

# Can autonomous mobility be sustainable?

---

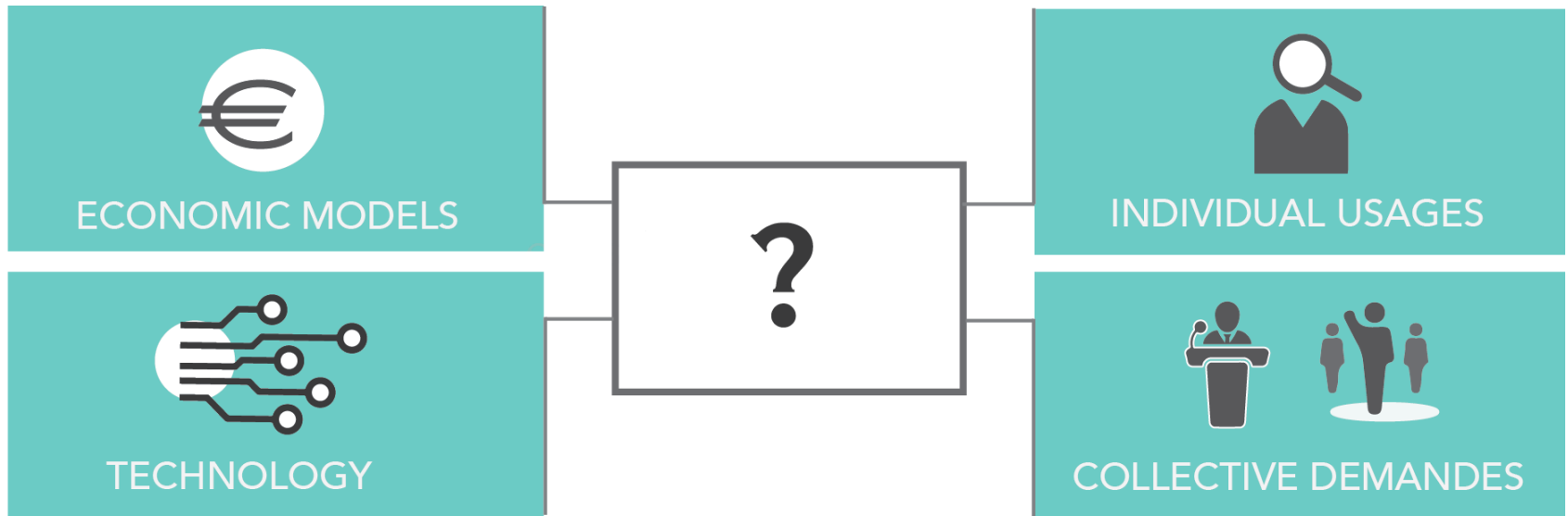
Laura Brimont

Research fellow – Innovation and Mobility

Institute for Sustainable Development and International Relations (Iddri)

- An international race...
- ... supported by various actors with different mobility proposals
- Each carrying many promises







Individual private vehicles



Public transports



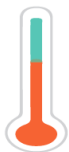
Robo-taxis



### INDIVIDUAL PRIVATE VEHICLES

IMPROVEMENT OF MOBILITY FOR THE ELDERLY/DISABLED  
INCREASE OF CAR SHARING

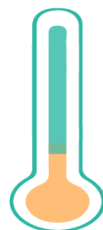
URBAN SPRAWL  
ACCESS INEQUALITIES  
OBSTACLES TO CARPOOLING  
USE OF PUBLIC SPACE  
ECOLOGICAL FOOTPRINT



### PUBLIC TRANSPORTS

FREEING UP OF PUBLIC SPACE  
EXTENSION OF ACCESS TO PUBLIC TRANSPORT  
INCREASED ENERGY EFFICIENCY  
DEVELOPMENT OF ACTIVE MODES  
REDUCTION IN VEHICLE NUMBERS

DEPLOYMENT OF ELECTRIC CAR



### ROBO TAXIS

FREEING UP OF PUBLIC SPACE  
REDUCTION IN VEHICLE NUMBERS

URBAN SPRAWL  
DEPLOYMENT OF A ELECTRIC CAR

CONCENTRATION IN PROFITABLE AREAS  
PREDOMINANCE OF PREMIUM VEHICLES  
DIFFICULT COEXISTENCE WITH ACTIVE MODELS



Additional fixed cost of individual private AVs (according to the littérature)

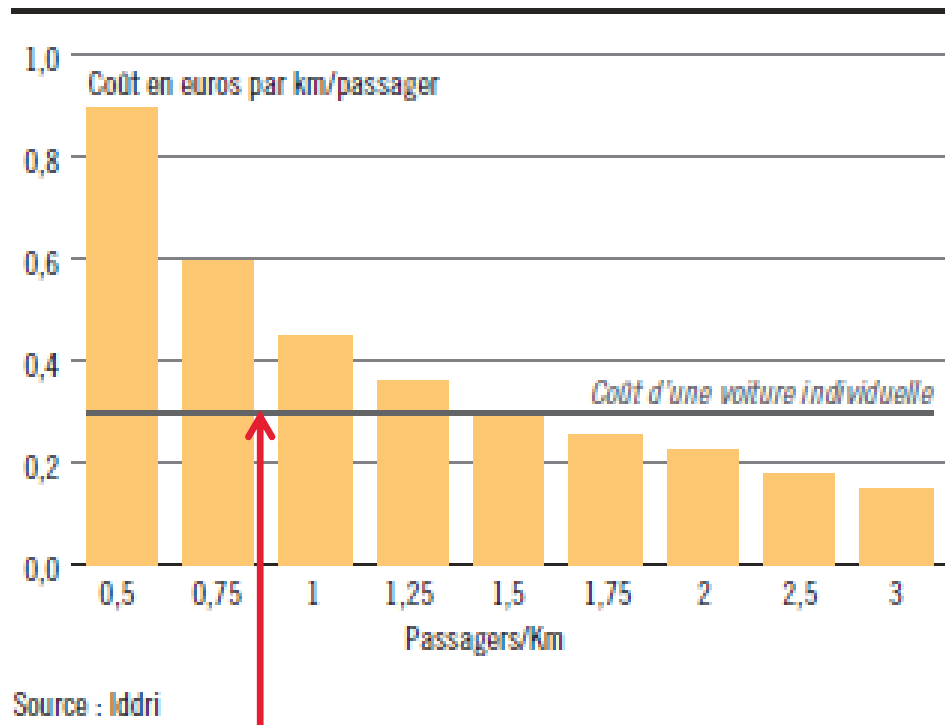
	2017	2030	2050
Intermediate level of autonomy (L3/L4)	+1500 – 6500€	+800 – 1500€	+800€
High level of autonomy	+65000 – 80000€	+8000 – 12000€	+3000 – 5000€

Source : Iddri (2018)



More carpooling ?

Figure 7. Coût par kilomètre d'un voyage en robot-taxi partagé en fonction du taux d'occupation



Occupancy rate Uber Pool (2016)





- Autonomy is not a magic wand for sustainable mobility.
- Public authorities have a huge role to play to orient its deployment towards most sustainable pathways : **we need a vision !**
- The purpose of experimentations is to make us learn about what could be the collective benefits (and risks) of autonomy.

CONTACT

Laura Brimont – [laura.brimont@iddri.org](mailto:laura.brimont@iddri.org)  
[@laura\\_brimont](#)