smart智城 VISION

SCC 智慧城市聯盟 Smart City Consortium

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How can Hong Kong Overcome the Bottleneck of IoT Development?

香港如何突破物聯網發展樽頸

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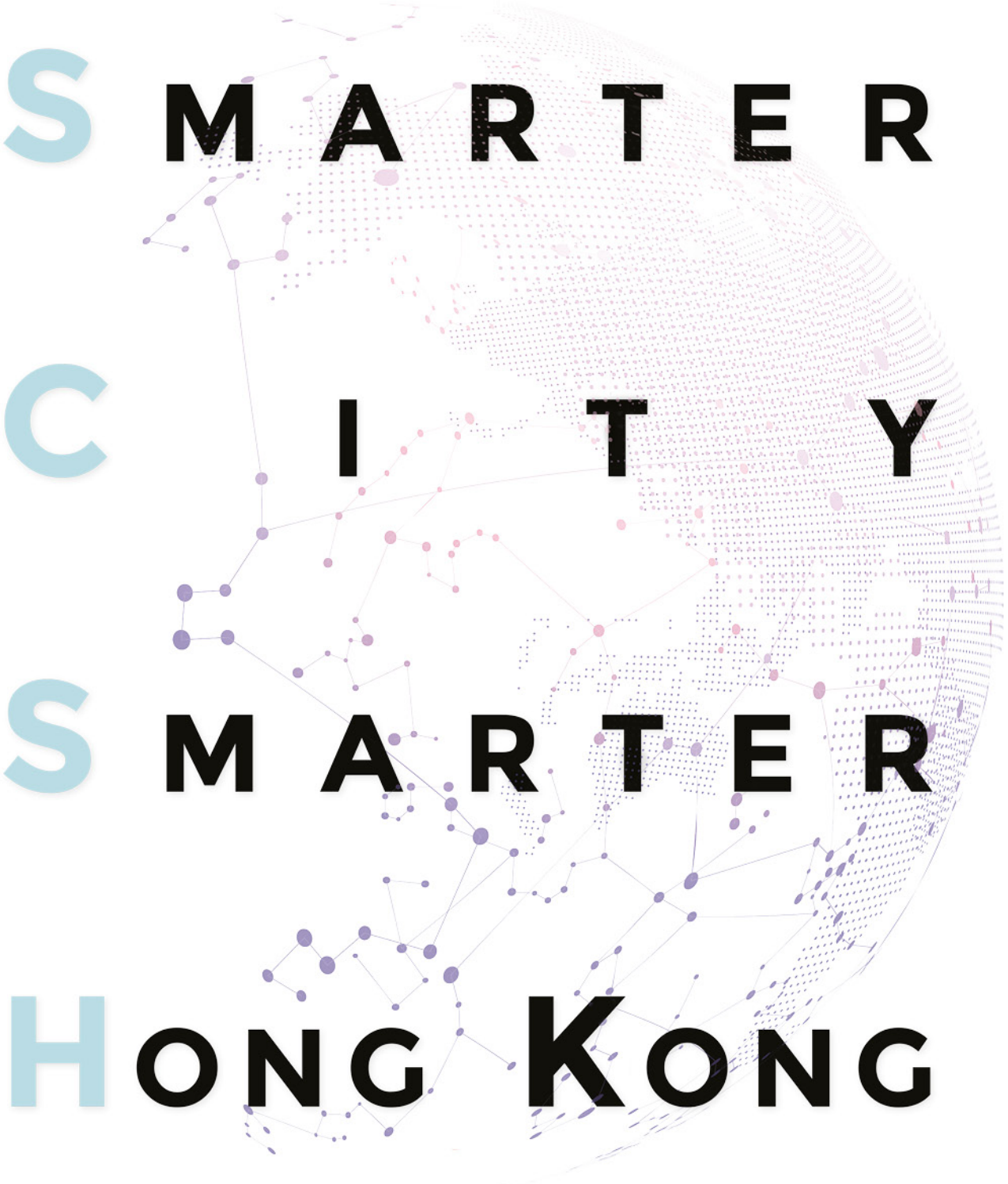
About the Smart City Consortium (SCC)
The Smart City Consortium (SCC) comprises a group of professionals from different corporations and organizations with the aim to provide opinions and suggestions to the Government for formulating related policies and standards in the development of Hong Kong as a 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。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Since the first issue of *Smart Vision* in May, we have received great support from our friends. They also provided valuable suggestions for the future issues. I hope with the help of *Smart Vision*, our Consortium can work together with the Government, the industry and the academics to promote smart city. Meanwhile, it can assure the public that smart city is not an unrealistic target. Just as Internet of Things (IoT), theme of this issue, some smart technologies have long been widely applied bringing positive impact to our lifestyle.

The essence of smart city is about the interconnection between humans and machines.

IoT acts as a connector to improve our life through enabling the circulation of massive amount of data. In fact, the concept of IoT has been used earlier on railway, drainage system and the airport baggage handling system. It can be foreseen that its application will increasingly be used in the day-to-day application.

At present, IoT has been actively developed in the world without any standardized regulations. Hong Kong should continue its development on IoT, and at the same time, foster the collaboration between different sectors to formulate related measurements. In long run, we can upgrade those rules to international level so that the smart city of Hong Kong can connect with the world readily.

Mr. Eric YEUNG
楊全盛先生
President
主席

《智城》創刊號已於五月面世，不少朋友對此予以肯定，更向我們提出了不少寶貴建議，務求使內容更豐富充實。我期望《智城》能促進我們和政府、業界以及學界，共同推動智慧城市發展；同時亦能讓公眾明白，智慧城市並非天方夜談。如同今期的主題「物聯網」一樣，智慧城市科技早已被廣泛應用，並正默默地改變人類的生活。

智慧城市講求人與物的互相連結，物聯網正正扮演了連結者（Connector）的角色，利用廣泛流通的數據改善我們的生活。事實上，鐵路、渠務及機場運輸帶等公共服務早已應用物聯網的概念，而未來的應用亦將日益廣泛。

現時世界各地的物聯網發展百花齊放，但其運作及應用卻缺乏統一的監管標準。香港應持續促進自身的物聯網發展，同時鼓勵各界攜手合作，參與制定相關標準，甚至推動其成為國際標準，令香港的智慧城市發展得以連繫世界。

How can Hong Kong Overcome the Bottleneck of IoT Development?
香港如何突破物聯網發展樽頸

The building and application of Internet of Things (IoT) are among the key elements of smart city initiatives. How will the recent and globally fast-growing IoT development affect our life and the city's development? At the same time, IoT has also presented new challenges to internet security and privacy. Whether the Hong Kong Government can incorporate innovative approach to meet these challenges will be crucial for the development of both IoT here and Hong Kong as a smart city.

智慧城市其中一個關鍵元素，就是物聯網的建設及應用。近年全球物聯網的發展速度勢不可擋，它會如何影響我們的生活以至香港的城市發展？另一方面，在發展物聯網時也會碰到形形色色的議題，如網絡安全及個人私隱等，香港政府能否以創新思維解決這些問題，將是物聯網以至智慧城市發展的關鍵。

IoT was coined by Kevin Ashton of the Massachusetts Institute of Technology (MIT) in 1999 to explain how people's life would be changed by the intercommunication between "things" and the network. As communication technologies improve, IoT has developed rapidly in recent decade and has evolved into an enormous economic entity. The study by an international think tank McKinsey Global Institute (MGI) even predicted that the economic value of IoT will range from US$3.9 trillion to US$11.1 trillion in 2025, an equivalent of about 11% of the world economy by then.

1999年，麻省理工學院的Kevin Ashton首次提出「物聯網」這個詞彙，闡述物品與網路連結後會如何改變人類生活。隨著通訊技術發達，物聯網的技術在近十年取得飛躍發展，更成為非常龐大的產業。根據國際智庫McKinsey Global Institute (MGI) 的研究，物聯網在2025年的經濟總值預計為3.9至11.1兆美元，佔該年全球生產總值11%。

What is IoT? Ir. Dr. Kim-fung Tsang, Vice President of the Smart City Consortium (SCC) and Chairman of IoT Committee, and a winner of IoT Heroes Award 2016, Associate Professor from the Department of Electronic Engineering of the City University of Hong Kong, cited that "IoT is a gigantic IT architecture that connects to a countless of 'things' to gather information, which would then be sent to the cloud network for big data analysis. IoT refers not only to connections between 'things' and cloud network, but also interconnections among numerous 'things' as well." In general, there are three levels in IoT: receiving, transmitting, and processing information. Data such as temperature, humidity, pressure, and their location are collected and transmitted through either fixed network or wireless communication like Wi-Fi, Bluetooth, ZigBee, LoRa, NB-IoT, Sigfox, as well as LTE/5G, to cloud platforms for big data analysis and weather forecasting.

A commercial and urban revolution

Most people relate IoT only to consumer products such as environmentally-friendly smart light bulb and smart television. However, the application of IoT is not confined to consumer products, it is also relevant to business operations and urban management.

Germany is one of the earliest countries to apply IoT to industries. Tsang quoted the case of the German government funding DHL and other corporations which embark on a warehouse management project named Alethia.

Tsang explained in details, "When a product enters the DHL warehouse, the wireless sensor will automatically scan its size and shape, saving additional manpower in inventory management. The location of each product is simultaneously logged to provide latest updates of the inventories. The system also reports any abnormality in the warehouse's temperature and humidity to warehouse managers for follow-up action. In short, examples of IoT-modified business operation are everywhere to be found."

"IoT is a blend of information and objects and it has transformed economic management in modern society. The contemporary IoT is a structure where information technology has constantly shaped the industrial markets. Through incorporating data and smart analytics in every single economic activity, transaction costs both in markets and within organizations are greatly reduced. In turn, market efficiency as well as organization effectiveness are substantially improved, marking a paradigm shift from a model of standardization and economic of scale, to a model of intelligent production, precise management and customized services. It differs from production and market models originated from the industrialization era, and can maximize economic efficiency in a society. "

IoT has also improved urban management, especially in transportation. Safety in transportation is a great concern to both governments and enterprises. Since vehicles are enormous IoT devices, the sharing of these data with each other and being analyzed in big data management will generate the safest route and driving mode to reduce accidents. Tsang added that such "vehicle-to-vehicle communication" not only changes the industry but also benefits governments in transportation management.

"Once the government collects adequate data on drivers' behaviour, like driving time, route, speed, acceleration, drowsiness, alcoholic

甚麼是物聯網？智慧城市聯盟副主席、物聯網科技委員會主席、物聯網英雄榜2016得獎人、香港城市大學電子工程系副教授曾劍鋒在受訪時指：「物聯網是一個龐大的資訊科技架構，它透過連接各類型物品來接收資訊，並把收集到的資訊傳送至雲端網絡作大數據分析。物聯網不單是物品與雲端網絡的連接，更是物品與物品之間的互相連接。」換言之，物聯網的架構包含三個層面，即接收、傳遞及處理資訊。例如物聯網裝置收集溫度、濕度、氣壓、方位等訊息後，再透過固網或Wi-Fi、藍牙、ZigBee、LoRa、NB-IoT、Sigfox和LTE/5G等無線通訊技術傳送，接駁到雲端主機後作大數據分析和天氣預測。

改變運作模式 掀起產業革命

提到物聯網，不少人只會想起智能環保燈泡及智能電視機等產品。其實，物聯網的應用並非只局限在消費品上，也會影響商業運作甚至整個城市管理。

德國是其中一個最早將物聯網應用到工商業的國家。曾劍鋒引用德國政府早年資助DHL等企業開展一個名為Alethia的倉儲工程作例子。

level, etc., it can analyze drivers' awareness, driving patterns, as well as predicting time and location of likely accidents, and hence preventive measures can be taken," he said.

In this increasingly technology-driven era, the rise of Internet of Vehicles (IoV) is an irresistible trend. Its flexibility, spontaneity, smartness and systematic organization have gradually assumed indispensable roles in our lives. Not only can it change our life and provide new travelling experience, it can also benefit our society and economy enormously. Indeed, IoV is not yet popular in Hong Kong, but it has created great economic value in the United States. A research report from the Intelligent Transportation Society of America (ITS) indicated that the market revenue of smart transportation end products and services in 2015 amounted to US$75 billion.

Though IoV is booming, we should not overlook its potential problems. IoV involves many technologies of which many have yet to be improved. In addition, the shift of traditional transportation model would take a prolonged transitional period. Therefore, much effort has to be made to realize the full potential of IoV.

Solution to talent mismatch

When IoT is applied to healthcare, transportation, environment protection, public administration and other aspects in globally-advanced smart cities, it will have great impact to the entire urban society. To protect environment and save energy, the government of Barcelona installed sensor on over 1,100 lampposts in the city which adjusts the illumination level according to the pedestrians' proximity to the lampposts. In transportation, the Catalonian city also has smart bus stops showing the arrival time of buses. Advertisement panels in bus stops can detect passengers' gender and age and show specific messages, which better suits the passengers' taste and creates business

「當貨物進入DHL的倉庫時，無線裝置會自動讀取貨物的體積及形狀，省卻人手點算的麻煩。同時程式會實時追蹤每件貨物的位置，讓商家可即時知道存貨量；如倉庫的溫度及濕度異常，系統更會通知倉庫主管處理。這些物聯網改變商業運作模式的例子可謂比比皆是。」

「物聯網結合了訊息與物件，改變了現代社會的經濟管理模式。資訊結合精銳分析，既改善經濟活動的各個環節，也有效地降低市場和機構內的交易成本，市場效率和組織效能大幅提高，這就是現代物聯網以資訊技術不斷改造工業化市場結構的結果。同時，這也改變了過往將工業程序標準化和追求規模效益的生產模式，轉換為智慧化製造、精確化管理和個性化服務。簡單而言，就是以資訊主導改善生產效率，跟以往工業化生產和市場運作模式截然不同。」

至於物聯網改變城市管理的例子，在交通範疇上比較明顯。交通安全是現時各國政府及企業都非常關注的議題，而汽車作為一個龐大的物聯網裝置，能夠與其他車輛共享數據，再通過大數據整合分析，從而找出最安全的駕駛路線及模式，減少交通事故。曾劍鋒補充，「車聯網」不但改變了行業，也方便政府管理交通。

他解釋道：「當政府收集到充足的行車數據，例如行車時間、路線、速度及加速情況，以及司機清醒度和體內酒精含量等，就可以分析司機的意識、駕駛習慣，從而找出容易出現交通意外的時間及地點，防範意外發生。」

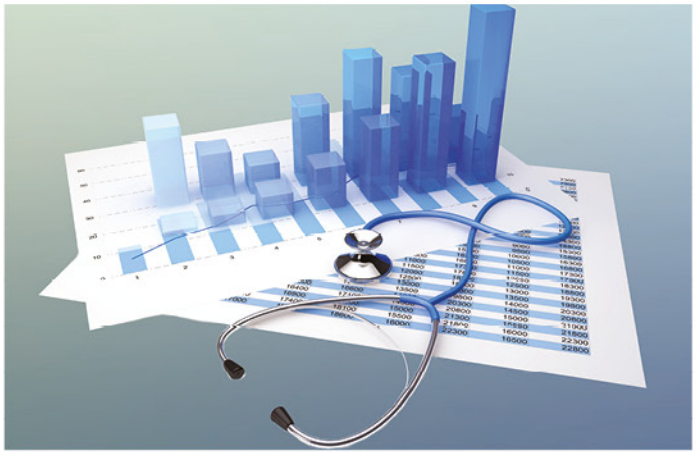
在科技日益發達的今天，車聯網的崛起已經是大勢所趨。它的靈活性、自發性、智慧化、系統化在我們的生活中漸漸扮演著不可或缺的角色。它不僅能夠改變我們的生活方式，帶來全新的交通

opportunities. Returning to our neighbour Singapore, it has already developed a remote rehabilitation system, allowing the disabled persons to undergo basic medical consultation at home. Back to Hong Kong, as one of the most developed economy in the world, we have only few IoT applications. What is the reason behind?

Tsang believed the answer lies in the current Government framework. He indicated, "Overseas smart cities do not often possess rare and the most sophisticated technologies, they just overcome uncertainties step by step led by a higher management body, which directs the smart city initiatives and the application of IoT." He emphasized that the implementation of IoT involves various aspects including transportation, environmental protection, energy efficiency, development and finance which should be coordinated by officials at the rank of Financial Secretary or above.

According to Tsang, Hong Kong remains in a preliminary stage of smart city development. Apart from formulating a management framework led by Secretaries of Departments, the Government should also tackle the labour mismatch between academy and industry. "The education system in Hong Kong is satisfactory, and university graduates are bright, creative and well versed in professional knowledge. However, their talents do not match the need of local industries at times. Eventually, employers miss the talent, while students' ambitions are frustrated and even forced to accept jobs unrelated to their major studies. One of the most imminent issues in Hong Kong nowadays is how to revitalize these graduates so that they can create value with their knowledge."

To solve the problem, Tsang proposed that the Government and the industry can jointly fund engineering students as interns at local enterprises during student's early years of study. "For instance, the Government can create one-year or two-year internship schemes in which students can participate in a specific signature project and co-develop the latest technologies with the corporation. After the internship, students may have job offers depending on their working performances. This helps students' future job-seeking and, at the same time, introduces new technique to private organizations, forming a channel between the academy and the industry in the transfer of technology.



體驗，同時也將帶來巨大的社會和經濟效益。車聯網在香港還沒有推廣開來，但在美國，車聯網已經創造了大量的經濟價值。美國智慧交通協會（ITS）的研究報告顯示，智慧交通系統製成品和服務在美國的市場規模，2015年已達到750億美元。

然而，在車聯網概念大熱的同時，我們也需要冷靜看清問題——由於車聯網涉及的技術眾多，許多關鍵技術還未完善；加上傳統交通模式的改變需時，車聯網真正普及還需要我們進一步的努力。」

解決人才錯配現象

在世界較先進的智慧城市中，物聯網已應用在醫療、交通、環保及公共行政等層面，從而影響整體城市規劃。在環保方面，西班牙巴塞隆拿政府在市內1,100多支街燈上安裝感應器，令街燈可計算與行人的距離來調節光暗，節省能源；在交通運輸方面，加泰隆尼亞的智能巴士站會顯示巴士的到站時間，並可偵測候車乘客的性別及年齡而播放相應的廣告。這不但便利市民，更締造了商機。另一邊廂，鄰近香港的新加坡已開發遙距復康系統，讓行動不便的病人可安坐家中覆診。相較之下，香港作為全球最成熟的經濟體之一，物聯網開發和應用卻不多見，原因在哪裏？

曾劍鋒認為答案在於政府架構，他指：「外國智慧城市的技術並非特別先進，很多時候他們也是摸著石頭過河，但他們往往有一個高層次的架構去統籌智慧城市及物聯網發展。」由於物聯網發展牽涉運輸、環保、能源效益、發展及財經等多個範疇，因此他強調香港物聯網發展必須由財政司司長級或以上的官員來統籌。

在曾劍鋒眼中，香港智慧城市的發展仍在萌芽階段。除了司級的統籌架構外，他認為現時科研與市場存在人才錯配現象，政府必須正視。「香港的教育制度優秀，畢業生大都有不錯的專業基礎知識並且富有創意，但他們的意念與本地企業的需求往往並非一致，結果企業錯失人才，學生則有志難伸，甚至要從事與主修科目無關的職位。如何讓這些畢業生得到大展拳腳的平台，以知識作為向上流的階梯，是香港現階段最迫切的問題之一。」

Data disclosure standard in need

Apart from being led by senior Government officials to drive our IoT development, Tsang urged the Hong Kong Government to be forward-looking and formulate information management regulation as soon as possible.

"The Government must define public information and delineate what data companies should disclose," Tsang said. He stressed that a number of big enterprises refuse to disclose the information collected on ground of confidentiality, resulting in the enterprises' monopolization of public information. Among the considerable amount of data collected, only a few is accessible to the public.

Tsang emphasized that IoT data collected by enterprises is their property and their interests should be respected. "However, some information related to transportation, healthcare and energy should be disclosed to foster the development of smart city." He added that the flow of information and technology development will be hindered when the public are unfamiliar with data access right, "Let us use electricity consumption as an example. Can the public create an energy-saving application with data from electricity meters in buildings? How to ensure the public will not use the data for profit-making? Will such usage be considered a theft of the property of the electrical companies? Will the data be returned to the public? There remain many grey areas to be clarified by the Government."

Therefore, Tsang suggested the Government to examine the standard of data disclosure and prevent any leakage of sensitive personal information such as name, identity card number and address.

Reaping the A^B benefit

What else should the Government, research institutes, and enterprises do to propel smart city development in Hong Kong? According to Tsang, apart from enhancing the hardware (such

要解決這個問題，他認為政府可考慮與商界共同資助工程系學生到本地企業實習：「例如政府可以構建平台，規定同學低年級時到企業實習一至兩年，參與企業內指定的重點項目，並與企業共同開發新型的科技。實習結束後，企業可能會根據表現為同學提供工作機會。此舉既幫助同學就業，同時企業亦得到新穎的技術，搭建了大學至業界的技術轉移管道。」

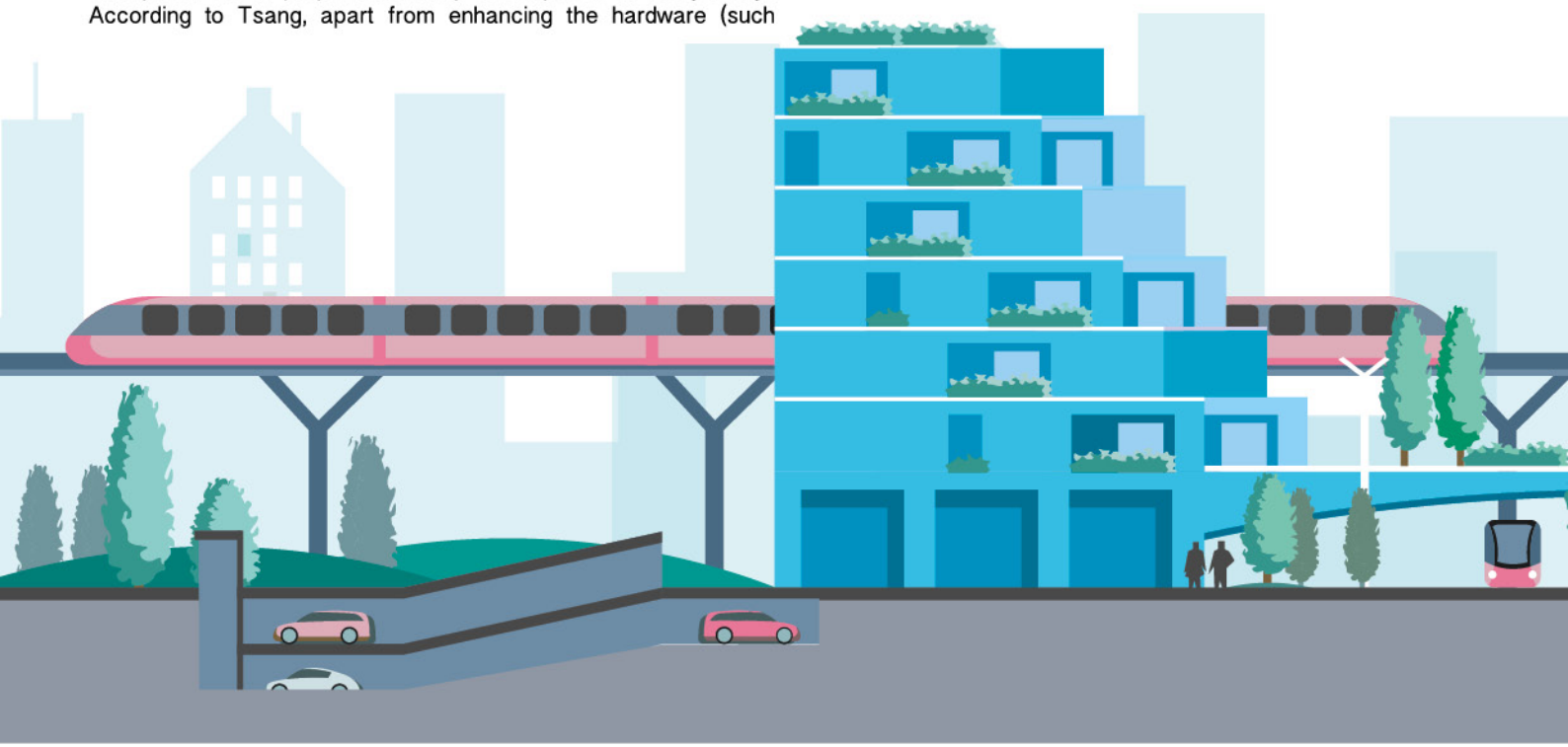
及早制訂公開數據標準

除了需要政府高層次官員統籌物聯網發展，曾劍鋒認為港府目光應該更加遠大，及早制訂資訊管理策略。

「政府必須定義甚麼是『公共資訊』，以及企業需要公開甚麼數據。」曾劍鋒指出，外國很多大企業在收集資訊後，往往因商業理由而不公開數據，令不少公共資訊被企業壟斷。即使收集了大量數據，但目前實際開放予公眾使用的卻少之又少。

曾劍鋒認為，一方面，物聯網數據由企業收集，屬企業的資產，我們不應妄顧它們的利益；「但是，另一方面，推動智慧城市發展亟需相關資訊，如交通、醫療及能源等就應該公開。」他進一步指出，當公眾不清楚數據的使用權限時，就會窒礙資訊流通及技術發展：「一個活生生的例子是用電量。公眾是否可以使用大廈的電錶數據來開發節能的應用程式呢？如何確保公眾得到數據之後不會用來牟利？使用這些數據會否等同挪用電力公司的資產？資料可否歸還予個人？這些灰色地帶應由政府釐清。」

因此，曾劍鋒認為政府應研究公開數據的標準，並確保敏感的個人資料如姓名、身份證號碼及地址等不會外洩。



as IoT facilities and education system) and software (nurturing talents and succeeding experience), these stakeholders should be equipped with new mindsets. They can no longer be complacent and merely pursue short-term profit. Instead, they should encourage the younger generation to innovate so as to sustain the economy, "because direct copying of ideas and products will suppress social innovation in the long run."

Tsang reminded that greater innovation comes with greater risk. On the other hand, innovation ideas can wither easily if there is no sustainable support. Therefore, the Government should strike a balance between innovation and risk management – neither support innovation blindly nor sacrifice innovation as a means to avoid risk. As for companies, clients' interest and needs have to be taken into account in innovation management. Big data analysis is often used to provide clients with a grand picture of future development, thus achieving a win-win result.

"Many organizations value 'integration' rather than 'innovation' in product development. 'Integration' refers to the production of a new product from a combination of two existing products (say product A and product B) in the market. On the contrary, 'innovation' refers to the development of product from a new idea that is pertinent to the need of majority as an evolving demand. While 'integration' generally generates benefit in the magnitude of A+B, 'innovation' brings AxB or even A^B benefits."

Tsang concluded that IoT is in fact the replacement of "integration" by "innovation." "Enterprises, the Government and research institutes should have new mindset, and afford first priority to the pursuit of long-term information integration."

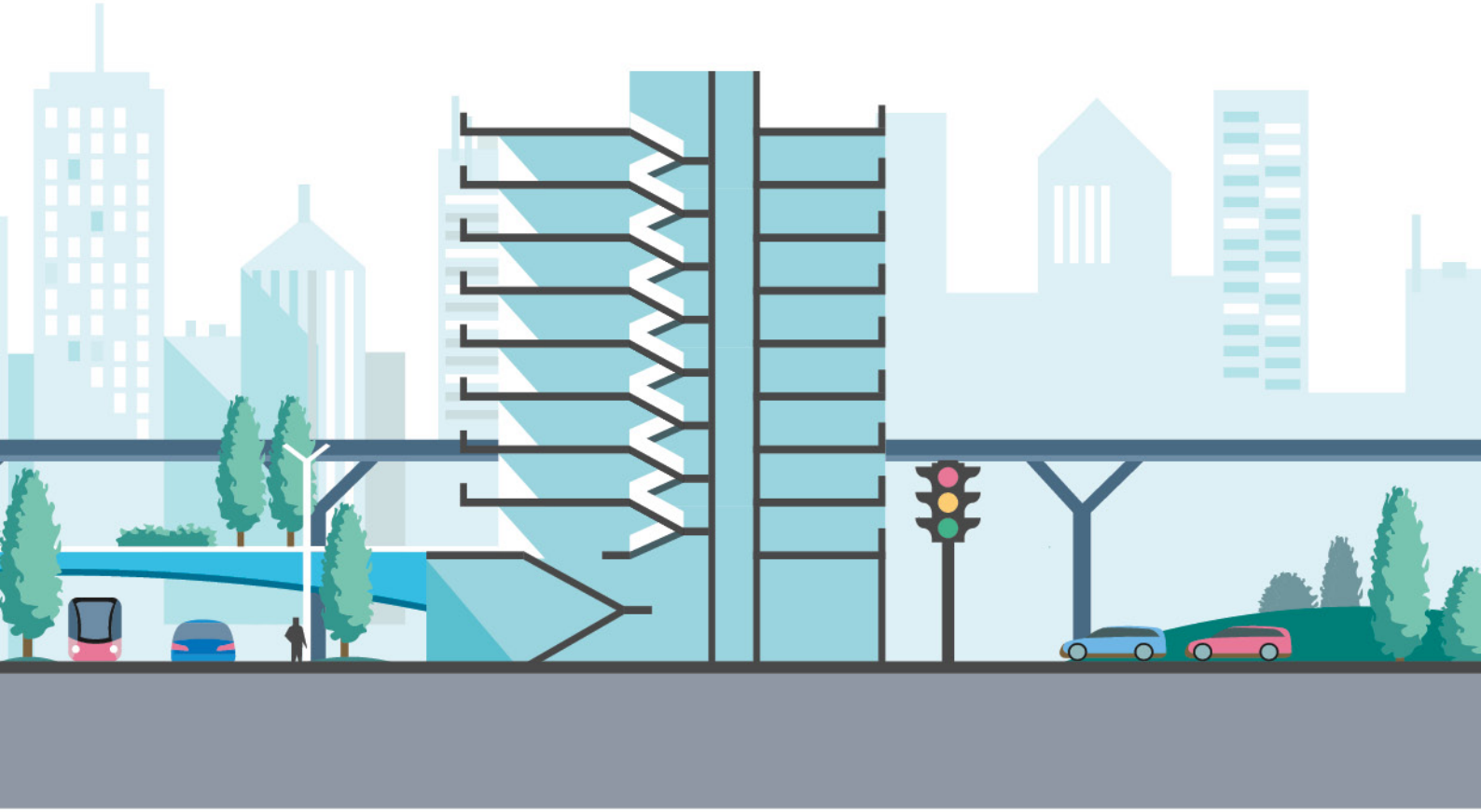
創新可令利潤倍增

要推動香港的智慧城市發展，政府、科研機構及企業還有甚麼要做？曾劍鋒認為除了要完善硬體，如物聯網裝置及教育制度，以及軟件，如人才及創意培育、經驗傳承等配套外，各個持份者更要有新思維。他指政府、科研機構及企業不能只著眼於短期利潤而故步自封，應鼓勵年青人不斷創新，社會才可持續發展。「只懂東抄西襲，長遠會抑壓了社會的創新風氣」。

當然，伴隨創新的是風險，越是大膽的創意則風險越高。同時，創新也需要持續的引導，否則容易虎頭蛇尾。因此，政府應平衡利弊，既不可盲目扶持創新，又不可因噎廢食，為免風險而扼殺創新。作爲企業，一切創新管理也當以客戶利益與需求先行。近年流行大數據分析，有利宏觀分析，令企業和客戶可以達到雙贏的效果。

「不過，很多機構在推出產品時只追求速度，以『簡單整合』代替了更重要的『創新』。『簡單整合』是看到市場有產品A及B，便製造二合一的新產品；而『創新』是指以創意開發更迎合市場潮流和大眾需要的新服務。若『簡單整合』的效益是A+B，『創新』則可以是A x B甚至是A^B。」

曾劍鋒總結指，物聯網其實便是以「創新」取代「簡單整合」。「不單是企業，政府及科研機構也要有新思維，以追求長遠的創新為首要目標。」



29th May, 2017

Smart City Consortium First Anniversary Ceremony cum Dinner
智慧城市聯盟一周年晚宴

On 29th May, 2017, with the presence of Mr. Leung Chun-ying, the then Chief Executive of the HKSAR, Mr. Nicolas W Yang, the Secretary for Innovation and Technology, Ir. Allen Yeung, the Government Chief Information Officer, and more than 200 professionals from various sectors, the Smart City Consortium First Anniversary Ceremony cum Dinner was held in Cyberport to express our gratitude for the supports from different parties.

Over the past year, the Smart City Consortium (SCC) signed 13 memorandum of understandings (MoUs) with different institutions worldwide, and organized more than 50 local and international events with a total of roughly 10,000 participants. Last October, we submitted an advisory paper (interim report) with practical solutions for smart city's development to the Government. In future, the SCC will continue to connect with different sectors to accelerate our progress to a smarter city.

2017年5月29日，智慧城市聯盟於數碼港舉行晚宴，以慶祝本會成立一周年，並感謝各方一直的支持。當晚很榮幸得到時任行政長官梁振英先生、創新及科技局局長楊偉雄先生、政府資訊科技總監楊德斌先生，以及超過200位業界人士蒞臨參與。

過去一年，智慧城市聯盟與全球13個不同的組織簽署諒解備忘錄，亦舉辦了超過50場本地及國際活動，總出席人數超過一萬人；去年10月，我們更向政府遞交了智慧城市諮詢中期報告，為智慧城市發展提供多種可行方案。未來，我們將繼續連結各界，讓香港邁向更創新的城市。

18th Jul, 2017

Signing MoU with UCL and HKU Faculty of Business and Economics
與倫敦大學學院及香港大學經濟及工商管理學院簽署諒解備忘錄

On 18th July, 2017, the SCC signed an MoU with University College London and the Faculty of Business and Economics of The University of Hong Kong to foster industry-academia cooperation and lay the foundation of smart city.

2017年7月18日，智慧城市聯盟與倫敦大學學院及香港大學經濟及工商管理學院簽署諒解備忘錄，以促進學術界與業界的合作，為智慧城市的發展打好基礎。

2nd-6th Aug, 2017

Future City Summit 2017

The University of Hong Kong organized the Future City Summit 2017 from 2nd to 6th August, 2017. Around 150 students across the globe travelled to Hong Kong to exchange ideas on the future development of smart city and urbanization. The SCC was honoured to be a strategic partner of the event. Legislative Councillors Mrs. Regina Ip and Mr. Charles Mok, as well as our members including Dr. Winnie Tang shared their insights on how smart technologies can shape sustainable developments and improve our quality of life.

2017年8月2日至6日，香港大學舉辦了Future City Summit 2017，近150名學生遠道從世界各地來港，討論未來智慧城市的發展及城市化議題。智慧城市聯盟是這次活動的策略合作夥伴，包括鄧淑明博士在內的多位成員亦有到場參與，並與立法會議員葉劉淑儀女士及莫乃光先生，一同與在場同學分享如何以創新科技推動可持續發展，並提升我們的生活質素。

Future City Summit 2017

Leaders of Future Smart City

智慧城市的未來領袖

To foster sustainable developments and to incubate an innovative younger generation, The University of Hong Kong had organized the Future City Summit 2017 from 2nd to 6th August of this year. The Smart City Consortium (SCC) was honoured to be a strategic partner of the event. Alongside Legislative Councillors Mrs. Regina Ip and Mr. Charles Mok, our members shared their vision of smart city with more than one hundred youths from around the world.

為促進可持續發展並培育年輕一代的創新精神，香港大學於本年8月2日至6日在校園內舉辦了Future City Summit 2017，有過百名來自世界各地的年輕人遠道來港交流。「智慧城市聯盟」為是次活動的策略合作夥伴，多位成員應邀出席，並與立法會議員葉劉淑儀女士及莫乃光先生一同分享他們對智慧城市發展的願景。

Engaging citizens, promoting STEM

In the keynote session, Dr. Winnie Tang, SCC's Founder and Honorary President, highlighted the importance of bottom-up participation in Smart City 3.0. According to Dr. Tang, Geographic Information System (GIS) collects and organizes various spatial data from which citizens can gain better insight into the current social situation. They can then make use of the open data to design innovative applications which help to improve municipal management. Dr. Tang also discussed the successful GIS platform GeoHub in Los Angeles. Since the introduction of GeoHub, more community-monitoring mobile phone applications have been launched. These applications significantly improve the municipal management and encourage citizens' participation.

Referring to the future of Hong Kong, Mr. Julian Vella, Partner and Asia Pacific Head of Global Infrastructure of KPMG, emphasized that we had to apply smart technologies and promote science, technology, engineering and mathematics (STEM) education in order to cope with the increasing living and medical expense and decreasing work force in the future. To maintain our momentum, it is equally important to make use of our advantages in the judicial system, logistics and financial infrastructure to leverage the "Belt and Road Initiative" and the Greater Bay Area plan.

Satisfying a few is not solving problem

Our members also recalled the contributions of smart technologies to society in the following panel sessions.

Mr. Danial Chun, Chairman of Research & Blueprint Committee, stressed that smart technologies had served the public and improved their quality of life. Mr. Andy Chung, Chairman of Green Committee, showed how Internet of Things (IoT) and automated systems had improved the efficiency of our daily work practices. In addition, Mr. Jason Ngan, Chairman of Smart Healthcare Special Interest Group, introduced the contribution of smart technologies to the public health system. The deployment of IoT and wearable devices can monitor patients' wellbeing from time to time, thus reducing emergency situations and assist in rehabilitation. The immense demand on public health system is therefore reduced.

We need a sand box for start-ups

In another panel session, Mr. Emil Chan, Chairman of FinTech Committee, reminded us that FinTech was gradually taking shape. To strengthen the development, the Government should extend the service of FinTech Supervisory Sandbox to start-ups as well. Mr. Andrew Work, Head Content Strategist for Asia Pacific of NexChange, believed that a simplified financial regulatory body can maintain the openness to FinTech business and attract talents.

The creative mind of the youths in the Summit will be the driving force of smart city's development. In future, the SCC will continue working on smart city with different sectors, while we will be supporting an innovative atmosphere for the younger generation.

促進市民參與 推廣創科教育

本會創辦人及榮譽主席鄧淑明博士在主題演講中指出，在「智慧城市3.0」的年代，市民由下而上的參與尤其重要。地理資訊系統（GIS）正正能透過收集及整理各樣空間數據，讓市民更了解社會現況；市民亦可利用公開的數據開發創新應用程式，以改善地區管理。鄧博士又指，洛杉磯在推出GIS平台GeoHub後，監察市政問題的手機應用程式百花齊放，對推動市民參與及地區管理甚有裨益。

KPMG中國基建行業聯席主管合伙人Mr. Julian Vella則談及香港的發展方向。未來，香港將面對生活與醫療成本增加，以及勞動人口減少的問題。為此，我們需要善用創新科技，推動科學、科技、工程及數學（STEM）教育，並在「一帶一路」與「大灣區發展規劃」當中發揮法制、物流及金融配套的優勢，以帶動香港的發展。

創新科技須服務大眾

在其後的座談會，多位智慧城市聯盟的成員分享了創新科技的社會貢獻。

研究及藍圖委員會主席秦仲宇先生指出，智慧城市應以改善多數人的生活為目標；環保科技委員會主席鍾偉樑先生則以鐵路系統保養為例，分析物聯網和自動化系統如何降低成本及改善服務，並協助我們處理日常工作。另外，智慧健康工作小組主席顏林軍先生亦介紹了怎樣透過物聯網和可穿戴裝置，全天候監察病人的健康狀況，繼而協助預防疾病及復康治療，以減輕整個醫療體系的負擔。

需為初創設沙盒

最後，金融科技委員會主席陳家豪先生指出，現時香港金融科技發展仍在起步階段，政府應將金融科技監管沙盒開放至銀行以外的初創企業，從而協助創新金融科技的發展。而NexChange的亞太區內容策劃主管Mr. Andrew Work則認為政府應簡化現有的金融監管架構，並保持香港營商環境的自由度，以吸引專才留港發展金融科技。

許多年輕參加者在會上提出了眾多嶄新意念，相信未來他們會成為智慧城市發展的生力軍。而智慧城市聯盟將繼續與各界合作，推動智慧城市的發展，並將創造有利環境，讓年輕一輩發揮他們的創新精神。

SMARTHK 2017 AND CROSS AUTHENTICATION TO FOSTER CROSS REGION COOPERATION UNDER THE BELT AND ROAD SYMPOSIUM SUCCESSFULLY HELD IN FUZHOU

「創新升級 • 香港論壇」暨「交叉身份認證提升『一帶一路』跨地區貿易合作」主題研討會在福州成功舉行(HKPKIF)

As the Internet Plus age is drawing near, the interconnection and mutual recognition of electronic identification has become increasingly important. On top of this, the "Belt and Road initiative" has placed a new demand on cross-border recognition of electronic identification. In order to complement Hong Kong and Fujian's advantages and seize the "Belt and Road" opportunity, the Fujian Development and Reform Commission, the Chinese Manufacturers' Association of Hong Kong, Hong Kong Trade Development Council (HKTDC), Fujian Electronic Commerce Association, Hong Kong PKI Forum, Asia PKI Forum, Smart City Consortium (SCC), and Certizen Limited had jointly organized the Cross Authentication to Foster Cross Region Cooperation under the Belt and Road Symposium on 25th May, 2017. The Symposium was successfully held in the Fuzhou Shangri-La Hotel and attracted more than 100 participants.

In the opening speech, Ms. Eva Chan, Vice Chairman of Hong Kong PKI Forum and CEO of Certizen Limited, and Mr. Li Huazhong, Chairman of China Chamber of International Commerce Fujian Free Trade Association, shared their insights on Hong Kong and Fujian's roles in the "Belt and Road Initiative". With Fujian being located in the core area of the "Maritime Silk Road" and Hong Kong acting as the "super-connector" bridging the Mainland and global markets, both cities have an important role to play. They should seize the opportunity to strengthen their ties in the smart city development so as to promote interactive economic development. In a subsequent keynote address, Mr. Gary Yeung, Chairman of eID Committee of SCC, introduced the safe, convenient and authoritative eID and its application in various aspects like finance, logistics and e-government. On the other hand, Mr. William Gee, Partner of PWC & Vice Chairman of Hong Kong PKI Forum, and Mr. Stanley LEE, Chairman of E-Commerce Association of Hong Kong & Member of the Council of the Hong Kong General Chamber of Small and Medium Business, focused on the legal and cross-border e-commercial aspects of the Mutual Recognition Certificate. They presented an action plan on the Certificate that can bridge Hong Kong and Mainland with the global community and promote cross-border e-commerce. All these addresses provided a more direct and in-depth approach to the "Belt and Road Initiative" and highlighted the complementary role between Hong Kong and the Mainland.

Mr. Liu Hailong, Representative of Jinlianhuitong Information Technology Limited, the Operator of the Third Research Institute of Ministry of Public Security, Ms. Phoebe Yip, Head of Electronic Certification Services Division, Macao Post and Telecommunications Bureau, Mr. Liu Yajun, Marketing Director of G4B Information Technology Co., Ltd., as well as Ms. Liu Lifen, Commercial Department Manager of G4B Information Technology Co., Ltd., were present at the Symposium and joined the photo session with guests. All parties undertook to focus on smart city development, enhance the efficiency and security of online commerce, and jointly promote cross-border e-commerce.

「互聯網+」時代的到來，網絡電子身份互聯互通的重要性已經充分凸顯出來。而「一帶一路」倡議的提出，對網絡身份跨境性提出了新要求。為了發揮香港和福建的自身優勢，取長補短，互利共贏，把握「一帶一路」的機遇，2017年5月25日，福建省發展和改革委員會、香港中華廠商聯合會、香港貿易發展局，聯合福建省電子商務協會、香港公匙基建論壇、亞洲公匙基建聯盟、香港智慧城市聯盟和翹晉電子商務有限公司主辦的「交叉身份認證提升『一帶一路』跨地區貿易合作」主題研討會，在福州香格里拉大酒店成功舉行，吸引了過百人參加。

香港公匙基建論壇副主席兼翹晉電子商務有限公司行政總裁陳婉華女士、福建省自貿國際商會會長李華忠先生在開幕詞中，對閩港兩地的角色進行了分享，福建作為「海上絲綢之路核心區」與香港作為「超級聯繫人」，都扮演了關鍵角色，應當好好把握機會，加強兩地智慧城市合作，帶動經濟互動發展。在之後的專題演講中，來自香港智慧城市聯盟數碼身份委員會主席楊文銳先生，介紹了eID，即電子身份的安全性、便捷性和權威性，以及在金融、物流、電子政府等多領域的應用。普華永道合夥人兼亞洲公匙基建聯盟副主席季瑞華先生，以及香港電商協會會長兼香港中小型企業總商會理事李基銓先生，分別從粵港互認證書的法律和標準以及跨境電子商務角度，介紹了如何實現交叉身份認證，內聯國內，外接國際，促進跨境電子交易。令大家更直觀、更深入參與到「一帶一路」議題的思考，對電子身份，以及加強中港及「一帶一路」合作的重要性，有了更深的認識。

此外，中國公安部第三研究所營運商－金聯匯通信息技術有限公司代表劉海龍先生、澳門郵電電子認證服務電子認證科技發展總監葉曉紅女士、廣州網融信息技術有限公司市場總監劉亞軍先生及商務部經理楊麗芬女士到場支持，並與在場嘉賓合影留念。各方將繼續圍繞智慧城市發展，提升網絡商貿的效率與安全，共同促進跨境電子商務的繁榮。

Ronald Pong:
More Education in Information Security

龐博文：
提高網絡安全意識 由教育入手

Extortion via internet virus ravaged globally in recent years, many government institutions, large enterprises, as well as individual users have fallen prey. These incidents again arouse public concern towards network security. The emergence of smart technology, such as smart car, smart TV, even the sensor of smart rice cooker can become target of the hackers. How to enhance cyber security? With over 20 years of international experience in the information security sector, how does Ronald Pong see the industry's challenges?

Ronald entered the industry in late 1980s and he is now the CEO of an information system and security consultancy firm. He has taken penetration testing, computer science and other related jobs since the second year at university in Canada. After graduation, he had worked at an accounting firm, a listed corporation, and a government agency, focusing mainly on security testing and certification, computer forensics investigations. These experiences laid the foundation for his future career path in information security. He then moved one step forward to the education field and even established his own company, turning interest into a life-long career.

All roads lead to Rome

Ronald's career path was closely related to his college life. At a start, theology and philosophy seems irrelevant to information security, but how have these been connected? Ronald said with a smile, "Student major in theology have high language skill and good at mathematic. It is not difficult for us to understand the concept of computer science since we could even recite Quran and Buddhist scriptures." In fact, IT is a kind of language. Theology and philosophy involve semiotics and logical analysis which help in understanding the computer language. By using the decoding system, one can identify the attack system easily whereas student majoring in computer science cannot see it. The strong memory and analytical skills enable Ronald and his eleven classmates to learn from zero to be familiar with hacker attack and defense skills. They have been approached by school and government institutions, and even invited by professors to help the local police crack down long distance telephone network hackers and computer crime by reviewing network activities. Twelve of them have turned interest into a life-long career, they eventually become information security experts and currently having moved to different parts of the world in pursuit of their careers.

Education is the hope

Ronald has pursued a career as an information technology industry start-up. Since returning to Hong Kong from Canada in 1997, he identified three problems of the industry after working in local and mainland companies. First, a lack of comprehensive training; second, a lack of standard; third, industry being over-commercialized, neglecting internet security issue of the public.

Ronald believed that a lack of awareness of information security in the education sector is the root of the problem. Therefore, he put effort on education rather than followed a stable job in an accounting firm.

Ronald chose to teach higher diploma students rather than college students. Some people questioned the ability of those students who have not reached university level. At the same time, Government authority argued that hacker attack and defense skills should not

近年，網絡勒索病毒攻擊肆虐全球，不少政府機構、大企業、以及個人用戶相繼「中招」，事件再度引起大眾對網絡安全的關注。智慧科技興起，智能車、智能電視，甚至智能電飯煲的感應機，容易被黑客入侵，如何減低網絡安全的隱憂？在國際市場從事資訊安全超過20年的龐博文又怎樣看業界面臨的挑戰？

龐博文是早期入行的資訊安全專家，現為網絡保安顧問公司的行政總裁。在加拿大讀書時，大學二年級已接觸滲透性測試、電腦工程等相關的工作。畢業後，曾於會計師樓、上市企業、政府機構等從事安全測試、鑑證、調查工作，這些經驗為日後網絡保安工作奠下基礎。其後，他加入教育界，到大專院校授課，再成立公司，將興趣變為終身職業。

條條大路通羅馬

龐博文的入行經過與大學經歷息息相關。神學、哲學與資訊科技和電腦工程看似風馬牛不相及，結果如何扯上關係？修讀神學系的龐博文笑言：「神學系學生的語文能力和數學不錯，當《佛經》和《可蘭經》都背誦到，要理解電腦工程的概念算不上難事。」

其實，IT是一種語言，神學及哲學牽涉大量符號學及邏輯分析，有助瞭解IT語言。利用解碼方式看IT系統，容易看出如何攻擊一個系統，這些往往是一個電腦科學系學生所看不到的。卓越的記憶力和分析力讓他和另外十一位志同道合的神學系學生由零開始，認識資訊科技的科目，「砌機」、圖書館自學、上網研究各種黑客攻防技巧等，令無資金、無資源、無人重視的學科發光發亮，漸漸受校方及執法機關關注。他們甚至獲得教授邀請，協助當地警方破解早期長途電話網絡黑客及電腦罪案的難題。這班學生最終將興趣化成職業，成為訊息安全專家，至今分佈世界各地。

be taught. Despite these challenges, he believed technology and regulation must move in parallel to ensure technology is properly and legally used. "These students are full of passion and drive." He insisted on passing all his knowledge and experience to the students. Ronald was pleased that all his students hold positive attitudes and make use of what they had learned after graduation. Some students were even promoted to managerial level after working for a few years.

Government and Industry co-operation

"Public have low ability to address the cyber security issues as the industry keeps receiving enquiries for assistance." Ronald said. In a Hack Attacks Testing for clients, data loss which is not supposed to happen is treated merely as an "accident". Meanwhile many clients are still using outdated software without backup nor firewall. Therefore, it is difficult to recover the lost data in such case. In order to protect client's data, Ronald broke the conventional rule of the industry by being the first information security consultant to buy a US$2 million liability insurance for every single client after the establishment of his own company in 2008.

Many internet virus, including the recent ransomware, WannaCry can be avoided and kept out effectively, Ronald emphasized. However, in corporate layoffs plans, the staff of IT department are often the hardest-hit as they are not the frontline operation staff. In fact, they worked as a gatekeeper to prevent and solve all internal and external cyber problems. At the same time, the development of smart city needs a large number of IT experts.

To absorb IT talents, he planned to organize more competitions, professional leagues and skill battles like Cyber Security Capture The Flag, as well as to participate in international competitions in the coming year. He also expected the Government to work closely with the industry which can provide techniques, experiences and support to official institutions. On the other hand, the industry should train more people with potential in attack and defense skills. He also suggested the Government to learn from neighboring countries, such as Japan and Taiwan, to strengthen the regulatory measures and set up certification and testing standards to upgrade overall network security in Hong Kong.

"Would you accept free food from stranger on the street? Would you open any unknown link or document on the web?" Ronald used the metaphor to explain that there is no free lunch in the world. The public should appreciate the importance of cyber security so that we can build and maintain a safe cyber community.

棄高薪厚職 將希望寄託於教育

龐博文於1997年自加國回港，香港的科網業剛起步，他先後在香港及內地工作，發現香港資訊安全市場的不足。一，缺乏全面訓練；二，行業沒有統一標準；三，行內只顧自己的商業利益，未有負起保障公眾網絡安全的責任。

「教育界一直對資訊安全的認識尤其不足。」他認為教育界對行業缺乏認識是根源所在，因而放棄會計師樓的安穩工作，決心培育新一代。

當初，他選擇任教高級文憑的學生而非大學生，有人質疑同學的能力未達大學水平，甚至有執法機關認為他教授黑客攻防知識是危險的做法。儘管兩度面臨挑戰，他仍堅信技術與法規應雙軌並行，以確保有關技術得以正確及合法地使用；並深信「這班學生有團火，年青人的進步空間大」，堅持將自己擁有的知識和經驗傳授給這班學生。令他欣慰的是，所教的學生都持有正確的價值觀，畢業後也學以致用，部分學生甚至在短短數年已升任公司科技部高層。

政府、業界攜手合作 打造網絡安全社會

談到香港網絡保安的情況，龐博文感慨：「大眾的網絡安全意識仍偏低，求助個案太多。」業界替客戶進行攻擊測試期間所造成的損失，資訊保安市場一向只視作「意外」；與此同時，不少客戶卻仍使用舊式軟件，既沒有為文件定期備份，也沒有安裝防火牆，受損的檔案故此難以修復。為保障客戶資料安全，他於2008年自立門戶，成為第一家替每位客戶買下200萬美元責任保險的公司，打破市場常規。

龐博文強調，很多網絡病毒，包括早前勒索軟件WannaCry，都能避免和預防。然而，每當企業裁員，資訊科技部門總淪為重災區。這班「守門員」站在科技最前線，為各部門解決對內、對外的問題，卻不被重視。

同時，現時全球大力發展智慧城市，需要大量IT專家把關。他表示來年會舉辦不同類型的網絡安全競賽如Cyber Security Capture The Flag、專業賽、特殊技能競賽和參與國際性賽事等，吸納人才。此外，他期望政府和業界攜手合作，業界一方面將技術、經驗提供予政府，一方面培訓更多有潛能的資訊保安人才，以進行防守、追捕黑客的工作；他亦建議政府參考日本、台灣等鄰近地區的做法，加強法規、設立認證及檢測標準，全面提高本港的網絡安全。

「街上有人突然請你吃東西，你會接受嗎？為何網上有人給你不明來歷的檔案，大家又會未經思考就打開？」龐博文提醒大家，世上沒有免費午餐，市民要提高警覺，才能一起打造網絡安全的社會。

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Opening up spatial data to boost creativity

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發放空間數據 匯聚各方創意

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In the information and technology industry, there is a saying: 80% of data is geographic. For example, the photos taken by our smart phones and posted on social network are marked with locations. When a country is building its smart city, the success or failure is highly correlated with the management and usage of spatial data. In short, the availability of geospatial data becomes a critical factor for success.

I am glad to learn from a recent media report that shows the OGCIO and Lands Department plan to launch an inter-departmental Geographic Information Platform at the end of this year. It plans to provide location data of a wide range of facilities such as clinics, cultural and recreational venues, electric vehicle recharge terminals, etc.

From data to apps

Public users can download the required information and develop applications through the application programming interface (API). This can be considered as Hong Kong Government's continual support to the development of smart city.

科技業界一向有「人類產生的80%數據都和地理空間有關」的說法，例如利用手機拍下的照片、在社交網絡上發布的帖子，都附加了「在哪裡發生」的標記。當世界各地要建設智慧城市，地理空間數據順理成章成為關鍵。

政府資訊科技總監辦公室（OGCIO）和地政總署合作，計畫最快於今年底推出跨部門「地理資訊平台」，內有如診所、文化休閒活動場所、電動車充電站等的坐標數據。市民可望下載瀏覽之餘，也可以透過應用程式介面（API）連結來編寫創新應用程式。這顯然是一個很好的消息。

空間數據共享平台

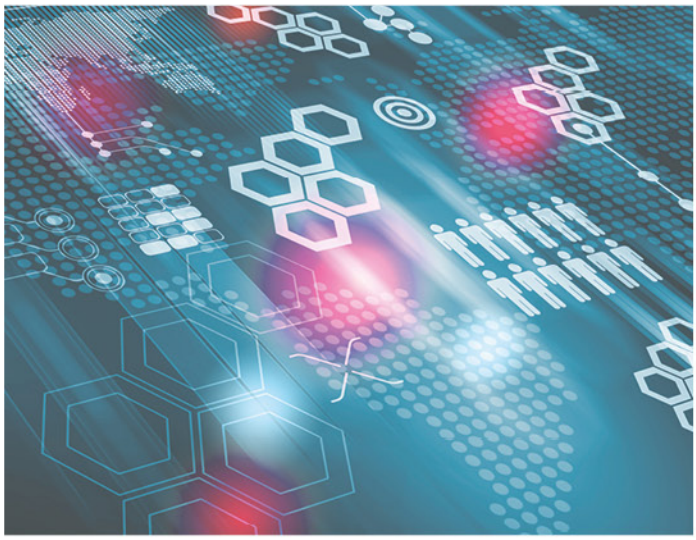
今年施政報告有提及發展局推動建立「空間數據共享平台」（CSDI），包括委聘顧問進行研究，以制訂整體發展策略及路線圖。CSDI是更為專業、全面、大規模的數碼基建，亦是智慧城市的重要基礎。

This year's Policy Address also mentioned that the Development Bureau is promoting the establishment of Common Spatial Data Infrastructure (CSDI), including the appointment of a consultant to conduct a study for formulating development strategy and roadmap.

CSDI is a more professional, comprehensive, large-scale digital infrastructure which is also an important foundation for a smart city. It can support various apps and services.

According to the Development Bureau's description, the CSDI allows Government departments, public and private organizations to consolidate and exchange various data, such as road networks, plots, land use, underground pipelines, urban planning requirements, real-time traffic conditions, and local weather condition. The platform aims to facilitate not only the Government departments and public organizations, but also citizens, to develop broader functional apps based on spatial data.

Promoting app development is one of the main objectives of delivering geospatial data. Their success will help to bring together creative ideas, improve the efficiency of city operation and enhance the quality of decision making. However, it requires proper strategy guidance.



Learning from LA and Taiwan

The GeoHub from Los Angeles is the best example. It uses the latest technology and operation concepts to share geospatial data; their successful experience is worth our reference.

Lilian Coral, chief data officer of Los Angeles City, came to Hong Kong earlier this year to share their experiences. With the support of the Mayor, her team has been able to lobby more than 60 government departments to share spatial data, which is open to public for developing innovative digital maps and apps beneficial to people's living.

根據發展局對CSDI的描述，政府部門及公私營機構可在其中整合和互通各種數據，如道路網絡、地塊、土地用途、地下管道、城市規劃要求、實時交通情況、地區天氣等。這平台將促進政府內部部門、公營機構以及民間，以空間數據為基礎，開發更廣泛和更多功能的應用。

不論是「地理資訊平台」還是CSDI，推動應用程式的開發是發放地理空間數據的主要目的之一，成功的話將有助提高城市營運和決策的效率和質素。不過，這需要適當的策略引導。

GeoHub是最佳示範

洛杉磯的GeoHub是最佳示範，值得香港參考。洛杉磯市的首席數據官（Chief Data Officer）Lilian Coral早前來港分享心得。在市長的支持下，她麾下的團隊，一方面游說超過60個政府部門分享可供開放的空間數據，另一方面則運用這些數據，開發有利市民生活的創新電子地圖和應用程式。

GeoHub催生了諸如顯示街道清潔指數的Clean Streets Index、顯示街道工程狀況的Street Wize、顯示交通意外黑點的Vision Zero Los Angeles等應用。結果GeoHub形成一種雪球效應，愈來愈多機構願意開放數據，甚至參與程式的設計，現時在該平台上的數據集已超過600種。

GeoHub spawned various apps, such as Clean Streets Index (shows street cleanliness), Street Wize (displays current and upcoming road works), Vision Zero Los Angeles (shows traffic accident black spots) etc. These apps have received good reputation and are widely adopted by the public, creating a sense of accomplishment for the developers. As a result, more organizations are willing to open data and even participate in the design of apps. There are over 600 kinds of datasets on the platform now.

Last year, I attended the 15th World Conference of the Global Spatial Data Infrastructure Association (GSDI) in Taipei. The conference speakers discussed Taiwan's smart disaster prevention and management strategy. Experts and academics around the world discussed how to increase Taiwan's ability to fight natural disasters such as earthquake, typhoon and flood through the use of SDI-based disaster alarm, disaster relief and post-disaster rehabilitation apps.

At the conference, the Taiwan government and local disaster prevention sector indicated that they would follow up on these recommendations to strengthen the integration of local stakeholders and the industrial community's relief effort, and to promote the development of related products and technologies. Looking at the positive atmosphere at the conference, I anticipate a number of well-established apps and services to fight against disaster based on geospatial data.

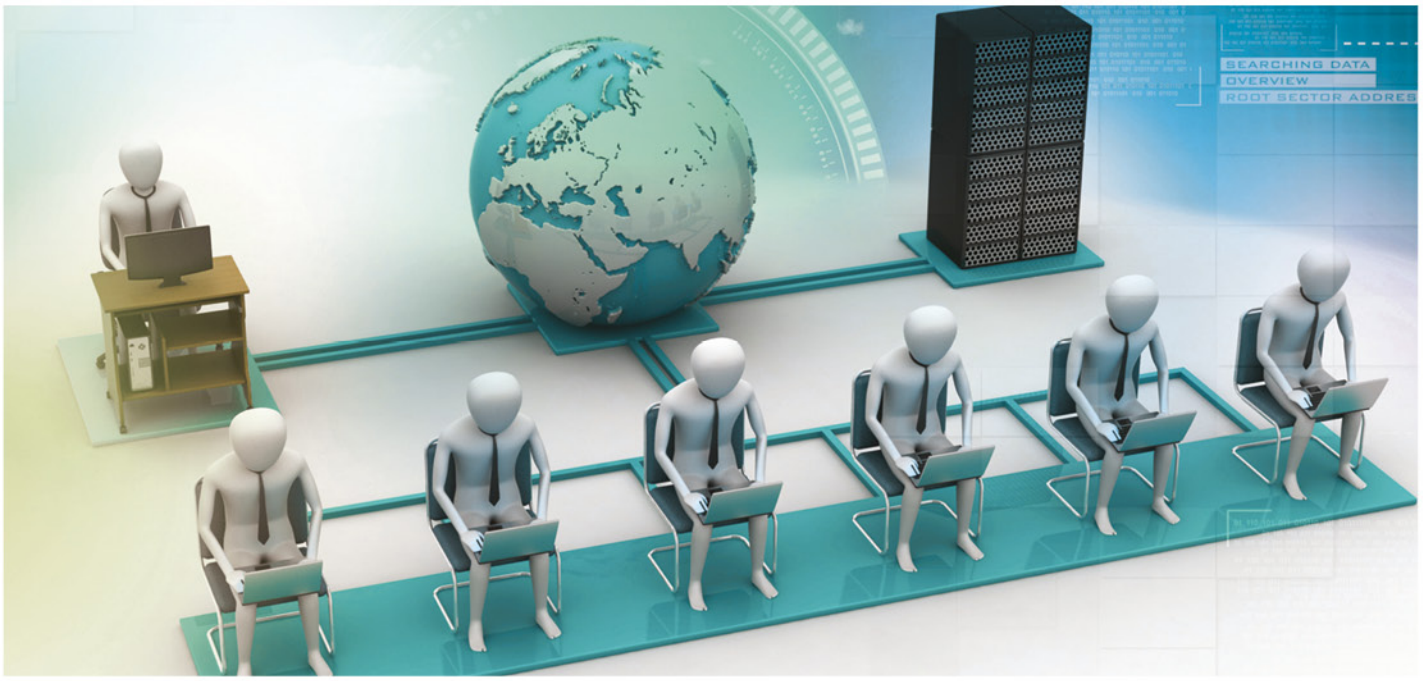
I believe the strategy of developing CSDI in Hong Kong should be related to the characteristics and needs of the local market, such as the public's special interest in the property market and the provision of services to the ageing population.

In addition, it should lobby and attract different organizations and departments, like Los Angeles, to open up their geospatial data and collaborate to promote the development of various smart apps and services. All these will maximize the benefits from the CSDI.

台北建立智慧抗災應用

今年初，台北GSDI（Global Spatial Data Infrastructure）協會第15屆國際研討會，以當地相當重視的智慧災害預防與災害管理作為會議主題之一。來自世界各地的專家學者和科技業者，討論怎樣透過基於SDI的災害預警、救災、災後善後應用程式，來增加台灣對抗地震、颱風、洪水等自然災害的能力。會議中，台灣政府及當地的防災產業界表示，將參考這些建議加強整合當地的產業鏈，並推動相關的產品和科技發展。

對於香港發展CSDI的策略，一來應針對本地市場的特色和需要，如市民對樓市特別關注、人口老化而開發相關的應用；二來則如同洛杉磯市一般，要針對性地游說和吸引不同機構和政府部門開放他們的地理空間數據，合作推動各種智慧應用程式和服務的發展，把CSDI的效益發揮到極致。



Smart city will no longer be an agenda within the industry, but a vision that every citizen is committed to realizing.

智慧城市不只是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。

Mr. Eric YEUNG
楊全盛先生

President
主席

SCC has created an effective platform for knowledge exchange and cooperation. We are looking forward to welcoming more of our friends to join us.

SCC過去一年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。

Dr. Hon Elizabeth QUAT, JP
葛珮帆議員 太平紳士

Founder & Honorary President
創辦人及榮譽主席

By providing opinions, suggestions, and insights to the Government, we can co-create the future of our world-class smart city.

未來我們會繼續實踐理念，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。

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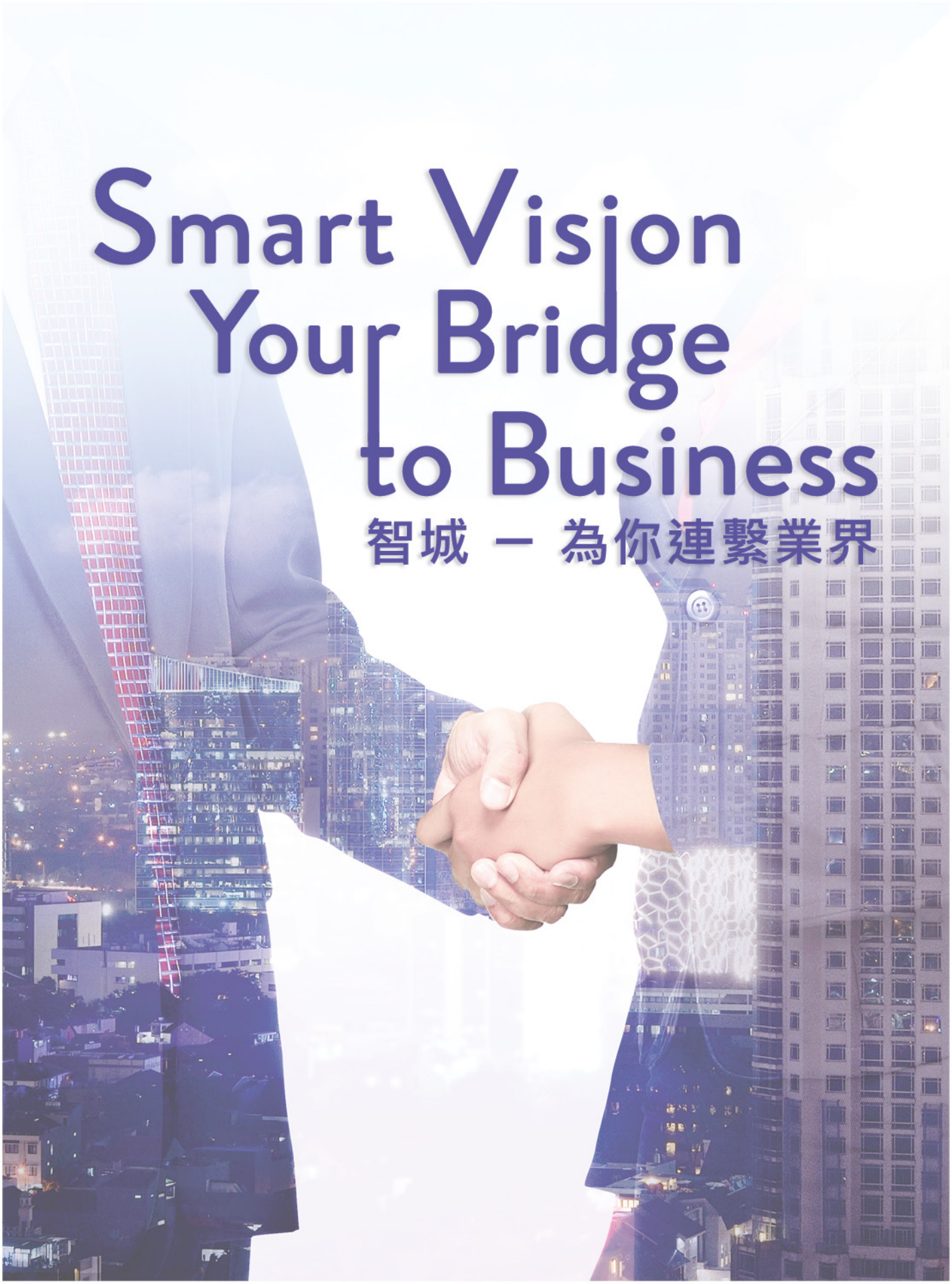

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智慧城市聯盟的《智城》每季出版一次，以IT社群為對象，派發地方包括政府相關部門、數碼港、香港科學園、啟迪科技園、生產力促進局以及各大專院校校園。查詢刊登廣告事宜，請致電3480–4230或電郵至info@smartcity.org.hk與智慧城市聯盟秘書處聯絡。

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