

By hand and by fax at 2147 5770

30 December 2019

Mr Paul M P CHAN GBM GBS MH JP
Financial Secretary
24/F, Central Government Offices
2 Tim Mei Avenue
Tamar Hong Kong

Dear Mr CHAN

Paul,

2020-21 Budget

On behalf of the Institution, I am pleased to submit herewith our views and suggestions as set out in the enclosure for your consideration in the preparation of the 2020-21 Budget.

For the welfare of the community as a whole and the development of the profession, the Institution, with the expertise of our members, welcome the opportunity to support the initiatives of the Administration on areas of concern.

Thank you.

Yours sincerely

Ringo Yu

Ir Ringo S M YU
President
The Hong Kong Institution of Engineers

Enc

RSMY/WC/SW

Cc: Mr Edward YAU GBS JP, Secretary for Commerce and Economic Development
By Fax Mr Michael WONG JP, Secretary for Development
Mr Kevin YEUNG JP, Secretary for Education
Mr WONG Kam Sing GBS JP, Secretary for the Environment
Mr James LAU JP, Secretary for Financial Services and the Treasury
Mr LAU Kong Wah JP, Secretary for Home Affairs
Mr Nicholas YANG GBS JP, Secretary for Innovation and Technology
Dr LAW Chi Kwong GBS JP, Secretary for Labour and Welfare
Ir Frank CHAN JP, Secretary for Transport and Housing

Enclosure

Views from the Hong Kong Institution of Engineers to the Financial Secretary for the Formulation of the 2020-21 Budget

The Hong Kong Institution of Engineers (HKIE) supports the Administration to take immediate measures to overcome currently severe economy challenges being faced by all walks of life in Hong Kong. Recovering Hong Kong's economy, supporting enterprises, securing employment and improving quality of life to relieve the hardship of society would be the major tasks. For the long-term development, the continuous adoption of prudent yet innovative approach is considered important in shaping the economic landscape in Hong Kong. With the aspiration of enhancing competitiveness and improving the livelihood in Hong Kong, the HKIE would like to submit our views and suggestions to the Administration for the formulation of the 2020-21 Budget for the betterment of Hong Kong.

2. In recent years, the progress for funding approval has been sluggish. The Finance Committee (FC) of the Legislative Council approved HK\$69 billion of works-related funding last year (2018-19), leaving about HK\$74 billion's worth of works-related funding still pending approval¹. A number of funding proposals had been piled since last year, including but not limited to hospitals, schools, housing, and land formation etc. The delay has led to substantial lag in pace for the development in social and economic aspects of Hong Kong, and that initiatives for innovation and technology development have also been hindered. The HKIE suggests the Administration to uphold the interests of the whole society and consider all possible means in fast tracking the implementation of the projects and their studies to avoid impairments to the development of Hong Kong.

Land & Housing

3. Shortage of developable land is a severe challenge threatening Hong Kong resident's livelihood, as well as social and economic developments. According to the Hong Kong 2030+ Study led by Planning Department², it is noted that Hong Kong's land shortage for residential use, economic use and infrastructure and facilities is estimated to reach 815 hectares by 2026 and would be worsened in 2046 to 1,206 hectares. This poses negative impact on the living quality and business environment. The HKIE urges the Administration to allocate sufficient resources to take forward the applicable short-to-long-term land supply options and at the same time conduct studies to find out the best practical option that could yield land earlier to improve land supply in a timely manner. The HKIE supports the Administration to make bold investment and allocate financial reserve to enhance the capacity of land development, improve quality of living and strengthen environment conservation.

¹ The homepage of the Chief Secretary for Administration's Office, *Join hands with Legislative Council Improve livelihood and revive the economy*. Retrieved from <https://www.cso.gov.hk/eng/blog/blog20191013.htm>

² The Task Force on Land Supply, *Estimation of Overall Land Supply and Demand up to 2046 (hectares)*. Retrieved from https://www.landforhongkong.hk/en/demand_supply/land_demand.php

4. In order to expedite the land supply, the HKIE supports the Administration's continuous review of land use to gain the consensus of the community. The HKIE suggests reserving sufficient financial resources to invoke the Lands Resumption Ordinance to facilitate the identification of sites suitable for housing or other uses and to initiate change of their original land uses when required and where technically permitted. Regarding the development of brownfield sites, the Administration should have sufficient financial preparation for providing compensation to the, land owners, affected industries and existing operators.

5. In terms of developing the artificial islands in the Central Water, and reclamation projects on the northern side of the Lantau Island as well as the coastal areas of Tuen Mun, the Administration is suggested to inject more resources to monitor the project implementation in a timely, eco-friendly and cost effective manner, by applying modern technology as well as necessary mitigation and compensation measures. Substantial investment in the infrastructural facilities, especially transport infrastructure for the connection of the near-shore reclamation in identified sites, such as Siu Ho Wan, Sunny Bay and Lung Kwu Tan, to existing road networks, would be required to ensure the projects could be commenced as soon as possible.

6. The HKIE supports the setup of Sustainable Lantau Office to take forward the housing and economic development as well as conservation initiatives in Lantau. We suggest the Administration provide more funding to set up similar Offices to follow up on the implementation of land development projects in other districts.

7. To speed up Urban Renewal Authority's redevelopment projects, it is suggested that the Administration should reserve funding to support flat-for-flat Scheme and inject capital to increase the supply of flats under the Subsidised Sale Flat Scheme. Meanwhile, incentives should be provided for collaboration with the market and/or non-governmental organisations on social projects such as Youth Hostel Scheme to meet the relevant housing needs and improve the living condition of the disadvantaged.

8. Currently, there are about 149,500 general applications for public rental housing with an average of waiting time of 5.4 years³. Transitional housing project is one of the efficient ways to alleviate the hardship faced by families awaiting public rental housing or living in substandard accommodation. The HKIE supports the Administration to continue the transitional housing projects, which was announced in 2019 Policy Address to set aside \$5 billion to provide 10,000 units within three years, and to consider the extension of the scope by introducing more grants for basic and necessary rehabilitation works for those transitional housings utilising old vacant government sites and buildings. There should be more assistance to community organisations through the Task Force on Transitional Housing for exploring innovative construction technologies and technical solutions for modular housing units.

³ The Hong Kong Housing Authority (2019), *Number of Applications and Average Waiting Time for Public Rental Housing*. Retrieved from <https://www.housingauthority.gov.hk/en/about-us/publications-and-statistics/prh-applications-average-waiting-time/index.html>

9. Regarding the aged residential buildings that are not under the scope of redevelopment, the Administration is suggested to offer subsidy to needy owner-occupiers to conduct regular inspection and maintenance to secure the safety of the building and facilities.

10. Urban planning is a valuable force to achieve sustainable city development. According to the Projections of Population Distribution 2019-2028 prepared by the Planning Department, it is estimated that the population of all new towns would constitute 47.7% of the total Hong Kong's population in 2028⁴. The HKIE supports the Administration to invest in continuing the new town extension projects in the New Territories. It is suggested to offer incentives and provide technical support to encourage owners of industrial buildings to pursue redevelopment plans or wholesale conversion. Regarding private land development, it is suggested to offer incentives to encourage public-private partnership.

11. Saturation in the core of urban areas has been a problem under rapid economic growth in Hong Kong. The HKIE suggests the Administration reserve resources for the initiative of pursuing the "single site, multiple use" model in multi-storey developments for Government, Institution or Community (G/IC) sites and for urban or building rejuvenation.

Economy and Innovation

12. To strengthen the competitiveness of Hong Kong, the Administration should assist local enterprises to embrace the global opportunities and support them to cope with the imminent economic downturn.

13. The Administration should keep seizing the opportunities in Guangdong-Hong Kong-Macao Greater Bay Area (GBA) through boosting subsidies and support for young entrepreneurship and employment as well as Hong Kong's participation in construction projects in the region. The HKIE notes that the Administration has been working with non-governmental organisations in supporting youth entrepreneurship in GBA through Youth Development Fund. It is recommended that the scope could be expanded to include SMEs. Furthermore, the Administration should strengthen the publicity of various schemes available for Hong Kong enterprises.

14. We support the development of Shenzhen-Hong Kong Youth Innovation Entrepreneurship Base which provides synergy for young entrepreneurs to set up companies there. The Administration may continue liaising with the Mainland authorities in facilitating Hong Kong engineers and other professionals to obtain the necessary recognition for professional practice in the GBA.

15. For the advancement of Innovation and Technology (I&T), the Administration

⁴ The Planning Department (2019), *Projections of Population Distribution 2019-2028*. Retrieved from https://www.pland.gov.hk/pland_en/info_serv/statistic/wgpd19/tables/Locked_WGPD%20Report_2019-2028.pdf

should further capitalize Hong Kong's advantages in research and development capabilities and support the I&T industry, especially for start-up companies and SMEs. We welcome the Administration in 2019 Policy Address announcing the injection of \$500 million into the Social Innovation and Entrepreneurship Development Fund to further promote social innovation. The launch of Smart Government Innovation Lab this year showcases the connection of Government Departments with the information technology sector to help enhance the quality and efficiency of public services. To expand the positive impact, the Administration should also further encourage collaboration with the I&T industry in private sector.

16. We suggest the Administration provide incentives for the industry to invest in exploring the application of latest technology, for instance, Building Information Modelling, 3-D reality modelling, Internet of Things (IoT), Design for Manufacture and Assembly (DfMA), Artificial Intelligence (AI) in construction projects to improve productivity and quality and to reduce accidents. The provision of tax deduction to enterprises, especially SMEs and start-up companies would encourage them to increase their investment in research and development. For enterprises in engineering and construction industry, tax deduction would raise their willingness to adopt new engineering technology, such as IoT, data analytics, biotech, Virtual Reality (VR) and AI.

17. As more opportunities are opened up for high-end manufacturing industry, the HKIE supports the Administration's active promotion of re-industrialisation by launching the Re-industrialisation Funding Scheme. The HKIE suggests investing more resources to upgrade traditional manufacturing industry by adopting advanced technologies, for example automation intelligence and robotic technology for smart production.

18. To improve the living environment, to reduce road congestion and to make maintenance easier, utilities should be put inside underground utility tunnels/galleries as far as is practicable, especially for newly developed areas. Funding should be allocated to pursue feasibility studies and design in this aspect. A Government agency should be established to oversee the process.

Nurturing Talent

19. To ensure the industry can be supplied continuously with dynamic and competitive workforce, the Administration should offer incentive to encourage re-skilling and apprenticeships. In addition, a culture of lifelong learning should be engrained and the HKIE suggests covering more construction and engineering-related courses under the Continuing Education Fund (CEF) and to allocate more resources for vocational and professional education for engineering-related training and courses. The HKIE suggests the Administration consider providing funding to help self-financing post-secondary education institutions to set up workshops and laboratories for teaching subjects of engineering and technology in order to supply new blood for the industry. Furthermore, we urge the Administration to encourage business and professional sectors to provide sufficient internship positions, on-the-job training opportunities for students and local skilled workers through provision of subsidies to both the companies and employees.

20. The HKIE is pleased to see that the Administration continuously devotes resources to arouse students' interest in STEM and facilitate relevant teaching. The Administration should regularise sufficient resources to provide diversified training and resources to teachers' STEM development, enhance the STEM teaching materials and encourage university-school partnership in creating a suitable environment that supports STEM teaching and learning.

21. According to the International Labour Organization of the United Nations, the world is now in a transition towards environmentally sustainable economies. It is noted that the transition to low-carbon, resource-efficient economies will lead to changes in the occupational structure of the economy. Jobs would likely transform and new skills would be required. The report estimated that 24 million new jobs can be created globally by 2030 due to a shift to a greener economy, while 6 million jobs would be lost⁵. To cope with the transformation of the global labour market, the Administration is suggested to allocate more resources to education and training on relevant emerging disciplines to cope with the global trend.

Quality and Smart City

22. The HKIE is pleased to note that the Hospital Authority will develop a longer-term view on supporting the future delivery of healthcare services and in the building of the smart hospital of the future⁶. The HKIE suggests the Administration allocate sufficient resources for regular reviews of the demographic and service statistics, and projections of future demand for medical services, in order to formulate necessary smart healthcare services for the second 10-year hospital development plan. The plan should include adoption of advanced smart health technologies in the facilities, sufficient healthcare manpower, and training to health specialists to provide the new smart healthcare services.

23. Based on the 2016 Population By-census, prepared by the Census and Statistics Department⁷, it projects that the pace of population ageing in Hong Kong will increase rapidly in the 20 years. The size of the elderly population with age of 65 or above between 2019 and 2039 will almost double from 1.32 million to 2.48 million respectively. In connection to this, the HKIE urges the Administration to provide financial support and incentives to encourage technological research and development relating to elderly and rehabilitation care in private and tertiary education sectors. The HKIE appreciates the setup of the Innovation and Technology Fund for Application in Elderly and Rehabilitation Care and the Administration has earmarked \$1 billion to subsidise the elderly and rehabilitation service units. The HKIE

⁵ International Labour Organization, the United Nations, *World Employment and Social Outlook 2018: Greening with jobs*. Retrieved from https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_628654.pdf

⁶ Hospital Authority, *Innovating for Care: Strategic Plan 2017-2022*. Retrieved from https://www.ha.org.hk/haho/ho/ap/HA-SP_1.pdf

⁷ The Census and Statistics Department, *Hong Kong Population Projections 2017-2066 (2017 edition)*. Retrieved from <https://www.statistics.gov.hk/pub/B1120015072017XXXXB0100.pdf>

suggests the Administration regularise the funding to advocate smart ageing projects and allocate resources to monitor the progress of the projects.

24. Apart from smart health care services, smart city initiatives should also be strengthened to enable the integration of the latest technology in various aspects for application in daily lives. In connection with this, the Administration should encourage research and development related to smart living initiatives through providing more financial incentives.

25. The HKIE supports the launch of Big Data Analytics Platform which would accelerate smart city development. The Administration is suggested to devote sufficient resources, including financial and human resources, to develop the platform for data sharing of different healthcare e-initiatives and to facilitate cross-Departmental collaboration and public-private partnership in implementing data sharing.

Transportation

26. Transportation network as the blood vessels of Hong Kong remains an essential part of Hong Kong Resident's daily living. The HKIE recommends the Administration to provide sufficient funding to conduct a new Railway Development Strategy for the next few decades to facilitate the development of transport infrastructure in parallel with the latest urban planning.

27. Apart from railway development, the HKIE notes that the Administration has consulted the public on the proposed Electronic Road Pricing (ERP) Pilot Scheme in Central and its adjacent areas. This adoption of "user pays principle" could encourage the passengers to switch to public transport. The HKIE urges the Administration to devote adequate resources for taking forward the ERP Pilot Scheme and at the same time studying the feasibility of expanding the ERP Pilot Scheme to other districts with traffic congestion.

Environment

28. The Paris Agreement in 2015 requires the global parties to undertake efforts to combat climate change. This Agreement is applicable to Hong Kong and the Administration will update the public on the work related to the public engagement on Long-term Decarbonisation Strategy conducted by the Council for Sustainable Development. The HKIE appreciates the Administration's increasing support and effort in carbon reduction and believes that more measures are to be taken.

29. The HKIE welcomes the Administration to set aside a total of \$1 billion for Government Departments to install renewable energy facilities at government buildings and venues and community facilities. The HKIE supports the Administration's initiative of Feed-in-Tariff (FiT) Scheme and more incentives is suggested to encourage FiT in assisting private sectors to install renewable energy generation facilities. To further reduce energy consumption of buildings, extra tax allowances for capital expenditure incurred by enterprises in procuring energy efficient building installations and renewable energy devices should be provided and alternative incentive schemes for energy saving projects of existing buildings are

suggested. The Administration is also recommended to review and strengthen financial support for research, education and adoption of advanced Green Building Technology. Monetary incentives can be considered for research institutions as well as the private sectors to incubate innovation in environmental projects, and the review of the effectiveness of the projects should be regularly conducted.

30. To improve roadside air quality, the Administration is recommended to provide sufficient incentives, such as tax reduction to encourage the purchase of new energy vehicles (NEVs), Euro VI vehicles and other more energy-efficient vehicles. The HKIE welcomes the \$2 billion pilot subsidy scheme for the installation of charging-enabling infrastructure for electric vehicles (EVs) and it is suggested to increase the density of quick charging stations for EVs in the city. In the long run, the HKIE urges the Administration to conduct study of the wider use of NEVs, including hydrogen, natural gas and solar vehicles. Transition from conventional vehicles to NEVs can be encouraged by enhancement of current tax concessions and provision of technical support.

31. The HKIE further recommends the Administration to allocate adequate resources for conducting a comprehensive study to examine how to further improve overall walkability with/without shared transport model. Construction of infrastructure to improve the overall walkability of the city, such as underground walkways, should also be developed with sufficient funding and detailed implementation plan.

32. In order to meet the growing demand of recycling infrastructure after the passage of the Amendment Bill on Charging for Municipal Solid Waste (MSW), the Administration is suggested to reserve resources for the promotion of waste reduction and recycling as well as construction of related facilities. Furthermore, the Administration is recommended to provide subsidy schemes to the low-income households under the Comprehensive Social Security Assistance Scheme to minimise their burden.

33. According to the Waste Statistics for 2018⁸ conducted by the Environmental Protection Department, among the 11,428 tonnes of MSW landfilled each day in 2018, the largest constituent of MSW was food wastes with some 3,565 tonnes (31% of MSW). In light of the statistics, the Administration should allocate sufficient resources to Food Waste Recycling Group to particularly focus on formulating regulatory measures on food waste disposal and for their implementation.

34. For the future development of the recycling industry in Hong Kong, the Administration is suggested to provide funding for a comprehensive circular economy study to examine the potential for closed-loop systems for key waste streams in Hong Kong or in conjunction with the wider neighbouring region.

35. Referring to the global trend of shifting to greener economy, the Administration is urged to reserve sufficient resources to develop and support investment policies on renewables, green transportation, green infrastructure and Feed-in Tariff scheme.

⁸ The Environmental Protection Department, *the Waste Statistics for 2018*. Retrieved from <https://www.wastereduction.gov.hk/sites/default/files/msw2018.pdf>