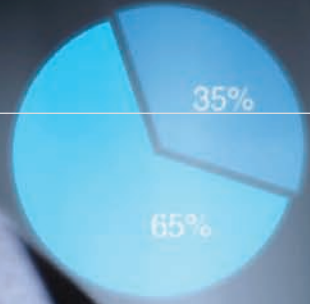


SALES per COUNTRIES



DATA

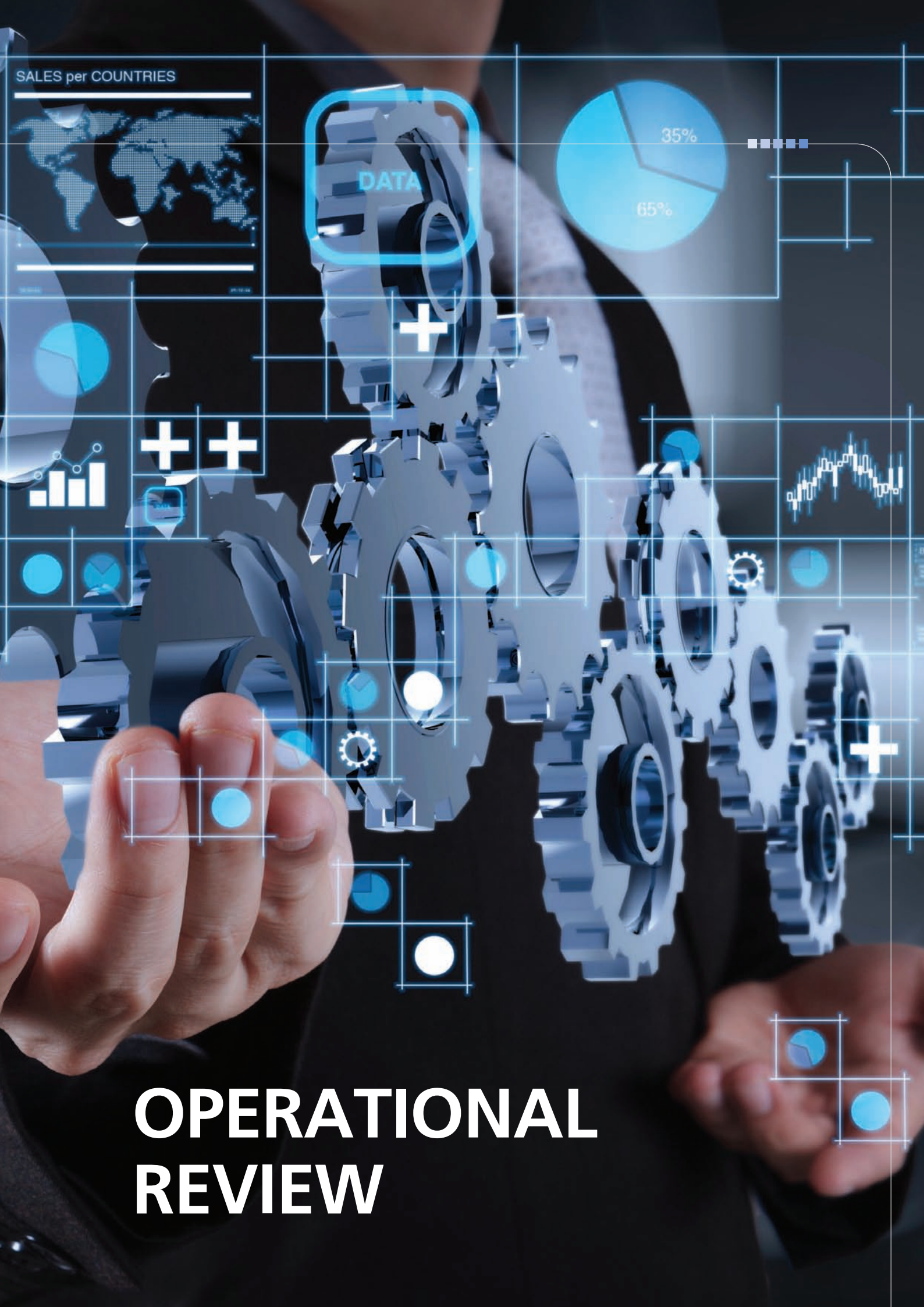


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OPERATIONAL REVIEW



OPERATIONAL REVIEW

Construction Digitalisation

The Construction Industry Council (CIC) continues to promote and facilitate wider adoption of BIM and construction digitalisation and related technologies in architecture, engineering, construction and operation, as well as formulating strategies for market transformation and promoting cross-discipline collaboration in the industry. The CIC given its momentum in developing standards, training, certification and accreditation, R&D in pursuit of these objectives, made significant achievements in 2021. To reflect its expanded functions, the Building Information Modelling Department has been renamed as the Construction Digitalisation Department in September 2021.

During the year, a series of new and updated CIC BIM training and publications related to BIM standards had won the Gold Award (BIM Projects – BIM initiatives Category) conferred in HKIBIM Award 2021 recognising our efforts in promoting the use of BIM in Hong Kong.



CIC Construction Digitalisation Award 2021

CIC Construction Digitalisation Award

The CIC organised the inaugural CIC Construction Digitalisation Award 2021 to recognise outstanding local projects and organisations for their achievements in digitalisation and innovation to improve construction productivity, quality, sustainability and safety. The Award received 120 entries in its two categories, namely “Project” and “Organisation”. There are six sub-categories under the “Organisation” category, including Client (Government, Public Clients and Developers), Consultant, Contractor Category A, Contractor Category B, Training/Research Institute and Start-up Company. 23 winning teams were selected through a rigorous evaluation process.

Construction Digitalisation Roadmap for Hong Kong

To further promote digitalisation in the construction industry, the CIC has been working with experts and key industry stakeholders to craft the Construction Digitalisation Roadmap. The Roadmap has been officially launched together with the Construction Digitalisation Dashboard and identified six high-value digital application areas, namely Smart Data Sharing, Smart Planning and Design, Smart Submission with BIM, Smart Offsite Fabrication and Delivery, Smart Site Management, and Smart Asset and Facility Management, and strategies to support construction digitalisation.



Construction Digitalisation Roadmap for Hong Kong



Teaching and Learning Kit for BIM Viewer Training

To cope with the surging demand for BIM Viewers, the CIC developed a “Teaching and Learning Kit” for BIM Viewer training. Launched since October 2021, the Kit was intended for both self-learning and instructor-led training. After completing the post-course online BIM Viewer Quiz and those passing the quiz would be awarded a CIC BIM Viewer Certificate. From its launch to December 2021, nearly 1,800 individuals had completed the online training and received the certificates.

R&D Project – BIM-Automation of Gross Floor Area (GFA) Calculation, Fire Safety and Prescribed Checking for General Building Plans (GBP) Preparation

Established in 2013, the CIC Research and Technology Development Fund continued to provide financial support for research projects which improved the performance and competitiveness of the industry. Completed in 2021, one of the CIC funded research and development projects, the “BIM-Automation of

Gross Floor Area (GFA) Calculation, Fire Safety and Prescribed Checking for General Building Plans (GBP) Preparation” could automate most of the time-consuming calculation and checking issues commonly required for GBP submission. Starting from 2021, CITF-eligible architectural firms are entitled to use this R&D product under a free license till the end of December 2022.

Consultancy Study on “Digital Hong Kong”

The CIC kicked off a consultancy study in support of the Government’s initiative of developing a smart city and Common Spatial Data Infrastructure (CSDI) in 2020. The study identified a total of 47 raw 3D spatial and BIM data use cases across the project lifecycle. They were then grouped and prioritised into 20 use cases, with elaboration given for the top 10. With the elaboration of one more use case supplemented in 2021, we have published a “Report on 3D Spatial and BIM Data Use Case Requirements of the Hong Kong Construction Industry”, which summarises the study, details the selected top 11 use cases with their respective constraints, way forward and benefits, and provides recommendations for reference of the industry.



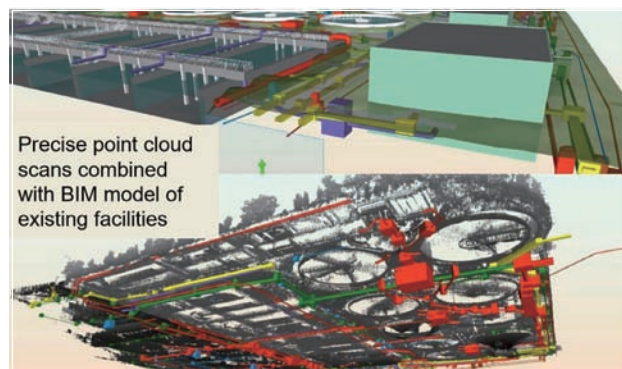
Teaching and Learning Kit for BIM Viewer Training

CIC BIM Standards

The CIC further developed and enhanced the CIC BIM Standards in 2021 to meet the needs of the industry. A total of 11 new / updated English publications related to BIM Standards were issued by the CIC as follows:

- CIC BIM Standards – General (Version 2.1 – 2021);
- CIC BIM Standards for Architecture and Structural Engineering (Version 2.1 – 2021);
- CIC BIM Standards for Underground Utilities (Version 2 – 2021);
- CIC BIM Standards for Mechanical, Electrical and Plumbing (Version 2 – 2021);
- CIC Production of BIM Objects Guide – General Requirements (Version 2 – 2021);
- CIC BIM Dictionary (2021);
- CIC BIM Exchange Information Requirements (EIR) Template (Version 1.1 – 2021);
- CIC BIM for Asset Management & Facility Management Case Sharing (2021);
- CIC BIM Guide for using BIM in generation of MEP digital drawings for Statutory Submissions (2021);
- CIC BIM Special Conditions of Contract (2021); and
- CIC BIM Services Agreement (2021).

Training classes and webinars were conducted after launching of the new publications to facilitate better understanding and adoption of them by the industry. Online training videos of the *CIC BIM Standards – General* were made available to industry.



Report on 3D Spatial and BIM Data Use Case Requirements of the Hong Kong Construction Industry



CIC BIM Competition

The CIC organised the CIC BIM Competition for the third time in 2021, aiming to promote the practical uses of BIM through collaborative and competitive learning approach among participating teams of higher education students in construction-related disciplines. Themed “An Advancing Net Zero (ANZ) Hub in CIC-Zero Carbon Park” this year, a record-breaking number of teams had registered 53 teams of 252 tertiary students. We organised 20 different webinars to build up their knowledge and skills in BIM, including BIM authoring tools, Geographic Information System (GIS) platforms, Common Data Environment (CDE) related solutions and building energy simulation software, and net zero building design, enabling their outstanding performance at the finals. The CIC looks forward to students’ outstanding performance again in the competition in 2022.

CIC BIM Space

The CIC BIM Space has been serving as an one-stop service platform for providing BIM-related services and support to the industry. We have revamped the showcases and continue to encourage BIM adoption and proliferation through organising joint seminars and events in collaboration with different stakeholders to provide the industry with an information sharing platform. Hands-on software workshops, advisory workshops, awareness seminars and workshops; and showcase advanced BIM and related technologies with their applications in real projects are also organised. 47 webinars were organised throughout the year, covering various BIM-related events such as BIM Talks, BIM Solution Day, BIM Show & Tell, briefing of the Certification of BIM Personnel and Accreditation of BIM Training Courses, and consultation and training sessions for industry stakeholders on CIC BIM Standards, successfully attracting around 32,200 attendees to CIC BIM Space.

Way Forward

Joining hands with the Development Bureau, the CIC would organise a Celebration of BIM Achievement again in 2022 to recognise outstanding local projects, organisations, individuals and higher education students for their efforts in adopting and promoting BIM in the construction industry in Hong Kong.

The CIC will develop a CIC BIM Starter Guide for new BIM users, an easy and user-friendly pamphlet to assist the industry, in particular small and medium enterprises, on BIM adoption right from the beginning. We will also develop reference material on Common Data Environment (CDE) to facilitate industry practitioners to adopt and select CDEs for information management, with an aim to improving the efficiency and effectiveness of information exchange and project collaboration, hence increasing productivity and quality of deliverables throughout the lifecycles. Meanwhile, more online training materials of CIC BIM standards-related publications would be made available to facilitate industry practitioners in BIM adoption in a more effective and easier way. We will also study the issue of cyber-security, in tandem with a more common uptake of BIM and digital applications.

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

The CIC will organise the first-ever BIM Education Symposium in Hong Kong to promote BIM education in higher education institutions through sharing of latest trend in building technology, best industrial practices and new challenges of BIM-related training needs in Hong Kong and around the world.

In advancing the frontiers of BIM application, the CIC will continue to liaise with relevant stakeholders to facilitate the use of open 3D spatial and BIM data in Hong Kong, and to conduct further R&D to facilitate the industry in applying BIM for statutory submission and approval process.

The CIC will continue to provide support for all stakeholders working towards construction digitalisation and better adoption in BIM and related technologies, in a smooth and sustainable manner for making Hong Kong a smart city.

Construction Business Development

Construction Business Development (CBD) promotes an efficient and healthy construction market in Hong Kong. Despite the challenges posed by the prolonged COVID-19 pandemic, the CIC is committed to enhancing the business environment in Hong Kong, while publishing relevant alerts to stakeholders in response to prevailing issues in the construction market. The CIC also launched the Greater Bay Area Construction Development Platform to promote communication and collaboration between local and Greater Bay Area (GBA) construction practitioners and to assist companies in exploring business opportunities in the GBA.

Outstanding Contractor Award

An efficient and healthy construction market relies on the concerted effort of its stakeholders, while contractors play a vital role, hence CIC organised the inaugural “CIC Outstanding Contractor Award” in the Government House on 2 December 2021 to recognise local contractors for their exceptional performances and contribution to the industry and society. Mrs. Carrie LAM, the Chief Executive of the Hong Kong Special Administrative Region, graced the event as the Guest of Honour. Main Contractors, Contractors and Specialist Contractors competed in the aspects of Corporate Innovation, Professionalisation, Revitalisation, and Environmental, Social and Governance (ESG) and a total of 14 awards were presented in the ceremony.

Consultancy Fee Evaluation System

With fierce competition on tender bids among consultants in the construction industry, even though the two-envelope system evaluating both fee and technical aspects is commonly adopted, consultants with inadequate resources may still attempt to secure jobs with abnormally low priced bids, resulting in unsatisfactory services. In view of this circumstance, a study had been carried out by the CIC to review existing fee evaluation systems and to recommend fee evaluation mechanism(s) for consultancy tenders which are suitable for the construction industry in managing unreasonably low bids. A reference material with the recommended fee evaluation mechanism(s) would be published in early 2022 to assist clients in the private sector in the assessment of consultancy fees.

Uplifting Construction Capacity

Efficient utilisation of resources could alleviate the problems of high construction cost that the construction industry of Hong Kong is facing. The CIC commissioned a consultancy study in 2021 for a strategic review of the construction capacity and identification of the resources needs with respect to the construction expenditure forecast, so as to help the industry to equip with better planning on resources utilisation and training output to meet the demand.



Award Presentation Ceremony of Outstanding Contractor Award 2021

Reasonable Construction Period

Construction period is a key performance indicator for measuring contractor’s deliverables in contract compliance, project completion and overall project management fulfilment of the contract time requirements. The CIC developed a digitalised construction duration model adopting big data analytics and machine learning approach for evaluating and benchmarking Construction Time Performance (CTP) of different building superstructure projects in Hong Kong. By comparing one individual project CTP index with a similar one in the past, this Index could be an effective tool in gaining an objective and independent perspective on how their projects CTP performed. The CTP index tool is already made available to the public at the CIC website.

Facilitating Construction Supply Chain at GBA

Although the pandemic had comprised our geographic mobility in GBA, local industry stakeholders’ interest in collaboration with other GBA cities remained strong. The CIC strived to establish connection with GBA construction stakeholders and launched the Greater Bay Area Construction Development Platform in 2021 to provide an online company directory facilitating the development of construction supply chains in nine selected GBA cities and two special administrative regions, i.e. Macau and Hong Kong. Over 200 companies had joined the platform to explore business opportunity with GBA cities.

Promoting Healthy Construction Market

Considering the generalisation of innovative technology adoption such as BIM and MiC, the “CIC BIM Special Conditions of Contract” and “CIC BIM Services Agreement” were published in Q3 2021 while “Reference Material – Sample Clauses for Procurement of MiC Building Projects” was published in September 2021 to facilitate the promotion of MiC and DfMA adoption. A webinar on the integrity requirements of practitioners was held in collaboration with ICAC in September 2021 to enable participants to fulfill IMS requirements in public works projects. With the issuance of the Technical Circular implementing Security of Payment provisions in public works contracts, briefing sessions were held in collaboration with DEVB in Q4 2021.

Way Forward

The CIC would 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 to organise promotion activities for the industry. The CIC noticed that Renovation, Maintenance, Additional and Alternation (RMAA) contributed a significant amount in Hong Kong’s overall construction expenditure but their work nature was scattered and comparably in small project scale. The CIC will conduct a study to set out framework in defining RMAA market and get a better understanding of the factors that would contribute to a healthy development of the RMAA market.

The CBD will keep striving to facilitate industry stakeholders to explore and establish supply chains in the GBA. In 2022, a liaison office is planned to be established in GBA to provide a convenient communication channel and to support construction connections between Hong Kong and GBA construction stakeholders.



Reference Materials and Material Alert issued by CIC

Construction Productivity

In view of the critical challenges of manpower shortages and anticipated high construction volume in the coming decade, the Construction Productivity Department supports the Committee on Productivity (Com-PRO) in promoting innovation and facilitating the adoption of modern technologies and construction methods to enhance the industry's productivity and quality.

Industrialisation

CIC continues to promote the wider adoption of offsite construction in the Hong Kong construction industry. In a webinar series organised by the CIC in 2021, local experts, as well as professionals from the Mainland, Singapore and the United Kingdom were invited to share their experience on offsite construction. Over 5,000 practitioners attended the event.

A consultancy study was carried out on driving the adoption of Design for Manufacture and Assembly (DfMA) for mechanical, electrical and plumbing (MEP) design and installation as DfMA brings large potential in improving construction productivity for the MEP works. Strategies, action plans were formulated while a practical guidebook was also published to guide industry practitioners to apply DfMA at various stages of project development involving MEP works.

Jointly organised by the CIC and the Hong Kong Federation of Electrical and Mechanical Contractors, the "DfMA MiMEP Tradeshow" (the Tradeshow) was held on 2–12 March 2021 at the CIC-Zero Carbon Park. With over 6,600 industry practitioners

visiting the Tradeshow, 25 innovative and inspirational exhibits on MultiTrade integrated Mechanical, Electrical and Plumbing (MiMEP) demonstrated the industry's capability in delivering high quality of MEP works using the DfMA approach. Besides, a conference and a technical forum were organised during the Tradeshow with 15 industry experts sharing the knowhow and benefits in implementing the DfMA for MEP works.

Innovation and Research

To promote construction automation, the CIC and the Hong Kong Science and Technology Parks Corporation co-organised the Third International Symposium on Construction Robotics and Automation on 10 December 2021. Over 1,100 participants attended the Symposium physically and online. The Symposium brought together local and international experts from Singapore and Israel to exchange on the latest development on automation, artificial intelligence and robotics (AIR) solutions for the construction industry. A business matching session was also held to facilitate the adoption of Internet of Things, sensing technologies, AIR solutions, and Digital Works Supervision System.

Funded under the CIC Research and Technology Development Fund, a mobile phone application with user guide has been developed to monitor construction-induced vibration and noise through a smartphone efficiently. A research forum webinar was also held in October 2021 to promote this mobile application and other smart IoT solutions for construction with around 700 industry practitioners participated.



Guests visit DfMA MiMEP Tradeshow 2021

The CIC is also promoting a sensing technology, namely maturity method, as a non-destructive approach to estimate the early-age and compressive strength of in-place concrete in real-time. It could bring about better quality control and assurance on concrete structures and provide important information for optimising project schedule. In view of this, the CIC funded a research and published a Practical Guideline on “Maturity Method for Estimation of Concrete Strength”. It sets out the guiding principles and provides the basis for applying concrete maturity sensors in different projects.

Construction Expenditure Forecast

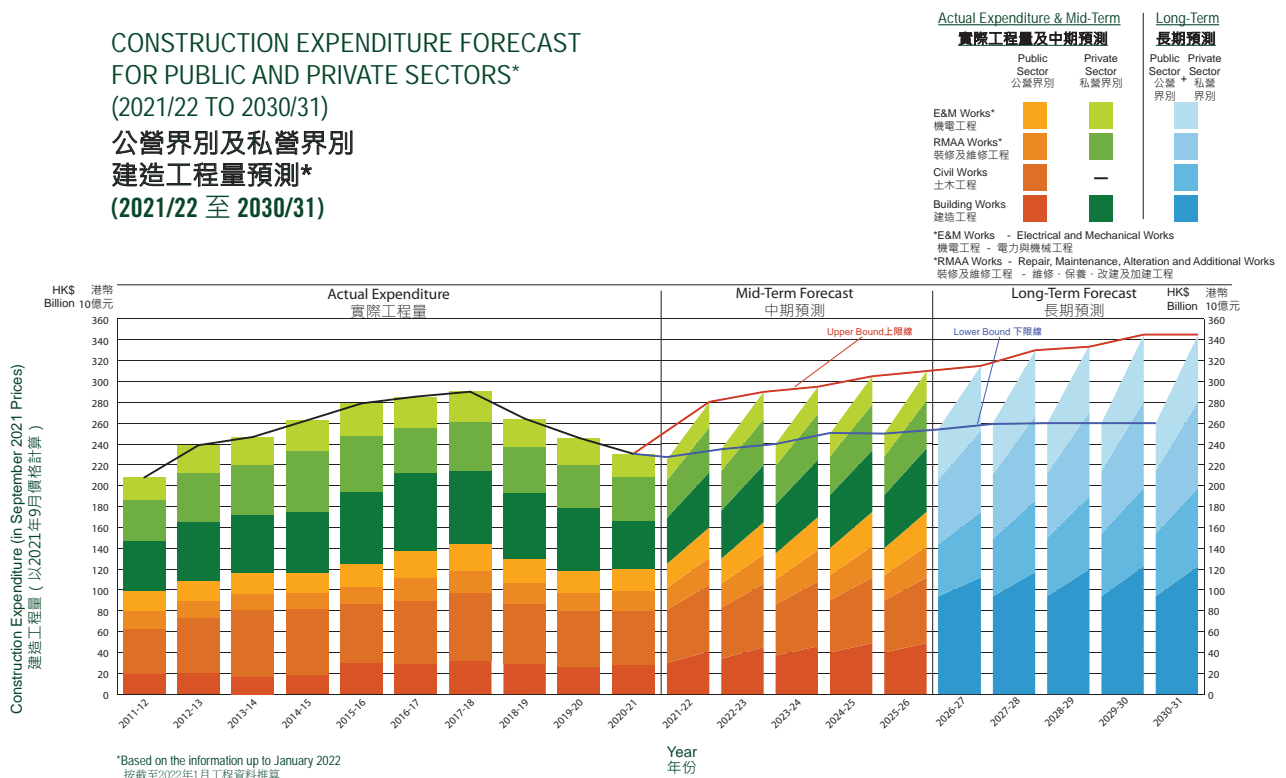
To facilitate policy makers and industry stakeholders in assessing market trends and formulating strategic plans, the CIC continues to forecast construction expenditure in various sectors. The latest forecast indicated that, due to the massive demand for housing and infrastructure development, the construction volume will reach between HK\$220 billion and HK\$345 billion (in September 2021 price level) per annum in the next 10 years.

Way Forward

The Com-PRO will continue to explore and take forward initiatives to showcase best practices on smart offsite construction and site management, improve buildability, facilitate wider adoption of high level DfMA solutions and construction robots for enhancing construction productivity. Practical research projects will continue to be supported to incubate innovative solutions in construction. A construction robot certification scheme is under development and expected to be launched in the 2022 as a pilot scheme, to uphold standard and reliability of robots to be deployed in construction sites for conducting welding, painting and plastering tasks.

Riding on the success of the inaugural Construction Innovation Expo (CIExpo) in 2019, the second CIExpo will be organised in conjunction with the CIC Construction Innovation Award in December 2022, promoting innovation adoption in construction industry.

CONSTRUCTION EXPENDITURE FORECAST FOR PUBLIC AND PRIVATE SECTORS* (2021/22 TO 2030/31)
公營界別及私營界別 建造工程量預測*
(2021/22 至 2030/31)



Construction Safety

The Committee on Construction Safety (Com-CSY) strives to develop and take forward initiatives to foster a positive safety culture and provide guidance and training on safe practices. The Com-CSY and its three sub-committees, 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 strategic direction of preventing fatal and serious construction accidents.

In 2021, the CIC published the “Guidelines on Safety Enhancement of and Notification Arrangement for Truss-out Bamboo Scaffolds” (Guidelines) to provide guidance on the good practice for the erection of truss-out bamboo scaffolds to enhance work safety of scaffolders in minor renovation and repair works. The notification mechanism introduced in the Guidelines marked a big step in enhancing work safety on truss-out bamboo scaffolds through inspection of law enforcement departments.

On the safety promotion front, the CIC and the Development Bureau continued to co-organise the tenth consecutive Construction Safety Week and the industry-wide “Life First” campaign. The theme of this year’s Construction Safety Week was “Safety x Smart Site”, with focus on “lifting and heavy machinery operation safety”. Activities including “Safety Conference”, “Safety x Smart Site Exhibition”, “Site Safety Gathering in Construction Sites Campaign”, “Sharing Session for Safety for

Confined Space Work”, “Sharing Session for accidents review and related safety measures” as well as “27th Considerate Contractors Site Award Scheme” were held to promote construction safety. “Life First” campaign continued to encourage industry players to conduct a 5-day safety review at their sites. 106 clients, 220 contractors and nearly 600 work projects were engaged campaign, and more than 3,000 good practices were received via the online platform. In addition, six technical webinars themed “Truss-out Bamboo Scaffolds’ Safety”, “Innovative solutions for Lifting and Machinery Safety”, etc. and a “CEO Safety Forum” were organised to promote safety knowledge to industry stakeholders with a total of over 9,000 participants. The CIC also developed a virtual reality (VR) safety training kit and a new VR download platform to share the latest VR training materials with the industry.



The opening ceremony of the seventh annual “Experiential Learning on Site Safety Training Scheme 2021-22”



Construction Safety Week 2021 – Opening Ceremony and Safety Conference



Construction Safety Week 2021 – “Safety x Smart Site Exhibition”

The CIC’s safety promotion platform, “Construction Safety” app launched an update in 2021. On top of its original function to disseminate timely safety information to frontline workers, practitioners and stakeholders, the update added an e-wallet function that could help keep copies of CIC issued cards.

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 seventh annual “Experiential Learning on Site Safety Training Scheme 2021–22”, providing training sessions to enhancing consciousness and instilling knowledge on construction safety into the minds of undergraduates planning to join the construction industry. Running from November 2021 to July 2022, 13 construction-related faculties from 11 universities and tertiary institutions joined this year and around 400

undergraduates are expected be benefited from the Scheme. Two new training courses were also launched this year, including “Foundation Certificate in Construction Safety Course” and “Safety Training Course for Construction Workers of Specified Trade (Silver Card) – Concreter”.

Way forward

With an aim to reduce fatal accidents, transform existing safety culture and enhance overall safety standards, the CIC will initiate several initiatives including enhancing safety control on high-risk activities; increasing awareness on stakeholder’s responsibilities; implementing of Design for Safety; enhancing support and focus on safety standard in Repair, Maintenance, Addition and Alteration (RMAA) work; and improving safety performance in private sector.



“Experiential Learning on Site Safety Training Scheme 2021–22”



Industry-wide construction safety campaign, “Life First”

Environment And Sustainability

Committee on Environment

The Committee on Environment (Com-ENV) aims to promote sustainable development in the construction industry through supporting sustainability research and development, fostering best practices in sustainable design and construction, and encouraging adoption of new technology and innovative ideas in environmental protection.

The construction industry plays a vital role in achieving net-zero target by 2050 in Hong Kong. In this context, the CIC strives to support and help the construction industry seize the decarbonisation opportunity in Hong Kong's advancing net-zero journey.

CIC Sustainable Finance Certification Scheme (SFCS)

Substantial financial resources are required to achieve carbon neutrality, green finance is critical for the net-zero transition by 2050. Hong Kong is well placed to become the green finance hub in the region and serves as a premier financing platform for green enterprises and projects. As demand for green finance instruments across the construction industry (including from public and private project owners, contractors, subcontractors and suppliers, etc.) rises, the CIC has developed and launched the Sustainable Finance Certification Scheme (SFCS) in

2021 that aims to provide a standard assessment system for the implementation of best practices in sustainable construction and serve as a tool to facilitate the wider adoption of green finance in the construction industry of the Hong Kong SAR and Greater Bay Area.

The SFCS is developed based on 3I design principles: integrity, internationalism, and intelligence to achieve recognition both locally and internationally. The successful launch of the SFCS represents CIC's critical and positive step towards advancing net-zero in Hong Kong through leveraging green finance to decarbonise the construction industry and hence promote sustainable construction in the long run. The CIC is now recognised by the Hong Kong SAR Government as an external reviewer under the Hong Kong Monetary Authority (HKMA) Green and Sustainable Finance Grant (GSF Grant Scheme).

By the end of 2021, the CIC had issued a total of 20 SFCS certificates and 11 certified candidates had already received bank offers with sustainable finance agreements. In addition, the CIC had accredited a total of 20 qualified SFCS Assessors. Through the provisions of both awareness training and SFCS assessor training, the CIC will contribute towards a broader range of initiatives to accelerate the growth of green finance ecosystem in Hong Kong.



The SFCS Launching Ceremony was held on 5 November 2021



Panel Discussion on Sustainable Finance Opportunities in Construction Industry and Collaboration in Greater Bay Area

CIC Carbon Assessment Tool (CAT)

The CIC Carbon Assessment Tool (CAT) launched in 2019 is a web-based carbon assessment tool that aims to provide a standardised assessment method for Hong Kong construction industry practitioners to evaluate carbon performance of construction projects.

In 2021, CAT has been integrated into BEAM Plus NB to encourage embodied carbon reduction through embracing low-carbon designs and construction. In addition, the benchmarking of carbon performance for major building project types has been incorporated into the CAT. In order to raise the awareness and capability of industry practitioners on embodied carbon reduction and CAT application, a total of 14 training sessions for CAT had been conducted for over 880 participants.

CIC Green Product Certification (GPC)

In 2021, over 600 products had been certified through GPC in 28 product categories. A maximum of 6 credits can be attained under the BEAM Plus NB 2.0 through the use of the CIC GPC certified products.

Way Forward

As the CIC strives to support the construction industry seize the decarbonisation opportunity in the journey of advancing net-zero, the Committee on Environment will prioritise the following initiatives:

- (1) Sustainable Finance Certification Scheme: establish an incentive programme and roadmap for SFCS to provide training programmes for industry practitioners and financial institutions, and hence encourage wider adoption of the scheme in public and private construction projects;
- (2) Carbon neutrality roadmap in construction: collaborate with the key industry stakeholders (including Development Bureau, Hong Kong Green Building Council, BEAM Society Limited, and Business Environment Council, etc.) to develop a consolidated carbon neutrality roadmap, in which energy saving in buildings is one of the focus areas, for the Hong Kong construction industry;
- (3) Smart Waste Management Plug-in: develop a Smart Waste Management Plug-in that can serve as a digital platform to increase the efficiency of data collection process and accuracy of data collected for monitoring and analysis of C&D waste management; and
- (4) Riding on the success of the CIC Sustainable Construction Award (SCA), the CIC is planning to launch the third SCA in 2023 to recognise sustainability and carbon neutrality best practices among construction organisations and practitioners, in particular the younger generation of the construction industry.

Modular Integrated Construction

Modular Integrated Construction (MiC) is an innovative and environmental friendly construction method. Since 2017, the Construction Industry Council (CIC) has been committed to promoting MiC to the industry and the public, in bringing about its rapid development in Hong Kong in recent years, and industry practitioners have strongly supported the adoption of this construction method in different types of buildings.

By end of 2021, more than 15 MiC projects were completed in Hong Kong. With the successful completion of InnoCell, Married Quarters for the Fire Services Department at Pak Shing Kok, various transitional housing projects, quarantine camps and Hong Kong Infection Control Centre, etc., it is proved that MiC is suitable for wide adoption in Hong Kong. There are more than 60 projects under construction / planning stages across the region.

MiC Resources Centre Provides One-stop-shop Exchange Platform for Latest Innovation Technologies

In July 2021, MiC Display Centre was officially renamed “MiC Resources Centre”. The Centre demonstrates exhibits residential flats built with MiC, while providing professional information and latest updates on MiC from around the world for industry professionals. As of December 2021, the Resources Centre has welcomed more than 1,200 guided tours. The MiC Resources Centre joined Construction Innovation and Technology Application Centre, CIC – Zero Carbon Park and Building Information Modelling Space to form the Construction Exhibition Hub to serve as a professional knowledge platform for the industry.

International Conference on MiC

In order to promote the expertise exchange on MiC around the world, following two successful events in 2018 and 2019, the 3rd International Conference on MiC was held in September 2021, attracting more than 1,400 participants. Experts from Hong Kong, Mainland China, Japan, Singapore and the United Kingdom shared the latest developments

and provided professional advice on MiC in their respective regions and jurisdictions, stimulating a wider MiC adoption in Hong Kong.

Local Seminars and Workshops

In 2021, the CIC organised five local seminars and workshops attracting a total of over 5,500 participants, they are a webinar for the North Lantau Hospital Hong Kong Infection Control Centre and workshop on procurement and contract for the Hospital Authority in March; procurement workshop on MiC transitional housing projects for non-governmental organisations (NGOs) in April; MiC Workshop on Lifting, Logistics and Transport of Modules in June and MiC Workshop on Technical Aspects of Design in July.



The International Conference on MiC was successfully held in September 2021



Students from the Civil Engineering Faculty from HKU experience the “iHub” tour in the MiC Resources Centre

Encourage Understanding of Local MiC Projects

As an advocate of MiC in Hong Kong, the CIC strives to promote understanding on the construction process of MiC in the industry. The CIC organised at least 6 local site visits in 2021 for council members, industry practitioners, NGO representatives, developers and media, including a visit to the North Lantau Hospital Hong Kong Infection Control Centre in February; a visit to Kwu Tung North Residential Care Homes for the Elderly Mockup Units in September; a visit to the transitional housing at Yen Chow Street and Ying Wa Street in November; as well as visit and sharing workshops to the HKU at Wong Chuk Hang Student Residences Mockup Units and InnoCell at HKSTP in December. In addition, The CIC presented commemorative plaques in January and September 2021 to the project teams of InnoCell at Hong Kong Science and Technology Parks and Married Quarters for the Fire Services Department at Pak Shing Kok as a token of appreciation to their contribution on the MiC development.



A visit to the HKU Wong Chuk Hang Student Residences Mockup Units

Reference Materials on MiC

The CIC regularly publishes reference materials on MiC to the industry practitioners. In 2021, the CIC issued “Reference Materials – Use of Digital Technologies for QA/QC of MiC Modules in MiC Factories” and “Reference Materials – Sample Clauses for Procurement of MiC Building Projects”. As of 31 December 2021, over 2,000 downloads were recorded for these reference materials.

MiC Training Programmes for Industry Practitioners

As of December 2021, the following MiC related training courses were conducted by the HKIC and SPDC, with over 300 enrollments:

1. Certificate in MiC Unit Installation
2. Certificate in Lifting Safety Supervisor
3. Certificate in MiC for Project Manager and Clerk of Works
4. Certificate in MiC for Foremen

Way Forward

With the initiatives stated in the “Chief Executive’s 2021 Policy Address”, it is expected that more projects will adopt MiC method to speed up housing supply, thereby improving living environment and standard for Hong Kong.



Guests celebrate the completion of the Married Quarters for the Fire Services Department at Pak Shing Kok in Tseung Kwan O at the plaque presentation ceremony

MiC Projects in Hong Kong

Significant Completed/Substantially Completed MiC Projects

- Hong Kong Infection Control Centre Camps (Architectural Services Department)
- InnoCell (HKSTP)
- Married Quarters for the Fire Services Department at Pak Shing Kok (Architectural Services Department)
- Modular Social Housing Scheme – Junction of Sung Wong Toi Road and To Kwa Wan Road Project (The Lok Sin Tong Benevolent Society, Kowloon)
- Nam Cheong Street Modular Social Housing Project (“NamCheong 220”) (The Hong Kong Council of Social Service)



Kong Ha Wai Transitional Housing Project will provide 1,998 units upon completion

- Quarantine Camps (Architectural Services Department, Civil Engineering and Development Department)
- Yen Chow Street Modular Social Housing Project – James’ Concourse (The Hong Kong Council of Social Service)
- Kong Ha Wai Transitional Housing Project (Phase 1) (Pok Hoi Hospital)
- Ying Wa Module Community (Society for Community Organization)
- United Court Transitional Housing Project (Hong Kong Sheng Kung Hui Welfare Council)

MiC Projects in Construction Stage



Residential Care Homes for the Elderly in Kwu Tung North will be completed in Q4 2022

- Composite Development at Ash Street, Tai Kok Tsui (Urban Renewal Authority)
- Elderly’s Home at Jat Min Chuen Chung Yuet Lau (Hong Kong Housing Society)
- High West Site Development (Estates Office, HKU)
- New Acute Hospital at Kai Tak Development Area (Hospital Authority)
- Public Housing Development at Tung Chung Area 99 (Housing Authority)
- Residential Care Homes for the Elderly in Kwu Tung North (Architectural Services Department)
- Kong Ha Wai Transitional Housing Project (Phase 2) (Pok Oi Hospital)
- Residential Development for Tonkin Street and Fuk Wing Street (Urban Renewal Authority, Chinachem Group)
- Subsidised Sale Flats Project in Hung Shui Kiu (Hong Kong Housing Society)
- Student Residence at Wong Chuk Hang Site for HKU (Estates Office, HKU)
- The Development of Chinese Medicine Hospital in Tseung Kwan O (Architectural Services Department)

* The above list is not exhaustive

CIC – Zero Carbon Park

The CIC – Zero Carbon Park (CIC-ZCP) is home to the first zero carbon building in Hong Kong. Its vision, execution and implementation of low carbon design innovations are forward-thinking, and marks a milestone achievement for Hong Kong’s 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 to promote a low-carbon mentality and advanced green building technologies beyond the industry, into the community.

CIC-ZCP aspires to boost the neighbourhood’s ecological value, and contribute as a living, breathing piece of infrastructure. With more engagement with the community and industry stakeholders, CIC-ZCP hopes to 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.



CIC-ZCP offers diversified marketing activities to promote well-being and low carbon living



CIC-ZCP launch the brand new exhibition themed “Sustainable Development”

“Sustainable Development” Exhibition

CIC-ZCP has transformed into an experiential platform that promulgates awareness in sustainable development. To enhance public’s understanding of low carbon living for achieving carbon neutrality, CIC-ZCP launched a brand new exhibition themed “Sustainable Development” in July 2021. Together with the CITAC relocation, synergy was achieved in promoting wider adoption of innovative construction technologies and construction sustainability.

Diversified Marketing Initiatives

CIC-ZCP aims to engage with the industry and community to promote well-being and low carbon living, various marketing campaigns including CIC-ZCP Spring Celebration, ZCP Market of Coffee x Busking, Enjoy Mid-autumn @ CIC-ZCP were launched and received overwhelming response throughout the year.

“Construction Month 2021”

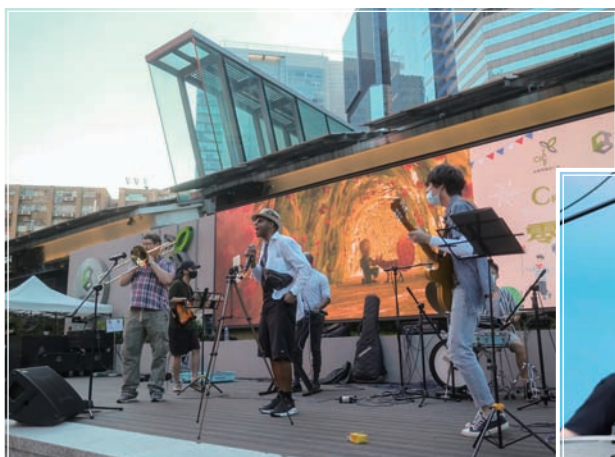
CIC-ZCP presented the annual signature campaign “Construction Month 2021” in November. With the theme of “Toward Carbon Neutral”, the campaign comprised of over 30 industry and environmental friendly activities, such as Construction Safety Forum, Construction Playground, Construction Story Corner, Construction Workers x Low Carbon Movie Night, CIC-ZCP Biodiversity Exploration and ZCP Green Market, offering a great platform to unite and encourage the industry as well as the public to explore the “Carbon Neutral” journey”.

Experiential Landmarks

CIC-ZCP continually uplifts its facilities to propel the sustainable development and enhance the experience of visitors. The timber floor in Hallway had been replaced whereas a new eco-café and souvenir shop was first introduced, offering a variety of versatile layouts for different events to promote low-carbon living.

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, and explore the enhancement of renewable energy to act. CIC-ZCP will also introduce new marketing initiatives to advocate advancing zero carbon and carbon neutrality with more engagement with the public and industry practitioners. With a view to creating and maximising synergy, CIC-ZCP will work closely with the industry practitioners and provide venue support to events initiated by the industry with aims of promoting construction sustainability.



With the theme of “Toward Carbon Neutral”, CIC-ZCP presents the annual signature campaign “Construction Month 2021”

Construction Innovation and Technology Application Centre (CITAC)

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

In 2021, under the strategic direction of its Management Board, CITAC promoted and showcased the use of construction innovations and technology via the following initiatives:

CITAC Exhibition

To promote wider adoption of construction innovation for the betterment of the industry, and to keep up with the fast-paced technological developments, CITAC was relocated to the CIC-Zero Carbon Park in July. CITAC joins hands with the CIC-Zero Carbon Park Indoor Exhibition Centre, MiC Resources Centre and BIM Space, to establish a "Construction Exhibition Hub" (the Hub). The Hub serves as a professional knowledge platform, to explore and identify innovative techniques and technologies that are suitable for adoption in the Hong Kong construction industry, boosting its productivity, sustainability and safety standards.

In light of the COVID-19 situation and the relocation work of CITAC, CITAC Exhibition Centre was temporarily closed in the first half of the year. After the relocation, around 3,000 visitors visited the centre to learn more about innovation technologies, in which, CITAC reorganised its exhibits into 6 zones, namely "Internet of Things", "Advanced Technology Solutions", "Advanced Equipment/Robotics, Industrialised Process", "Advance Materials" and "Smart Lifecycle Management".

Works department and local professional bodies, including the Development Bureau, Architectural Services Department, Electrical and Mechanical Services Department, Hong Kong Housing Authority, HKIE Geotechnical Division and Housing Society had visited CITAC to exchange ideas and explore the potentials for implementing innovative technologies in the construction industry. Besides, potential construction practitioners from educational institutions, including The Hong Kong Polytechnic University, City University of Hong Kong, Hong Kong Metropolitan University had participated in tours to the Hub to understand and explore the development of the Hong Kong construction industry.

Webinars attracted more than a thousand live viewers:

Date	Title	No. of Attendees
28 Jan 2021	CIC Webinar on Forum on Unmanned Aircraft Systems (UAS) Adoption in the Construction Industry	1,048
05 Feb 2021	Sharing on the Tuen Mun-Chek Lap Kok Link Project	1,449
23 Feb 2021	Webinar on Empowering Future Urban Planning & Design with Dynamic Data	1,169
16 Apr 2021	CIC Power Talk – Where Next for MTR Projects	1,940
21 May 2021	Webinar on Emerging Digital Communication Tools in Construction Sites	1,235
15 Oct 2021	CIC Power Talk: Ways to Build Smarter – HA's New Initiatives	1,032
29 Oct 2021	Webinar on Innovation and Technology Application on Smart Construction Sites 2 – Digital Twin	1,039

OPERATIONAL REVIEW

Webinars

Webinars continue to serve as one of the means for CITAC to engage industry stakeholders and maintain the momentum on knowledge sharing under different social distancing measures. In 2021, CITAC organised 17 webinars and successfully engaged more than 15,558 attendees.

The CITAC Anniversary Conference 2021

The CITAC Anniversary Conference on Unlocking the Power of Data to Revolutionise the Construction Industry 2021 was held as a hybrid event on 10 November 2021 with around 110 and 1,100 physical and online participants respectively. Centred on the theme of data to revolution, local and overseas experts shared their knowledge and experience in big data mining and analytics and how these tools can unlock the game-changing benefits to solve industry problems and provide critical insights for construction activities.

Webinar on Emerging Digital Communication Tools in Construction Sites

Co-organised by the Construction Industry Council, the Department for International Trade UK and Institution of Civil Engineers – Hong Kong Association, was held on 21 May 2021 and brought together nearly 1,200 online participants. Experts were invited to share their modern methods of construction and digital transformation in the UK construction industry and introduce their cutting-edge digital tools to our Hong Kong industry practitioners.



CITAC Management Board and guests at the launch ceremony for exhibitions

CITAC x Israel Construction Technology Conference and B2B Session

Following the success of the CITAC x Israel Construction Technology Conference and B2B ("Conference") in November 2020, CITAC was proud to co-organise the Conference on 15 December 2021 with the Consulate General of Israel Hong Kong, supported by the Institution of Civil Engineers. A total of six high-tech Israel companies gave presentations and participated in this conference and B2B session, which aimed to foster connections between high-tech companies in Israel and industry stakeholders in Hong Kong.

Growth of i-Club Membership

Benefited from numbers of held webinars and system integration, the number of registered organization members and individual members was 717 and 12,537 respectively (as of 31 December 2021), with over four-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.



Hong Kong Institute of Construction

2021 was a year full of challenges posed by the pandemic, yet the Hong Kong Institute of Construction (HKIC) achieved positive results through the concerted efforts of its staff.

HKIC has completed the articulation pathway for the students, including recognising the Professional Diploma in Construction for Specialist Trades to be launched in 2022/23, under the Hong Kong Qualification Framework (QF) at Level 4 successfully and the completion of Accreditation/Re-accreditation for various programmes. HKIC will forge ahead with various courses' accreditation under QF. In order to provide more quality programmes and ensure a sustainable long-term development of construction training, Hong Kong Institute of Construction Management Board (HKICMB) has approved a 3-year development plan for the School of Professional Development in Construction (SPDC) and safety training.

For the Repair, Maintenance, Alteration and Addition (RMAA) trade, HKIC is reviewing the courses for building services and electrical & mechanical fields (E&M) to enhance relevant training. At the strategic level, The CIC has set up a Task Force on RMAA to execute major tasks in 2021. The HKICMB also

established the Task Force on HKIC's Staffing Policy and Steering Committee on Implementation of HKIC's Vision, Mission and Motto.

Training

With the continuous support from the CIC on construction training, hardware and software of HKIC have been further strengthened. In 2021, HKIC completed uplifting works for its three campuses and established clear positioning for programmes offered by each campus (Kowloon Bay Campus, Sheung Shui Campus and Kwai Chung Campus and SPDC). Facilities of each campus have also been enhanced, including the re-provisioning of workshops, the setting up of lecture theatres, learning resources centre, indoor gym room, Ideas Lab, etc. There is an indoor sports hall at the Sheung Shui Campus which could be used for 5-a-side football or basketball games.

Moreover, in response to the impact of the pandemic, HKIC has upgraded the classrooms with internet-ready AV facilities which can support both face-to-face and online teaching and learning modes. Teaching staff can conduct online teaching under pandemic situation.



Enhancement of campus facilities for Hong Kong Institute of Construction



Qualification Framework Accreditation for Initial Evaluation at QF Level 4 and Professional Diploma in Construction for Specialist Trades programme

Complete Progression Pathway with Qualification Framework Accreditation

After the completion of the uplifting project, Kowloon Bay Campus will launch the revamped flag-ship Advanced Diploma Programme and QF level 4 Professional Diploma in Construction for Specialist Trades. The uplifting project has also facilitated the widening of coverage on full-time short programmes and promotion of construction safety in Kwai Chung Campus. Sheung Shui Campus has enhanced its full-time & part-time workshop-based craft skills training and nurtures year-long students of the Certificate in Construction and the Diploma in Construction programmes at QF level 2 and 3 respectively. The quality of teaching of SPDC was also enhanced.

Apart from the uplifting project, HKIC has established a completed articulation pathway for students. Students can complete the programmes at QF Level 2 to 4 at HKIC and join the 2-year Construction Industry Council Approved Technical Talents Training Programme (CICATP) after graduation for advancement to skilled workers.



HKIC staff and students assist EPD on the restoration of a seawall at Lai Chi Wo

Whole Person Development

In addition to mastering professional craft skills and industry knowledge, HKIC also encourages students to participate in various sports activities and competitions in order to nurture their whole-person development and team spirit, including CIC Happy Run 2021 organised by the Construction Industry Sports and Volunteering Programme, an interschool rowing competition with secondary schools and the “2021 HKIC Baduanjin Qigong Competition” adjudicated by the Health Qigong Association of Hong Kong, China, etc.

Besides, HKIC is committed to cultivating a caring and compassionate attitude among students in pursuit of their whole person development. Staff and students have formed teams by their specialties and perform volunteer work during weekends and after classes, such as helping the neighborhood on small repair works, helping elderly to relocate homes, carrying out cultural preservation and restoration projects in remote islands with EPD & CUHK.

Woodwork lecturers at Sheung Shui Campus crafted a giant six-way Luban lock (two-meter in height and two-tonne in weight) with the rare wood logs (Malagasy Rosewood and Red Sandalwood) donated by the Agriculture, Fisheries and Conservation Department with the assistance of WorldSkills Competition candidates. The statue took more than three months to complete and became the landmark of HKIC in December 2021.



Inter-school rowing competition at HKIC Sheung Shui Campus

All-rounded Curriculum Development

For programme development, the inclusion of foundation skills subjects into the curriculum of the Certificate in Construction and Diploma in Construction helps to equip students with fundamental skills on communication, numeracy and information technology application for their career development after graduation. The module-based delivery arrangement enables a better teaching and learning experience.

In order to meet industry requirements, HKIC has successfully launched an EMSD recognised part-time Certificate of Electrician/Electrical Fitter (Grade A) Upgrading Course and the first class was launched on 20 December 2021.

A new 2-day Certificate in Construction Safety Foundation Course was launched in September 2021 to replace the one-day Mandatory Basic Safety Training Course (Construction Work) for HKIC students. The new course features interactive discussion sessions and virtual reality exhibits to enhance students' understanding and awareness of site safety. In 2021, 51 classes were conducted with 890 graduates. HKIC is in active discussion with the Labour Department, for offering Certificate in Construction Safety Foundation Course to industry practitioners with recognition.



HKIC students help elderly in need to repair their homes

HKIC launched the “Construction Industry Council Relief Fund – Multi-skills Training Scheme for Registered Workers” to assist the underemployed or temporarily unemployed construction workers in acquiring new skills and enhance their competitiveness to prepare for further development in the industry. The eligible registered construction workers who enroll in a suitable full-time course under the Enhanced Construction Manpower Training Scheme within the Scheme period will receive a special allowance of maximum HK\$3,000 per month in addition to the monthly basic allowance based on their attendance record. The scheme provided training to some 700 workers in 2021.

Updates to Training Grounds

In order to optimise the usage and management of all outdoor training grounds, Wong Lung Hang Training Ground and Yuen Kong Training Ground were returned to the government in 2021. The Wai Lok Street Training Ground has to be returned to the government by June 2022, and the CIC has secured a three-year (renewable) short-term tenancy of a piece of idle land in Lam Tei for relocation with the assistance of Development Bureau. It is expected that the new outdoor training at Lam Tei will come into operation in the second quarter of 2022. In addition to providing training on bar-bending and formwork, a simulated bar-bending and cutting production zone, equipped with computerized automatic machines, will be set up in the new training ground.



Computerised automatic bar-bending and cutting machines

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In order to enhance workers' skills in safe machinery operation, the 2021 Construction Industry Machinery Operation Competition was organised on 20 November 2021 in Tai Po Outdoor Training Ground, with 27 teams comprising of 39 participants from nine companies and organisations joining the competition's five categories, namely Crawler-mounted Mobile Crane, Tower Crane, Truck-mounted Crane, Gantry Crane and Mini-loader.



Competition in the Crawler-mounted Mobile Crane Operation Category

Streamlined SPDC curriculum

SPDC is committed to offering a variety of innovative and professional training courses to the market, with focus on the provision of up-to-date training to industry practitioners. In line with the development direction, SPDC has streamlined the programme categories into five core areas, namely BIM, MiC/



Webinar "Experience Sharing on Modular Integrated Construction (MiC): Married Quarters for the Fire Services Department at Pak Shing Kok in Tseung Kwan O"

DfMA, Construction Technology and Quality, Construction Management and Safety Management. In order to promote "Construction 2.0" and meet the industry demand on training, seven new courses were launched in 2021.

New Website and Enrolment Platform

SPDC launched a brand new website and online application platform (www.spdc.hkic.edu.hk) in 2021. The new portal provides a real-time interface for latest programme information and online application. In order to expand the publicity coverage and broaden the reach of courses, SPDC promotes its courses via Electronic Direct Mailing to the alumni, contractors and sub-contractors under CIC's registration scheme, newsfeed in CIC's social media including Facebook, Instagram and LinkedIn, placing banners on HKIC website and advertising on CIC eNewsletter "Construction Post".

Extending Collaboration Network

SPDC also proactively reaches out to industry stakeholders and professional associations, for example, the Hong Kong Federation of Electrical and Mechanical Contractors Limited (HKFEMC), Hong Kong Housing Society, Gammon Construction Limited and Hip Hing Construction Co. Ltd., for the provision of SPDC programmes for their members/employees to expand SPDC collaboration network.



"Innovation Engineering Training Course – Innovation: Mindset and Technology"

The Construction Industry Council Approved Technical Talents Training Programmes



The first batch of CICATP graduates

The Construction Industry Council Approved Technical Talents Training Programmes (CICATP) was launched in September 2019. After two years of systematic on-the-job and enrichment programme training provided by the employers and HKIC, about 100 CICATP apprentices graduated in 2021. They are the first batch of knowledge-based skilled workers trained by HKIC. By the end of 2021, a total of 581 applications have been approved with 130 employers participating.

To embrace the launching of various QF recognized programmes in 2021/22 and 2022/23, and to optimise and enhance the training quality, the part-time “Diploma in Construction” and the part-time “Professional Diploma in Construction for Specialist Trades” have been incorporated into the CICATP in 2021/22 and 2022/23 respectively. In order to provide a complete progression ladder, eligible graduates from the full-time Certificate in Construction, full-time Short Course, and full-time Diploma in Construction may enroll into related apprentices’ programmes. The CICATP Approved Employer List was launched in August 2021 to monitor the on-the-job training quality provided by the employers and to ensure the trainees are trained in appropriate construction environment under the supervision of site trainers. By the end of December, a total of 130 eligible employers were added to the list.

To strengthen the traditional spirit of mentorship and apprenticeship of the industry, as of December 2021, 186 (including CICATP and Collaboration Scheme) site trainers have completed the five days Instructing Techniques for Site Trainers course programme to ensure that the site trainers have sufficient knowledge and teaching skills.

Curriculum Development & Quality

In 2021, five streams of Professional Diploma in Construction for Specialist Trades had acquired recognition as QF Level 4. 10 streams of “Diploma in Construction” programme and two safety supervision programmes had completed Accreditation/Re-accreditation for QF Level 3. With eight streams of Full-time Certificate in Construction being recognised as QF Level 2, a total of 25 courses’ qualifications were being recognised under the QF. The HKIC continued to drive quality improvements in new programme development and the operation of existing programmes, including enhancing teaching effectiveness of part-time teaching staff on QF-recognised programmes, standardizing arrangement of appointing External Examiners for Foundation Skills Subjects, enhancing the arrangement for class observation, streamlining the structure of HKIC committee and the composition of programme teams, etc. During the year, 10 new or revamped programmes had been vetted or validated based on HKIC quality assurance (QA) mechanism.

To provide articulation to degree programmes for graduates of the new “Professional Diploma in Construction for Specialist Trades” and of the four revamped Advanced Diploma programmes, HKIC signed the Memorandum of Intent and Letter of Intent with The Technological and Higher Education Institute of the Vocational Training Council, Chu Hai College of Higher Education and Hong Kong Metropolitan University in 2021 to explore the cooperation opportunities.

HKIC put in place the “3-year QA and QF training programme for teaching staff” in 2021. Over 40 sharing sessions, seminars and workshops were arranged for teaching staff in the year. 700 participants (man-time) joined the activities covering topics like QA, QF, curriculum development of outcome-based programmes, assessment design, programme management, development of learning and teaching materials and preparation for programme accreditation.



Memorandum of intent signed with the Hong Kong Metropolitan University

Student Recruitment, Student Development and Career Support Services

HKIC continues to recruit students and assist them with job placements while providing moral and civic education to students despite the pandemic.

For student recruitment, HKIC participated in the “Education and Careers Expo 2021” from 15 to 18 July 2021. The event organiser has designated one of the exhibition days as “Construction Progression Pathway” theme day featuring talks on BIM, Construction Industry Outstanding Young Person sharing and construction craft demonstration, to introduce HKIC courses and prospects of the construction industry. To reach a wider audience of targeted students, HKIC also actively participated in various education exhibitions, including the “Virtual Information Expo on Multiple Pathways 2021” organized by the Education Bureau and the “Wan Chai Job Expo – Building a Multicultural Workplace” organised by the Labour Department.

HKIC launched the “Construction Pathway Project” TV Announcements in the Public Interest (API) in 2021, aiming to promote Vocational and Professional Education and Training in construction industry and HKIC’s new progression pathway after the programme revamp. New design of related promotion was also published in outdoor media, MTR stations, bus shelters, online and mobile media to attract youngsters to enrol in HKIC programmes and join the construction industry. The video has reached nearly 630,000 views on Youtube channel. HKIC has also produced a series of social media videos to feature the stories of young graduates. Both HKIC website and YouTube channel recorded significant growth in the number of visitors.

Despite the drop in the number of secondary school leavers, HKIC has attained a slight increase of 5% on enrolment figures of full-time long programmes as compared with last year, including Advanced Diploma, Diploma in Construction and Certificate in Construction. On the other hand, the available training places of full-time short course in the 2020/21 has been adjusted due to the class suspension under pandemic situation and the total number of enrollment was 1,885.



“Construction x STEM Winter Camp” well-received by participating secondary school students

To promote awareness among secondary school students, the HKIC’s STEM Alliance held an online quiz “Construction x STEM” in May 2021 about building structure and bar bending and fixing. It attracted around 800 secondary students. In addition, STEM Alliance has also organized the two-and-a-half-day “Construction x STEM” Winter Camp during 18–20 December 2021, which offered workshop experience and introduced construction innovation to secondary school student who joined a tower crane model making competition in teams, and the Award Presentation Ceremony was held at CIC-Zero Carbon Park on 20 December attended by more than 100 students and guests.

Looking forward, the COVID-19 epidemic situation is expected to remain unstable in 2022 and the decrease in number of secondary students will continue, it brings unprecedented challenges to the student recruitment of HKIC. However, HKIC will continue to make best efforts to enhance its branding through diversified promotional channels, and expand website and social media promotions, etc. to maintain growth in the student recruitment number.

Promote a Sense of Belonging

To promote the Vision, Mission and Motto (VMM) of HKIC, the HKIC Anthem Music Video Production work was completed in May 2021. The Music Video of the HKIC Anthem has also been uploaded to the HKIC website as well as CIC and HKIC YouTube Channel for public viewing.

In addition, in order to enhance students’ understanding of Moral and Civic Education and build their national identity, HKIC started providing various training programmes in collaboration with the Hong Kong Army Cadets Association in 2021. It included seminars on “The National Flag, National

Emblem and National Anthem of the People's Republic of China", exhibition on "The History of the Development of the National Flag, National Anthem and National Emblem", a series of film appreciation activities on "Records of National Infrastructure Development", and training workshops for the Flag-raising Ceremony held at the HKIC campuses, which were conducted by students of full-time long programmes. In 2021, the Ceremony was conducted to mark the anniversary of the Hong Kong Special Administrative Region Establishment Day, and the National Day of the People's Republic of China.



Flag-raising Ceremony

Career Support

The job market of the construction industry has gradually recovered in 2021, which led to a higher employment rate and retention rate than that of last year. To explore more employment and training opportunities for the graduates, HKIC held 18 job fairs and provided services to more than 2,200 graduates through the career portal. Meanwhile, HKIC also received support from the Hong Kong Bar-Bending Contractors Association and successfully extended the sponsorship scheme to the Diploma in Construction (Bar-Bending & Fixing). Sponsorship and job placements are provided at the early stage of students' admission to encourage students for the completion of the course and to join the construction industry.

HKIC has attached importance to the mission of improving graduates' employability and personal quality. By optimising the Career Advising Scheme and in partnership with the CICATP, HKIC provides three years of personalized career counseling work to establish mutual trust and provide timely assistance to the graduates.



Production of HKIC anthem music video

Networking in the construction industry is essential and HKIC has always focused on exchanging views and deepening cooperation with industry stakeholders. In 2021, 24 briefing sessions on career support services were held for employers and trade associations of the industry, meeting with 147 organizations and 173 representatives. HKIC also conducted 27 employers and students sharing sessions to prepare students well before graduation.



Briefing session of Sponsorship Programme of Diploma in Construction sponsored by Hong Kong Bar-Bending Contractors Association



Career Advising Scheme – provides career counseling service for students

Collaborative Training Schemes

In addition to the running of full-time and part-time courses, HKIC offers a variety of Collaborative training Schemes as supplementary measures to meet the industry demands for intermediate tradesmen and tradesmen and provide comprehensive and structured craft trainings for construction practitioners. Gaining support from main contractors, employers and trade unions, HKIC has trained 1,535 graduates from the Collaborative Training Schemes in 2021.

Intermediate Tradesman Collaborative Training Scheme (ITCTS) Recruitment Days co-organized by the Collaboration Scheme Department, Labour Department and Social Welfare Organizations were held regularly. HKIC arranged on-site and online platform recruitment days in 2021 to assist employers in recruiting trainees and delivering training. 19 ITCTS Recruitment Days were held in 2021, attracting 1,320 job seekers and 1,280 interviews were arranged. On the other hand, "Construction Industry Recruitment Day" was held at CIC-Zero Carbon Park on 27 November 2021 with a total of 28 companies signed up and more than 500 construction industry job vacancies were provided.

About a hundred site trainers participated in 14 "Site Trainers and Trade Test Exchange Sessions" in 2021. By organizing exchange sessions and conducting visits to the Hong Kong Construction Industry Trade Testing Centre regularly enables site

trainers to share their teaching experience with the trade test instructors and learn more about trade test requirements to improve students' passing rates. In the coming years, Collaboration Scheme Department will focus on enhancing teaching skills of site trainers and improving the scheme's effectiveness.

To promote non-Chinese speakers to participate in Collaborative Training Schemes, the "Employer Seminar – To Enhance the Integration of Ethnic Minorities in Construction Site" was held at the CIC-Zero Carbon Park on 30 July 2021. The Seminar aims to strengthen the relationship among employers who intend to employ non-Chinese speakers and broaden the employers' network by sharing information about opportunities and challenges of employing non-Chinese speakers. Besides, HKIC will also assist employers in organizing recruitment events for non-Chinese speakers to facilitate non-Chinese speakers in joining the construction industry.

In order to show appreciation for the efforts made by employers in training intermediate tradesmen and tradesmen in 2020, "Employers Appreciation Ceremony and Construction Industry Outstanding Apprentice Award Presentation Ceremony 2021" was held at the Royal Plaza Hotel on 8 October 2021. 15 outstanding apprentices received awards for their remarkable performance.



Enrichment programme to build team spirit



Employers Appreciation Ceremony and Construction Industry Outstanding Apprentice Award Presentation Ceremony 2021 was held to express gratitude to the employers for continued support and to express appreciation to apprentices for outstanding performance

HKIC has also set up a Team of WorldSkills Competition to facilitate knowledge exchange between HKIC teaching staff and students with their counterparts around the world, and fostering a culture of pursuing excellence. Due to epidemic measures, HKIC participated in “Arc Cup International Welding Competition 2021” held in Xiamen via the online platform from 3 to 8 December 2021. This competition attracted competitors from different countries and regions, including India, Bulgaria, Indonesia, Malaysia, Thailand, Vietnam, and Ghana. HKIC’s team won the 2nd runner up award.

Urban Forestry Support Fund – Trainee Programme

The Urban Forestry Support Fund – Trainee Programme (UFSF-TP) has been in operation since August 2020. Employers in the arboriculture industry are encouraged to engage graduates of arboriculture, tree management, tree climbing and tree work programmes to join the Trainee Programme through the “first-hire-then-train” principle. Nearly 100 trainees have participated in the programme as recommended by their employers which include government departments, landscape companies, arboriculture companies, construction companies and so on. The first batch of trainees will complete their training in March 2022.



Tree climber trainee practice in the enrichment programme

To assist these trainees in acquiring professional skills, HKIC has arranged soft skills and knowledge enhancement courses in the form of group activities, lectures and field trips. Seminars and workshops are also arranged for trainees to enhance their industry knowledge, such as applying Building Information Modelling (BIM) in arboriculture landscape planning to enhance the landscape planning.

HKIC has arranged 2 briefing sessions to strengthen the relationship with the industry and enhance their understanding of the trainee programme attracting 100 stakeholders in the industry and 70 students.

Other Administrative Work

In order to enhance the work of HKIC, the CIC has appointed a professional accounting firm to carry out an Internal Audit for HKIC in the end of 2020 and it was completed in the third quarter of 2021. HKIC will make necessary enhancement on management and operation fronts according to the recommendations to provide high quality training programmes to the industry.



Arborist trainees learn to use sonic tomography to detect trees’ health status

Trade Testing

The Hong Kong Construction Industry Trade Testing Centre (“HKCITTC”) continues to strive for providing independent and creditable trade testing services. The HKCITTC has carried out a series of work to enhance trade testing procedures and upgrade trade testing systems in 2021, aiming to further improve the professionalism of trade testing services. Furthermore, the HKCITTC has also conducted a series of industry engagement activities to further promote the industry’s recognition of trade testing qualifications.

Uplift Professionalism of Trade Testing Services

Standardisation of Trade Test Assessment Criteria

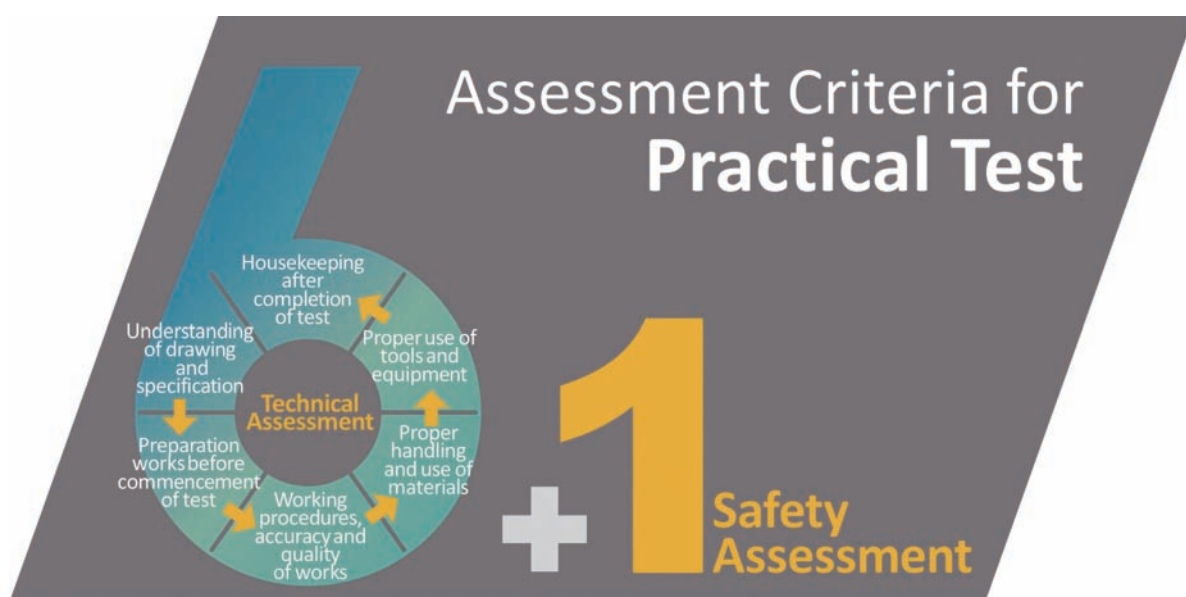
The HKCITTC endeavors to standardise and regularise the procedures of trade tests in recent years to further raise the level of the professionalism of trade testing services. In 2021, the HKCITTC fully adopted 6+1 assessment criteria in the practical tests of 150 trades and laid down the related practical test processes and requirements in details, to ensure that

all candidates are accurately assessed based on their understanding and handling capability of the entire working procedures and requirements.

Assessment Criteria for Practical Test:

1. Understanding of drawing and specification;
2. Preparation work before commencement of test;
3. Working procedures, accuracy and quality of works;
4. Proper handling and use of materials;
5. Proper use of tools and equipment;
6. Housekeeping after completion of test; and
7. Safety precautions.

In addition, the HKCITTC published the assessment criteria of practical test for 150 trades, to facilitate candidates and training institutes to understand more about the trade testing content and scopes of assessment for different trades.



Practical Test Assessment Criteria of Trade Test

Timely Review of Trade Test Contents and Proactive Response to Social Issues

The HKCITTC maintained close contact with industry stakeholders and conducted timely reviews of trade test contents to ensure that the current trade tests are effectively in line with the practical operations and meet industry needs. In 2021, outbreak of COVID-19 and numerous industrial accidents raised public health and safety concerns in drainage system and bamboo scaffolding works respectively. In view of this, the HKCITTC invited representatives from the industry to discuss preventive initiatives and solutions, and further suggested revisions to plumbing and bamboo scaffolding trade test contents with updated assessment requirements relevant to the latest societal issues, underlining its pioneering role to raise industry awareness towards public health and construction safety.

Strengthen Connections with Training Institutions

The HKCITTC stepped up its communication with various training institutions – a total of 60 trade test exchange sessions and a series of training workshop exchange visits were hosted in 2021, in order to boost synergistic collaboration with training institutions and instructors (including HKIC, Collaboration Training Scheme and other training institutions), and facilitate them to enhance training efficiency.

Boost Recognition of Trade Testing Qualifications

Proactively and Closely Liaise with The Industry to Raise Trade Testing Recognition

The HKCITTC actively promoted trade testing qualifications and the skill level of workers to the industry. With the recognition and support from the industry, some organisations have introduced trade testing qualifications as minimum employment requirement into their works contracts and some contractors and organisations have included trade testing qualifications in their employment contracts as well.

Furthermore, certain trade test certificates were added to the admission requirement, as one of the eligibility criteria, of the Voluntary Recognition Scheme for Fire Service Installation (FSI) Technicians of Fire Services Department; and Metal Scaffolder Trade Test Certificate holders are eligible for signing the Labour Department’s Form 5 for the Construction Sites (Safety) Regulations 38F(1).

Extend the Promotion to Repair, Maintenance, Alteration and Addition (RMAA) Industry

In 2021, the HKCITTC devoted much efforts to the promotion of trade test to RMAA, minor works and property management industries. The HKCITTC took the initiative to approach the Urban Renewal Authority, RMAA, minor works and property management industry stakeholders to introduce trade testing qualifications and its application to their industries.

Step up Publicity for Trade Test

The HKCITTC produced a series of promotional videos to promote trade test to the general public in the home repairs and maintenance. The videos present stories in a clear and vivid way to call attention to the significance of trade testing qualifications in home renovation. Through the interesting videos, the HKCITTC hopes to raise public awareness and understanding of trade test and to encourage employment of skilled workers, recognizable by their trade test qualifications, in repairs and maintenance works.



Create interesting video to promote trade test to public

OPERATIONAL REVIEW

Further Reinforce Trade Test Resources Utilisation Efficiency and Test Capability

Significantly Increase the Flexibility and Mobility of the Resource Use

The HKCITTC performs regular reviews over trade test resource deployment, and re-allocated resources flexibly in accordance with the changes of market needs. Besides, the HKCITTC adopts modular design and smart replacement parts in workshops aiming to further optimise trade test resources' flexibility, mobility, utilisation ratio and efficiency. The HKCITTC completed the re-planning and setting up for 13 workshops in Aberdeen building, and officially put into use in the year.

Continuous Digitalisation and Automation

In 2021, the HKCITTC continually co-operated with Information Technology Department to enhance the Trade Testing Management System (TTMS) and upgraded various systems, for example, introduced e-Written Test to Trade Test for Grade A Electrical Work and newly launched SMS blasting system. Moreover, the HKCITTC upgraded the e-payment function of TTMS to fully implement cashless payment, and integrated TTMS with Training Management System of HKIC in order to reduce tedious administrative works and provide timely services.

Introduce Artificial Intelligence (AI) Technology for Invigilation

The HKCITTC first introduced AI technology to assist invigilators to monitor the safety performance of candidates. Metal Scaffolding Workshop installed an artificial intelligence (AI) system for pilot run in December 2021. The system's camera captures candidates' activities and analyse with AI real-time. The system will alert the invigilator immediately while any safety misconducts of candidate are observed, such as not wearing safety helmet.



New bar-banding and fixing workshop adopts modularisation design

Set Up Trade Testing Control Room

For the purpose of strengthening the monitoring and governance of the trade testing operation, the HKCITTC set up a central control room in 2021. The management can monitor the real-time operation and efficiency through different reports, dashboards and real-time internal monitoring systems in the control room.

Workers Registration

Being the front-line service department for over 584,000 registered construction workers, the Workers Registration Office (WRO) continues adopting the traditional and effective service delivery while tapping into potential service innovation.

Registration Figures

The WRO received 52,942 new registrations and 83,408 renewal applications in 2021, maintaining high service volume.

Registration Category	Number of Registered Workers (as at 31/12/2021)	Number of Registered Workers (as at 31/12/2020)
Registered skilled worker	206,411	208,158
Registered semi-skilled worker	34,628	32,972
Registered general worker	343,265	307,198
Total	584,304	548,328

Enhanced registration service online and offline

The new CIC Service Centre (Kowloon Bay) was established in August 2021. On top of one-stop workers registration, trade test and training course application, the new Service Centre served as information and activity hub for construction workers on upskill, health and industry news. The CIC also noticed the upward trend of online

workers registration. Workers registration submission via “easyJob” Mobile App and online platform accounted for 28% of total applications.

Overcoming challenges of COVID-19

In view of the ongoing impact of COVID-19 epidemic in 2021, the WRO assisted workers in making appointments of COVID-19 testing service online. Industry news were disseminated via SMS messages such as available support from “Construction Industry Caring Campaign”, priority vaccination arrangement for workers, as well as updates of training courses and trade tests.

To continue our support to registered workers under the COVID-19, the CIC extended the waiver of the construction workers registration and renewal fees for another year from 1 October 2021 to 30 September 2022. The CIC has waived the relevant fees for construction workers for three consecutive years in total with a sum of approximate HK\$29 million.



New CIC Service Centre (Kowloon Bay)

Diversified Development and Welfare Activities

The CIC organised a wide range of activities and initiated welfare measures for workers, to promote their balanced development and express our thoughtful care.

The annual signature event, Construction Workers Festival (CWF), collaborated with the CIC Construction Month for the first time, and provided a variety of weekend activities for workers and their families. Themed “continuing professional development and upkeep health”, the CWF featured health talks, Construction Industry Exhibition Hub guided tours and Low-Carbon movie nights. Territory-wide Physical Fitness Survey for the Community was held to enable workers to have general understanding of his/her own fitness conditions. CWF was well received and was attended by over 1,580 workers and their family members.

The CIC held night webinar series on “Road to Construction Professional” to encourage registered general workers to become registered skilled workers. The webinars covered trade test scope and support services, career development path and the statutory requirements of the Construction Workers Registration Ordinance (Cap. 583) (CWRO).

The CIC premiered industry sponsorship for the annual signature event, Scholarship for Family Members of Registered Construction Workers. With the support from eight contractors and registered specialist trade contractors, 39 outstanding students were awarded this year with over HK\$300,000 scholarships where both numbers were record high.

The CIC celebrated festivals with workers and cared about their well-being in relation to the seasonal impact on their work. Seasonal giveaways such as card cases, red packets and sun protection gears were given to workers.



Territory-wide Physical Fitness Survey for the Community



Promotion poster of Construction Workers Festival 2021



Holders of Scholarship for Family Members of Registered Construction Workers 2021 shared their experience

Enforcement of CWRO

The CIC is committed to promoting the construction industry's compliance with the statutory requirements of the CWRO, including employment of registered construction workers for carrying out construction works on construction sites and submission of workers daily attendance records (DAR). The CIC continued to discharge its functions in conducting compliance checks and enforcement of the statutory requirements of the CWRO amidst the pandemic. In 2021, a total of 1,560 inspections on construction sites and 2,455 compliance checks on DAR submitted by principal contractors were conducted.

Upon discovery of non-compliances, investigation would be commenced and, if appropriate, prosecution would be initiated against the suspected offenders. A total of 235 summonses were issued for prosecution of the suspected offenders. Including the cases brought forward from the previous years, 408 summonses resulted in convictions in 2021, of which 3 summonses involving non-registered workers who carried out construction works on construction sites and 405 summonses relating to failure in submitting DAR within the prescribed statutory period.

To convey the importance of the submission of DAR and explain the requirements in simple terms, a new poster was produced and disseminated to contractors and construction sites. In addition, a total of 25 webinars and seminars on CWRO requirements and Construction Workers Registration System operation were held.

The Inspection Team and the Hong Kong Construction Association jointly conducted site inspections on the implementation of compulsory testing measures which required all site staff to present either updated negative COVID-19 test results or vaccination records when entering construction sites for work. The inspection also covered checking of site anti-epidemic measures and facilities implementation so as to provide advice to site personnel to stay vigilant against COVID-19. Over 1,500 sites were inspected during the year.

Way Forward

The workers registration statistics reflected an aging trend of skilled workers and increasing proportion of general workers. Looking forward, we will focus on incentivizing registered general workers to upskill and collaborate with industry stakeholders to promote professionalism of skilled workers which in turn benefits safety and quality of construction.



Joint site inspections of COVID-19 Measures

Registered Specialist Trade Contractors Scheme

The Registered Specialist Trade Contractors Scheme (RSTCS) emphasizes the professionalism and competency of the registered companies. The RSTCS specifies comprehensive registration requirements to registered companies and provides business opportunities and support for qualified specialist trade contractors to strengthen their competitiveness. As of December 2021, there were 7,808 registered companies, including 1,849 Registered Specialist Trade Contractors (RSTC) and 5,959 Registered Subcontractors. The RSTCS is widely supported by the industry, especially by the public sector such as the Development Bureau (DEVB), Hong Kong Housing Authority, MTR Corporation Limited etc., which have adopted the RSTCS in public work contracts.

Expanding Spectrum of Designated Trades

The RSTCS, launched in 2019, has been upholding structure and safety as its core principles. It uplifts the professionalism of seven designated trades including concreting, concreting formwork, curtain wall, demolition, erection of concrete precast component, reinforcement bar fixing and scaffolding. In January 2021, as requested by the Association of Plastering Sub-Contractors and supported by the industry, the CIC upgraded plastering trade as the eighth designated trade for enhancing professionalism of industry.

Strengthening Core Elements for Registration

In September 2021, the CIC, the DEVB and the Independent Commission Against Corruption co-launched the 'Integrity Charter' which aims to enhance the awareness of corruption prevention and the corporate governance of the construction companies, thereby ensuring the legal and regulatory compliance of their business operations. Along with the current registration requirements in terms of safety, management, job experience, execution and finance, the RSTCS keeps abreast of the latest developments and introduced 'Integrity Management' as the sixth registration requirement. Starting from 2022, registered companies will be required to formulate 'integrity policy' and complete 'integrity training' under the new requirement.

The six registration requirements of the RSTCS are in line with the List of Approved Contractors for Public Works and the List of Approved Suppliers of Materials and Specialist Contractors for Public Works under the DEVB, which established a consistent and credible standard for the registration and management mechanism of local contractors and specialist trade contractors.



Mr. Simon PEH, Commissioner of the ICAC (2nd right), Ir LAM Sai-hung, former Permanent Secretary for Development (Works) (2nd left), Mr. CHAN Ka-kui, former Chairman of the CIC (1st right), and Ir Albert CHENG, Executive Director of the CIC (1st left), officiating at the launching ceremony

Continuous Professional Development

RSTCS encourages continuous professional development and core personnel of the registered companies including the management team, front-line supervisory staff and technical staff were provided with training on advanced knowledge and technologies. The framework of the professional development of the RSTCS includes three major aspects, namely legal and regulatory compliance and industry development, management of specialist trades and the application of construction technologies.

During the year, the RSTCS has organised a series of practical professional development activities for the registered companies including:

- For strengthening the understanding on statutory requirements of the registered companies, representative of the Labour Department was invited to share the updates on the Employment Ordinance and relevant case studies;
- In response to the increasing concerns for Environmental, Social and Governance, representative of Ernst & Young was invited to introduce the topic and encourage the registered companies to elevate their corporate governance;
- Industry leaders were invited to exchange ideas on the latest developments of the RSTCS;
- A webinar on Competition Ordinance was organised and representatives of the Competition Commission were invited to illustrate the Competition Ordinance and share construction industry relevant cases.



The Chairperson of the Committee on RSTCS, Ir Chan Chi-chiu (1st left), exchanged ideas on the latest developments of the RSTCS with industry leaders

The RSTCS and the Hong Kong Institute of Construction introduced the 'Continuous Professional Development Courses for Registered Specialist Trade Contractor' which covers modules including contract management, site safety, digital transformation and site guidance, aiming to strengthen their teamwork and project management techniques. The registered companies will continue to strive for excellence, in order to keep abreast of the latest developments and seize business opportunities.

Regulatory Actions

The Committee on RSTCS instigates regulatory actions against registered companies arising from court convictions or violations of relevant laws, as well as violating the 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 19 registered companies were convicted, 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 for one to nine months.

The RSTCS Young Leaders Network

The Young Leaders Network under the RSTCS has attracted over 160 management personnel and site supervisors of the registered companies aged 45 or below to join. We delivered the latest industry news and events updates through the Young Leaders Network chat room. We have also organised an executive workshop on leadership

and team management skills and invited experts to introduce Digital Works Supervision System to the young leaders. Through a variety of activities to broaden the young leaders' horizon and enhance their management skills, they are able to embrace the new challenges ahead, as well as to drive industry rejuvenation and technological developments.



Young leaders of RSTCS Young Leaders Network participated the executive course on leadership and team management.

Way Forward

The grace period of Group 1 RSTC under the seven designated trades will close by end of March 2022. By that time all the registered companies under the RSTCS will be recognised as with experienced

management, financial competencies and qualified professionals. We welcome the addition of more trades for the continuous advancement of the RSTCS. Meanwhile, we will also explore the enhancement of other trades under the Register of Subcontractors for the sake of upgrading the construction industry as a whole.

Technically Competent Persons Registration Scheme

Launched in December 2020, the Technically Competent Persons Registration Scheme (TCPRS) builds a pool of Technically Competent Persons (TCPs) and Competent Person (Logging) (CP(L)) readily accepted by the Building Authority for the purposes of the Code of Practice for Site Supervision 2009 and the Buildings Ordinance (Cap. 123). The TCPRS runs parallel to the current practices of provision of curriculum vitae of TCPs and CP(L) upon submission of supervision plans for individual projects.

Total Digitalisation

A web-based platform, the TCPRS Portal and a TCPRS Mobile App, was developed to allow applicants to submit applications electronically and the TCPRS Secretariat can review and vet each application on the same electronic platform. Successful registrants were issued e-Registration cards housed in the TCPRS Mobile App. The whole process was completely digitalised. 2,494 TCPs and CP(L) had registered before the first anniversary of the TCPRS.

Continuous Development to Boost Digital Capability

With the increasing demand for digitalised supervision in the construction process, the CIC continued to bring latest technological development knowledge for the registered TCPs and CP(L). Executive Seminar on Digitalisation Solutions was held to introduce the Digital Works Supervision System solutions and other digitalised tools for smart construction.

Industry Adoption

To widen the industry adoption of the TCPRS, a total of 13 stakeholder briefings and regular themed webinars were organised for designated trade associations and target groups. Posters and leaflets were distributed to over 600 construction sites while a TCPRS advertisement had been posted in the September 2021 issue of the Construction Post to introduce TCPRS. The adoption of TCPRS in the supervision plans submitted under Buildings Ordinance (Cap. 123) was on the rising trend.

Way Forward

In order to enhance the quality, skills and knowledge of the TCPs and CP(L) through continuous training, TCPRS Continuous Competence Development (CCD) model is established to provide continuous professional development for the registrants in three areas, namely statutory requirements, environment, health and safety and advanced construction practices. The CCD model is expected to be promulgated in 2022.

The TCPRS will strive for promoting professionalism and recognition of the registered TCPs and CP(L) so as to uncover business opportunities and expand career development in the construction industry. The launch of the CCD would mark a milestone for the TCPRS in enhancing quality, skills and knowledge of the registrants.



TCPRS Portal and TCPRS Mobile App

Construction Innovation and Technology Fund (CITF)

Accelerating Industry Technological Transformation

The Construction Innovation and Technology Fund (CITF) continues to support local construction industry to transform and improve its productivity, quality, safety and environmental performance through automation, digitalisation and industrialisation. As of 31 December 2021, a total of 3,041 applications were received, among which 2,248 applications were approved with an accumulative approved amount increased to HK\$571 million in 2021.

Under the six categories of funding support, namely Building Information Modelling (BIM), Advanced Construction Technologies (ACT), Modular Integrated Construction (MiC), Prefabricated Steel Rebar, Industrialised Process – Robotic Welding and Manpower Development, the total accumulative number of beneficiaries increased to 849 in 2021. The fact that CITF is well-received by the industry somehow reflects a wider adoption of new technologies in construction projects. More than 11,200 training places of different construction-related technologies including BIM have been approved under the CITF, which benefited construction personnel at various levels including professionals, technicians and students and encouraged the adoption of innovative construction technology.



Large-scale briefing session on the Enhancement Measures of the Construction Innovation and Technology Fund

The CITF Mid-Term Review was conducted in 2021 to assess the effectiveness of CITF after two years of operation and identify areas for improvement and enhancement. Through 17 focus group meetings and questionnaire surveys, industry-wide feedback from nearly 800 industry practitioners were collected, with over 80% response affirming CITF's effectiveness to the industry's development. Enhancement measures to CITF were launched on 1 January 2022 alongside with substantial uplift to the funding ceilings and three new funding modes had been rolled out to widen technology adoption among construction projects. Under the new measures, the per-technology and per-company BIM and ACT combined fund ceilings were increased from HK\$0.8 million to HK\$1.5 million and from HK\$3 million to HK\$6 million respectively. Two new BIM funding modes for doorstep Project-based Coaching and BIM Viewer Collaborative Training were introduced to boost the supply of qualified BIM personnel to cope with the increase in construction digitalisation. The new funding category – Pioneering Application in Hong Kong – with a fund ceiling of HK\$10 million was also established under ACT to encourage industry stakeholders to bring in new technologies for the long-term benefits of the local construction industry. Multi-trade Integrated Mechanical, Electrical and Plumbing (MiMEP) was also accepted as one of the new funding scopes to encourage the adoption of more integrated modular design and off-site prefabrication in the electrical and mechanical (E&M) trades.

The CITF Pre-approved Lists had undergone a comprehensive review in 2021 to ensure the appropriateness of the pre-approved items. In 2021, Advanced Construction Technologies, BIM software and BIM training courses on the Pre-approved Lists continued to expand and by the end of 2021, there were 566 pre-approved items.

Wider Engagement with the Industry

The CITF continued to provide industry stakeholders the latest information on the CITF and new technologies through a hybrid mode of on-line and in-person promotional activities in 2021 amidst the COVID-19 pandemic. In 2021, the CITF Secretariat delivered 18 CITF briefing and case sharing sessions while participating and promoting in 13 key cross-departmental or partnering organisations' events. A briefing session to announce the latest CITF enhancement measures was held in December 2021. Successful applicants were also invited to share their experience in technology adoption and workflow transformation journey.

Way Forward

As CITF enters into its fourth year of operation, a comprehensive Overall Review on the CITF will be conducted to consolidate the results and set the foundation for future development. CITF will continue its work in cultivating of innovative mindset and driving continuous development of the construction industry through financial support.



CIC proactively encourages industry stakeholders to adopt CITF Pre-approved Technologies

Corporate Secretariat

The Corporate Secretariat (C-SECT) provides quality secretarial services and administrative support to the two top 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 continuously 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.

Enhancing Corporate Governance Standards and Quality of Secretarial Services

In 2021, C-SECT conducted three interactive and refresher training workshops on corporate governance and writing skills, and two briefing sessions on "Tender Recommendations Paper Writing". We, through Grade Management, critically reviewed and provided constructive advice/suggestions to uplift the quality of secretarial services delivered by various CIC business units on a regular basis. Noting the surge in webinars and video conferences conducted under COVID-19 epidemic, C-SECT organised an experience sharing session on "Useful Tips for Running a Smooth Online Meeting", benefitting over 50 staff members.

Release of Informative Publications

C-SECT revamped the *Information Booklet for Council Members* in January 2021 and distributed it during the orientation for new Council Members. It also published and distributed the bilingual *CIC 2021 Major Work Plans* in February 2021, the electronic version of which was also uploaded to the CIC website for easy access.

Supporting the 2021 Legislative Council General Election

For the 2021 Legislative Council General Election, C-SECT and Corporate Communications Department organised (a) a Discussion Forum for Election Committee (EC) members and candidates of the EC constituency with around 40 participants, including Council Members, CITB Members, representatives from stakeholder organisations and the CIC senior management in September; and (b) an Election Forum, attended by around 100 EC members and EC constituency candidates in December 2021. The success of these events has strengthened CIC's leading position in the construction industry.



Strengthening Cyber Security and IT System Controls

Given the imminent need to safeguard cyber security, C-SECT assisted in forming the Committee on IT and Cyber Security to formulate the IT and cyber security strategies, and their implementation plans as well as reviewing the structure of the IT Department. We provided secretarial services to the Committee meetings in 2021 and remarkable progress was achieved in the implementation of an enhanced cyber security monitoring system and IT System Controls.

Setting up the CIC Fellows

C-SECT was tasked with setting up of the CIC Fellows in 2021, composed of retired Council Members, retired Chairpersons of major Boards/ Committees and retired Executive Directors. It served as a high level advisory organisation for the benefit and future development of the construction industry as well as a platform to facilitate the exchange of information among stakeholders on industry knowledge, experience and new technology updates. The inaugural gathering was organised on 6 December 2021. It was planned that various functions, site tours and social gatherings would be organised regularly to solicit ideas from the CIC Fellows.

Way Forward

Looking ahead, C-SECT will continue to strengthen corporate governance for the CIC and enhance the quality and standard of our secretarial services. In particular, we will conduct a full review of the Corporate Governance Manual and the Corporate Secretariat Operation Manual with the aim of further enhancing fellow departments' awareness of corporate governance standards and quality of secretarial services. To demonstrate our commitment to high standards in corporate governance, we endeavour to seek formal recognition in excellent corporate governance through exchange and participation in events or competitions organised by renowned bodies.

Corporate Communications

The Corporate Communications Department continues to overcome challenges for the CIC with innovative solutions under the pandemic. The Department forecasts potential threats for the CIC and settles them ahead. Comprehensive promotion strategies are devised by the Department for promoting a positive image for the industry and CIC's position as an advocate of the industry via its constructive media network. The Department maintains effective communications with industry stakeholders to upkeep the CIC's goodwill and boost the promotion of sustainable construction and building a positive and caring industry culture. The Corporate Communications Department manages promotions, public and media relations, Construction Industry Sports and Volunteer Programme (CISVP), outreach services and crisis management for the CIC.

Demonstration of Persistence

The pandemic situation had been volatile throughout 2021, the Corporate Communications Department continued the "Construction Industry Caring Campaign – Fight against Novel Coronavirus" to provide assistance to workers affected by the pandemic. The Department also devised above-the-line and below-the-line promotion strategies to assist the CIC's initiatives to urged construction workers to undertake regular COVID-19 checking and receive vaccination. A "Construction Workers Vaccination Lucky Draw" was also held to encourage and show gratitude to workers receiving vaccination and protecting the community from the pandemic.

Getting Back on Track

Face-to-face events and meetings are greatly affected by the pandemic. To maintain its interaction with the industry, the Department actively maintained exposure through its media network and created high media value. The team overcame hurdles to organise several industry awards in 2021 to recognise construction practitioners' outstanding performance in times of difficulties, including:

- Construction Industry Machinery Operation Competition 2021;
- First CIC Construction Digitalisation Award 2021;
- Inaugural CIC Outstanding Contractor Award 2021.

To nurture the next generation of construction talents and to recognise outstanding achievements of young construction practitioners. The Corporate Communications Department organised a series of events for the younger generation:

- Hong Kong Young Construction Conference 2021 and 2nd Construction Industry Outstanding Young Person Award;
- MiC: Maximise Infinite Creativity – Mini-Building Model Competition;

The Corporate Communications Department also supported the organisation of several events to put forward the industry's concerns for further discussion in the Legislative Council, and catalyse further development in the construction industry:

- Discussion Forum with Members (Designate) of the Election Committee (Engineering Subsector) in September 2021;
- A forum for candidates for the Election Committee Constituency with regards to the 2021 Legislative Council General Election in December 2021.



With uncertainties brought by the pandemic, the Corporate Communications Department has to be well prepared for adversity in view of the changing social distancing measures. The Department also adjusted some of its planned activities such as annual events – “Happy Run 2021” and “Construction Industry E-sports Games 2021” to virtual or smaller group events under tightened social distancing measures to protect participants’ safety while encouraging a healthy lifestyle during the pandemic.

Building a Better Community

Under the pandemic, some of CISVP’s planned events are cancelled, however, the team continued to work closely with the community to understand their need in order to enhance their services. To improve the industry image, CISVP’s Construction Industry Volunteer Award Scheme continued to encourage industry practitioners to participate in volunteer activities such as blood donation and shoreline cleaning and recorded a total of 107,090 service hours by 15,498 volunteers (man-time) from 62 organisations from the construction industry and welfare sector.

Although much of the society’s operations has resumed in 2021, some underprivileged may still struggle. Hence the CISVP continued distributing Lo Pan Rice in 2021, handed out 32,000 meal boxes and warmth to people in need, in which 5,000 meal boxes were distributed through the “18 Districts Lo Pan Rice” campaign jointly held by the CIC and the Hong Kong Construction Association, to send warmth and care to communities across 18 districts.

Way Forward

The Corporate Communications Department will continue to innovate to overcome challenges brought by the macro environment and promote the sustainable development of the construction industry while safeguarding the CIC’s goodwill. The Department will continue its good work to encourage interaction between the CIC and the community, promoting public understand of construction industry and its latest technology to improve its public image and attract more talents.

Human Resources & Administration

Human Resources Department continues to perform as business partner to functional teams in the delivery of human resources services in areas of manpower planning, talent acquisition, compensation & benefit, talent development and staff engagement. Our main objectives are to ensure that our HR policies, procedures and practices support and align with the objectives of CIC and facilitate the accomplishment of the organization's overall development strategies.

The Administration Department ensures that the administration work flow and the work environment facilitate the efficient and effective operations of various functional teams. Our main objectives are to manage and co-ordinate resources effectively and efficiently through standardization, automation and adoption of new technology.

Although 2021 continued to be another challenging year for Human Resources and Administration in providing support to the operations and development of CIC, we overcame the challenges with agility to cope with the epidemic.

Active Support to the Construction Industry COVID-19 Testing Scheme (CITS)

The Human Resources and Administration partnered with the Development Bureau and provided active support in protecting the construction workforce by driving four phases of Construction Industry COVID-19 Testing Scheme (CITS) which commenced from end of December 2020 until June 2021. The 4 phases of CITS provided testing services to a total of 1,250 construction sites and 143,566 construction workers.

Safeguard Staff's Health and Well being

Staff is an important asset of CIC and the health and safety of our staff, students and the public are always our top priority.

In February 2021, CIC supported the pledge of the industry and requested all staff, students and trade testing candidates to take the COVID-19 test regularly and to provide negative test results before entering CIC. We also arranged free testing services for staff and students on a monthly basis (and on bi-weekly basis for front-line staff) from February until September 2021, with a total of 10,483 tests being arranged, including 5,429 for staff and 5,054 for students.

CIC also encouraged staff to receive vaccination and allowed Injection Time Off and Vaccination Rest Day for staff to take the COVID-19 vaccine. All staff are required to be vaccinated before entering CIC premises with effect from 15 February 2022. As of today, 99% staff have been vaccinated except 1% with medical conditions who will take the COVID-19 test on regular basis.

As a further protective measure, all persons entering CIC premises are also required to use their mobile phone to scan the "LeaveHomeSafe" QR code.

The Operation Task Force met regularly in 2021 to monitor the pandemic situation and to co-ordinate work operations. Over 30 alerts and announcement were issued to staff in 2021 to update them with instant information on pandemic situation. The "Guide on Measures against COVID-19" was revised and issued to management staff.

The Administration Department played a vital role in supporting CIC's anti-epidemic measures in 2021. Apart from sourcing adequate personal protective equipment for staff and regular deep cleansing of CIC premises, additional cleaning and fogging services were arranged whenever a preliminary positive or confirmed case was reported. New technology was also adopted in various locations including the deployment of body temperature checking smart robots and sanitizing robots.

Talent Development

CIC is cultivating a learning culture amongst staff to prepare themselves to align with CIC's development and to meet the challenges of the ever-changing working environment through Staff Training & Job Enrichment.

Staff Training

CIC engaged an online learning platform "LinkedIn" for staff to access a 24/7 year round free tool to learn, either in office or at home. An "Optimized Learning Time" was allowed for staff to take the online learning within office hours and a Mandatory Learning KPI of no less than 48 hours per year would come into effect from 2022.



In-house training on “Learning and Teaching” for teaching staff continued in 2021, with Certificate in Learning and Teaching (CLT) organised for newly joined teaching staff and Continuous Learning Programme (CLP) as refresher training for current teaching staff. Other in-house trainings were held during the year on various topics, including ordinance awareness, interviewing skills, customer engagement, MS Excel, MS Power BI, etc.

A Job Enrichment Programme was put in place to attract, motivate and retain talented staff by enhancing their exposure to various Industry Development functions. Staff joining the Programme were able to explore individual skills and talents through a series of talks, workshops, sharing and inter-department awareness sessions which were held from January to August 2021. These staff later participated in and provided support to various Industry Development events in 2021.

Cyber Security Awareness

Cyber Security risks are top rated risk and CIC had put much effort and resources on to uphold defense against risk exposure. As staff has the responsibility to protect CIC against any cyber security risk, Human Resources worked closely with the Information Technology Team to educate staff by organizing compulsory training sessions on cyber security protection for current staff as well as for newly joined staff. Phishing email simulations tests were sent out by IT team on regular basis and staff who failed in the test are subject to warning and were arranged to attend further trainings.

Staff Engagement

Human Resources Team continued to encourage staff to demonstrate care for the community and society by supporting the Construction Industry Caring Campaign and the Construction Industry Sports & Volunteering Programme (CISVP). Staff also supported the fund raising activities held during the year for various welfare organisations.

Though large-scale staff activities cannot be held under the pandemic, gestures have been made to care for the well-being of our staff, including Friday Night Activities in small groups held at various offices

and a Well Being Day provided to staff in 2022 for them to take a day off to spend some meaningful time with themselves, their families or friends.

Service Enhancement

The Service Enhancement Team handled enquiries / grievances / complaints from public and internal staff. A total of 118 external cases and 11 internal cases were received in 2021. All cases were responded swiftly and handled appropriately, and investigations were instituted as and when required. Areas of improvement were identified and enhancement measures were recommended to relevant departments to ensure our services meet public expectation.

Way Forward

The development of a highly effective and motivated workforce is essential for supporting CIC’s development initiatives and overcoming the challenges ahead. CIC is fostering a learning culture amongst staff and empowering them to learn by optimising their learning experience. Cross team collaboration is advocated whereby staff may enrich their exposure and expand their potentials and horizons through supporting and participating duties and functions of other teams. A mentor scheme is also in place to groom and develop potential staff for succession planning.

Staff engagement will be further enhanced through reinvigorating Corporate Culture values. The bondages between new and serving staff is to be strengthened through a series of relationship or team-building activities and workshops. Staff’s well-being is one of our major concern especially under the pandemic, various caring initiatives will be undertaken.

Fostering a green mindset amongst staff and initiatives to reduce waste and carbon footprint will be implemented in CIC workplace and a mechanism will be introduced to reduce excessive use of resources.

Corporate Safety

Safety and health for CIC staff, students and other interested parties are major focus of Corporate Safety Department (CST). CST aim to provide a safe and healthy environment for all stakeholders by maintaining an effective safety and health management system to avoid injury and ill health incident.

HKIC Uplifting and Other Development Project

In addition to the ongoing HKIC uplifting project launched in 2019, CST worked closely with internal departments and other project related parties to provide effective monitoring and advice continuously to ensure high safety performance can be delivered during project period. There are no serious accident present in 2021.

Installation of Outdoor Safety Information Board

Production and Installation of Outdoor Safety Information Board (Phase 2) has been completed. CST has also conducted various OSH training (e.g. heat stress prevention) and supported HKIC to promote manual handling safety to training student.

Leading Internal Anti-epidemic Work

As part of its preventive measures against the spread of COVID-19, CST assisted to keep review and update of "A Guideline on Measures Against COVID-19". On the other hand, in order to adopt "Green" idea to COVID-19 prevention implementation, CST has established On-line health declaration form for CIC premises user. This measure offers a green alternative for those users to complete the declaration before entering CIC premises. At the same time CST also work closely with internal task force to formulate relevant contingency and precautionary measures for various operation units.

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 stakeholder expectation.



Estates Office

Estates Office (EO) supports the CIC's operation in facilities management and capital projects. The department is responsible for maintenance services for common building services, building structures, landscaping, furniture & equipment and ELV systems (IP phone, CCTV surveillance, access control & IoT devices) via the Estates Office Management System; executing statutory compliance checking and upkeep; and providing license renewal services. For capital projects, the department focuses on contracting and project management of revamp works, A&A Work and new development works, optimizing space utilization, and the adoption of Building Information Modelling (BIM) in CIC's premises.

Estates Office manages both land lease and short term tenancy, as well as applying for short-term use of vacant government sites for CIC campuses and outdoor training grounds.

Renovations and Spatial Changes

EO managed to successfully execute a wide range of commitments in 2021 so as to support continuous development of the CIC. Several changes to premises of the CIC were made throughout the year. Relocation of Construction Innovation and Technology Application Centre was completed with new exhibition booths installed at the Zero Carbon Park to promote innovative technologies in the construction industry. Renovation works on G/F and 1/F at Kowloon Bay Campus of the Hong Kong Institute of Construction were also completed to cater new needs on worker registration services and demands for office space.

Adoption of BIM, IoT and EOMS

EO integrated BIM and Internet of Things (IoT) technology into the Estates Office Management System to enhance facility maintenance as well as asset, safety and environmental management at the ZCP. The integration was completed at the end of 2021 to allow effective and comprehensive management of premises.

Uplifting of Hong Kong Institute of Construction (HKIC)

As a remarkable achievement of the year, uplifting projects at Kowloon Bay Campus, Kwai Chung Campus and Sheung Shui Campus of the HKIC were completed to revitalise aged training facilities. Construction works for new Training Ground at Lam Tei will complete soon. The Wong Lung Hang Training Ground and Yuen Kong Training Ground were returned to the District Lands Office.

Way forward

In 2022, EO will continue to perform its supportive and constructive functions, including:

- Replacement of existing lifts at HKIC Kowloon Bay Campus, Kwai Chung Campus and Sheung Shui Campus with an anticipated completion in 2024;
- Set up new Training Ground at Lam Tei with an anticipated completion in Q2;
- Exploring opportunity on expanding Tai Po Training Ground and establishing new Training Ground at Siu Lam; and,
- Expanding the integration of Estates Office Management System, Internet of Things and Building Information Modeling to HKIC Kowloon Bay Campus and Hong Kong Construction Industry Trade Testing Centre

Information Technology

Information Technology Department is responsible for all CIC information technology services including managing information system implementation, network and infrastructure, service-desk, data management, cybersecurity, information management services, IT governance and procurement, etc. The department strives to support CIC daily operations and serve industry stakeholders, as well as to promote the adoption of Information-Communication-Technology collaboration and Internet-of-Things to support the digital transformation in the construction industry.

Enhance Cybersecurity in the CIC

The department is dedicated to enhancing the cybersecurity in the identity management, network access security and data protection areas to comply with the industry standard. Intensive IT Security Awareness Training and phishing exercises were conducted regularly among staff to cultivate a strong cybersecurity awareness within the CIC.

Improvement on the adoption of Cloud Technology

Adoption of various cloud services such as email, storage and collaboration platform were extended to improve the service availability and scalability, and facilitate better communication and collaboration during the pandemic.

Upgrade of the Wi-Fi Services

To support the operation of CIC-Zero Carbon Park and Construction Innovation Technology and Application Centre to provide better exhibition facilities, ZCP's Wi-Fi system had been upgraded to Wi-Fi 6 with a high-speed mobile network which could accommodate more Wi-Fi users and bandwidth-intensive applications, such as Augmented Reality.

New Digital Channels for Construction Workers and Professionals

New CIC Construction Safety App was launched for public use from late July 2021, providing a user-friendly platform for industry stakeholders and frontline workers to receive timely key safety messages and activities updates. Meanwhile, the app applied user-centric verifiable digital credentials and uplifted the control of data privacy and identity of users for cybersecurity.

A new portal for the School of Professional Development in Construction (SPDC) with electronic application to enroll SPDC courses was launched in September 2021 for public. This allows industry professionals to pursue relevant and recognized qualifications for continuous learning opportunities and pathways, and professional advancement in construction.

Process Optimization and Automation

Trade Test Management System was uplifted to support electronic payment gateway in December 2021. Applicants can now settle trade test enrolment fees in any convenience store with an ePayment Advice. Fees settlement will be managed in the backend system automatically to streamline payment checking and reduce manual procedures.

Training Management System had integrated with Trade Test Management System in December 2021 to allow HKIC staff to submit trade test applications and synchronise with students' trade test result automatically. The manual process will be replaced to avoid repetitive communication.



Way Forward

An online course enrolment platform will be developed to simplify application process, increase transparency and enhance the efficiency of HKIC operation.

The system enhancement of Register of Specialist Trade Contractors (RSTC) will be launched to optimize the scalability in managing expansion of RSTC on other designated trades in near future.

ITD will incorporate machine learning and Robotic Process Automation into Trade Testing e-scheduling platform as a trial run. Using pattern recognition technology to automate repetitive processes and eliminate human factors, and ITD aims to enhance productivity of and optimize Trade Testing scheduling and operation.

CIC will further enhance its cybersecurity by strengthening its incident response capability, multi-factor authentication and access control. Phishing email simulation will also be conducted to foster user awareness and build strong cybersecurity awareness in the CIC. Meanwhile, cloud services will be further adopted to improve the operational efficiency and service accessibility.

Internal Audit

The Internal Audit Department (IA) assists the CIC in accomplishing its objectives by evaluating the adequacy and 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 by the Audit Committee. According to the internal audit plan, IA reviews the key controls in different areas and reports the findings to the Audit Committee quarterly.

Comprehensive Internal Review and Assessment

IA reviewed the operational, financial and compliance control matters on management of cyber security, levy collection process as well as departments of Construction Productivity, Trade Testing and Workers Registration. 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 6 months.

During the year, a comprehensive review on the Hong Kong Institute of Construction (HKIC) had been completed. The audit covered reviews on training, campus management, curriculum development and quality assurance, student assessment and staff management of HKIC. Audit recommendations were proposed to improve HKIC's controls and the implementation is in progress.

With input from heads of each department and division, a corporate-wide risk assessment exercise was conducted at year end of 2021. Top risks were highlighted to senior management for further controls and action.

IA also facilitated in drafting internal guidelines on several cross-departmental operation.

Way Forward

In the coming years, IA will continue to cooperate with external consultant to carry out internal audit services. Audit recommendations will be proposed to the CIC management with reference to the best practices in the industry.

IA will further enhance the governance of CIC by reviewing the operation manuals of all departments to assure adequate control procedures are established.



Procurement Department

The Procurement Department supports the CIC's operations by understanding its business requirements, managing internal transactions for ordering and receiving goods and services and handling procurement data, hence maximising its efficiency of transaction flow and reporting.

Management of Major Tenders

The Department assisted the CIC in tender management for several large scale events and facility uplifting projects such as:

- Design and Installation of the Exhibition Booths and Fitting-Out Works at the Zero Carbon Park for Relocation of the Construction Innovation and Technology Application Centre
- Renovation Works of New Office at 1/F, Kowloon Bay Campus
- Renovation Works of New Service Centre at Ground Floor, Kowloon Bay Campus
- Facility Management, Maintenance and Operation Services for Construction Industry Council – Zero Carbon Park
- License to Operate the Zero Carbon Building (ZCB) Eco-Café and Souvenir Shop for the Construction Industry Council
- Event Management and Production Services for Construction Innovation Expo 2022

The Procurement Department also managed a number of major service tenders this year, including:

- Consultancy Services of Development of Design for Safety Management System and Training Programmes for the Hong Kong Construction Industry
- Supply and Delivery of Hong Kong Institute of Construction Student Uniform and Construction Industry Worker Uniform
- Provision of Call Centre Services
- IT User Support Services
- Managed Security Services
- Quantity Surveying Consultancy Services
- Insurance Broker's Service
- Chauffeur Services

- Statutory Audit Services and Special Audit Services
- Communication Link Services
- Legal Services
- Term Contract for Supply of Hand Tools, Consumables & Miscellaneous Items
- Security Guard Services
- Repair and Maintenance for Electrical and Mechanical Works and Builder's Works cum On Site Technician Services
- Repair and Maintenance of Landscaping Works
- Live Streaming and Video Production Services for Conducting Webinars

Project and Supplier Management

The Procurement Department supports the administration works of the Project Committee and the Project Management Policy & Procedures Working Group since its establishment. The Project Management Handbook (Non-Capital Projects) was updated in 2021 and technical project reviews were conducted in accordance with the handbook. In terms of supplier management, the Procurement Department also continues to maintain the qualified vendor list for "Event Management and Multi-Media Design Services" and "Engineering, Construction & Renovation Works and Repair & Maintenance" categories, and conducts quarterly vendor performance reviews and the CIC vendor surveys.

Way Forward

We will review procurement policies and develop vendor lists by making reference to the Government and other public authorities and to review current Terms and Conditions and various Contract Templates bearing organisational needs and the market norms in mind. In addition, the Procurement Department will conduct random project reviews and audits regularly to strengthen user departments compliance with project procedures. To implement procurement digitization and facilitate e-procurement, supplier portal and associated modules such as e-tendering will be established and enhanced.

Finance

The Finance Department supports the CIC on 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 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. It 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.

The Department provides secretarial and decision support to the Investment Task Force in formulating investment strategies and monitoring investment performance. It continuously upgrades systems to improve the finance and levy operations, and also proactively adopts electronic services for the benefits of various stakeholders. It conducts process reviews to streamline workflow and enhance efficiency. In addition to company secretarial support for the subsidiaries of the CIC, it develops and executes internal control policies and procedures for all finance and accounting matters.

Key Achievements in 2021

According to the recommendation from Investment Task Force, 7 bonds were purchased in 2021 from UBS's bond portfolio, with target annual return setting at three times of time deposit.

Besides, we have kicked off the establishment of additional Electronic Collection Platforms, including Payme, BOCPay and FPS. On the other hand, the income control procedures for HKIC were strengthened to enhance accuracy and efficiency of income recognition. During the year, Finance Department completed Internal Audit for Levy with implementation plan of recommendations for improving controls. In addition, development of E-Service 2.0 for Levy System had been commenced to improve levy data quality and processing efficiency.

Way Forward

Digitalisation of finance operation is in progress in order to improve operation efficiency. Levy System will also be enhanced to further automate the Levy Forms submission and to strengthen controls on levy processing. Finance Department will continue to support the CIC and provide professional advices from financial perspective to maximise the benefits of all stakeholders.