

INSIGHT | Smart City

HONG KONG 2.0

As cities around the world have embraced the smart city concept, Hong Kong too has taken steps to turn itself into a world-class smart city. By finding novel solutions to the city's challenges, Hong Kong's smart city journey looks to involve and benefit various segments of the community. By Chris Davis



elmadadi/Shutterstock.com

At the end of last year, the Hong Kong government released its Smart City Blueprint, which aims at improving management of the city while enhancing quality of life for Hong Kong inhabitants. With no universally established one-size-fits-all definition for what defines a city as a smart city, the Blueprint includes proposals covering six main areas: smart mobility, smart living, smart environment, smart people, smart government and smart economy.

A “living” document

Government Chief Information Officer Allen Yeung says the Blueprint, which embraces innovation and technology including the Internet of Things (IoT) acting as key enablers, provides a framework to improve Hong Kong’s environmental performance and meet rising healthcare needs, which is particularly important as Hong Kong faces the challenge of an ageing population; and addresses issues related to urban renewal, all while raising the vibrancy of Hong Kong business and society. “While cities may share similar challenges, each city must implement unique solutions to solve its own unique challenges,” says Yeung. He adds that Hong Kong’s journey to develop as a smart city is a multifaceted endeavour that requires collaboration between members of the government, the business sector, academia and the wider community.

According to Yeung, the Smart City Blueprint is a flexible, “living” document, designed to be updated as existing technologies are refined and new technologies are developed that fit with Hong Kong’s specific needs. A good example is the roll-out of the Faster Payment System (FPS) by the Hong Kong Monetary Authority (HKMA), scheduled for September 2018. Through a convergence of banking and technology, the FPS will provide a platform for real-time payments and transfers from person to person, from person to banks and businesses, and between banks and non-bank payment service providers.

In addition to the FPS, the Blueprint calls for the implementation of a common QR code standard. This will enable merchants, especially SMEs, to use a single QR code that will accept the 13 different stored value facilities licensed by the HKMA for digital payment schemes. Yeung says initiatives such as the launch of the FPS and standardised QR code will help businesses of all sizes to raise the level of e-services they offer, thereby providing more convenient and comprehensive services to their

customers. Furthermore, by 2020, an electronic identity (eID) card issued to Hong Kong residents will enable anytime, anywhere personal authentication for online government and commercial transactions by mobile phone and via Internet platforms.

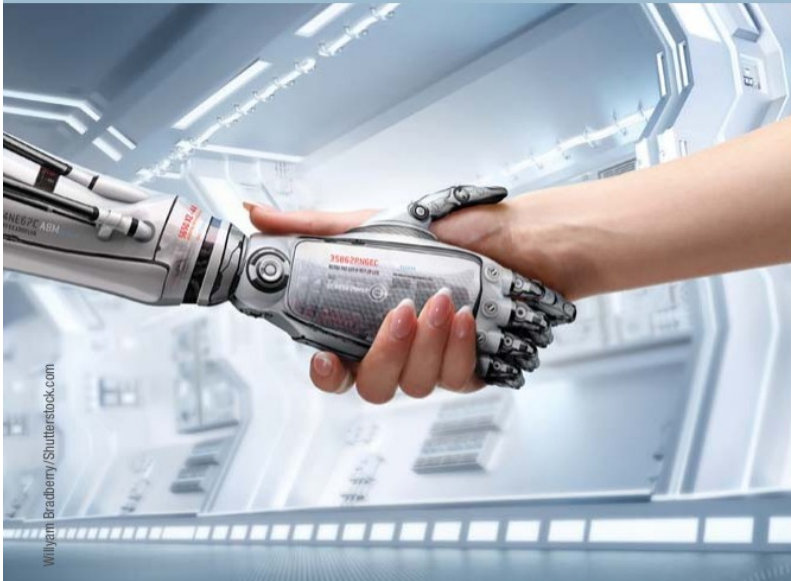
To support businesses and the economy, the Blueprint looks to strengthen the city’s current economic pillars while building new ones for the future. To uphold Hong Kong’s role as one of the leading cities in financial services, various fintech initiatives will be promoted to further develop and facilitate the adoption of trading and financial innovations. Looking to the future, the Blueprint outlines a strategy for building the local technology industry into a new economic pillar by attracting internationally renowned institutes and tech companies to set up R&D centres and platforms in the city.

“If Hong Kong is able to showcase home-grown smart city successes such as the MTR, this could act as an economic driver and allow entrepreneurs and businesses to export their products, services and know-how to other cities and regions, including cities in the Guangdong–Hong Kong–Macao Bay Area and along the Belt and Road,” says Yeung.

All-round capabilities

Other smart city initiatives look to tackle healthcare and infrastructure challenges. Against the backdrop of an ageing population and shrinking workforce, the development of labour-saving technologies and systems is a priority to allow the elderly to look after themselves in their own homes, and therefore to age in place. In March 2016, to better manage healthcare quality and costs, the Food and Health Bureau (FHB) and the Hospital Authority (HA) launched the Electronic Health





Record Sharing System (eHRSS), which centralises patient information for the provision of healthcare services. The system allows medical practitioners in both the public and private sectors to view and share electronic health records. As of mid-February 2018, over 690,000 residents had registered with the voluntary system, along with 1,470 private healthcare providers, including all 12 local private hospitals.

The Smart City Blueprint also highlights how refurbishing ageing buildings and installing sophisticated building management technologies could help to improve Hong Kong's energy management profile. By mid-2019, the government plans to install about 50 smart lampposts fitted with multiple sensors in strategic locations as the first phase of the smart lamppost pilot scheme, which would ultimately install about 400 lampposts in three years' time. The sensors will collect real-time weather, environmental, traffic and pedestrian data, which will be analysed with a view to supplying better management and facilities to local areas. Yeung says the pilot scheme represents part of the government's wider commitment to providing more access to open data to private and public organisations while protecting privacy and data security concerns.

Smart technologies in action

In the future, data will be one of the key elements driving innovation. Simon Wong, CEO of the Hong Kong R&D Centre for Logistics and Supply Chain

Management Enabling Technologies (LSCM R&D Centre), believes that data analytics, IoT, robotics and automation, and artificial intelligence (AI) technologies can act as the building blocks to support Hong Kong's smart city development endeavours. Explaining his rationale, Wong says that sensors placed around the city and data collected from robotics need to be collected wirelessly through IoT systems, and then analysed by AI and data analytics professionals. "The wonderful thing about this way of collecting and analysing data is that it lets us passively discover the unknown, which can lead to new or disruptive business models," notes Wong.

The LSCM R&D Centre has introduced a number of logistics- and supply-chain-related technologies to facilitate the adoption of new technologies by industry and to improve their core competencies. For example, to reduce the potential risk of injury while moving heavy objects in warehouses or on construction sites, the LSCM R&D Centre's "Follow-Me" robots are equipped with multiple sensors and use advanced computer vision techniques to track and automatically follow workers. Guided by a type of smart technology termed "platooning", the robots are also able to follow and control one another, further boosting efficiency.

The Hong Kong Central Mail Centre has also deployed the LSCM R&D Centre's AI, Sensory and Robotics Enabling Technologies to automate the stamping process in post offices, which streamlines operational efficiency. Also of note, a portable, non-invasive device using state-of-the-art ultra-wideband sensors and radio frequency (RF) technologies enables item-scanning and stock-taking without having to open the packages.

Hong Kong's journey to become a truly smart city has already begun, with plenty of innovations and initiatives set to follow over the next few years. "So long as the entire community works together, Hong Kong has many opportunities to develop into a leading example of a smart city," says Wong. 📖



For all the latest industry news and insight on information and communications technology, visit www.hktdc.com/ict