Smart | 智城 VISION

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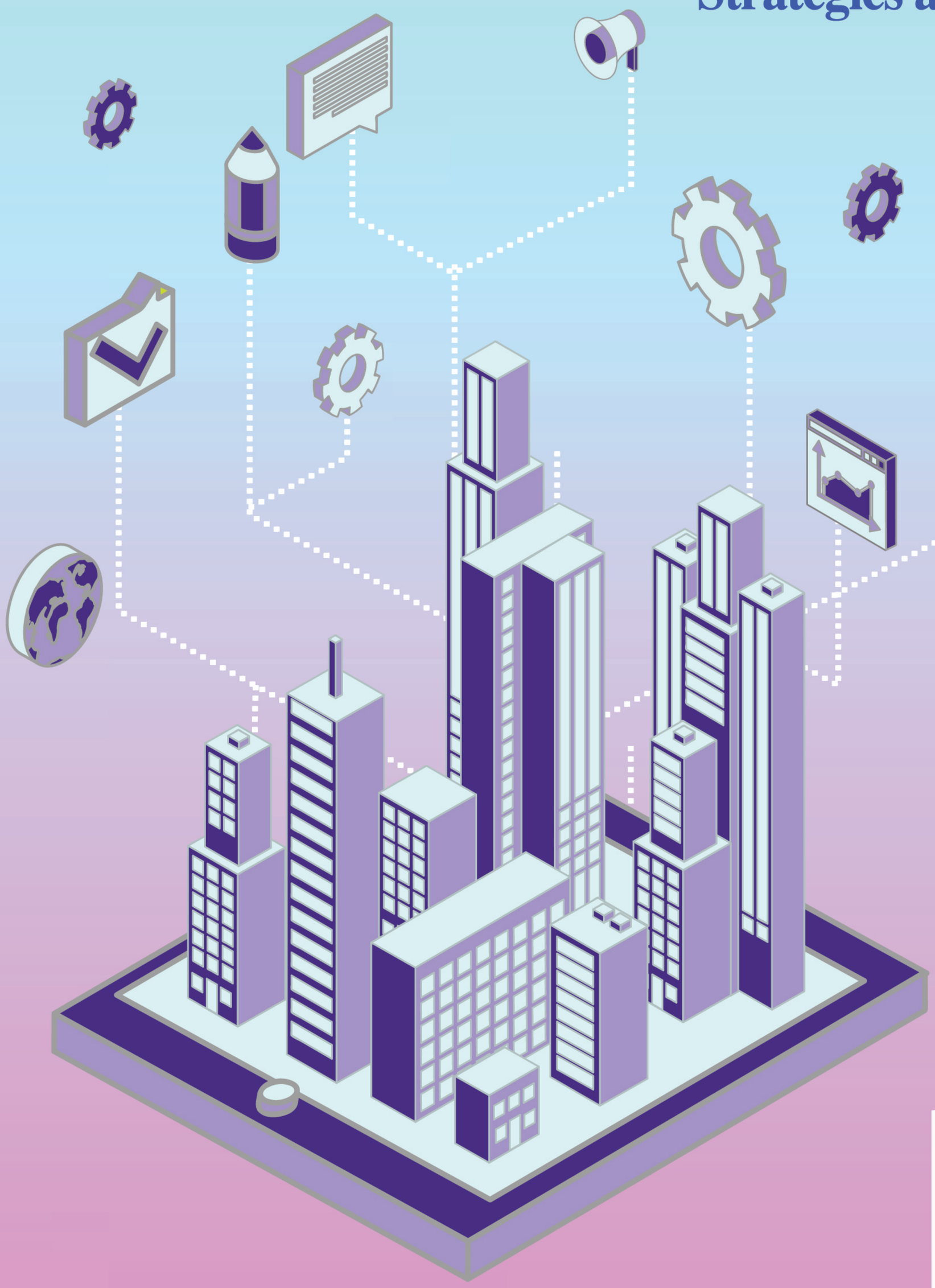
Smart City 3.0 for Hong Kong : Strategies and Prospects

香港智慧城市3.0 : 策略與願景



SCC
智慧城市聯盟
Smart City Consortium

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About the Smart City Consortium (SCC)
The Smart City Consortium (SCC) comprises a group of professionals from different corporations and organizations with the aim to provide opinions and suggestions to the Government for formulating related policies and standards in the development of Hong Kong as a world-class smart city. We encourage worldwide collaboration with different stakeholders to create the right ecosystem, which fosters innovation and sustainable economic growth for Hong Kong.

關於智慧城市聯盟（SCC）
智慧城市聯盟（SCC）匯聚一群來自不同公司和機構的專業人士，為香港發展成為一個世界級的智慧城市，在政策和標準層面提供專業意見和建議。我們鼓勵與全世界不同的持份者合作以創造合適的生態系統，促進香港創新及經濟的可持續增長。

楊全盛先生
Mr. Eric YEUNG
Convener

Smarter City Smarter Hong Kong

The SCC has connected with various stakeholders in the industry since its foundation. We have also signed Memorandum of Understandings (MoUs) with more than 10 international organizations, which has laid solid foundations for smart city development in Hong Kong.

In the past year, our members were very devoted to SCC activities. They became the driving force of the SCC so that we can continue to break through.

I hope that more smart products and services will be provided to the whole community so that a smart city will no longer be an agenda within the industry, but a vision that every citizen is committed to realizing.

SCC成立至今，成功連繫了業界不同持份者，更與十多個國際組織簽訂諒解備忘錄，為智慧城市的發展打下穩固基礎。

過去一年，很多會員都熱心參與SCC活動，帶動了SCC的發展，令我們得以不斷突破。

我期望將來愈來愈多有關智慧城市的產品及服務面世，令智慧城市不只是一個業界需要思考的議題，更加是一個全港市民需要共同關心、携手締造的願景。

葛珮帆議員, JP
Dr. Hon Elizabeth QUAT, JP
Co-chairman of Steering Committee

In recent years, the Hong Kong Government has been placing a higher emphasis on smart city development. However, a 'Smart City' must be founded on a 'Smart Government'. The Government must equip their teams of civil servants with innovative thinking, technology literacy, and the courage to change.

I hope that in this coming year the SCC will be able to implement a number of viable public-private projects with various Government departments to better promote smart city development in Hong Kong.

The rapid development of the SCC in the last year has created an effective platform for knowledge exchange and cooperation. We are looking forward to welcoming more of our friends to join us as members as well as and their valuable participation.

政府近年開始重視發展智慧城市，但「智慧城市」必須建基於「智慧政府」，政府必須重新裝備公務員團隊，要有創新思維、善用科技及敢於改變。

我期望SCC未來一年可以和多個政府部門落實一些官商民合作項目，為提升香港「智慧城市」推出可行方案。

SCC過去一年發展十分迅速，已為香港打造了一個有效的交流及合作平台，我們歡迎更多朋友加入，共同參與。

鄧淑明博士, JP
Dr. Winnie TANG, JP
Co-chairman of Steering Committee

I am really proud of the achievements of the SCC in the past year. The miracles have come from the passion and endless support supplied by all members and friends. Thank you so much!

In order to provide opinions, suggestions and insights to the Government for the development of Hong Kong as a world-class smart city, we shall continue to organize events and activities for interactions and exchange of ideas so that together we can co-create the future of our smart city.

我對過去一年SCC的發展感到驕傲，這全賴義工團隊全方位的投入，加上各界鼎力支持，成就了許多奇蹟。在此再一次感謝大家！

未來我們會繼續實踐理念，以促進智慧城市的發展，包括持續舉辦交流活動，與各界互動，刺激思維，共同為推動香港成為世界級的智慧城市提供專業意見、建議和新靈感。

香港智慧城市3.0：策略與願景

Smart City 3.0 for Hong Kong: Strategies and Prospects

未來的城市會是甚麼模樣？試想像一下：公共及商業決策是由實時的大數據即時演算出來，市民不但會恆常參與社會事務，更會靈活地以眾包（crowdsourcing）及眾籌（crowdfunding）等方式，共同推動商業及社會創新。簡而言之，這將是一個由市民、學界、政府及商界共同協作，並建基於大數據及物聯網的智慧城市。雖然這情景尚未實現，但紐約及巴塞隆拿等世界級智慧城市，已逐步邁向這目標。那麼，香港與這個願景又有多遠？要成為首屈一指的智慧城市，我們又需要甚麼策略？

Imagine a city where public and business decisions are made instantly based on real-time big data analytics. Not only are citizens well-informed about city development, they are also smart enough to initiate businesses and social projects by means of crowdsourcing and crowdfunding. It is a city driven by the co-creation of citizens, academia, government and businesses, enabled by sophisticated analytics and underpinned by the Internet of things (IoT) sensors. Although this is a hypothetical scenario, some world-class smart cities like New York and Barcelona are not far away from realizing it. In contrast, we will have to ask ourselves how far is Hong Kong from achieving this vision and how could we all contribute to make Hong Kong a top-tier smart city?

Why smart city?

Over the past 10 years, the discourse around smart city development has been increasingly popular around the globe. The smart city concept was first coined by IBM in 2008[1]. Though the concept has been continually evolving, it can be generally defined as "a city that uses information & communication technologies (ICT) to improve the quality of life of citizens, optimize resource usage and maintain sustainable development" [2].

Smart cities are built to address urban issues like sustainability, traffic congestion and energy management. By 2050, nearly 70% of the world's population will live in cities[3], which means that cities will generate the largest amount of carbon emissions and consume most of the world's energy and natural resources. Therefore, the way to build and manage cities has become world leaders' focal point of interest. Smart cities provide a sustainable solution to maximize efficiency and the quality of welfare as well as services. It also enables new business models, promotes innovation and supports better decision-making because it facilitates the identification of citizens' needs and encourages innovative approaches for new solutions. All of these benefits have encouraged a rise in the number of smart cities around the world.

為甚麼要發展智慧城市？

過去10年，智慧城市的發展在世界各地愈來愈蓬勃。智慧城市這概念最初由微軟於2008年提出[1]，雖然概念其後不斷演變，但離不開以下核心價值，即「以資訊及通訊科技（ICT）改善市民生活質素、優化資源運用，並建設可持續發展的城市[2]」。

建設智慧城市的目的，是為了處理形形色色的城市化問題，如可持續發展、交通擠塞和能源管理等。至2050年，世界上7成人口將在市區居住[3]，令城市成為能源和自然資源消耗最大，以及碳排放最多的地方。因此各國政府都費盡心思，希望找到更有效建設及管理城市的方法。智慧城市不但能滿足可持續發展的期望，更可將服務效率和品質提升至最高水平。此外，智慧城市講究精準地辨識市民需要，同時鼓勵以創新方式解決問題，因此能孕育嶄新商業模式、推動創新發展和支援更好決策。這些好處推動智慧城市的數目不斷增長。

Hong Kong's advantages and challenges

Hong Kong is one of the pioneers of smart city development in Asia. Since 1998, the Hong Kong Government has adopted various ICT projects, with policies like the Digital 21 Strategy to more effectively serve the varied needs of the Government, businesses, and citizens through electronic channels. Over the decades, the Government has made considerable efforts in building Hong Kong into a smart city, as demonstrated in projects like Energizing Kowloon East, which is on its way to becoming a "Smart City district" and having recently launched a demonstration of a "Smart Parking" mobile app in July 2016. Hong Kong is a robust knowledge-based economy and has the full potential to be developed into a world-class smart city, with a professional and efficient workforce, enterprising entrepreneurs, a high-quality education system, sound legal and banking systems, and last but not least, a stable government capable of managing various infrastructure and development projects.

Despite this, many research reports that evaluate smart city development have suggested that Hong Kong has not fully realized her potential. A notable example is the Smart City Development Index 2016, reviewed by International Data Corporation (IDC)[4], which clearly shows that Hong Kong is lagging behind. The report indicates that neighbouring cities including Taipei, Incheon, Singapore, Shanghai and Beijing are outperforming Hong Kong in aspects like economic development and social services.

Even Hong Kong citizens feel the pressure to catch up. In a survey titled "Would Smart Technologies Smarten up Hong Kong?" [5] conducted by the Hong Kong Internet Registration Corporation Limited (HKIRC) in July 2016, the responses reflected that the quality, breadth and depth of products and services in the following areas need substantial improvements: Smart Government (36.1%), Smart Living (21.3%), Smart Mobility (20.8%) and Smart Economy (16.8%). In short, professional bodies and the public have both expressed concerns that Hong Kong is falling behind in the smart city race.

香港的優勢與挑戰

香港是亞洲智慧城市發展的先驅之一。早在1998年，香港政府已採用不同資訊及通訊技術，例如制訂數碼21資訊科技策略，以電子渠道更有效地滿足政府、企業及市民的需求。政府一直努力建設智慧城市，例如「起動九龍東」計劃便是香港智慧城市的試點，並在2016年7月於該處推出智慧泊車的手機應用程式。作為一個蓬勃的知識型經濟體系，香港擁有專業高效的人力資源、具冒險精神的企業家、高質素的教育制度、健全的法律和銀行體系，以及一個穩定及具備卓越管理經驗的政府。要擠身頂尖的智慧城市行列，理應是輕而易舉。

然而，不少智慧城市發展的研究報告都指出香港未有發揮其真正潛力。較為人熟知的是顧問機構國際數據資訊（IDC）的《智慧城市發展指數2016》報告[4]。報告明確表示香港的智慧城市發展落後，而台北、仁川、新加坡、上海及北京等鄰近城市，在經濟發展和社會服務等發展指標均比香港領先。

即使一般市民也認為香港要急起直追。香港互聯網註冊管理有限公司（HKIRC）於2016年7月進行的「智能科技能令香港更有智慧嗎？」調查[5]中，受訪市民反映以下範疇的產品和服務，不論是品質、廣度還是深度都有很大改善空間。認為需改善的範疇及百分比依次為：智慧政府（36.1%）、智慧生活（21.3%）、智慧運輸（20.8%）和智慧經濟（16.8%）。簡而言之，專業團體和市民都擔心香港會在智慧城市發展的競賽中持續落後。

The Smart City 3.0 Vision

The Smart City Consortium (SCC) has striven to develop Hong Kong as the world's leading smart city 3.0. According to Dr. Boyd Cohen, an internationally renowned urban strategist, there are three phases in the evolution of smart city initiatives, beginning with company-driven technology (smart city 1.0), to a government-driven city (smart city 2.0) and finally to citizen-driven (smart city 3.0)[6]. Songdo in South Korea is an example of smart city 1.0 where technology companies lead the adoption of smart city projects, but these have limited impact on the quality of life as citizens may not understand the implication of these solutions. In a smart city 2.0, the initiative is led by city administrators instead of technology companies. One typical example is Barcelona, where the mayor has initiated over 100 smart projects to significantly improve the citizens' quality of life. However, the success of smart city 2.0 may not be sustainable because it depends very much on the administrators' vision.

Hong Kong will benefit the most from the smart city 3.0 initiative because it will align with the interests of our citizens. It should be noted that many smart 3.0 examples, like Vienna, still remain active in the 2.0 model. Nevertheless, the 3.0 cities also emphasize citizen engagement and co-creation among different parties like the government, technology companies, community organizations and individuals, so as to maximize the impact on the quality of life of citizens. One successful case of a smart city 3.0 is Jakarta in Indonesia, where researchers have developed a real-time map of flooding by crowdsourcing citizens' Tweets in social media to monitor severe flooding during rainy seasons. The project is successful because it engages Jakarta citizens to solve real-life problems. This bottom-up approach is a good example for Hong Kong since it can foster a sense of belonging among citizens and cultivate their innovation through continuous collaboration, making smart city development a truly sustainable social project.

On the other hand, the Hong Kong Government should take the lead and embark on smart city development by utilizing a comprehensive range of strategies. According to Cohen, a smart city is a multi-disciplinary initiative which comprises six components, namely: "smart government", "smart economy", "smart environment", "smart mobility", "smart people" and "smart living"[7]. All these components are vital to the overall success of building smart cities and they require detailed policy support. Although the Government has made huge efforts in realizing smart city initiatives, they need to act promptly in the following aspects.

邁向智慧城市3.0

智慧城市聯盟（SCC）致力推動香港發展成領先全球的「智慧城市3.0」。此概念由國際著名城市發展學者博伊德·科恩（Boyd Cohen）提出，他把智慧城市發展分為三階段，依次為：科技企業主導（智慧城市1.0）、市政府主導（智慧城市2.0）及市民主導（智慧城市3.0）[6]。韓國松島是智慧城市1.0的典型例子。在松島，科技企業主導了智慧城市項目的開發及應用。然而市民對於這些應用往往一知半解，因此對提升生活質素的效果有限。而在智慧城市2.0中，市政府取代了科技企業成為發展的火車頭。一個著名例子是巴塞隆拿，該地政府至今已經開展了超過100項智慧項目，大大改善了市民的生活質素。然而，智慧城市2.0非常依賴政府的願景，發展成果未必能持續。

反之，由大眾主導的智慧城市3.0最能照顧市民的實際需要，也對香港的發展最為有利。值得注意的是，智慧城市2.0及智慧城市3.0並非截然二分，在許多3.0城市如維也納等，政府依然扮演關鍵角色。然而，智慧城市3.0強調的是政府、科網企業、社區組織及市民等不同持份者的共同參與及創造，從而把提升市民生活質素的功效發揮到極致。智慧城市3.0的一個成功例子是印尼雅加達的洪水預警系統。該市長期受水患困擾，研究人員為此匯集市民在社交網絡的訊息（Tweet），製作實時的水災地圖。它的成功之處，在於能集結市民的智慧及力量，共同解決迫切的生活問題。這種由下而上的方式對香港來說是很好的參考，透過持續協作，市民的參與意識及創新精神不斷提高，令智慧城市成為真正可持續的社會工程。

另一方面，政府應該制訂完善策略，引領智慧城市發展。科恩指出智慧城市是一個跨領域的工程，當中包括「智慧政府」、「智慧經濟」、「智慧環境」、「智慧運輸」、「智慧市民」及「智慧生活」6個範疇[7]。這些範疇對智慧城市的成功非常重要，需要詳細政策支援。雖然香港政府已就智慧城市的推動及發展付出不少努力，但仍需盡快就以下幾個範疇作出回應。

Smart government: enhancing public services with spatial data

Open data and availability of spatial data infrastructure (SDI) are prerequisites of well-developed information services. Real-time traffic conditions, building inspections and business statistics are examples of useful spatial data that can contribute to better urban management, including aspects such as energy consumption management, waste management and building maintenance. Although many government departments have developed geographic information system (GIS) to analyse and manage spatial data, they do not make application programming interface (API) available to the public, thus it is difficult for application developers to integrate spatial data in creating further work and values that could benefit society.

It is also the Government's role to initiate and facilitate the implementation of SDI. This can be achieved by collaborating with both public and commercial sectors to define the level of service and agree on a clear roadmap. Moreover, relevant laws and regulations should be reviewed, particularly on protection of privacy and personal information.

Smart economy: proactive decision-making in a changing economic landscape

The pace of FinTech development is accelerating and the Government must seize this development opportunity. With the number of Stored Value Facilities (SVF) licenses, which regulates service providers of prepaid payment systems, escalating from 5 in 2016 to 13 in the first quarter of 2017 [8] in Hong Kong, there will soon be intense competition in the e-Wallet market. Furthermore, technical innovations, such as the Blockchain, have presented new business opportunities and scope for cost saving to the Government and private companies alike.

The Government should be proactive in establishing an institutional framework to encourage new technologies rather than maintaining a risk-averse approach to innovation. In particular, the Hong Kong Monetary Authority (HKMA) could take the first step by developing frameworks to lower the entry barrier for companies to start small projects or pilot tests. It should also be prepared to step in and mitigate possible tensions between traditional licensed banking institutions and new solution providers.

Smart environment: green rejuvenation in old urban areas

Reducing electricity consumption is the top priority for the Government to achieve environmental sustainability. According to the Environment Bureau, electricity generation is the largest source of local greenhouse gas emissions in Hong Kong, accounting for about 68% of the total in 2012[9]. In particular, the use of air conditioning in both the commercial and residential sectors is the single

智慧政府：善用空間數據 改善公共服務

完善的通訊服務系統，建基於空間數據基建（SDI）及開放數據。空間數據種類繁多，用途較廣的包括實時交通狀況、樓宇檢測數據及商業統計等。只要善加利用，這些數據可以推動更先進的城市管理，包括改善能源管理、廢物處理和樓宇維修等工作。許多政府部門雖已開發了地理資訊系統（GIS）來分析和管理空間數據，但他們並未開放應用編程介面（API）予公眾使用，因此開發商難以將數據與民間的應用程式結合，令社會未能受惠。

除了開放數據和API外，政府應透過與公私營機構共同釐定服務水平及制訂明確的路綫圖，來推動和落實建立SDI。另一方面，政府亦應檢視現行的相關法律，特別是關於私隱和個人資料的條文，以配合建立及推廣SDI。

智慧經濟：積極回應多變經濟格局

金融科技（FinTech）的發展步伐愈來愈快，政府必須更積極地把握機遇。現時政府以儲值支付工具（SVF）牌照規管支付工具營辦商如八達通等，隨著牌照數量由2016年的5個升至2017年第一季度的13個[8]，香港電子錢包市場的競爭將日益激烈。此外，區塊鏈等技術創新也有助政府和企業節省成本及帶來新商機。

要發展創新經濟，政府必須一改規避風險的心態，主動地在制度上保障及鼓勵各種技術創新。金融管理局應先制訂框架，降低企業開展小型項目或新技術測試的門檻。此外，金管局亦應致力平衡傳統金融機構與新經營商之間的利益矛盾。

智慧環境：綠色工程活化舊區

要實現可持續環境發展，政府的首要任務是降低全港整體用電量。據環境局統計，發電是本地溫室氣體排放的最大源頭，2012年便佔總排放量約68%[9]。而在用電類別中，又以商用和住宅空調的耗電量最高。因此，研發綠色建築技術，以增加使用空調的效率及減少整體耗電量，可謂當務之急。

現時政府已經採用國際BEAM+環保建築標準來減少新建樓宇的用電量。另一方面，改善舊式樓宇的用電效率及環保效能也十分重要。據屋宇署的統計，香港超過85%建築物的樓齡在10年以上[10]，它們都需要翻新改裝以達至節能效果。可幸的是，一些本地公司已率先研發出獲獎的技術方案如SmartAirCon，以減少舊式樓宇的溫室氣體排放。公用企業可資助用戶安裝這些物聯網設備，以減低高峰時期的電力消耗及溫室氣體排放。

largest category of electricity consumption. Therefore, new technologies to retrofit buildings with more efficient air conditioning devices must be explored to reduce electricity consumption.

The adoption of BEAM+ (Building Environmental Assessment Method Plus) construction for new buildings, which is an internationally recognized suite of rating tools for green buildings, demonstrates the Government's commitment to energy reduction. Furthermore, it is important to improve energy efficiency and environmental performance of old buildings. According to the Buildings Department, over 85% of buildings in Hong Kong are 10 years or more[10], and require retrofitting technologies to help achieve energy saving objectives. Fortunately, some local companies have taken the lead to develop award-winning solutions, such as SmartAirCon, to reduce greenhouse gas emissions. The utility companies in Hong Kong can subsidize the installation of these smart IoT devices to reduce peak electricity demand and greenhouse gas emissions.

Smart mobility: building a citywide IoT network

Hong Kong should also explore ways of constructing a citywide IoT sensor network to improve both public and commercial services. IoT sensors are application-specific devices which include CO_2 sensors, humidity sensors, RFID sensors and high-definition cameras. Not only can they provide better environmental monitoring, they could potentially reduce urban traffic congestion by analyzing traffic flow automatically and on a real-time basis.

The Government can adopt a Public-Private-Partnership (PPP) model to accelerate IoT network construction. The LinkNYC project in New York in 2015 is a good example of PPP, whereby corporations paid the cost of constructing Wi-Fi kiosks in exchange for commercial provision, like touch-screen vending machines and advertising panels. These kiosks quickly expended their services to provide public information like location-based travel information and public transport information. The IoT kiosks soon covered the whole city and it has proven to be a success.

Smart people: nurturing an ICT-literate generation

To foster a culture of creativity and innovation, the Government must endeavor to boost ICT education, improve job creation and business environment for startups and entrepreneurs. Nowadays students seem to lose interest and aspirations to become scientists due to a lack of systematic education in science, technology, engineering, and mathematics (STEM), all of which are vital to a technology-driven knowledge workforce. Apart from formulating a comprehensive ICT education policy, it is worth introducing a training scheme for engineering research students to jointly receive funding support from SMEs and the Government;

智慧運輸：構建全城物聯網

另一個香港應著力發展的方向是建立覆蓋全城的物聯網，以改善公共和商業服務。物聯網由無數感測器組成，如二氧化碳感測器、濕度感應器、無綫射頻識別系統感應器及高清攝錄裝置等，各自具備特定用途。這些感應器不但可以改善環境監測，還可透過實時及自動化的交通流量分析，紓緩交通擠塞問題。

政府可採用公私營合作模式，加快建設物聯網。紐約市在2015年開始的LinkNYC項目，便是這個模式的好例子。在項目中，供應商負責興建Wi-Fi亭的開支，換取在亭內提供各樣商業服務，如觸控式自動售賣機及廣告面板等。Wi-Fi亭的服務其後迅速擴展，例如提供旅遊導覽及公共交通資訊等。在政府與企業互動下，Wi-Fi亭覆蓋了整個紐約市，成為智慧城市發展的成功案例。

智慧市民：培養通訊科技新世代

要培育創意和創新文化，政府必須努力推廣資訊及通訊科技教育、創造相關就業機會，以及改善企業及初創企業的營商環境。STEM教育（包括科學、科技、工程及數學）對發展創新驅動的知識型經濟非常重要，然而香港缺乏系統性的STEM教育，令學生缺乏成為科學家的興趣及憧憬。除了制訂完善的ICT教育政策外，政府也可考慮引進工程科研學生培訓計劃，讓工科研究生可同時申請政府及企業資助，藉此推動企業引入前沿技術，提升行業標準。此外，政府應帶頭採購本地IT產品，以鼓勵本地公司的創新研發及改善創科環境。

this would aim to raise the industry standard. Lastly, the business environment will be greatly enhanced if the Government takes the lead to procure local IT products and support local companies in their adoption of the latest technologies.

Smart living: 4P approaches for the Hong Kong health system

The aging problem in Hong Kong poses a formidable challenge to smart city development. Currently, there are an estimated 35,000 elderly citizens waiting for nursing homes. By 2040, one in every three citizens in Hong Kong will be over 65 years old[11], putting unprecedented pressure on the healthcare system.

Using a "4Ps" Partnership approach to link up families and community organizations (People), caregivers and doctors (Private) and policy implementers in government (Public) with a holistic and pro-active smart health system can keep our citizens safe, healthy and productive. At the same time, smart technologies can alleviate the problem with the threefold "proactive", "predictive" and "preventative" approaches. For instance, a proactive smart health monitoring system based on an IoT network to detect one's real-time health status is worthy of consideration. The system can also be integrated into smart home devices and linked up with a specific clinic and hospital, thus providing more comprehensive health data for medical treatments.

Furthermore, the Government can consider establishing a big data analytic platform for medical professionals as a predictive tool for chronic diseases. By integrating raw data and digital health records, the system can identify correlations between environmental changes and health risks, which enables a more personalized treatment. This solution can be supplemented with a preventive community network; this would involve the Government emergency departments, medical professionals and community organizations, all of which would provide immediate support and emergency services.

The multi-disciplinary approach to smart city development represents a paradigm shift for economic regeneration, social cohesion and better city administration. These suggestions provide the foundation for ongoing discussion and the SCC is committed to establishing an open dialogue with the various stakeholders aiming to co-create a people-oriented smart city for our next generation.

智慧生活：多管齊下改革醫療系統

在智慧生活方面，人口老化是一個重大挑戰。據統計，目前約有35,000名長者輪候資助護理安老宿位。至2040年，香港將有三分之一人口年齡達65歲以上[11]，屆時香港的醫療系統將承受前所未有的巨大壓力。

為了應對人口老化問題，我們可串連起鄰里（民）、醫生和照顧者（商）以及政府（官），合作組成一個完善的智能保健系統，使市民享有安全、健康而豐盛的生活。

同時，智慧科技可從「主動應對」、「預測」及「預防」三方面配合。在「主動應對」方面，當局可考慮建立一個連接物聯網的智能健康監測系統，主動偵測長者的健康狀況。系統還可進一步連接智能家居設備及指定的診所和醫院，為醫療人員提供更全面的健康數據。

在「預測」方面，政府可考慮為醫護人員設立大數據分析平台，以預測慢性疾病的發展趨勢。通過整合原始數據和電子醫療紀錄，系統可以偵測環境變化與健康風險之間的相關性，從而給患者更準確及個人化的治療。最後在「預防」方面，系統可與政府的緊急服務、醫護人員及社區組織連結成社區網絡，為長者提供緊急及即時支援。

智慧城市發展是一個跨領域的發展理念，它將為香港的經濟體系、社會融合及城市管理等層面帶來飛躍性的變革。上述的發展建議不只是智慧城市建設的第一步，也為市民主導的發展模式奠定基礎。智慧城市聯盟將繼續匯聚社會不同持份者，致力為下一代建設以人為本的智慧城市。

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15th Mar, 2016

Smart City Consortium Inauguration Ceremony
智慧城市聯盟就職典禮

The Smart City Consortium (SCC) Inauguration Ceremony was successfully held on 15th March, 2016. The Ceremony was officiated by the following Guests of Honour, namely, Dr. David Chung, Under Secretary for Innovation and Technology; Mr. Eric Ma, JP, Under Secretary for Development; Ir. Allen Yeung, Government Chief Information Officer, and Mr. Yang Cheng Wei, Deputy Director-General, Department of Youth Affairs, Liaison Office of the Central People's Government in the HKSAR. Legislative Council members Dr. Hon Elizabeth Quat, JP, and Ir. Dr. Lo Wai-kwok, SBS, MH, JP, with over 200 guests from different sectors also attended the Ceremony to witness the historic moment.

2016年3月15日，「智慧城市聯盟」（SCC）就職典禮邀得創新及科技局副局長鍾偉強博士、發展局副局長馬紹祥先生、政府資訊科技總監楊德斌先生及中聯辦青年工作部副部長楊成偉先生任主禮嘉賓。立法會議員葛珮帆女士和盧偉國博士及超過200名業界人士出席並見證SCC成立。

21st Jun, 2016

SCC Fintech Forum cum Networking
智慧城市聯盟金融科技論壇暨會員交流

On 21st June, 2016, the SCC signed a MoU with IngDan and was followed by a FinTech forum and the first members' networking gathering. Over 300 members and guests participated in the event with positive responses.

2016年6月21日，智慧城市聯盟與硬蛋簽署諒解備忘錄，同日亦舉行金融科技論壇及首個會員交流活動，現場超過300位會員及嘉賓參加。

4th Aug, 2016

Public Consultation Forum on an Advisory Paper for the Smart City Blueprint in Hong Kong
智慧城市聯盟就智慧城市藍圖的公眾諮詢論壇

The SCC held two Public Consultation Forums on 4th August, 2016. Dr. Winnie Tang, Founder and Chairman of the Steering Committee and Mr. Daniel Chun, Chairman of Smart City Blueprint SIG, shared their insight on the Smart City Blueprint for Hong Kong during the Forum and had detailed discussions with the participants in both Chinese and English sessions.

智慧城市聯盟於2016年8月4日舉行了兩場公眾諮詢論壇，由創辦人及督導委員會主席鄧淑明博士及智慧城市藍圖小組主席秦仲宇先生擔任主持人；兩人分別在論壇上分享他們對香港智慧城市藍圖的意見，並以中英文和與會者作詳細討論。

19th Aug, 2016

SCC Smart Green Forum cum Networking
綠色智慧論壇暨會員交流活動

On 19th August, 2016, The SCC signed a MoU with Tus-Holdings Co., Ltd. (TUS) and China Digital Industry City Association (CDICA) at the Hong Kong Computer & Communications Festival 2016. The SCC also organized a Smart Green Forum cum Networking event. Mr. Andy Chung, Chairman of the Green Committee of the SCC, served as the moderator of the forum to discuss how a smart city should address climate change and energy issues.

智慧城市聯盟於2016年8月19日在香港電腦通訊節2016會場上，與啟迪控股股份有限公司（TUS Holdings Ltd）及中國數字產城聯盟（CDICA）簽訂諒解備忘錄，當日也同時舉辦了綠色智慧論壇暨會員交流活動，並由智慧城市聯盟綠色委員會主席鍾偉樑先生擔任主持人，探討「智慧城市如何應對氣候變化和能源問題」，與一眾論壇講者及與會者分享心得。

27th Sep, 2016

InnoTech Expo 2016 - Smart City Forum – What's Hong Kong Waiting For?
創科博覽2016 – 智慧城市—香港還在等甚麼？

The Smart City Forum co-organized by Our Hong Kong Foundation (OHKF) and the Smart City Consortium (SCC) was held during the InnoTech Expo 2016 in 27th September, 2016. Seven experts from the Government and private sectors discussed how to make Hong Kong a smarter city. One of the key speakers was Director Wang Zhiqin who is a pioneer in developing 5G mobile communications technology.

由團結香港基金及智慧城市聯盟合辦之智慧城市聯盟論壇，於9月27日的創科博覽2016上舉行，7位來自政府及私營公司代表共同探討如何令未來的香港成為更具智慧的城市，與會者包括5G移動通信技術的先驅——中國資訊通信研究院通信標準研究所王志勤所長。

8th Oct, 2016

Submission of Advisory Paper for Building a Smart City in Hong Kong
遞交智慧城市諮詢中期報告

In response to the Government's initiative on drafting a Smart City Blueprint, the SCC carried out a five-week consultation, which commenced in August 2016; it included two public forums to collect public views, industry opinions and expert advice on building a smart city in Hong Kong. With the collaborative effort from all parties, an advisory paper (interim report) with solid suggestions and strategies was completed and submitted to the Ir. Allen Yeung, Office of the Government Chief Information Officer in October.

為回應政府開展未來香港智慧城市發展藍圖的相關計劃，智慧城市聯盟由8月開始進行了一個為期5星期的公眾諮詢，當中包括兩場公眾諮詢論壇，收集了不同業界及專家的意見，經過與各方的通力合作，完成了一份有關智慧城市諮詢的中期報告，並於10月遞交給政府資訊科技總監楊德斌先生。

17th Jan, 2017

StartmeupHK Festival 2017 - The Connected City
2017年StartmeupHK創業節

On 17th January 2017, the SCC and KPMG co-organized a one day event during the StartmeupHK Festival 2017 - The Connected City at PMQ. Key highlights included innovations for the next generation of city living, with case studies of technology from around the world, including IoT and data analytics that aim to enhance the livability, workability and growth in renewable energy in cities.

2017年1月17日，智慧城市聯盟與KPMG在中環元創坊聯合舉辦StartmeupHK Festival 2017 – The Connected City，主要討論新一代城市生活的創新，以及來自世界各地的真實個案，包括物聯網和數據分析，旨在提高城市的宜居度、可操作性和可再生能源的增長。

11th Apr, 2017

IES 2017-Thematic Forum: Smart City for Better Living
第二屆互聯網經濟峰會專題論壇—更優質生活的智慧城市

The 2nd Internet Economy Summit (IES) was held in mid-April, one of the thematic forums focusing on a 'Smart City' was organized by the SCC on 11th April. All speakers and panelists discussed and shared their experiences and challenges in the development of a smart city. Practical solutions for a city's sustainability, better living as well as a smart city blueprint for smart city development were discussed during the forum.

第二屆互聯網經濟峰會於2017年4月中舉行，其中一個專題論壇由智慧城市聯盟於4月11日舉辦，論壇主要討論對智慧城市的見解。講者及論壇嘉賓為持續發展智慧城市所遇到的挑戰作深入討論，並分享實際經驗，為更優質生活及智慧城市發展藍圖提供可行方案。

Four-P play for a smart, competitive Hong Kong

Winnie Tang
Published on Harbour Times on 12 December 2016

4P助香港屹立不倒

鄧淑明
原刊於《信報財經新聞》2016年12月30日

鄧淑明博士 JP
Dr. Winnie TANG, JP
Co-chairman of Steering Committee

The World Bank's Smart Cities Conference – held in Yokohama, Japan in November 2016 – presented some good examples from around the world on how to use a bottom-up approach with active citizen engagement to increase the chance of success in implementing changes. The audience was interested in learning about the successful transformation of Yokohama through the cities' many initiatives, such as the development of the Minato Mirai 21 central business district.

One of the critical features of this transformation is how the Yokohama Government consciously pushed the private sector to develop new technologies as the drivers of economic growth, such as those in fuel-cells cars and energy conservation. Some of these innovation are oriented toward the social sector, as well, to improve citizen engagement – for example, the "Local Good Yokohama" initiative, which provides a platform for citizens to share their thoughts and to participate in the city's various activities. The World Bank, at the same time, through its Tokyo Development Learning Center program is actively engaging with Japanese cities such as Yokohama, to identify and disseminate practical solutions to many complex development challenges like competitiveness, inclusion, and sustainability.

Nowadays, with the popularity of the internet, smartphones and social networks, public participation in decision-making is becoming increasingly common. To better realize the increasing public demand for input into policy formulation and infrastructure planning, a "4Ps" approach – with a Partnership among the Public (the government), the Private (corporations and civic associations) and the People

2016年11月在日本橫濱舉行的世界銀行智慧城市會議，展示全球不少地方從下而上、由民間帶動改變的例子，正好為積極求變的香港做了優良示範。譬如對於橫濱成功蛻變成「港未來21」（Minato Mirai 21）的商業中心區，不少與會者都讚嘆不已。

Minato Mirai本身解作「未來的海港」，它是橫濱由古舊小鎮發展成新銳環保城市的實證。「港未來」在上世紀80年代之前本來是大型船塢，後來成功蛻變，關鍵在於政府銳意推動私營企業發展新科技，例如燃料電池自動車（fuel-cells car）、能源保育和其他環保意念，大大促進經濟發展。同時，這些意念不少由公眾參與達成，例如其中一個平台Local Good Yokohama，正是讓市民分享想法和參與城市建設的活動。

智能保健 創新工種

隨着互聯網、智能手機和社交媒體普及，今時今日公民參與決策已愈來愈常見。從政者也應更從善如流，在釐定政策和規劃基建時，廣納民間和大眾的意見。政府（Public）、私營機構（Private）和市民大眾（People）大可結成夥伴（Partnership），是為「官商民合夥」或「4P」，從下而上合力推動政策和基建等社會事務。透過鼓勵公眾參與，有助消弭對立，也令權責更分明。

(the citizens) – is formed to help improve the development process. As a result, the city can reduce the risk of unforeseen oppositions, allocate clear responsibilities and rights, and create opportunities for public input.

To use public input most efficiently and effectively, the use of the latest technology – for example, big data, artificial intelligence and internet of things (IoTs) – that allows for the quick capture and analysis of public data is critical.

This "4Ps" approach is relevant in addressing one of Hong Kong's key bottlenecks to competitiveness: its fast-aging population and workforce.

The Census and Statistics Department in 2015 announced that Hong Kong has about 1.12 million people aged over 65 – and 15% of them are over 85. By 2040, however, one in every three persons in Hong Kong is likely to be over 65.

To facilitate healthy aging in Hong Kong, using the "4Ps" approach to link up families and community organizations (People), caregivers and doctors (Private) and policy implementers in Government (Public) with a holistic and pro-active smart health system can keep our citizens safe, healthy and productive. A recent advisory paper by the Smart City Consortium suggests that a smart health system, with the 4Ps in place, can be constructed by the following three-pronged approach:

- a Pro-active Smart Health Monitoring using an IoT network to monitor individual's real-time health with links to the individual's family, doctor, clinic and hospital to provide comprehensive health management;
- a Predictive Smart Health Analysis by which digital healthcare professionals detect acute diseases and provide real-time advice for personalized medical treatment; and
- a Preventative Smart Health Community Network with the sharing of electronic health records, which enables tele-medical consultation for patients with chronic illness. When required under emergency situations, the nearest neighbor or healthcare practitioners would receive alerts to locate the person in need.

This is just one example of how Hong Kong can use the "4Ps" framework with the support of the latest technology to tackle the problem of an aging city. What's more, apart from conventional caretakers and medical practitioners, this new approach creates job opportunities for talented people from various fields, including sensor-network planning, biometric-data monitoring, social-behavioral model building, big-data analysis, and acute-diseases predictive model-building.

"Smart City (SC) means Competitive City (CC)", according to recent comments by Kurt Tong, the U.S. Consul General for Hong Kong and Macau. Indeed, if the Government can take the lead to promote cohesive collaboration with various players in the cities, not only can Hong Kong address the demands created by an ageing population, but our city can also enhance efficiency and stay competitive in the years to come.

舉例說，由於嬰兒潮一代步入退休年齡，香港人口老化問題日趨嚴重。統計處公布，2015年全港700萬人口中，年逾65歲的達112萬人，其中15%更在85歲以上；到2040年更是三個人之中便有一人滿65歲。

為了應對人口老化，我們要串連起社區網絡（民）、醫生和照顧者（商）以及政府（官），合作組成一個完善而主動的智能保健系統，使市民享有安全、健康而豐盛的生活。智慧城市聯盟最近在一份建議書中指出，透過官商民合夥，可以建構一個三管齊下的智能保健系統，包括：

- 「主動的智能健康監測」：透過物聯網偵察長者的實時健康指標，並聯繫家人、醫生、診所和醫院，全面作出有效健康管理；
- 「預測性的智能健康分析」：醫療人員偵測到緊急的健康問題，並提供即時而個人化的治療；
- 「預防性的智能保健社區網絡」：一旦有緊急狀況，社區網絡或醫療人員會收到訊息，可以迅速回應。

建議旨在說明，香港如何在「官商民合夥」框架下，配合最新的科技解決人口老化問題。此外，從感應器網絡規劃、生物統計數據監測、社會行為模式建立的工作，以至大數據分析、建構急性疾病的預測模式等，全是新框架下創造的嶄新工種，令就業機會不再限於從事傳統的醫療和護理工作。

「智慧城市意即具競爭力城市」，這是美國駐港澳總領事唐偉康（Kurt Tong）最近一句很精警的說話。政府若能牽頭帶領推動和城中各界人士合作，不單能有效應對人口老化的挑戰，更可改善施政效率，維持香港最具競爭力城市的地位。

Security standards for HK's smart city blueprint

Ronald Pong and Daniel Chun
Published on ComputerWorld on 11 April 2017

香港智慧城市藍圖的保安標準

龐博文、秦仲宇

Imagine a Bluetooth-enabled toy or a Wi-Fi-enabled monitoring camera which is supposed to bring joy to kids and safety to homes is turning evil one day. It becomes a tool for hackers to collect your images and other personal information, and then hold you for ransom.

This is not a Hollywood movie script. This is already happening around the world. Children's latest gadget Cloudpets and Cayla were reported as targets for hackers because their product and software design can be easily compromised. Reports by CNN, NYPost have reported that Cloudpets could leak voices, photos and location information. BBC also has reported that the Cayla doll also exhibited the same potential vulnerability to hacking.

When IoT becomes more pervasive and millions of new products become connected to the Internet, there will be more vulnerability found and cybercrimes unfolded from these IoT devices. Viruses, Trojan horses and ransomware are not new, but with IoT, they could easily perpetuate to the new things that promise to be connected, smart and Internet friendly.

Bringing standards to HK

At the Smart City Consortium, we believe the best practices and standards like ISO/IEC 15408-1:2009, also known as the Common Criteria, should be adopted in the HKSAR Government's upcoming smart city blueprint. Furthermore, the Government through the OGCIO should also consider building its own IoT security certification centre that follows the Common Criteria.

The adoption of this standard is expected to provide evidence and traceability of the IoT-related products. It also helps these products conform to minimum security standards and formulate a governance framework suitable to combat any potential risks in data management.

一件具備藍芽功能的玩具，理應為孩子帶來歡樂；一部可連接無線網絡的相機，同時也要確保家居安全。然而，這些裝置亦可能帶來橫禍，因駭客可利用這些裝置，獲取你的影像及其他個人資訊，並向你勒索。

這並非荷里活電影情節，而是已發生在全球每個角落。「雲寵物」（Cloudpets）及「凱拉」（Cayla）這兩款近期熱門的小童玩具，由於其產品及軟件設計容易導致資訊外洩，據報已成為駭客的目標。有線電視新聞網及《紐約時報》已指出「雲寵物」能洩露聲音、照片及位置，而英國廣播公司亦稱「凱拉」公仔存在駭客入侵的潛在漏洞。

當物聯網（IoT）日趨普及，成千上萬的新產品連接至網絡，隨之而來的是更多的漏洞及網絡罪案。雖然病毒、木馬及勒索軟件並非新事物，但由於新產品的研發原意是為了連接用戶、提供智能及便利的網絡服務，物聯網裝置可讓病毒等輕易地存留在這些新產品中。

為香港制訂標準

智慧城市聯盟認為，良好作業模式及標準如ISO/IEC 15408–1:2009（即通用條件，Common Criteria（CC）），可應用於香港特區政府將來的智慧城市藍圖。同時，政府亦應考慮透過政府資訊科技總監辦公室，成立物聯網保安認證中心，並按通用條件運作。

採用上述標準，相信能就物聯網相關產品提供證據及線索。此標準亦可確保產品符合最基本

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Consumer electronic products may not require the highest level of certification, as compared to the enterprise systems such as payment terminals or mission-critical sensors-based systems. It is nonetheless necessary for the Government to start thinking about the need for certification and the associated talents.

Another area the Government should consider is formulating a strategy in Evaluation Assurance Level (EAL). EAL is a numerical grade assigned following the completion of the Common Criteria security evaluation. Consisting of seven levels, the EAL level does not measure the security of the system itself, it simply states at what level the system was tested.

EAL can also help to protect Bluetooth-enabled devices, which are also adopted in smart city initiatives. With the new Bluetooth 5.0 standard providing higher performance, wider reach and better connectivity, it is essential for associated attacks like Bluejacking, Bluesnarfing or Bluebugging to be minimized with the EAL certification.

CC adoption in the region

In Taiwan, the ISO/IEC 15408 Common Criteria has been adopted since 2009 and in China a similar standard has also been adopted by the China Information Technology Security Evaluation Centre.

The adoption in Taiwan and China demonstrate the need to raise standards of information security as a result of the proliferation of smart cities initiatives and IoT technologies.

The critical question that remains to be answered is not why, but how Hong Kong can adopt this certification. Who within the Government should enforce the certification of IoT-related products? Is it the responsibility of a particular Government department like the Electrical and Mechanical Services Department or a third-party body? These questions need to be further discussed.

的保安水平，並制定一個適合對抗任何數據管理風險的規範架構。

與企業系統（如支付終端或關鍵任務感應器系統）相比，消費者所用的電子產品，未必需要最高等級的認證。然而，政府亦須開始考慮是否需要設立認證，並培育相關技能的人才。

另一方面，政府亦應考慮就評估保證水平（Evaluation Assurance Level, EAL）制定相關的策略。評估保證水平就是系統經通用條件評測後所得的評級。水平共有7級，只指出該系統通過哪一級水平測試，而不會就系統安全進行評估。

在智慧城市中所應用的藍芽裝置，亦受評估保證水平保護。目前，藍芽已發展至最新的5.0代，其性能更高、覆蓋範圍較廣及連線能力較佳。獲得評估保證水平認證後，能有助減輕藍牙攔截（Bluejacking）、藍牙漏洞攻擊（Bluesnarfing）或藍牙竊聽（Bluebugging）等相關攻擊。

鄰近地區採用通用條件的情況

台灣自2009年起已採用通用條件ISO/IEC 15408。在中國，中國信息安全測評中心亦採用類似標準。可見，在智慧城市建設及物聯網科技日趨普及下，台灣及中國的措施反映了提升資訊保安的需要。

然而，關鍵問題並非在於「為何」採用此認證，而是香港「如何」採用。物聯網產品認證，應由哪個政府部門執行？是否應由特定政府部門，如機電工程署或第三方機構負責？這些問題需留待日後討論。

Eric Yeung's 40-year journey to the smart city

楊全盛：玩足電腦40年

"I was in primary 1 when I started learning computer programming," said Eric Yeung with a shy smile. The IT entrepreneur was overwhelmed with excitement whenever he spoke of computers and innovation technologies. Though born in a traditional Chaozhou bakery family, he chose to found his IT company instead of inheriting the family business 20 years ago. Since 2016, he has even assumed a new role as the convener of the Smart City Consortium (SCC), regardless of how many industry seminars and policy meetings he had to attend. The question is, what carried him so far?

提起電腦及創新科技，楊全盛（Eric）瞬間化身一位「機癡」，一臉雀躍地分享與電腦結下的不解緣。出身潮州餅家的他沒有繼承家族生意，反而選擇創辦IT公司，一做20多年。一年前他更成為智慧城市聯盟的召集人，生活多了各項業界研討會及政策會議。問到甚麼時候發現喜歡電腦？「小一」，Eric略微靦腆地說，「那時我已玩programming了。」

Self-study to lay IT foundations

Eric's affection for computers came from his elder brother. "I would not have gone this far if he wasn't there. It was he who brought me to computers and the IT industry." While Eric's primary school classmates were reading comics, the little boy was playing with his brother's Mac, which was the 1980's model that looked exactly like an astronaut's helmet. In Secondary 3, Eric spent his leisure time as a part-time programmer and learnt the invoicing system. Soon his teachers discovered his talent and gave him a special duty, which was to compile a digital track table for the school sport's day. Before that, teachers had to mess around with drawing tables with their own hands.

"At that time, I was completely wrapped up in programming," he recalled that he joined the Hong Kong programming competition in Secondary 5 with excitement, "and I believed I was capable of creating something." During the competition, he created his first computer mini-game and became determined to study computer science in university. It was a difficult goal because there was no IT subject in his secondary school. However, Eric became the first student to self-study IT and attained an A grade in the open exam to enroll in computer science at the Chinese University of Hong Kong.

Walking along a narrow path

Coming from a family of successive Chaozhou bakers, Eric did not have to venture into a new business, but he did. Before graduation in 1999, he co-founded his first software company with his elder brother. They had a good start but the company closed down after two years due to the dot-com bubble burst in 2001.

These ups and downs upset Eric a lot, "but I have never thought of returning to the bakery," he chuckled, "and my family knew it well." He later reflected on this bitter experience, "I misinterpreted business as interest, but after all business is business." Although interest is important in maintaining work momentum, he realized the importance of discerning the market. Shortly after closing the first company, he met his current partner and started his second business. The persistent young entrepreneur now understands how to build a strong foundation and mitigate risks, and as such, his company sustains.

Hong Kong in mind, smart city in view

After the business reaching a steady state, Eric started to think of connecting with people who are passionate about innovation to create greater synergy for smart city development. Knowing that the Energizing Kowloon East scheme was in full swing, he formed an expert

自學電腦知識　為IT路奠下基礎

Eric對電腦的熱愛，全靠大哥啟發，「無他就無我，是他帶我自小接觸電腦，帶我入行」。當小學同學還在看連環圖時，Eric已在玩哥哥的蘋果電腦，那時還是80年代，蘋果的電腦還像太空人頭盔一樣笨重。到中三時，他利用課餘時間做程式編寫員，學習操作進銷存系統。當時老師也注意到他的電腦才能，放手讓他用電腦編排陸運會賽程及賽道表，取代以往用人手逐行編寫的麻煩。

「當時真是做到廢寢忘餐，認為自己有能力寫出東西來。」他憶述中五參加的全港編寫程式比賽時仍難掩興奮。在那次比賽中，他寫了個人第一個遊戲，同時確定了修讀電腦科學的目標。雖然學校沒有電腦科，他卻成為全校首位自修電腦科的學生，最後更輕鬆奪A入讀中文大學計算機科學系。

拒當餅店少東　創業一波三折

身為有名的潮州餅店少東，楊全盛大可不必辛苦「捱世界」，但是他卻決定開闢自己的道路。1999年，他大學尚未畢業便與哥哥創立他們第一間軟件公司。創業初期生意尚算順利，然而不到兩年的時間，卻遇上科網股爆破，最終公司也被逼倒閉。

首次創業一波三折，給Eric的衝擊自然不小，「但我從沒想過要回去繼承父業」，他笑道，「家人都十分清楚這一點」。痛定思痛，他說自己其實有不少體會，「當時純粹由興趣出發，忘記了生意就是生意」，雖然說做事應由興趣出發，但他明白到配合市場亦很重要。經歷高山低谷，他遇上現時的業務夥伴，很快便決定重新出發，開展第二輪業務。這一次他學會了打穩根基及分散風險，公司也一直營運至今。

放眼社會 望建智慧城市

在公司業務穩定以後，Eric開始思考如何連繫其他對創新科技有熱誠的人。近年起動九龍東計劃進行得如火如荼，他便在2015年和10多個資訊科技界人士自發組成專家小組，向政府提交發展建議。小組後來匯聚了愈來愈多有志參與智慧城市建設的專家學者，並在去年正式組成智慧城市聯盟，由Eric擔任召集人。

與創業一樣，他指聯盟開始時處境也十分艱難。他笑說「最初公眾不認識智慧城市聯盟，甚至不知道甚麼是智慧城市」，因此聯盟在過去一年，舉辦了大大小小的研討會，同時組團到世界各地的智慧城市考察，凝聚業內人士。聯盟更先後和不同國家及組織簽訂合作備忘錄，例如與中國智慧城市聯盟合作，推

panel with a dozen IT professionals and submitted a development proposal to the Government. The panel soon pooled talents who were interested in smart city and was reorganized into the Smart City Consortium (SCC) last year, in which Eric became the convener.

Leading an expert group is no less difficult than starting a business for Eric, "At the beginning people didn't recognize what the SCC is, they even lacked an idea of what smart city means," he gave a wry smile. Therefore, the SCC focused on pooling sectors of the IT industry, first by organizing seminars of all sizes as well as field trips to smart cities in the world. The SCC also signed memorandum of understandings (MoUs) with various countries and organizations, one of them was the Smart City Development Alliance of China, which enables Hong Kong professionals to formulate standards of smart city development in China. After a year, the SCC has operated smoothly and expanded into an organization which spans 17 committees and special interest groups, has signed over 10 MoUs and connected with more than 100 technology enterprises.

Public expenditure must serve its purpose

Apart from strengthening connections with overseas organizations, Eric hoped that the SCC can take up a bridging role in the IT industry. "There are lots of excellent researches projects in Hong Kong, but they have not yet been commercialized and turned into real products." The key solution, as Eric claimed, was not so much on subsidies but a lack of powerful lobby group, which the SCC has aspired to be. He cited a local company which was planning to retrofit all telephone booths in Hong Kong by installing Wi-Fi hotspots and information panels for better access of public information, payments and even online shopping. "This bold idea requires a lot of legislative amendments, for instance no advertisements are currently allowed on these booths, and they are operated by different service providers. These are challenges the SCC has to consider and deal with."

A few years ago, New York city started a similar plan called LinkNYC. NYC took just one year to retrofit all the telephone booths and astonishingly the city Government didn't even pay a single dollar for it. What is more, service providers who paid the retrofitting cost agreed to update services regularly, thus making a three-win situation for the government, industry and citizens. "Therefore, increasing public expenditure may not be the most efficient way to develop smart cities, the government can simply set rules and let companies take over the work," Eric gave a sudden grin, "Hong Kong people are smart, they are always ready to strike gold."

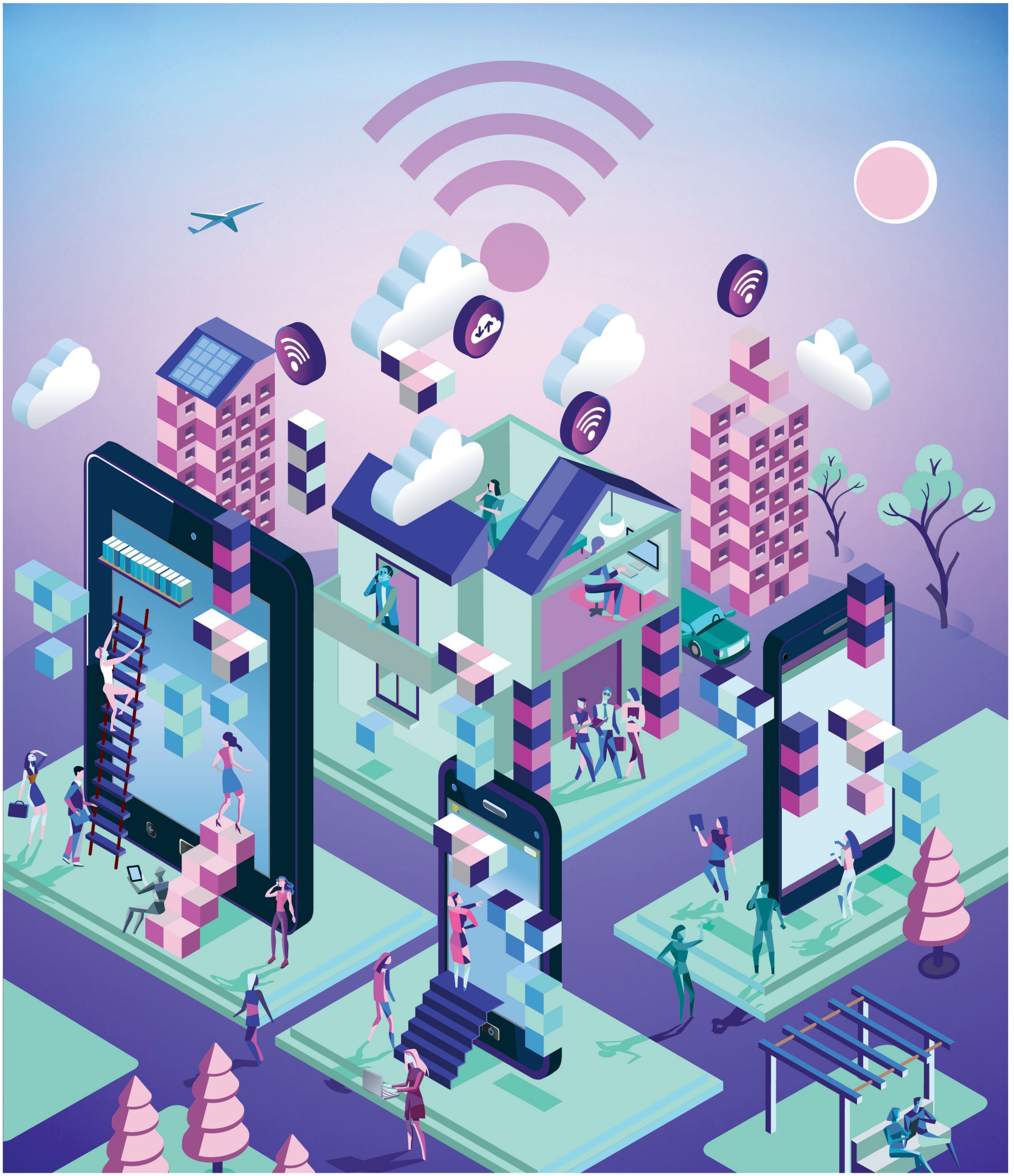
動香港專家參與制訂中國智慧城市標準等。經過一年努力，聯盟已擴展至擁有17個委員會、與10多個地區簽訂了合作備忘，並連繫了百多間科技企業，總體可算上了軌道。

創科補助須用得其所

除了加強和海外地區的連繫外，Eric希望聯盟可以真正做到創科界的發展橋樑。「香港有很多出色的研究，但它們都『落唔到地』，未能商業化」，Eric認為除了資金援助外，更重要是有人推動政府的政策及改變法規，而聯盟正可以發揮這角色。他舉例指有本地企業希望更新全港電話亭，除了全綫加裝Wi-Fi熱點外，更計劃加設互動資訊面板，讓市民可查閱政府資訊、繳費甚至網購等。「但這個建議其實要改很多法例，例如電話亭現時由不同營運商管理，而且是不准賣廣告的，聯盟的角色就是思考如何推動這些法規的改變。」

紐約早前也開展了類似的LinkNYC計劃。計劃不但只花了一年便完成，市政府更不用花一分一毫，當地承辦商又會不時添加最新服務，令政府、商界及市民一同受惠。「因此加大公共開支未必是最有效率的方式，不如由政府訂定規則，再由私人企業承擔更理想。」Eric笑說，「香港人其實好醒，只要有空間，他們就會有方法做。」

> There are lots of excellent researches projects in Hong Kong, but they have not yet been commercialized. The SCC hopes to prompt the Government to enhance laws and regulations so that more smart products and services can be introduced to the society.
>
> 香港有很多出色的研究，但它們都未能商業化。SCC希望推動政府完善法規，令更多智慧城市的產品及服務可以面世。



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