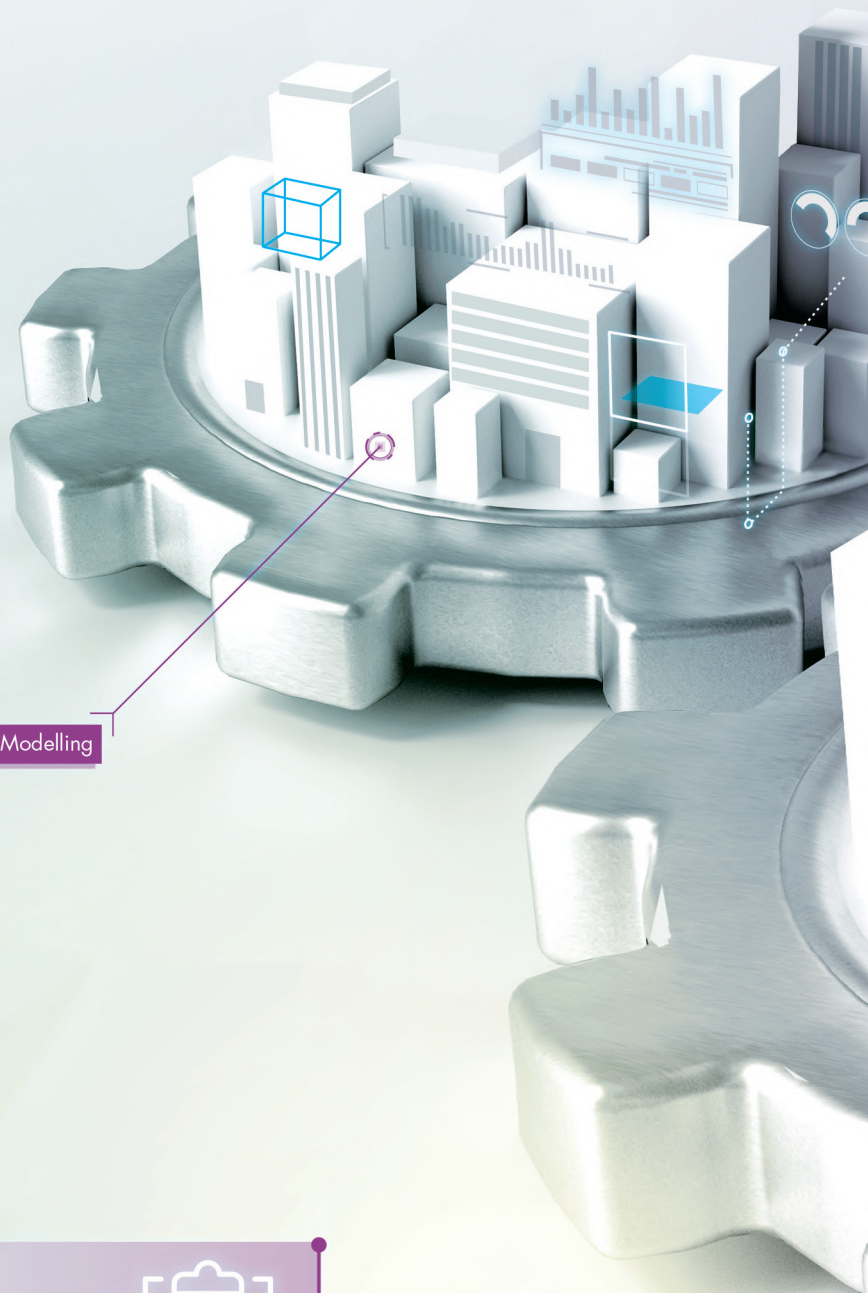


# OPERATIONAL REVIEW



 Building Information Modelling



Modular Integrated Construction

Collaboration Scheme

Workers Registration



# FORGING AHEAD WITH SAFE, SMART AND SCALABLE CONSTRUCTIONS

## Building Information Modelling

The Building Information Modelling (BIM) Department strives to promote and facilitate wider adoption of BIM and its related technologies in architecture, engineering, construction, owner and operation. The CIC continues to develop itself as a Centre of Excellence for BIM, formulating strategies for market transformation and promoting cross-discipline collaboration and wider adoption of BIM.

During the year, a series of new and updated *CIC BIM Standards* publications in 2020 has won the Grand Award (BIM Projects - BIM initiatives Category) and the CIC has won the Gold Award (BIM Organisations - BIM Department / Units / Teams Category) at HKIBIM Awards 2020. The awards are recognition of our efforts and achievements in promoting the use of BIM. We have published a commemorative booklet with highlights of our endeavours and achievements during the BIM Year 2019. This booklet has clinched the Bronze Award under the category "Brochures" at the International Astrid Awards 2021.

## Celebration of BIM Achievement

Riding on the momentum of BIM Year 2019, the CIC launched the Celebration of BIM Achievement 2020. It recognised and shared achievements of organisations and practitioners with stakeholders with a view to inspiring them to constantly be creative, innovative, transformative or disruptive in bringing BIM to its full potential. Receiving enthusiastic support from the industry, this first-ever Celebration of BIM Achievement fully demonstrated that the industry has been successfully adopting and implementing BIM. A total of 17 local construction and non-construction projects were awarded "BIM Projects 2020", 15 local organisations received "BIM Organisations 2020", 10 BIMers were named "BIMers 2020" and among them, three participants aged below 30 were recognised as "Young BIMers 2020".



■ Celebration of BIM Achievement 2020



■ Publications of *CIC BIM Standards*

## CIC BIM Certification and Accreditation Schemes

The CIC BIM Certification and Accreditation Schemes (Schemes) aim at assessing the competency of BIM practitioners and ensuring the quality of local BIM training courses. Subsequent to the successful launch of the Certification of BIM Managers and Accreditation of BIM Manager Courses in 2019, the CIC expanded the Schemes to cover the Certification of BIM Coordinators and Accreditation of BIM Coordinator Courses in March 2020. Since the launch of the Schemes, nearly 400 BIM managers and 20 BIM coordinators have been successfully certified by the CIC. Moreover, three BIM manager courses and three BIM coordinator courses have been accredited by the CIC.

## CIC BIM Standards

The CIC further developed and enhanced the *CIC BIM Standards* in 2020 to meet the needs of the industry and introduced the ISO 19650 international standard, marking an important milestone in the history of BIM development in Hong Kong. During the course of the development, we conducted consultations with relevant stakeholders

to identify and align common practices with a view to facilitating better implementation and adoption of BIM technologies in project execution. The following new / updated BIM Standards and BIM-related publications in English were published by the CIC in 2020:

- *CIC BIM Standards – General Version 2 – December 2020* (with Hong Kong Local Annex of ISO 19650-2:2018)
- *CIC BIM Standards for Architecture and Structural Engineering Version 2 – December 2020* (in line with ISO 19650)
- *CIC BIM Dictionary December 2020* (in line with ISO 19650)
- *CIC BIM Exchange Information Requirements (EIR) Template (BIM Specifications) December 2020* (in line with ISO 19650)
- *CIC BIM Standards for Preparation of Statutory Plan Submissions December 2020*

## OPERATIONAL REVIEW

### FORGING AHEAD WITH SAFE, SMART AND SCALABLE CONSTRUCTIONS

#### BIM Objects

With the collection of over 1,500 BIM objects used by government departments in their projects, the CIC has checked their compliance with the *CIC Production of BIM Object Guide General Requirements* and uploaded onto the CIC BIM Portal for use by practitioners, which is also positioned as a virtual showroom for suppliers in the industry.

#### CIC BIM Space

With the growing demand in using BIM and its related technologies in the industry, the CIC BIM Space was established in 2019 to promote BIM awareness and adoption in the industry. Also serving as a one-stop shop for provision of BIM-related services and support to the industry, the CIC BIM Space encourages BIM adoption

and proliferation through organising joint seminars and events in collaboration with different stakeholders; provides stakeholders an information sharing platform; organises hands-on BIM software workshops, advisory workshops, awareness seminars and workshops; and showcases advanced technologies and different BIM applications with real projects.

In light of the COVID-19 outbreak, the CIC BIM Space was occasionally closed in 2020, while seminars were continued and switched to online webinar format to keep the momentum of BIM knowledge sharing. During the year, 52 webinars were organised, covering various BIM related events such as BIM Talks, BIM Solution Day, briefing of the Certification of BIM Personnel and Accreditation of BIM Training Courses and consultation sessions with industry stakeholders on CIC BIM Standards, successfully attracted over 33,000 attendees.



■ CIC BIM Space



■ CIC BIM Competition 2020

## CIC BIM Competition

The CIC continued to organise the CIC BIM Competition for higher education students in 2020. The competition aims to promote the practical use of BIM through collaborative and competitive learning approach among higher education students in construction-related disciplines, as well as to provide an excellent platform for the younger generation to unleash their potentials and demonstrate their skills in using BIM knowledge.

In response to the COVID-19 outbreak, 13 hands-on BIM training courses covering various BIM software knowledge and techniques were conducted through webinars in March and April 2020. Around 430 students attended the online training, which was twice as many as in 2019. In addition, since some participants were either out of Hong Kong or unable to meet up due to COVID-19, cloud collaborative platforms were provided to students to facilitate remote teamwork, showing how the adoption of BIM overcame geographical constraints on collaboration.

## BIM Adoption Survey

Based on an industry-wide BIM adoption survey conducted in 2019, we conducted a simplified survey in 2020 and continued to understand the BIM trend, current BIM adoption status and needs in local construction industry, thereby formulating effective plans to advance BIM adoption in Hong Kong. The survey showed promising improvement in adoption when compared to the results of 2019, which further reinforces the major directions of BIM strategies in the CIC's roadmap.

## 3D Spatial and BIM Data Use Case Requirements of Hong Kong Construction Industry

The CIC conducted a consultancy study in support of the Government's initiative of developing a smart city and Common Spatial Data Infrastructure (CSDI). It aims to accelerate the development of a digital Hong Kong by identifying and collecting different 3D spatial and BIM data use case requirements from the local construction industry.

Use cases of BIM, Geographic Information System (GIS), 3D spatial data and other kinds of geospatial data are covered in the study. The Study facilitates the integration of BIM and GIS and the development of 3D Map, as well as the research and development of the digital-built environment for the development of a smart city. A webinar to the public was organised in December 2020 to share the findings of the study.

#### R&D Project – BIM-based Rebar Design Optimisation and Prefabrication Automation

The CIC Research and Technology Development Fund was set up to provide financial support to research projects which may benefit the development of Hong Kong construction industry through practical applications of the research outcomes. As one of the funded research projects, the BIM-based Rebar Design Optimisation and Prefabrication Automation project was carried out by the Department of Civil and Environmental Engineering, Hong Kong University of Science and Technology, and was completed in December 2020. The project aimed to develop an innovative approach for automated clash-free steel reinforcement design optimisation and an automated BIM-based framework to generate the rebar schedule, detail drawings and factory machine codes for rebar prefabrication.

#### The Way Forward

Upon release of the CIC BIM publications on Standards and Guidelines in December 2020 in accordance with ISO 19650, there is a significant impact on the local industry. The CIC will develop a work plan and organise special training sessions in 2021 to upskill all practitioners in Hong Kong with the aim of promoting wider adoption in the industry.

To ensure data interoperability and facilitate data sharing, the CIC will continue to develop CIC BIM Standards on different BIM uses and disciplines to meet the needs of the industry. We will also work with project clients to identify building and infrastructure projects and carry out pilot BIM submissions to the Buildings Department with a view to developing streamlined workflow for the private sector.

Applications of BIM in various development stages often associate with different digital technologies, such as Virtual Reality / Augmented Reality (VR / AR), Radio Frequency Identification (RFID), Artificial Intelligence (AI), Internet of Things (IoT) as well as Integrated Project Delivery (IPD), etc. As the use of digital technologies has become a growing trend with increasing attention in the industry, the CIC will foster and promote digitalisation by formulating a Construction Digitalisation Roadmap for the local construction industry.

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 fulfil the demands. Given the momentum and quantum of the need for capacity building through the supply chain, the CIC will share the work with professional bodies and trade associations, as well as engage with vendors to produce short training videos and self-learning packages in 2021.

The CIC has been supporting a R&D project titled “BIM-Automation of Gross Floor Area (GFA) Calculation, Fire Safety and Prescribed Checking for General Building Plans (GBP) Preparation”, which is targeted to be completed in 2021. It aims to automate the GFA calculation, taking into account necessary statutory requirements with exemptions and fire safety prescribed checking will also be worked out.

The CIC will continue to organise the CIC BIM Competition in 2021 to encourage the young generation to acquire the knowledge of BIM. In addition, we will assist in organising the first CIC Construction Digitalisation Award to recognise outstanding local organisations and local projects for their contribution to the promotion and adoption of digitalisation tools to improve workflows, and bringing innovation into these areas to improve productivity, quality, sustainability and safety with measurable KPIs.

## Construction Business Development

Following the promulgation of the *Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area*, the Committee on Construction Procurement was officially revamped and renamed as the Committee on Construction Business Development in 2020, aiming to cultivate a sustainable construction market with equitable risk sharing and collaborative culture. The newly revamped committee will put more focus on fostering a healthy business environment for the construction market and enhancing connections with Greater Bay Area (GBA) counterparts.

### Reasonable Construction Period

A consultancy study was completed in 2020 to review critical factors affecting construction periods and establish an objective benchmark of construction period for building projects. With the adoption of big data analytics and machine learning approach, a Construction Time Performance (CTP) index was developed. Nine parameters were identified and validated by industry stakeholders as highly impactful to construction duration, the CTP index provides stakeholders an independent perspective to compare time required by a particular project to other similar projects completed in Hong Kong.

### GBA Construction Communication Platform

In light of the strong interest from industry stakeholders in Hong Kong to collaborate with other cities in the Greater Bay Area (GBA), the CIC will establish a GBA Construction Directory to cover the construction supply chains in nine selected GBA cities and two special administrative regions. Industry stakeholders in these cities and regions can connect with the right counterparts through this communication platform.

### Reasonable Consultancy Fee Evaluation System

Due to fierce competition amongst consultancy tenders in construction industry, unreasonably low bids have been submitted by consultants to secure jobs, resulting in unsatisfactory assignment completion. Under the “two-envelope system” commonly adopted in Hong Kong with evaluations on both fee and technical aspects, cost can still outweigh technical assessment when there are large variations in submitted fees.

A study on reasonable consultancy fee evaluation system is underway to appraise various fee evaluation mechanisms for consultancy tenders in local and overseas construction industries. A consultancy fee evaluation mechanism suitable for the market in Hong Kong will be developed and recommended to safeguard industry stakeholders against unreasonably low fee in consultancy tenders.

### MiC and DfMA Procurement

In promoting and facilitating the adoption of Modular Integrated Construction (MiC) and Design for Manufacture and Assembly (DfMA) in the construction industry, the CIC is developing a set of bilingual reference materials on MiC and DfMA procurement for industry stakeholders, covering procurement approaches, contract provisions as well as suggested timeline to adopt MiC and DfMA in construction projects.



## Construction Industry ESG Reporting Service 建造業環境、社會及管治報告服務



■ Construction Industry ESG Reporting Service

### ESG Reporting Services

With the aims of promoting Environmental, Social and Governance (ESG) best practices in the construction industry and assisting companies, in particular, the small and medium enterprises (SMEs), in preparing their corporate ESG reports, the CIC announced the launch of Construction Industry ESG Reporting Service (CIESG) in Q4 2020 and the service operation will commence in 2021.

### Publications on Promoting Healthy Construction Market

A number of publications were issued in 2020 to promote a healthy construction market. A *Review Report on Quality Site Supervision Practices of the Hong Kong Construction Industry* was issued in Q3 2020 to identify possible improvements and offer recommendations to elevate the performance of the industry regarding construction quality. In response to unforeseeable incidents in the market, the CIC will produce and publish relevant timely alerts to draw the attention of industry practitioners. A *Procurement Alert on Prevention of Bribery* and a *Market Alert on Considerations under COVID-19 Epidemic for Construction Projects* were published.

## Risk Management during COVID-19

To avoid crowd gathering due to the epidemic, a number of seminars, talks, conferences and stakeholder engagement sessions went virtual and switched to video conferencing, and corresponding prevention measures were taken in accordance with internal guidelines. Planned mainland study tours and exchange activities were also postponed.

## The Way Forward

Extended the work plan of 2020, the CIC will continue to conduct different studies on the aspects of healthy construction market, equitable risk sharing and collaborative culture, as well as to develop relevant reference materials and organise promotion activities for the industry. The CIC will also strive to facilitate industry stakeholders to explore and establish supply chains in the GBA.

The mismatch of resources has long been faced by the construction market, resulting in imbalance between demand and supply on certain resources, in particular, the fluctuating project rollout against labour shortages. In view of these problems, the CIC has initiated a study on sustainable construction volume and resources utilisation. This study aims at investigating the maximum construction volume that can be met practically by the industry as well as the minimum amount of construction works required to sustain the construction industry. Thus, industry stakeholders can make reasonable planning on projects, scheduling and training, as well as better resource utilisation. The study is expected to be completed in 2022.

With the aim of encouraging professionalism among contractors, the CIC will launch its inaugural CIC Outstanding Contractor Award in 2021, to recognise main contractors and specialist contractors with exceptional performances in innovation and professionalisation, revitalisation and ESG.



■ Review Report on Quality Site Supervision Practices of the Hong Kong Construction Industry

### ■ Procurement Alert on Prevention of Bribery



#### ■ Prevention of Bribery

A former foreman and a worker of a construction company were charged with soliciting and accepting bribes at a construction site, contrary to Section 8(1)(a) of the Prevention of Bribery Ordinance (POBO).

In a construction related corruption case report recently, the accused misrepresented to consultants, falsifying the work experience of job-seekers, and employing unqualified workers. The above acts constituted bribery and the company suffered financial losses.

Furthermore, typical corruption scenarios that occur in the construction industry include:

- solicitation of referral fee or "tea money" from consultants, so as to offer interview or job openings;
- falsification of attendance records for collusion;
- acceptance of advantages by site supervisors of other contractors / subcontractors.

<sup>1</sup>Under Section 8(1) of POBO, an agent (e.g. employee) who solicits or accepts a bribe as a reward or inducement for doing or forbearing to do an act, or for showing or forbearing to show favour or disfavour, commits an offence. The person offering the bribe also commits an offence.



#### ■ Considerations under COVID-19 Epidemic for Construction Projects

As COVID-19 cases continue to emerge, different sectors of the society are adversely affected by the epidemic. It has been raised that as construction workers adopt anti-epidemic measures at work, such as wearing masks and observing social distancing, their work efficiency is reduced. This may adversely affect the progress of construction works. If the works are delayed due to the epidemic or other reasons, the industry is reminded of the following:

- Contractors**
- When a delay in completion of project is anticipated, contractors may discuss with project consultants and employers alternative methods which are practical and feasible. For example, re-sequencing the works to prevent or to mitigate the delay;
  - Contractors should properly maintain relevant documents and records, such as site daily reports, method statements, progress plans and reports, completion records and daily attendance records of registered workers, as supporting documents for the application for extension of time.
- Employers / Consultants**
- If contractors propose other feasible solutions to prevent or to mitigate the delay in completion of works, the employer / consultant are encouraged to consider favourably and adopt their suggestions. Flexibility in construction sequences and methods may be exercised in compliance with relevant laws, regulations and project specifications, where circumstances permit;
  - If contractors apply for an extension of time in accordance with the contract, the employer / consultant are advised to assess the application based on the justifications and relevant documentary proofs provided by the contractors, and reply to the contractors within a reasonable time.



■ Market Alert on Considerations under COVID-19 Epidemic for Construction Projects

## Construction Productivity

The Hong Kong construction industry is facing challenges of ageing workforce, high construction cost, and stagnant productivity growth. The Construction Productivity Department (COP) supports the Committee on Productivity (Com-PRO) in promoting innovation and facilitating the adoption of advanced technologies and construction methods to elevate the industry’s productivity and competitiveness.

## Design for Manufacture and Assembly (DfMA)

DfMA is a proactive design approach that focuses on achieving ease of manufacture and improving assembly efficiency, enabling higher quality and higher efficiency in offsite construction. To promote and facilitate adoption of DfMA and modular construction, a DfMA Alliance was established in 2019, and 148 companies / organisations from the industry joined the Alliance by the end of 2020. Major initiatives on promoting DfMA are highlighted as follows:

### DfMA for Mechanical, Electrical and Plumbing (MEP) Systems

A consultancy study on “Driving DfMA Adoption to Enhance Productivity for MEP Works in HK Building Projects” was commissioned in June 2020. Best practices on DfMA for MEP works both locally and internationally were

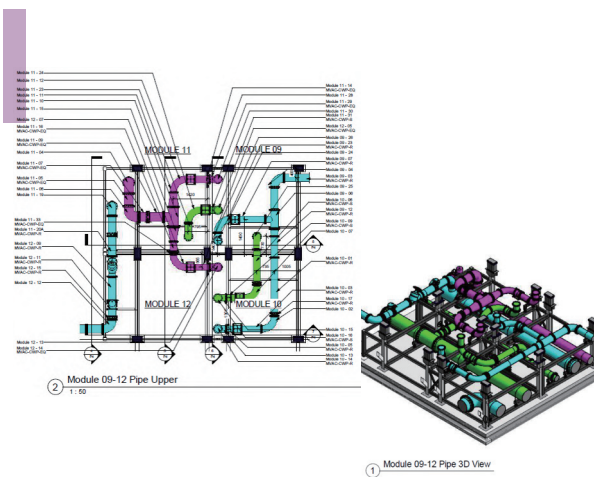
reviewed with an aim of formulating practical strategies with supporting measures to enhance productivity for MEP works in the building sector of Hong Kong. In addition, a DfMA Guidebook for MEP works is also being compiled.

### DfMA Scoring Scheme (DSS)

Com-PRO believes that measurement is a key step in monitoring performance and identification of improvement measures. To this end, a research project titled “Development of an Appraisal Framework for Assessing the DfMA Content for Buildings in Hong Kong” was conducted to develop a DfMA Scoring Scheme (DSS) to measure the extent of DfMA applied in residential building projects. A wide range of DfMA applications are covered in the DSS, including panelised systems, Modular Integrated Construction (MiC), MEP prefabrication, adoption of BIM, etc. The DSS can serve as an industry metric to assess project achievement on DfMA adoption and associated project performance on construction productivity, safety and sustainability.

### Promotion of DfMA

Five webinars on DfMA were organised in 2020. Local experts as well as experts from Australia and the UK were invited to share their experience on design guidelines, practices, MEP and DfMA platform approach. Around 4,000 practitioners joined the webinars.



■ Draft DfMA MEP Templates

## Innovation and Research

### International Symposium on “Unlocking Innovation in Construction through 5G Technology” 5G

The CIC and the Hong Kong Science and Technology Parks Corporation (HKSTP) co-organised the International Symposium on Unlocking Innovation in Construction through 5G Technology virtually on 9 December 2020 which welcomed nearly 1,200 attendees. Officiated by Ms. Rebecca PUN, Commissioner for Innovation and Technology, the Symposium brought together local and international experts, including representatives from Huawei Technologies Co., Ltd, Guangdong Bright Dream Robotics Co., Ltd, and SmarTone Mobile Communications Ltd, etc., to exchange views on transforming the construction industry by leveraging 5G network. Along with the Symposium, a B2B event was also held to promote the adoption of digital solutions, robotics and A.I., as well as advanced materials and technologies in the industry. About 100 B2B matchmaking meetings were successfully arranged.

### Research and Technology Development

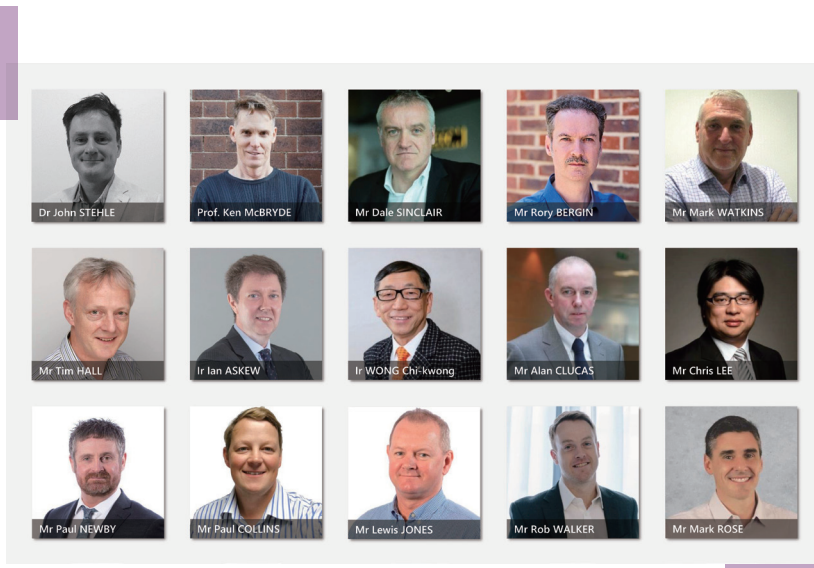
The Com-PRO is committed to improve the productivity and competitiveness of local construction industry by driving research and innovation. In 2020, the CIC Research and Technology Development Fund supported a research project

titled “Application of Maturity Method for Determination of Early-age Concrete Strength in the Hong Kong Construction Industry” which aims at assessing the applicability of the maturity method and maturity functions to predict the early age strength development of common cement and concrete products in Hong Kong. Practical guides to facilitate wider application of the maturity method among the industry will be developed.

With the objectives to disseminate research outcomes to the industry and solicit industry’s needs on research and development, two online research forums were organised in July and October 2020 with the themes “Advanced Construction Materials” and “Advanced Steel Solutions & Co-engineering” respectively. About 1,100 industry practitioners attended the Forums.

## Improving Construction Time, Cost and Quality

A consultancy study on “Improving Time, Cost and Quality Performance of the Hong Kong Construction Industry” was undertaken to formulate strategies and measures to improve performances on those three aspects in the industry. Four key directions were initially recommended, namely “Shifting to Industrialisation”, “Driving Innovation”, “Streamlining Approval Processes”, and “Enhancing Project Management and Procurement”. An influential report on the Hong Kong construction industry is expected to be issued in 2021.



Local and overseas experts on DfMA sharing experiences online

### Construction Expenditure Forecast

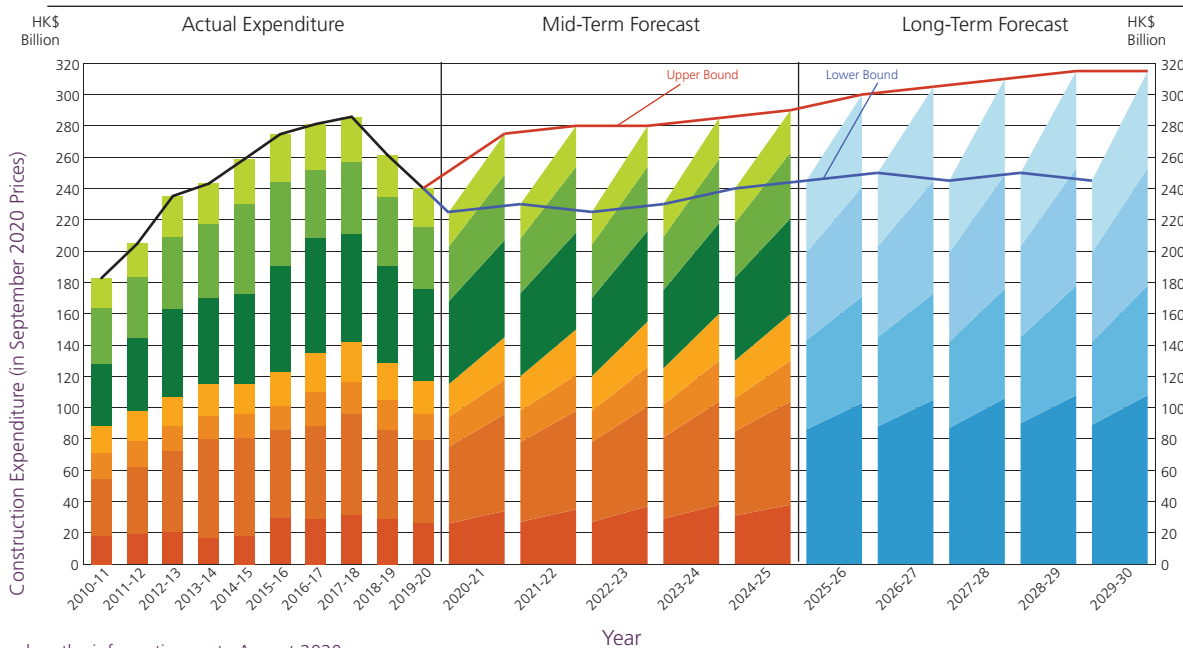
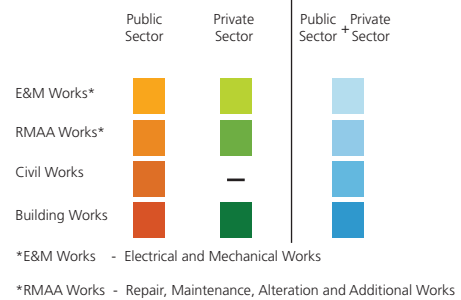
With a view to assisting policy makers and industry stakeholders in conducting resources and strategic planning, the CIC published a construction expenditure forecast in September 2020. In the next decade, construction volume is expected to range from HK\$225 billion to HK\$315 billion (in September 2020 price level) per annum. In spite of the challenges brought by COVID-19, the CIC will keep reviewing and monitoring the construction volume and manpower market for various industry stakeholders to formulate business strategies and development plans.

### The Way Forward

The manufacturing industry has experienced waves of industry revolutions, with a long history of innovation leading to the significant rise of productivity. Through industrialisation and digitalisation, the Hong Kong construction industry is currently under transformation to “Construction 2.0”. Looking ahead, the Com-PRO will endeavour to promote and facilitate the adoption of new technologies, advanced construction method, novel construction materials, and innovative solutions for a productivity leap in the local construction industry.

## CONSTRUCTION EXPENDITURE FORECAST FOR PUBLIC AND PRIVATE SECTORS\* (2020/21 TO 2029/30)

Actual Expenditure & Mid-Term | Long-Term



\*Based on the information up to August 2020

■ The latest Construction Expenditure Forecast released in September 2020

## Construction Safety

The Construction Safety Department (CSA) has been providing secretarial support to the Committee on Construction Safety (Com-CSY) to develop and take forward initiatives to foster a positive safety culture, and to provide guidance and training on safe practices. The Com-CSY and its three sub-committees, viz. Sub-committee on Safety Promotion, Sub-committee on Safety Training and Sub-committee on Safety Technical Issues, continue to carry out work following the consensus on the strategic direction to prevent fatal and serious construction accidents.

## Foster Safety Culture at Construction Sites

The CIC and the Development Bureau (DEVB) continued to co-organise the ninth consecutive Construction Safety Week (CSW) with a main focus on “Lifting Operation Safety”. Related activities including “Site Safety Gathering”, “Site Safety Gathering Sharing Session for Working-at-Height Safety”, “CSW 2020 Sharing Webinar”, “Lifting Safety Promotional Campaign”, “26<sup>th</sup> Considerate Contractors Site Award Scheme (CCSAS)”, as well as “Innovative Safety Initiative Award (ISIA) 2020” were held. In view of the epidemic, offline activities of the CSW 2020 were changed to online, such as live webcast for award ceremony, to prevent crowd gathering and to safeguard the health of workers.



■ 26<sup>th</sup> Considerate Contractors Site Award Scheme (CCSAS), one of the activities in Construction Safety Week 2020

## OPERATIONAL REVIEW

### FORGING AHEAD WITH SAFE, SMART AND SCALABLE CONSTRUCTIONS

In August 2020, the CIC and the DEVB launched an industry-wide construction safety campaign, “Life First”, to encourage industry players to hold a 5-day campaign with safety review activities at their sites, including a thorough site safety inspection to identify potential risks and to protect

frontline workers. With the overwhelming response from the industry, almost 80 clients, including various Works Departments of the DEVB, public organisations and private developers, as well as about 200 main contractors and more than 450 construction sites participated in the Campaign.



■ An industry-wide construction safety campaign, “Life First”, was launched in August 2020

In addition, four technical webinars, themed “Site Safety Measures for Working in Hot Weather”, “Design for Safety”, “Pay for Safety Scheme” and “Safety Roles and Responsibilities”, were organised with a total of over 4,000 participants to promote safety knowledge to industry stakeholders.

With the aim of educating and cultivating proper site safety awareness among future construction talents, the CIC and the Hong Kong Construction Association co-organised the sixth annual “Experiential Learning on Site Safety Training Scheme 2020–21”, providing training sessions with a view to enhancing consciousness and instilling knowledge on construction safety into the minds of undergraduates planning to join the construction industry. Running from November 2020 to July 2021, 15 construction-related faculties from 11 universities and tertiary institutions have joined this year and around 450 undergraduates are expected to be benefited from the Scheme.



■ Outdoor training of “Experiential Learning on Site Safety Training Scheme 2020–21”



■ Lifting operation safety training of “Experiential Learning on Site Safety Training Scheme 2020–21”



## OPERATIONAL REVIEW

# FORGING AHEAD WITH SAFE, SMART AND SCALABLE CONSTRUCTIONS

### Provide Safety Training Materials

Four new training courses were offered to workers in 2020, including “A12 Course on Construction Materials Rigger”, “A12S Silver Card Course on Construction Materials Rigger and Signalman”, “Lifting Safety Supervisor Course” (a 3-day course) and “Certificate in Soil Nail Drilling Safety Training Course”. In addition, the CIC utilised virtual reality (VR) technology to develop training materials on lifting operation safety. Participating contractors of “Site Safety Gathering 2020” could download the VR training software from the newly developed VR platform and their workers could receive online safety training at sites.

### Publish Educational Publicity Publications

With an aim of promoting lifting operation safety, a *Lifting Safety Handbook* was published. It provides a summary of safety information and highlights of the lifting operation so that the industry can have a better understanding of the risks and take appropriate measures when conducting the related works. The CIC also published a *Building Services Safety Handbook*

*Handbook*, providing information on common accidents in building services and maintenance operations and good practices to minimise work-related risks.

### The Way Forward

With the aims of strengthening the safety culture and enhancing safety awareness throughout the industry, the CSA continues to prioritise initiatives on the promotion of specific safety topics which focused on the prevention of fatal accidents to improve safety awareness. The main theme of CSW 2021 will be “Safety x Smart Sites” with a focus on safety on lifting and heavy machinery operations. A Task Force on Design on Safety (TF-DfS) was formed in April 2020. The TF-DfS will carry out work that aims at investigating and formulating the roadmap and strategy on Design for Safety, strengthening the industry’s knowledge on Design for Safety, carrying out promotional activities, and conducting consultations with the industry to identify the feasibility and strategy on Design for Safety.



■ *Building Services Safety Handbook* and *Lifting Safety Handbook* were published

## Environment and Sustainability

In view of the growing importance of combating global climate change, the CIC strives to drive and facilitate the construction industry in the application of low carbon initiatives, with an ultimate goal of supporting the HKSAR Government to drive carbon neutrality before 2050. The Committee on Environment aims at encouraging the wide adoption of sustainability best practices and innovative technologies among the construction industry.

### CIC Sustainable Construction Award Conference and Presentation Ceremony

The CIC announced the launch of its second Sustainable Construction Award (SCA) in November 2019 and more than 300 applications were received this year. The SCA aims at

recognising sustainability best practices among organisations and practitioners, in particular, the young generation of the construction industry. The virtual SCA Conference and Presentation Ceremony was successfully held on 13 November 2020, with over 2,000 industry practitioners participated. Renowned speakers, construction leaders and award winners shared their experience on the green finance opportunities and new direction of sustainable construction in Hong Kong and Greater Bay Area. In addition, the award trophies this year were made of recycled concrete and materials which obtained the CIC Green Product Certification, implementing the sustainable construction concept on waste reduction and carbon reduction. The CIC is planning to arrange post-event activities, such as sharing sessions to further promote the winners' best practices to industry practitioners.



■ Highlight video



■ The renowned speakers and all awardees took part in the recording of the virtual SCA's Conference and Presentation Ceremony

## OPERATIONAL REVIEW

### FORGING AHEAD WITH SAFE, SMART AND SCALABLE CONSTRUCTIONS

#### World Sustainable Built Environment Conference 2020

With a view to demonstrating our effort and contributions in driving for a sustainable built environment and becoming the world's exemplar on green building development, the CIC and the Hong Kong Green Building Council became the joint Gold Sponsor of the World Sustainable Built Environment Conference 2020 (WSBE 2020), which was held virtually from 2 to 4 November 2020. Industry stakeholders

were given the opportunity of transferring knowledge and presenting innovative ideas in this reputable international platform. The CIC Chairman and the Chairperson of Committee on Environment also announced the initiative of developing CIC Sustainable Construction Certification Scheme for Green Finance at the conference, and the *Hong Kong Report 2020* was published in parallel with the opening of the WSBE 2020 to showcase the sustainability achievements of Hong Kong's construction sector.



■ Keynote Speech by Mr. CHAN Ka-kui, Chairman of the CIC

**Keynote**  
2 November 2020 (Monday) | 9:50am to 10:20am (CET) | 4:50pm to 5:20pm (HKT)  
The State of the Sustainable Built Environment in Hong Kong

 Mr Michael WONG Wai-lun Secretary for Development The Government of the Hong Kong Special Administrative Region ● Driving for Sustainable Growth	 Mr CHAN Ka-Kui Chairman Construction Industry Council ● Reforming the Construction Industry for a Better Environment	 Mr CHEUNG Hau-wai Chairman Hong Kong Green Building Council ● Fostering a Sustainable High-Density City
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BEYOND2020 NOV 2-4  
WORLD SUSTAINABLE BUILT ENVIRONMENT ONLINE CONFERENCE



■ Panel Discussion

### CIC Sustainable Construction Certification Scheme for Green Finance

The *Chief Executive's 2020 Policy Address* pointed out that Hong Kong would be positioned as an Asia's green finance hub for raising green capital to build a low-carbon economy through wide adoption of green finance. The substantial GDP annually contributed by the construction sector is extremely high and therefore has a high potential to meet the trend of green finance. Thus, the CIC has been developing the Sustainable Construction Certification Scheme for Green Finance (Scheme) since September 2020 which clearly stipulates the green standard and system to facilitate the application of green finance in the construction industry with reference to international principles. Over 20 stakeholder engagement sessions were arranged for construction and financial key players in Hong Kong and Greater Bay Area, and the stakeholders showed great interest and support to the direction of the Scheme.

### Enhancement of CIC Carbon Assessment Tool

Launched in September 2019, the CIC Carbon Assessment Tool (CAT) is a universal platform for the construction industry in Hong Kong to evaluate the carbon performance of buildings and infrastructure. There are currently over 200 construction projects proactively using the CAT for the measurement of carbon performance on embodied carbon of construction materials and carbon emission of on-site construction processes. Besides, it has been successfully integrated into BEAM Plus New Building v1.1 and v1.2 BEAM Plus NB with effect from January 2021. The CAT was also showcased in the *Asia Pacific Embodied Carbon Primer* published by World Green Building Council as one of the successful cases in Asia Pacific, reaching a major milestone for its development.



■ Engagement Sessions with international green finance experts



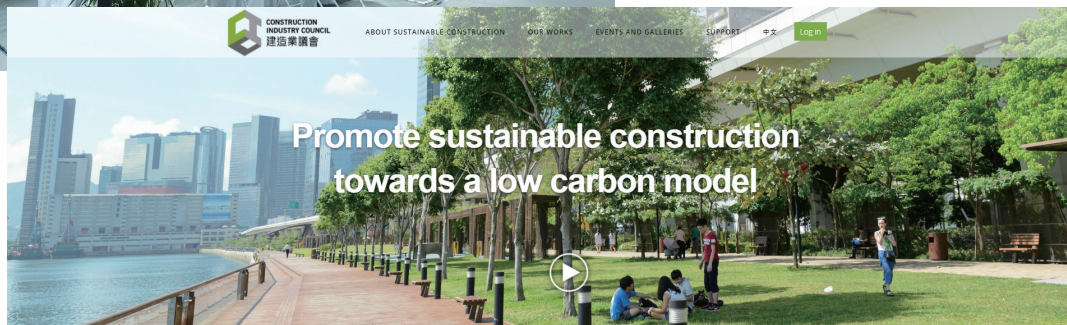
■ Asia Pacific Embodied Carbon Primer

## OPERATIONAL REVIEW

### FORGING AHEAD WITH SAFE, SMART AND SCALABLE CONSTRUCTIONS



■ 19<sup>th</sup> China International Exposition of Housing Industry & Products and Equipment of Building Industrialisation



#### Sustainable Construction

The construction industry accounts for 36% of worldwide energy usage and 40% of CO<sub>2</sub> emissions. In response to the Paris Agreement, Hong Kong's Climate Action Plan 2030+ sets out carbon emissions target, which aims at 25% to 36% absolute carbon reduction by 2030. The construction industry should seek to achieve an 11% reduction against business-as-usual in 2030.

Sustainable construction aims at reducing industry's impacts on environmental, social and economic aspects caused by the construction

■ Sustainable Construction E-platform

## CIC Sustainable Construction E-platform

The CIC launched the Sustainable Construction E-platform (E-platform) in September 2020 ([www.sc.cic.hk](http://www.sc.cic.hk)), a one-stop platform providing the latest information and services on sustainable construction aspects, including CIC Carbon Assessment Tool, CIC Sustainable Construction Award and CIC Green Product Certification, and many more. The general public can also register for events, view photo and video galleries, as well as have a better understanding on CIC's sustainable construction initiatives and the latest carbon reduction figures.

## 19<sup>th</sup> China Housing Exposition

The 19<sup>th</sup> China International Exposition of Housing Industry & Products and Equipment of Building Industrialisation, a signature exhibition of the building sector in Mainland China, was successfully held from 5 to 7 November 2020 in Beijing. The CIC was invited to participate as one of the major exhibitors, showcasing the CIC's major events and activities, as well as sustainability best practices of construction projects in Hong Kong.

## The Way Forward

With a view to supporting the HKSAR Government's ambition to achieve carbon neutrality in 2050, the CIC targets to launch the Sustainable Construction Certification Scheme for Green Finance in 2021 to incentivise the use of green finance products by the construction supply chain, in particular, contractors and suppliers. The CIC will also encourage more successful local cases through promotion and pilot projects. The CIC Carbon Assessment Tool (CAT) is the key to success in driving the Scheme. The CIC will proactively promote a wider use of CAT to establish a benchmark which will serve as a quantifiable base for the industry. The enhancement services of CAT are commenced and will provide training courses in Hong Kong Institute of Construction and online benchmarking services in 2021. It is expected that CAT will become the leading measuring tool for embodied carbon in the industry. With the aim of arousing industry awareness of sustainability and carbon neutrality, the CIC will also endeavour to explore the opportunity of enhancing ESG governance in the construction industry.

During COVID-19 epidemic, technologies have been making progress quickly worldwide which resulted in tremendous growth of digitalisation in the construction industry. The CIC will establish a one-stop digital platform, "Smart Waste Management Plug-in", to increase the efficiency of data collection, monitoring and reporting concerning construction and demolition (C&D) waste. It is expected that time, cost and quality of onsite waste management will be greatly improved in the future, supporting the industry to develop a reliable and comprehensive waste database for benchmarking purpose, and echoing with the direction and initiatives set out in the *Waste Blueprint for Hong Kong 2035*.

## Modular Integrated Construction

### Transformation of the MiC Display Centre into a MiC Resources Centre

Modular Integrated Construction (MiC) is an innovative construction method adopted in Hong Kong and also a breakthrough in the construction industry. The CIC has been actively promoting MiC to industry stakeholders and the public since 2017.

In 2020, the MiC Display Centre has set up a number of new exhibits and equipment for showcasing purpose, turning it into a Resources Centre for industry practitioners. In view of

the COVID-19, the MiC Display Centre was closed for some time during the year. A virtual tour was therefore specially produced, allowing the public to access updated information and technology online.

A Negative Pressure Isolation Ward was installed adjacent to the MiC Display Centre in July 2020, fully demonstrating the adoption of MiC technology in a medical setting. In response to the development of COVID-19, the Ward was subsequently transferred to the Asia-World Expo for demonstration and operation purposes in August 2020.



■ The MiC Display Centre has set up a number of new exhibits and equipment, transforming into a Resources Centre

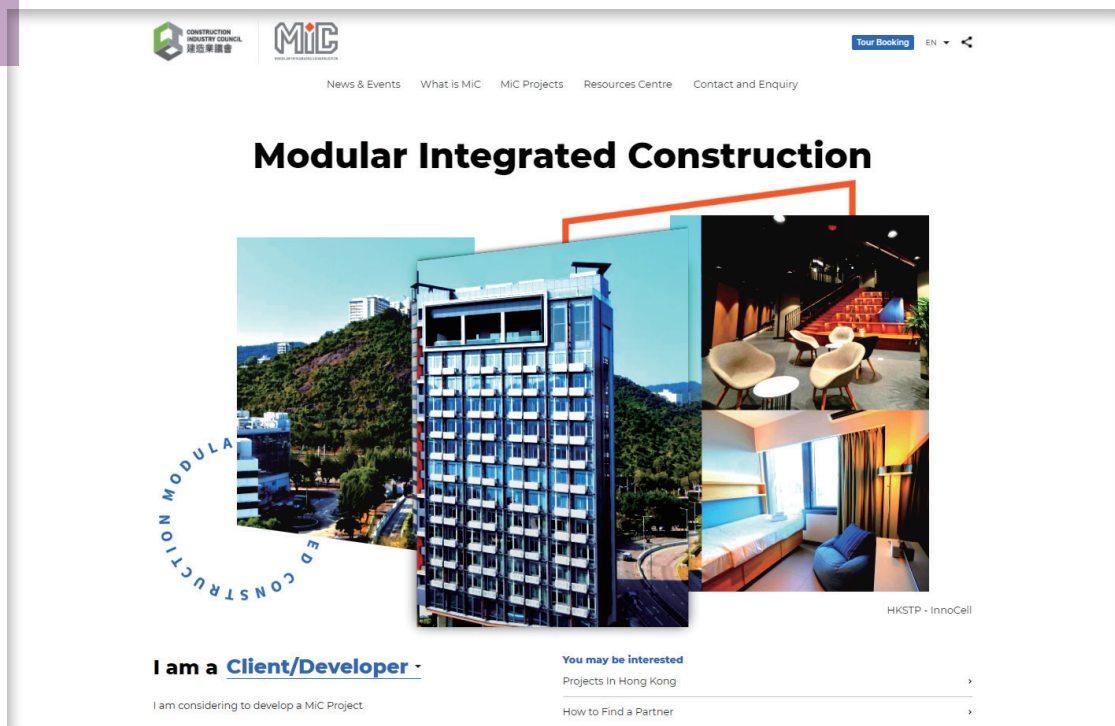


■ Prototype of Negative Pressure Isolation Ward

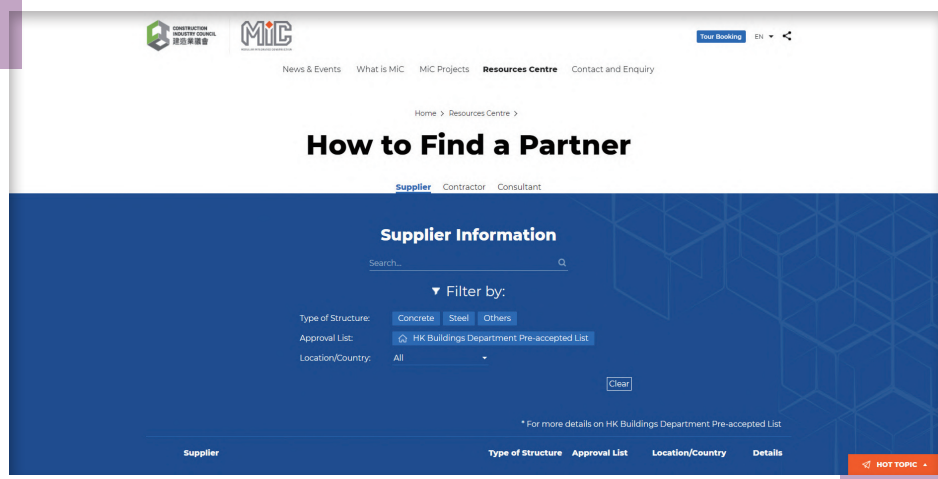
### One-Stop-Shop Online Resources Platform

A brand new website ([mic.cic.hk](http://mic.cic.hk)) was launched in November 2020, serving as an online one-stop resources platform for users to obtain the latest information related to MiC

anytime and anywhere. Not only does it provide the trends and developments of MiC, but also the recent developments of projects around the world and their project team information, official guidelines and reference materials.



■ The new website provides the latest MiC information worldwide



■ Information on projects, project consultants, contractors and MiC suppliers is provided



#### CIC Webinars

As the COVID-19 pandemic persists, the CIC organised and supported a series of seminars and forums in the form of online webinars, including “The 2<sup>nd</sup> International Conference on Modular Integrated Building (Architecture) Technology and Applications” held in Suzhou in August 2020 where a CIC representative provided a pre-recorded presentation on the development and application of MiC in Hong Kong; “Guangdong-Hong Kong-Macao Greater Bay Area’s

Construction Robot and MiC New Technology Promotion Forum” held in September 2020 where representatives of the CIC provided a pre-recorded presentation, sharing information on the development of MiC in Hong Kong with experts all over the world; the CIC Lunch Talk on “Accommodating a Co-creation Community in InnoCell – Technology Breakthrough with MiC” held in November 2020 with over 600 participants, where representatives from project management and design consultant shared their experience and the challenges on the InnoCell project.



■ Ir Albert CHENG, Executive Director of the CIC, gave a pre-recorded speech for the “Guangdong-Hong Kong-Macao Greater Bay Area’s Construction Robot and MiC New Technology Promotion Forum”

## Reference Materials for Modular Integrated Construction Projects

Further to the publication of the *Guidelines on the Statutory Requirements for Modular Integrated Construction Project* published in 2019, the CIC released an updated version in September 2020 and renamed it to *Reference Material on the Statutory Requirements for Modular Integrated Construction Projects*. During the year, the CIC also published *Reference Material on Logistics and Transport for Modular Integrated Construction Projects* to provide information and guidance on logistics and transport for MiC projects.

## Events Organised in 2020

In 2020, the CIC organised a number of events to facilitate the implementation of MiC in Hong Kong, which include:

### Greater Bay Area Factory Visit

In January 2020, a visit to four MiC factories in the Greater Bay Area, including AluHouse, Nova Deko, CIMC and China State Hailong, was arranged for non-governmental organisations (NGOs) to understand the advantages and constraints of MiC under prescribed regulations, so as to help them make appropriate decisions on transitional housing planning.

### Local Site Visits

In order to have a better understanding of the construction processes of MiC projects, various local site visits were arranged for industry practitioners. In January 2020, the CIC staff and the MiC JWG members visited the Married Quarters for the Fire Services Department in Pak Shing Kok, Tseung Kwan O, which was topped out in August 2020; in March, representatives from the CIC and the government departments visited the InnoCell at the Hong Kong Science and Technology Park (HKSTP); and members of the CIC and MiC JWG visited the “Nam Cheong 220” project in May 2020 (Intakes started in August 2020). In addition, visits to quarantine camps constructed by MiC in Lei Yue Mun Park and Holiday Village as well as Penny’s Bay Phase I and IV were organised for industry professionals, NGOs and developers.



Members from the CIC and NGOs visited a MiC factory in the Mainland



The CIC representatives and the JWG members visited the InnoCell at the HKSTP

## OPERATIONAL REVIEW

### FORGING AHEAD WITH SAFE, SMART AND SCALABLE CONSTRUCTIONS

#### MiC Projects in Hong Kong

By the end of 2020, there were a number of completed / substantially completed MiC projects in Hong Kong, including InnoCell at HKSTP, North Lantau Hospital Hong Kong Infection Control Centre and Nam Cheong 220. More than 30 MiC projects are now in the pipeline and over 20 MiC systems are on the Lists of Pre-accepted Modular Integrated Construction (MiC) Systems / Components of the Buildings Department. In addition, MiC was also widely adopted for the provision of transitional housing projects and quarantine camps to meet the housing demand and the demand arising from COVID-19.

#### The Way Forward

As more MiC projects will be completed, it is believed that confidence and acceptance of the industry and public in MiC will be further enhanced. The CIC will continue to make an all-out effort to promote a wider adoption of MiC in Hong Kong so as to expedite residential housing development and supply, thereby improving the living environment of Hong Kong people in the long run.

#### Completed / Substantially Completed MiC projects

InnoCell at HKSTP

North Lantau Hospital Hong Kong Infection Control Centre

“Nam Cheong 220”

#### Part of MiC projects in the pipeline

Married Quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O

Residential Care Homes for the Elderly in Kwu Tung North

Student Residence at Wong Chuk Hang Site for the University of Hong Kong

Composite Development at Ash Street, Tai Kok Tsui

Chung Yuet Lau Elderly Homes at Jat Min Chuen, Shatin

High West Site Development in Pok Fu Lam

Subsidised Sale Flats Project in Hung Shui Kiu

- The Married Quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O is expected to be completed in the second quarter of 2021



- The Quarantine Camp in Penny's Bay – Phase 4 was completed in November 2020

## SUSTAINABLE FUTURE ENVISIONED WITH INNOVATIVE TECHNOLOGY

### CIC-Zero Carbon Park

The CIC-Zero Carbon Park (CIC-ZCP) is home to the first zero carbon building in Hong Kong. The vision, execution and implementation of low carbon design innovations are forward-thinking, serving as milestone achievements for Hong Kong construction industry. To this day, building performance has been continually optimised since its opening in 2012. As a centre for exhibition, education and information, CIC-ZCP aims at promoting a low-carbon mentality and advanced green building technologies beyond the industry, and into the community.

CIC-ZCP completed the large-scale landscape optimisation works in 2020 which aspires to boost the neighbourhood's ecological value, and contribute as a living, breathing piece of infrastructure. With more than 200 different varieties of flowers and trees at CIC-ZCP, it is hoped that CIC-ZCP

will create a paradigm shift towards sustainable living by becoming a local landmark building, and function as a “city lung”, breathing new life and clean air into Hong Kong.

### Landscape Optimisation Work

To propel the continuous development of CIC-ZCP and enhance the experience of visitors, the landscape optimisation work was completed in 2020, including the turf soil enhancement, improvement in constructed wetland features and installation of the Air Improvement PhotoVoltaic (AIPV) Solar Kiosk in the urban native woodland, etc. A series of video promotions capturing the entire construction process was launched to showcase the adoption of advanced green technologies and sustainable construction development of CIC-ZCP.



■ CIC-ZCP completed the landscape optimisation work in 2020 to enhance the experience of visitors

### “Hong Kong Energy Evolution” Exhibition

CIC-ZCP has transformed into an experiential platform that promulgates awareness in sustainable development. To enhance public’s understanding on energy efficiency and energy conservation, CIC-ZCP launched a brand new exhibition themed “Hong Kong Energy Evolution” in September 2020. With the support of key energy provision stakeholders in Hong Kong, the exhibition introduced the energy sustainable development and showcased the evolution of power generation.

### “Art in Construction”

CIC-ZCP first presented “Art in Construction” in September 2020, an exhibition that gathered local artists to explore and showcase the connection and creativity between construction and art through various art-forms such as sculptures, installations, paintings, photography, and workshops. By incorporating the 360-degree camera technology, this exhibition also offered the public a virtual experience on the creativity of construction, appreciating the integration of art and a greener lifestyle in a whole new way.



■ CIC-ZCP first presented the “Art in Construction” Exhibition to showcase the public the correlation and creativity between art and construction



■ CIC-ZCP organised a series of regular “Low Carbon Living” fitness activities and workshops to promote the well-being

### Diversified Marketing Initiatives

CIC-ZCP aims at engaging with the industry and community to promote the wellbeing and low carbon living through various kinds of events. To echo the goal of achieving carbon neutrality before 2050 in *The Chief Executive's 2020 Policy Address*, CIC-ZCP launched a series of new marketing initiatives featuring carbon-neutrality, including webinars, an online video campaign featuring “Low Carbon Classroom”, regular “Low Carbon Living” fitness activities and workshops.

### Ride Through Crisis Together with Low Carbon Activities

CIC-ZCP organised the CIC’s annual signature event, Construction Month, in November 2020. The event comprised more than 20 online activities including music busking, movie screening, workshops and conferences to interact with the industry stakeholders and members of the public. In view of the COVID-19, the Construction Month was conducted simultaneously on online platforms, allowing more practitioners and the public to enjoy the fun-filled activities and keep abreast of the latest construction trends. Throughout the month, over 2,600,000 online views were reached on social media platforms.

## OPERATIONAL REVIEW

### SUSTAINABLE FUTURE ENVISIONED WITH INNOVATIVE TECHNOLOGY



■ “Construction Month” launched a series of compelling online activities to engage with the industry and community

In support of the “Construction Industry Caring Campaign - Fight against Novel Coronavirus” (Caring Campaign), CIC-ZCP organised an array of online concerts, uniting all sectors and encouraging everyone to give back to the tireless registered construction workers and their families affected by the COVID-19. It also promoted the sustainable development and reminded the members of the public to remain environmentally conscious when fighting against the pandemic. The concerts were streamed via over 40 media outlets which attracted both local and overseas audiences to support the Caring Campaign. Over 1,800,000 views and more than 460 pieces of media coverage were achieved.

### The Way Forward

As a low carbon role model, CIC-ZCP will continue to demonstrate the state-of-the-art eco-building design and technologies for promoting sustainability, as well as explore the enhancement of renewable energy. CIC-ZCP will also introduce new marketing initiatives to advocate advancing zero carbon and carbon neutrality with more engagement with members of the public and industry practitioners. With a view to creating and maximising synergy, CIC-ZCP will collaborate with the Construction Industry Sport and Volunteering Programme in organising more health / wellness-related workshops and community services.



■ CIC-ZCP launched the online concerts to support the “Construction Industry Caring Campaign - Fight against Novel Coronavirus”

## Construction Innovation and Technology Application Centre (CITAC)

CITAC was established in November 2017 to showcase and promulgate innovative technologies and practices which can improve the productivity, safety and sustainability in the construction industry. CITAC also explores and identifies innovative solutions, both locally and internationally, that are suitable for adoption in Hong Kong construction industry.

In 2020, under the strategic direction of its Management Board, CITAC promoted and showcased the use of construction innovations and technologies via the following initiatives:

### CITAC Exhibition with Virtual Tours

In 2020, a number of Industry stakeholders visited the centre to learn more about innovative technologies in terms of industrialisation, informatisation, intelligentisation, integration and infinity. Works department and local professional bodies, including the Housing Department, Architectural Services Department, Electrical and Mechanical Services Department and the Institution of Civil Engineers (ICE) Hong Kong, also visited CITAC to exchange and explore the potentials for implementing innovative technologies in the construction industry. Due to COVID-19, CITAC was temporarily closed to the public as a precautionary measure to reduce social contact.

In response to the fluctuating epidemic situation, virtual tours were developed and uploaded to CITAC’s official

website to offer the public a virtual walkthrough in the CITAC exhibition areas. 1,100 virtual visits were recorded since its launch in March 2020. Various online conferences and alternative events were also organised with more than 37,000 attendees, demonstrating a significant growth of engagement with industry stakeholders when compared with last year.

CITAC regularly renews its exhibits with a view to promoting wider adoption of construction innovation for the betterment of the industry, and keeping up with the fast-paced technological developments. The fourth round of exhibition will be launched in July 2021 after CITAC’s relocation to the CIC-Zero Carbon Park. CITAC will form a “Construction Exhibition Hub” with other exhibition centres nearby, namely the CIC-Zero Carbon Park, CIC BIM Space, and MiC Display Centre.

### Webinars on Diversified Topics of Interest of the Industry

Organising webinars serves as a new initiative to maintain the momentum on knowledge sharing during this challenging period, allowing CITAC to engage a larger group of industry stakeholders.

From 19 March to 31 December 2020, CITAC organised 49 webinars, successfully engaged more than 37,000 attendees. The webinars which attracted more than a thousand live viewers are shown as follows:

Date	Title	No. of Attendees
14 May 2020	Webinar on The Story of Crossrail: The Creation of a Digital Railway	Nearly 1,500
11 August 2020	Webinar on How to Improve Site Performance with Digital Works Supervision System + BIM	Over 1,100
21 August 2020	Webinar on Experience Sharing of a Showcase using Prefabricated Rebars	Over 1,300
27 August 2020	Webinar on Transforming the Construction Industry through Innovations	Over 1,200
17 September 2020	Webinar on Mainland and Hong Kong BIM and Digital Construction Forum	Over 1,100
24 September 2020	Webinar on Digital Infrastructure – Smart Bridge Technologies	Over 1,200
10 December 2020	Webinar on Revolutionary & Sustainable Nano & Bio-Green Technologies for the CIC-Zero Carbon Park	Over 1,100



## Exchange Views with Renowned Experts at Conferences

The CITAC Anniversary Conference on Construction Digitalisation was held online on 11 November 2020 with over 1,000 attendees across different sectors of the construction industry, including representatives from government departments, contractors and consultants, etc.

Centred on the theme of digitalisation across the construction life-cycle, Ir LAM Sai-hung, Permanent Secretary for Development (Works) of Development Bureau as the Guest of Honour, delivered the opening remarks. Local and overseas experts then shared their experience and lessons learnt on how to improve the construction industry across the whole project life-cycle with the implementation of digital tools.

The first “CITAC x Israel Construction Technology Conference and B2B Session”, co-organised by CITAC and the Israel Economic and Commercial Mission to Hong Kong and supported by Sino Inno Lab, was successfully held on 9 November 2020. Ir Dr. Richard PANG, Director of Industry Development of the CIC and Mr. Yoav HAIMI, Head of Economic and Commercial Mission from the Consulate General of Israel in Hong Kong gave the opening remarks. A total of seven Israeli contech companies gave presentations at this event, connecting Israeli companies with cutting-edge innovations in the construction tech domain with industry stakeholders in Hong Kong.



■ Left to right: Mr. Olivier KLEIN, Lead Technologist, Asia-Pacific AWS Solutions Architecture, Amazon Web Services; Ir Thomas HO, Chief Executive, Gammon Construction Limited; Mr. Donald CHOI, Chairperson of Construction Innovation and Technology Application Centre Management Board; Ir LAM Sai-hung, Permanent Secretary for Development (Works), Development Bureau; Ir Albert CHENG, Executive Director, Construction Industry Council; Ir Dr Richard PANG, Director – Industry Development, Construction Industry Council, Mr. Thomas TONG, General Manager of Innovation and Technology Development at Construction Industry Council



■ The CIC and HKSTP management and judges of final presentation at SciTech Challenge 2020

## SciTech Challenge 2020

Co-organised by the CIC and Hong Kong Science and Technology Park, SciTech Challenge 2020 was an open competition for innovators to pitch sensory technologies and solutions to industry end-users. This event brought together students and start-ups with potential users from the construction sector, in which the former groups pitched their products and solutions to the latter potential users. Over 60 groups from educational institutions and corporates participated in this year's competition.

The SciTech Challenge 2020 Finale was successfully held on 19 November 2020 at the CIC-Zero Carbon Park to celebrate the achievements of the vibrant and energetic contestants. Five prizes, including the Most Innovative Award and the Best Presentation Award, were presented to the winning teams.

## Increase of i-Club Membership

Benefited from the launch of online webinars, as of 31 December 2020, the number of registered organisation members and individual members was 156 and 3,060, respectively, with over six-fold growth in membership this year. The CITAC will continue to develop attractive i-Club

member privileges to appeal to industry stakeholders in joining the i-Club community.

## The Way Forward

2020 was undoubtedly a difficult year to all walks of life. Despite the CITAC was committed to drive the development and application of innovative technologies in the construction industry amid difficulties.

Looking forward, CITAC will continue to roll out more new projects to further promote innovative technologies and their applications in the industry, among which the development of an Innovation and Technology (I&T) Knowledge Hub will be one of the core businesses. A new web portal will be developed to consolidate knowledge, data and R&D findings related to the construction industry and construction I&T. CITAC will take the responsibility to draft model specifications and distribute it onto this platform to encourage wide technology adoption in the industry.

Meanwhile, we will also produce a series of videos, organise webinars and the CIC Digitalisation Award and launch the CITAC Anniversary Conference to encourage wide adoption of I&T in construction projects in the coming year.

## FOSTERING PROFESSIONALISM FOR INDUSTRY DEVELOPMENT

### Hong Kong Institute of Construction

#### Programme Curriculum Enhancement

Established in 2018, the Hong Kong Institute of Construction (HKIC) has strived to nurture accomplished and professional practitioners for the construction industry. Following the confirmation of the blueprint and roadmap for course development of full-time (one-year and two-year) programmes in 2019, HKIC continued to enhance programme curriculum for the Certificate in Construction, Diploma in Construction and Advanced Diploma and completed the accreditation exercises for the Certificate in Construction programme at the Hong Kong Qualifications Framework (QF) Level 2 and the addition of a new stream, i.e. Site Surveying, to the Diploma in Construction programme at QF Level 3. HKIC is now planning to introduce new stream of Electrical and Mechanical areas into the Diploma in Construction in an effort to address market needs more comprehensively and provide students more diversified articulation pathways.

#### 45<sup>th</sup> Anniversary of Construction Training

To mark the 45<sup>th</sup> anniversary of construction training in Hong Kong in 2020, three “45<sup>th</sup> Anniversary of Construction Training in Hong Kong” roving exhibitions were held

in October. The exhibitions featured stunning exhibits including traditional and innovative training tools and teaching materials, classic uniforms and virtual reality safety training gears, to showcase the development milestones of construction training in Hong Kong, attracting over 3,500 HKIC students and alumni, industry practitioners and public visitors. A series of branding campaigns was also launched throughout the year including a dedicated anniversary website, news supplement in Ming Pao, tramcar and tunnel billboards, and three promotional videos for social media platforms.

Besides, HKIC specially invited Professor LAU Chi-pang, a historian and Associate Vice President of Lingnan University, and his research team to compile the first-ever historical publication on construction training development in Hong Kong. After two years of preparation, from collecting historical information to conducting oral history interviews with more than 50 industry leaders and veterans, the book was published in December 2020.



■ “45<sup>th</sup> Anniversary of Construction Training in Hong Kong” roving exhibition attracted thousands of visitors



■ The first-ever historical publication on Hong Kong construction training development is available for purchase



■ Tramcar advertisement to celebrate the 45<sup>th</sup> Anniversary of Construction Training in Hong Kong

## Campus Facilities Upgrade

The COVID-19 epidemic has unleashed changes to the operation of HKIC, causing class suspension and reduction in the number of student enrolment. Instead of taking things lightly, HKIC faced the difficulties squarely by optimising training programmes and services provided, laying down a more solid foundation for nurturing future industry talents.

The “Centre for Professional Development” was formally renamed to the “School of Professional Development in Construction” (SPDC) on 1 January 2020. In April, the SPDC Advisory Committee was established to provide professional advice and guidance on the strategic development of SPDC and launching of training programmes, ensuring that the programmes can meet future needs and achieve sustainability of the construction industry.

With several years of concerted efforts, HKIC has taken a big step forward in enhancing campus facilities, improving training programmes and strengthening instructor training. The renovation works of campuses started in 2019 and subsequently completed in 2020, covering workshops and classrooms enhancement. To further foster all-round development of students, HKIC took this opportunity to provide additional campus facilities such as the Learning Resources Centre and gym room.

## Training

### Distance Learning During COVID-19

Since the outbreak of COVID-19, HKIC has suspended classes several times since February 2020, leading to a direct impact on the number of student enrolment and graduates. This year, there were 1,800 full-time graduates and 34,197 in-service construction practitioners completed part-time courses.

To protect the health of students and staff, HKIC took a series of measures to facilitate distance education as far as practicable, such as implementing “real-time online e-classes” and adopting “non-face-to-face teaching and learning packages” immediately in the wake of class suspension. Since February 2020, HKIC has uploaded 70 sets of programme materials and nine videos onto the website. A total of 40 videos on skills training of various trades were produced for students to refresh the knowledge at home. Originally-planned physical seminars were also switched to online setting, allowing practitioners to broaden their industry knowledge even during the pandemic. Moreover, the HKIC Non-face-to-face Teaching and Learning Task Group was set up to follow up with the progress of distance education, as well as to review content and quality of online training.

### High Quality Training Programmes

With a view to catching up market demand for well-trained technicians, teaching staff strived to enhance the existing curriculum while HKIC spared no effort to develop new programmes, such as adding new stream “Site Surveying” to the “Diploma in Construction” and launching the “Certificate in Aluminium Formwork”. In addition, a 40-hour “Certificate in Instructing Techniques for Site Trainers” was tailor-made to train up qualified site trainers and equip them with instruction skills to coach trainees at construction sites, thereby enhancing overall standard of on-the-job training at sites. In the meantime, the development plan of electrical and mechanical programmes was finalised to offer more comprehensive and high quality training programmes. In response to the government’s efforts on combating COVID-19, HKIC prepared a commissioned training course “Modular Integrated Construction (MiC) Unit Safe Installation” in March for a construction company entrusted to the government for building the Quarantine Centre in Penny Bay.



■ Temperature screening robot stationed at Kowloon Bay Campus and Tai Po Training Ground, by courtesy of the Electrical and Mechanical Services Department



■ HKIC teaching staff receiving the Best Trainee Award for completing the Site Supervisor Train-the-Trainer Course



■ Students taking the “Modular Integrated Construction (MiC) Unit Safe Installation” commissioned course at Tai Po Training Ground



■ Classroom teaching of the 5-day Site Supervisor Train-the-Trainer Course

### Safety Training Courses

In April 2020, the Safety Training Course for Construction Workers of Specified Trade – Rigger and Signaller (A12S), which was greatly welcomed by the industry, was launched to further enhance lifting safety training. To better prepare for the fast-growing development of Modular Integrated Construction (MiC), HKIC provided forward-looking lifting safety training course “Certificate for Lifting Safety Supervisors” specifically for experienced site managers recommended by contractors, enabling them to formulate lifting proposal and supervise lifting work after completing the course.

HKIC has also concerned about the safety training of slope work in Hong Kong. In this connection, the Certificate in Soil Nail Drilling Safety Course was launched in 2020, considered as a prerequisite by the Civil Engineering and Development Department for performing slope work.

## OPERATIONAL REVIEW

### FOSTERING PROFESSIONALISM FOR INDUSTRY DEVELOPMENT

#### Development and Programme of School of Professional Development in Construction

Same as last year, Modular Integrated Construction (MiC) and Building Information Modelling (BIM) were still the two main focuses of the curriculum development of School of Professional Development in Construction (SPDC).

The first intake of the “9-Day Specialist Certificate in Design for Manufacturing & Assembly (DfMA)”, jointly organised by SPDC and Singapore’s Building and Construction Authority (BCA) Academy, was held successfully in Singapore from 2 to 11 January 2020, with a total of 24 industry professionals and university researchers from 13 organisations. On the other hand, “Professional Certificate in Modular Integrated Construction (MiC) for Project Managers and Clerks of Works”, the first training programme in Hong Kong, was launched on 27 November.

With regards to BIM course development, the “Professional Certificate for BIM Coordinator” course was recognised as

one of the first batch of CIC-accredited BIM Coordinator courses on 13 November 2020 and will commence on 29 January 2021, with completion of the course being one of the prerequisites for applying for registration as CIC-certified BIM Coordinator. In addition, several BIM and digital construction related programmes were successfully launched in the year, for example, the “Certificate in Building Information Modelling (BIM) – Asset Management for EMSD Projects”, “Certificate in BIM Usage for Frontline Staff of Construction Works” and “Certificate in Digital Construction and Supervision Technologies for Front-line Supervisors”.

SPDC is now taking the leading role to set up a standalone website and mobile application and expects to implement roll-out in the second quarter of 2021. By then, applicants will be able to obtain the latest course information and apply for courses via the app. Existing courses will also undergo a review and restructuring process to accommodate the increasing need of industry practitioners for continuing professional training.



■ A Revitalisation of Haw Par Mansion – Experience Sharing Webinar on Conservation of Built Heritage held on 15 September 2020



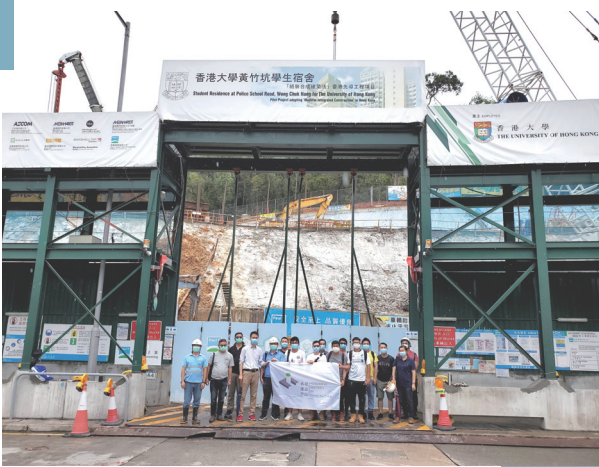
■ A “9-Day Specialist Certificate in Design for Manufacturing & Assembly (DfMA)” programme jointly organised by SPDC and Building and Construction Authority (BCA) Academy from 2 to 11 January 2020 in Singapore



■ Group photo of SPDC Advisory Committee members and HKIC management staff



■ Webinar on “New Engineering Contract” jointly organised by SPDC, NEC Asia Pacific and construction-related institutes starting from November 2020



■ Site visit to the complex of student dormitories of the University of Hong Kong in Wong Chuk Hang, a pilot project adopting MiC

## Construction Industry Council Approved Technical Talents Training Programme

Launched in September 2019, the Construction Industry Council Approved Technical Talents Training Programme (CICATP) adopts dual-track approach by combining on-the-job training and skill assessments and enrichment programme in safety training, soft skills, innovation and technology provided by HKIC. HKIC graduates of one-year courses as well as selected individual short courses will be trained to be a knowledge-oriented senior tradesmen in two years. Up till the end of 2020, a total of 370 applications were approved, together with over 100 participating employers. About 190 days of Apprentice Enrichment training were organised with 96% attendance rate.





■ Mid-Term Skill Assessment marking the first training milestone of apprenticeship programme



■ Soft skill training for apprentices

#### Wide Recognition from Employers

CICATP has earned recognition from some of the key employers in the industry, such as the Works Departments under the Development Bureau, the Hong Kong Housing Authority, the Airport Authority Hong Kong and the MTR Corporation Limited, and has been considered as one of the designated worker training programmes listed in the contract with main contractors. According to the survey of the programme design, implementation and apprentice performance conducted with participating employers in April 2020, about 90% of the employers were satisfied with the overall student performance and programme implementation.

#### Motivation for Apprentice Training Participation

HKIC targets to recruit and train 200 to 300 HKIC full-time graduates to become knowledge-oriented senior tradesmen every year. As the HKIC full-time courses will acquire Qualification Framework (QF) Level 2 to QF Level 4 recognitions in the 2021/22 and 2022/23 academic year, the CICATP will keep up the pace and launch programmes integrated with qualification accredited courses and on-the-job training to increase students' incentive to participate in the apprentice training, laying the foundation for their future career development.

## Curriculum Development & Quality Assurance

In 2020, procedures of accreditation by the Hong Kong Council for Accreditation of Academic and Vocational Qualifications were successfully completed for the revamped “Certificate in Construction” programme with eight streams at QF Level 2 and the addition of a new stream (Site Surveying) to the “Diploma in Construction” programme at QF Level 3. The HKIC has its courses successfully accredited without any conditions precedent or requirements for three consecutive years.

Apart from it, HKIC has strived to improve quality in the development of new programmes and the operation of existing programmes. During the year, 12 newly launched or revamped programmes have been vetted or validated according to the HKIC quality assurance (QA) mechanism. A “Health Check” mechanism for conducting annual quality assurance for QF-recognised programmes was also implemented. HKIC will continue to take a proactive role in mentoring all six Programme Teams (covering more than 200 programmes) through “account manager system”.

Over 25 sharing sessions, seminars and workshops were arranged for teaching staff in the year. Topics included QA, QF, curriculum development of outcome-based programmes, assessment design, programme management, learning and teaching materials development and programme accreditation preparation. To support the HKIC’s development, after reviewing the level of staff awareness and understanding of QA and QF, a 3-year roadmap for launching a holistic QA and QF training programme for teaching staff and a structured Continuing Professional Development (CPD) Scheme was established and approved by the Hong Kong Institute of Construction Management Board (HKICMB) in December 2020. To call attention to staff to the course quality, the second round of new quality improvement measures was launched at all campuses and departments of HKIC in 2020. New measures included enhancing the online service of Learning Resources Centre, holding forums with teaching staff and administrative staff to identify areas for improvement, creating learning circles to raise the level of staffs’ competence, etc. Two internal e-newsletters with a dedicated section to share quality assurance mechanism were also published.



■ Qualifications Framework Accreditation for “Certificate in Construction” programme

## Student Recruitment, Student Development and Career Support Services

### Promotion among Secondary School Students

Despite class suspension for all secondary schools, approximately 1,300 students were still reached in 2020 throughout the year through physical and online talks, as well as the below competitions.

To promote the construction innovation of BIM among secondary school students, HKIC launched the first-ever web-based “STEM Alliance – 3D Home Design Competition” in 2020, with over 300 participating students. Subsequently, the first-ever live webcasts “Construction x STEM” was held in June 2020 to discuss how BIM and electrical installation can be applied in construction industry and daily life.

Partnered with the Corporate Tech Academy Network (CTAN) members, the first “VPET Competition for Hong Kong Secondary Students”, was launched with the support of the Electrical and Mechanical Services Department, the Hong Kong Island School Heads Association, the Kowloon Region School Heads Association, the New Territories School Heads Association and the Engineering Discipline of Hong Kong Institute of Vocational Education to promote vocational and professional education and training. The competition attracted 113 students in total.

### Online Admission

With the ongoing decline in the number of secondary school graduates, along with the profound impact brought by COVID-19 on physical promotional activities, HKIC embraced the challenges and fully utilised online channels for student recruitment and activities promotion, such as web-based programme information talk, social media promotions, online admission and online programme consultation via Microsoft Teams on the day of HKDSE Release of Examination Results and WhatsApp stickers for DSE candidates, contributing an increase in the number of enrolment compared to last year. For full-time Advanced Diploma, Diploma and Certificate programmes in the 2020/21 academic year, the overall application rate was 74%, representing an increase of 13% compared to that of last academic year while the number of students enrolled saw a slight increase of 7% to 460. On the other hand, the application rate of full-time short courses was 122%, representing a significant increase of 33% compared to that of last year. Negatively affected by the four-month-long class suspension, the number of places available decreased that only 2,054 students were enrolled. Benefited from the wide adoption of online platforms, the number of HKIC website visitors soared to about 900,000 in 2020, representing a remarkable growth of 60%. The web-based programme information talk also recorded nearly 5,000 visits.



■ Finalists of “STEM Alliance – 3D Home Design Competition” presenting their works to judges online



WhatsApp stickers to cheer DSE students up with over 23,000 downloads

The COVID-19 epidemic situation has unleashed changes to the economic growth of Hong Kong and the long-term development of the construction industry to an unprecedented scale. Alongside this, the decrease in the number of secondary school graduates in recent years has posed daunting challenges to the recruitment work of HKIC. In view of this, HKIC will vigorously promote the development blueprint of “Construction Pathway Project” through versatile promotion strategies, such as branding campaigns, promotions in secondary school and website and social media promotions, to increase public awareness about the certificate and diploma programmes. Efforts will also be made to broaden the source of students to include young people seeking alternative employment. It is hoped that a growth in the number of student enrolled can still be maintained in spite of tough times in the coming years.

### HKIC Anthem Production

To promote the vision and mission of HKIC as well as increase the sense of belonging of students and staff, the HKIC commenced anthem production work in 2020. The management, teaching staff and students were invited to participate in the recording. The anthem was officially broadcasted for the first time in the Graduation Ceremony in 2020.



Anthem recording



HKIC Anthem Lyrics Writing Competition Award Presentation Ceremony



■ Brainstorming Session of “Moral and Civic Education”



■ The newly published “Handbook on Positive Work Attitude and Value” for students

#### Moral and Civic Education Promotion at School

To encourage teaching staff to promote civic education, promote traditional Chinese culture at school, and strengthen the sense of national identity among them, HKIC invited Professor LAU Chi-pang to share his experience on how to implement moral and civic education in higher education institutions with the management. Three brainstorming sessions of “Moral and Civic Education” were held in the campuses. In the brainstorming sessions, the principals introduced the work strategy of promoting moral and civic education in the campus while staff from Student Development Department shared their experiences in relevant teaching materials preparation. In addition, teaching staff were also invited to share experiences in integrating moral and civic education elements into their teaching.

In December 2020, HKICMB approved the introduction of one-day sports training into full-time short courses with training duration of 75 days or longer. HKIC is actively following up on the relevant arrangement.

#### Expansion of Opportunities for Employment and Training

2020 was a challenging year for the Career Support Services. Various types of services were relentlessly organised for students and graduates, such as “Career Advising Scheme”, thematic workshops, production of *Handbook on Positive Work Attitude and Value* and individual career facilitation, to enhance their employability and personal qualities. At the same time, with the continued expansion of the CICATP, more employment and training opportunities were opened up for graduates. This year, over 80% of full-time students were employed by the industry within one month after graduation. Furthermore, as COVID-19 had an impact on the operation of full-time short courses, HKIC provided job-matching service for employers and 600 course applicants with urgent employment needs by coordinating both sides to participate in the Intermediate Tradesman Collaborative Training Scheme (ITCTS) so as to bring new talents into the industry.

Employer seminar on “How to Work with Ethnic Minorities and New Immigrants”



Writing lucky messages for Chinese New Year

高紹倫	郭志仁	謝啟堅	楊鎮儀
工程師 短期訓練課程 工務副技術員 (1999)*	董事 基本工務課程 建築師課程 (2008)*	高級策劃工程師 建造業督工/ 技術員課程 土木工程 (2001)*	工程師 建造業督工/ 技術員課程 電子證書 (1999)*
文永俊	譚潔彩	黃偉倫	楊嘉智
董事 短期訓練課程 建築師李奧羅亞 (1996)*	工程師 建造業督工/ 技術員課程 電子證書 (2013)*	高級項目經理 建造業督工/ 技術員課程 電子證書 (1999)*	高級主任 建造業督工/ 技術員課程 電子證書 (2000)*

專業樂業 精益求精  
CONSTRUCTION INDUSTRY COUNCIL  
香港建造業議會  
The banner relates to HKIC Outstanding Alumni Award. Should you have any enquiries, please contact 2702 9000.

Outstanding alumni putting HKIC motto “To Dedicate · To Excel” into practice

Diversified Publicity Initiatives

During COVID-19, HKIC strictly complied with the control measures while making best effort to extend stakeholders’ support for the career development of HKIC full-time course graduates through a wide range of activities. Activities included Contractor Sponsorship Scheme, HKIC Student Site Practices Scheme, Employer Appreciation Ceremony 2020, HKIC Graduation Ceremony 2020, employer seminar on “How to Work with Ethnic Minorities and New Immigrants?”, Build Your Life Mentorship Programme and the 2<sup>nd</sup> Outstanding Alumni Award. 25 briefing sessions on Career Support Services were held for industry employers and trade associations, totalling 111 representatives from 93 organisations. For students, 34 employer career talks and on-site recruitment activities were organized.

The 2<sup>nd</sup> Outstanding Alumni Award

The contributions made by alumni to the industry and HKIC signifies the legacy of HKIC’s mission. The 2<sup>nd</sup> Outstanding Alumni Award was held this year and eight alumni with remarkable contribution were awarded. Being the role models for “Pride of Construction”, the awardees have earnestly put HKIC’s motto “To Dedicate · To Excel” into practice and achieved great success in their lives and careers.

## OPERATIONAL REVIEW

### FOSTERING PROFESSIONALISM FOR INDUSTRY DEVELOPMENT



■ Signing memorandum of collaboration with Bureau of Education of Guangzhou Municipality



■ Visit to the WorldSkills training base in Guangzhou by the "Hong Kong Construction Industry Delegation to Guangdong Province"

#### Skills Exchange Internationally

Furthermore, HKIC has set up a WorldSkills Competition delegation to carry out relevant work with the purpose of promoting exchange between HKIC instructing staff and students and their international partners and encouraging the pursuit of excellence in skills. In January 2020, HKIC coordinated the "Hong Kong Construction Industry Delegation to Guangdong Province" and signed a memorandum of collaboration with the Bureau of Education of Guangzhou Municipality to steer active exchanges between technical institutes in the two cities in areas of student recruitment and employment, skills training and competition, etc.

#### The Way Forward

HKIC has been striving to nurture highly skilled workforce, provide a stable source of manpower over a long run for the construction industry and support graduates in building a successful career in the industry. It is expected that the labour market will be gradually stabilised. As such, HKIC will continue its efforts to expand networks of employers, strengthen partnerships with alumni, optimise the existing Career Portal and follow up the progress of students after their job placement in earnest to facilitate the process of job-seeking and employment. In addition, comprehensive training activities and competitions with our counterparts in the Mainland will also be organised to promote exchanges between both sides and equip the contestants and trainer team of the WorldSkills Shanghai with necessary skills.

## Collaboration Scheme

In addition to the full-time and part-time courses, the CIC offers a variety of collaborative training schemes as supplementary measures to respond to the demand for construction tradesmen and provide systematic and comprehensive craft training for construction practitioners. Working closely with main contractors, sub-contractors and trade unions, 2,095 graduates were trained under the Collaboration Scheme in 2020. In the years to come, special attention will be paid to expand the online platforms to reach more targeted employers and trainees and exploring more trades that would be benefited from collaborative training to enhance the outcome of the collaboration scheme.

### Intermediate Tradesman Collaborative Training Scheme

Intermediate Tradesman Collaborative Training Scheme (ITCTS), an integration of initial training provided by HKIC and on-the-job site training provided by employers, has been in operation for more than three years. In response to the suspension of face-to-face initial training courses during

COVID-19, the CIC exercised flexibility by arranging trainees to commence site-training directly at the employers' sites, supplemented with initial training in e-class as an alternative to ensure that trainees' training progress could get underway without delay. In order to address the rising industry demand for professional trades, three trades, namely Underwater Lamination Sand Placing Special Barge Operator, Offsite Rebar Automation Cut and Bend Operator as well as Tunnel Worker, were added to ITCTS in 2020. At present, ITCTS covers 46 trades.

### Lift Modernisation Subsidy Scheme

In response to the implementation of the "Lift Modernisation Subsidy Scheme" by the HKSAR Government and manpower demand for lift mechanic, the CIC cooperated with the Electrical and Mechanical Services Department (EMSD) and industry stakeholders to include "Lift Mechanic" in ITCTS in December 2019. With active promotion of the CIC and the EMSD, a total of 61 trainees of the ITCTS Lift Mechanic were successfully recruited in the year.



■ Utilising online platform and video conferencing application to launch ITCTS online recruitment days in times of the COVID-19 pandemic



### Advanced Construction Manpower Training Scheme – Pilot Scheme

To further optimised the “Advanced Construction Manpower Training Scheme – Pilot Scheme (Structured On-the-job)” (ACMTS – SOJ), an Enrichment Programme comprising of safety training, soft skills empowerment and skills enhancement with innovation and technology elements was included in the ACMTS – SOJ to ensure a holistic development of trainees.

### Increasing Recognition of the Scheme

To enhance publicity and receive wider recognition of the schemes, the CIC actively sought for collaboration with 42 social welfare organisations (SWOs) and Home Affairs

Enquiry Centres and regularly organised ITCTS Recruitment Days with the Labour Department and various SWOs. Given the challenges posed by the COVID-19 pandemic, ITCTS Recruitment Days were launched using virtual event platform and video conferencing application. A total of 16 recruitment days were held in 2020, attracting 882 job seekers with 1,557 on-site interviews arranged.

With a view to strengthening the relationship with employers and enhancing trainees’ understanding of the market, the CIC conducted 187 Scheme Introduction Briefing Sessions with employers via phone calls, video conferences and meetings. A total of four “Employer Sharing Sessions” and four “Trainee Sharing Sessions” were held in 2020, with the participation of more than 30 companies and 90 trainees.



■ Collaborative Training Scheme Employer Sharing Sessions



■ The newly added “Enrichment Programme” of Advanced Construction Manpower Training Scheme – Pilot Scheme (Structured On-the-job)



■ Co-organised recruitment days with social welfare agencies to expand publicity network

## Urban Forestry Support Fund – Trainee Programme

Commissioned by the Greening, Landscape and Tree Management Section of the Development Bureau, the CIC administers the “Urban Forestry Support Fund – Trainee Programme” (Trainee Programme). Launched in August 2020, the Trainee Programme follows the “first-hire-then-train” principle to enable graduates of arboriculture and tree management programmes to receive on-the-job training, paving the way for them to become qualified arborists and tree climbers in the future. It is expected that around 100 arboriculture and tree management graduates will be benefited from the Trainee Programme every year.

To strengthen the relationship with employers and industry stakeholders and enhance their understanding of the programme, 15 briefing sessions were arranged in 2020 with more than 35 participating companies. From August to December 2020, there were 23 trainees enrolled in the programme, of which 20 were arborist trainees and three were tree climber trainees.



■ Training tutor and arborist trainee were supervising tree removal work by the chainsaw operator at construction site



■ Tree climber tutor was felling a tree with chainsaw



■ Tree climber training tutor was demonstrating tree climbing with rope access during internal training session

## Trade Testing

The COVID-19 pandemic has brought unprecedented challenges both for the business environment and the operation of society; nevertheless, the Hong Kong Construction Industry Trade Testing Centre (HKCITTC) stood fast in its role and continued to provide efficient services during this particular period in the hope to facilitate workers to obtain qualifications to stay in their jobs and support living. An array of anti-epidemic measures were also adopted to protect the health of candidates and invigilators.

## More Efficient and Effective Trade Testing Service

### Adjustment of Construction Trade Test Application Requirements

Adjustment of the trade test application requirements took effective on 1 January 2020. In order to update workers on the details of the latest trade test application requirements for work experience and documentary proof, the HKCITTC actively communicated with industry stakeholders through various means and widely distributed leaflet of “Work

Experience Requirement for Trade Tests”. With the smooth implementation of the new application requirement, the average number of trade tests taken per person has been improved significantly, and the passing rates of students from training institutions has also been increased. In addition, the mechanism of recognised training institutes and labour unions for trade tests was introduced in early 2020, for which a poster was produced to promote industry stakeholders the idea that work experience requirement can be exempted by attending recognised bridging courses.

### Newly Launched “Trade Test for Grade A Electrical Work”

The HKCITTC officially launched the brand new “Trade Test for Grade A Electrical Work” in December 2020. Workers who successfully pass the trade test can apply to register as the Grade A Electrical Worker to the Electrical and Mechanical Services Department by using the Trade Test Certificate issued by the CIC. This arrangement has further expanded the scope of services provided by HKCITTC, facilitating more construction workers to obtain relevant professional qualifications and build their own career ladder in construction industry.



Poster of “Recognised Bridging Courses”



Poster of “Trade Test for Grade A Electrical Work”

### Digitalisation and Computerisation

The HKCITTC co-operated with Information Technology Department to improve the Trade Testing Management System, streamline operation procedures and processes, and ultimately enhance overall efficiency of daily processing of trade tests and statistics with satisfactory initial result. Meanwhile, the e-written test system has also been adopted in Trade Tests and Intermediate Trade Tests and received remarkable result in simplifying the written test workflow and increasing the efficiency and accuracy of written test scoring.

### Standardisation of Testing Processes

A set of trade tests reference study materials, such as pre-test briefing materials, practical test mock papers, written mock test papers, study materials and a collection of reference trade test photos, has been prepared in a standardised format to provide candidates clearer and more consistent preparation materials.

The HKCITTC also standardised the scoring sheets and practical test assessment scope of all trades to maintain objectiveness of assessment criteria and consistency of assessment process, and to further streamline the scoring process. Through the standardisation of assessment process, particularly the design of assessment criteria and process, validity and reliability of trade testing assessment can be enhanced.

### Invigilators' moderation and training

The purpose of moderation is to ensure invigilators making consistent assessment judgments when assessing candidates' performance, which is an essential part ensuring assessment integrity. Through moderation, experience sharing and discussion, invigilators will come up with a set of objective, standardised assessment criteria on evaluating skill levels of candidates to ensure consistent assessment results across different invigilators for the same candidate.

Training for invigilators was arranged to refresh their knowledge of the stringent requirements and procedures of the invigilation and skill assessments, enhance their

customer service skills, and update their understanding of the industry's expectation towards and latest demand for trade tests.

### Resources Redeployment

In 2020, some of the trade testing workshops, such as bar-bending, concreting and drainlayer, which originally conducted at Tai Po Training Ground, were relocated and arranged to be operated at the HKCITTC in Aberdeen, in which most of trade testing workshops are planned to be centralised and operated in 2021. Besides, various trades underwent restructuring process, for example, combining the supervision of levelling trade with that of scaffolding trade, and construction-related electrical and mechanical trades with construction plant mechanic trades, with the aim of utilising resources in a more effective way and further enhancing monitoring and management efficiency.

### Multi-channels for Trade Test Applications

Taking into consideration the latest development of the epidemic situation, the HKCITTC stepped up the promotion of Trade Test App (TTOA) to encourage workers to use the App for trade test application to reduce social contact. Furthermore, a drop box for trade test applications was also set up at the HKCITTC to provide alternative application method.

■ Promotion Leaflet of Trade Test Mobile App

#### More Facilitation on Trade Test Preparation for Candidates and Training Institutes

##### Enriching Materials on Preparing for Trade Trades and Trade Test Information

The HKCITTC has always strived to provide quality services to candidates. This year, a number of candidate-centric trade test information and preparation materials were produced, including producing and updating eight trade test videos introducing trade test background, new application requirement, trade test and e-written test procedures, etc.; producing “Trade Testing Agent” videos for Trade Tests and Intermediate Trade Tests; translating 14 “Trade Testing Agent” videos into English and different Ethnic Minority (EM) languages; producing trade test reference photo collection for 149 trades; standardising the format and optimising the content of 135 mock papers, study materials for written tests for Trade Tests / Intermediate Trade Tests; and preparing instructors of training institutes a tailor-made brief of test preparation.

All trade test information and preparation materials were uploaded to the CIC’s official website and Youtube channel in order to help candidates and instructors familiarise with the contents and requirements for trade tests and get well-prepared, thereby further enhancing the professional image of the HKCITTC.

#### Maintaining Close Contact with Construction Industry Stakeholders

The HKCITTC hosted 43 trade test exchange sessions and 12 industry exchange forums with industry stakeholders and instructors from Hong Kong Institute of Construction, Collaboration Scheme and other training institutes to provide an effective communication platform and maintain close relationship and communication with them.

During exchange sessions, trade test content and assessment criteria were explained in detail by invigilators, while views towards the latest trade test development was discussed and exchanged with industry stakeholders from labour unions and trade associations in exchange forums. A large-scale EM exchange forum was also held with over 10 major EM communities and organisations invited to gather their opinions of trade tests and the difficulties encountered when having trade tests, and to explore how to assist EM candidates more effectively.

The HKCITTC also organised 15 online trade test seminars for 17 hot trades to introduce industry practitioners trade tests. The online seminars received an overwhelming response, attracting the participation of about 240 HKIC students, workers and industry practitioners who were interested in taking trade tests.



■ Fire Services Department was invited to visit the HKCITTC on 3 November 2020



■ Major EM communities and organisations were invited to attend an EM exchange forum on 10 January 2020

## Recognition to Construction Masters and New Talents

With the purpose of recognising exceptional workmanship of experienced workers and new talents and acknowledging skilled industry practitioners from different trades, thereby encouraging the industry to identify and value talents, the HKCITC organised the 1<sup>st</sup> Hong Kong Construction Skills Competition (Competition) in 2020. Being one of the leading competitions in the construction industry, the Competition consisted of youth group and open group competitions, attracting a total of 161 contestants.

As COVID-19 persisted, the Competition was held behind closed doors. To increase public engagement, the Competition was streamed live online on the CIC's Facebook page and YouTube channel on the first day of open group competition, attracting a total of 35,800 views and arousing heated discussion in the industry.

Thanks to the generous sponsorships and enormous supports from the industry, the Competition was held successfully with over 97% of the contestants satisfying with the arrangement. An event highlights video was also produced and uploaded to YouTube channel for public review.



■ Mr. CHAN Ka-kui, Chairman of the CIC, Ir Albert CHENG, Executive Director of the CIC, Ir YU Sai-yen, Chairperson of the Construction Industry Training Board, and Mrs. Sylvia LAM, the then Director of Architectural Services, visited the 1<sup>st</sup> Hong Kong Construction Skills Competition and cheered for the contestants



■ Winners of the 1<sup>st</sup> Hong Kong Construction Skills Competition – Open Group

## The Way Forward

Looking forward, the HKCITTC will formulate a three-year plan with three major goals: enhancing resource utilisation and operational process efficiency; promoting participation of workers in taking trade tests to obtain quality-assured qualifications, thus enhancing their competitiveness; and encouraging construction employers and contractors to include trade testing qualifications as a mandatory requirement in the construction contracts, and raising the recognition of qualifications of trade tests.



■ Winners of the 1<sup>st</sup> Hong Kong Construction Skills Competition – Youth Group

## QUALIFICATION FRAMEWORK FOR ESTABLISHING PROFESSIONAL STATUS

### Workers Registration

The construction industry has been facing severe challenges during the pandemic, the Workers Registration Office (WRO) worked hand-in-hand, displaying resilience and resourcefulness to continue the support to registered workers.

### Uninterrupted Registration Services

The WRO provided uninterrupted services to construction workers during the outbreak. The CIC Service Centres stayed open for counter services while the back office operated around-the-clock to handle applications by post and electronic applications.

### Omni-channels for Registration

To minimise the possible risk of infection when commuting to CIC Services Centres for registration, omnichannels were launched for workers registration services including drop box at centres, postal method, easyJob mobile app and online submission to suit different needs of workers. Meanwhile, the WRO processed the applications back-end and ensured timely issuance of registration cards to registered workers.



■ The service centres adopted adequate anti-epidemic measures and colleagues provided uninterrupted registration services during COVID-19

### Registration Figures

The Workers Registration received 71,717 new registrations and 108,777 renewal applications in 2020, which was an increase of 128% and 69% respectively compared to 2019.

Registration Category	Number of Registered Workers (as at 31/12/2020)	Number of Registered Workers (as at 31/12/2019)
Registered skilled worker	208,158	202,612
Registered semi-skilled worker	32,972	30,655
Registered General worker	307,198	245,778
Total	548,328	479,045

### Anti-epidemic Assistance

The CIC assisted the Government in disbursing subsidies to the construction enterprises and workers under the “Anti-epidemic Fund” (AEF). The WRO set up enquiry service at the CIC Service Centres to handle registered workers’ enquiries and to assist them in applying for the AEF via mobile app. The flexibility of services provided by the CIC Service Centres coped well with the service demand, whilst we also stayed vigilant to the epidemic and adopted prevention measures to ensure health and safety of our staff and visitors.

Hong Kong faced a shortage of anti-epidemic supplies during the pandemic outbreak, the WRO distributed masks and hand sanitisers under the “Construction Industry Caring Campaign - Fight against Novel Coronavirus” to more than 50,400 registered workers who visited the CIC Service Centres for registration services. We continued to distribute thoughtful and practical seasonal giveaways to workers who came to apply for registration, including card cases and red packets, etc.



## Workers' Development and Welfare

Amidst the COVID-19 pandemic, the Construction Workers Registration Board continued to introduce a variety of initiatives for workers' professional development and welfare.

### Construction Workers Professional Development Scheme

We launched the Construction Workers Professional Development Scheme (Development Scheme) in 2020, aiming to encourage workers to pursue continuous learning and professional enhancement, as well as to develop

multiple skills, so as to nurture more outstanding professional tradesmen for the industry. The Development Scheme was well received by the industry with over 5,800 applications.

Due to the pandemic, the in-person award presentation ceremony was cancelled and replaced by a compilation of short videos featuring 186 awardees with their tips on professional development. The compilation video was uploaded onto the CIC website so that the awardees could share the joy with their family members and friends. The Development Scheme delivered positive energy during the pandemic and it showed impressive professionalism and multifaceted skills of registered construction workers.



■ Construction Workers Professional Development Scheme



■ Award winners of the Construction Workers Professional Development Scheme were invited to share their experiences (Awardee of the Construction Career Advancement Commendation Programme (Diamond) - Mr. WONG Kin-pan, Alexander)



■ The card face of “CCB (Asia) Construction Industry UnionPay Dual Currency Credit Card”

### Designated Credit Card for Construction Workers

The CIC and China Construction Bank (Asia) Corporation Limited jointly launched the “CCB (Asia) Construction Industry UnionPay Dual Currency Credit Card” (Credit Card) specially designed for registered construction workers, with the aim of increasing workers’ pride and sense of belonging to the construction industry. In addition to providing exclusive privileges and discounts for registered workers, the Credit Card is equipped with the UnionPay App which provides workers with a contactless payment method to reduce contacts during the pandemic.

### Supporting Young Family Members of Workers

Aiming to recognise registered workers for building Hong Kong a home for all and their parenting efforts to raise their families, “Scholarship for Family Members of Registered Construction Workers” celebrated its tenth anniversary in 2020. Over the decade, the CIC awarded 203 outstanding students with a total of over HK\$1.69 million scholarships. A record-breaking number of 503 applications were received in 2020, and 30 awards were presented at the award ceremony held on 31 October 2020. Past winners were invited to share their stories and experience of academic and career development and together shared the joy with this year’s winners and their families.

### Financial Relief

Hong Kong was facing a challenging economic environment since 2019. In order to relieve the burden of frontline construction workers, the CIC extended the waiver of registration and renewal fees for one year from 1 October 2020 to 30 September 2021 in response to the relief measures of the HKSAR Government.



■ The promotional poster for waiver of the construction workers’ registration and renewal fees



■ The award ceremony of the tenth Scholarship for Family Members of Registered Construction Workers was held on 31 October 2020

## Enforcement of Construction Workers Registration Ordinance

The Inspection and Enforcement Team continued to strengthen the industry's compliance with the provisions of the Construction Workers Registration Ordinance (Cap. 583) (CWRO) through a multi-pronged approach, including site inspection, compliance check on daily attendance records (DAR), prosecution, publicity and education. In 2020, the team conducted a total of 1,301 site inspections, checked 13,187 workers registration cards and reviewed a total of 2,462 DAR.

The Inspection and Enforcement Team prosecutes, in the name of the CIC, persons suspected of violating the provisions of the CWRO. Following investigations, the team issued a total of 327 summonses to the suspected offenders in 2020. Including the cases brought forward from the previous years, 252 summonses resulted in convictions in 2020 with 228 summonses to be heard in 2021.

Regarding publicity and education, a total of 20 seminars including tailor-made ones for contractors, were held to explain the requirements of the CWRO and the operation of the Construction Workers Registration System. Education efforts were stepped up during the year with dissemination of detailed illustration of CWRO requirements for new contracts registered and major CWRO provisions via regular emails.

## The Way Forward

Looking forward, we will continue to strive to provide excellent registration services to different industry stakeholders, including actively promoting e-registration to workers and upgrade of registration centres, as well as organising publicity and educational activities to promote various initiatives for workers registration and enforcement.

Workers' wellbeing is another priority of the CIC. We will organise a series of activities themed "personal development" and "personal health" for workers in 2021, and continue to strive to engage and motivate industry stakeholders and friends to participate in workers' development and welfare projects with an aim of further advancing the caring culture of the construction industry.

## Registered Specialist Trade Contractors Scheme

Launched in April 2019, the Registered Specialist Trade Contractors Scheme (RSTCS) achieved a record of 1,606 Registered Specialist Trade Contractors (RSTC) and 5,775 Registered Subcontractors (RS) for a total of 7,381 registered companies by end of 2020. Registration drove professionalism of registered companies and brought together specialists of core construction sectors.

### Industry Recognition

The seven designated trades of the RSTCS including concreting, concreting formwork, curtain wall, demolition, erection of concrete precast component, reinforcement bar fixing and scaffolding had been widely recognised by industry stakeholders. To accelerate the recognition of professionalism of the registered companies and to attract more industry stakeholders to get registered, the five core registration elements regarding safety, management, job experience, execution and finance have been uplifted. In response to the Association of Plastering Sub-contractors' request to add plastering as the eighth designated trade under the RSTCS, plastering trade will commence its RSTC registration with effect from 1 January 2021 with wide industry support.

The deployment of RSTCS registered companies was also adopted in the public works contracts. In particular, Group 2 companies of the RSTCS were not subject to any tender limit arrangement on subcontracts in public works under Development Bureau and the Housing Authority while Group 1 companies would tender according to the specified threshold starting from 1 October 2020.

### Registration Drives Professionalism

During the year, the Registration Services held 49 workshops to introduce the RSTCS objectives, requirements and application procedures. To encourage stakeholders' participation during the COVID-19 pandemic, face-to-face workshops were turned to webinars, establishing a two-way communication platform for attendees to express their concerns and share suggestions.

### Regulatory Actions

The Committee on RSTCS instigates regulatory actions against registered companies arising from court convictions or violations of relevant laws, as well as breach of Rules and Procedures of the RSTCS. When there is a prima facie case, a hearing will be conducted by the Committee and any regulatory actions imposed will be published on the RSTCS website. An independent appeal mechanism is also established to handle appeal cases.

During the year, a total of 28 registered companies were regulated, mainly in relation to violations of safety, wage payment and MPF legislations. The concerned companies were subject to penalties ranging from warning letters to suspension of registration from one to nine months.

### Talent Development

The RSTCS effectively provides a platform for registered companies to increase their exposure among a broader network of stakeholders. The RSTCS Leadership Summit 2020 (Summit) was conducted online with more than 240 attendees. Themed "New Normal" in Construction Industry – Digitalisation and Innovation, chairpersons of trade associations shared the advantages and their experiences of registration.

The Summit also invited industry pioneers to share their successful experiences and insights in implementation of digitalising site supervision and human-robot collaboration in construction projects. Four young leaders from the RSTCS Young Leaders Network, delivered presentations on automation and advanced technological solutions during the Summit. A discussion session was held to discuss how young leaders driving the industry to embrace the new trend of technology in construction.

## OPERATIONAL REVIEW

### QUALIFICATION FRAMEWORK FOR ESTABLISHING PROFESSIONAL STATUS

With the four core values of the RSTCS Young Leaders Network, we envision to nurture management and site supervisory staff aged 45 or below to succeed the professionalism and expertise of trade specialist, bringing forward the construction industry to new era. The four core values are:

1. Rejuvenate entrepreneurial spirit of new generation leaders;
2. Succeed professionalism and endeavor of businesses;
3. Transform the industry with innovative technologies; and
4. Collaborate with respect and trust in pursuit of excellence.

## The Way Forward

The RSTCS will continue to elevate the status of the registered companies with a forward-looking vision to promulgate the five core registration elements with other similar registration systems in Hong Kong and to implement the subcontract tender limit arrangement in public works contract for the newly added plastering designated trade from the end of 2021.



■ Young leaders from RSTCS Young Leader Network shared experiences of innovative technology adoption in construction projects



■ Speakers of the RSTCS Leadership Summit 2020 (left to right): Mr. Conroy TSANG, Mr. Andy WONG, Mr. Tim CHEUNG, Mr. Daniel LEE, Ms. LEE Oi-yen, Assistant Director – Registration and Technology Fund of the CIC, Mr. Benjamin WANG

## Technically Competent Persons Registration Scheme

### Launch of Technically Competent Persons Registration Scheme

A Memorandum of Understanding was signed between the CIC and the Buildings Department to establish the Technically Competent Persons Registration Scheme (TCPRS). The TCPRS facilitates the appointment and administration of Technically Competent Persons (TCPs) and Competent Person (Logging) and aims to build a pool of technically competent personnel to carry out engineering safety supervision and routine safety supervision duties.

The TCPRS was officially launched on 18 December 2020 with the following objectives:

1. Facilitate submission of supervision plans under the Buildings Ordinance (Cap. 123);
2. Gauge supply of TCPs; and
3. Through continuous training, enhance the quality, skills and knowledge of the TCPs and Competent Person (Logging).



TCPRS App

### Recognition and professionalism of the TCPs

Through registration to TCPRS via the TCPRS Portal, the registered TCP obtains an electronic registration card stored in the TCPRS Mobile App. The e-registration card states the registration particulars of the registered TCPs for easy identification and verification. Besides having the status being recognised, through continuous training and professional development, the quality and knowledge of the TCPs would be enhanced continuously.

The TCP List with details of all valid registered TCPs is available on the CIC website for every member of the public to ascertain a TCP's registration.

### The Way Forward

The CIC would continue publicising the TCPRS to industry stakeholders. The Continuous Professional Development model would also be built to enhance the overall quality of the registered TCPs and to nurture and recognise construction talents.



Back: (left) Mr. CHAN Ka-kui, Chairman of the CIC, and Ir LAM Sai-hung, Permanent Secretary for Development (Works)  
Front: (left to right) Ms. LEE Oi-yen, Assistant Director – Registration and Technology Fund of the CIC, Ir Albert CHENG, Executive Director of the CIC, Mr. YU Tak-cheung, Director of Buildings, and Mr. Humphrey HO, Assistant Director / New Buildings 2, Buildings Department

## FUELLING INDUSTRY INNOVATION WITH IDEAS AND CAPITAL

### Construction Innovation and Technology Fund (CITF)

#### Catalyst to Industry Transformation

The Construction Innovation and Technology Fund (CITF) continues its mission to support industry transformation through automation, digitisation and industrialisation. As of the end of 2020, 2,074 applications were received, among which 1,553 applications were approved, amounting to a total of HK\$366 million fund granted. The CITF applications manifested the six pillars of transformation catalyst, namely Building Information Modelling, Advanced Construction Technologies, Modular Integrated Construction, Prefabricated Steel Rebar, Industrialised Process – Robotic Welding and Manpower Development.

In response to the needs of Hong Kong construction industry, the scope of the CITF has broadened to enable industry stakeholders to pursue a visionary transformation. During the year, the funding category for MiC was expanded to financially support project consultants for additional costs incurred in implementing MiC projects as well as for costs incurred in the applications for in-principle acceptance

of MiC systems to the Buildings Department's Lists of Pre-accepted MiC Systems. The financial subsidy was up to HK\$4 million per project for the former and up to HK\$1 million per successful application for the latter. Besides, the funding ceiling of the category "Prefabricated Steel Rebar" increased from HK\$3 million to HK\$5 million per project and the cash rebate per tonne also increased from HK\$200 to HK\$300. A new funding category, Industrialised Process – Robotic Welding, was newly created to further encourage industrialisation of in-situ work processes.

#### Industry Engagement

Another highlight of CITF was the CITF Pre-approved Lists (PA Lists) which serves as a sharing platform for both suppliers and potential users, providing the latest technology products, software and course information at fingertips. By the end of 2020, there were 207 pre-approved BIM Training Courses, 78 pre-approved BIM Software and 223 pre-approved technologies on the three PA Lists published on the CITF website.



■ CITF virtual booth



■ Signature online event “CITF ConTech 2020”

Under the COVID-19 pandemic, CITF continued to provide industry stakeholders the latest information on technological development and applications. A signature online event organised by the CITF Secretariat, CITF ConTech 2020, was held from September to October 2020, the PA List products which are readily available in the market were introduced and showcased via different thematic sessions such as Technologies Sharing, PowerUP Talk, Virtual Exhibition Booths and CITF Chat. Over 70 successful applicants and technology providers shared their experience in technology adoption and their products in various sessions.

In the face of the new normality under COVID-19, the CITF embraced the digital world for seminars. The series of theme-based online CITF Seminars discussed the CITF funding scope and application procedures as well as associated PA List products. We also maintained our vibrant communications with industry stakeholders through various direct e-marketing initiatives, offering the latest CITF updates and promoting the PA Lists.

## The Way Forward

The year of 2020 marked the second anniversary of the CITF, moving towards a new milestone. A comprehensive mid-term review will be conducted to take stock of the experience of the past two years and set forth the direction for the upcoming years for the benefit of a wider stakeholders group, with a view to developing a more “smart”, automated and productive construction industry.



■ Marketing Pre-approved Lists



■ Promoting CITF webinar



## EXEMPLARY LEADERSHIP, IMPACTFUL OPERATION

### Corporate Secretariat

The Corporate Secretariat (C-SECT) provides secretarial services and administrative support for the two highest-level authorities, the Council and the Executive Committee. It ensures the CIC's compliance with statutory and appointment requirements, upholds the corporate integrity and governance standards, and assists the Council on important policy decisions and strategic directions. C-SECT improves the quality of meeting documents and correspondence by implementing Grade Management for secretariat staff. It also develops governance systems and procedures, formulates corporate policies and guidelines, prepares documentation framework and templates, as well as providing regular training on relevant topics for staff.

### Enhance Corporate Governance Standards

C-SECT conducted the "Experience Sharing on Corporate Governance and Way Forward for CIC" session in 2020 to promote awareness and understanding of corporate governance, sustainability and social responsibility for senior management staff, and to reinforce enhancement of various standards and practices. Three sessions on Grade Management training were organised by C-SECT benefitting over 80 staff members.

### Release Informative Publications

C-SECT published the bilingual *CIC 2020 Major Work Plans* and *Corporate Governance Manual* in February and March 2020 respectively and updated the *Information for Council Members* booklet in March 2020. The *Corporate Secretariat Operation Manual* was also revamped for staff members' reference.

### Encourage Employment of the Ethnic Minorities

C-SECT developed initiatives with the Task Force on Ethnic Minorities in Construction to facilitate and encourage the ethnic minorities to join the construction industry. A video was produced to illustrate the career prospect in construction for ethnic minority workers and to promote the services of the CIC.

### Tackle COVID-19 Epidemic with Agility

To cope with challenges posed by the pandemic, C-SECT closely observed the precautionary measures on COVID-19. To maintain social distancing, we conducted video conferences and delivered training sessions by hosting webinars. For urgent matters such as the implementation of various anti-epidemic relief measures, we sought Council Members' approval by means of circulation of papers to ease concerns about attending meetings in person during the epidemic.

### The Way Forward

Looking ahead, C-SECT will continue to strengthen corporate governance for the CIC and enhance the quality and standard of our secretariat services. We will encourage fellow departments to put greater effort and commitment into the areas of sustainability and risk management.

As a pledge to drive for excellence and self-improvement, we shall strive for more and higher level recognitions in best corporate governance via active participation and exchange in prestigious award competitions.

## Corporate Communications

The Corporate Communications Department (CCD) has been keeping pace with the fast-changing situation and going against the convention to support the CIC to address any challenges arising from the COVID-19 pandemic with a high level of preparedness and resilience. The CCD leads the strategic publicity plan to build a positive industry image and strengthen CIC's position as an advocate of the industry. The CCD plays a pivotal role in maintaining CIC's excellent reputation and fostering a sustainable, positive and caring image and culture within the industry by establishing effective communication channels. The CCD is responsible for CIC's marketing, public relations, media relations, Construction Industry Sports and Volunteering Programme, outreach services and crisis management, and identifies and manages potential crisis with shrewd market acumen.

### Weather the Storm with the Industry

The construction industry was hard hit by the COVID-19 pandemic since early 2020. Many site operations are disrupted by epidemic control measures, which leads to underemployment and affects the livelihood of many workers. In view of this, the CIC initiated the "Construction Industry Caring Campaign - Fight against Novel Coronavirus" (Caring Campaign) to raise funds for assisting workers affected by the pandemic or infected by COVID-19. Furthermore, to tie in with the HKSAR Government's policies in fighting the disease, the CIC allocated a fund of HK\$200 million to set up a "CIC Relief Fund". A one-off financial support was provided to small and medium enterprises (SMEs) in the construction industry to relieve their economic distress, while workers were encouraged to acquire new skills with additional training allowance for enhancing their competency to switch to other trades and further their career within the industry. The CIC also assisted the Development Bureau to distribute the Construction Industry "Anti-epidemic Fund". The CCD undertook tasks such as coordination, answering enquiries, promotion, administration and logistics arrangement for several large

scale anti-epidemic campaigns, making sure relevant relief support is provided to the industry in time. Under such exceptional circumstances, the CCD worked day and night to promote various relief measures and establish interactive communication channels, ensuring messages delivered are up-to-date and all stakeholders and workers' queries are answered. Thoughtful non-financial support is also provided to workers affected by the pandemic.

Apart from assisting to source protective equipment, the CCD commissioned the Outreach Services team to manage the increasing workload, including to process Caring Campaign's enquiries, applications, administrative arrangements and distribute caring packs, rendering timely support for workers in need on behalf of the CIC and the industry. Thanks to the industry's support, the Caring Campaign processed 2,580 applications, issued a total subsidy of HK\$11,668,000 and distributed 140,000 caring packs, over 135,000 bottles of hand sanitisers and over 530,000 face masks in 2020, assisting construction workers in times of supplies shortage.

Echoing the "Construction Industry Caring Campaign - Fight against Novel Coronavirus", a "Construction Industry Community Caring Campaign" initiated by the Construction Industry Sports and Volunteering Programme in April and May had successfully gathered construction industry organisations to organise over 150 rounds of anti-epidemic material distribution activities in different districts, extending the support of the construction industry in the community to show care for underprivileged groups. 450,000 pieces of masks and 40,000 bottles of hand sanitiser were distributed, benefitting over 52,000 citizens.

#### Effective Communication to Support Sites' Anti-epidemic Measures

In 2020, the prevalence of the pandemic dealt a severe blow to local construction industry and brought operation to a halt at a few sites. In view of the situation, the CCD adjusted its communication plans to effectively publicise changes in relevant policies and formulated comprehensive anti-epidemic promotion plans for construction sites to raise health awareness of workers. Taking into account the language demand of ethnic minority workers, multi-language posters were prepared in Nepali, Hindi and Urdu for workers who are illiterate in both Chinese and English to ensure relevant messages were effectively delivered to all workers, thus breaking the possible transmission chain in the industry. In response to the evolving epidemic situation, the CIC worked hand-in-hand with the Development Bureau to roll out various initiatives, such as driving sites to review environmental hygiene, encouraging site workers to participate in the testing scheme, encouraging site workers to conduct test regularly and take effective prevention measures. Alongside with online and offline advertising efforts, the CCD broadens audience base by leveraging different promotional platforms such as posters and websites to promptly and effectively disseminate information to the industry and the public to ride out the storm.

Operation of the society was affected by the pandemic, a special crisis communication task force within CCD was set up to update the public, workers and the media regularly on latest operation arrangements of the CIC and the industry to allay public concerns while maintaining operational transparency. In the meantime, the CIC continued to provide services and facilities to workers and anti-epidemic information to the industry and the public to uphold CIC's positive image and reputation.

To encourage sustainable development and improvement, the CCD is committed to promoting industry cohesiveness with a positive industry image. Despite the fact that many events were cancelled and postponed due to the pandemic in 2020, the CCD strives ahead with extensive experience and take the lead to launch events in different formats to

cope with the challenges, as well as helping everyone in the CIC adjust to the new normal, for example, hosting online events and uploading exhibition content onto websites. In addition to various themed online activities, the CCD has also crafted a new informative and energetic lunch webinar "CIC Lunch Talk" to invite professionals to share insights about innovation and their experience, leading industry development forward and invigorating the public image of the construction industry with the use of virtual space. As the epidemic situation gradually stabilised later this year, the CCD launched a number of key publicity events between September to November, including "Art in Construction" Exhibition and Construction Month 2020, enhancing the image of the industry. Recognising the growing importance of online platforms, the CCD accelerated its CIC website revamp project to fully utilise the internet platform for sharing information.

Besides organising a number of themed activities and competitions, the CCD spared no effort in driving industry-wide innovation adoption and sustainability development through several campaigns, such as the CIC Sustainable Construction Award Conference and Presentation Ceremony, Hong Kong Green Building Week 2020, a construction safety campaign "Life First", Construction Safety Week 2020 and World Sustainable Built Environment Online Conference 2020. Many of these campaigns went virtual to promote industry development, encouraging practitioners to explore and adopt better construction methods and to strive for excellence even in pandemic period.

#### Building a Caring and Energetic Community

The CIC prides itself in uniting the construction industry in Hong Kong, great emphasis is also put on promoting the physical and mental wellbeing of construction workers. The Construction Industry Sports and Volunteering Programme (CISVP) focuses on organising healthy activities for the industry. A wide variety of activities, sports events and volunteer programme were launched to promote healthy living over the years with active participation of industry practitioners at all levels.

In early 2020, CISVP successfully organised the Construction Industry Happy Run and Carnival 2020 with more than 1,300 participants. Though the original planning of several events was set aside due to the outbreak of virus, many industry practitioners showed commitment and enthusiasm for volunteer services. With its effective and proactive coordination of CISVP, more than 17,000 participants from 62 construction related organisations and NGOs joint hands and contributed over 120,000 service hours this year. The team also overcame challenges posed by the pandemic and managed to organise three signature volunteering events, namely Construction Industry Lo Pan Rice Campaign, Construction Industry Blood Donation Day and Construction Industry Shoreline Clean-up Day. A total of 72 rounds of services were organised, attracting 1,600 volunteers to participate in the events, and the Construction Industry Lo Pan Rice Campaign benefited nearly 8,000 in need. Adding to the list of activities, CISVP introduced the Construction Industry Volunteer Award Scheme to encourage construction practitioners to organise or join volunteer service.

As the epidemic continues to spread, citizens and the industry are busily fighting against it. To re-energise the community, the CCD organised three fund-raising music concerts between August to November in CIC-Zero Carbon Park as part of the Caring Campaign. Through the relaxing music performance, the CCD hoped to cheer up fellow industry practitioners and members of the public during stressful times under the pandemic. Strictly following the anti-epidemic measures, CIC-Zero Carbon Park also organised more than 30 "Low Carbon Living" workshops in 2020, including fitness workshop and DIY workshops to promote low carbon living. The community are more aware of the importance and benefit of low carbon living and enjoy more interaction with the CIC-Zero Carbon Park.

## The Way Forward

The CCD will continue its mission to strengthen CIC's brand image and promote sustainable and professional development of the construction industry while overcoming challenges brought by changes in the environment. Interactive strategies will be deployed in the coming year to provide the community opportunities to understand construction industry and cutting edge construction technologies with the aims of uplifting the image of the construction industry and attracting more talents.

## Human Resources & Administration

Human Resources Department plays the role of business partner in the delivery of our services to departments in areas of talent acquisition & management, compensation & benefits, talent development and employee relations. Our main objective is to ensure that our policies, procedures and practices fit the needs, goals and aims of CIC and facilitate the accomplishment of the organisation's overall business strategies.

The Administration Department ensures that the office environment and administration work flow facilitate the efficient and effective operations of various departments. Our main objective is to organise resources effectively through automation and standardisation to direct operations in achieving organisation goals.

### Overcome Challenges with Agility

2020 was a challenging year for Human Resources and Administration Department. Nevertheless, we made significant achievements in protecting and taking care of staff's health and well-being, implementing anti-epidemic measures, leading and driving the Construction Industry Anti-epidemic Fund and maintaining the provision of Human Resources and Administration services.

### Stay Connected with Staff

To achieve automation and better connection with staff, the HR Mobile App "HRConnect" and the Human Resources Management System were further upgraded with new features added. A new version of *Staff Handbook* was issued which incorporated changes of the Employment Ordinance.

### Talent Development

Most of the planned training activities were carried out in 2020 using either online platforms or face-to-face training when the situation allowed. 32 classes of Continuous Learning Programme (CLP) and two classes of 6-day Certificate in Learning and Teaching (CLT) were held for more than 300 teaching staff. We also organised 24 Corporate Culture Workshops for over 400 staff to reinforce the CIC corporate culture. Other training workshops on language enhancement, knowledge sharing, ordinance awareness, etc. were also held.

### Lead and Drive the Construction Industry Anti-epidemic Fund

Human Resources and Administration Department led and drove the first and second Round of Construction Industry "Anti-epidemic Fund" (AEF), which was commissioned by the Development Bureau to CIC. To simplify application procedures so as to provide timely subsidies to workers and enterprises, we developed the application Mobile App and established relevant procedures within a short time frame of two weeks. Staff from Human Resources, Administration, Corporate Safety and other departments were deployed to handle the AEF administration work as well as to provide active support to the work of Employment Support Scheme for the Construction Section (Casual Employees) (ESSC). Upon completion of AEF, we have successfully disbursed subsidies in the total amount of over HK\$6,375 million to 500,000 workers, 21,000 companies and over 1,770 employers who have employed some 40,000 casual employers.

### Active Participation in Construction Industry COVID-19 Testing Service Scheme

Human Resources and Administration Department also actively supported the Construction Industry COVID-19 Testing Service Scheme (CITS) spearheaded by the CIC and the Hong Kong Construction Association to provide voluntary on-site testing services for construction workers. After two weeks of preparation, CITS was launched on 22 December 2020 as scheduled. It is estimated that approximately 290 construction sites with about 58,000 site staff will be tested in the first phase.

## Safeguard Staff Health and Wellbeing

Human Resources Department drove and coordinated the work of the CIC Operation Task Force which was set up in 2019 to closely monitor issues due to the societal incidents. The Task Force continued to meet regularly in 2020 to communicate and co-ordinate proactive measures to mitigate the day-to-day disruption arising from the pandemic.

In 2020, over 40 alerts and announcements were issued to staff to update them with instant information on operations and work arrangements and to remind staff to carry out anti-epidemic measures. A *Guideline on Measures Against COVID-19* was prepared to guide management staff on how to handle pandemic related issues.

Human Resources and Administration Department worked closely with various departments to implement anti-epidemic measures. Apart from taking temperature at the entrance, Health Declaration, wearing of surgical masks, other measures such as staggered working hours, flexible lunch hours, mobile work stations, provision of protective gears and rest time for frontline staff were also implemented. Staff who had special concern of going to work in office might discuss with their Line Managers for alternative work arrangements such as Work-From-Home.

The Administration Department had a busy year in 2020 from sourcing surgical masks, hand sanitiser and other protective gears for staff, to beefing up cleaning and disinfection at all CIC premises, conducting deep cleaning to premises visited by suspected / confirmed cases, etc. New technology had also been adopted including partnering with the Electrical and Mechanical Services Department (EMSD) to deploy robots to provide touchless body temperature checking at the entrance.

## The Way Forward

This is an opportunity for us to rethink and prepare our business model for the new normal once the pandemic is over. We plan to equip our staff with versatile skill-sets not only to navigate current challenges but also to prepare for the changes ahead. Staff bondage will also be strengthened through the reinforcement of corporate culture.

In year 2021, Human Resources will strengthen its strategic role as business partner by integrating staff to work directly and closely with business units in manpower planning, talent acquisition, talent development, administration and corporate safety. Plans have also been made to further expand staff's potential through upskilling and job enrichment to work in cross-functional team environment. The reinforcement of corporate culture will focus on rebuilding staff morale and encouraging staff to embrace innovation and digitalisation. Administration Department will also strengthen its role to facilitate the effective operations of various departments.

## Corporate Safety

Corporate Safety Department (CST) is responsible for the occupational safety and health of all CIC staff, student and those who can be affected by the CIC's operations and activities. CST leads tasks related to maintaining a safety and health management system intended to allow the CIC to provide safe and healthy workplace and environment for all stakeholders to prevent injury and ill health.

### Outdoor Safety Information Board

In 2020, CST designed, produced and installed outdoor safety information boards in 39 training workshops at HKIC outdoor training grounds. These information boards show basic safety requirement and allow training instructors to deliver work-trade-related safety message to students. The information boards are more durable and sturdy against outdoor condition with the prototype modification.

### HKIC Uplifting Project

With regards to HKIC's large scale renovation uplifting project launched in late 2019, CST worked closely with internal departments and external parties to provide monitoring and advice continuously to maintain high safety standard. In 2020, this project was granted the Gold Award for Best Refurbishment and Maintenance Contractor in Occupational Safety and Health by the Occupational Safety and Health Council.

### Leading Internal Anti-epidemic Work

In view of the prevention of COVID-19, CST assisted in compiling *A Guideline on Measures Against COVID-19* and formulated relevant contingency and precautionary measures for internal departments. We also took a consolidation role to resolve COVID-19 related issues within the organisation.

### The Way Forward

Corporate Safety Department will continue to devote to cultivating a safety-first culture and to stimulate the enhancement of our internal safety performance, in order to deliver continual improvement on safety aspect and to meet our stakeholders' expectation.

## Estates Office

The Estates Office (EO) supports the CIC's operation in facilities management and capital projects. For facilities management, the department is responsible for maintenance services for common building services, building structures, landscaping and Furniture & Equipment; executing statutory compliance checking and upkeeping; and providing licence renewal services. For capital projects, the department focuses on contracting and project management of revamp works, A&A Work and new development works, optimising space utilisation, and the adoption of Building Information Modelling (BIM).

### Adoption of BIM, IoT and EOMS in CIC

EO integrated BIM and Internet of Things (IoT) technology into the Estates Office Management System (EOMS) to enhance maintenance as well as asset and safety management at the headquarters. The integration was completed and launched at the end of 2020 with a more effective and comprehensive management on the CIC premises.

### Hong Kong Institute of Construction

Short Term Tenancies for development of new Lam Tei Training Ground and extension of Tai Po Training Ground were approved by the District Lands Conference. The Shatin Training Ground was returned to the District Lands Office in December 2020. Besides, the uplifting works for the Kowloon Bay Campus, Kwai Chung Campus and Sheung Shui Campus of Hong Kong Institute of Construction were still proceeding.

### Risk Management during Pandemic

During the COVID-19 pandemic, EO requires the contractors to implement strict measures to prevent and control the spread of disease with regular review and improvement on the measures. During the outbreak, the frequency of site visits was reduced to safeguard colleagues' health. In addition to switching to virtual meetings, contractors were required to prepare regular reports on project matters so that EO could closely monitor the project schedule.

### The Way Forward

EO will continue to support the future development of the CIC, maintain the good condition of CIC premises through professional management and intelligent system management, and provide sustainable facilities and comfortable working environment at all premises (HKIC Campuses, Hong Kong Construction Industry Trade Testing Centre, CIC Services Centres, Construction Innovation and Technology Application Centre, CIC-Zero Carbon Park, Headquarters and other back offices).

Outlook in 2021, EO will continue to provide the support and constructive suggestions with diligence, including:

- Uplifting works for the Kowloon Bay Campus, Kwai Chung Campus and Sheung Shui Campus of Hong Kong Institute of Construction will be completed in Q1 2021;
- Setup of new Lam Tei Training Ground for the Hong Kong Institute of Construction;
- Relocation of Construction Innovation and Technology Application Centre (CITAC) to the CIC-Zero Carbon Park (CIC-ZCP);
- Renovation works for the new Construction Workers Registration Service Centre;
- New renovation and improvement works for the CIC's premises; and
- Feasibility Study for adoption of new IoT for facilities management of the CIC's premises.



## Information Technology

With its professional knowledge on information technology, Information Technology Department (ITD) is responsible for the formulation of the CIC's IT development strategies, IT risk assessment and security control, as well as the design and management of the Enterprise Architecture, including applications, data and infrastructure to meet the Council's business requirements and growth. The department will also study users' requirements, recommend and deliver the most suitable solution with the purpose of ensuring users enjoy benefits brought by new technologies.

### Enhance Cybersecurity in the CIC

Firewalls at HKIC campuses and Hong Kong Construction Industry Trade Testing Centre were upgraded with network segmentation and intrusion prevention system protection to strengthen the intra-connectivity security. Meanwhile, a new IT Security Awareness Training was conducted to refresh IT security knowledge and best practices of all CIC staff to better safeguard CIC's cybersecurity.

### Upgrade Mobile Application

Mobile application "HRConnect" underwent improvements with a more user-friendly layout and new features of photo gallery and safety information. The "EasyJob" application was also upgraded to promote CCB (Asia) Construction Industry UnionPay Dual Currency Credit Card.

### Improvement on Operational Efficiency

Existing application systems, including Human Resources Management System, Trade Test Management System and Levy Assessment and Collection System, were enhanced to optimise system functions, improve operations automation and information transparency.

### New Initiatives Launched

The HKIC Training Management System was launched to provide automated management service covering training courses and students. The one-stop platform "Technically Competent Persons Registration Scheme" system was also launched to allow the public to register online and enable the Council and the Development Bureau to manage the approval process. Apart from them, the Sustainability E-platform and Model Portal was introduced to share benchmark and provide carbon performance tracking of buildings and infrastructure in Hong Kong.

### Risk Management during COVID-19

To cope with changes brought by the pandemic, the department set up an online learning platform for HKIC to conduct online teaching during the school suspension period and enhanced the remote access and video conference services to support intensive "work from home" requirement. Application systems for Anti-Epidemic Fund 1.0 and 2.0 were set up to support the applications from construction workers and contractors / sub-contractors.

### The Way Forward

ITD will kick off a series of initiatives to improve operation efficiency and cybersecurity, in order to support daily operation of the CIC and enhance its efficiency.

To improve operation efficiency, the department will deploy the HKIC Card Accessing System integrated with Digital Signage for attendance capture automation, and promote the use of tablets for rating practical tests in Trade Test e-assessment. Construction Workers Registration System will allow viewing and signing documents on tablet computers for a green and low carbon operation. Student Survey Platform will also expand and cover School of Professional Development in Construction courses and part time courses. Business intelligence platform with training related data will be enhanced to offer multi-dimensional analysis. The Safety Mobile App will be revamped with block chain technology for e-certificates storage and verification.

ITD will further enhance the CIC's cybersecurity by upgrading the log and event monitoring service, access control, emails. Phishing email simulation will also be conducted to foster user awareness and build a strong cybersecurity culture in the CIC. A location independent IT infrastructure will be introduced by setting up dual availability zones, multiple cloud environment, and anywhere anytime accessible services. In addition, CIC-Zero Carbon Park's Wi-Fi system will be upgraded to Wi-Fi 6 to support high-speed mobile network serving more Wi-Fi users and bandwidth-intensive applications, such as augmented reality. By upgrading the gateway to improve the performance and availability of remote offices or training grounds, we aim to support operation anywhere under the pandemic. Microsoft Teams Live Event service will be deployed to support webinars with large audience size and speakers from remote locations.

## Internal Audit

The Internal Audit Department (IA) assists the CIC in accomplishing its objectives by evaluating the effectiveness of the CIC's internal control system, including financial, operational and compliance controls, as well as proposing recommendations for improvement to the management.

A risk assessment exercise is conducted annually to formulate an annual internal audit plan for the approval of the Audit Committee. According to the internal audit, IA reviews the key controls in different areas and reports the findings to the Audit Committee quarterly.

### Audit Work Done in 2020

IA reviewed the operational, financial and compliance control matters of the operations in project management, payment control and Apprenticeship Management as well as departments of Construction Innovation and Technology Fund, Modular Integrated Construction and Building Information Modelling. All key findings and recommendations were communicated, discussed and followed up with the process owners in a timely manner. In general, critical findings were addressed immediately or within 3 months while minor findings were addressed within a year.

During the year, an external consultant was engaged to carry out an internal audit on the Hong Kong Institute of Construction (HKIC). Phase 1 of the audit covered reviews on training, campus management, curriculum development and quality assurance of HKIC, is expected to be completed in February 2021 while phase 2 covering review on staff management and student assessment will be commenced in February 2021.

### COVID-19 Measures

To prevent cross infection, originally scheduled face-to-face interviews were replaced by phone call or video conference whilst on-site visits were only carried out when necessary.

### The Way Forward

From 1 January 2021, an external consultant will provide 2-year internal audit services to the CIC. The consultant will assess the risk level of various divisions and departments of the CIC and develop audit plan(s) at the beginning of 2021. The control effectiveness of the CIC's operations will also undergo a review throughout 2021 to 2022 and audit recommendations will then be proposed to the CIC management with reference to the best practices in the industry.

## Procurement

With its main objective to improve efficiency of transaction flow and reporting, the Procurement Department (PD) supports the CIC's operations in managing transactions of goods and services, as well as handling procurement database on operation requirements.

### Management of Major Tenders

PD managed a number of major research and consultancy service tenders this year, including "10-Year Construction Expenditure Forecast in Hong Kong (Year 2020-2023)", "3D and BIM Data Use Requirements of the Construction Industry for the Development of Digital Hong Kong to the HKSAR Government", "Enhancement of the Building Information Modelling (BIM) Standards (General)", "Improving Time, Cost and Quality Performance of the Hong Kong Construction Industry (Phase II)", "Driving Design for Manufacture and Assembly (DfMA) Adoption to Enhance Productivity for E&M Works in Hong Kong Building Projects", "Development & Formulation of BIM Guide for using Building Information Modelling (BIM) in generation of Mechanical, Electrical & Plumbing (MEP) digital drawings for statutory submissions", "Development and Implementation of Sustainable Construction Certification Scheme on Green Finance", and "Reasonable Consultancy Fee Evaluation System".

PD also assisted in tender management for other large scale events and facility uplifting projects such as the "Optimisation of Landscape Works for CIC-Zero Carbon Park", "Supply and Installation of Language Laboratory Learning System for Kowloon Bay Campus and Sheung Shui Campus of the HKIC", "Workstation Computer for BIM Extension for Kowloon Bay Campus of the HKIC", "Design and Implementation of Mobile Application on Construction Safety and Website and Mobile Application for the SPDC", "Event Management and Production Services for Construction Industry Happy Run and Carnival 2021", and "Term Repair and Maintenance for Builder's Works and Closed-Circuit Television System".

## Supplier Management

PD established the Project Committee and the Project Management Policy & Procedures Working Group in 2020 and is responsible to manage their daily operation. The *Project Management Handbook (Non-Capital Projects)* was launched this year and technical project reviews were conducted in accordance with the handbook. Moreover, maintenance of the qualified vendor list for "Event Management and Multi-Media Design Services" and "Engineering, Construction & Renovation Works and Repair & Maintenance" categories were also updated this year together with the quarterly vendor performance review and the CIC vendor survey.

## Anti-pandemic Measures

During the outbreak of epidemic, PD sourced personal protective equipment such as surgical masks and alcoholic hand sanitisers, as well as COVID-19 testing and related services for construction workers and site personnel in construction sites. Audit Services were also procured for the Employment Support Scheme for the Construction Sector under the Anti-epidemic Fund.

To minimise social contact during the pandemic, the procurement process was digitalised. Virtual documentation and management approval have been implemented to protect the health of colleagues. In addition, supplemental contract terms and conditions were added to hedge against potential contractual liabilities that might arise between the CIC and its vendor due to COVID-19 pandemic.

## The Way Forward

PD will focus on three main areas in the coming years. First, procurement and vendor policies will be reviewed with reference to the Government and other public authorities while vendor list will also undergo expansion. Second, enhancement will be done to the Enterprise Resource Planning (ERP) System by establishing supplier portal and associated modules. Mobile application will be developed for the implementation of procurement digitisation and to facilitate e-procurement. Last but not least, PD will perform technical project review and audit by monitoring project performance of project managers with respect to time, cost and compliance independently through the year.

## Finance

The Finance Department supports the CIC with a wide spectrum of finance functions, including financial and management reporting, budgeting and forecasting, levy assessment and collection, strategic planning and decision support, treasury and investment management, financial analysis, company secretarial work, bank account operations and all finance related projects. The department develops and executes internal control policies and procedures for all finance and accounting matters. Secretarial and decision support are provided to the Investment Task Force in formulating investment strategies and monitoring investment performance.

The Finance Department arranges statutory audit with external auditors and reports the audited accounts to the Audit Committee. It compiles annual budgets, performs budgetary control and monitors business performance. The department also administers the assessment and collection of construction levies payable by contractors on the value of construction operations under the Construction Industry Council Ordinance and Construction Workers Registration Ordinance.

### Coordination of Subsidies during Pandemic

To support frontline workers in times of pandemic, the CIC initiated the Construction Industry Caring Campaign – Fight against Novel Coronavirus, as well as arranged the administration and disbursement of fund allocation from Construction Industry “Anti-epidemic Fund”. Finance Department timely provided the disbursements of subsidies and coordinated the related audits. In addition, 2020 operating contingency budget was centralised and reallocated to meet the related expenditure for anti-epidemic measures.

### Ensure Smooth Levy Operation

Policies and Procedures on Levy Prosecution were approved while procedures for levy surcharge imposition was implemented this year. The Levy Assessment and Collection System was revamped and upgraded to Levy System 2.0 to smoothen the levy assessment. Through webinars and collaborations with stakeholders, the department aims at enhancing the awareness of the Levy in the industry.

### Enhancement on Operation Efficiency

Finance Department upgraded the budget module in ERP. Budget virement mechanism was implemented to provide more flexibility for fellow departments to manage resources promptly and implement their business plans more effectively. Accounting procedures manual was also updated to strengthen internal controls. Business analytics tool, Power BI, was launched for all departments to provide a more interactive, dynamic and visual platform for performance monitoring.

### The Way Forward

In view of the challenges faced by the construction industry arising from the impact of the pandemic and the possible recovery of the economy, Finance Department will continue to provide our professional support and advice from financial perspective to both internal and external stakeholders for the benefits of the construction industry.