

Transporting people and parcels autonomously on public roads



The Flemish city of Mechelen is again experimenting with a self-driving shuttle. This time for transporting people and parcels autonomously on public roads. The city of Mechelen, Mpact and Autodelen.net wrote a discussion paper with policy recommendations on autonomous shared and inclusive transport. Twenty experts from Flanders and the Netherlands collaborated on this. The discussion paper was handed over to two Flemish ministers.

Together with the University of Aalborg, Mechelen organized a workshop on self-driving transport for mobility professionals from Flemish cities. With DLR (German Aerospace centre), the city

worked on a Delphi survey on self-driving transport in the countries of the North Sea region. With the Robert Gordon University from Aberdeen, the city of Mechelen collaborated on public transport modelling to use computer intelligence to identify public transport blind spots in the Mechelen transport region.

In the summer of 2022 Mechelen implemented an autonomous pilot gaining widespread media attention. The pilot was unique because it was the first time that an autonomous shuttle operated on public roads in Flanders and that the combination between people and parcel transport was made.

What are the key outcomes?

The city issued a tender for a self-driving bus on three possible routes. Ultimately, a loop in the business park Mechelen-Noord was chosen where the combination of passenger transport and parcel delivery was tested.

An electrically powered shuttle, made in France, travelled a 2.1-kilometre trajectory on weekdays. At 6 different stops, one can board the vehicle. Via an app, passengers can let the shuttle know that they are waiting at a certain stop and then the shuttle will stop autonomously to pick them up. The shuttle operated for 8 weeks and drove 1555 km of which nearly 95% km in fully autonomous mode.

An intensive participation process with internal departments, citizens, seniors, experts and companies was set up to introduce and involve various Mechelen stakeholders in this new form of transportation.



Main conclusions:

1. Accessibility must be guaranteed f.e. through low price
2. There is more public support for autonomous shared mobility than initially thought
3. There is potential for autonomous shuttles as customized transportation for the differently-abled or tourists.



Mechelen chooses for autonomous and automated transport that is

1. Sustainable, electric and CO2 neutral
2. Inclusive, also for less mobile people
3. Shared, given that Mechelen has for years resolutely opted for shared mobility.

What are the next steps for the city of Mechelen?

The City of Mechelen is eager to take further steps to deploy self-driving shuttlebus technology as one means to help achieve the necessary modal shift in the city. Perhaps self-driving shared shuttles will also be an added value on the ring road around Mechelen where major works are planned in 2022 – 2025 to make this ring road one-way and halve the number of car lanes. The large space that becomes available creates excellent opportunities for more greenery in the city and more experiments with sustainable autonomous mobility.

In Belgium, however, much remains to be done to make this progress. We are thinking here of an adapted legal framework, insurance policies that cover transport by automated and autonomous shuttles, processes, checklists and guidelines to be drawn up by federal or Flemish authorities to facilitate future autonomous shuttles operating on public roads. Obtaining a legal permit for the Mechelen pilot was now a difficult process in which the ball was passed between the various competent government bodies in Belgium. A lot of preparatory work is therefore needed so that



autonomous technology will also be able to make Flemish cities more sustainable, cleaner and safer.

The city of Mechelen would like to partner up with knowledge institutions, technologies companies and other European cities to accelerate this progress with the help of European project subsidies. Do not hesitate to contact the mobility department of the city if you are interested.



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Contact

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