

# Autonomous scooter ready to go on market

**Toh Ting Wei**

An autonomous scooter designed by a team of researchers in Singapore is now ready to go on the market.

It could be deployed for use in areas such as hospitals, tourist attractions and university campuses, if plans come to fruition.

Although it is marketed as a scooter, it will be designed to be classified as a personal mobility aid and will be a safe mode of transport, a researcher behind it said.

The scooter is one of four variants of autonomous vehicles that are being worked on by the Singapore-MIT Alliance for Research and Technology Future Urban Mobility (Smart FM) research group, which is the Massachusetts Institute of Technology's research enterprise in Singapore.

It was on show to the public at Suntec Singapore, as part of Smart FM's exhibition at the 26th Intelligent Transport Systems World Congress earlier this week.

In an interview with *The Straits Times* on Tuesday, Smart FM collaborator, Dr Marcelo Ang, said the device will be safer than traditional electric scooters due to its slower speed of 15kmh and safety features built into it.

"We have all the sensors around it that see everything," he said. "If we put the same technology in personal mobility devices, it will prevent accidents... it's similar to the driver assistance systems for cars."

Dr Ang said the group is seeking manufacturers to commercialise the scooter even as work to improve it continues.

Using the Suntec Singapore exhibition hall as a reference point, he said:

"The scooter is ready now...it can go from here to any point anywhere else."

The company first unveiled the scooter three years ago. Since then, it has been upgraded to better avoid obstacles and move in dynamic environments, said Dr Ang, who is also acting director of the Advanced Robotics Centre at the National University of Singapore.

The scooter weighs about 50kg, runs on battery power and has a maximum speed of about 15kmh. It can travel about 20km on a full charge, and, equipped with advanced navigation software, cameras and a pair of Lidars – which bounce lasers off objects – it moves around without bumping into obstacles.

A map of the area it is operating in will be uploaded into the scooter's system for it to navigate itself.

It currently costs about \$18,000 to build one autonomous scooter, but Dr Ang said he hopes that the cost can eventually be brought down to below \$1,000 when it is mass produced.

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# 20km

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