



PRESS RELEASE

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Keolis and Ericsson demonstrate 5G on autonomous vehicles at UITP 2019 in Stockholm

- **On June 10-12, at the UITP World Congress 2019, Keolis demonstrated how 5G technology can be harnessed to control autonomous vehicles remotely**
- **The 5G technology provided by Ericsson offers increased efficiency, reliability and safety in autonomous vehicles operation**
- **This is another milestone illustrating Keolis' expertise in autonomous vehicle operations**

In the context of a growing autonomous vehicle market, Keolis is collaborating with Ericsson, a leader in mobile networks, to use 5G technology to remotely control and supervise autonomous vehicle fleets. The demonstration is part of the 'Drive Sweden' Strategic Innovation Program (SIP) whose members – including Keolis and Ericsson – collaborate in trialling 5G technology with automated vehicles.

Keolis showcased the technology jointly with Ericsson for the first time at the June 10-12 UITP World Congress held in Stockholm (Sweden), where visitors could remotely test drive a prototype vehicle made by the KTH Royal Institute of Technology. The vehicle was located at the Ericsson headquarters in Kista 15 kilometres from Stockholmsmässan (Stockholm Exhibition Center), where the event is being held. This demo is an important milestone for Keolis, as it illustrates its expertise in autonomous vehicle operations and enables the Group to enhance its future mobility offer.

5G technology enables high-speed data transmission with very low latency and high reliability, so the vehicle can be controlled at distance and in real time. 5G also improves NTRIP¹ connection, enabling greater precision in the localisation of the vehicle. To guarantee safety, the vehicle features geo-fencing to prevent collision as well as a dedicated IT system for these demonstrations, ensuring very high cybersecurity standards. A safety driver also remained on board the test vehicle throughout the demonstration.

Based on the results of this initial phase, Keolis' goal is to deploy 5G capabilities widely aboard autonomous electric shuttles.

¹ Networked Transport of RTCM via Internet Protocol

Keolis, pioneer in autonomous vehicles operations

Used to complement traditional transport modes, autonomous vehicles offer a mobility solution that is accessible, environmentally friendly, flexible and cost-efficient. A pioneer in shared autonomous mobility, Keolis started trialling autonomous vehicles with its partner Navya in Lyon, France, in September 2016. Since then, Keolis began operating autonomous shuttles in other cities in France including Paris, Rennes and Lille as well as in UK, Australia, Canada, US or Belgium. Since 2016, Keolis has carried transported 160,000 passengers in autonomous vehicles over 70,000 km.

About Keolis

Keolis is a pioneer in developing public transport systems and works alongside public decision-makers who want to turn shared mobility systems into levers to enhance the appeal and vitality of their regions. A world leader in operating automated metro and tramway systems, Keolis is supported by a sustained and open innovative policy alongside all of its partners and subsidiaries – Kisio, EFFIA, Keolis Santé and Cykleo – to bolster its core business and develop new innovative and bespoke shared mobility solutions, including trains, buses and coaches, trolleybuses, shared car solutions, river and sea shuttle services, bike share services, car sharing, fully electric driverless shuttles and urban cable cars. In France, Keolis is the second largest parking company through its subsidiary EFFIA, and the country's leading medical transport solution since the creation of Keolis Santé in July 2017.

The Group is 70%-owned by SNCF and 30%-owned by the Caisse de Dépôt et Placement du Québec (Quebec Deposit and Investment Fund), and employs some 65,000 people in 16 countries. In 2018, it posted revenue of €5.9 billion. In 2018, 3.3 billion passengers used one of Keolis' shared mobility services. www.keolis.com

* Keolis is well-established in France and also operates in Australia, Belgium, Canada, China, Denmark, Germany, India, Luxembourg, the Netherlands, Norway, Qatar, Senegal, Sweden, the United Kingdom and the United States.

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