Robot sanitation for a post-Covid world

What role will robots play? Dr Michelle Zhang, SoftBank Robotics Asia Pacific Market Expert, CIO of Laviana Pharma, and Visiting Professor at Nankai University discusses.

BY SOFTBANK ROBOTICS

In the 1800s, Singapore's sanitation system relied on coolies to remove buckets of human waste – then known as 'night soil' – that would then be used as fertilisers in plantations.

The practice was eventually abolished in the 1890s – and the nation's public sanitation standards have risen drastically ever since. But how will public cleanliness look like after the global Covid-19 outbreak?

Robots and big data will play a crucial role in this future, says Dr Michelle Zhang, SoftBank Robotics Asia Pacific Market Expert (Healthcare). GovInsider spoke to her to find out more.

Redefined standards of cleanliness

The pandemic has set a new normal for public sanitation. High traffic and high touch-point areas – such as airports and malls – must be cleaned more frequently to reduce the transmission of infectious diseases, says Zhang.

Singapore has announced new measures that mandate public areas such as hawker centres, schools, childcare facilities and eldercare centres to be cleaned at a minimum frequency. Self-disinfecting coatings have also been applied to lift buttons in public flats,

The National Environment Agency is planning a public toilet overhaul, its Director of the Department of Public Cleanliness told GovInsider. The agency will also be subsidising the redesigning of toilets at hawker centres and food courts.

Enter the future of robots

Cleaning robots will be key in the future of public sanitation, Zhang says. Manually wiping down every surface is no longer feasible – using autonomous solutions will reduce the risk of virus transmission, and increase the efficiency of cleaning.

SoftBank Robotics' AI-robot, Whiz, can automate the laborious task of vacuuming so cleaners can focus on disinfecting surfaces and adhering to Covid-19 guidelines, Zhang says. "Behind the scenes, SoftBank Robotics is also working on innovations to allow for sterilisation and disinfection," she adds.

Governments need to equip workers with new capabilities such as robotics operational skills and big data analysis, she says. Grants for businesses to adopt such technologies will also be crucial.

"With a well-trained workforce in the latest robotic solutions, these countries will be able to fast track and pace themselves for the new economic transformation," Zhang says.

How about human workers?

Zhang acknowledges the perennial worry of robots replacing humans in their jobs. "With any emerging technology, we need to be mindful of its potential for disruption," she says.

"There is enormous potential in how people can collaborate with robotics to make our lives easier, safer and more connected," she adds.

SoftBank Robotics takes a "people first" approach to designing and developing robots, Zhang says. The company "works closely with industry bodies to ensure that robots are not disrupting an industry, but improving it."

Whiz redefines the role of a cleaner, Zhang says. It replaces labour-intensive, repetitive tasks with high-value, human-centric tasks, while equipping them with robot operation skills. Cleaning teams can access cloud data visualisation, cleaning and status reports through the Whiz Connect application to understand how to optimise workflows.

The role of data

Big data will also be a driving force of transformation in the cleaning sector, Zhang says. Tapping on and analysing data will help countries reshape operations and make smarter, holistic decisions.

She adds that there will likely be a demand for a single operating platform that merges various cleaning robots. This would allow organisations to quickly analyse data and optimise cleaning schedules.

Robots are here to stay, says Zhang. "Humans and robots will certainly work hand in hand to continue to evolve, innovate and accomplish feats large and small."

Covid-19 has redefined many aspects of our lives – especially public hygiene. The use of robots will help immensely with the workloads of cleaners and play an increasingly important role in the future.

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