

By Hand and Email at [policyaddress@pico.gov.hk](mailto:policyaddress@pico.gov.hk)

27 September 2021

The Honourable Mrs Carrie LAM CHENG Yuet Ngor, GBM, GBS  
The Chief Executive  
c/o Policy Innovation and Co-ordination Office  
26/F, West Wing, Central Government Offices  
2 Tim Mei Avenue  
Tamar, Hong Kong

Dear Mrs LAM

**Views from The Hong Kong Institution of Engineers to the Chief Executive for Formulation of the 2021 Policy Address**

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

With our expertise and experience, the Institution welcomes the opportunity to work with the Government on the area of concern for the benefits of the profession and the general public as a whole.

Thank you.

Yours sincerely



Ir Edwin K F CHUNG  
President  
The Hong Kong Institution of Engineers

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**Enclosure**

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to the Chief Executive for Formulation of 2021 Policy Address**

Having confronted with the unprecedented challenges in the past two years, it is the hope of all sectors of the society to return to normality and there is a pressing need for not only to find solutions to overcome problems, shape up the economy, but also to seek breakthrough for Hong Kong.

2. As a professional body of engineering excellence, The Hong Kong Institution of Engineers (HKIE) is committed to offering its knowledge and experience to confront the challenges, help make changes and map out a better future for Hong Kong. In this light, the HKIE is putting forth our views on the forthcoming Policy Address to the Administration for consideration.

**Technology & Innovation**

3. The Outline of the 14<sup>th</sup> Five-Year Plan for the National Economic and Social Development and the Long-Range Objectives Through the Year 2035 (the 14<sup>th</sup> Five-Year Plan) sets out a clear target that by 2035, the country should have made significant breakthroughs in core technologies and become a global leader in innovation. It is therefore foreseeable that associated opportunities and resources allocation will be abundant ahead. The HKIE fully supports the Administration to develop technology and innovation (T&I) as a major pillar supporting the growth of the city, with a view to establishing a leading role within the Guangdong-Hong Kong-Macao Greater Bay Area (GBA).

4. In particular, the HKIE welcomes the expansion of the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone from 14.92 km<sup>2</sup> to 120.56 km<sup>2</sup>, offering more opportunities for the establishment of research and development (R&D) institutions, T&I enterprises and creating future synergy opportunities of professional services for the state and the city. The HKIE suggests the Administration reinforcing the collaboration with stakeholders across the region in order to prepare

the local service industry, institutions and T&I set-ups for exploring the forthcoming development prospects.

5. To enhance the connectivity with Qianhai and also within the GBA as a whole, the Administration is recommended to further consider the need for the necessary transportation infrastructure to ensure seamless connection, set out the corresponding timeline, and include in the plan the role of Hong Kong engineers and practitioners. In the 2007 Policy Address, ten major infrastructure projects were advocated and these included the Hong Kong-Shenzhen Western Express Line project, the commencement of which had been deferred for various reasons. Taking into account the new perspective for Qianhai, the planned developments of the Northwest New Territories and the studies being undertaken for creating artificial islands for residential and commercial purposes in Lantau, as well as the need to provide cross-boundary transportation with environmentally friendly and efficient service, the Administration is proposed to consider reactivating the planning for this missing major infrastructure. It is believed that the financial investment would be outweighed by the economic return generated by the new employments and investment opportunities for Hong Kong.

6. On the construction and engineering related fronts, innovative technologies such as Big Data, Artificial Intelligence, the Internet of Things (IoT) and Blockchain technology are also increasingly being adopted internationally. Apart from the tangible benefits, these technologies also rejuvenate the engineering and construction industry as well as its practitioners, and in turn contribute to the sustainability of the profession. To maintain the competitiveness of our local construction industry, the Administration is recommended to support the business sector's digital transformation. To set examples, incentive measures could also be considered for promoting the use of such technologies in public works projects.

7. The HKIE also supports the Administration's promotion of reindustrialisation and automation to boost the economic growth of the territory as well as to keep up with the accelerated pace of digitalisation. With the country's support given to Hong Kong for developing into a T&I centre as promulgated in the 14<sup>th</sup> Five Year Plan, it is believed that Hong Kong needs an industrial policy to keep pace with the technology-driven economy, which will also provide job opportunities to a greater

population, reinforce confidence and enhance the image of the industry, and in turn help attract more young talents to choose engineering and technology as their profession.

### **Land Supply and Mobility**

8. Shortage of land and housing supply has become a problem plaguing Hong Kong for years. The HKIE supports the Administration to use all its best endeavours to source land. To alleviate the shortage of land in the medium-to-long run, and to meet the long-term housing, social and economic development needs of Hong Kong, the HKIE maintains its support for the idea of creating artificial islands around Kau Yi Chau.

9. While comprehensive study and public consultations are essential, it is also important to observe the efficiency of the process, the timeliness of answering to the needs of society, and the necessity of keeping projects within a reasonable timeframe and budget. There have been quite a few examples of development projects taking a lengthy period of time. To mitigate the land shortage problem and to accelerate the process of boosting land supply, the Administration is urged to review the current development and planning procedures and relevant ordinances such as the Town Planning Ordinance (TPO), Environmental Impact Assessment Ordinance (EIAO), Land Resumption Ordinance, Buildings Ordinance, etc and streamline the intertwining development procedures involving town planning, land formation and building submissions. The Administration may also consider delinking the TPO and the Foreshore and Sea-bed (Reclamations) Ordinance (F&SO), in that once the feasibility study and necessary statutory procedures (such as EIAO and F&SO) for reclamation are completed, reclamation works can commence while the remaining planning and studies for the superstructure/infrastructure continue. This delinking could potentially shorten the overall programme of land and housing development by a few years.

10. With more land and housing developments taking place, the Administration is urged to accelerate the implementation of major transportation projects to strengthen urban mobility and connectivity. These include the recommended new lines in the latest Railway Development Strategy studies and the fourth road tunnels linking

Northern New Territories and Kowloon as well as linking Kowloon and Hong Kong Island, so as to early relieve the severe traffic congestion already prevailing over the existing links between these areas.

11. In land and housing supply or indeed any engineering projects, a reasonable budget and stringent cost control is an essential element for ensuring quality and on-time completion. Recently, the Institution has observed an unhealthy trend for the accepted tender price of public works contracts being significantly lower than that allowed within the approved project estimates. From experiences, it is to be noted that the lowest bid does not necessarily guarantee a lowest cost taking into account various circumstances that could arise during the implementation stage. To have adequate protection to the public purse and also offer better prospect to the industry practitioners, the Administration is urged to review the procurement policy and tender assessment process and address this important issue. Furthermore, the HKIE requests the Administration to steadily roll out projects in a way that is manageable by the industry in order to enhance workforce sustainability while maintaining healthy competition and preventing tender price fluctuations influenced by the demand of manpower. In anticipation of the surge of public works projects in the coming years, favourable consideration shall be given to import certain amount of labour after careful consideration of the manpower model and availability of the Hong Kong industry.

### **Housing Supply**

12. Families living in barely habitable conditions and queuing for public housing for a long time has now become a serious social issue. Added to that, the hotel and guesthouse industry has been devastated since the outbreak of the COVID pandemic. The HKIE welcomes the “Pilot Scheme to Subsidise Using Rooms in Hotels and Guesthouses” for the provision of transitional housing to the families in need. The Administration is suggested putting more resources into searching for more suitable hotels and guesthouses which are eligible for the Pilot Scheme, as well as allocating more funding to subsidise the operation of the hotels and guesthouses serving as transitional housing.

13. With rapid development of the Modular Integrated Construction (MiC) and Building Information Modelling (BIM) technologies, and the industry getting familiarised with the technologies gradually, construction time is now much shortened. Successful implementation of such new technologies has been seen over the past few years, highlighted by the quarantine camps at Lei Yue Mun Park and the Holiday Village built in 26 and 62 days respectively and the even more impressive commissioning of North Lantau Hospital Hong Kong Infection Control Centre within just 16 weeks. To increase housing supply within a shorter period of time and promote the development of the construction industry, the Administration is recommended to promote the use of the technology of MiC and/or other pre-fabrication concepts and innovative construction technologies for the construction of public/private housing.

14. In addition to the above short to medium term solutions for housing development measures, an effective land redevelopment strategy is also imperative to meeting long-term housing needs and creating decanting space to facilitate the development of the society at large. The HKIE welcomes the implementation of the Energising Kowloon East initiative and Invigorating Island South initiative as promulgated in previous Policy Addresses. The Energising Kowloon East initiative has successfully transformed areas such as Kwun Tong, Kowloon Bay and Kai Tak into the second core business district in Hong Kong. It is hoped that the vicinity of San Po Kong, Aberdeen and Wong Chuk Hang will be rejuvenated and fully utilised, and attracting property development in these areas to help meet the intense housing demands.

### **Integration with the Greater Bay Area**

15. Under the framework of the 14<sup>th</sup> Five-Year Plan, Hong Kong continues to play a significant and unique role in the country's development, especially in the progressive development of the GBA. Engineering professionals in Hong Kong have much to offer to the GBA, such as consultancy, planning, design, construction and project management skills. The registration measures namely《深圳市前海深港現代服務業合作區香港工程建設領域專業人士執業備案管理辦法》and《珠海經濟特區橫琴新區港澳建築及相關工程諮詢企業資質和專業人士執業資格認可規定》has opened the door for qualified Hong Kong firms and professionals in construction- and engineering-related fields to practise in the Qianhai Shenzhen-Hong Kong Modern

Service Industry Cooperation Zone and the Zhuhai Hengqin New Area respectively. To enable Hong Kong engineers across different disciplines to tap into the opportunities arising from the innovation ecosystem of the region, the Administration is recommended to strengthen the cooperation and expedite dialogues to expand the recognition of professional qualifications to more engineering disciplines in the area. It is suggested that a joint task group with participation from the GBA, Qianhai and Hong Kong to work out the advance construction technology such as robotic approach and adoption of new material can be set up with a view to improving productivity, supporting green construction, and also providing opportunities for Hong Kong engineers to be trained in the GBA.

### **Youth Development**

16. Young people engineer the future. It is vitally important to unleash their potentials and support their diverse aspirations. From the establishment of the Youth Development Commission, the Greater Bay Area Youth Employment Scheme, and the Youth Development Fund to the Space Sharing Scheme for Youth and more, the HKIE is delighted to note the Administration's devotion to address young people's needs and has put them in the picture of the development of Hong Kong and include them into the overall development of the country.

17. To ensure engagement of youth in the framework and process of development, the HKIE urges the Administration to review the STEM (Science, Technology, Engineering and Mathematics) education curricula for primary and secondary schools. While the HKIE acknowledges the ongoing efforts of the Administration in promoting STEM education, including the IT Innovation Lab in Secondary Schools Programme and the Knowing More About IT Programme launched lately, it is undeniable that the recent development of STEM in Hong Kong has yet to yield applaudable outcome. This is neither conducive to nor able to sustain Hong Kong's development into a T&I centre. The current STEM-related curricula in local primary and secondary schools are implemented through STEM-related Key Learning Areas (KLAs) subjects like Science, Technology and Mathematics. It is crucial to foster the development of the very different talents of students, and be able to communicate the importance of STEM to those who are less attracted to these subjects. The Administration is recommended to integrate STEM-related curricula to other subject

areas, such as arts and personal, social and humanity curricula, in order to engage students with different interests in STEM-learning experiences. Especially with the goal of developing Hong Kong into a T&I centre supported by the country's 14<sup>th</sup> Five Year Plan, the Administration is urged to extend uttermost efforts to illustrate the importance of a solid knowledge base in science in the future world and support students, especially those in junior high schools, in arousing their interest in science subjects and making well informed decisions in paving their study and career.

18. With digital transformation at the forefront of the social development agenda, the Administration is recommended to support tertiary institutions with funding to subsidise the establishment and promotion of new programmes on digital technology and innovation and encourage collaboration with stakeholders and regional counterparts to nurture technology talents of the future. Meanwhile, the HKIE is pleased to note that the STEM Internship Scheme of the Innovation and Technology Fund launched last year has been well recognised by the education and business sectors. The Administration is recommended to study the feasibility of expanding the internship scheme into a placement scheme for fresh graduates to gain a broad range of I&T experiences.

### **Sustainable Future**

19. Combating climate change is a global challenge. Following the announcement of the target of achieving carbon neutrality before 2050 in last year's Policy Address, the Administration is urged to take a more proactive role to complete the updating of the "Hong Kong's Climate Action Plan", to set out measures to reduce carbon emissions in particular for the electricity generation and transportation industries, which contribute significantly to carbon emission.

20. To pinpoint, the HKIE is glad to see the introduction of "Clean Air Plan for Hong Kong 2035", which set out a goal for the city's air quality to be on par with major international cities by 2035. However, the "Hong Kong Roadmap on Popularisation of Electric Vehicles", which help achieve carbon neutrality by setting the goal to achieve zero vehicle emission by 2050 could have been more ambitious. The Administration is urged to work with the industries and facilitate the implementation of both policies at the earliest possible time.

21. The HKIE is pleased to note that the Administration has set out the Waste Blueprint for Hong Kong 2035. In this connection, the on-going initiative of turning our 3,000 tonnes of food waste produced daily into energy through measures such as adopting the latest technology of co-digestion of sewage sludge and food waste should be accelerated. Furthermore, as a coastal city, Hong Kong is particularly affected by mishandled plastic waste from plastic products and packaging, contributed significantly by the food and beverage sector. The Administration is urged to regulate disposable plastic tableware by education, study reuse systems for plastic containers in other regions and the possible introduction of an environmental levy.

22. The HKIE also supports the implementation of Municipal Solid Waste (MSW) charging, together with other actions to reduce waste, strengthen waste separation and enhance waste to resources infrastructure, as well as educational promotion campaigns on waste reduction and recycling. The Administration is recommended to introduce innovation and technology initiatives to help overcome the difficulties in implementing the relevant measures during the enforcement of the regulations, to which the engineering sector may offer suitable technical solutions.

23. A decarbonisation roadmap with separate goals in pollution control, waste management, resource management and stakeholder engagement is essential. For a long-term decarbonisation strategy up to 2050, the Administration is currently adopting a bottom-up approach by encouraging public engagement. In view of the extreme climate events in recent years and around the globe this year in particular, though the HKIE is pleased to note the launch of the HK\$200 million Green Tech Fund by the Environmental Protection Department in February this year to support research and development projects that can help Hong Kong decarbonise and enhance environmental protection, a holistic plan has yet to be seen.

24. We believe Hong Kong has every opportunity to become the exemplar city in the GBA on the way to carbon neutrality, and this is one important aspect for the city's position in the country's development. As many associated policies are, or will be, technology-based, more generous resources need to be allocated for a coordinated top-down engineering and technology programme that is more aligned with the

country to support the Administration's efforts. This will in turn generate economic and societal benefits.

25. To create a sustainable future for all and to partner with various stakeholders for a sustainable future, the Administration is also urged to take lead to incorporate the United Nation Sustainable Development Goals (UNSDG) into policy-making and project implementation. Means should be taken to promote UNSDGs to private sector for the betterment of society.