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HKCS's Response to the 2021 Budget: Supports the Government to continue to Invest in the Development of I&T, Related Infrastructure and Scientific Research Applications Encourage Enterprises to Make Good Use of Technology, Cultivate I&T Talents And Support Technology Startups

February 24, 2021. Hong Kong—The Hong Kong Computer Society (HKCS) expresses support to the 2021 Budget delivered by Mr. Paul Chan GBS MH JP, the Financial Secretary today. The Budget clearly indicates its focus on the science and technology development in Hong Kong, for driving economic growth through innovation and technology (I&T), promoting and funding the development of local scientific research and I&T industries, and its emphasis in the use of technology to fight epidemics and prevent epidemics, re-industrialization, development of innovation and technology infrastructure, assistance to the youth I&T start-ups, further development of e-government services, the establishment of Hong Kong as an innovation and technology center in the Greater Bay Area in accordance with national policies, and funding the Hong Kong Trade Development Council to establish a virtual platform, etc. HKCS welcomes Financial Secretary's efforts in strengthening the nurturing of I&T talents starting from primary schools, regularizing the subsidies to short-term internships for I&T industry, creating a good investment environment in innovation and technology, attracting more innovation and technology talents to Hong Kong, and increasing funding to encourage the use of I&T in broader industries and enterprises, etc., and introducing related preferential policies and injecting funding, which are appreciated by HKCS.

Dr Ted Suen MH, President of the Hong Kong Computer Society, said: "As the most well-established and the largest ICT professional association in Hong Kong, the Hong Kong Computer Society fully agrees and supports the Government's emphasis in enhancing Hong Kong's competitiveness through innovation and technology. The Budget does not only demonstrate that the government will continue to invest in the development of innovative technology and related infrastructure, promote scientific research, nurture talents, encourage companies to make good use of technology, continue to develop e-government services, position Hong Kong as an innovation and technology center in the Greater Bay Area, to enhance Hong Kong's competitiveness in

the long run, it also announces a number of innovative technology policies, which we support and welcome."

Hong Kong Computer Society's Response to the Budget

Dr Suen pointed out that, in the past two years, HKCS had recommended that the government should try to fill the "digital skills gap" to support the large number of information and communication technology practitioners, to enhance their mastery of the new digital technology, and enhance the training of IT staff for the IT posts which are facing talent shortage. Some of the related remedial measures have been reflected in this year's Budget. Among them, the "Re-industrialization and Technology Training Program" has provided on-the-job training for over 3,500 employees of some 1,800 enterprises to enable them to better grasp the development of the new economy and I&T.

Nurturing IT Talent Starting from Childhood

Dr Suen said: "We are pleased to see that the government has responded positively to our demand for the nurturing of IT talents, such as strengthening STEM education in primary and secondary schools; extending the IT Innovation Lab in Secondary Schools Programme to primary schools, rolling out a "Knowing More About IT" Programme to enhance students' interests and knowledge in information technology and their applications through extra-curricular activities. HKCS is also willing to provide support to the IT talent training programmes of primary and secondary schools through its member network. We also strongly support the regularisation of government subsidies for students who study science and technology in local universities to enroll in short-term I&T related internships. The programme was launched last year as a pilot scheme, with overwhelming responses, and with eighty per cent of the interns indicating they would consider pursuing a career in I&T after graduation. This pivoted a very positive significance in local technological talent cultivation.

It is worth noting that, in support of professional talent development, HKCS has also been contributing to nurturing the next generation of IT talents through programs like iLEAP, which provides a forum, with mentorship and training, for senior IT practitioners to exchange knowledge, views, insights and professional/managerial experiences related to Information Management, Information Systems and

Information Technology; We have also been supporting gender diversity through HKCS FACE Club and nurturing future women leaders."

Launching the First Award to Recognise Pandemic I&T Solutions

With the epidemic, all walks of life are accelerating digital transformation, and information technology has also made a lot of contributions in the prevention and combat against the epidemic. Similar to many organisations and with more intensity, HKCS has been holding a large number of virtual webinars to support HK's IT community growth despite the pandemic.

Dr Suen pointed out that the "Pandemic Innovative Digital Solution Awards 2020" (PIDSA 2020) hosted by HKCS in the fourth quarter of last year is the first award in Hong Kong, that specifically recognise and award those outstanding IT innovation projects, solutions, products and applications that help the community prevent, combat or overcome the COVID-19 pandemic. The innovations by a total of nine local I&T enterprises and four local schools have won awards, including the electronic wristbands used for home confinement and the touchless lift button system praised by the Financial Secretary today. HKCS believes that information technology will make greater contributions to helping the society fight the epidemic and restore the operation of enterprises and education; and the recognition of awards will encourage more technology companies to participate in the development of anti-epidemic products and solutions, which will better benefit the society of Hong Kong.

Joining Force with Invest Hong Kong to Attract More Overseas Investment from I&T Enterprises

Dr Suen expressed deep support for the government's preparations to promote Hong Kong after the epidemic, including promoting Hong Kong's position as an innovation and technology center. Dr Suen pointed out that HKCS, as a member of the Executive Committee of the Asia Pacific Information and Communications Technology Alliance Awards (APICTA), which is broadly recognised as the "Oscar Awards" of ICT Industry, is responsible for the selection and nomination of outstanding entries that have won awards in the local information and communication technology industry to participate in the competition to promote Hong Kong's technology overseas, with outstanding results. HKCS is very pleased to cooperate with Invest Hong Kong, and work together to attract more overseas I&T enterprises to invest in Hong Kong.

Urging the Launch of Research Programme for "Congestion Charging" and Electronic Road Pricing Pilot Scheme

Dr Suen added, the government has been promoting the development of smart cities. However, most of the measures introduced in the past have focused on the overall policy level. This Budget states that the government will implement a series of urgently needed tasks, such as e-government services, the "iAM Smart", digital authentication platform for corporate entities etc., are all encouraging.

Dr. Suen said, "Personal data protection has been used as the scapegoat for the silo effects that we have seen in most of our public information systems. This has hindered the proper information exchanges among government agencies which are needed for effective governance and administration of public services. The iAM Smart services can be the catalysis of an important change that will allow citizens to opt-in and control the sharing of their personal data among government agencies. ."

HKCS also has high expectations for the "Congestion Charging" and the Electronic Road Pricing Pilot Scheme in Central by the Transport Department; It has been about thirty years since the project was proposed, and it is hoped that the research can be completed as soon as possible for its implementation.

Keeping Informed of the Status of Digital Tax Policy

The Organisation for Economic Co-operation and Development (OECD) is drawing up new proposals to address base erosion and profit shifting (BEPS 2.0), which include the introduction of a global minimum tax rate and a digital tax. The Financial Secretary stated that, as an international financial and business centre, Hong Kong will actively implement the BEPS 2.0 proposals according to international consensus.

"It is indeed progressively timely for the Budget Speech to brief the community on the preliminary views, from Hong Kong's perspective, on the OECD/G20 Base Erosion and Profit Shifting (BEPS) Project which focuses on possible solutions to governments for closing the gaps in existing international rules that allow corporate profits to 'disappear' or be artificially shifted to low/no tax environments, where little or no economic activity takes place. Given our mandate, HKCS is particularly interested in the Digital Tax component of BEPS, which deals with taxation issues in a digital economy, including internet commerce and crytocurrencies like Bitcoin. We look forward to be kept informed on this issue and where relevant to contribute our

IT-related Measures of Budget 2021

In the budget announced today, there are various IT-related measures, which include:

1. Encourage Good Use of Technologies to Combat Epidemics

- The Distance Business Programme was launched under the Anti-epidemic Fund ("AEF") to provide funding support for enterprises to adopt information technology solutions and cover the expenses for providing relevant training to their employees. An additional funding of \$1 billion will be subsequently allocated for the continuation of the programme and further enhancement.
- The Government will continue to support enterprises or manufacturers through, among others, the Public Sector Trial Scheme, the Technology Voucher Programme and the Re-industrialisation Funding Scheme in realising and commercialising their R&D outcomes, using technological services to improve their productivity or business processes, and setting up smart production lines in Hong Kong. This will enable them to better grasp the opportunities brought by the new economy.
- A total of \$375 million will be allocated to the Hong Kong Trade Development Council (TDC) in three years, for developing virtual platforms to enhance its capability to organise online activities and to proceed with digitalisation.
- Issue \$5,000 electronic consumption vouchers in instalments to each eligible Hong Kong permanent resident and new arrival aged 18 or above to facilitate and stimulate local consumption
- Once the pandemic further subsides, the Government will launch a large-scale publicity and promotional campaign at home and abroad, showcasing to the world the image of Hong Kong as a highly open international city in the Greater Bay Area from various perspectives such as finance, I&T, culture and creativity and tourism, as well as our unique advantages under "One Country, Two Systems". We hope to attract enterprises, investors and talent to Hong Kong.

2. Expediting the Progress of e-Government Development

- By mid-2022, unless there are legal or operational constraints, all government forms and licence applications can be submitted electronically.
- E-payment options (including the Faster Payment System) will be available for

- making payments in respect of most government bills and licences starting from mid-2022.
- The "iAM Smart", a one-stop personalised digital service platform, was launched at the end of last year. Members of the public can choose to obtain their data kept by individual government departments via electronic means, and submit such data electronically when applying for services from financial institutions.
- The HKMA is currently working with the Office of the Government Chief Information Officer (OGCIO) to develop the business version of the "iAM Smart" digital authentication platform. It can be used to authenticate the identity of enterprises through an electronic channel.
- The HKMA has commenced the development of "Commercial Data Interchange", which will allow commercial services operators to submit customers' data to financial institutions under the instruction and consent of their corporate customers so as to assist them in the application for services.
- The Transport Department will also continue the studies on "Congestion Charging" and the Electronic Road Pricing Pilot Scheme in Central with the aim of optimising the use of road space and relieving traffic congestion.

3. Promoting Use of Technology to Transform Business Sectors

- Financial Technology: With a view to fostering the development of more novel financial products, the HKSTPC and Cyberport will collaborate with the HKMA to attract more financial, technology or research institutes to set up laboratories in Hong Kong, with a focus on such areas as regulatory technology and cyber security, where Hong Kong enjoys clearest advantages. In addition to the Fintech Proof-of- Concept Subsidy Scheme announced in January this year, the HKMA is considering enhancing its Fintech Supervisory Sandbox by providing "throughtrain" vetting and funding arrangements for those promising Fintech solutions to reduce the time for the launch of innovative financial products in the market.
- LawTech: The Government has allocated \$100 million to promote the LawTech development, starting from this year, the platform will roll out negotiation, arbitration, mediation and online training services progressively and develop other services such as e-translation and smart contract in phases. This year, the Government will actively explore the development of the Hong Kong Legal Cloud, in order to sharpen Hong Kong's edge and raise our status in the provision of professional legal services.
- Cultural and Creative Industries: The Home Affairs Bureau has established an inter-bureau task force with \$100 million reserved to promote the integration of

arts and technology, and support arts groups and I&T savvy. Additional resources will also be allocated to promote the development of cultural and creative industries, so that young people can have more employment and business start-up opportunities for unleashing their potential and realising their dreams.

- Public Works: With \$100 million allocated for the development of the integrated digital platform in the last Budget, the platform will be implemented in phases from this year onwards for driving digitalisation of public works through data integration and analysis to monitor project performance continuously and enhance the management of capital works projects.
- Manufacturing Sector: The Re-industrialisation Funding Scheme, which was launched in mid of last year, provides subsidies, on a matching basis, to manufacturers for setting up new smart production lines in Hong Kong. The scheme has received 12 applications so far. The Advanced Manufacturing Centre in the Tseung Kwan O Industrial Estate and the Microelectronics Centre in the Yuen Long Industrial Estate, being developed by the HKSTPC, will be completed in the coming two years.

4. Continue to Promote Research and Development

- Amendments were made to the Inland Revenue Ordinance in late 2018 to provide for enhanced tax reduction for qualifying R&D expenditure so as to encourage enterprises to devote resources to local R&D. The measure has delivered notable results. Since permission was granted for the remittance of Mainland R&D funding to Hong Kong, the Ministry of Science and Technology, Guangdong Provincial Government and Shenzhen Municipal Government in the past two years have approved over RMB 340 million for universities and research institutes in Hong Kong to conduct R&D or set up laboratories.
- The "InnoHK Research Clusters" which comprises Health@InnoHK on healthcare technologies and AIR@InnoHK on artificial intelligence and robotics technologies, has attracted many top-notch universities and research institutions in the world. The first batch of about 20 R&D laboratories will commence operation progressively in the first quarter of this year.
- Two years in a row, \$4,750 million per year will be injected to Innovation and Technology Fund (ITF), to sustain its 17 funding schemes as well as the work of over 50 R&D laboratories in the next three years.

5. Nurturing and Pooling Talents

- The Standing Committee on STEM Education of the Curriculum Development Council steers and promotes the long-term development of STEM education in primary and secondary schools, as well as reviews continuously the relevant curriculum.
- Over \$200 million will be set aside to extend the IT Innovation Lab in Secondary Schools Programme to primary schools. Funding of up to \$400,000 will be provided to each subsidised primary school in the coming three school years, thereby rolling out a "Knowing More About IT" Programme to enhance students' interests and knowledge in information technology and their applications through extra-curricular activities. The OGCIO will set up a one-stop support centre to provide assistance for primary schools.
- The pilot scheme, under which subsidies are provided for students who study science and technology in local universities to enrol in short-term I&T related internships, was implemented last year. Given the overwhelming response, eighty per cent of the interns indicated that they would consider pursuing a career in I&T after graduation. Therefore, the Government announced that the scheme would be regularised.
- Involving an expenditure of about \$2 billion, the Government will launch a Global STEM Professorship Scheme in the first half of this year, to support universities in attracting world-renowned I&T scholars and their teams to Hong Kong to participate in STEM teaching and research.
- The Government will continue to support the programmes for nurturing I&T talent, including the Research Talent Hub, The Re-industrialisation and Technology Training Programme, etc. The Greater Bay Area Youth Employment Scheme launched early this year also provides around 700 I&T places to encourage enterprises to employ Hong Kong's university graduates so that the latter can undertake I&T- related work and receive on-the-job training in Hong Kong and another city in GBA.

6. Supporting Youth Enterpreneurship

- The Government will continue to support start-ups through various means, including strengthening the support of the HKSTPC and Cyberport for their tenants and incubatees, backing university start-ups through the Technology Start-up Support Scheme for Universities, making use of the Innovation and Technology Venture Fund for co-investing with venture capital funds in local technology start-ups.
- The TDC will explore the use of its physical and online Business- to- Consumer

- platforms to assist young business starters in promoting their original products and gauging the preference of consumers.
- The Innovation and Technology Venture Fund (ITVF) appointed three new coinvestment partners late last year, and it continue to partner with venture capital funds to invest in local start-ups.
- The HKSTPC and Cyberport will inject \$350 million and \$200 million into the two Funds respectively and extend their scope to cover Series B and later stage investments.
- Continue to support the Technology Start-up Support Scheme for Universities. Among those start-ups which have benefited from the Scheme since inception, over half of them have launched their products in the market, more than 40 per cent have earned revenue and about 60 per cent have received capital injection from investors with a total amount of some \$530 million.

7. Development of IT Infrastructure

- Various innovation and technology infrastructures have been available in the market, including the expansion of the two buildings under Stage 1 of the Science Park Expansion Programme, the Data Technology Hub (DT Hub) in the Tseung Kwan O Industrial Estate, the InnoCell adjacent to the Science Park, etc. It will continue its works in Science Park expansion and Cyberport 5 development.
- Pressing ahead the development of the Hong Kong-Shenzhen Innovation and Technology Park (the Park) in the Lok Ma Chau Loop. A provision of about \$32.5 billion has been approved for the project. Works have already commenced. The first batch of facilities is expected to be completed in phases from 2024 to 2027
- On digital infrastructure, the coverage of 5G network in Hong Kong is now over 90 per cent. The subsidy scheme for expanding fibre-based network to villages in remote areas will be completed in phases from this year onwards. It will continue to support the development of 5G networks and applications; release more 5G spectrum in different frequency bands; facilitate the setting up of radio base stations by operators at suitable government venues and public facilities; assist in the relocation of the Tai Po satellite earth stations; and provide land at Chung Hom Kok Teleport for the development of infrastructure to connect with external telecommunications facilities.

Hong Kong Computer Society's Further Recommendations on Budget 2021

Dr. Suen said: "Apart from the actions stated in the Budget 2021, the HKCS would urge the Government to focus strategically and holistically on the following recommendations."

1. Establish a Smart City Advisory Committee

- It is recommended to widely invite participants from technology industry, academics, and foreign experts to form an advisory committee, to provide more diversified suggestions on the government's planning of smart city development.
- Numerous local experts under the umbrella of the Hong Kong Computer Society are also happy to provide professional advice on the development of innovation and technology and smart cities for the government.

2. Strengthen the support of the digitisation for disadvantaged communities

 The government should allocate additional resources to support non-governmental organizations and charitable service groups to carry out operations electronically.
 Even when the relevant personnel are working at home, the recipients can still obtain the required services online.

3. Analyzing social sentiment with big data

At present, many young generations in the society have different opinions and voices on government administration. It is necessary for the government to strengthen the reach-out to the public opinions. It is recommended to use big data and artificial intelligence technology to analyze the data of young generations, that are collected through outreach and liaison activities. Through analysis, to understand and predict changes in social sentiment, so that the Government would be able to more accurately get hold of the public opinions as reference for formulating policies, with the corollary to create new programs to mobilize the youth community so that they can actively and positively contribute to the Hong Kong community.

4. Open Data Policy

The government's Policy Address for the past two years has mentioned the policy goal of open data. However, in the past two years, progress has been slow. The Hong Kong Computer Society recommends that the Policy Address can include proposals of more effective and clear implementation methods to achieve the goal; and set up an open

priority, based on the value of the data to the business community and the public. It is recommended that the government should conduct adequate consultation with all major stakeholders, including government departments, public and private organizations, security and privacy professionals, and open service providers, to develop an open data framework. It is particularly important to establish clear guidelines on risks and benefits of data privacy, as well as the awareness and participation of the community and stakeholders in the open data policy, during the different stages of the adoption. And it is essential to use various technical and administrative measures to reduce the risk of personal data privacy intrusion.

5. Artificial Intelligence Policy

In the digital age, it is inevitable that artificial intelligence and machine learning will affect Hong Kong's economic and social development. The government should develop artificial intelligence policies to support the application of related technologies and supervise their applications and formation in various important services. Policies should include ethical requirements for the application of artificial intelligence, technological development, compliance with individual industry legal requirements, data sharing policies, privacy and compliance, etc. It is recommended to establish a high-level advisory committee to supervise its development. The committee must analyze and deal with the many traditional types of jobs that are likely to be eliminated due to the emergence of artificial intelligence, including the impact on the labor market, ways to assist in labor transformation, social expectation management for labor market changes, retraining and skill upgrading of labor, etc. All the above factors require strategic cooperation from the government to prepare the next generation for the digital transformation society to ensure the stability and prosperity of Hong Kong. .

About the Hong Kong Computer Society (HKCS)

Founded in 1970, the Hong Kong Computer Society (HKCS) is a recognised non-profit professional organisation focused on developing Hong Kong's Information Technology (IT) profession and industry. Their members come from a broad spectrum of Hong Kong's IT community, from corporations to like-minded individuals, all coming together to raise the profile and standards of the IT profession and industry. As a well-established IT professional body, the Society is committed to professional and industry development as well as community services to ensure the IT sector continues to make a positive impact on peoples' lives with three main goals, namely, 1) talent cultivation

and professional development, 2) industry development and collaboration, and 3) the effective use of IT in our community.

For more details, please visit http://www.hkcs.org.hk.

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