Mock skyscrapers, simulated rain at Singapore self-driving test centre

Welcome to Singapore’s self-drivers test centre, complete with traffic and lights and skyscrapers, which is at the heart of the city’s push to become a hub for autonomous vehicles.

However, while authorities are keen to tap a global trend by enlisting startups to develop vehicles, the industry must still prove it is safe and prudent people to use the technology.

Three times a week, two chefs sit at a track with a route, traffic lights, a slope, and a slope stop to simulate real driving conditions. Shipping containers are also added up to emulate how high road could potentially block satellite signals to self-driving machines.

The CETEX centre, run by Nanyang Technological University (NTU), even has a rain-making machine that can simulate frequent tropical rainstorms in the Southeast Asian city-state of 5.2 million people.

Before you are ready to go to the public roads, we test them here to see if they are really safe,” said Mark De Boer, programme director at the centre.

Negotiating lanes, dodging pedestrians. All companies must pass their autos through the centre’s testing and certification procedures before they are allowed to hit public roads.

The test is being trashed as part of government plans that could eventually see them deployed in the city, according to local media, while local taxi and bus lanes are also being tested, and trials of delivery robots will soon take place.

The government has led the drive, as it seeks to attract more foreign firms and because it sees the technology as useful for public transport and delivery services.

The first trials of an autonomous car on public roads took place in 2015.

In 2019, shuttle software firm Easy--Mobil launched shuttle test trials in Singapore, becoming the first company in the world to do so.

Authorities aim to deploy autonomous public transport in three areas by 2022; and in October, companies were expanding the area where self-driving vehicles can test to 1.099km (620 feet) of roads.

Self-driving vehicles will mainly be used in the public transport network for tasks such as shuttling people to stations and stops from homes or workplaces, said exploitation.

Mhaskar, an NUS professor involved in the autonomous vehicle programme.

De Boer from the CETEX centre said authorities are working on ensuring the correct regulations, such as traffic laws, are in place for self-driving vehicles.

Countries where private companies are testing the latest tech, having “wonderful technology,” but not being able to launch it in the market because of the absence of rules, he added.

— Reuter office

There are still many roadblocks to advance, however.

Safety remains a major concern for the industry worldwide — in 2019, a self-driving Uber car was involved in a crash that killed a woman in Arizona.

All trials in Singapore will require a safety driver and most vehicles are not yet ready to move on public roads.

And the key equipment remains among other markets, such as the US, where self-driving ride services are in various stages of deployment.

“I would be very difficult to leap into the entire industry simply because the nation is small,” said Gould. Chen, associate professor of strategy at French business school INSEAD.

The key challenge may be persuading members of the public to hop aboard self-driving vehicles, and experts say the technology will have to be introduced at different stages.

“If you made it every day, it would be a lot easier,” said Mhaskar, adding that it’s not only the technology.

Mhaskar added that the Singapore government is working on the regulations and testing procedures.

Meiklejohn added that the problems are not limited to the technology itself.

“Other issues to consider include the safety of the passengers, the reliability of the system, and the potential for illegal use,” she said.