50th Anniversary AmCham Luncheon

<u>Speech by Ir Alfred Sit JP, Director of Electrical & Mechanical Services</u>

Good afternoon, Ms Joseph (Tara Joseph, AmCham President), Mr. Grieves (Robert Grieves, the Chairman), Committee Members, ladies and gentlemen, I am deeply honoured to give a speech at the 50th anniversary year of the American Chamber of Commerce (AmCham).   Since its establishment in Hong Kong in 1969, AmCham has made significant contribution to the economic growth of Hong Kong in the past half century. We in Hong Kong are very grateful for the contribution of AmCham and are looking forward to the continuous collaboration with AmCham.   Today, United States remains one of the most important trade partners with Hong Kong, ranking second just behind mainland China, in terms of total trade and also export from Hong Kong.   1969 is indeed a remarkable year in science and technology, and may I say, one of the most important years in the history of mankind.

I am sure many of you still recall it was the year of the first moon landing. I still vividly remember the image of Neil Armstrong walking out of the lunar module, and making the giant leap of mankind.   As a child back then, I joked that he was so very like a robot in science fiction.   Talking about science fiction, does anyone here remember a TV series in 1982 called "Knight Rider"? It foresaw the advanced technology of autonomous vehicle which could come any time by itself when called by its master to rescue him. A few decades later, the Google autonomous vehicle has made this a reality. Also in the movie "Total Recall", the non-invasive full-body scanner used for scrutinizing illegal objects hidden by a person had illustrated a fairly portrayal of advanced technology that are now widely used in many airports around the world. These countless examples of science fictions have foretold and somehow inspired the development of innovation and technology. They also visualised what future smart cities might look like.   Innovation and technology (I&T) has become the main drive of economic growth around the globe.   In recent years, more and more I&T companies have set up their business in the Greater Bay Area. Without doubt, Greater Bay Area development is going to bring invaluable opportunities to Hong Kong's I&T development. Leveraging on Hong Kong's connection with the international arena, we can pool together innovative resources from the Greater

Bay Area and the world to boost our competitiveness and create new momentum for economic development of Hong Kong. Today, I would like to share with you the recent initiatives from the Hong Kong Government in support for I&T development and to use the recent works of my department, Electrical and Mechanical Services Department (EMSD), to demonstrate how the Government gradually brings forward these initiatives.

Echoing with AmCham's suggestions to the previous Policy Address 2018 on smart city initiatives, we are very much in agreement that engaging style and collaborative approaches are the key drivers to reach out to the market and to keep abreast of the technology development. For the promotion of I&T industry, the Hong Kong Government underpins five core approaches: (1) fostering an I&T culture; (2) providing world-class technology infrastructure for enterprises, research institutions and universities; (3) offering financial support to industry players to develop and commercialise their R&D results; (4) nurturing I&T talents; and (5) strengthening science and technology collaboration with Mainland. Earlier this month, the Government has just promulgated a new pro-innovation procurement policy, and I am going to talk further on this later. Under the new policy, my department, the EMSD, together with Office of the Government Chief Information officer (OGCIO), have assumed the new role of being the innovation facilitators for helping other government departments to identify suitable solutions on technology innovation in transforming Hong Kong into a smart city, with OGCIO helping out on information technology, and EMSD on electrical and mechanical applications and related aspects. With the Government's new policy, we facilitate the creation of innovation culture with design thinking and build up a collaborative partnering network with our local start-ups, academia, innovation SMEs and other strategic partners. EMSD has launched our web-based collaborative platform "E&M InnoPortal" in 2018 on E&M applications while OGCIO has also launched their "Smart Government Innovation LAB" this year on IT application to support government departments in identifying suitable I&T products and solutions from local start-ups and SMEs. Throughout the arrangement of various trade promotion activities such as InnoCarnival, Tech Connect Forum, Innovative Technology Days, symposiums, guided tours, technology competitions and etc, lots of the I&T solutions in the above-mentioned collaborative platforms could be effectively showcased, shared and matched in the

market, meeting the specific technological challenges and wishes of government departments and public bodies.

With the significant increase in resources injected, Hong Kong's I&T development has continuously expanded over the past few years. According to the ICT Development Index, Hong Kong has risen from no. 10 in the world in 2012 to no. 6 in 2017. I would say we are now in the right direction but there are still much rooms for improvements. We need to take a bolder action with determination. Technology infrastructure which provides facilities, services and a dynamic environment is vital in nurturing local innovations and keeping up the momentum of I&T development in Hong Kong. The high take-up rate of facilities in Science Park and Cyberport has revealed that more resources on technology infrastructures will be needed.   To reinforce the role of Science Park and Cyberport as Hong Kong's flagship technology infrastructures, the Government has allocated 10 billion HK dollars in the 2017 budget to the Science Park to construct research-related infrastructure facilities and enhance support for tenants or incubatees, and another 10 billion HK dollars for establishing research clusters to attract top science research institutions and technology enterprises. The Government has also set aside five and half billion HK dollars in the 2019 budget for the development of Cyberport to accommodate more technology companies and start-ups. I look forward to stronger presence from world-class universities and research institutions in Science Park and Cyberport when more world-class research facilities are established.

As regards provision of *Financial Support for I&T Market Players,* over HK$100 billion commitment is made available under "The 2019 Budget" on the development of Innovation and technology. The business opportunities and possibilities arising from smart city initiatives that can be brought by technology may be endless.   Currently, there are 14 funding programmes under Innovation and Technology Fund (ITF) such as I&T Support Programme, University-Industry Collaboration Programme, Technology Start-up Support Scheme for Universities, Public Sector Trial Scheme, I&T Venture Fund, Patent Application Grant, etc to cater for different I&T market players from academia, start-ups and SMEs.   As at the end of August 2018, over eight thousand (8209) of ITF projects were approved with a total funding of HK$14.6 billion.

In recent years, substantial growth has been witnessed in the technology sector of Shenzhen, and more high-tech conglomerates are expected to be established in the Greater Bay Area (GBA) cities.   To keep abreast with the latest technology development and maintaining talent resourcing are the vital elements in facilitating smart city development.   Establishing regional cooperation in GBA could thus provide great opportunities for Hong Kong to enhance our scientific-innovation capability and supplies of I&T talents.   In EMSD, we strive to serve as a "connector" to link up the E&M sectors of GBA cities with our local E&M trade industry for exchanging the standards and best practices on I&T and skill-sets.   In November 2018, we have signed MoCs between local professional bodies and organisations in GBA cities to promote the adoption of retro-commissioning as a new solution for achieving building energy efficiency through sharing of knowledge, experience and training.   We have also arranged another MoC with the Guangzhou Municipal Human Resources & Social Security Bureau to strengthen the training for E&M sectors in the area of air-conditioning, mechatronics, lift and vehicle maintenance.   Dialogue on another MoC with Guangdong Academy of Sciences and local innovation organisations is being arranged for exploring closer cooperation on the I&T development in artificial intelligent, robotics, data analytics and others.   We also have plan for our E&M InnoPortal to be extended to GBA in near future to facilitate the matching of I&T solutions and wish-lists of end-users across the whole GBA cities. With this move, we hope to have some contribution in making Hong Kong as the international I&T hub for connecting the mainland China. Please note that the connection and the works that I just mentioned are just what my department, EMSD, has been doing in nurturing I&T Talents and Strengthening Collaboration with Greater Bay Area and there are many other government bureau and departments working in the same direction but at different ambits.

Favorable regulatory environment is also vital in enabling and facilitating the development of smart city, making innovation and technology survive and grow. The HKSAR Government has taken an open-minded approach in launching the new financial circular on Pro-innovation Government Procurement with effect from 1 April 2019, which streamlines the Stores and Procurement Regulations for promotion of innovation with measures to facilitate the participation of more market players (including start-ups and SMEs) and provide assistance to the procuring bureaux & departments in the government procurement process.   The

specific changes involved three areas. Firstly, minimizing entry barriers (particularly for start-ups and SMEs) by not setting tenderer's relevant experience as essential tendering requirement. Secondly, significantly raising the technical rating in the standard marking scheme from previously 30-40% to 50-70% in the latest version, and requiring a minimum of 20% of technical marks being reserved for innovative suggestion. Thirdly, allowing bureaux & departments to use restricted, single or direct engagement to procure technological innovation or ideas not conventionally adopted in meeting the operational needs.

As you are all aware, the Government has put a lot of effort in recent years in developing Hong Kong into a smart city by embracing innovation and technology to enhance city management, improve the quality of living, and build up a stronger economy for Hong Kong. The Hong Kong Smart City Blueprint was released in December 2017, outlining the vision and mission to build Hong Kong into a world class smart city and setting out short-, medium- and long-term initiatives under six major areas, namely Smart Mobility, Smart Living, Smart Environment, Smart People, Smart Government and Smart Economy. EMSD has also actively taken part in implementation of many of these initiatives, joining hands with various government departments to leverage its key development over the past few years to digitalise the electrical and mechanical assets in Government buildings, venues, and infrastructure systems, striving for a new vision that we name as "E&M 2.0". Let me give you some examples.

We are collaborating with the Department of Health to develop "Smart Fever Screening System" which integrates artificial intelligence, real-time tracking and big data analytics with thermal imaging to strengthen fever screening of travellers at boundary control points. This innovative project won the Grand prize of HKIE's 2019 Innovation Awards for Young Members.

We are also working with the Correctional Services Department to implement pilot projects under the "Smart Prison" initiatives. New equipment, including a new CCTV system with video analytic monitoring functions and smart wristbands for prisoners will be used to capture prisoners' abnormal behavior and provide remote monitoring of prisoners' health status. The pilot project also involves the application of robotic arms with automatic video-based controls to perform obnoxious tasks in place of humans. Those new technologies were showcased in

the 47th International Exhibition of Inventions Geneva, one of the biggest annual events in the world to be devoted to inventions and also won a Gold Medal under the class of "Security-Rescue-Alarm" in the competition.

Relieving parking space issue in Hong Kong is always on the list of smart transportation and a smarter ways of providing more parking spaces are required. We are commissioning a trial on Mechanized Vehicle Parking System of a puzzle-type parking system in 5 times 3 formation, offering 13 spaces over the footprint of 5 spaces.   The longest retrieval time for the system is less than 150 seconds. Such system can be installed relatively quickly in both indoor and outdoor car parks, which is critical for installing it in places such as short term tenancy open space car parking sites. The trial aims at confirming the retrieval time and obtaining information regarding the cost and time to set up a system. We also plan to devise mobile apps for car owners to check the real-time parking space availability of the system and book a time slot for advance car retrieval. Through the trials, we aspire to promote its application both within the government and the private sector in providing temporary yet effective solution to the shortage of parking space. We can see that the technology also has a great potential to solve car-parking issue especially during short-term Mega events.   As I mentioned earlier, EMSD has also taken up the role of the innovation facilitator with OCGIO and will help other government departments to identify suitable solutions on technological innovation. One of the major tools that we shall use to connect departments with relevant I&T market players to facilitate procurement with technological innovation is our E&M InnoPortal.   As I mentioned earlier, we also aim at expanding the E&M InnoPortal to connect GBA as well and this will give the I & T market players in Hong Kong one more channel to connect themselves with a much bigger market.   So, if there are any AmCham members here like to offer us your innovative products to improve the services of the Government, please feel free to make use of the E&M InnoPortal to show us your products. We are very pleased to connect you with the concerned bureaux & departments to put your products on trial.   When I first joined the Government in 1980's as an engineer, I was young and always had flights of fantasy about remotely monitoring the E&M installations in various government buildings.   When I shared the thought with my boss, he smiled and said, "Your idea is very interesting."   I thought the remarks was very encouraging although my idea, in fact, was not practical at all at that time. Now, 30 years later, my fantasy, remote real time

monitoring has become a normal practice in the reality. This is all because of innovation and technological advancement and sometimes its power is beyond our imagination.

May I show you a video "The Evolution of Technology", the video takes you on a journey from 1964 to the present, showing old technologies and their progression until they finally converge into one device, and seamlessly integrate themselves into our lives.   Dear friends, the video just shows what we most have witnessed and experienced in person, the changes arising from innovation and technological advancement in the past 55 years, which changed the world to a better and more connected place for all.

Now, may I appeal to everyone of you in AmCham, let us continue to work together for the betterment of the community through promotion of innovation and technology.   Thank you very much for your attention.

24 April 2019