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**Lyon
Demonstration**

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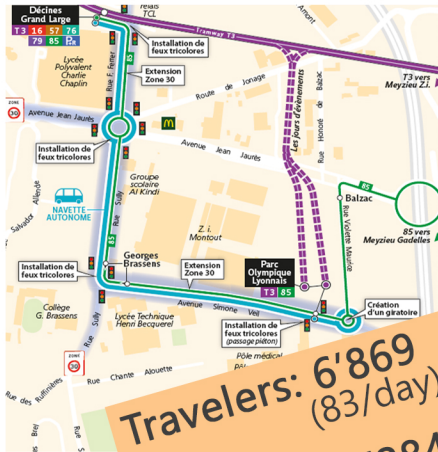
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Lyon Demonstration

Operation phase and Results



This demonstration, operated by *Keolis-Lyon*, has served passengers in the *Groupama stadium* area, hosting hotels, medical and recreation centers, and office buildings, from 08:30 to 19:30. The route is a 2,6 km round trip with fixed course on highly frequented open roads, and strong pedestrian traffic. An on-demand service over an area including residences, shops, offices is currently under development.



Travelers: 6'869
(83/day)
Travelled: 2'284km
(50km/day)
1.13 passengers/journey
(pre-pandemic)



The operation started late 2019. At first, NAVYA had a difficulty with the vehicle-to-vehicle communication protocol (V2X), but soon fixed it. The services, mobilising two vehicles, were consistent particularly at peak hours. Due to the *Covid*, the operation stopped on March 2020 and could not be carried out before September. Transport operator's financial difficulties and a decrease in demand due to a new tram put an end to the project early 2021.

A new itinerary
is now coming!

Delay rate: 1-2%
Cancel rate: 1-2%



During this experiment, the autonomy rate of the vehicles was satisfactory (>90% auto-mode), improving in each new software release, and the avg speed was 10kmh. The rate of completion of the service was set to 85% and the achievement one was 46% because of a major failure on the 2nd minibus. Many incidents were reported, but without any injuries.

This demonstration showed that a successful implementation of technologies such as V2x for cross-roads/roundabout is possible as well as the integration of A.Vs into the public transit system validating the possibility of implementing a coherent service. The results are great from an ecological point of view, as the vehicle consumed only 0,73kwh/km, generating monetary savings.

The team concludes that minibuses need safety validations and greater abilities to interpret and adapt to each road-situation. A speed of 30kmh is seen as needed as the ability to overtake fixed obstacles and improvements of braking behavior, reliability, and availability. Minibuses will also have to rely heavily on connected infrastructures. Get rid of the safety-driver is also seen as a priority. Governments should be more involved and we need to innovate quickly to keep their interest. Operators should be trained for the maintenance and to solve hardware malfunctions

Another important achievement was to make the automated technology better known, to familiarise the population with it, and to provide a positive image of it. 46% of the population were aware of these experiments, and a majority had a positive view of it ; 1/3 would be ready to give up their car! It also raised a lot of media attention!

