

VISIONS OF A SMART CITY

May Chan Rhodes

A smart city isn't just about smart infrastructure, technology, planning and management. It is also about developing a smart mindset that seeks to maximise connectivity and collaboration among various stakeholders in order to achieve better living for all, say three divisional spokesmen at the Hong Kong Institute of Surveyors.

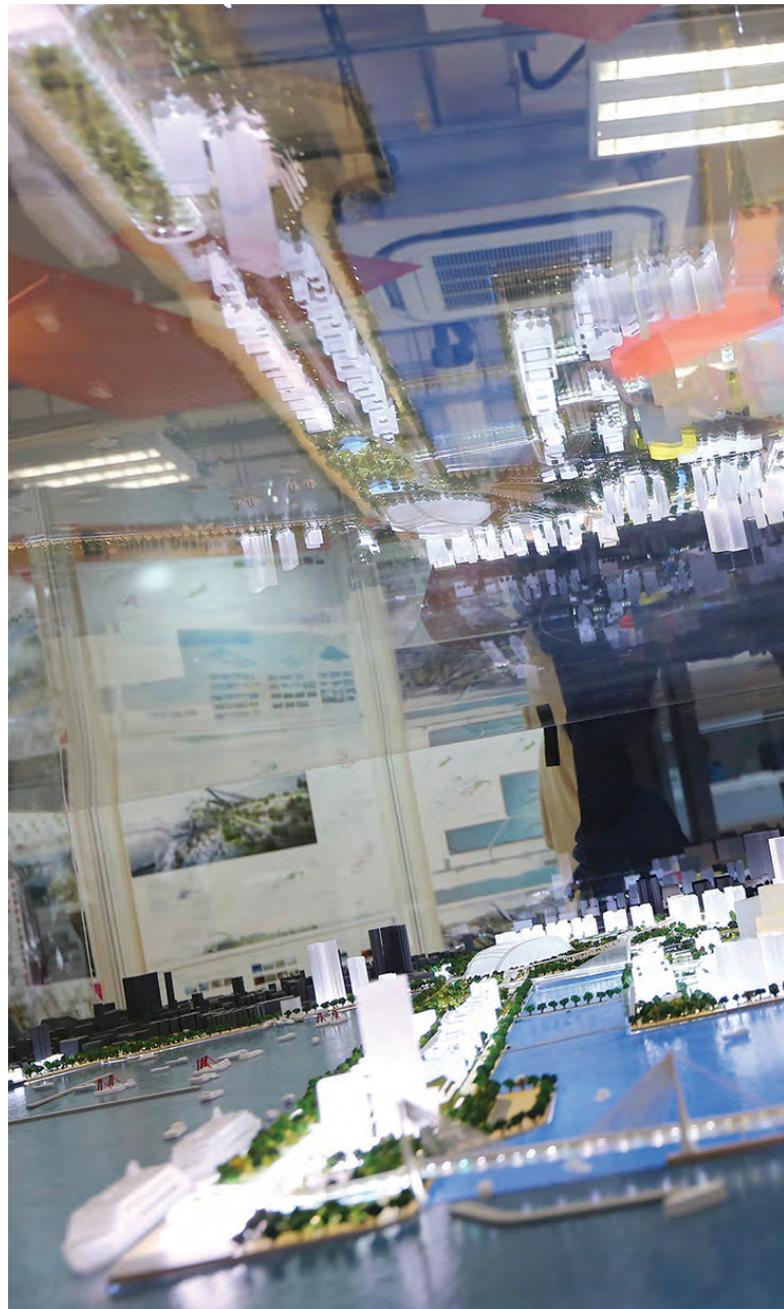
Sr Prof Eddie Hui, Vice-Chairman of the Property and Facility Management Division, says it is important for surveyors to keep reflecting on what people truly need. They need to look at how various smart features can enhance the quality and efficiency of living, as well as add value to properties or facilities in the city.

"There is no universal definition of what a smart city is," says Hui, who is also a professor at the Department of Building and Real Estate at Polytechnic University. "Generally, it is about how to make a city more interactive, more efficient and more liveable."

For example, he says, different shopping malls can share information on the availability of parking facilities so that drivers know exactly where and when they can park before choosing which mall to patronise. Commercial buildings, on the other hand, can monitor whether their tenants are still on the premises in order to improve their overall energy management.

"It is about a new way of thinking that promotes connectivity, convenience and a smarter way to live that releases the potential of endless possibilities for those who live in the city," Hui says.

Similar features have been included in the outlines



“Chicago, Rio de Janeiro, Glasgow, Stockholm – all have been labelled “smart cities” in recent years for their advances in technology, planning and policy, but what does a smart city mean for Hong Kong? May Chan Rhodes investigates the role the surveying profession will have on a “smart” Hong Kong and how areas such as Kowloon East can help the city become a world leader in smart living.”



SHORTLISTED SUBMISSIONS OF
KAI TAK FANTASY INTERNATIONAL
IDEAS COMPETITION ON
URBAN PLANNING AND DESIGN
DISPLAYED AT ENERGIZING
KOWLOON EAST OFFICE (EKEO)
OF THE DEVELOPMENT BUREAU
IN KWUN TONG. 05JUN14

PHOTO SOURCE:
THE COPYRIGHT IS OWNED BY
SCMP AND THE PHOTOGRAPHER
IS DAVID WONG.

of a “smart city” blueprint drafted by town planners for Kowloon East, which has been earmarked by the government as a pilot area to explore the feasibility of developing a smart city.

Planners for this area have suggested ways to embed green elements and digital technology into its construction. These include the use of sensors in traffic lights, the installation of electronic panels at road junctions and the development of mobile phone apps that would give visitors all the information they need – ranging from traffic, parking, building and cultural information updates – to satisfy their business, leisure and livelihood goals in the district.

Sr Dr Lesley Lam, Chairman of the Land Surveying Division, says that easy access to spatial data is the key to implementing such initiatives in a successful and sustainable way.

“There are many types of spatial data available in Hong Kong that serve different purposes,” he says. “For example, an aerial image of a Hong Kong street taken by an airplane is very different from the satellite image taken by Google Maps in terms of resolution and details. As a result, they are used for different purposes.

“Land surveyors like us will be able to tell you what spatial data is available, by checking the quality and accuracy of the data, and advising you on how to apply and manage such spatial data across time. We are even able to compile a set of spatial data that is tailored to your specific goal.”

Previously a government surveyor at the Lands Department before switching to the private sector, Lam urges the government to provide policy support to guarantee easy public access to spatial

data. He also recommends that spatial data be in a format that is compatible across different government departments, such as the lands, transport, water supplies, and the electrical and mechanical services departments.

Lam cites the successful example of Seoul, where the government established the Seoul Open Data Square initiative several years ago to share various categories of public information with citizens and businesses, covering areas such as city management, the environment, transportation, welfare, health, education and tourism.

The information released to the public enabled the private sector to develop innovative applications to enhance the public's quality of life. The government also encouraged the development of mobile applications based on such open data, and launched other policies to increase access to smart devices and educate users from various age and income groups on their usage.

"Without a good policy, you may have one or two amazing companies or government departments doing some good work here and there, but that is just not sustainable," Lam says.

He adds that the HKIS has been working closely with policy makers in Hong Kong to advocate stronger policies. "Policy support is the key. It ensures the consistency and transparency needed for both the public and private sectors to accumulate and use spatial data in a meaningful way."

Sr Dr Tony Leung, Chairman of the Planning and Development Division, says there is a lot of potential in the Kowloon East development, which is an alternative core business district in Hong Kong that is twice the size of Central and could supply up to five million square metres of additional commercial/office floor space. The area, including Kai Tak, boasts an ample supply of open space compared to those of existing CBDs.

"If you look at Central, it already includes some smart city elements, like green buildings, and pockets of leisure, culture and heritage

conservation including the former Police Married Quarters," Leung says. "However, Kowloon East is a blank canvass. It is going to be something that you have never seen in Hong Kong before."

From a planning and development perspective, Leung says it is important to be able to think in terms of how a building project will function in the context of the district, along with the role the district will play in the bigger picture of Hong Kong. This will provide the guiding principle in the facilities to include in residential and commercial buildings, the incorporation of green elements, which older buildings should be demolished or repurposed, and how much money should be invested into various private and public projects.

He adds that the government might consider including some of the green and smart city elements into the land sale terms and requirements for zoning applications, in order to ensure that the private sector concurs with the overall purpose of smart city development.

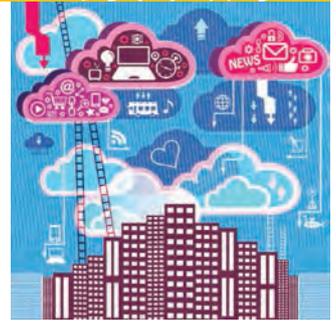
"Some developers may be willing to invest more in being green and being smart, but other developers may only want to sell as many flats as possible," Leung says. "We need the government to motivate the business sector in a realistic way."

Leung also believes that surveyors should keep abreast of the latest government policies and city-development trends across the world in order to capture the opportunities that arise from smart city initiatives.

"Green, sustainable development, the use of technology, and the use of smart devices are going to be very important," Leung says. "You need to constantly update and equip yourself, and think beyond just what is required in your profession."

"Don't just focus on what people need in 2015, but envision what kind of world you wish for in the next 10, 15 years. Think about the future."

智能城市願景



近年來，芝加哥、里約熱內盧、格拉斯哥、斯德哥爾摩在技術、規劃上突飛猛進，政策多有進展，獲冠以「智能城市」之稱。而怎麼樣的香港，才算得上「智能城市」呢？May Chan Rhodes 探討了測量界對營造「智能」香港的作用，並思考本港如何從九龍東等地區著手，實現世界級的智能生活。

May Chan Rhodes

香港測量師學會的三位組別發言人表示，智能城市不僅意味著基建、技術、規劃、管理的智能化，亦是形成一種智能思維模式的過程，令各界之間交流無間、攜手合作，提升整體生活質素。

物業設施管理組副主席許智文教授測量師表示，測量師需要不斷反思人們的真正需要，瞭解如何以不同的智能理念改善生活質素及效率、提升城市中的建築物或設施的價值。

許測量師兼任香港理工大學建築及房地產學系教授。他指出：「智能城市一詞並無普遍通用的定義。一般而言，智能城市是指一種更多互動、更高效率、更適宜居住的生活方式。」

舉例來說，商場可以提供實時車位數目，以便車主在選擇光顧某間商場前知道何時何地能夠找到車位泊車。另一方面，商廈亦可以監察租戶是否仍在大廈內，藉以改善整體能源管理。

「這是一種全新的思維方式，旨在促進交流、便利以及智能的生活方式，釋放城市人的無盡潛能。」

九龍東城鎮規劃師草擬的「智能城市」藍圖概要中已收錄類似的理念，而政府亦已預留一塊試驗用地，用以探索發展智能城市的可行性。

這塊試驗用地的規劃師提出多項建議，在建設過程中加入環保元素及電子科技，包括使用感應式交通燈、在路口安裝電子屏幕、開發手機應用程式，為途人提供最新的交通、停車、建築物、文化資訊，迎合商務、休閒及生活所需。

土地測量組主席林力山博士測量師認為，要成功而持久地推行這些措施，關鍵在於空間數據是否唾手可得。

「香港的空間數據種類多樣、功能各異。舉例而言，一組由飛機拍攝的香港街道航拍圖與谷歌地圖所拍攝的衛星圖，在像素及細節上截然不同，用途也因此有所不同。」

「土地測量師會核實數據的質素及準確程度，提供可用的空間數據，建議你如何應用及管理不同時間的空間數據。我們甚至可以按照你的具體目標，編製一套空間數據。」

林測量師轉行進入私營機構前，曾擔任地政總署的政府測量師。林測量師促請政府制訂政策，保證公眾可輕鬆獲取空間數據，並建議將空間數據製成可以共享的形式，供地政總署、運輸署、水務署及機電工程署等部門之間共用。

林測量師以首爾的成功為例：首爾市政府於數年前計劃建立首爾公開數據平台 (Seoul Open Data Square)，與市民及商界共享不同類別的公共資訊，涵蓋城市管理、環境、交通、福利、衛生、教育及旅遊等範疇。

據此發放的公共資訊將會激發私營機構開發饒具創意的應用程式，從而提升市民的生活質素。首爾市政府亦鼓勵使用公開資訊開發流動應用程式，並推出其他政策，以令不同年齡層和不同收入階層的市民均可更廣泛使用智能設備，同時必須教導他們如何使用這些設備。

「若沒有好的政策，即使有一兩間好的企業或者政府部門作一些零星的善舉，也不是長治之法。」

他又指出，香港測量師學會一直與香港政府密切合作，提倡更加健全的政策。「政策支持是關鍵所在，確保一致性及透明度，以便公眾及私營機構收集空間數據，發揮有意義的作用。」

規劃及發展組主席梁家棟博士測量師表示，九龍東尚有巨大發展潛質。作為香港又一個核心商業區，坐擁兩倍於中環的規模，九龍東將會提供高達五百萬平方米的額外商業/辦公用地。九龍東地區（包括啟德在內）相較現有的商業中心，可提供龐大的開放空間。

「如果留心觀察，你會發現中環已包含若干智能城市元素，例如環保建築、小規模的休閒娛樂場所、文化遺產，包括前已婚警察宿舍。然而，九龍東現在雖猶如一塊空白的畫板，卻將會呈現本港前所未見的景象。」

梁測量師表示，在考慮規劃及發展前景時，必須思考如何讓一座建築項目在地區中發揮其作用，而這個地區在香港的大版圖上又扮演甚麼角色，藉以決定住宅及商廈該有甚麼設施，注入甚麼環保元素，哪些舊建築應該拆除或改變用途，各類私營及公共項目該投放多少金額。

他補充道，政府可考慮在分區申請時，在土地銷售條款及要求中加入環保及智能城市元素，以確保私營機構符合智能城市發展的整體目的。

「部分發展商會願意在環保及智能發展上投入多些資金，但其他發展商可能只想出售盡可能多的單位。我們認為政府應該以實際可行的方式為商業機構提供動力。」

梁測量師亦認為測量師應與時並進，了解最新的政策及世界城市發展趨勢，把握智能城市發展計劃所造就的各種機會。

「環保、可持續發展、科技應用、如何運用智能設備都是未來的重點。要不斷提升自己、裝備自己，不要讓思維局限於行業所需。」

「切勿單看 2015 年的人們需要甚麼，要設想未來十年、十五年內，你希望看到一個怎樣的世界，放眼未來。」