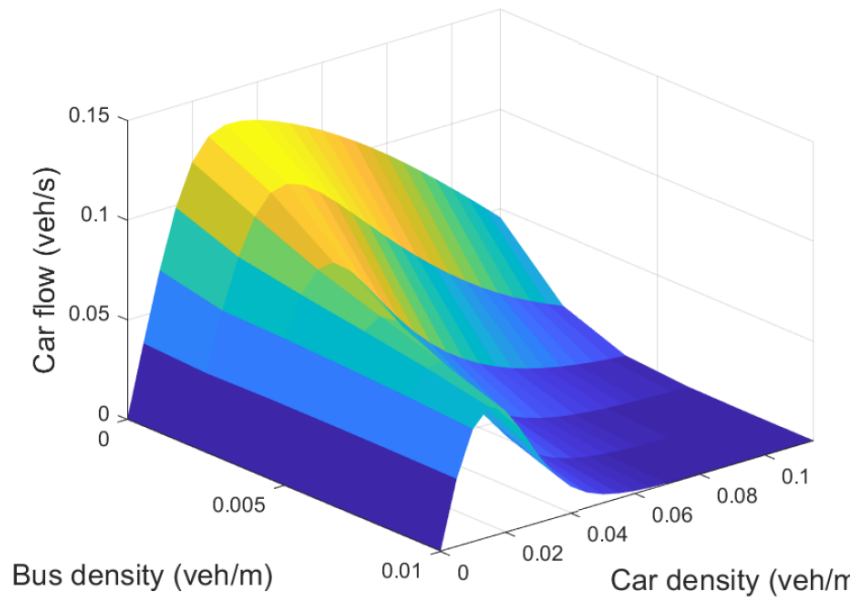
~ car use for the given networks

~ large, joint use vehicles

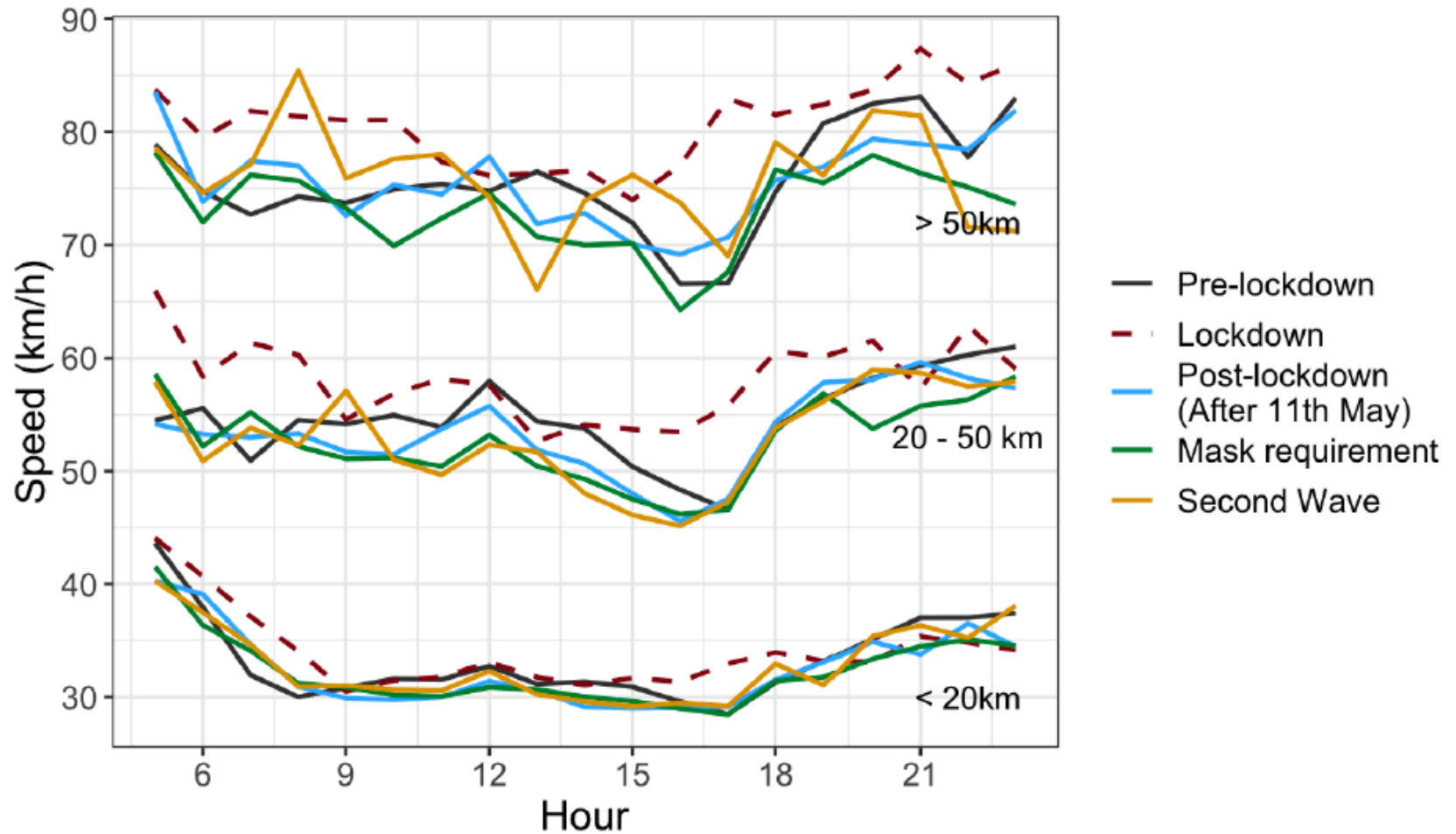
~ e-bikes

Multimodal MFDs describing urban capacity for PAX

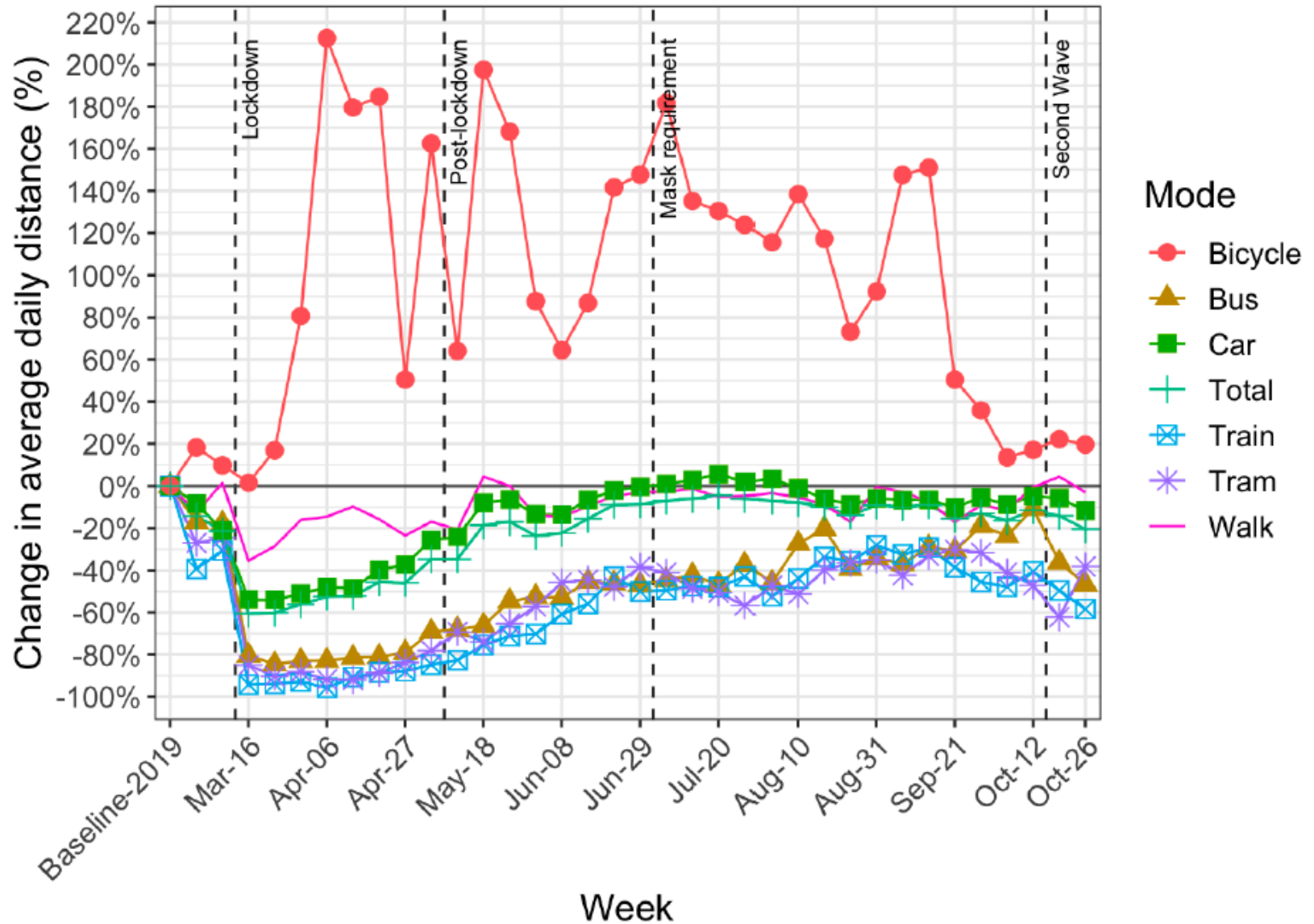
Loder, A. et al. A general framework for multi-modal macroscopic fundamental diagrams. Transp. Res. Part B Methodol. review, (2019).



COVID19 impacts in Switzerland: Door to door speeds



COVID19 impacts: Suppressed demand in PKm



Challenge: Is there the will for a (sprawled) «e-bike» city?

What would an e-bike city be like?

- Reallocation of (constant) road space to
 - Walking
 - e-bikes/bikes
 - Express busses
 - «golf»-carts/e-scooters for the last mile of the non-fit
- New bridges over rivers, railway tracks, motorways
- Bike/e-scooter parking
- (Changing rooms)
- (Heavy investment in a grid-like “big vehicle” system?)
- Heavy subsidy for reliability and frequency of services, including night services
- Bus priority everywhere

Questions ?

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