

EXECUTIVE DIRECTOR'S REPORT



Turning Challenges into Drivers

For the Hong Kong construction industry, 2021 was a roller-coaster year with a myriad of challenges. The construction industry was awash with a range of problems including construction delays due to stringent lockdown measures, interruptions in access to funding sources and serious disruptions in supply chains. The aforesaid challenges however presented an opportunity to the Construction Industry Council (CIC) in uniting the industry to act decisively and curtail the impact of these difficulties on the overall development of the industry as it strives to build a better future.

Facing the profound impact Covid-19 had on both the economy and the lives of Hong Kong people, the CIC played an enormous role to safeguard the construction industry during this downturn by working around the challenges created by the pandemic while pressing ahead on its robust infrastructure development plan supported by the HKSAR Government's desire to increase housing supply. The CIC acted vigorously to beef up the industry's productivity with technologies and foster young talent's development of important industry skills and innovativeness. The CIC also strives to achieve sustainable development through utilizing carbon measuring tools and green financing schemes.

Caring for Workers

Workers' well being and safety is always our top priority. The novel coronavirus epidemic overwhelmed Hong Kong and seriously impacted construction workers' livelihood as many workers who were infected or quarantined are family breadwinners. The CIC promptly responded by providing financial assistance and caring support to construction workers to help them get through these tough times. The CIC fully understands the workers' burden and moved to extend the Campaign 2.0 in 2022 and other protective measures with the support of the Development Bureau, to protect workers' health and ease their financial concerns.

To encourage construction workers to get vaccinated and increase the industry's vaccination rate, the CIC and the industry set up a "Construction Workers Vaccination Lucky Draw", distributing prizes worth HK\$3.3 million to lucky workers who received the COVID-19 vaccination. The Lucky Draw gave away a total of 411 prizes including the grand prize which was a pre-paid card or credit card with a spending credit valued at HK\$300,000.



With the provision of HK\$70 million to support registered construction workers who were underemployed or temporarily unemployed due to the COVID-19 pandemic, the CIC launched the “Construction Industry Council Relief Fund – Multi-skills Training Scheme for Registered Workers”. The program consists of 21 full-time short courses to encourage workers to acquire new skills and enhance their competitiveness to prepare for future changes in the development of the industry. Through the Multi-skills Training Scheme, the CIC aims to assist construction workers acquire new skills to enhance their competency while they are in between jobs, making it easier for them to switch to other trades in need of workers or for better job prospects.

With united efforts, the CIC will stay focused and diligent in battling challenges and seizing new opportunities within the industry as it continues to excel and flourish.

Promoting Innovative Technology and Construction Digitalisation

Hong Kong’s construction industry is accelerating its digital transformation efforts in response to limitations created by the Covid-19 pandemic. Promoting smart construction to enhance productivity and rejuvenating the industry’s workforce is high on the CIC’s agenda. As part of the “Construction 2.0 strategy” launched in 2018, the CIC actively promotes smart and sustainable construction practices along with the adoption of innovative technologies including Modular Integrated Construction (MiC) and Building Information Modeling (BIM) to enhance the industry’s productivity and attract digital-savvy young talent.

MiC is an innovative and environmentally friendly construction method that has gained a high level of importance in the technological development of Hong Kong’s construction industry. In 2021, the industry successfully integrated MiC technology to build the Hong Kong Infection Control Centre of North Lantau Hospital. The speed and ease in which the hospital was constructed fully demonstrates the success in harnessing the versatility of MiC in urgent and large-scale development projects.

To further establish Hong Kong as an important player in the international MiC market, CIC successfully held the International Conference on MiC for the third consecutive year. The conference attracted over 1,400 experts from across the globe, providing them with the opportunity to exchange views and insights as well as share the latest developments and professional advice on the MiC in their respective regions and jurisdictions. The wealth of knowledge gained from the conference is expected to stimulate a wider MiC adoption in Hong Kong.

By the end of 2021, over 15 MiC projects were completed; specifically the high-rise Fire Services Department’s Married Quarters at Pak Shing Kok marked a major step forward in utilising this technology. Additionally, there were more than 60 projects under construction or in the planning stage to adopt MiC including the refurbishment of the Western Police Married Quarters, the Kwun Tong Composite Development, and an extension to the Legislative Council complex. The success of these projects will be remarkable proof showing MiC effectiveness and suitability for a wide variety of construction applications in Hong Kong. The initiatives proposed in the “Chief Executive’s 2021 Policy Address” highlighted that more construction projects will be adopting MiC in order to expand the housing supply in an effort to improve Hong Kong’s living environment and standards.

The ongoing development of professional talent and solidifying advanced industry knowledge is essential in order to accelerate construction innovation. The CIC pressed ahead in mobilizing workers’ professional development. The CIC renamed MiC Display Centre as MiC Resources Centre for demonstrating residential flats built with MiC. In the past year, CIC organised five local seminars and workshops which attracted over 5,500 participants in total. The MiC Resources Display Centre joined Construction Innovation and Technology Application Centre, CIC – Zero Carbon Park and Building Information Modelling Space to form the Construction Exhibition Hub to serve as a professional knowledge platform for the industry.

Fortifying the construction industry's digital transformation, the CIC has achieved considerable success from embracing BIM. In September 2021, the CIC renamed the Building Information Modelling Department as the Construction Digitalisation Department, expanding its role to orchestrate the wider adoption of BIM and other digital construction technologies in architecture, engineering, construction and operations. The CIC also developed new strategies to accelerate the market transformation and promote cross-discipline collaboration in the industry. These programs provide a solid foundation along with extensive infrastructure to empower Hong Kong's construction industry to incorporate BIM as part of its long term development plans.

In 2021, the CIC won the Gold Award (BIM Projects – BIM initiatives Category) granted by HKIBIM Award 2021 for publishing a series of publications related to new and updated BIM training and BIM standards in mobilizing the development of BIM in Hong Kong. This recognition from the industry bolsters our confidence and reinforces BIM's use by Hong Kong's construction industry's professionals.

The CIC Construction Digitalisation Award 2021 is given out to recognise outstanding local projects and local organisations for their achievements in digitalisation and innovation to improve construction productivity, quality, sustainability and safety. This year the CIC received 120 entries in its two categories, "Project" and "Organisation". 23 winning teams were selected through a rigorous evaluation process.

The use of digital technology in construction has now become commonplace in the industry. To further promote digitalisation in the Hong Kong construction industry, the CIC has been working with experts and key industry stakeholders to craft the Construction Digitalisation Roadmap. The Roadmap includes a Construction Digitalisation Dashboard and highlights six high-value areas: Smart Data Sharing, Smart Planning and Design, Smart Submission with BIM, Smart Offsite Fabrication and Delivery, Smart Site Management, and Smart Asset and Facility Management. It also lists strategies to encourage a greater adoption of digitalisation.

The Construction Innovation & Technology Fund (CITF) continues to promote wider adoption of innovative construction methods and technology in the construction industry to boost productivity, uplift built quality, improve site safety and enhance environmental performance. Up til the end of 2021, the total accumulative number of beneficiaries increased to 849 covering technologies and

initiatives in BIM, Advanced Construction Technologies, MIC, Prefabricated Steel Rebar, Industrialised Process – Robotic Welding and Manpower Development. In 2021, Advanced Construction Technologies, BIM software and BIM training courses on the Pre-approved Lists continued to expand to 566 pre-approved items by 2021.

Making Sustainability an Imperative

As one of the economic pillars of Hong Kong, the construction industry is closely related to Hong Kong's sustainable development. Driving the sustainability of the industry is the eager cooperation and support from the industry in various areas. Despite the challenges posed by the prolonged COVID-19 pandemic, the CIC remained committed to enhancing the business environment and promoting sustainable development in Hong Kong's construction industry on many fronts over the past year.

The launch of the CIC Sustainable Finance Certification Scheme marks another milestone in the construction industry and encourages Hong Kong's development as a sustainable green city. The Scheme which is developed based on three Principles – Integrity, Internationality, and Intelligence, aims to support the HKSAR Government's carbon neutrality target and the growing demand for sustainable finance across the construction industry. The Scheme provides a common framework and a simple and easy assessment system that brings together stakeholders including developers, contractors, subcontractors and suppliers. 19 pilot projects from 17 organisations successfully obtaining the certification in 2021. These organizations utilise the tools for sustainable finance and further develop more sustainable construction projects. They also support green finance in Hong Kong's construction industry and raise awareness of sustainable financing solutions available to the construction industry while supporting Hong Kong's carbon neutrality agenda.

To showcase the industry's ability in DfMA and the multi-trade integrated approach for MEP works, CIC together with the Hong Kong Federation of Electrical & Mechanical Contractors Limited successfully organized the DfMA MiMEP Tradeshow 2021. The Tradeshow served as a platform for sharing the best practices, innovative ideas and benefits to adopting DfMA for MEP works. The 25 innovative and inspirational exhibits, drew over 6,600 project clients, industry practitioners and government regulators to the Tradeshow. In addition to the Tradeshow, CIC



organized a conference and a technical forum. 15 industry experts from project clients, practitioners, specialist contractors, and professional bodies shared their knowhow and experience in adopting DfMA – MiMEP works during these events.

Although the pandemic hindered our ability to freely travel to the Greater Bay Area, local industry stakeholders' interest in collaboration with other GBA cities is still a high priority. The CIC strengthened connections with GBA construction stakeholders and launched the Greater Bay Area Construction Development Platform in 2021. The platform provides an online company directory to facilitate the development of construction supply chains in nine selected GBA cities and two special administrative regions, Macao, and Hong Kong. Over 200 companies joined the platform to participate in the expanding business opportunities between GBA cities.

In 2022, CIC plans to establish a liaison office in the Greater Bay Area to enhance its communication channel and support connecting Hong Kong and GBA construction stakeholders.

Empowering New Generation to Lead Change

The future of Hong Kong's construction industry relies on both traditional skills and craftsmanship, but also training younger talents in innovative techniques that will help the industry evolve.

The completion of upgrading the campus at Hong Kong Institute of Construction (HKIC) opens a new chapter in construction training. The campus provides advanced hardware for students and a comprehensive learning environment. In line with the education system in Hong Kong, HKIC is committed to optimising its full-time courses. Currently, a total of 25 qualifications are recognised under the Qualification Framework accredited at QF Level 4, Level 3 and Level 2.

HKIC strives to provide opportunities for young people to receive professional training and build a career path to higher level management. Young students who completed Secondary 3 can acquire professional skills in HKIC and enter the construction industry after becoming semi-skilled workers. Graduates can start their career with systematic apprenticeship training and then transfer to a university degree programme.

Launched in 2019, the Construction Industry Council Approved Technical Talents Training Programmes (CICATP) has provided systematic on-the-job and enrichment programme training to about 100 CICATP apprentices. These apprentices are the first batch of knowledge-based skilled workers trained by HKIC and who will be the pillar supporting the future of our construction industry.

HKIC aims to nurture an accomplished construction workforce with sound professional skills. Its commitment to the "Construction Pathway Project" provides graduates with a comprehensive pathway and progressive development in a vocational or professional career in the construction industry. All these initiatives pave the way for young talents to pursue a career in construction, contributing to the industry's sustainable development.

The CIC is developing a CIC BIM Starter Guide for new BIM users. This is an easy and user-friendly pamphlet to assist the industry, in particular small and medium enterprises, on BIM adoption.

To uphold the quality and ascertain the competency of BIM personnel in the industry, CIC has launched the BIM Certification and Accreditation Schemes (the Schemes) since 2019. 484 BIM Managers and 338 BIM Coordinators have been certified under the Schemes by end of 2021.

On the training side, the CIC will continue to consolidate training needs from the industry and collaborate with the School of Professional Development in Construction (SPDC) and BIM training service providers to offer necessary training courses to meet industry demands. In addition, the CIC will include BIM and Construction Digitalisation in the Science, Technology, Engineering and Mathematics (STEM) Education program for secondary school students through taster workshops.

The CIC organised the CIC BIM Competition for the third consecutive year in 2021, with the aim to promote the practical uses of BIM through a collaborative and competitive learning approach among participating teams of higher education students in construction-related disciplines. We also organised 20 different webinars to strengthen students' knowledge and skills in BIM to facilitate outstanding performance. These webinars covered BIM authoring tools, Geographic

Information System (GIS) platforms, Common Data Environment (CDE) related solutions and building energy simulation software, and net zero building design.

To promote the MiC method, the CIC successfully launched the "MiC: Maximise Infinite Creativity" Mini-Building Model Competition to stimulate creativity among secondary school students and to provide participants with trainings on MiC and related technology.

Leading the Industry to Improving Safety

Safety is paramount to the CIC. The loss of even one life is unacceptable yet in 2021, the industry suffered 23 fatalities showing more can be done to improve on-site safety. To increase safety awareness, the focus of this year's Construction Safety Week was "lifting and heavy machinery operation safety". The CIC also launched its 'Life First' campaign which encourages all stakeholders – including the owner, the contractor and sub-contractors, designer and architect – to regularly walk the site to ensure there are no loose ends or potentially dangerous areas. "Design for Safety" was developed last year providing guidelines to promote good practices in planning and design for safety in the project life cycle. This aims to make on-site safety an absolute priority by involving all parties at every stage.

To further enhance the safety of the construction industry, the Committee on Construction Safety develops and presents initiatives to foster a positive safety culture by providing guidance and training on safe practices. The CIC and the Hong Kong Construction Association co-organised the seventh annual "Experiential Learning on Site Safety Training Scheme 2021–22" to educate and cultivate proper site safety awareness among future construction talents. It provided training sessions to enhance awareness and necessary knowledge on construction safety for undergraduates planning to join the construction industry.

Way Forward

Both the Hong Kong community and the construction industry continue to evolve and adapt to cope with the impact of the ongoing pandemic, while continuing to seize a variety of valuable opportunities. To achieve our goals, the CIC will continue to provide support for all stakeholders working towards construction digitalisation and seamless adoption of related technologies contributing to Hong Kong's sustainable development in transitioning to a smart city. As a strong proponent of the construction industry, the CIC is committed to fight the pandemic and overcome challenges as it leads the way forward towards a sustainable future. We will lead the CIC team to promote new initiatives in various key areas to achieve our vision for the future. Our main focus will cover promotions of innovation adoption in the construction industry and BIM education in higher education institutions. We are also determined to reduce fatal accidents and enhance overall safety standards while developing relevant reference materials and organise promotion activities for the industry. Equally important is the Greater Bay Area which is our next target to explore and establish supply chains to develop business opportunities for local enterprises.

In conclusion, I want to acknowledge the hard work and dedication of the CIC team during this year of unprecedented challenges. I am grateful for every staff member who rose to the occasion. We appreciate their dedication, skills and focus which allowed us to roll out so many successful programmes and initiatives, and I am proud of their considerate efforts.

Finally, I want to thank all my work colleagues, the many stakeholders across the construction industry, and the government officials who all rallied behind the CIC during this difficult year. We have all emerged stronger – and are well-positioned to make our industry safer, more sustainable, and more innovative for the years ahead.

Ir Albert CHENG

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