SINGAPORE: Fully automated minibuses are set to ply the roads at Nanyang Technological University (NTU) by 2019.

NTU, SMRT Services and Dutch autonomous vehicles (AV) manufacturer zeganthere announced on Monday (April 16) signed a Memorandum of Understanding, paving the way for Group Rapid Transit AVs to be integrated into NTU’s transport network, the companies said in a media release.

Run by SMRT and zeganthere, the autonomous minibus, which can hold up to 24 passengers with seating for eight and which has a top speed of 60kmh, uses magnetic pellets on the road for navigation.

The system has a localised accuracy of 0.5cm, compared to GPS which has an accuracy of up to a meter, according to zeganthere Chief Technology Officer Sjoerd van der Zwan.

LIDAR (Light Detection and Ranging) and ultrasonic radars are installed at the vehicle’s bumper to detect obstructions, and cameras give visual feedback to the operations centre.

The GRT was introduced to NTU last September as part of the Mobility-as-a-Service testbed, a collaboration between NTU, JTC and SMRT.

The testbed integrates access to different mobility services — such as shuttle buses, e-scooters and autonomous vehicles — on the app Jalan-Jalan, created by start-up mobilitiXs, which received seed funding from SMRT.

The GRT vehicles have undergone preliminary testing along a 350m route between two NTU halls of residence since November last year, ferrying close to 4,000 passengers, said the media release.

The current pilot will expand to a half-kilometer route including a stretch between the campus’ Smith Spire and Canossa 2 in the fourth quarter of this year.

Over time, the trial will gradually be expanded campus-wide, running alongside other AVs that have been undergoing tests since 2012, said the media release.

In the meantime, researchers will work to increase the complexity of the route, in anticipation of more passengers and the need to negotiate other vehicles in its path.

The parties are also exploring the possibility of extending the network to JTC’s Cleantech Park, located about a kilometre away from NTU.

“Urban solutions such as Mobility-as-a-Service help us improve the travel experience of the communities in JTC’s estates and lay the foundation for next-generation connectivity and mobility infrastructure in our new estates,” said Ms Charity Woe, JTC’s director of aerospace, marine and urban solutions.

SMRT CEO Desmond Kuek called the collaboration between NTU, JTC and mobilitiXs an “exciting opportunity to fundamentally change and improve the lives of our communities in Singapore”.

SMRT signed 10 per cent of zeganthere in 2016, two months after announcing a joint venture with the company.

Source: CNA/apr17