Cities & Self-driving Cars

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> "Sharing is the way to make cities better and autonomous cars are just the means,"

How will self driving cars re-invent and shape our cities, and what consequences and opportunities will they bring? We reached out to Ananda Groag (ShareNL), and Anne Knol (Friends of the Earth Netherlands): shared mobility experts to give us their opinion. Read their insightful piece on what cities should take into consideration with the advent of autonomous vehicles.

Beyond the hype

The arrival of the autonomous vehicle in cities will make moving by car so easy and affordable that it might have an adverse effect on urban areas, creating more congestion, pollution and pressure on public space according to Anne Knol and Ananda Groag. Its time to think about the best way to embed autonomous cars in cities.

All over the world experts are praising the foreseen arrival of self-driving cars and policy makers are expecting a lot from this technological advancement as well. The robot car is expected to drastically change our lives and cities. It is expected that this car will be making mobility so easy, safe and affordable that we will collectively abandon car ownership and start sharing rides. This will solve traffic jams and parking problems and save us a lot of money. The cars are predicted to be fully electric too, allowing us to say goodbye to fossil fuelled cars.

Travel habits

But maybe this future scenario is not that simple. While the self-driving car certainly has a lot of potential, the assumption that everyone will automatically refrain from car ownership and start sharing cars may

seem like a leap of faith. Regardless of whether people will actually want to abstain from driving themselves, we first have to ask ourselves if we are ready to change our traveling habits when the self-driving car has arrived.

To ensure a livable and bright future we need to change our current mobility system, which is heavily focused on the car; a highly polluting and space-occupying means of transport (standing idle for 95% of the time, carrying 1.2 persons on average). Currently kilometers travelled are already increasing and with the arrival of self-driving cars, we can count on an exponential growth of car travel.

Imagine cheaper, easier and more comfortable rides with the self-driving car. Travel time will suddenly become time we can use efficiently for working or relaxation. It can take people from door-to-door, which makes it more attractive than public transport. Additionally, car travel will become accessible for new target groups such as the elderly, youth and people with reduced mobility. The easy and low price per ride will possibly even be at the expense of 'slow modes' such as cycling and walking. All of the above together will lead to a steep increase of car rides and kilometers driven.

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Moving away from car ownership

Are we really going to abandon car ownership? Car sharing is already a possibility today enabling saving on the cost of ownership. And yet, we are not sharing on a mass scale. People remain fixed on the idea of owning a car as the only way to have the 'freedom to move' and we don't seem that eager to share rides with strangers. At the same time, cities are limited by the amount of cars they can handle, but sharing offers a way to do more with less. This means that a huge behavioral change is needed in the way we think and act on our mobility needs. The occupancy rate of cars, which is already low, may fall to zero; also

referred to as ‘ghost rides’. Imagine the ability of sending your autonomous car anywhere on an errand or circling the block. This may well be more efficient and cheaper than parking. Cars may even take on the forms of mobile shops or offices as an attractive alternative to expensive real-estate.

In short, without sharing, both the car and the ride, the self-driving car will not solve traffic jams and challenges with urban public space. On the contrary, it could make things worse. A decrease in numbers of cars will not be from the introduction of the self-driving car, but from sharing these cars.

Conditions

A sound discussion about an appropriate framework for the self-driving car is needed. What are the terms under which they can operate in cities and which behavioral changes are required to incentives us to change our travel habits? Nothing stands in our way to already start benefiting from the solutions we expect self-driving cars to bring; less cars for a better city life.

We can, for example, improve cities by creating more space for walking and biking, we can encourage people to get rid of their own cars by offering alternatives and by discouraging car ownership. A more comprehensive approach, without the car at the center of our mobility system, is needed. This way the autonomous car can live up to the high expectations we have.

Ananda Groag

Ananda works at ShareNL, and is an expert at working on mobility solutions. She is the project leader of the ‘Green Deal Car Sharing’, the yearly Car Sharing symposium and of the autodelen.nl website. She is also currently interested in purpose of work, future of work abundance, and autonomous mobility.

Anne Knol

Anne works for Friends of the Earth Netherlands (Milieudefensie: environmental NGO) as senior advisor on transport and air pollution campaigns. Anne has a background in environmental health sciences (MSc) and a PhD in dealing with uncertainty in complex environmental health problems.