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# Hong Kong Computer Society's Feedback to the 2023 Budget: Support the Government to Continue to Invest in I&T Development To Promote Digital Economy and Digital Infrastructure It is Recommended to Establish KPIs to Measure Grant Effectiveness And Focus on the Retraining Needs of IT Practitioners

February 22, 2023 Hong Kong — The Hong Kong Computer Society (HKCS) expressed support to the 2022 Budget delivered by Mr. Paul Chan, the Financial Secretary today. The Budget clearly indicated its focus on Hong Kong's I&T development, including promoting the development of digital economy and digital infrastructure. It strives to deploy resources to welcome the third-generation Internet era (Web 3); to further enhance basic research in frontier technology fields such as AI and quantum technology; to support the establishment of a Microelectronics Research Development Institute; to continue to support digital transformation of all walks of life; to grasp the opportunities of national policies to build Hong Kong into an International GreenTech and GreenFi Centre as well as International Innovation and Technology Centre in the Greater Bay Area (GBA), etc. The Budget also promises to continue to invest resources to promote and subsidise local scientific research, support start-ups, strengthen training for Fintech talents and devote funding to support secondary schools to hold technology-related extracurricular activities, relax the listing requirements for I&T companies, and implement the development of the Northern Metropolis and San Tin Technopole, etc. Nevertheless, HKCS recommends the Government to set up KPIs for the effectiveness of various grants, and enhances focus on the retraining needs of practitioners in the I&T industry.

Dr. Rocky Cheng, President of HKCS, said: "The Government released, at the end of last year, the "Hong Kong Innovation and Technology Development Blueprint" and set out eight major strategies under the four broad development directions. In the Budget announced today, it highlighted that the Digital Economy Development Committee is currently undertaking in-depth studying on the four major areas to explore, namely, the digital infrastructure needed to promote the development of digital economy, cross-boundary data transfer in a convenient, efficient and secure manner, digital transformation of enterprises and human resources support, so as to promote the development of the digital economy in Hong Kong. To these endeavours HKCS expresses its support. Despite the current deepening fiscal deficit situation, we feel encouraged to see that the Government still proposed, in the Budget, to allocate

concrete funds for many fields of innovation and technology. It is a clear demonstration of the Government's determination and vision to promote the development of I&T in Hong Kong and establish the city as an international innovation and technology center."

#### It is recommended to set up KPIs for the effectiveness of various grants

Dr. Rocky Cheng continued: "This year's Budget clearly shows the Government's determination and vision in I&T promotion; however, in the implementation front, in order to ensure more effective use of resources, we recommend setting up key performance indicators (KPIs) for each grant. Through multi-layered analyses and regular monitor and progress reporting, assurance is achieved for each budget responsible unit to reasonably approves and utilizes the funds, as well as effectively monitor their execution. We also hope that the Government can maximise the value of the fiscal budget, use it where it is most needed, and use it properly to fittingly match with the corresponding indicators, so that citizens can enjoy the results and benefits, or can see the value for the future."

The HKCS expressed its appreciation for the many new measures in the budget to promote the digital economy. Among them, in the development of digital infrastructure, the Government will conduct a feasibility study on the establishment of an artificial intelligence supercomputing center; earmark a sum of about \$200 million to enhance the operation of the "iAM Smart" platform, so as to further promote "Smart Government" and digital transformation of the whole society; and provide tax deduction for the spectrum utilisation fees to be paid by the future successful bidders of radio spectrum. In order to promote the digital transformation of enterprises, the budget set aside \$500 million for Cyberport to launch a Digital Transformation Support Pilot Programme, with which subsidies will be provided on a one-to-one matching basis to assist SMEs in applying ready-to-use basic digital solutions; and the Hong Kong Productivity Council (HKPC) launched the Biz Expands Easy one-stop online platform last September in order to make the Technology Voucher application process smoother.

In addition, in order to prepare for the era of the third generation Internet (Web3), following the establishment of the Web3 Hub@Cyberport in Cyberport early this year, the Government will allocate \$50 million to expedite the Web3 ecosystem development by, among other things, organising major international seminars, to enable the industry and enterprises to better grasp frontier development and to promote cross-sectoral business co-operation, as well as arranging a wide array of workshops for young people. Regarding Virtual Assets (VA) as an integral part of a vibrant Web3 ecosystem, the

Government will establish and lead a task force on VA development, with members from relevant policy bureaux, financial regulators and market participants, to provide recommendations on the sustainable and responsible development of the sector. The HKCS believes that this move is far-sighted and can make early deployments for Hong Kong to embrace the future of the Internet era.

In terms of Fintech development, the Government has plans to accelerate the development of Hong Kong into an International GreenTech and GreenFi Centre in five directions, including building a green technology ecosystem, green financial application and innovation, green certification and alignment with international standards, training for talents and enhancing the exchange and co-operation with the GBA and international markets. HKCS believes that this is the right direction and trusts that information technology will play an important role. In addition, the Government began to make use of tokenisation technology in the process of bond issuance, and continued to take forward the application testing and preparatory work for various Fintech infrastructure projects such as "e-HKD" and "e-CNY" as cross-boundary payment facilities; link the Commercial Data Interchange (CDI) with Consented Data Exchange Gateway, and to launch a "Fintech Internship Scheme for Post-secondary Students" to deepen the development of Fintech in Hong Kong.

## The Government Should Devote Attention to the Retraining Needs of I&T Practitioners

Dr. Rocky Cheng stated that the Government will conduct a feasibility study on the development of an AI Supercomputing Centre, intend to establish a microelectronics research and development institute, promote the Web3 ecosystem and further enhance basic research in frontier technology fields such as AI and quantum technology, etc, these endeavours are all the deepening of our FinTech development.

"We hope that the relevant feasibility study on the establishment of the artificial intelligence supercomputing center can be carried out at full speed. Thus, the artificial intelligence supercomputing center can be completed in Hong Kong in its shortest time, and be able to provide a stronger computing power foundation for the development of local scientific research and artificial intelligence industries, so as to catch up with the fast moving international I&T development. HKCS welcomes the SAR Government's proposal to establish a microelectronics research and development institute to promote the long-term development of microelectronics in Hong Kong. The semiconductor industry is one of the most important development directions of our country at present,

and it is also the key technology for promoting the development of high-tech and telecom industries. Hong Kong has always experienced R&D talents in the semiconductor field, mastering cutting-edge chip design technology. We believe the microelectronics research and development institute has sufficient qualifications to develop into an APAC leading organisation in supporting the microelectronics industry development in the region, and help to drive the national I&T development." Dr. Rocky Cheng further said.

Dr. Rocky Cheng said: "The Hong Kong Computer Society has always aimed to promote the industry's professional development and cultivate young talents. The Government's deployment for meeting the future technological era is in line with HKCS's direction of keeping pace with the times. In recent years, HKCS has established five specialist groups of Artificial Intelligence, Enterprise Architecture, FinTech, Cyber Security and Innovation and Entrepreneurship, as well as devoted resources in the promotion of professional certification and related training of Fintech area, etc., which are the measures directly responding to market needs. Our five specialist groups bring together industry elites and are also willing to provide the Government with relevant recommendations and suggestions. We sincerely look forward to contributing to the preparation for Hong Kong to step into the new technology era."

Dr. Rocky Cheng added: "The Hong Kong Computer Society believes that, to meet the needs of the new technology era, talents are indispensable, and I&T practitioners should have life-long learning. Thus, we have launched various technical courses, and actively been cultivating a new generation of leaders in the technology industry, leveraging our IT Leadership Accelerator Platform, or iLEAP. Therefore, we also recommend the Government to devote attention to the retraining needs of information technology practitioners, and help them in life-long learning, as well as to master various emerging technologies in a timely manner. With these, Hong Kong's I&T industry can be equipped with a talent pool with continuous new force that keeps pace with the times, which in turn, enables us to contribute to Hong Kong's development as an international innovation and technology center, an international green technology and financial center."

## **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 <a href="http://www.hkcs.org.hk">http://www.hkcs.org.hk</a>.

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**Appendix: IT-related Measures of Budget 2023** 

#### **Appendix: IT-related Measures of Budget 2023**

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

# 1. Expediting the Progress of Digital Economy Development, digital infrastructure and e-Government Development

- The Digital Economy Development Committee is undertaking in-depth studies on four major areas to explore, namely, the digital infrastructure needed to promote the development of digital economy, cross-boundary data transfer in a convenient, efficient and secure manner, digital transformation of enterprises and human resources support. The four sub-groups under the committee will provide specific recommendations to the Government this year.
- The Government will conduct a feasibility study on the development of an AI Supercomputing Centre. The study will be completed in 2023-24.
- The Government will earmark a sum of about \$200 million to enhance the operation of the "iAM Smart" platform, so as to provide members of the public with more convenient one-stop digital services and improve user experience. The wider use of "iAM Smart" will further promote "Smart Government" and digital transformation of the whole society.
- To encourage telecommunications network operators to more actively invest in infrastructure for providing better communication services to companies and the public, it is proposed to provide tax deduction for the spectrum utilisation fees to be paid by the future successful bidders of radio spectrum.

### 2. Well preparing for the new technology development

- The Internet has been undergoing continuous development and evolution. Every generation of technological reform brings about new applications and fresh opportunities, and even disrupts the mode of business operation. The third generation Internet (Web3), currently in its start-up period, has the same huge potential. Cyberport established the Web3 Hub@Cyberport early this year. The Government will allocate \$50 million to expedite the Web3 ecosystem development by, among other things, organising major international seminars, to enable the industry and enterprises to better grasp frontier development and to promote cross-sectoral business co-operation, as well as arranging a wide array of workshops for young people.
- Virtual assets (VA) are an integral part of a vibrant Web3 ecosystem. The policy

statement on VA issued in October last year has set out the Government's policy stance and approach towards the relevant sector. The market has responded proactively. Over the past few months, a large number of innovative enterprises with potential have been considering setting up business in Hong Kong. For the next step, a task force on VA development, with members from relevant policy bureaux, financial regulators and market participants, will be established to provide recommendations on the sustainable and responsible development of the sector.

- To further enhance basic research in frontier technology fields such as AI and quantum technology and to better realise our basic technology research capabilities in making breakthroughs out of the blue, the Government will earmark \$3 billion to promote the development of relevant facilities, in particular, to leverage Hong Kong's unique advantage as a platform for international scientific research collaboration and attract leading I&T talents, research teams and enterprises from the Mainland and overseas to Hong Kong, thereby promoting cross-sectoral research cooperation.
- Microelectronics is the core technology in high-tech and information industries. Given the rapid growth of its global demand, microelectronics has infinite room for development and Hong Kong must seize this opportunity. The Government will support the establishment of a Microelectronics Research and Development Institute to promote microelectronics development in Hong Kong, aiming to make it a leading organisation for supporting microelectronics development in the Asia-Pacific region. The Institute will be tasked with strengthening collaboration with universities, R&D centres and the industry and expediting the "1 to N" transformation of technological outcomes. This will help pool together Mainland and overseas talents in relevant fields and strengthen the nurturing of local R&D talents, thereby further enhancing the I&T ecosystem.

#### 3. Promoting Use of Technology to Transform Business Sectors

- For all business sectors:
  - \$500 million would be set aside for Cyberport to launch a Digital Transformation Support Pilot Programme, under which subsidies will be provided on a one-to-one matching basis to assist SMEs in applying ready-to-use basic digital solutions, thus facilitating their digitalisation.
  - The Technology Voucher Programme was launched by The Government to support enterprises to use technologies to enhance productivity and upgrade

or transform their business processes. To assist enterprises in better developing digital support facilities as well as carrying out upgrade and transformation, the Hong Kong Productivity Council (HKPC) launched the Biz Expands Easy one-stop online platform last September in order to make the funding application process smoother.

#### Tourism industry,

- The Government will inject \$30 million into the Information Technology Development Matching Fund Scheme for Travel Agents, with the aim of encouraging the industry to undergo upgrade and transformation by making use of technology.
- Aviation, Maritime and Logistic Industry
  - Under the development strategy of the Airport City, the HKIA is also actively taking forward the integrated commercial development project of SKYCITY. Moreover, logistics infrastructure will be strengthened to further expand the business of high-value goods and e-commerce. With its advantages in terms of geography, infrastructure and transportation, the site will be developed into a vibrant hub of commerce, conventions and exhibitions, tourism, lifestyle and logistics.
  - In order to further promote the development of Hong Kong as an international maritime centre, the Transport and Logistics Bureau will set up a task force with the aim of putting forward, in collaboration with the Hong Kong Maritime and Port Board and representatives of the high-end maritime services industry, an action plan on the following strategies by the end of this year. These strategies include:
    - enhancing business sectors such as ship finance, marine insurance, maritime arbitration and ship management, thereby enabling Hong Kong to become a global leading high-end maritime service market;
    - facilitating transformation of global maritime and port business towards zero emission;
    - promoting the development of smart initiatives and digitalisation in the maritime industry;
    - promoting exchanges and collaboration among maritime industries in the GBA and those around the world.
- International Legal and Dispute Resolution Services
  - The Department of Justice (DoJ) has set up a task force, comprising experts and academics, to study various measures for facilitating exchanges among the people and businesses in the area. The DoJ will seek to establish and promote the use of a common online mediation platform for dispute

resolution in the GBA, with a view to providing a more convenient, efficient and cost-effective means for people and businesses in the GBA to settle cross-boundary disputes online.

#### Agriculture and Fisheries Industry

■ The Government has attached importance to the local agriculture and fisheries industry and is committed to promoting its modernisation and sustainable development. It supports the sector in the application of advanced technology and intensification of production, as well as helping it seize the opportunities arising from the GBA development.

#### Construction Industry

- To further strengthen the advantages of our construction industry, the Government will promote the extensive application of advanced technologies in the construction industry to improve construction methods and materials.
- \$30 million was earmarked for the Development Bureau (DEVB) to conduct a study on establishing the Building Testing and Research Institute and to carry out related planning and preliminary design. Apart from R&D activities for innovative materials, construction methods and technologies, the centre will also devise standards, conduct testing and provide accreditation to spearhead innovation in the construction industry and attract R&D talent to Hong Kong. The centre will also capitalise on Hong Kong's unique advantages to provide a platform for our country's construction standards and related products to align with those in the international market.
- \$30 million was also earmarked for conducting a study on the construction of the first advanced construction industry building at a site of about three hectares in Tsing Yi, carrying out planning and preliminary design work as well as advising on its mode of operation. The conceptual idea is to provide space for operators to set up steel reinforcement bar prefabrication yards, processing sites for Multi-trade Integrated Mechanical, Electrical and Plumbing (MiMEP), and other advanced manufacturing yards in the multi-storey building.

#### • Public Healthcare Services

The Hospital Authority will introduce a new service for drug collection and delivery by phases, and further promote tele-consultation services.

#### Support Ageing in Place

■ The Government will set up 16 new neighbourhood elderly centres in the next five years and expand the service scope of a total of over 200 district

elderly community centres and neighbourhood elderly centres in the fourth quarter of this year to cover retirement planning and promotion of gerontechnology.

#### 4. Actively Align with National Development Strategies

- International Innovation and Technology Centre: Hong Kong has to better capitalise on its advantage as an international I&T centre. Apart from strengthening co-operation with the Mainland and overseas, we should also make good use of the vast Mainland market as well as the regional advantages of the GBA. Furthermore, we have to pool the efforts of Government, industry, academic and research sectors to commercialise research and development (R&D) results and promote the development of I&T industry.
  - The Development of life and health technology
    - ♦ Announced in last Budget that \$10 billion would be earmarked to further promote the development of life and health technology in Hong Kong. In a bid to enhance support for the transformation of R&D outcomes as well as R&D activities related to life and health technology, the Government will set aside \$6 billion out of the above provision to provide subsidies for universities and research institutes to set up thematic research centres. The aims are to foster cross-university, cross-institutional and multi-disciplinary co-operation.
    - ◆ The Government will invite universities and research institutes interested in setting up life and health technology research institutes to submit proposals in 2023-24.

#### ■ To Support Start-up

- ◆ To step up investment in technology start-ups, the HKSTPC will inject \$400 million into its Corporate Venture Fund to help more technology start-ups with potential.
- ◆ The HKSTPC will, through consolidating its existing Acceleration Programme and injecting an additional amount of \$110 million, launch the Co-acceleration Programme in collaboration with cooperation partners to support the growth of technology start-ups with high potential into regional or global enterprises.
- ◆ To tie in with the policy of developing smart city and digital economy, the Government will earmark \$265 million for Cyberport to launch a dedicated incubation programme for smart living start-ups, under

which a maximum grant of \$500,000 as well as targeted professional support and counselling will be provided.

- Supporting New Industrialisation
  - ♦ Advanced manufacturing activities generate R&D demand and encourage private enterprises to invest more resources in R&D work, thereby supporting Hong Kong in developing into an international I&T centre.
  - ◆ The Advanced Manufacturing Centre (AMC) in the Tseung Kwan O InnoPark was opened in April 2022, providing advanced manufacturing space of about 110 000 square metres. Tenants which have already moved in include enterprises engaged in the manufacturing of civilian satellites and advanced materials as well as provision of smart logistics-related services.
  - ◆ To tie in with the policy objectives of attracting strategic enterprises to establish a presence in Hong Kong and promoting new industrialisation, the Government will plan ahead to provide more advanced manufacturing space, including to support the setting up of the second AMC, on which the HKSTPC is currently conducting a feasibility study.
- The Government will allocate additional funding of about \$200 million to the Hong Kong Tourism Broad for stepping up its efforts in securing the staging of more international meetings, incentive travels, conventions and exhibitions (MICE) of various scales and types in respect of finance, innovation and technology (I&T), medicine, etc. in Hong Kong.
- In support of the Happy Hong Kong Campaign, organisations like Hong Kong Cyberport Management Company Limited (Cyberport) and Hong Kong Science and Technology Parks Corporation (HKSTPC) will each hold themed fairs, carnivals or other activities this year.
- International Centre for Green Technology and Finance: Hong Kong must actively seize the opportunities brought by our country's dual carbon strategies at the right time. We should also leverage our strengths under "One Country, Two Systems" and as an international financial centre to accelerate the development of Hong Kong into an international centre for green technology and finance. We will proceed in five directions, namely:
  - building a green technology ecosystem to attract top-notch enterprises or start-ups to set up their operations, encourage efficient interaction among industry, academia and research sectors to commercialise R&D outcomes, and boost the demand for green technology through policy support;

- green finance application and innovation: facilitating green projects to obtain capital more conveniently and flexibly through financial innovations apart from traditional financing channels;
- green certification and alignment with international standards;
- training for talents;
- enhancing the exchange and co-operation with the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) and international markets.
- The Government will set up a Green Technology and Finance Development Committee, inviting industry representatives from green technology, green finance and green standard certification, etc. to assist in the formulation of an action agenda for promoting the development of Hong Kong into an international green technology and finance centre. The Government will organise an International GreenTech Week at the end of this year to pool together representatives, enterprises and investors from the green technology industries around the world.

### **Supporting the Growth of Fintech**

- Continue to take forward the application testing and preparatory work for various financial technology (Fintech) infrastructure projects, including "e-HKD" and "e-CNY" as cross-boundary payment facilities.
- The HKMA is currently working with the Bank of Thailand to explore the use of Hong Kong's Faster Payment System and Thailand's PromptPay by visitors from the two places for local payment, providing them with another safe, fast and effective payment option.
- The Commercial Data Interchange (CDI) will be linked to the Consented Data Exchange Gateway developed by the Office of the Government Chief Information Officer at the end of this year, thus allowing financial institutions to obtain relevant data after receipt of their clients' authorisation, thereby enhancing the efficiency of providing financial services.
- Use of tokenisation technology:
  - The Government just issued the inaugural one-year tokenised green bonds last week, making use of tokenisation technology in the process of bond issuance, including coupon payment, secondary trading and maturity redemption, etc. Institutional investors were the targets of this pilot issuance which explores the compatibility of Hong Kong's existing legal framework and financial infrastructure with tokenised issuance.
  - Hong Kong will consolidate the experience gained, review the development

potential and prospects of tokenised bond issuance in Hong Kong, and consider policy initiatives to promote the wider use of tokenisation technology in our capital market.

#### **Nurturing and Pooling Talents**

- To further nurture Fintech talents, the Government will launch a Fintech internship scheme for post secondary students, under which subsidies will be provided to participating students in Hong Kong and the GBA. The scheme facilitates eligible students to acquire practical work experience in Fintech enterprises in Hong Kong or the wider GBA, and helps them develop an early interest in pursuing a career in Fintech after graduation, with a view to enlarging the local Fintech talent pool.
- The Government will make an additional funding of \$300 million to continue providing subsidies of up to \$1 million for each publicly-funded secondary school in the next three academic years for organisation of IT-related extra-curricular activities.

#### **Launching of IT Related Policy**

- After consulting the market, the HKEX will introduce a listing regime for advanced technology companies in the first quarter of this year to expand the listing channel for issuers. The HKEX will also put forward specific reform recommendations on GEM within this year after carefully considering the views of various market players on the financing needs of SMEs and start-ups, and consult stakeholders.
- The Northern Metropolis Development
  - The Government will start off by commencing consultation in the second quarter on the development proposals and land use planning of San Tin Technopole, the flagship I&T project in the region covering 150 hectares of new land for I&T uses.
  - The first three buildings of the Hong Kong-Shenzhen Innovation and Technology Park in the Lok Ma Chau Loop will be gradually completed from end-2024 onwards.
  - The site formation works of the first batch of new land for I&T uses at San Tin Technopole will commence in the same year.
  - The additional space made available will facilitate the recruitment of Mainland and overseas I&T enterprises to establish a presence in Hong

Kong.

- Strengthen the Intellectual Property Regime
  - The Government will continue to allocate resources to further promote and develop the "original grant patent" system to tie in with Hong Kong's I&T development. An additional funding totalling \$10 million will be allocated to the Intellectual Property Department in the next two years for employing and nurturing its patent examiners as well as progressively developing a talent pool, with a view to acquiring institutional autonomy in conducting substantive patent examination by 2030.
  - The Government will also continue to enhance the IP regime. To strengthen copyright protection in the digital environment, the Copyright (Amendment) Ordinance 2022 will come into operation on 1 May this year, following which the Government will embark on a new round of review as soon as possible as part of our ongoing efforts to enhance the competitiveness of our copyright regime.
  - The Government also plan to table the relevant subsidiary legislation for implementing the Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks in the LegCo in the first half of this year, with a view to putting in place the international trademark registration system under the Protocol as early as possible. This will enable trademark owners to register and manage their trademarks in multiple jurisdictions under one single application.
  - To encourage the I&T sector to forge ahead with more R&D activities and create more patented inventions with market potential, the Government will introduce a "patent box" tax incentive to provide tax concessions for profits sourced in Hong Kong from qualifying patents generated through R&D activities. The Government will consult the trade on the "patent box" tax arrangements within this year and formulate a competitive concessionary tax rate applicable to Hong Kong. The target is to submit the legislative amendments to the LegCo in the first half of 2024.