

By hand, by email at budget@fstb.gov.hk and by fax at 2147 5770

8 February 2022

Mr Paul CHAN Mo Po, GBM, GBS, MH, JP
Financial Secretary
c/o Budget Consultation Support Team
24/F, Central Government Offices
2 Tim Mei Avenue
Tamar, Hong Kong

Dear Mr CHAN

**Views from The Hong Kong Institution of Engineers to the Financial Secretary
for Formulation of the 2022-23 Budget**

On behalf of the Institution, I am pleased to present to you our views and suggestions as set out in the enclosure for your kind consideration on the captioned subject.

For the development of the profession as well as the welfare of the community as a whole, the Institution is looking forward to working with the Government on all areas of concern by offering our expertise and experiences.

Thank you.

Yours sincerely



Ir Edwin K F CHUNG
President

The Hong Kong Institution of Engineers

Enc

Cc: Mr Edward YAU Tang Wah, GBS, JP, Secretary for Commerce and Economic Development
(By Fax) Mr Michael WONG Wai Lun, JP, Secretary for Development
Mr Kevin YEUNG Yun Hung, JP, Secretary for Education
Mr WONG Kam Sing, GBS, JP, Secretary for the Environment
Mr Christopher HUI Ching Yu, JP, Secretary for Financial Services and the Treasury
Mr Jack CHAN Jick Chi, JP, Acting Secretary for Home Affairs
Ir Alfred SIT Wing Hang, JP, Secretary for Innovation and Technology
Dr LAW Chi Kwong, GBS, JP, Secretary for Labour and Welfare
Ir Frank CHAN FAN, JP, Secretary for Transport and Housing

EC/CKH/SS

Enclosure

**Views from The Hong Kong Institution of Engineers
To the Financial Secretary for the Formulation of the 2022-23 Budget**

In the past two years, Hong Kong has undergone many unprecedented challenges. Whilst the city now generally has a more stable and peaceful environment and focus can be placed on its economic recovery, the most recent 5th-wave pandemic outbreak has again complicated the situation. With the long period of stunted growth of the economy, it is high time that strategic plans should be formulated to boost developments on both the external and internal fronts.

2. Against this backdrop, the HKIE, as a professional body of engineering excellence and by virtue of its obligation to the society, has met representatives of various engineering organisations, government departments, consultants, contractors, public utilities, academia, etc. in the past few months in order to understand the current engineering-related problems and consolidate views for devising possible solutions. With the valuable insights gathered, the Institution would like to put forth our views in the following areas to the Administration for the formulation of the 2022-23 Budget in the hope of helping to drive the economic recovery of Hong Kong from the havoc wreaked by the COVID-19 pandemic.

Encouraging Infrastructure Development

3. Investment in infrastructure represents the vision of Hong Kong's long-term development and is one of the best means to provide the much-needed job opportunities for the community especially during challenging times. Though the 2021-22 Budget allocated some HK\$84.1 billion for infrastructure with the annual expenditure likely exceeding HK\$100 billion in the coming years, the HKIE urges the Administration to plan adequately ahead in terms of financial investment, implementation strategy, operation models beyond the mid-term so that the long-term development of the city could sustain. It is also important that infrastructure projects will be rolled out in a steady and sustainable manner bearing in mind the affordability of the engineering and construction industry, especially on the fronts of manpower and materials.

4. The Administration is also urged to continue with its efforts in reviewing the systems for guarding against malfunctioning of quality control, safety hazards, unrealistic time and budget estimation for mega infrastructure projects with a consistent approach from a single statutory entity being held accountable. The Institution will welcome initiatives to brush up project management and quality assurance/control capability of all personnel involved. To promote better quality assurance of works and safety, the Administration is suggested to consider introducing statutory, or as a start administrative, requirements that all positions carrying the title of “Engineer” shall be filled by Corporate Members of the HKIE or Registered Professional Engineers under the Engineers Registration Ordinance (Cap 409).

Land and Housing Supply

5. It has been the unwavering effort of the Administration to increase land supply through a multi-pronged approach to meet the needs of housing, economic and social development of the society.

6. Apart from the Lantau Tomorrow Vision, the Administration has also outlined the plan to develop the Northern Metropolis with a total land area of about 300 square kilometres covering the Yuen Long District and North District to accommodate multi-functional land uses for a population of about 2.5 million. The total number of jobs in the Metropolis is anticipated to increase substantially from 116,000 at present to about 650,000, including 150,000 I&T-related jobs. To complement the development of the Metropolis, a number of projects will be carried out including five new railway projects leading to the creation of the Hong Kong-Shenzhen One-hour Cross-boundary Commuting Network, four large-scale housing and land expansion projects, three wetland conservation parks, two outdoor eco-recreation/tourism projects and the San Tin Technopole. To ensure these areas are accessible and mobile, the fourth road tunnel linking the middle to eastern part of the Metropolis to Kowloon is urgently needed, the feasibility study of which should therefore commence as a matter of priority, alongside the one already underway for the proposed western Route 11 (between North Lantau and Yuen Long).

7. The HKIE welcomes the development of the Northern Metropolis which will facilitate Hong Kong’s integration into the overall development of the Country, open

up a new and conducive business environment as well as create a huge number of jobs. However, as the transformation involves almost one-third of Hong Kong's territory, the Administration needs to be financially prudent as the city has just started its path to economic recovery from a two-year recession.

8. To ensure a sustainable land supply beyond the next ten years, the Administration is planning for a number of reclamation works such as the Kau Yi Chau Artificial Islands and the Lung Kwu Tan reclamations, various development areas in the New Territories North and the re-planning of the Tuen Mun West area. To minimise the construction impact on the ecology awareness and social concerns that may arise from these reclamation and development projects, the Administration should ensure sufficient financial resources for conducting necessary and thorough environmental assessments and various impact studies in the early planning stage. Professional engineers possess abundant expertise in these aspects could help minimise the impact on environment and control the use of resources during the process as well as ensuring resilience in combating challenges of climate change.

9. To ease the housing needs of Hong Kong, the HKIE is delighted to note that the Administration is collaborating with community organisations and the business sector for the provision of transitional housing and the Administration's proposal in the 2021 Policy Address to increase the amount of funding to HK\$11.6 billion to meet the target of supplying an additional 5,000 transitional housing units to a total of 20,000 units in the coming years. The Administration is suggested to consider room for further increasing provision on this front which is imminently needed by grassroots citizens.

10. The HKIE is also pleased that the current-term Government has allocated over HK\$19 billion to subsidise owners of aged buildings to maintain and repair their properties. The number of private buildings aged 50 years or above has surged from 3,900 to 8,600 over the past decade and is expected to increase further, the Administration is recommended to allocate necessary funding with a view to generating innovative ideas in expediting urban renewal. To reduce the pressure on urban renewal, the Administration is recommended to provide further funding support to preventive maintenance scheme for older buildings to extend their lifespan. At the same time, studies on whether new buildings shall be designed with longer design life or serviceable years is suggested to be carried out.

11. One of the ways to solve the pressing needs for housing is to shorten the construction time and to reduce costs. Time is of the essence. Technical approval should be streamlined and consistent. The HKIE agrees with the industry stakeholders for promoting the adoption of new construction technologies such as Modular Integrated Construction (MiC) and Building Information Modelling (BIM) to maximise construction efficiency, reduce costs and wastage, improve site safety and save total project construction time. Despite being optimistic about the increasing adoption of such modern construction technologies, the HKIE urges the Administration to inject capital investment and offer incentives and subsidies to encourage the industry to attract more innovative minds to develop new and advance construction technologies to achieve higher efficiency and cost-effectiveness.

Nurturing Talent Successors

12. With the foreseeable increase in manpower demand arising from the investment in infrastructure development, the upcoming boosting of land and housing development projects and the preparation for Hong Kong to develop into an International Innovation and Technology Hub as promulgated in the National 14th Five Year Plan and 2021 Policy Address, the Administration is recommended to provide suitable funding support as well as review the curriculum for a more comprehensive planning on through-the-train training from secondary to tertiary levels to develop necessary talents at all levels for the Industry. This shall include a holistic design of relevant curriculum bridging the secondary and tertiary education and inviting collaborative efforts between secondary schools and higher education institutions. The Administration is also suggested to provide funding and policy support to devise a suite of measures to encourage/promote the younger generation to enter the industry such as launching promotional campaigns to create aspiration for joining.

Streamlining Submission and Approval Processes

13. With the anticipated developments in the years ahead, dual efforts from the industry and the Administration is deemed necessary. While the engineering and construction industry is looking for innovative ways to implement the works in a safer, more efficient, effective, environmentally friendly, sustainable and cost-effective manner, the Administration is urged to look into measures on streamlining the planning

and implementation processes. Apart from ways of reducing the time and effort at the planning stage(s)/processes of development projects¹, the Administration is advised to review the current submission and government approval processes during the design and construction stages to create and promote a culture to facilitate industry works in various Departments on top of their regulatory duties without compromising work quality and safety and in fair, open and transparent manners. This could help reduce the overall time, cost and resources spent during the life cycle of projects.

Leveraging Opportunities in the GBA

14. With the National 14th Five-Year Plan in place to support the Country's strategy of high-quality construction of the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) and provide a clear direction for positioning Hong Kong, the HKIE is glad that the Administration has leveraged the advantages of the integration of the two areas and capitalised on Hong Kong's innovation and technology (I&T) capabilities to act as a strategic bridge for innovative enterprises to enter the Mainland market with the intention to expedite economic recovery for Hong Kong and to develop the city into an international I&T hub.

15. The HKIE appreciates the current-term Administration to commit over HK\$130 billion to promote I&T development in eight major areas within four years. Amongst the I&T initiatives, there is the synergistic development of "one zone, two parks" within the Shenzhen-Hong Kong Innovation and Technology Co-operation Zone which comprises the Hong Kong-Shenzhen Innovation and Technology Park (HSITP) at the Lok Ma Chau Loop and the Shenzhen Innovation and Technology Zone (SZ I&T Zone) along the north side of Shenzhen River and adjacent to the Loop, which will offer great convenience and facilitate I&T collaborations between the two areas and create a vast amount of job opportunities in advanced technologies for I&T professionals.

16. The HKIE also welcomes the Administration putting resources for the forward-looking I&T initiatives announced in the 2021 Policy Address regarding the development of an area of 150 hectares of lands around Lok Ma Chau/San Tin to form the San Tin Technopole to accelerate Hong Kong's re-industrialisation and facilitate the

¹ For instance, delinking the Town Planning Ordinance and the Foreshore and Sea-bed (Reclamations) Ordinance for reclamation works.

development of advanced manufacturing industries of new technologies and smart production, going the extra mile to shape Hong Kong's unique leading role in the GBA.

Supporting Start-ups and Local Enterprises

17. The HKIE is pleased to learn that there have already been 3,755 start-ups and 13,804 start-up jobs created in 2021, an increase of 68% and 118% respectively as compared to 2017. The Institution is particularly delighted to see fundings to support start-ups, such as the HK\$2 billion Innovation and Technology Venture Fund (ITVF) set up to co-invest on a matching basis with selected private venture capital funds in Hong Kong and the Technology Start-up Support Scheme for Universities. This provides an annual funding of HK\$48 million in total to the participating universities to back their teams in starting technology businesses and commercialising their research and development achievements. The Technology Voucher Programme and the Public Sector Trial Scheme have also been set up to provide funding support to local enterprises and organisations. While the city is still under the shadow of an economic recession, despite the current funding support, the HKIE recommends that the Administration sets up more funding support to stimulate I&T talents starting their own businesses and to help local enterprises sustain their operations during this difficult time.

I&T Development and Pooling I&T Talent

18. The HKIE appreciates the Administration's investment in promoting research and development (R&D) for I&T advancement. In the 2021 Policy Address, the Administration has accepted in principle the proposals of The University of Hong Kong and The Chinese University of Hong Kong to provide the two universities with land for research use, and to give support to The Hong Kong Polytechnic University in exploring the use of its Hung Hom Bay Campus for academic and research development purposes.

19. To attract overseas I&T talent, the HKIE supports the Administration's Global STEM Professorship Scheme, the Technology Talent Admission Scheme and the Research Talent Hub to provide funding support to attract world-renowned scholars to engage in I&T-related teaching and research activities or research talent to conduct R&D work in Hong Kong. With the world economy being slowed down for two years and overseas scholars going back to their own country, the HKIE urges the

Administration to increase funding support to attract talents from overseas and the Mainland to work in Hong Kong again.

20. To nurture I&T talent, it needs to start with students at their earlier age. The HKIE is glad to learn that the Administration has planned to increase its recurrent expenditure on education by over HK\$13 billion. The introduction of the HK\$500 million IT Innovation Lab in Secondary Schools Programme which provides funding support to all publicly funded secondary schools to strengthen their STEM education for three years starting 2019-20 is also worth commending. In the 2021-22 Budget, the Administration set aside over HK\$200 million extending the programme to primary schools. The HKIE urges the Administration to extend the programme beyond three years to continue nurturing future I&T talents in Hong Kong.

21. The HKIE welcomes the Administration's devotion to support young talent with a bachelor's degree or above from a local university or university outside of Hong Kong in 2019 to 2021 to work in the GBA and receive on-the-job training through the "Greater Bay Area Youth Employment Scheme". The Administration is suggested to extend the employment scheme to provide opportunities to young talents who aspire to develop their career in the I&T sector in the GBA.

Building a Smart, Green and Resilient City

22. The HKIE supports the Administration's vision and strategy as set out in the recent Hong Kong 2030+ final report to develop Hong Kong into a smart, green and resilient city. We urge the Administration to turn the vision into solid actions as quickly as possible in parallel with continuous consultation and refinement of the strategy. The HKIE supports the Administration in implementing the smart city blueprint 2.0 with more than 130 initiatives to bring benefits and convenience to members of the public. Some of the initiatives include a HK\$1 billion Smart Traffic Fund for research and application on vehicle-related I&T, and a digital platform for data integration and information exchange of all public works projects. The HKIE will expect the Administration to set aside funding to develop other smart solutions for the public's smart living.

23. Decarbonisation paves the way to a sustainable future and is the central theme of

the Hong Kong Climate Action Plan 2050. The Administration is suggested to be more aggressive on decarbonisation which is critical to combating the global issue of climate change. The Administration is suggested to set aside more funding on this front and consider measures to assist the public and industry by means of legal, administrative, or funding support on fast-tracking new initiatives such as facilitating retrofitting of electric vehicle charging facilities in multi-storey apartment car parks. The Green Tech Fund (GTF), established with a HK\$200 million Government allocation aims to provide a better and more focused funding support for relevant R&D. It gives new impetus to deep decarbonisation and the development of green technologies, which together may help achieve the target of carbon neutrality before 2050.

24. As the applicants for the Fund have to contribute at least one-third of the total project cost and the Fund is on a matching basis, the HKIE suggests the Administration consider lowering the threshold for applicants in order to allow more I&T talents to benefit from the Fund and review the matching mechanism to increase its inclusivity. Other funding support that can help Hong Kong achieve the interim target of reducing carbon emission by 50% before 2035 as compared to the 2005 level, such as those for encouraging the installation of EV charging stations and reducing energy uses, should also be continued and expanded.

25. The development of renewable energy (RE) is instrumental to achieving carbon neutrality and should therefore be vigorously boosted. Specifically, the Administration is recommended to devote more efforts and resources to facilitate first the on-grid connection of large-scale public and private RE installations to the city's electricity grids (e.g. solar panels on reservoirs) so that Hong Kong would not be seen as much lagging behind in promoting the use of RE ; and second, the effective collection of the city's food waste for co-digestion with the abundantly available sewage sludge for turning waste into clean energy.

26. To create a sustainable future for all, the Administration is also urged to take lead in incorporating the United Nation Sustainable Development Goals (UNSDGs) into major project implementation. In addition, the HKIE suggests the Administration consider supporting local entities (NGO/Quasi-government Corporation etc.) to promote UNSDGs for the betterment of society.