

Industry Development

The core initiatives undertaken by Industry Development include design for safety, digitalisation, industrialisation, innovation and advanced technologies adoption. There are seven departments under Industry Development, namely, Construction Digitalisation, Construction Business Development, Construction Productivity, Construction Safety, Modern Methods of Construction, Environment and Sustainability and Construction Innovation & Technology Application Centre.

Construction Digitalisation

The Construction Digitalisation Department continues to promote and facilitate wider adoption of 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.

To achieve the target set in the CIC's "Construction Digitalisation Roadmap for Hong Kong", the CIC carried out the following initiatives in 2022.

Hong Kong Construction Common Data Environment Award

The CIC and Development Bureau co-organised the first Hong Kong Construction Common Data Environment Award to recognise outstanding local projects and organisations that had best utilised Common Data Environment (CDE) to improve project management, collaboration and productivity.



Hong Kong Construction Common Data Environment Award

Construction Digitalisation Charter

A total of 59 organisations signed the Construction Digitalisation Charter to join hands with the CIC to achieve our digitalisation targets for the industry. By signing the Charter, organisations commit to devise an organisational digitalisation roadmap to achieve the 2026 targets set in the CIC's Construction

Digitalisation Roadmap for continual and wider adoption of BIM, CDE, and if applicable, Smart Asset Management / Facility Management (AM / FM) for Operations & Maintenance (O&M) in their projects.



Construction Digitalisation Charter Signing Ceremony

CIC Master Class on Common Data Environment (Project Managers)

To enhance the industry’s capacity in adopting and implementing CDE and digital construction tools for projects in Hong Kong, the CIC launched the first signature course on CDE, namely the “CIC Master Class on Common Data Environment (Project Managers)” in 2022. The course is set to re-run quarterly. The next course is scheduled to start in early 2023.



CIC Master Class on Common Data Environment (Project Managers) Kick-off Ceremony



CIC Beginner’s Guide on Construction Digitalisation

The CIC has actively promoted the digital transformation of the construction industry. In order to help the industry, especially Small and Medium Enterprises (SMEs) to enhance their capabilities, accelerate digitalisation and embrace new technologies, the CIC has published the following three “CIC Beginner’s Guides on Construction Digitalisation”, namely “CIC Beginner’s Guide on Construction Digitalisation – Smart Site Digital Platform”, “CIC Beginner’s Guide on Construction Digitalisation – Adoption of BIM in Small and Medium Enterprises” and “CIC Beginner’s Guide on Construction Digitalisation – Adoption of Common Data Environment (CDE) for Information Management using BIM”.



- CIC Beginner’s Guide on Construction Digitalisation – Smart Site Digital Platform
- CIC Beginner’s Guide on Construction Digitalisation – Adoption of BIM in Small and Medium Enterprises
- CIC Beginner’s Guide on Construction Digitalisation – Adoption of Common Data Environment (CDE) for Information Management using BIM

OPERATIONAL REVIEW

Celebration of BIM Achievement 2022

The CIC and Development Bureau co-organised the Celebration of BIM Achievement (CBA) 2022 to inspire organisations and practitioners to bringing BIM to its full potential, by recognising and sharing their achievements with all stakeholders. Ten judge paneling experts reviewed the numerous submissions through a stringent evaluation process to select the 67 winners.



Celebration of BIM Achievement 2022

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 available in both self-learning and instructor-led training. From its launch in 2021 to the end of 2022, over 17,500 individuals had completed the online training and received the BIM Viewer certificates.

BIM Education Symposium

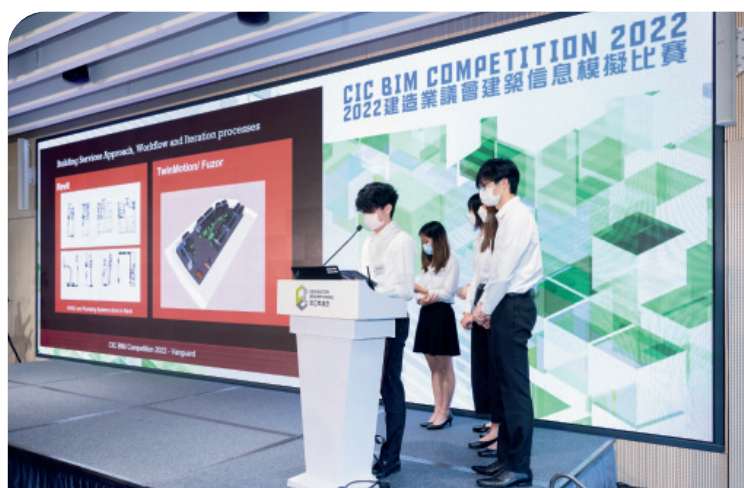
The CIC organised the Inaugural BIM Education Symposium to provide opportunities for local higher education institutions to share their achievements and good practices in BIM education. 13 educators from 11 institutions shared at the Symposium, which was well received by over 900 participants.



BIM Education Symposium

CIC BIM Competition 2022

For the fourth year, the CIC BIM Competition continued to promote the practical uses of BIM through a collaborative and competitive learning approach among higher education students in construction-related disciplines.



CIC BIM Competition 2022

CIC BIM Space

The CIC BIM Space has started expanding its scope to not only encourage BIM, but also Construction Digitalisation technology adoption and proliferation through acting itself as an information sharing platform. 52 webinars were organised throughout the year, such as BIM Talks, BIM Solution Day, webinar series on CDE Platform for Site Management, briefing of the Certification of BIM Personnel and Accreditation of BIM Training Courses, successfully attracting around 37,700 attendees to the CIC BIM Space.

Way Forward

The CIC BIM Space will be revamped based on the recommendations given in the CIC's Construction Digitalisation Roadmap.

The CIC would produce guidelines for appropriate additional information requirements of BIM models based on the use cases identified in the Report on 3D Spatial and BIM Data Use Case Requirements of the Hong Kong Construction Industry for reference by the industry to support the Government's initiative of developing the Common Spatial Data Infrastructure (CSDI) and Hong Kong as a Smart City.

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 and BIM training service providers to offer necessary training courses. In addition, the CIC is going to launch the CIC Master Class on Artificial Intelligence (AI) for Construction in February 2023.

The CIC is going to launch for the second time, the Hong Kong Construction Common Data Environment Award and the Construction Digitalisation Award, to recognise outstanding local projects and organisations for their contribution and achievements in improving productivity, quality, sustainability and safety with digital tools.

We will continue to collaborate with industry stakeholders and relevant government departments to identify and develop quick win BIM-related digital solutions, such as plugins, through consultancy services or R&D projects, to harness the power of digitalisation in Hong Kong.

The CIC will publish a White Paper with a review of the BIM personnel development in Hong Kong construction industry in 2023. The "White Paper on BIM Personnel Development in Hong Kong" will also review shortage in manpower, and present the supply and demand forecast of BIM personnel in next five years (i.e. from 2023 to 2027). Key recommendations will be made in the White Paper to facilitate a healthy and sustainable development of BIM personnel in Hong Kong.

OPERATIONAL REVIEW

Construction Business Development

With an aim to foster a more efficient and healthy construction market in Hong Kong, the Committee on Construction Business Development (Com-CBD) completed a research study on better resources utilisation to meet the increasing construction volume. Through collaboration with industry counterparts, the Com-CBD had organised various activities such as stakeholder engagement sessions and workshops to promote equitable risk sharing. Meanwhile, the CIC has been setting up a representative office in Guangdong with a view to assisting companies in exploring business opportunities in the Greater Bay Area (GBA) and had arranged a course on National Affairs for Construction Young Persons in Hong Kong.

Study on Strategic Review for Uplifting Construction Capacity

As the annual construction volume is estimated to exceed HK\$300 billion, the Com-CBD had completed a study on Strategic Review for Uplifting Construction Capacity proposing 16 initiatives to enhance construction capacity to meet future demands. The initiatives covered eight major areas – offsite construction, innovative technology, standardisation, non-local resources, training and development, contractual, statutory and local supply to ease the predicted manpower and construction material shortages, by lowering the demand or enhancing the supply of resources. A report detailing the findings and proposed initiatives would be published in the first quarter of 2023.

Security of Payment Legislation (SOPL)

The Com-CBD has been working closely with Development Bureau (DEVB) and stakeholders on the progress of SOPL. With the Security of Payment Provision (SOPP) became effective in December 2021 for public works contracts, the Com-CBD has been collaborating with DEVB in encouraging client bodies to adopt SOPP in their construction contracts before the legislation is enacted. Briefing sessions had been conducted for various client bodies to introduce SOP framework and its implementation if so adopted in the contracts.



Briefing Session on SOPP in Public Works Contracts for Urban Renewal Authority on 29 Nov 2022

Temporary Land Allocation

Temporary land allocation for material storage was one of the relief measures offered by DEVB during the COVID-19 pandemic. To cope with the global supply chain disruption caused by the pandemic, the Com-CBD has coordinated with DEVB and Hong Kong Construction Association to allocate six pieces of lands to contractors to alleviate the hardship faced by the local construction.

The lands were allocated to 9 different contractors for a period of about six months to one year.

Mainland Liaison Services

In 2022, the CIC had expanded its networks for the Mainland liaison affairs with courtesy visits to more than 40 organisations, including institutes and associations, to exchange views on opportunities and developments in the Mainland.

The Representative Office of CIC (HK) in Guangdong was set up in Guangdong which will be operable in 2023 to assist companies in exploring business opportunities in GBA.



Kick-off Ceremony of Signature Course on National Affairs for Young Construction Leaders on 22 September 2022

The first Signature Course on National Affairs for Construction Young Persons was held from September to October 2022 to nurture young construction leaders, with invitation of mainland experts, government officials and renowned industry leaders for sharing to enhance the understanding of the development of the Mainland China and develop students' sense of belonging to the country. In addition, the Com-CBD organised the Greater Bay Area Construction Summit during the Construction Innovation Expo 2022. Industry leaders shared their experiences and insights on driving innovation and development in GBA.

Way Forward

The Com-CBD will continue to promote a healthy construction market with a view to enhancing the business environment in Hong Kong. The Com-CBD would set up a Task Force on Review and Enhancement of Construction Contract Terms to evaluate the reasonableness of contract terms and trade practices adopted in Hong Kong construction industry and make recommendations thereon. While Policy Address 2022 encouraged the use of various innovative technologies, in particular Modular Integrated Construction (MiC), for speedy completion of housing, the Com-CBD will conduct study and develop reference materials on procurement strategy to facilitate the adoption of innovative technologies.

With the Representative Office of CIC (HK) in Guangdong soon to be put into operation, the Com-CBD will conduct courtesy visits, organise technical study tours and exchange activities. In addition, the Com-CBD will continue to organise National Affairs classes for industry practitioners of various tiers to understand the development of the Mainland China.



Greater Bay Area Construction Summit held on 13 December 2022

Repair, Maintenance, Alteration and Addition

In view of the gradual increase in the construction volume and accidents related to repair, maintenance, alteration and addition (RMAA) works, the CIC established a Committee on the RMAA (Com-RMAA) in August 2022 in order to promote and support the development of the RMAA sector. Major works include comprehensively reviewing and determining the development directions of RMAA works, and enhancing the techniques, management and safety knowledge of the RMAA sector by providing and optimising the existing relevant courses.

The Com-RMAA and its four newly established sub-committees: Sub-committee on Worker Training, Sub-committee on Promotion and Education, Sub-committee on Standardisation and Sub-committee on Supervision Matters will implement relevant works following the development directions of the RMAA sector.

Promotion on Certificate in Repair, Maintenance, Alteration and Addition Courses and Intermediate Tradesman Collaborative Training Scheme

In order to enhance the skill level and safety awareness of workers engaged in RMAA works, the Hong Kong Institute of Construction (HKIC) has organised the Certificate in RMAA (Building Construction) and Certificate in RMAA (Electrical and Mechanical) courses. Since the launching of the courses in June 2022, the cumulative number of applicants has exceeded 100. In addition, the HKIC also provides the Intermediate Tradesman Collaborative Training Scheme (ITCTS) to meet the needs of the industry.

With the aim of encouraging more practitioners in the RMAA sector to enroll in the certificate courses and participate in ITCTS, the Com-RMAA has collaborated with the Hong Kong Association of Property Management Companies and District Offices under Home Affairs Department on promotion to property management companies and owners' corporation. A promotional video about the certificate courses was also shared on social media to introduce the advantages of the courses.



Leaflets for Intermediate Tradesman Collaborative Training Scheme

Leaflets for Certificate in Repair, Maintenance, Alteration and Addition (Building Construction) and Certificate in Repair, Maintenance, Alteration and Addition (Electrical and Mechanical)

Thematic Talks in Construction Innovation Expo 2022

To promote collaboration and knowledge sharing in the RMAA sector, the Com-RMAA organised two thematic talks, namely “Innovation Equipment for Domestic Renovation” and “Technology Applications in Monitoring and Facilitating Property Management and RMAA”. The talks successfully attracted about 120 participants.



Inno Talks on RMAA at Construction Innovation Expo 2022

Partnering Workshop

To help building a partnering spirit across the industry and extend the benefits of partnership to the RMAA sector, the Com-RMAA organised a partnering workshop for stakeholders in the RMAA sector to foster the culture of partnering and introduce the “New Engineering Contract”. The workshop aims at those who had yet to know about the “New Engineering Contract” projects, allowing them to experience and appreciate the concept of collaboration.



Partnering Workshop was held on 30 November 2022

Way Forward

In order to set out framework in defining RMAA market and get a better understanding of the factors that would contribute to the healthy development of the RMAA market, the Com-RMAA will conduct a consultancy study on the RMAA market to define the scope of RMAA sector including the types of works and trades involved. The study will facilitate the understanding of the current situation of the RMAA sector and provide proposals and recommendations that could help optimise the long-term development of the RMAA sector. Subsequently, stakeholders from the industry will be engaged to obtain feedback on the proposals and recommendations.

In terms of publicity, the Com-RMAA will hold a large-scale promotional event for home renovation and maintenance in March 2023 to publicise the rights and responsibilities of property owners, types of insurance, claim procedures, the two certificate courses and ITCTS, etc.

In order to solve the difficulties encountered by ordinary property owners in home renovation and maintenance, the Com-RMAA will compile a series of concise and easy-to-understand pamphlets to help the public, especially property owners.

The Com-RMAA will also continue to consolidate training needs from the industry and collaborate with the HKIC to offer necessary RMAA training courses to meet the demands. In addition, the CIC will also continue to explore with various government departments that the certificate courses would cover the skills required for government maintenance works contracts, so that the qualification of graduates of the courses would be recognised.

Construction Productivity

In view of the critical challenges of ageing workforce 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.

Construction Innovation Expo 2022

Officiated by the Chief Executive of the HKSAR, Mr. John LEE, the Construction Innovation Expo (CIExpo) 2022 was successfully held from 13 to 17 December 2022 at the Hong Kong Convention and Exhibition Centre. This second CIExpo was co-organised by the Development Bureau and the Centre of Science and Technology Industrial Development of Ministry of Housing and Urban-Rural Development of the People's Republic of China, and the CIC. The five-day exhibition attracted over 21,000 visits and 173 exhibitors participated to showcase construction innovations originated from 15 countries and regions. Over 40 local and overseas experts shared their knowledge and experience at the three-day International Conferences with the themes on Modular Integrated Construction (MiC), construction digitalisation, construction safety and health and green construction. Industry leaders also shared the latest trends in construction innovations and opportunities in worldwide and the Greater Bay Area.

CIC Construction Innovation Award 2022

The fourth CIC Construction Innovation Award was organised in 2022 with the aim to spearhead the development, promotion, and implementation of new construction materials, methods, and technologies for enhancing the competitiveness of the construction industry. 12 awards were presented to the winner chosen from the 118 eligible submissions in five categories: International, Construction Productivity, Construction Safety, Construction Sustainability, and Young Innovators.

Publications

Reference Material on Adopting DfMA for MEP Works (A Concise Guide)

Following the practical guidebook published in 2021, a concise version of the guidebook was compiled and released this year for industry stakeholders' ease of reference. This concise version provides key considerations and practical strategies from planning and design phase to implementation phase, encouraging practitioners to make use of prefabrication solutions out of the DfMA spectrum and fully utilize the BIM tool together with lean manufacturing construction principles to achieve value maximisation and waste minimisation. Webinars were also organised to promulgate the Multi-trade Integrated Mechanical, Electrical and Plumbing (MiMEP).

Improving Time, Cost, and Quality Performance of the Hong Kong Construction Industry

The consultancy report "Improving Time, Cost and Quality Performance of the Hong Kong Construction Industry" was released on 17 November 2022. The report recommended 13 strategies in four focus areas: High Productivity Construction; Streamline Approval Process; Drive Adoption of Innovative Technologies; and Enhance Project Management & Procurement with the aim to uplift the industry's competitive strength to cope with the golden decade ahead.



Construction Innovation Expo 2022 Grand Opening Ceremony

Ongoing research projects

To enhance construction productivity, a number of research projects initiated through emerging technologies such as artificial intelligence, robotics, etc.

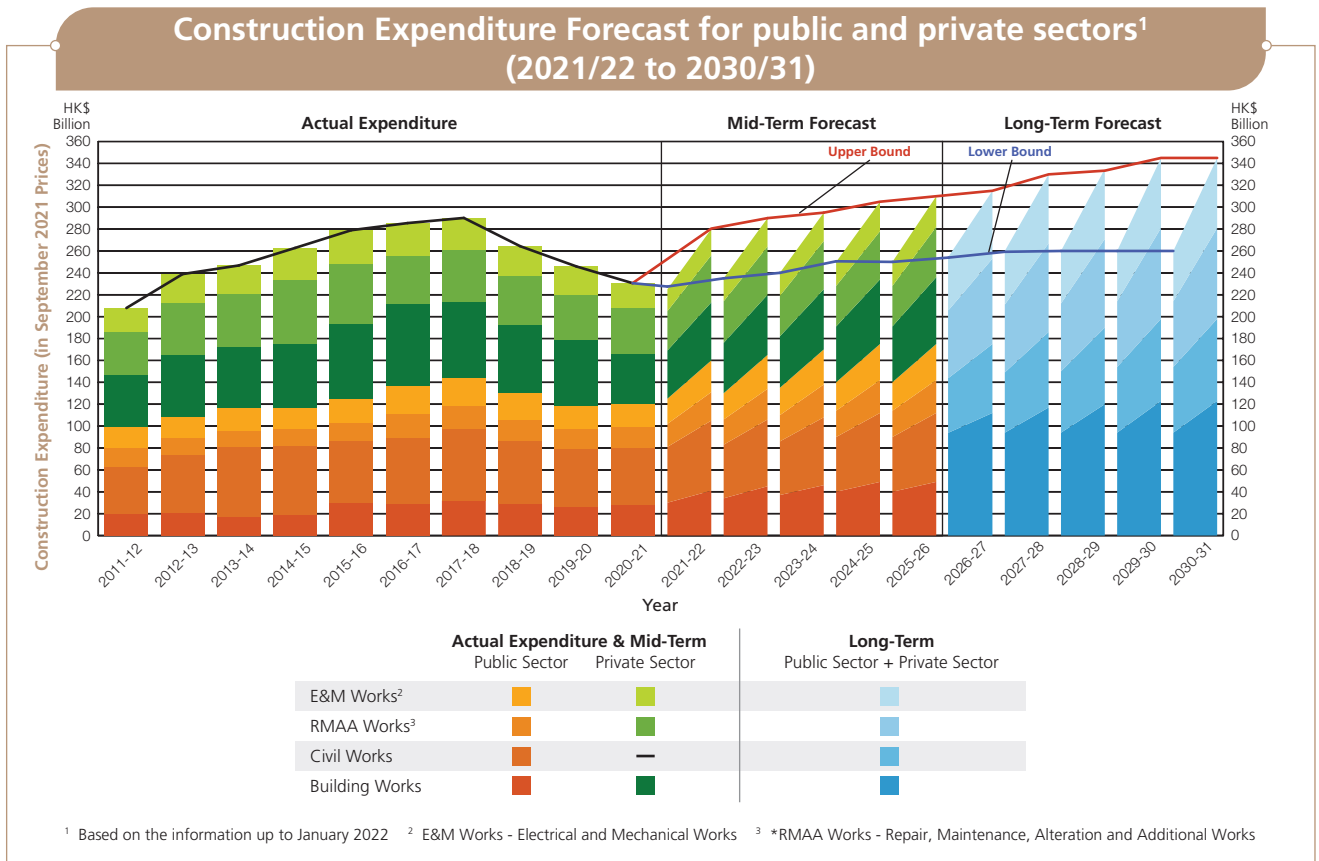
- Study of Artificial Intelligence for Road Surface Depression Detection Using 3D LiDAR Data (conducted by PolyU and the Highways Department as industry partners)
- Development of Artificial Intelligence Rock Type Classification APP for Geotechnical Logging (conducted by HKU)
- Autonomous Mobile Robot for Material Delivery and Site Inspection (conducted by Shui On Construction Company Limited)
- Development of Advanced Seismic Design Guidelines for MiC Buildings in Hong Kong and in the Greater Bay Area (conducted by The Hong Kong Polytechnic University)

Construction Expenditure Forecast

To facilitate policy makers and industry stakeholders in assessing market trends and formulating strategic plans, the CIC continues to forecast the construction expenditure over the next ten years. The latest forecast indicated that, due to the massive demand for housing and infrastructure development, the construction volume was expected to reach between HK\$225 billion and HK\$345 billion (in September 2021 price level) from 2021/22 to 2030/31.

Way Forward

The Com-PRO will continue to explore and take forward initiatives to showcase best practices on smart offsite construction and site management, explore emerging technologies and advanced materials, and facilitate wider adoption of high productivity construction solutions and construction robots for enhancing industry’s productivity. Practical research projects will continue to be supported to incubate innovative solutions in construction.



Construction Safety

The Committee on Construction Safety (Com-CSY) has been developing and taking forward initiatives to foster a positive safety culture and provide guidance and training on safe practices for years, to build a safer working environment for the industry. 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 in different areas based on the strategic direction of preventing fatal and serious construction accidents.

Safety Publications

Four sets of “Reference Material on Safety Roles and Responsibilities of Key Stakeholders in the Hong Kong Construction Industry” with different topics, including Work-above-ground Operation, Erection and Dismantling of Scaffold or Platform, Lifting Operation and Electrical Work, and three sets of reference materials focusing on “Fatal Zone Management”, “Hole Management” and “Smart Safety-related Technologies for Use in Construction Works” were issued, to enhance safety awareness of all the industry stakeholders. Besides, “Guidelines on Site Safety Measures on Working in Hot Weather” had been published to promote the good practice and provision of guidance to the construction industry on measures that may be taken to protect construction workers working in hot weather.

Safety Promotion

The CIC and the Development Bureau continued to co-organise the eleventh consecutive Construction Safety Week (CSW) with the theme of “Safety 2.0”, activities included “Construction Safety Summit 2022”, “Safety Conference”, “Safety X Smart Site Exhibition”, “Site Safety Gathering in Construction Sites Campaign”, as well as “28th Considerate Contractors Site Award Scheme”, “Life First” campaign, etc.

The “Construction Safety Summit 2022” was a great success with the participation of more than 100 participants at the venue, and some 10,000 participants via online live broadcast. The Summit had brought together 46 supporting organisations coming from various sectors of the construction industry to sign the Safety Charter. With the invaluable contribution of all participants in the discussion sessions of the Summit, we had concluded an insightful “Action Plan” mapping out the four way-forward for uplifting construction safety. The “Life First” promotional campaign came to the third year with the support of the industry, in which nearly 80 clients, 180 contractors, and 430 work projects participated in the campaign and they submitted slides and videos to demonstrate the spirit of “SAY NO TO DANGER” with high risk activities for sharing. The CIC also organised the first “Life First” Quiz Competition in CSW, to remind participants about construction safety related information in a fun way and got overwhelming response.



Construction Safety Week 2022 - Safety X Smart Site Exhibition



Construction Safety Summit 2022



Construction Safety Week 2022 – Kick-off Ceremony and Conference

In addition, nine technical webinars themed “Suspended Working Platform (Gondola) Operation”, “Repair, Maintenance, Alteration, Addition – Scaffolding Works Safety”, “Temporary Works and Tower Cranes”, etc. and a “CEO Safety Forum” were organised to promote safety knowledge to the industry stakeholders with a total over 20,000 participants.



“Life First” Promotion Campaign



“Life First” Quiz Competition



OPERATIONAL REVIEW

Safety Training



CIC Master Class on Design for Safety (Project Managers)

The CIC and the Hong Kong Construction Association co-organised the eighth annual “Experiential Learning on Site Safety Training Scheme 2022-23”, for undergraduates who are planning to join the construction industry, to get well-prepared and 400 undergraduates are expected to be benefited from the Scheme. With the aim of fostering the development of Design for Safety, the “CIC Master Class on Design for Safety (Project Managers)” had been launched in October 2022. In addition, “Design for Safety Management System” and related reference material were published, encouraging the industry to resolve the potential risks at the design stage.



“Experiential Learning on Site Safety Training Scheme 2022-23”



Way Forward

With the aim of further enhancing the overall safety performance of the industry, the CIC will adopt a more proactive approach in coming years. Webinars will be held regularly to encourage practitioners to strictly follow and implement relevant site safety measures to prevent accidents. At the same time, the CIC will encourage the industry to enhance construction safety by adopting the four approaches: Site Safety Culture; Design for Safety; Smart Site for Safety; Improvement of Site Safety Management System, with the vision to achieve “zero accidents”.

Environment and Sustainability

Sustainability is an overarching trend for construction industry and the entire world in the coming decades. To promote the best sustainable practices and adoption of innovative technologies to enhance the sustainability performance of the industry, the CIC conducts research, develops tools, standards and guidelines for the industry. The CIC is keen on steering the industry to formulate decarbonisation strategies and devise measures contributing to the Government's fulfillment of its pledge to achieve carbon neutrality by 2050.

Smart Waste Management Tool (SWMT)

One key area of decarbonisation in our city rests on waste reduction. To streamline the existing construction and demolition (C&D) waste management procedures, the CIC has kicked off a research study to evaluate the current C&D waste disposal procedures and policies, and develop the smart waste management system (SWMT), a one-stop digital platform that digitalises processes from waste data collection to management. The platform aims to create single source of truth with reduced manhours and paper usage in waste handling processes, and more importantly enables efficient waste management for projects. The groundwork of the platform has been laid in 2022, the pilot trials and refinement will be made before its launch in 2023.

International Conference on Green Construction and CIC Sustainable Construction Award 2023 Launching Ceremony

To foster a sustainable culture in the construction industry, an International Conference on Green Construction was held on 15 December at the Construction Innovation Expo (CIExpo) 2022. The Conference gathered sustainable construction and green finance experts from China, Singapore, the United Kingdom and Hong Kong to share the latest trend and practices in sustainable construction, attracting over 600 industry stakeholders to attend. Concurrently, the launching ceremony of the CIC Sustainable Construction Award (SCA) 2023 was staged.



OPERATIONAL REVIEW

iBEAM Unison

To facilitate the calculation of buildings' embodied carbon in the design stage directly from BIM models, CIC funded the BEAM Society Limited to conduct a R&D research on developing iBEAM Unison e-platform. The major functions of the platform were developed and the launching ceremony was held on 14 December 2022 in CIExpo 2022. In 2023, the platform will further develop other features to enable users to collect and analyse more environmental performance data of buildings.



CIC Green Product Certification (GPC)

As of December 2022, there were around 800 certified products under the 28 product categories of GPC, making a 33% increase in the cumulative number of certified products under GPC compared to 2021. The CIC will conduct further research in 2023 to review and explore new product categories, and assessment criteria to ensure industry needs on the adoption of more green and low-carbon products are met.

CIC Sustainable Finance Certification Scheme (SFCS)

The SFCS is a common green finance assessment framework customised for the construction. It aims at facilitating the industry to grasp the opportunities in green finance as well as to promote sustainable construction best practices. In 2022, 25 engagement and training sessions were conducted to promote the scheme to both the financial and construction sectors, engaging over 2,900 industry stakeholders and financial practitioners. In the first half of 2022, 17 assessors were trained and accredited under SFCS, increasing the total number of assessors to 29.

Way Forward

In line with Hong Kong's Climate Action Plan 2050, the industry is committed to a sustainable and carbon neutral city. The CIC initiated a consultancy study in late 2022 with a view to develop Strategy and Plan Directional Guideline for the Hong Kong Construction Industry Achieving Carbon Neutrality. The Guideline is targeted to complete within 2023, guiding the direction of industry decarbonisation towards the goal of carbon neutrality in 2050.

The CIC Global Construction Sustainability Forum and Exhibition will also be held in 2023 to promote construction sustainability within the industry and among the general public.

Modular Integrated Construction (MiC)

Led by the Development Bureau and widely promoted and facilitated by the CIC, MiC technology has already been widely adopted in different building types, both in public and private sectors. By the end of 2022, there are more than 90 MiC projects in Hong Kong and over 20 of them have already been successfully completed. The benefits of MiC, in terms of safety, sustainability, productivity and quality etc., have been fully demonstrated by these projects.

MiC Resources Centre Go Full Steam Ahead With “Mi-Infinity”

As part of the “iHub”, MiC Resources Centre received nearly 7,000 visitors in 2022, including students from tertiary and secondary education who intend to join the construction industry. At the same time, the Centre also provided a platform for the industry to communicate and match with their potential clients, so as to encourage the adoption of innovative solutions. In 2022, the Centre renewed three exhibits. To further promote “Mi-Infinity”, the Centre not only showcased MiC projects information and its module connection technologies, but also a number of MiMEP solutions, digital platforms to facilitate fabrication and construction on site, heavy lifting equipment and advanced construction materials.

International Conference on MiC and MiC Achievement Ceremony



MiC Resources Centre organised interactive guided tours for students.

The 4th International Conference on MiC cum MiC Achievement Ceremony was held successfully on 14 December 2022 during the Construction Innovation Expo 2022. Experts from Hong Kong, Mainland China, Singapore and the United Kingdom shared the latest developments and professional advices on MiC in their respective regions and jurisdictions, stimulating a wider MiC adoption in Hong Kong. The 1st MiC Achievement Ceremony aimed to recognise outstanding local MiC advocators, projects and project teammates for their contributions to the adoption of MiC. The event attracted more than 600 attendees.



The first MiC Achievement Ceremony

OPERATIONAL REVIEW

Facilitating Latest Development Transfer and Exchanges

To facilitate MiC knowledge exchange and keep updating the MiC development, in 2022, the CIC organised two webinars attracting over 3,000 attendees.

Four local site visits were also organised in 2022 for the Joint Working Group on MiC, MiC Vetting Sub-committee on CITF, developers and master class students, including visits to Mockup for Tonkin Street Redevelopment Project and MiC Mockup for Hung Shui Kiu Phase IA in October; Student Residence at Wong Chuk Hang Site for the University of Hong Kong in November and December.



The project team shared the concept of the façade design of Mockup for Tonkin Street Redevelopment Project with developers

Meetings with Government Departments and The Real Estate Developers Association of Hong Kong (REDA)

To collect views and concerns of adopting MiC and understand the pain points in private residential development, the CIC organised regular meetings with REDA and related government departments, including Development Bureau, Lands Department, Planning Department, Buildings Department to discuss and respond to the concerns of property developers.

Reference Materials on MiC

The CIC regularly publishes reference materials on MiC to the industry practitioners. In 2022, the CIC issued “Reference Material on Heavy Lifting Operation for MiC Projects”. The CIC also updated “Reference Materials on Use of Digital Technologies for QA / QC of MiC Modules in MiC Factories” and “Reference Material on Adopting DfMA for MEP Works (A Concise Guide)”. As of 31 December 2022, there were over 5,000 downloads for all published reference materials.

MiC Training Programmes for Industry Practitioners

As of December 2022, MiC related training courses were conducted by the HKIC and SPDC and approximately 300 students have been trained in 2022.

CIC Master Class on MiC Project Implementation (Project Managers) was newly introduced with its Kick-off Ceremony being held in August 2022. It was one of the signature courses of the CIC in 2022. Two classes were held in August and November 2022 respectively. There would be a total of 100 graduates from the master class every academic year (four classes).



CIC Master Class on MiC Project Implementation (Project Managers) was one of the signature courses newly introduced in 2022

Way forward

As the demand for high productivity construction continues to grow in Hong Kong and around the world, the CIC will continue to explore innovative technology and collaborate with relevant departments and institutes for promoting the development of “Mi-Infinity”.

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 “green lungs”, breathing new life and clean air into Hong Kong.



Continuous facility upgrades were carried out in CIC-ZCP

10th Anniversary Initiatives

To celebrate the 10th anniversary of the CIC-ZCP, a Minecraft Competition with the theme of “Construct Your Sustainable City” was organised to encourage students to apply the concept of innovative construction technologies as well as environmental sustainability.



The Minecraft Competition encouraged students to construct our ideal, sustainable city together

CIC-ZCP launched an educational reward programme, namely “ZCP Green Heroes”, to encourage primary and secondary school students, as future leaders of our community, to actively participate in various carbon reduction activities organised by CIC-ZCP, to promote the understanding of the importance of sustainable development and carbon neutrality.



The 1st ZCP Green Heroes Acknowledgement Ceremony held in November 2022

OPERATIONAL REVIEW

Diversified Marketing Initiatives

CIC-ZCP aims to engage with the industry and community to promote green construction and low carbon living, various marketing campaigns including Construction Maze, Construction x Coffee @ ZCP Mart 2022, and ZCP Outdoor Electric Vehicles Exhibition were launched and received overwhelming response throughout the year.



The first Electric Vehicles Exhibition promoted the fun of low-carbon mobility and carbon neutrality

MiC Play Unit

The MiC Play Unit was installed featuring the Modular Integrated Construction (MiC) concept which leverages on the technology of component prefabrication to utilise ready-made components to facilitate the installation process, as well as demonstrates the industry's efforts in terms of technology application.



The MiC Play Unit was installed in November 2022 featuring the MiC concept

"Construction Month 2022"

CIC-ZCP presented the annual signature campaign "Construction Month 2022" in November. With the theme of "Leading Towards Carbon Neutrality", the campaign comprised of different captivating events, such as "Making of Hong Kong" Opening Ceremony, Little Architect Day Camp, Industry-wide PR Campaign Launch Ceremony, Low Carbon Movie Night and ZCP Green Market, offering a great platform to unite and encourage the industry as well as the public to explore the "Carbon Neutrality" journey".

Experiential Landmark

CIC-ZCP continually uplifts its facilities to propel the sustainable development and enhance the experience of visitors. Facilities of CIC-ZCP have been enhanced, including the new bio-diesel generator and Greenwall system which aims to increase energy efficiency, reduce carbon emissions, and keep up with the latest energy efficiency standard.

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.

Construction Innovation and Technology Application Centre (CITAC)

In 2022, 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

iHub 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. In 2022, iHub conducted over 280 tours and over 7,500 visitors participated.

Government and local professional bodies, including the Drainage Department, the Architectural Services Department, the Hong Kong Housing Authority, the Housing Society, the Hong Kong Electric Company Limited and the HKIS Senior Members Club 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, had participated in tours to understand and explore the latest development of the Hong Kong construction industry.

Besides the tours at iHub exhibition centers, eight Technical Tours were organised to showcase the adoption of innovations and technologies in major local construction sites during CIExpo 2022. More than 100 professionals joined the site visits.

At CITAC, we are always eager to search for innovative solutions and new technologies to enhance productivity, safety standard and quality control of the construction industry in Hong Kong. In 2022, CITAC has showcased over 50 technologies at CITAC digital platform and more than 400 technologies were showcased as of 31 December 2022.

Increase of i-Club Membership

Benefited from webinars and construction related events, the number of registered organization members and individual members was 950 and 22,300 respectively (as of 31 December 2022), more than 52% growth of individual members since the end of 2021 was recorded. The CITAC will continue to develop attractive i-Club member privileges and networking activities to appeal to industry stakeholders in joining the i-Club community.

OPERATIONAL REVIEW

Industry Engagement – Technology matching

CITAC proactively approached industry practitioners to understand their pain points and needs and sorted our technology ventures for matching, more than 20 engagement activities had been conducted to increase the level of technology adoption by clients, consultants and SME contractors in the local construction industry. 83 SME contractors, six project clients, three consultants and 13 large-scale contractors connected to the technology suppliers during the matching events.

Industry Engagement – ConTech Accelerator

The CIC and Hong Kong Science and Technology Parks Corporation (HKSTP) jointly launched Hong Kong's first ConTech-focused innovation accelerator programme in July 2022. Engaged 20 leading contractors, this programme created a unique platform to expedite the adoption of novel technologies and materials for enhancing safety, sustainability and productivity performance of the Hong Kong construction industry. This one-year programme is anticipated to drive the commercialisation and wider applications of the related technologies in construction.



The CIC and HKSTP launched Hong Kong's first ConTech-focused innovation acceleration programme – the ConTech Accelerator.

Way Forward

The CIC will establish a CIC Innovation Platform. This integrated platform aims to accelerate, facilitate, and drive the implementation and application of innovative technologies in construction.

Hong Kong Institute of Construction

2022 is full of challenges for the Hong Kong Institute of Construction (HKIC) due to the COVID-19 pandemic. Nevertheless, with the joint efforts of its staff, HKIC achieved fruitful results in various aspects.

To align the development of training and trade testing with the needs of the industry, the Course Advisory Panel under Construction Industry Training Council was renamed to Trade Advisory Panel in 2022. Training and testing contents were further improved by introducing new construction technologies and enhancing collaborations with the industry in training and trade testing for nurturing more outstanding construction talents.

With the goal of becoming a leading construction training academy in Asia within five years, HKIC formulated Development Blueprint for Manpower Training of Construction Industry in June 2022, covering four areas of training as the pillars of HKIC: Trade Skills Development; Professional Development; Technology / Modern Methods of Construction / Modern Construction Management and Sustainability; and Construction Safety.

Training

In response to the future manpower needs of the industry, the CIC decided to increase the training target for Senior and Intermediate Tradesman to 10,000 (for the period from 1 April 2022 to 31 March 2023) in April 2022. As of 31 December 2022, the student enrollment of HKIC's relevant programmes and Collaborative Training Schemes reached nearly 9,439, which amounted to 94% of the target.

In 2022, the total number of students enrolled in the HKIC Full-time and Part-time programmes was 53,162.

To enhance the professionalism of specialist trade contractors and to groom their future leaders, HKIC, in partnership with the Registered Specialist Trade Contractors Federation, launched a new Part-time Diploma in Construction for Specialist Trades Management programme in September 2022. The new programme took the lead to provide training to the practitioners of four specialist trades in the areas of latest construction technologies, construction methods, smart safety management, Building Information Modelling (BIM), sustainable development, human resources management, team communication and coordination, etc. A number of new programmes were launched to meet the training needs of the industry as well, including Full-time short programmes: Certificate in Repair, Maintenance, Alteration and Addition (Building Construction), Certificate in Repair, Maintenance, Alteration and Addition (Electrical and Mechanical), Certificate in Refrigeration, Air-conditioning & Ventilation, Certificate in Fire Service Electrical Fitting and Certificate in Fire Service Mechanical Fitting and Part-time intensive programmes: Certificate in Electrical Wiremen (Intermediate Tradesman), Certificate in Plumbing and Pipe-fitting (Intermediate Tradesman), Certificate in Site Surveying (Intermediate Tradesman) and Foundation Certificate in Metal Scaffolder (Intermediate Tradesman); Part-time Intermediate Trade Test Preparatory programmes: Leveller, and Painter and Decorator; and Certificate in Safety Enhancement to Erection & Dismantling of Truss-out Bamboo Scaffolds.

The Foundation Certificate in Construction Safety (2-day Green Card course) was implemented in all Full-time programmes. It is planned to open for the public enrollment in 2023 to enhance the safety awareness of the industry practitioners.

OPERATIONAL REVIEW

Whole Person Development

In addition to mastering professional craft skills and industry knowledge, HKIC also encouraged students to participate in various sports activities and competitions, in order to nurture their all-round development and team spirit, including 'CIC Online Happy Run 2022' and 'Construction Industry 5-a-side Football Competition 2022' organised by the Construction Industry Sports and Volunteering Programme (CISVP), Jockey Club 'Water Sports 4 All' Programme – Interschool Indoor Rowing Competition 2022 and the 'HKIC Baduanjin Qigong Competition' co-organised by HKIC and the Health Qigong Association of Hong Kong, China.



HKIC Football Team

Besides, HKIC is committed to cultivating a caring and compassionate attitude among students. Students and teaching staff participated in different outreach volunteer activities every weekend. For instance, 370 students participated in the '18 Districts Lo Pan Rice' campaign jointly organised by the CIC and the Hong Kong Construction Association.



'18 Districts Lo Pan Rice' Campaign

For nurturing students' sense of Craftsmanship for their study and work, HKIC does not only integrate the elements of craftsmanship into teaching materials and assessment of Whole Person Development modules (if applicable), but also invites outstanding craftsmen from Chinese traditional trades to conduct various workshops. They inspired students to apply the essence of craftsman spirit in their study and work in future.

HKIC arranged silent tribute in the morning assembly on the second Friday of the month after a fatal industrial accident, to mourn deceased worker and to analyse the causes of accident with students so as to learn the lesson. HKIC's silent tribute was also adopted by the industry, where contractors of each working site organise their own silent tribute for working hands to promote safety culture.



Workshop on Mini Pawn Shop Sign Ornament

Uplifting Training Venues

The Lam Tei Training Ground, replacing the Wai Lok Street Training Ground in Yau Tong, started its operation in September 2022 to provide timber formwork and bar bending training for Full-time programmes students.

In late 2022, Safety Experience Training Centre was further uplifted with three new equipment including Safety Harness and Fall Experience Plant, Mobile Elevated Working Platform and Confined Space Module to enhance students' awareness of working at height and in confined space.



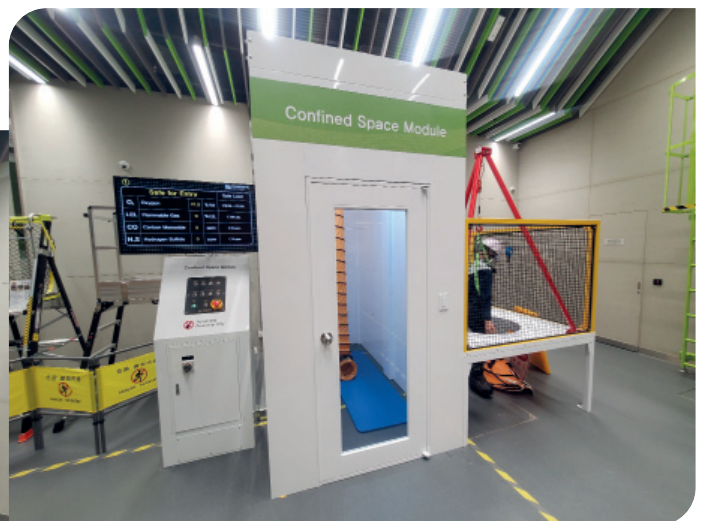
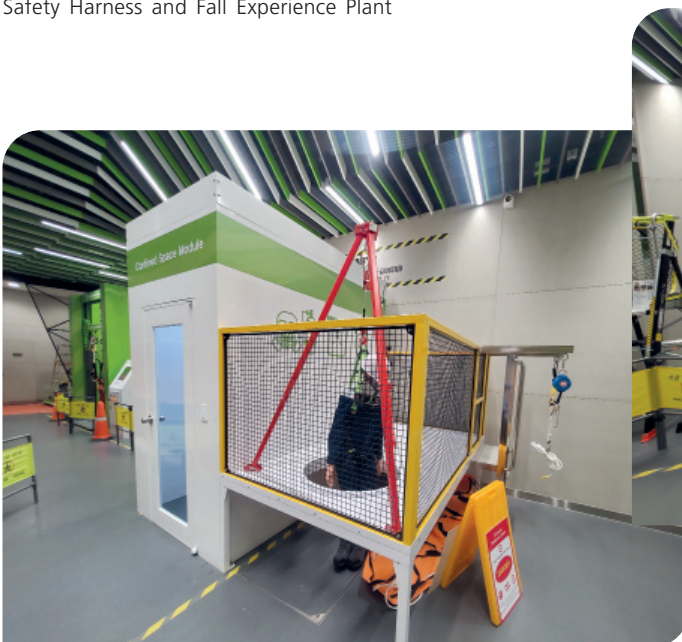
The Lam Tei Training Ground started to operate since September 2022



Safety Harness and Fall Experience Plant



Mobile Elevated Working Platform



Confined Space Module

OPERATIONAL REVIEW

School of Professional Development in Construction

To promote 'Construction 2.0', support the industry development and cater for the industry demand on training, the School of Professional Development in Construction (SPDC) is committed to providing advanced professional and continuous training for the practitioners. In 2022, CIC Master Class on Modular Integrated Construction (MiC) Project Implementation (Project Managers), CIC Master Class on Common Data Environment (Project Managers), CIC Master Class on Design for Safety (Project Managers) and CIC Master Class on Temporary Works (Engineers and Supervisors) were launched.



CIC Master Class on MiC Project Implementation (Project Managers) Kick-off Ceremony

In addition, on promoting popularisation of Building Information Modelling (BIM), SPDC launched the training programme in BIM for BIM Viewer. It aims to equip construction practitioners with the ability and knowledge of BIM viewing and commenting skills. By the end of 2022, over 700 students enrolled in the programme.



Training Programme in BIM for BIM Viewer

To expand the publicity coverage and broaden the reach of programmes, SPDC promoted its programmes via Electronic Direct Mail to the alumni, contractors and sub-contractors under CIC's registration schemes, newsfeed in CIC's social media platforms including Facebook, Instagram and LinkedIn, placing banners on HKIC website and advertising on CIC Newsletter 'Construction Post'.

SPDC proactively reached out to industry stakeholders and professional associations to promote the training programmes to their members and employees, and expand SPDC's collaboration network. For example, the Hong Kong Federation of Electrical and Mechanical Contractors Limited, the Real Estate Developers Association of Hong Kong, Hong Kong Housing Society, Gammon Construction Limited and Hip Hing Construction Co. Ltd.

The Construction Industry Council Approved Technical Talents Training Programmes

HKIC understood students' strong demand for career support services. The Construction Industry Council Approved Technical Talents Training Programmes (CICATP) articulated with the Part-time programmes of 'Professional Diploma in Construction for Specialist Trades' and 'Diploma in Construction' in academic year 2022/23. About 130 students participated in these dual-track programmes, allowing them to acquire academic qualifications, apply the skills and knowledge learnt in the workplace and gain practical working experience concurrently.

To train more new blood and upskill the existing workers, the training places of CICATP was increased to 620 in 2022/23 with great support and funding from the Government. The number of trades covered in the scheme extended to 23, straddling all the trades in 'Enhanced Construction Manpower Training Scheme'. In September 2022, the 'On-the-job Skill Consolidation Subsidy Scheme' was also launched to subsidise employers with a monthly allowance of HK\$2,500 who employ the graduates of the 'Enhanced Construction Manpower Training Scheme', with monthly salary not less than HK\$15,000 for nine months. This scheme encourages employers to provide the HKIC graduates with on-the-job training and continuous employment. HKIC expects, through the CICATP, more talents with both skills and qualifications could be nurtured to meet the manpower demand of the construction industry.

Programme Accreditation and Progression Pathway

The four Advanced Diploma programmes were successfully revamped, accredited at QF Level 4, and offered in 2022. Together with the previously accredited programmes, the total number of HKIC qualifications currently recognised under the Hong Kong Qualifications Framework (HKQF) has reached 29.

The new Professional Diploma in Construction for Specialist Trades programme with five streams pitching at QF Level 4 was successfully introduced in 2022. With the offer of this programme, HKIC provides articulation for students to progress from Certificate in Construction (QF Level 2), through Diploma in Construction (QF Level 3), to this new Professional Diploma programme. Students on Full-time mode of study may progress onto the next level of study on the newly offered part-time-day mode and join the 2-year CICATP for advancement to become skilled workers.

To further extend the articulation pathway, HKIC has been actively liaising with local tertiary institutions to offer degree programmes for graduates of Advanced Diploma and Professional Diploma in Construction for Specialist Trades programmes (all at QF Level 4). Graduates would receive module exemptions when joining specific degree programmes, thus reducing relevant study time.

OPERATIONAL REVIEW

Professional Recognitions

In addition to academic articulation opportunities, HKIC has also been seeking professional recognitions for the Advanced Diploma and Professional Diploma in Construction for Specialist Trades programmes. For example, in December 2022, the Advanced Diploma in Building Construction Supervision programmes was first recognised by Buildings Department as an acceptable academic qualification for Technically Competent Person (TCP) T2 to T3 for site supervision of relevant streams under the Supervision Plan System.

On 18 November 2022, HKIC signed a Memorandum of Intent (MOI) with the 'Hong Kong Institute of Construction Managers' (HKICM), with a view to promoting professional recognition of HKIC's programmes by HKICM, strengthening as well as actively examining exchange and collaboration on construction manpower training between the parties, and deepening the cooperative relationship with each other. HKICM has approved-in-principle the accreditation of Advanced Diploma and Professional Diploma in Construction for Specialist Trades programmes to its Associate Class of Membership. Other professional bodies offering recognitions to Advanced Diploma and / or Professional Diploma in Construction for Specialist Trades programmes include The Hong Kong Institute of Clerks of Works and Chartered Association of Building Engineers, etc.



Signing of Memorandum of Intent (MOI) between HKIC and the Hong Kong Institute of Construction Managers

Trainings on Quality Assurance and Qualification Framework

HKIC continuously provides different trainings on quality assurance (QA) and qualification framework (QF) for its staff members. In 2022, HKIC has arranged for its staff a total of 30 training sessions on QA and QF with number of participants reaching 582. These trainings cover topics including HKQF, internal programme validation and programme accreditation, teaching materials and assessments design, marking for assessments, online learning management system, industry and site attachment scheme etc. To allow greater flexibility for staff to engage into relevant trainings, HKIC is also offering e-learning modules on QA and QF on online platform. Assessments for these modules provide staff an opportunity to self-evaluate their understanding of a topic.

As the major provider of vocational and professional education and training (VPET) for the construction industry in Hong Kong, HKIC would continue to obtain QF recognition for its programmes to facilitate lifelong learning of its students. In 2022, HKIC had kicked-off preparation for revamping eight of its Full-time short programmes and are planning to seek accreditation at QF Level 2 in 2023. The Institute also aims at submitting the application for 'Programme Area Accreditation' (PAA) at QF Level 3 in the near future. Relevant preparation work, including liaison with Hong Kong Council for Accreditation of Academic and Vocational Qualifications, will commence in 2023.

To help students stay abreast of the latest practices and development of the construction industry, and strengthen the relationship between HKIC and the industry, the Institute would establish a 'Visiting Scholar / Guest Lecturer Scheme' in 2023 and invite experienced industry practitioners and professionals to join. An appointment ceremony is anticipated to be held by Q3 in 2023.



Trainings on QA and QF for staff members

Student Recruitment, Student Development and Career Support Services

Within the year, HKIC proactively recruited students, assisted them with job placement while providing them with moral and civic education.

HKIC participated in the 'Education and Careers Expo 2022' which was held from 21 to 24 July 2022. The event organiser designated one of the exhibition days as 'Construction Theme Day – Exploring Construction', with seminar on BIM and sharing by Worldskills Competition contestants, to introduce HKIC programmes and prospects in the construction industry. The award presentation ceremony of the Construction Industry Machinery Operation Competition 2021 was also held on the same day. To reach more targeted students, HKIC also actively participated in various education exhibitions, including the 'Virtual Information Expo on Multiple Pathways 2022' organised by the Education Bureau and the 'Ming Pao Education Expo'.



HKIC joined the 'Education and Careers Expo 2022' in mid-July

HKIC continued to broadcast the TV Announcements in the Public Interest (API), 'Construction Pathway Project', through social media channels (YouTube & Facebook), and outdoor media (MTR TV). The API with a theme of construction innovation and technology had generated nearly 850,000 views cumulatively.



HKIC promoted Full-time year-long programmes and the "Construction Pathway Project" to secondary school students through various school talks.

The number of subscribers to the HKIC YouTube channel increased by about 35% this year and the total number of visitors of the HKIC website also increased to 1,318,594 in 2022, a substantial increase of 30% as compared with 2021, and the total number of pageviews were 4,255,088.

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Further to the 'STEM Alliance – 3D Home Design Competition' held in 2020 to promote the construction innovation – BIM among secondary school students, the HKIC 'STEM Alliance' launched the 'My Future Campus 3D Design Competition' in 2022. The competition encouraged secondary students to acquire basic knowledge on BIM and its application software to utilise creativity, and to design ideal campuses under the theme of smart campus, sustainable development and shared space. A total of 17 teams were shortlisted to the final competition. Through the competition, HKIC successfully promoted the BIM Viewer training to secondary schools and a total of 78 students completed the programme and obtained certificates.



'My Future Campus 3D Design Competition'

Besides, as the Education Bureau would step up its efforts to promote STEAM (Science, Technology, Engineering, Arts and Mathematics) education at primary and secondary schools, the HKIC has transformed the 'STEM Alliance' to 'STEAM Alliance', to dovetail with future education policies and directions, and to support the future innovation and technology development in Hong Kong.

Looking forward, HKIC will continue to make best efforts to further enhance the brand awareness, diversify the promotional channels, make use of website and social media promotions and also leverage on the promotion of the Construction Hong Kong Campaign 'Design for Future Build for Life', commenced in November 2022, to attract youth to participate in HKIC's training and join the construction industry.

Enhance Students' Sense of Belonging towards HKIC

To facilitate newly joined students from Full-time (1 year or above) programmes to familiarise with the institute life and to strengthen their sense of belonging to HKIC, an adventure training day camp was organised in September 2022 with about 380 students participated. About 90% of the participants agreed that apart from strengthening their knowledge and skills in setting the personal learning and career goals, this activity could also enhance their communication skills and establish team spirit.

Promote National Identity

To strengthen students' national identity and the sense of belongings towards our country, HKIC continued to provide various training activities in collaboration with the Hong Kong Army Cadets Association in 2022. They included seminars on 'The National Flag, National Emblem and National Anthem of the People's Republic of China', book exhibition and film appreciation on 'The History of the Development of the National Flag, National Anthem and National Emblem', etc.

Besides, students of Full-time Year-long programmes were encouraged to join the HKIC Flag-raising Team with the provision of structural training on the flag-raising and foot-drill. They served as flag-raisers and flag-bearers in the flag-raising ceremonies organised by the CIC and HKIC. In the solemn Flag-raising ceremony, members of the flag-raising team and the participating students witnessed the national flag rising, hereby to embrace the responsibility of contributing to the national development as a 'Construction Young Person' in future.

Career Support Services

HKIC offered graduates a wide range of employment services and training opportunities. It was also committed to expanding apprenticeship training and facilitating students to develop their strengths to join the construction industry. The first class of the Diploma in Construction (Bar Bending & Fixing) sponsored by the Hong Kong Bar-Bending Contractors Association was completed in August 2022. This sponsorship programme has been extended to the formwork industry, and the Hong Kong Formwork Contractors Association will sponsor new Diploma in Construction (Formwork) students. Employers also gave priorities to the graduates participated in the sponsorship scheme during recruitment which strengthens students' determination to complete the programmes and further contribution to the construction industry.

The success of the HKIC depends on the support and trust of the industry for years. Deepening industry collaboration could help students to establish networks and grasp the industry development. The 'Employers Appreciation Ceremony cum the 3rd Outstanding Alumni Award Presentation Ceremony and the Pledging Ceremony of WorldSkills Competition 2022' was held successfully to appreciate the employers who staunchly supported the training of HKIC through the year and to congratulate outstanding alumni for their achievements.

In view of the importance of construction youth development, 'Construction Industry Council Youth Affairs Committee' (CICYAC) was established by the CIC in 2022, which served to formulate the future direction of the youth development policy of the construction industry in Hong Kong, to make recommendations that meet the needs of youth in their developmental stages (including short-, mid- and long-term), and to develop a comprehensive blueprint for the development of youth in the construction industry. The preparatory work of the CICYAC was in full swing with signature events, like the 'Hong Kong Construction Industry Youth Development Blueprint Forum', the briefing session to non-governmental organisations on 'Youth Life Planning Activities Subsidy Scheme', the organisation of 'Youth Sports Teams', the 'Construction FunRun', and the coordination of drama performances, to encourage young people to broaden their horizons, understand the structures and development prospects of the construction industry.



Hong Kong Construction Industry Youth Development Blueprint Forum



The Employers Appreciation Ceremony cum the 3rd Outstanding Alumni Award Presentation Ceremony and the Pledging Ceremony of WorldSkills Competition 2022

OPERATIONAL REVIEW

Collaborative Training Schemes

In addition to the provision of Full-time and Part-time programmes, to meet the manpower demand of intermediate tradesmen and senior tradesmen, HKIC offers a variety of Collaborative Training Schemes to provide comprehensive and structured craft trainings for construction practitioners. With the support from chambers of commerce, main contractors, employers, trade unions and training bodies, the enrollment number was 3,678 whereas the graduation number was 2,075 for the Collaboration Training Schemes in 2022.

HKIC newly launched the 'Intermediate Tradesman Collaborative Training Scheme (Skills Enhancement Courses)'. Through the partnership with training bodies, a 50-hour training programme was offered to registered general workers who possess relevant working experience for upgrading to registered semi-skilled workers. At the same time, trades of 'Window Frame Installer', 'False Ceiling Installer', 'Curtain Wall Installer', 'Glazier', 'RMAA (Building Construction)' and 'RMAA (Electrical and Mechanical)' were newly introduced in the Collaborative Training Schemes in order to meet the training needs of the industry and to work in line with HKIC's four pillars under the Development Blueprint for Manpower Training of Construction Industry.

From time to time, HKIC co-organised with Social Welfare Organisations and construction practitioners (including Registered Specialist Trade Contractors Federation and Hong Kong Construction Sub-Contractors Association) to hold the Intermediate Tradesman Collaborative Training Scheme (ITCTS) Recruitment Days for recruiting students who are interested in joining construction industry to participate in the training.

HKIC arranged 70 ITCTS Recruitment Days and promotion booths in various districts in 2022, attracting more than 1,000 job seekers to participate the activities and on-the-spot interviews. A promotion booth was also set up at CIC Service Centre (Kowloon Bay) to promote Collaborative Training Schemes.



ITCTS Recruitment Days co-organised by HKIC, Labour Department, Social Welfare Organisations and construction practitioners

HKIC established the approved trainer list in 2022 to record the average passing rate of all students trained by each site trainer in the past year. The relevant site trainer's performance became one of the consideration factors for future applications and thus to improve the effectiveness of training schemes. During the year, 276 site trainers participated in 31 'Site Trainers and Trade Test Exchange Sessions' and 219 site trainers completed 5-day 'Certificate in Instructing Techniques for Site Trainers' programme in 2022 to strengthen their teaching and instructing skills for Collaborative Training Schemes, and to improve students' passing rates.

In the coming years, in consultation with stakeholders, HKIC will explore and introduce more work trades under the Collaborative Training Schemes to alleviate manpower shortage in construction industry.



Collaborative Training Schemes BIM Awareness Seminar and Workshop

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 UFSF-TP through the ‘first-hire-then-train’ mode. As of 31 December 2022, over 140 trainees, including Arborist Trainees and Tree Climber Trainees, have thus far participated in the programme as recommended by their employers ranging from government departments, landscape, arboriculture, construction companies to consultants.

To assist these trainees in acquiring professional skills, HKIC arranged soft skills and knowledge enhancement courses in the form of group activities, lectures and field trips. Their overall competency development was assessed through several rounds of assessments which included mid-year & final written and practical fieldwork of tree risk assessments or tree climbing assessments.

To promote the UFSF-TP, HKIC arranged a series of promotion activities, which included a feature story in the newsletter of Hong Kong Institute of Landscape Architects and CIC’s Construction Post, video interviews with employers, trainees and training tutors, recruitment talks at job fairs and collaboration with various associations and organisations on digital media platforms.

Urban Forestry Support fund – Trainee Programme



OPERATIONAL REVIEW

Encouraging non-Chinese Speakers to Join the Construction Industry

HKIC attaches great importance to the employment development and needs of non-Chinese speakers, English classes of various training programmes are therefore offered. In 2022, the English class of 'Certificate for Ground Investigation Assistant' programme was newly launched to assist the non-Chinese speakers to join the construction industry after the completion of HKIC's training. To encourage non-Chinese speakers to participate in Collaborative Training Schemes, HKIC jointly organised Non-Chinese speakers Recruitment Day with Registered Specialist Trade Contractors to assist employers in recruiting non-Chinese speakers. HKIC also participated in 'Carnival: Inspiring Hong Kong' organised by HK Nepalese Federation and 'Job Expo – Building a Multicultural Workplace' organised by Labour Department to encourage non-Chinese speakers to join the construction industry.



'Carnival: Inspiring Hong Kong' organised by HK Nepalese Federation

HKIC organised The EM (Ethnic Minority) Culture Day in Construction Month 2022. Through incorporating elements of exhibitions, art, music and language, HKIC facilitated the mutual understanding and exchange between non-Chinese speakers and Chinese speakers and raise public awareness of the life and culture of non-Chinese speakers. This event connected with the community and passed on the professionalism of the construction industry in Hong Kong.



EM Culture Day

Trade Testing

The Hong Kong Construction Industry Trade Testing Centre (HKCITTC) continues to strive for providing independent, equitable and creditable trade testing services. In 2022, the HKCITTC incorporated several new elements in trade test in the hope of leading the industry to adopt the latest technologies and higher safety standard. In addition, to further improve the efficiency of trade test, the HKCITTC continually implemented a series of work to ameliorate the test process and enhance trade test related systems. And the HKCITTC also carried out numerous communication work with the industry to strengthen recognition of trade test, thus to improve the recognition of workers' skills.

Advocate the Adoption of Good Practice of Work in the Industry

Upgrade Trade Testing Workstations to Simulate Real Site Environment

The HKCITTC endeavours to upgrade the trade testing workstations in recent years in pursuit of an optimised simulation of the actual workplace threats one may encounter in construction sites. Such Simulation not only tests the response capability of candidates, but also effectively promote good practice of work.



Introduction of simulating works on external wall at height in Plumber trade test

Introduce 'Protection and Handover Works'

The HKCITTC introduced 'Protection and Handover Works' requirements into trade test this year and encouraged the industry to protect the upstream works prior to work; and ensure each construction work is finished in compliance with industry standard and touch up on work before handover and housekeep after work, to achieve high standards in all aspects. Additional time is offered in trade tests for candidates to carry out 'Safety Assessment Prior to Work', 'Protection to Work Site Prior to Work' and 'Final Touch-up on Work before Handover', in order to spread the 'Protection and Handover Works' culture and habit from trade test to the industry, and soon become the industry principles and standard operating procedure.



Switch and pipes newly introduced in Painting trade test

OPERATIONAL REVIEW

Introduce Safety Assessment Prior to Work

The HKCITTC wished to promote good practice of safety assessment prior to work to candidates and to raise candidates' awareness of safety before, during and after works. Therefore, the HKCITTC tightened the standard of trade test risk and safety assessment in 2022 by bringing scenarios imitating potential threats of real-life construction site into trade test and testing candidates' response capability.



Controlled scenarios imitating potential threats into trade test environment

Timely Update on Trade Test Contents

The HKCITTC strives to keep trade test contents abreast of time and to maintain close contact with industry stakeholders. In 2022, the HKCITTC organised regular meetings with Trade Advisory Panels and 57 trade test exchange meetings to listen to the industry stakeholders, understanding the latest market trends and application of new technologies and tools. The HKCITTC has been constantly updating trade test contents and purchasing new equipment to keep up with the actual operation and market needs.



Trade Advisory Panel members visited HKCITTC and joined the exchange meeting

Active Promotion of Trade Test Recognition

Continual and Closely Connected with the Industry to Boost Trade Test Recognition

The HKCITTC organised a total of 49 stakeholder exchange sessions and 27 trade testing seminars in 2022 to actively promote trade test qualification and the high skill level of certified workers. Support and recognition were received from various stakeholders; some incorporated the minimum skilled worker requirement in their construction work contracts, some specified the skilled worker qualification requirements in their employment contracts. Trade test qualification is moreover recognised by various government departments and their respective programmes or projects, such as the Hong Kong Fire Services Department, the Electrical and Mechanical Services Department and the Labour Department.



Property Management Services Authority visited the HKCITTC



Annual open day event organised by the HKCITTC

In 2022, the HKCITTC joined hands with the Urban Renewal Authority and Property Management Services Authority to promote trade test qualification towards owners and property management practitioners, including introduction of trade test qualification and elaboration on its application in renovation, repair or maintenance works.



Promoting trade test qualification and its application in the Building Rehabilitation Platform of the Urban Renewal Authority

Source: <https://www.ura.org.hk/> & <https://brplatform.org.hk/en>

OPERATIONAL REVIEW

Continuous Enhancement of Trade Test Operation Digitalisation and Test Capacity

Further Reinforce Digitalisation and Automation Process

The HKCITTC continued to enhance the Trade Test Management System (TTMS) in 2022, widening the integration scope between TTMS and Training Management System of HKIC and Collaboration Scheme Department, with the aim of optimising administrative procedures, and streamlining the trade test application handling processes.

In addition, in the hope of further increasing the efficiency of assessment and scoring procedures in practical tests, the HKCITTC has developed the e-Assessment System (phase 1) and conducted pilot run in Metal Scaffolding trade in 2022. The HKCITTC has also completed the design of e-Scheduling system in the year to allow better management and reallocation of manpower and workshop resources, etc. The system will be developed and put into operation in 2023. The HKCITTC has as well extended e-written test to Training Course for Persons Working on Suspended Working Platforms (Gondolas) so as to increase the bulk data handling efficiency and accuracy.



Pilot run of e-Assessment System in Metal Scaffolding Trade

Flexible Deployment of Manpower Resources to Support Full Implementation of 7-day Operation of HKCITTC

The HKCITTC has been providing 7-day operation services in order to facilitate the attending of trade test during public holidays. To facilitate such arrangement, invigilators can flexibly plan their work ahead to better fit the operational needs across 7 days of a week, for example resting on workstation restoration days while working on Saturdays, Sundays or Public Holidays. Human resources is henceforth more easily reallocated and fully utilised, especially in view of the pushing forward of the 7-day operation.

Workers Registration

Workers Registration overcame acute challenges brought by the fifth wave of the COVID-19 pandemic and grasped the opportunities to bring wellness and development for registered workers with the easing of the pandemic situation.

Registration Figures

The Workers Registration Office (WRO) processed 50,351 new registrations and 89,887 renewal applications in 2022. The sum increased almost 3% compared to previous year and showed the pandemic did not reduce the service demand.

Registration Category	Number of Registered Workers (as at 31/12/2022)	Number of Registered Workers (as at 31/12/2021)
Registered Skilled Worker	205,356	206,411
Registered Semi-skilled Worker	36,409	34,628
Registered General Worker	367,562	343,265
Total	609,327	584,304

Combating Pandemic

The WRO provided uninterrupted registration services during the fifth wave of the pandemic. Contactless registration was welcomed by workers and over 93% of applications submitted during the pandemic were via “easyJob” mobile app, online electronic form and postal. The CIC Service Centres resumed normal services immediately when the pandemic went under control.

Incentivise Upskill

Workers are construction industry’s biggest asset. Any strategy sought to transform the industry could not be achieved without having the right talents to lay the foundation. There was a considerable pool of Registered General Workers with diversity of skills and experiences. In order to address future skills and capabilities demand, the CIC nurtured the upskill atmosphere.

Construction Workers Professional Development Scheme was launched in the year. Registered General Workers who passed designated trade test to become Registered Skilled Workers were awarded with cash prize of HK\$5,000.



Promotion poster of Electronic Channels for Construction Workers Registration

OPERATIONAL REVIEW



Publicity of Construction Workers Professional Development Scheme

The Scholarship for Family Member of the Registered Workers 2022 was also organised to support family members of construction workers with outstanding results in the Hong Kong Diploma of Secondary Education (HKDSE). It also recognised the skilled worker family members of the awardees to set a demonstration for fellow workers on the professional status of attaining skill qualification.

Showing Care

Industry news were disseminated to workers such as Vaccine Pass implementation at construction sites, updates of training courses and trade tests. To continue our support to registered workers under the pandemic, the CIC extended the waiver of the construction workers registration and renewal fees for another year from 1 October 2022 to 30 September 2023. The CIC has waived the relevant fees for construction workers for four consecutive years in total with a sum of approximate HK\$38 million.

“Medical Examination Scheme for Registered Construction Workers” benefited 3,019 workers who paid HK\$10 to receive a medical check-up.



Promotion poster of “Medical Examination Scheme for Registered Construction Workers”

We celebrated festive joy with workers and cared about their well-being in relation to the seasonal impact on their work through seasonal giveaways such as red packets, electrolyte drink powder and card cases.

Family Events

A series of family friendly events were held in this year's Construction Workers Festival including: Territory-wide Physical Fitness Survey for the Community, Construction Industry Exhibition Hub guided tours, Optimal Spinal Health Talk, Seminar / Webinar on “Road to Construction Professional – Refrigeration / Air-conditioning / Ventilation Mechanic”, and “Quit to Win” Smoke-free Community Campaign recruitment session.



Construction Industry Exhibition Hub guided tours



Optimal Spinal Health Talk

Enforcement of CWRO

The CIC is committed to promoting the construction industry in compliance with the statutory requirements of the Construction Workers Registration Ordinance (Cap. 583) (CWRO), including employment of registered construction workers for carrying out construction works on construction sites and submission of workers daily attendance records (DAR).

Amidst the COVID-19 pandemic, the Inspection and Enforcement Team was able to meet the target inspection of the year. In 2022, a total of 1,509 inspections on construction sites and 2,433 compliance checks on DAR submitted by principal contractors were conducted in accordance with requirements in the CWRO.

Regarding prosecution work, a total of 337 summonses were issued for prosecution of the suspected offenders. Including cases brought forward from previous year, 216 summonses, all relating to failure in submitting DAR within the prescribed statutory period, resulted in convictions in 2022.

To continue to raise awareness of contractors to comply with the CWRO, publicity on the CWRO related seminars was disseminated through email and instant messaging tools. Industry stakeholders are encouraged to refresh their understanding on CWRO regularly.

The Inspection and Enforcement Team continued to perform site check on anti-epidemic measures and a total of 1,043 sites were inspected during the year.



The Inspection and Enforcement Team conducted inspection at construction site

Way Forward

The industry faces a pressing need for a skillful workforce to deliver upcoming new projects and to transform the industry. Looking forward the following initiatives will be further intensified:

- Big data analytics on registered workers data to provide insightful information for training, upskill programs and workforce trend;
- Outreach to the registered workers currently not engaged in the construction industry to join the industry; and
- Upskill Registered General Workers to become Skilled or Semi-skilled Workers through training or incentive schemes.

Registered Specialist Trade Contractors Scheme

Professional and Resilient Specialist Trade Contractors

The Registered Specialist Trade Contractors Scheme (RSTCS) recorded the advancement of the registered companies. Despite the impact of the COVID-19 pandemic, as of December 2022, there were 7,685 registered companies, including 1,545 Registered Specialist Trade Contractors (RSTC) applicable to the 11 designated trades and 6,140 Registered Subcontractors applicable to other common civil, building and electrical and mechanical trades. The RSTCS is widely supported by the industry, especially by the public sector such as the Development Bureau, the Hong Kong Housing Authority, the Airport Authority Hong Kong and the MTR Corporation Limited etc., which have mandated the implementation of RSTCS in their projects. To facilitate a broader adoption of the RSTCS among private sector projects, representative from the Buildings Department had been invited to join the Committee on RSTCS from mid-July 2022. Furthermore, a set of reference model contract clauses for engagement of subcontractors registered under the RSTCS was also published on the Scheme website in June 2022.

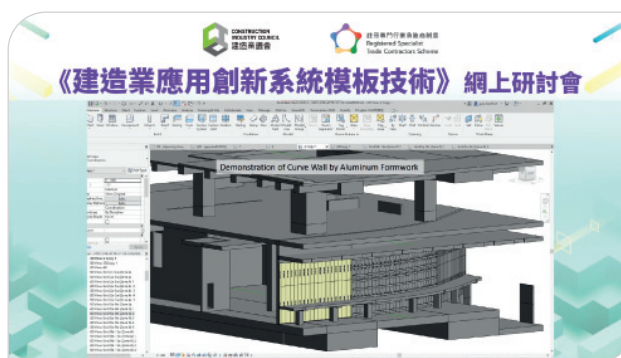
Ignite Specialist Professionalism with Innovative Insight

Specialist trade contractors are sharing productivity, sustainability, safety and workers' wellness responsibilities. During the year, the RSTCS organised the "Specialist Trade Technical Webinar series" to showcase the achievements, good practice and innovative technology adoption of the specialist trades. Around 3,800 representatives from registered companies and industry stakeholders participated in the Webinar series:

- April – Concreting Formwork
- July – Curtain Wall and Demolition
- August – Erection of Concrete Precast Component and Scaffolding
- October – Suspended Ceiling and Plastering
- November – Reinforcement Bar Fixing



Showcase of how BIM optimised rebar fixing works in Leadership Summit 2022



Introduced the innovative modular integrated aluminium formwork system in Technical Webinar

Designated Innovative Technology Workshops were held successively in October and November for collaborative parties such as Hong Kong Construction Sub-Contractors Association and Registered Specialist Trade Contractors Federation, to promote building and safety technologies in smart construction sites and brainstorm solutions amongst stakeholders to resolve difficulties in adoption of technologies.



Stakeholders shared their views at the Innovative Technology Workshop

Moreover, the series of “specialist trade good practice manual” was launched during the year which aimed to promulgate good practice on site among specialist trade contractors, front-line practitioners as well as other industry stakeholders. The Hong Kong Polytechnic University consultant team was engaged to compile the first three manuals covering concreting, concreting formwork and reinforcement bar fixing specialist trades.

Continuous Enhancement to the RSTCS

Three designated trades joined the RSTCS in the year, namely suspended ceiling, tower crane (erecting, dismantling and altering height) and building drainage installation. The RSTCS was keeping the momentum of development to cover 11 designated trades in 2022 from only the seven trades in the beginning of 2019.



Three new designated trades implemented respectively in April and September together with the latest sixth element of registration of “Integrity Management”

While foreseeing an increasing trend in construction expenditures, a corruption-free environment is crucial to ensure a fair-share of the achievements. The new Integrity Management as the sixth element of registration of the RSTCS was implemented in April this year, regulating all registered companies to submit integrity policy and arrange their senior management staff to complete recognized integrity

training. We also proactively and closely cooperated with Independent Commission Against Corruption (ICAC) to promulgate extensively the Construction Industry Integrity Charter and recognized integrity trainings amongst all registered companies and industry stakeholders through our regular induction workshops, electronic direct mails, the designated webinar in February and the joint press conference in September which were well-received by the industry with over 5,100 attendees.



Mr CHAN Chi-chiu, Chairperson of Committee on RSTCS and Mr. FOK Kwong-man, Kenny, Assistant Director, Corruption Prevention 2 of the ICAC co-hosted the press conference in September

Build Up Capability of Future Leaders

The RSTCS aims to enhance capabilities of registered companies’ young leaders to prepare them to be future leaders to transform the industry in terms of Mi-infinity, digitalisation and sustainability.

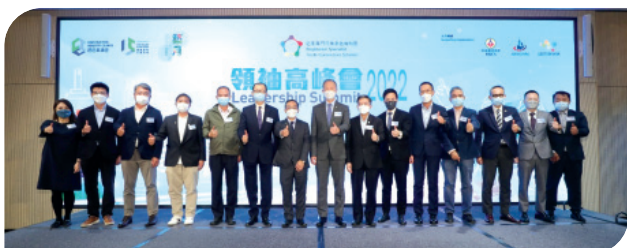
A designated i-Hub tour cum “Happy Hour” sharing session was held in July to let young leaders experience the latest technologies and share with each other their experience of adoption. We encouraged all young leaders to be BIM Viewer and arranged designated training classes for them in September. We also arranged a dedicated site visit to an iconic project ‘The Henderson’ in core Central, which was a valuable experience for our young leaders of the RSTCS in December.

OPERATIONAL REVIEW



Ir Thomas HO, Chairman of the CIC led our Young Leaders to visit the construction site of “The Henderson” in Central

This year concluded with the biennial Leadership Summit of RSTCS under the theme of Ignite Innovative Skills. The Summit demonstrated how RSTCs adopted new technologies in their projects and attracted over 1,400 representatives from registered companies and industry stakeholders with overwhelming positive feedbacks received.



The Committee on RSTCS kicked-off Leadership Summit 2022 with guests in November

Stepped Up Regulatory Actions

The Committee on RSTCS instigates regulatory actions against registered companies on court convictions as well as breach of the Rules and Procedures for 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.

In view of the impactful fatal accidents happened during the year, the Committee on RSTCS stepped up regulatory actions on concerned companies involved in the fatal accidents with immediate sanctions imposed after hearings where appropriate.

During the year, a total of 36 registered companies were regulated, mainly in relation to violations of safety and anti-bribery legislations. The concerned companies were sanctioned with suspension of registration for 3 to 12 months.

Way Forward

Looking forward, RSTCS registered companies would face challenges to handle the growing complexities and to have closer cross trades collaborations with other stakeholders in public and private construction contracts. It is also expected industry transformation will be speedy. The RSTCS would focus on the following areas:

- Build up the brand of RSTCS with elevated registration requirements and expanded coverage;
- Regulate improper behaviour to provide clear signal to the sector on significance of upkeep safety and professionalism;
- Promulgate good practices in terms of technical competence and governance.

Technically Competent Persons Registration Scheme

The Technically Competent Persons Registration Scheme (TCPRS), which facilitates supervision plan submission under the Buildings Ordinance (Cap. 123), gauges the supply of Technically Competent Persons (TCPs) and enhances their quality, skills and knowledge through continuous training, had recorded steady growth of registrants with over 3,300 registered TCPs by the end of 2022.

Launched the Continuous Competence Development Model

TCPs played a pivotal supervision role in construction projects and thus the TCPRS puts emphasis on professional development of TCPs. Registered TCPs are encouraged to complete continuous learning via the Continuous Competence Development (CCD) model launched during the year. The CCD model comprises three core pillars, namely statutory requirements, advanced construction practices, and environment, health and safety. The new CCD module in TCPRS Portal and mobile App was launched simultaneously to facilitate the recording of learning for TCPs.



Recognised HKIC Course as T3 Academic Qualification

Being the very first Hong Kong Institute of Construction advanced diploma recognised as T3 academic requirement, graduates of HKIC’s Advanced Diploma in Building Construction Supervision with relevant work experience could register as TCP of grade T2 or T3, they could also seize articulation opportunities to advance their career paths.

Developed Business Platform for Registered TCPs

To facilitate industry stakeholders to identify suitable TCPs for supervision works and supervision plan submission, the enhanced online TCP List contained registered TCPs’ registration information with advanced search function to enable business matching.

Way Forward

The CIC would collaborate with the Buildings Department to encourage the practicing TCPs to register under the TCPRS through a diversified channels via promotion, industry liaison and CCD activities.

OPERATIONAL REVIEW

Construction Innovation and Technology Fund (CITF)

Booster for Technological Transformation

The Construction Innovation and Technology Fund (CITF) continued 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 2022, a total of 4,216 applications were received, among which 2,931 applications were approved with an accumulative approved amount increased to HK\$795 million in 2022. The amount approved in 2022 is equivalent to 39% of the accumulated amount in the past three years.

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 985 in 2022. The total accumulative number of small and medium enterprises (SMEs)¹ supported increased by 20% to 580 in 2022, indicating the wider adoption of new technologies among SMEs. More than 14,893 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.

Subsequent to the completion of the CITF Mid-Term Review to assess the effectiveness of CITF and identify ways for improvement after two years of operation, the major CITF enhancement measures were launched on 1 January 2022, featuring substantial uplift to the per-technology and per-applicant fund ceilings under the BIM and ACT categories and some new funding modes for BIM training, Pioneering Application of new technologies in Hong Kong and support to Multi-trade Integrated Mechanical, Electrical and Plumbing (MiMEP) adoption. The major enhancement measures successfully boosted up the number of applications by 1,175, representing a 39% increase in the accumulative number of applications in 2022. In addition to the major enhancement, some more minor enhancement measures have been implemented in 2022 including earlier disbursement arrangement to relieve cash flow pressure of applicants, streamlined approval process to further reduce the processing time of funding applications and the new subsidy of 15% on course fee on top of the basic 70% subsidy for BIM training for CIC-Certified BIM Co-ordinators (CCBC) and CIC-Certified BIM Managers (CCBM) to further boost the supply of CCBC and CCBM.

The CITF Pre-approved Lists had undergone a comprehensive review in 2022 to ensure the appropriateness of the pre-approved items. In 2022, the advanced construction technologies, BIM software and BIM training courses on the pre-approved Lists continued to expand and by the end of 2022, there were 622 pre-approved items.

¹ Small and Medium Enterprises refer to organisations which employ fewer than 50 persons.

Focused Engagement of 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 amidst the COVID-19 pandemic. In 2022, the CITF Secretariat delivered or participated in a total of 92 promulgation activities including 31 CITF briefing and case sharing sessions, 37 cross-departmental or external party events and 24 tailor-made briefings to specific groups of industry stakeholders. To further encourage SMEs and subcontractors to adopt innovative and advanced technologies, a series of technology forums were delivered in collaboration with the Registration Services team to key subcontractors and small general contractors trade associations including the Hong Kong General Building Contractors Association and Hong Kong Registered Contractors Association to promote the latest CITF enhancement measures and pre-approved technologies applicable to their specific work trades.

Way Forward

Entering into the fifth year of operation of the CITF, an outreach team will be added to boost the promotion to a wider range of eligible applicants at project level. A comprehensive overall review will also be conducted to consolidate the experience of the previous four years and set forth the next step to boost the cultivation of innovative mindset and continuous development of the construction industry through financial support.



Technology forums for introducing specific technologies to contractor associations

OPERATIONAL REVIEW

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 2022, C-SECT conducted four interactive and refresher training workshops on corporate governance and writing skills. Through Grade Management, C-SECT critically reviewed and provided constructive advice / suggestions to uplift the quality of secretarial services delivered by various CIC business units on a regular basis.

Release of Informative Publications

C-SECT published the bilingual "CIC 2022 Major Work Plans" and the revamped "Information for Council Members" booklet in February 2022. The electronic version of "CIC 2022 Major Work Plans" is available at the CIC website and the "Information for Council Members" booklet was sent to the new Council Members in February 2022. In addition, the "Corporate Secretariat Operation Manual" has been updated and uploaded to the CIC website for staff reference.

Latest Updates of the CIC Fellows

Following the establishment of the CIC Fellows in 2021, a new initiative called the "CIC Members cum Fellows Visit Programme" commenced in 2022. Nine visits to various CIC premises / facilities were held on a bi-weekly basis. The first visit was held on 5 August 2022 at the HKIC Kwai Chung Campus, followed by visits to the Hong Kong Construction Industry Trade Testing Centre, the HKIC Sheung Shui Campus and Tai Po Training Ground, etc. The visiting groups put forward valuable improvement suggestions on the operation of various departments / business units, which helped to further strengthen the corporate governance of the Council.

In addition, the CIC Fellows Annual Event cum Luncheon was held on 20 December 2022. The luncheon was followed by a guided tour to the Advanced Manufacturing Centre in Tseung Kwan O.

Supporting Election Events

C-SECT was tasked to provide administrative and secretarial support to the election events for the Council. Two candidates' forums were organised on 10 December 2022 for the 2022 Legislative Council Election Committee Constituency By-election and the Hong Kong Special Administrative Region (HKSAR) to the 14th National People's Congress Deputies Poll. Both forums were attended by around 90 election committee members and candidates in total. The success of these events manifested the commitment of CIC to civic responsibility and the construction industry.

Support to the Hong Kong Engineering Science & Technology Award 2022

The Hong Kong Academy of Engineering Sciences (HKAES), supported by the Innovation and Technology Fund of the HKSAR Government, launched the inaugural Hong Kong Engineering Science & Technology (HKEST) Award in 2022 to recognise outstanding contributions and excellence among younger generations in Hong Kong for their dedication and achievements in the arena of engineering, science and technology. The CIC was seen as closely related to the nurturing and / or the development of engineering science and technology in Hong Kong and was invited by the HKAES to nominate up to three potential candidates for award consideration. The C-SECT invited nominations from a total of 53 industry / stakeholder organisations and formed a judging panel to decide on CIC's prioritised nominations. Finally, two out of seven submissions were nominated by the CIC's Judging Panel to the HKAES. CIC's support of the HKEST Award affirmed CIC's recognised status in the construction industry.

Way Forward

In 2023, the C-SECT will continue to perform its supportive functions to the Council, the Executive Committee and the CIC Fellows, and to enhance the quality and standard of our secretarial services. Looking ahead, in addition to striving for high standards in corporate governance of the CIC, the CIC Fellows is also committed to contributing to the whole-person development of HKIC students. A preliminary idea of an interactive sharing session between CIC Fellows and HKIC students on management skills, career / life experience and technical skills / knowledge is in the brewing process, hoping to help students develop a positive attitude to life. In particular, the C-SECT will prepare an orientation for new Council Members and publish the bilingual "CIC 2023 Major Work Plans" in early 2023.

OPERATIONAL REVIEW

Corporate Communications

The corporate communications Department continues to implement comprehensive promotion strategies and maintains effective communications with industry stakeholders in a professional manner to upkeep the CIC's goodwill and leadership among the industry. The Department manages promotions, stakeholders, public and media relations, Construction Industry Sports and Volunteering Programme (CISVP) and crisis management for the CIC.

The Industry-wide PR campaign

To promote the professional image of the construction industry and attract new blood, the CIC and the Development Bureau has launched the "Design for Future, Build for Life" Construction Hong Kong PR Campaign. The Corporate Communications Department of the CIC has been working closely with the Bureau and organised the launching ceremony in November 2022, attracting at least 15 media to cover the event. Through diversional platforms, which include TV advertisement, website, social media tools, etc., the campaign reaches the community widely. The industry-wide Campaign also includes Master Talks, site visits and career talks, sowing seeds for the future of the construction industry. The CIC also launched two columns "Safety Walk with Thomas" and "CIC-See What I See" to share with the industry and general public on the latest development of construction technology and pioneering insights.



"Safety Walk with Thomas" column to share on advance construction technology

Connecting the Industry

The Corporate Communications Department worked closely with different departments to organise the "Celebration for the 15th Anniversary of the Construction Industry Council and the Hong Kong Construction Exhibition Grand Opening Ceremony", with the Honourable John LEE, Chief Executive of the HKSAR Government officiated at the grand ceremony. The Construction Innovation Expo was another highlight event of the CIC in 2022 where Corporate Communications Department took the leading role of promotion. Apart from online event listing and social media platforms, outdoor billboard advertisements were also placed outside tunnels.



Celebration for the 15th Anniversary of the Construction Industry Council and the Hong Kong Construction Exhibition Grand Opening Ceremony

To provide an exchange platform for the Government and industry stakeholders, the Corporate Communications Department has launched a series of "See What I See Luncheon". Six luncheons were held in 2022 with honour to have the then Director of Architectural Services, Ms. Winnie HO; Chief Executive Officer of Mass Transit Railway Corporation (MTR), Dr Jacob Kam; Managing Director of the Urban Renewal Authority (URA), Ir WAI Chi-sing; Chairman of the Business Environment Council and Chief Executive of Gammon, Mr. Kevin O'Brien, Secretary of Transport and Logistics, Ir LAM Sai-Hung, and Permanent Secretary for Development (Works), Ir LAU Chun-kit, Ricky, as our keynote

speakers. A celebratory luncheon was also held to bid farewell to former Chairman of the CIC, Dr. CHAN Ka-kui, and retired Council Members.



CIC-See What I see event

Caring and Energising the Community

Commitment to corporate social responsibility has always been one of the major initiatives of the CIC. Once the Government has lifted its anti-pandemic measures and gradually resumed normal operations, the Construction Industry Sports & Volunteering Programme (CISVP) immediately rolled out a number of events including Construction Industry Volunteer Award Presentation Ceremony, Construction Industry Lo Pan Rice Campaign, Construction Industry Shoreline Clean-up Day, Construction Industry Table Tennis Competition, Construction Industry Basketball League, etc. New programme named “CISVP Let’s Workout Together Scheme” has also been launched with an aim to promote regular exercise through cooperating with schools to provide free sports facilities. With the support of the industry, CISVP recorded over 12,421 participants (man-time), 156,817 volunteering service hours and 65,835 beneficiaries (man-time).



CISVP Lo Pan Rice

Supporting Resumption of Normalcy

Earlier in 2022, where Hong Kong suffered from the fifth wave of COVID-19 pandemic, the Corporate Communications Department did not only assist the implementation of Construction Industry COVID-19 Testing Day, but also extended the “Construction Industry Caring Campaign” into its 2.0 phase (Campaign 2.0) to aid construction workers. As of 31 December, two phases approved nearly 15,000 applications, with an amount of \$56 million approximately.



Construction Industry COVID-19 Testing Day

Way Forward

The Corporate Communications Department will continue to safeguard the image of the CIC and the industry, and to cope with challenges, with an innovative mindset and professional attitude. The Department will strive to promote innovative construction technology continually and encourage industry’s sustainable development by hosting different events and campaigns. To motivate the young generation, the Department will also organise the Construction Industry Outstanding Young Person Award, hoping to contribute to the betterment of the industry.

OPERATIONAL REVIEW

Human Resources

The Human Resources Department provides professional human resources support to operational teams in areas of manpower planning, talent acquisition & retention, and talent development. Our main objective is to ensure that our policies and operations support the sustainable development of the CIC.

The Administration Department ensures the administration activities and work environment run smoothly and efficiently by providing coordination and co-operation amongst operational teams. Our main objective is to utilise resources effectively and efficiently through standardization, automation and adoption of new technology.

Implement People Initiatives

With a view to competing for attracting and retaining talents, Human Resources department implemented a number of people initiatives in 2022. These measures included, Alternate 4-day Work-Week (“Alt-4 arrangement”), Extending Retirement Age to 65, Building Career Ladder for Staff; and, Supporting Continued Learning. The Alt-4 arrangement was formally commenced on 1 July 2022. This measure is a pioneer in the market and a lot of preparation work had been done since early 2022 to engage support from staff and Line Managers, including a “Work Smarter Campaign”, to encourage staff to adopt work smarter measures and build an efficient working environment together. Regular reviews on the effectiveness of the Alt-4 arrangement were conducted after its implementation. A corporate-wide Staff Opinion Survey was held in December 2022 with an enthusiastic participation rate of 100%. The Survey indicated that 92% of staff agree that the Alt-4 arrangement has enhanced their overall well-being and 91% has transformed their work pattern to Work Smarter.

Optimize Learning Experience

The CIC made available various learning platforms to encourage a learning culture amongst staff. An online “LinkedIn Learning” has been made available to all staff to access a 24/7 year-round free tool to learn. In 2022, the average LinkedIn learning hours per staff was 26 hours and near 94% of staff have fulfilled / largely fulfilled the learning requirement of 48 hours per year.

We continue to engage the Education University of Hong Kong to organize the Certificate of Learning & Teaching Programme (CLT) to equip 32 new joined teaching staff with the required teaching skill. The Continuous Learning Programme (CLP) was also conducted by the Education University to 192 serving teaching staff to refresh and update their learning and teaching knowledge.

Two “All-rounded Presentation” workshops were held in April and August 2022 to update 22 management staff with a brand new design presentation skill in an audience-centric approach and to grasp the keys to make an impressive presentation image. The Career GPS Mentorship Programme was also commenced in 2022 to develop talents for succession planning. 22 mentees were nominated and assigned to six mentors respectively. External mentors were also invited either as mentors to senior management staff to share their personal experience, career challenges and success stories.

Seven workshops were held in 2022 to make staff aware of various ordinances relating to their daily duties, including two on the Prevention of Bribery, two on Equal Opportunities, two on the Protection of Personal Data and one on Protection of Intellectual Property. A total participation of 1,411, including new joined staff and serving staff attended these ordinance awareness workshops. An in-house training organized in 2022 included a customized Smart Customer Service and Operations Workshop held in November for 25 front-line staff.

Encourage Collaboration

To strengthen the bond among staff and to facilitate cross-team collaboration, Human Resources department organised eight “Staff Engagement Workshop” from August to December 2022 and 212 staff participated, including new staff, serving staff and culture champions. Feedback from staff were positive and they opined that the workshop was able to enhance staff’s understanding of the CIC, reinforce CIC’s core values, as well as foster Work Smarter and Team Collaboration.

A Management Retreat was held in June 2022 to advocate department to work together for the bigger interest. The Retreat was joined by the CIC Chairman, the Executive Director and over 20 management staff with the aim to reinforce the importance of collaboration and synergy.

Combat the Spread of Pandemic

The Administration Department sourced and distributed over 45,000 Rapid Antigen Test (RAT) kits to support frontline staff and operation team in 2022. Additional disinfection, cleaning and fogging services were arranged whenever necessary. In April 2022, the Administration Department supported the Development Bureau to dispatch more than 1 million RAT kits and masks to over 1,400 contractors for distribution to more than 120,000 construction workers and personnel.

Handle Public Enquiries

The CIC hotline call volume in 2022 reached 230,000 which is 50% more than 2021. To maintain our services to handle public enquiries effectively, the Administration Department reshuffled and arranged extra manpower to support the hotline. The Administration department also reviewed the demand and workflow of various administration services to achieve work efficiency and save cost.

Reduce CIC Workplace Carbon Footprint

Green initiatives were deployed to enhance the awareness in the use of paper in CIC workplace. The paper consumption in 2022 reduced around 27% when compared with 2021. As some best practices were implemented, the overall electricity consumption in 2021 and 2022 was stable and achieved around 13% reduction when compared to 2020.

Way Forward

To cope with the challenges ahead and to support the sustainable development of the CIC, the Human Resources Department will review, update and re-design the manpower structure of the CIC to ensure that our structure, job grading, job titles, etc. are market comparable, align with organization strategic goals and meet the challenges of attracting and retaining talents. We shall further enhance continuous learning opportunities for staff to gain practical experience from the market and to groom and develop potential talents to grow and build their career within the CIC. Various staff engagement activities will also be held to strengthen the core values of the CIC, to encourage new ways of thinking as well as to facilitate cross team collaboration.

Administration team will continue to reinforce green mindset amongst staff, promote green workplace and actively encourage waste reduction, energy saving and waste separation to reduce carbon footprint. We shall further adopt robotic automation and expand the work scope of intelligent robots. Plans have been made to deploy robots to virtual reception, document dispatch, cleaning, disinfection and security patrol.

OPERATIONAL REVIEW

Corporate Safety

Corporate Safety Department (CST) is taking ownership of the safety and health of all CIC staff, students and those who can be affected by the CIC's operations and activities. CST implements and maintains a safety and healthy management system for ensuring CIC's day-to-day operation with excellent safety standard and also provides zero-harm environment for all stakeholders.

Digitalisation of Occupational Health Assessment

In view of supporting paperless policy and effective enhancement, the whole process of Display Screen Equipment Assessment has been digitalised. Apart from the digitalised and streamlined process, digital dashboard has been established for progress monitoring on the assessment.

Online Training Platform for Occupational Safety & Health Training

Development of online training platform brings convenience and allows OS&H training to be carried out at various locations within the CIC. At the same time, staff are able to pick time slots to complete watching the training video clip. Relevant quiz is arranged to ensure the level of understanding on training material.

Leading Internal Anti-epidemic Work

In view of the prevention of COVID-19, CST takes lead to decide and implement preventive measures within the CIC. At the same time, CST also works closely with all departments to tackle problems during for daily operation.

Way Forward

Corporate Safety Department will continue to ensure a safe environment for all CIC's operations. In the long run, Corporate Safety Department will also be devoted to cultivating the safety-first culture and to stimulate the advancement of our safety performance within the organisation, in order to cope with the advancement of the industry's best practice and safety standard.

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, Alterations & Additions Work and new development works, optimizing space utilisation, and the adoption of Building Information Modelling (BIM) and Internet of Things (IoT) technology 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.

Facilities and Assets Management

Development, integration and implementation of BIM and IoT into Estates Office Management System for asset management and facilities management in Hong Kong Institute of Construction (HKIC) Kowloon Bay Campus and Hong Kong Construction Industry Trade Testing Centre were completed in Q4 2022.

Modification works for enhancement of space utilization at office of Hong Kong Construction Industry Trade Testing Centre, office of HKIC-Kowloon Bay Campus and part of Canteen of HKIC-Sheung Shui Campus were completed in Q4 2022.

Replacement works of existing lifts at HKIC-Kowloon Bay Campus, HKIC-Kwai Chung Campus (KCC) and HKIC-Sheung Shui Campus (SSC) commenced in Q4 2022 with an anticipated date for completion in Q4 2024.

Set up of Lam Tei Training Ground (LTTG) for HKIC was completed in Q3 2022. The development was required to accommodate the courses mainly operated in the former Wai Lok Street Training Ground which had to be vacated and handed back to the Government for development. The project scopes involved statutory submissions, site clearance, site formation, noise barrier, temporary building erection, street fire hydrant, building services installation works, relocation works and reinstatement of Wai Lok Street Training Ground, etc. After project completion, LTTG now serves formwork and re-bar fixing training courses.

Way Forward

Estates Office will continue to work in concert with HKIC campuses, Trade Testing Centre, Service Centres and CIC-ZCP to carry out the facilities enhancement works for their built environment.

At the same time, we will forecast, plan and implement by overall consideration of facility and space utilization of properties to accommodate the future organization growth & practical needs of the CIC.

The team will continue to deploy, develop and integrate BIM and IoT into EO management system for facility management and asset management in other campuses (HKIC-SSC and HKIC-KCC).

Deployment of CCTV analytic with A.I. will be applied to facilitate the facility management of CIC premises, and integrated with other building systems and IoT devices, to setup Centralized Monitoring Dashboard Platform and perform different kinds of smart building applications, including General Building Status and Facilities Portfolio, Building Insight such as Energy Management and Saving Forecasting, Indoor Comfort and Building Health Status, Predictive Monitoring and Simulation, and ESG & Carbon Tracking. We will also work towards applying for temporary vacant government land and setting up new training ground for HKIC.

OPERATIONAL REVIEW

Information Technology

Information Technology Department (ITD) is responsible for the strategic development, coordination, maintenance, and operations of all information services and technology for the CIC. The primary duties of the ITD included IT Strategy implementation, enterprise architecture, IT demand management, enterprise applications implementation, application development, data management, cybersecurity, network and infrastructure services, service desk, and workspace technologies, etc. The ITD strives to provide excellent employee or customer-centric solutions through one-stop service and user experience principles.

Big Data Cultivation

CIC aimed to foster a data-driven culture in day-to-day operations. The ITD implemented technology infrastructure, including a data lake, data management platform, and analytic platform in 2022, and the benefits were being seen gradually with more insights drawn from data. To minimize maintenance effort, automatic data loading processes are also deployed for various databases, including CWRS, DAR, TMS, TTMS, LEVY, and SRMS. An internal dashboard reflecting all the key figures about trade had also been developed for use by various divisions.

Enhancing Cybersecurity in the CIC

To protect sensitive data and maintain business continuity by preventing cyberattacks, IT departments successfully initiated and completed several initiatives to enhance CIC's cybersecurity. Four protection solutions recommended by the consultant were implemented: Network Access Control, Data Leak Prevention, Privilege Access Management, and Web Application Firewall. Implementation of a Cybersecurity Assessment framework and set up necessary people, processes, and technologies to

continuously improve the protection of CIC's IT Systems and Data. ITD also set up the Annual Red Team Exercise, Cyber Threat Intelligence, Mobile Device Management, Endpoint Management of 1,000 endpoints and 300 servers, and Single-Sign-On and Multi-Factor Authentication for enhancing CIC's Cybersecurity Posture. The ITD also reviewed and reconfigured the network to segregate networks for different types of devices to lower the security risks arising from less manageable IoT devices while at the same time consolidated various cloud hosting services for different websites and applications into one enterprise subscription for increased usage visibility, manageability, and enhanced security.

Customer Centricity Services

The information technology department completed various projects to improve customer centricity and digitalization this year, including:

- Completed the e-service upgrade for LEVY Assessment and Collection System in Jul 2022 which is ready for industry-wide electronic adoption planned in mid-2023 to replace the paper submission.
- Completed the roadmap and design for the "Construction Worker Superapp" planned for launch in 2023 with additional features such as electronic construction worker registration cards, trade-specific or site-specific push notifications, and one-stop digital CIC services.
- Initiated the "CIC OnePass" project to assign a single online identity for CIC stakeholders to facilitate single account to log into all CIC systems.

- Adoption of digital tools to enhance efficiency, including e-Signature platform (i.e., Adobe Acrobat Sign) Faster Payment System (FPS) and Payme as well as e-tendering system (launch scheduled for Jun 2023).
- Network bandwidth upgraded for training grounds and various CIC offices / campuses accompanied with simplified Wi-Fi connection method to allow staff to use Wi-Fi more securely without registration and configuration by the IT department.

Digitalisation of HKIC

In 2022, ITD assisted HKIC in the following:

- Completion of the online programme application system for all 1-year and 2-year full-time programmes in mid-2023.
- Completed the “Student Grading Management System” development to facilitate grade input and transcript printing.
- Enhanced the eSurvey system for HKIC to compare teaching feedback from graduates year-on-year.
- Launched Trade Test eAssessment in November 2022.

IT Modernization and Enabling Technologies

Digital infrastructure must be modern and up-to-date to tackle the fast pacing world. Below technologies are adopted:

- Implemented a Low-code Application Platform (LCAP), OutSystems, as a standard platform for future external-facing applications. The platform is expected to cut short development time by 40%.

- Acquired an API Connectivity and Management platform to speed up system development, encourage code reuse, and enhance security.
- Acquired a “Centralization Web Content Management Platform” to support content management and publishing workflows for all future websites. CIC will benefit from lowered management and maintenance costs, and enhance cybersecurity in the long run.

Governance

- Acquired a Social Media Management Platform to enhance social media publishing workflow effectiveness.
- Award two consultancy projects to review and develop relevant IT and Data Privacy Policies & Procedures.
- Implemented IT Service Management Platform (ServiceNow). Associated processes and procedures are reviewed to ensure the full adoption of IT service management practices for enhanced IT service levels.

Way Forward

To drive the digital transformation journey of CIC, a 3-Year IT transformation roadmap was finalised to further transform the CIC into a digital organisation. The 3-Year IT transformation roadmap identified and prioritized 26 IT and Digital Transformation initiatives, including enhance employee experience, Improve Learning Experience, Teaching Quality and Optimize Resource Utilization, Industry Development Promotion, One-stop Service for Workers and Further uplift Cybersecurity Posture.

OPERATIONAL REVIEW

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 of 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.

Key and Signature Achievements in 2022

IA reviewed the operational, financial and compliance control matters on management of Collaboration Scheme, Personal Data Protection, Registered Specialist Trade Contractors Scheme, Competent Persons Registration Scheme, Human Resources and Corporate Communications Department. 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 six months.

With input from head of each division / department, Executive Director and Council Chairperson, a corporate-wide risk assessment exercise was conducted at year end of 2022. Top risks were highlighted to senior management.

Starting from November 2022, IA handled external complaints and carried out investigation when necessary.

Way Forward

In the coming years, IA will continue cooperating 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.

To further enhance the governance of the CIC and to assure adequate control procedures are in place, IA would continue to review the operation manuals of all departments and facilitate the drafting in organisation-wide policies such as Complaint Handling Policy.

Procurement

The Procurement Department strives to understand stakeholders' requirements and support the CIC's operations by fulfilling internal purchase requests, as well as managing transactions of goods and services, with the aim of ensuring compliance of procurement procedures and maximum efficiency of transaction flow and reporting.

Management of Major Tenders

The Procurement Department managed various major tenders in regard to consultancy and general services in 2022, including:

- Online Course Enrolment Platform and System Integration Services for Hong Kong Institute of Construction;
- General Services for Medical Examination Scheme for Registered Construction Workers;
- e-Tendering Platform and System Integration Services;
- Provision of the services for the Promotion and Publicity Campaign for the Construction Industry of Hong Kong;
- Consultancy Services on Digitalising Construction for Enhancing Project Delivery;
- Consultancy Services on Development and Implementation of Smart Waste Management Plug-in;
- Centralised Authentication Service;
- Centralised Web Content Management System;
- Hyper-converged infrastructure and Implementation Service;
- Network Attached Storage and Implementation Service;
- Computer Leasing and Procurement Services;
- SMS Sending Services; and
- Mailroom Service

The Department also assisted the CIC in carrying out tenders for numbers of large-scale events and facility uplifting projects, such as:

- Event Management and Production Services for Opening Ceremony of the Construction Exhibition Celebrating the 15th Anniversary of the Construction Industry Council and the 25th Anniversary of the Establishment of the HKSAR;

- Replacement Work of Existing Lifts at Kowloon Bay Campus, Kwai Chung Campus, and Sheung Shui Campus for Hong Kong Institute of Construction (HKIC); and
- Supply and Delivery of Equipment for PPE Zone and Working at Height Zone of Safety Experience and Training Centre at Hong Kong Institute of Construction – Kwai Chung Campus.

Project and Supplier Management

The Procurement Department continues supporting the administration works of the Project Committee, in order to ensure all projects are being handled in compliance with the Project Management Handbook (Non-Capital Projects).

The Department also continues our journey in digitalization transformation aiming to increase operation efficiency and ensure data security. The digitalization initiatives include: Supplier Portal implementation that has been successfully launched in the 2nd half of 2022, allowing electronic submissions of proposals for the Request for Quotation (RFQ) and Request for Proposal (RFP) as well as Supplier Registration and Information Management; initiation of e-signature reducing turnaround time for approval process and electronic documents management; and E-tendering systems initial implementation allows electronic submissions, assessment and operation for the Request for Tender (RFT). The Department also maintains and expands the supplier database continuously, with conducting regular review of suppliers' performance.

Way Forward

The Procurement Department will review and enhance the Procurement Manual to ensure a higher level of transparency and efficiency throughout the procurement operation process. The revised Terms and Conditions and Contract Templates will be adopted, for better safeguarding the interest of the CIC on one hand and aligning with the latest market practices on the other. The Department will reach an important milestone by implementing the highly anticipated e-Tendering system as part of the digitalisation roadmap. The Department will also regularly conduct random project reviews and audits to monitor the project performance regarding time, cost, and compliance through the year.

OPERATIONAL REVIEW

Finance

The Finance Department continues to act as the business partner of the CIC and its stakeholders in delivering a wide range of finance services, 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 works, bank account operations and all finance related projects.

In 2022, Finance Department has achieved a number of key milestones to digitalise income collection and payment operation, streamline and re-engineer process flow and strengthen corporate governance.

Launching Levy E-Service 2.0

An interactive platform (Levy E-Service 2.0) for submission of Levy Forms replacing the web-based platform was successfully launched in July 2022. The online validation features with the mandatory fields substantially improve the data quality and completeness of the Levy Forms. The new platform provides E-service users with valuable function for tracking of Forms submission, enquiries of payment records and reporting of levy key performance indicators. It comes with additional protection on cybersecurity with deployment of One Time Pin and also offers new function of levy projects assignment to meet specific need of users. Based on a survey conducted after launch of Levy E-service 2.0, the user satisfaction improved greatly in every aspects on using the new platform. The user-friendly platform has successfully enhanced data quality, submission efficiency and communication with Contractors and Authorized Persons.

Digitalising Finance Operations

Digitalisation is extensively deployed to minimise manual works and improve the finance operational efficiency. In view of numerous payment transactions, electronic payment method has been adopted for trainee allowance and staff costs to automate and speed up the processing. In 2023, it will be further extended to other vendor payments.

Revamping Accounting Procedure Manuals

In July 2022, a new Policies and Procedures Manual on Levy Operations was launched outlining the processes and procedures on how levy operations are run and controlled in CIC. In December 2022, all Finance Accounting Procedures Manuals were revamped for streamlining the processes and improving operational efficiency as well as enhancing their clarity and conciseness.

Way Forward

Riding on the successful launch of Levy E-Service 2.0, the CIC plans to enforce the compulsory use of this platform in 2023 with all Levy Forms submitted electronically via Levy E-Service 2.0. It would greatly uplift the levy operations while at the same time enhance the communication between the CIC and the industry practitioners. Controls on levy processing would be strengthened via levy system enhancement. Digitalisation journey will be continued to further automate and improve other finance functions, especially on treasury management and reporting. Business partnering projects would be conducted to develop constructive recommendations and action plans in process streamlining and effective resource utilisation.

Finance Department will continue to support the CIC by providing professional advices from financial perspective to maximise the benefits of all stakeholders.