For discussion
on 18 December 2018

Legislative Council
Panel on Commerce and Industry

City Innovation and Technology Grand Challenge

Purpose

      This paper seeks Members' support for the Government's allocation of $500 million to organise the City Innovation and Technology Grand Challenge ("City I&T Grand Challenge"), with a view to encouraging the community to use innovation and technology ("I&T") to tackle issues that are closely related to our daily lives and enhance the attention and focus of the society on I&T.

Background

2.   I&T is not a single industry, but a new model of development. The development of I&T is conducive to not only promoting diversified economic growth, creating new industries and employment opportunities, but also improving the quality of living. In her Policy Address delivered in October 2017, the Chief Executive outlined eight major areas in promoting I&T development in Hong Kong, with a view to developing the city into an international I&T hub in the Guangdong-Hong Kong-Macao Greater Bay Area. The Government has been actively implementing the relevant measures, among which are the completion of a series of I&T infrastructure in the coming few years[1]. The Innovation and Technology Bureau has also rolled out in recent years a number of new schemes and initiatives, including the enhanced tax deduction for research and development ("R&D") expenditure incurred by enterprises, the Technology Talent Admission Scheme, the Innovation and Technology Venture Fund, and other new programmes under the Innovation and Technology Fund.

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[1] Including Stage 1 of the Science Park Expansion Programme, two technology research clusters focusing on healthcare technologies and artificial intelligence/robotics technologies, InnoCell, Advanced Manufacturing Centre and Data Technology Hub, etc.

3.   With the implementation of various initiatives, the I&T ecosystem in Hong Kong has been significantly enhanced.   Apart from the settling of internationally renowned research institutions in Hong Kong, the number of local start-ups has also shown a continued growth in recent years.   According to the survey on Hong Kong's start-up ecosystem conducted by Invest Hong Kong, there are currently more than 2 200 start-ups in Hong Kong, representing a 40% increase as compared to the number in 2015.   Nevertheless, in order to successfully drive the comprehensive development of I&T in Hong Kong, other than providing diversified I&T infrastructure, capital and talent, it is also crucial to promote the application and popularisation of technology, and to blend I&T products and services in people's daily lives.

4.   We need to step up efforts to create a fervid I&T atmosphere and promote the use of I&T to tackle problems encountered in daily lives.   To this end, the Chief Executive announced in the 2018 Policy Address the allocation of $500 million to organise the annual City I&T Grand Challenge in the next five years.   This paper outlines the preliminary proposal for the competition.

Preliminary Proposal for the Competition

5.   The objectives of the City I&T Grand Challenge include: (a) creating a fervid I&T atmosphere and strengthening popular science education; (b) encouraging various sectors of the community to tackle livelihood issues with I&T; and (c) realising innovative ideas and inventions and bringing them into our daily lives.

6.   Currently, I&T-related activities and competitions are organised by various organisations and enterprises from time to time.   Some examples of local and non-local I&T competitions are listed at Annex.   Many of them aim at promoting popular science education, raising capital or matching investment. Compared to these competitions, the focus of the City I&T Grand Challenge is on identifying potential technology solutions for specific issues facing society and promoting trial of these solutions in relevant public sector organisations/communities, with a view to tackling vexing problems in communities on one hand, and on the other facilitating product development of innovative ideas and supporting the technology-based solutions in opening up market opportunities.

<u>Format</u>

7.   The City I&T Grand Challenge is open for participation from all walks of life in the community.   The competition is preliminarily proposed to be divided into two groups –

(a)   Open Group: covering interested individuals or teams, students or post-graduates of local tertiary institutions, and Hong Kong-registered companies or organisations.

(b)   Student Group: covering all students at or below secondary level from local registered schools.

8.   We will set a theme of the competition having regard to issues that are closely related to daily lives, such as environmental protection, medical and health, public hygiene, the underprivileged, transportation, etc., for participants to put forward solutions with I&T elements.   Participants shall offer I&T-based solutions for the theme, with the objective to improve the public's daily lives or benefit specific communities.

9.   Based on our initial idea, the flow of process of the City I&T Grand Challenge is by and large as follows –

(a)   Participants will submit a conceptual proposal in the first stage for preliminary assessment by an assessment panel. Outstanding entries will be shortlisted to enter the next stage of the competition;

(b)   Shortlisted participants will be arranged to attend different workshops on skills such as applied research and development, product design, maker skills, presentation skills, etc.;

(c)   On completion of the workshops, participants shall refine their conceptual proposal, provide a detailed proposal, and take part in the final competition to explain and present the proposal to the assessment panel.   The detailed proposal of Open Group participants shall include a specific plan on development and implementation; and

(d)   Winning entries of the Open Group may receive support on follow-up product development and implementation.

10.		We will engage the Hong Kong Science and Technology Parks Corporation ("HKSTPC") as a key partner to assist in organising the competition, with a view to leveraging its network and experience to more effectively promote active participation from I&T enterprises and schools.

Assessment Criteria

11.		We will set up an assessment panel comprising members from the I&T sector, professionals, investors, experts from specific fields, as well as representatives from relevant public organisations, government departments and the HKSTPC. The assessment panel will, with reference to pre-determined criteria, vet the various entries from perspectives of originality, feasibility, market potential, cost-effectiveness, social benefits and impacts of the solutions etc.

Awards

12.		Winners of the Open Group will receive cash prize and may be offered the opportunity to join the HKSTPC's Incubation Programme or other support programmes. Besides, we will select from the winning entries one or more solutions and assist their development of the technologies or concepts involved for trials in relevant public sector organisations/communities, and provide funding support for product development. The amount of funding support to be provided will depend on the solutions' specific content, technology field, nature, estimated cost of development, and the availability of other sources of funding/sponsorship, etc.

13.		Winners of the Student Group will receive scholarships and trophies, etc. We will also display the winning solutions in other I&T events organised by the Government or the HKSTPC. We wish to create a favourable atmosphere for I&T education through the competition and the awards, thereby stilmulating the younger generation's interest in I&T and STEM (i.e. Science, Technology, Engineering and Mathematics) -related disciplines and encouraging them to pursue a career in I&T for contributing to the society.

Monitoring Mechanism

14.		Regarding the funding support for realisation of the winning solutions, we will make reference to the existing funding schemes of the Government and formulate detailed funding guidelines for the City I&T Grand Challenge stating the rights and responsibilities of the stakeholders concerned, and devise a monitoring mechanism to ensure the proper use of public money. Specifically, the progress of the funded solutions will be monitored having

regard to the proposed implementation plans and schedules. Funding will be disbursed by instalments to the winners based on the relevant progress and the milestones in product development. In case of non-compliance with the funding agreements/guidelines or unsatisfactory progress of realisation of the solutions, the Government will withhold or terminate the disbursement of funding as appropriate.

15. We plan to review and enhance the format and details of the competition having regard to the response from the community at large after completion of the first City I&T Grand Challenge.

Financial Implications

16. The Government will allocate $500 million to implement the City I&T Grand Challenge. The relevant resources will be used to provide cash prize and other awards, support the realisation , refinement and trial of selected solutions, organise workshops, and cover the costs of competition venues, publicity and promotion as well as other expenses for organising the competition, etc. We envisage that the non-recurrent allocation of $500 million is sufficient to meet the expenditure of the City I&T Grand Challenge in the coming five years. As for the specific estimate, it will depend on the theme of the competition and the specific content of the solutions to be funded each year.

17. We will include sufficient provisions in the draft Estimates of the relevant years to meet the cost of the above proposal.

Advice Sought

18. Members are invited to note and provide views on the Government's proposal to organise the City I&T Grand Challenge.

Innovation and Technology Bureau
Innovation and Technology Commission
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**Examples of Innovation and Technology ("I&T") Competitions
in Hong Kong, Mainland and Overseas**

Hong Kong

Hong Kong Information and Communications Technology ("ICT") Awards

- Steered by Office of the Government Chief Information Officer of Hong Kong SAR Government, and organised by 8 organisations[1].

- Recognising and promoting outstanding ICT inventions and applications, thereby encouraging innovation and excellence among enterprises in pursuit of better and creative solutions to meet business and social needs.

- Target participants include Hong Kong registered companies, entities or residents and students in Hong Kong. Except for the student category, the submitted entry must have been available in the market for sale or download, or in live operation for at least 3 months.

- Winners will be offered trophies, participation in various marketing campaigns to promote their achievements and investment matching activities of the Hong Kong Business Angel Network, etc.

Elevator Pitch Competition

- Organised by the Hong Kong Science and Technology Parks Corporation.

- Providing a platform for global I&T talents to pitch their innovative ideas and connecting them with potential investors.

- Target participants include start-ups and children.

- Winners will be offered trophies, training in fundraising , cash prize etc.

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[1] Hong Kong Digital Entertainment Association, Hong Kong Institute of Bankers, Rotary Club of the HUB Hong Kong, Hong Kong Computer Society, Hong Kong Information Technology Federation, GS1 Hong Kong, Hong Kong Council of Social Service, Hong Kong Innovative Technology Development Association.

Jumpstarter

- Orgnaised by Alibaba Entrepreneurs Fund.

- Providing opportunities for start-ups to pitch their business ideas and network with potential business partners and investors.

- Target participants include start-ups and university students in Hong Kong.

- Winners will be offered cash prize, opportunities to showcase the achievements, business matching meetings with industry leaders and investors, Alibaba's internship, etc.

HSBC x HKET Innovative Business Award

- Organised by HSBC Commercial Banking and Hong Kong Economic Times ("HKET").

- Promoting a culture of entrepreneurship and continuous innovation across businesses in Hong Kong; recognising the outstanding achievements of Hong Kong enterprises and start-ups in technology application, innovative business model, products and services or technology breakthroughs; and encouraging the use of technology and innovation for new business development.

- Target participants include technology companies and start-ups registered in Hong Kong.

- Winners will be offered advertisement sponsorship, trophies, corporate exchange tour, etc.

HKUST One Million Dollar Entrepreneurship Competition

- Organised by Hong Kong University of Science and Technology ("HKUST").

- Providing a learning platform for HKUST and surrounding cities to create and evaluate new business and preparing students to start their future career in entrepreneurship.

- Target participants are students and startups.

- Winners will be offered trophies and cash prizes.

Mainland

China Innovation & Entrepreneurship Competition

- Organised by Mainland government authorities.

- Gathering and consolidating resources provided for innovation and entrepreneurship, fostering the community to support innovation and entrepreneurship, and establishing a platform to promote the culture of innovation and entrepreneurship, thereby driving economic development, transformation and upgrading.

- Target participants include I&T enterprises and start-ups engaged in research and development, manufacturing and services of high-tech products.

- Winners will be offered investment funding, training, support in fund raising, project development, etc.

China (Hengqin) Science and Technology Entrepreneurship Competition

- Organised by the Zhuhai Hengqin New Area Management Committee.

- Promoting the development of emerging industries in the Hengqin New Area; gathering innovative elements, such as high-tech entrepreneurial projects, venture capital institutions and technical experts, to form an influential innovation ecological chain and industrial eco-environment.

- Target participants are enterprises or teams that are interested in settling in Hengqin.

- Winners will be offered research and development funding.

<u>Overseas</u>

Asia Pacific ICT Alliance (APICTA) Awards

● Organised by APICTA[2].

● Stimulating ICT innovation in the Asia Pacific region; increasing ICT awareness in the community; providing opportunities for business matching between IT innovators and investors; and facilitating technology transfer and application.

● Target participants include companies registered in the respective APICTA member economies.

● Winner Prizes and Merit Prizes will be granted.

AI in Health Grand Challenge

● Organised by AI Singapore.

● Encouraging the development of innovative approaches that use AI to enhance health promotion and disease management in Singapore and the world.

● Target participants include research team from 6 Institutes of Higher Learning and/or A*STAR Institutes in Singapore.

● Winners will be offered cash prize.

European Social Innovation Competition

● Organised by the European Commission.

● Stimulating the potential of social innovation to provide solutions to societal challenges and foster sustainable growth in Europe. The competition will provide direct support to ideas that illustrate potential.

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[2] Established in Malaysia, APICTA organises the APICTA Awards annually in different cities in Asia. The 2018 Awards were held in Guangzhou.

- Target participants include individual or organisations from European Union member states and countries/area associated with Horizon 2020.

- Winners will be offered cash prize.

The Mayor of London's Civic Innovation Challenge

- Organised by the Greater London Authority.

- Offering an opportunity for start-ups to work together with leading corporates and public organisations to tackle London's most pressing problems in seven areas (namely, dementia services, active travel, electric vehicles, delivering affordable homes, financial inclusion and digital skills, loneliness and isolation and physical activity).

- Target participants include technology start-ups, or small and medium-sized enterprises registered in the United Kingdom.

- Winners will be offered cash prize and the opportunity to work with the public and private sectors to test and validate their solutions.

Global Impact Challenge ("GIC")

- Organised by Singularity University in the USA, with an organisation in the GIC hosting country/region as co-organiser.

- Finding innovative solutions to tackle challenges faced by specific regions (such as environment, energy, water supply, poverty, etc.) for the benefit of citizens in these regions.

- Eligibility criteria for participation differ for competitions co-organised in different countries/regions, e.g. application may only be open to residents of the hosting country/region.

- Winners will be offered scholarships by Singularity University.