



Mr Chee Keai Jiang, 27, a research staff member at NTU's Robotic Research Centre, controlling the arm of the OutoBot via a tablet. The locally built system was co-developed by Elid Technology International and NTU. ST PHOTO: KEVIN LIM

Robots that paint, clean HDB blocks to be tested shortly

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Robots may soon take over cleaning and painting high-rise buildings here, thanks to a new automated gondola system co-developed by Singapore electronics company Elid Technology International and Nanyang Technological University (NTU).

Called the OutoBot, the locally built system was launched yesterday as a commercially ready product after two years of research and development, with the aim of improving productivity while enhancing workplace safety.

The robot was developed in response to a 2015 call by the Housing Board for proposals to automate the painting of building facades to enhance worker safety and productivity. It will soon be tested on selected public housing

blocks in consultation with HDB.

The robot requires only two workers for the washing or painting of a building facade, instead of the usual five.

One worker will operate the robot remotely while the other performs the role of a safety officer, but both do not have to be on the gondola.

OutoBot is equipped with a robotic arm and a spray nozzle that can shoot high-pressure water jets to clean surfaces or to spray paint. The system is designed to use the existing gondola mounts found in many high-rise buildings.

Most of the fatal accidents at construction sites in the last decade were the result of a fall from height, though not all involved gondolas. The move towards automation is also in step with recent measures to boost productivity within the construction sector. Said Elid's

managing director, Mr Dennis Lim: "Using our new robot, we have shown that a labour-intensive job can be transformed into one that can be easily done by an older worker and, at the same time, eliminates the risk of employees having to work at heights."

Elid claims that OutoBot's current iteration is able to reduce painting and cleaning time by 30 per cent and paint wastage by 20 per cent as it "does not suffer from fatigue". A high-rise building typically takes around three months to paint, said Mr Lim.

But Elid was tight-lipped on the cost to use the technology.

Building maintenance contractor Yeong Wai Teck said the technology looks promising and, if successful, could address labour woes in the construction sector.

Said the managing director of Aegis Building and Engineering: "With the OutoBot, we can potentially look to hire younger people who are interested in technology, or older people who might not be physically able to brave the weather on a gondola for an entire day."

He added: "It is going to be very expensive, but we think that in the long term, the overall advantages of automation will outweigh the initial costs."

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