Smart Means Inclusive

We consider the impact of tech-based initiatives on the lives of Hong Kong's impoverished residents — for whom staying connected isn't a priority

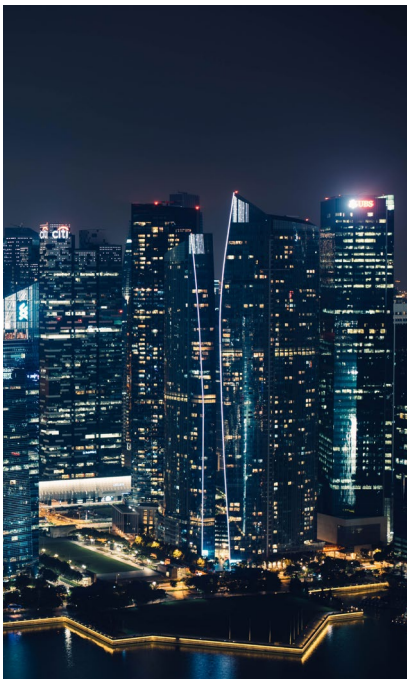
> ***Smart cities put the well-being of their citizens at the center of their decision making***

Picture your usual trip to the local supermarket. Except this time, it's a fresh, clear day in the city, you aren't stuck in traffic along the way, and there are no queues at checkout. Considering what the Hong Kong government hopes to achieve with its Smart City Blueprint, to most of us, embracing smart city tech seems like a no brainer.

But for the 20 percent of the population living below the poverty line worried about where their next meal will come from, or from marginalized communities, technology is likely to be the last thing on their minds.

"For asylum seekers and refugees whose biggest concern is where they are going to sleep, a mobile phone or getting on the internet isn't a priority," says Sue Toomey, Executive Director of HandsOn Hong Kong (HOHK), an NGO dedicated to supporting Hong Kong's social sector through the mobilization of volunteer services.

Income inequality in the city



has reached its highest level in more than 40 years, according to government data. An aging population and smaller family structures, coupled with the economic shift from manufacturing to higher value-added services, all add pressures to workforce issues and the poverty rate.

At particular risk are the city's isolated elderly, solemnly defined by Toomey as those "aging and dying alone." Hong Kong's elderly population is growing at an alarming rate. One in three elderly residents currently live below the poverty line, and in 20 years, one in three people will be over the age of 65, according to the latest government census.

The good news is, this demographic stands to gain the most from greater connectivity brought on by smart city initiatives, she thinks.

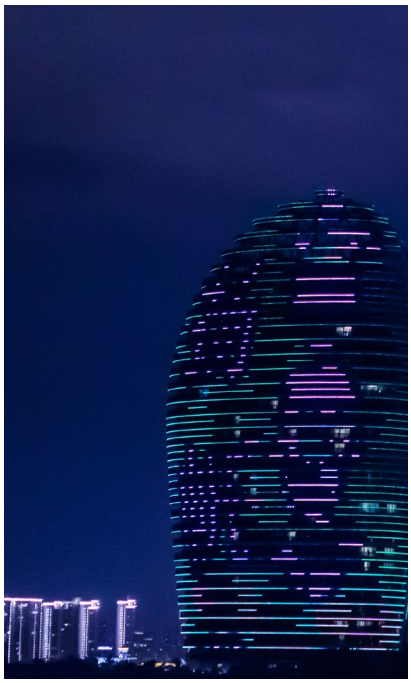
NGO-organized visits to the homes

> ***Connectivity isn't just nice to have, it's a must have'***

of elderly residents can provide a crucial human connection to those living alone, but Toomey says that, if taught how, elderly people can leverage technology to inform more people about their needs.

"For these people, connectivity isn't just nice to have, it's a must-have," she says. "The Hong Kong government needs to be more mindful and deliberate about making its Smart City initiatives more inclusive in ways that will also benefit those on the fringes of society who will otherwise get left behind."

Janet Pau, Program Director at Asia Business Council, thinks greater social inclusion can be achieved by using smart city tech to target two key areas in Hong Kong: healthcare and housing.



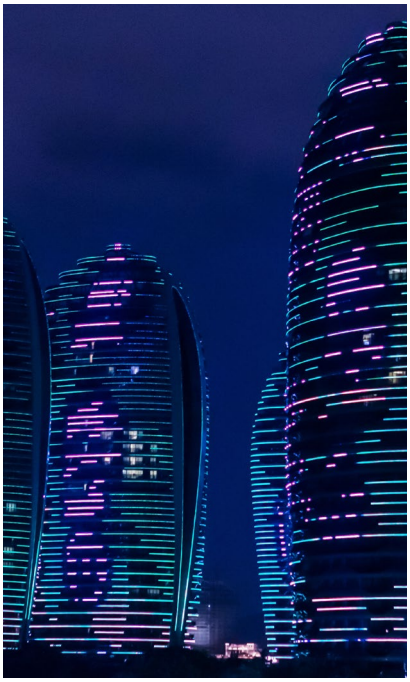
Healthcare

Hong Kong still does not have a dedicated program or strategy specific to actively promote innovation and technology within elderly care services, says Pau.

This is particularly problematic given that the average wait for an elderly person to get a place in a public nursing home is longer than two years. There are also chronic staff shortages at elderly homes, severely impacting the quality of care on offer.

Smart home technologies have the potential to keep elderly residents in their homes for longer and to address their needs, says Pau.

In 2017, a pilot program implemented by the Senior Citizen Home Safety Association



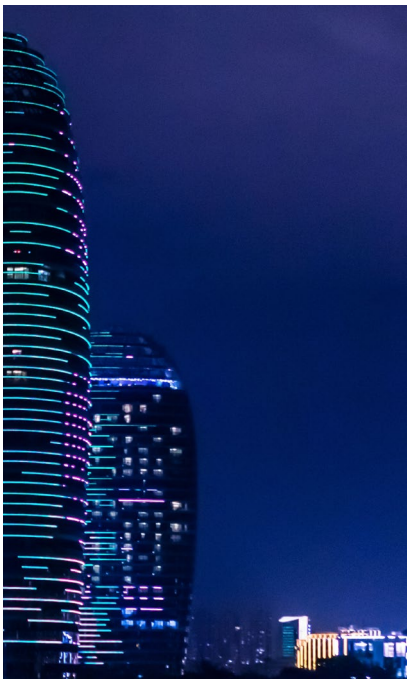
installed sensor devices in the homes of 1,000 elderly people in an effort to decrease the number of serious accidents thanks to quicker reaction times, also relieving the public hospital system.

Pau says Hong Kong should learn from American telecom companies and technology start-ups already offering services that enable family members and other caregivers to monitor the meals, mobility and medication schedules of the elderly via mobile phone apps connected to sensor devices.

"This way, the home can, in a way, help 'care for' the elderly resident," says Pau.

Julian Vella, ASPAC Regional Head - Global Infrastructure Advisory, KPMG China, agrees that technology will play an important role in planning for and reducing the cost of aged care and public healthcare facilities.

"The built environment should



place more emphasis on diverse age-friendly neighborhoods and buildings," he says, "including for example, barrier-free urban infrastructure, recreational facilities and technologically equipped housing for the elderly."

Housing

Hong Kong's lack of affordable housing is another area in which smart technology can bring about positive change.

The use of "prefabricated" construction technology, which involves the manufacturing of modular units, such as wall panels, at factories, followed by the assembly of the modules on-site, can substantially lower the cost of housing, says Pau.

Advocates for Smart City cite other benefits such as energy efficiency, speedy construction, and not only financial — but also

physical — access to low cost, high-quality housing, through better infrastructure.

"In a city like Hong Kong with limited land supply and a growing population of seven million, well-connected intra-city public transport is necessary for livability and access to affordable housing," says Vella, who specializes in infrastructure.

A human-centric approach

In Hong Kong specifically, major obstacles to Smart City involve scaling up existing initiatives and technology, most of which, up to this point, have only been for demonstrative or pilot use, says Pau.

According to a 2018 government report entitled Policy measures to promote smart elderly care services in selected places, other possible difficulties during smart city implementation include

the lack of funding for product commercialization, shortage of testing grounds, difficulties associated with localizing imported products, and limited knowledge and spending power of the elderly.

The report also heeds a lack of "government-led holistic strategy to drive innovation and technology for elderly care services."

It may still be early days for IoT in Hong Kong, but Pau says the government should be aware of an over-emphasis on technology solutions and over-reliance on foreign and corporate investment, to avoid marginalizing the city's poor.

Vella agrees. "There are many definitions of what constitutes a smart city. They have a vision, are well managed and are technology enabled. But most of all, smart cities put the well-being of their citizens at the center of their decision making," he says.

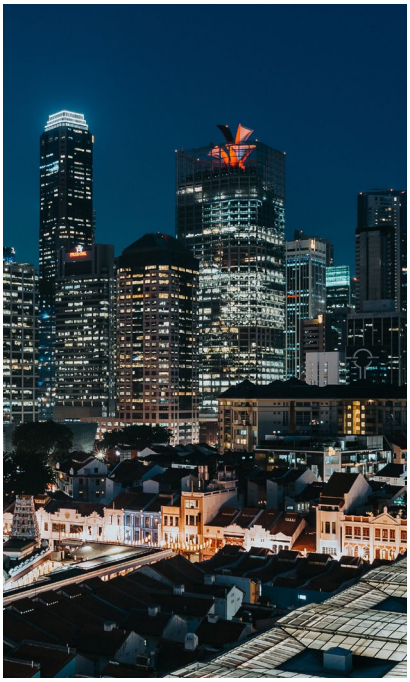
A committee view

'Connectivity goes beyond mobile and devices. A connected city is building infrastructure, healthcare and real estate investments that can create more jobs, better efficiencies and essentially improve living standards. For people who have fallen through the cracks, a smart city is about connecting their priorities, such as basic food and shelter, with access to public and private sector services that better cater to community needs'

— Jen Flowers, Consulting Director at PwC Hong Kong and AmCham I&T Committee Vice-Chair

Success Stories

If you can't beat 'em...



Singapore

Singapore ranked second on the global smart cities ranking in 2017. Some attribute this success to the government's Smart Nation strategy.

Like Hong Kong, the Lion City also uses smart tech to address its aging population. "Elderly monitoring systems" which use Internet of Things technology to monitor movement within the home have already been deployed under the initiative. When there is suspiciously infrequent activity, or the system detects a problem, a caregiver is alerted immediately.

Vital-X, a system allowing patients to be monitored remotely by doctors without having to leave their homes, is also a part of the Smart Nation initiative.

"Systems like these could help to alleviate stress on the public healthcare system," says Pau. "A core emphasis is on the commercialization of smart city initiatives, which makes sustaining these systems over time more likely."

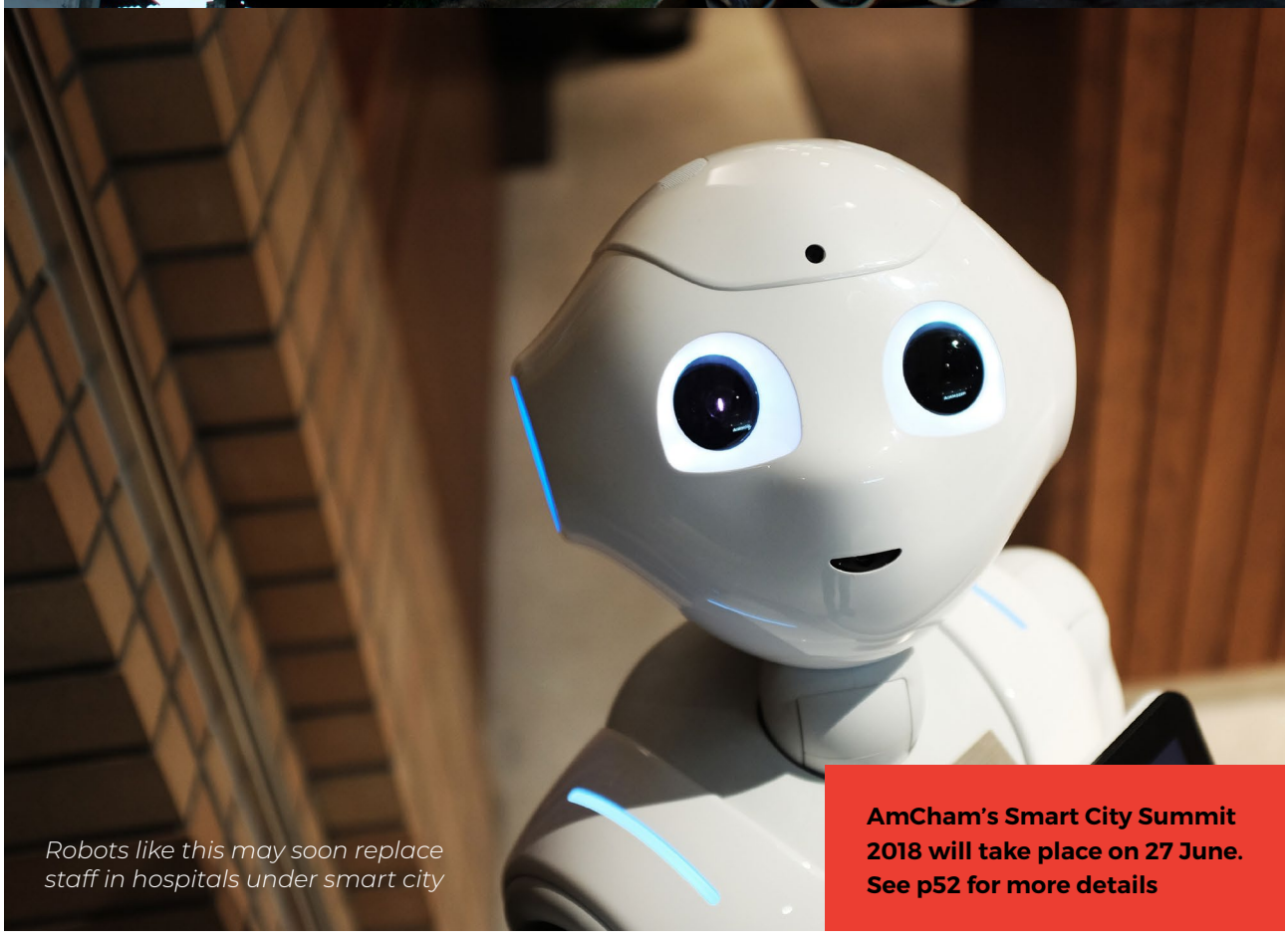
In terms of prefabricated housing, the Singapore government aims to build 35 percent of its new HDB (Housing Development Board) flats using the latest prefabricated construction technology by 2019, although this seems to be being discussed from an efficiency standpoint in Singapore rather than one aimed at helping lower-income residents, says Pau.

Japan

In 2015, Japan launched a robot-care strategy in response to the growing healthcare issues faced by its rapidly aging population. At that point, 60 percent of caring methods already involved the use of robots, said Pau, and the government is targeting an 80 percent usage rate by 2020.

In 2013, it launched the Project to Promote the Development and Introduction of Robotics Devices for Nursing Care, which "aims to support and promote the development, practical application, and introduction of robotic care equipment, and to create an environment for the preparation of standards necessary to introduce robotic equipment into nursing care settings."

An example of prefabricated container housing - a practical and affordable solution to Hong Kong's housing crisis, some say



Robots like this may soon replace staff in hospitals under smart city

AmCham's Smart City Summit 2018 will take place on 27 June. See p52 for more details