



CONSTRUCTION  
INDUSTRY COUNCIL  
建造業議會



# **CIC BIM Competition 2024**

## **Competition Design Brief**

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## Version Control

Version	Description	Date
-	First draft for OC comments	December 2023

## 1. General Brief

### 1.1 Organiser

The CIC BIM Competition 2024, refer as the “Competition”, is organised by the Construction Industry Council (CIC), located at 38/F, COS Centre, 56 Tsun Yip Street, Kwun Tong, Kowloon, Hong Kong.

### 1.2 Competition Design Brief

This document contains the design brief, competition detailed requirements, submission deliverable requirements, guidance, assessment scoring criteria, awards and prizes, terms and conditions defined for this Competition.

### 1.3 Use of Information

All the information of this document is meant for the use of this sole Competition only and shall not be used for reference in actual design nor construction project in future, if any, for the particular site.

### 1.4 Liability of the CIC

The CIC shall not be held liable for any consequences, losses or damages which may arise or result from any misuse by any parties or reliance made on its information for any purposes in future.

## 2. Competition Introduction

### 2.1 Background

The 2-stage ideas Competition aims at continuing to build momentum for Building Information Modelling (BIM) adoption and encourage collaboration. Participants will develop a **Student Innovation Academy** using BIM for a proposed site with design requirements.

### 2.2 Competition Objective

The Competition’s objective is to **promote practical uses of BIM through collaborative and competitive learning approach** among higher education students in construction-related disciplines.

### 2.3 Eligibility

This Competition is only eligible to full-time higher education (post-secondary) students, and part-time students who are pursuing top up degrees. Students shall form a team of 3 to 6 members from a minimum of 2 construction-related disciplines. (Refer to Section 10.1 - Registration).

There is no limit to the number of teams from each institution.

## 2.4 Competition Schedule

Date	Activities
28 Dec 2023	Open for Registration
24 Jan 2024 (Tentative)	Competition Briefing Webinar
Jan 2024 – Apr 2024	Online Training Materials
<b>21 Feb 2024</b>	<b>Deadline for Registration</b>
Mar 2024 – Jun 2024	Free BIM Software Licenses
Mar 2024 – May 2024	Hands-on BIM Software Training Webinars
Mar 2024 – Jun 2024	BIM Mentoring Support
<b>27 May 2024 (12:00nn)</b>	<b>Submission Deadline for 1st Round Competition</b>
3 Jun 2024	Judging Panel selects teams for 2nd Round Competition
<b>7 Jun 2024 (Fri)</b>	<b>2nd round onsite competition (9:00am-9:00pm)</b> (Finalists will be selected to compete onsite in 12 hours)
<b>8 Jun 2024 (Sat)</b>	<b>2nd Round Onsite Competition</b> am: Team presentation to judge pm: Award Presentation Ceremony

## 3. Design Brief and The Site

### 3.1 Design Competition on CIC Innovation Academy using BIM

(This Design Brief is intended for this Competition only, and shall not be allowed for releasing, publishing or use for other intentions.)

### 3.2 Competition Theme

The theme of this Competition is “**CIC Innovation Academy**” for higher education students.

This Competition aims to challenge the participant’s creativity and innovation in the design of a CIC Innovation Academy and in the application of BIM technologies.

The CIC Innovation Academy is a state-of-the-art facility designed to promote Innovation and Technology education. It aims to provide a stimulating environment where students can engage in hands-on learning and collaborative projects through applying ideas and knowledge into practical applications.

In this Competition, participants may assume they are submitting a proposed design for the client CIC at the Zero Carbon Park premise in Kowloon Bay.

### 3.3 Project Brief Introduction

The Chief Executive's 2023 Policy Address highlights the government's commitment to utilizing innovative technologies to address built environment challenges. One significant proposal is the adoption of Building Information Modelling (BIM) in the construction lifecycle including for the preparation and approval of building plans for building developments. To set

an industry example, a roadmap for the full adoption of BIM in construction will be promulgated this year, and more and more organisations will adopt BIM technologies in their business workflow. The CIC has been committed to promoting BIM, including the opening of the CIC Digital Twin Hub, promoting pioneering BIM practices from industry leaders, developing CIC BIM standards, and organising BIM competitions, and CIC will continue to lead the industry to construction digitalisation.

In addition to BIM, the Policy Address mentions the Government's multi-pronged approach to utilise innovative technologies to meet surging demand. For example, the Policy Address mentions making use of Modular Integrated Construction (MiC) to enhance quantity, speed, efficiency and quality, and implementing trial adoption of smart estate management in the design and construction stage as well as in property management. The CIC will continue to upgrade and transform the industry with innovative technologies, such as Artificial Intelligence (AI), Internet of Things (IoT), robotics, MiC, Smart Site Safety System (SSSS) etc., to enhance construction safety, productivity and sustainability.

To fully realise the potential of construction digitalisation, it is crucial to train sufficient practitioners with diverse digitalisation skills and creativity. This will enable the future Architecture, Engineering, Construction, and Operation (AECO) industry to meet challenges and remain competitive. Recognising the importance of higher education institution students in supporting the industry's advancement, the theme of this BIM Competition is to establish a **CIC Innovation Academy**. This academy will be a purpose-built building dedicated to educational and learning activities for higher education students. By fostering a vision, commitment, and collaborative efforts, we can move towards a brighter future for the industry and for Hong Kong as a whole.

### **3.4 Project Objective**

Participants of this Competition are required to develop a CIC Innovation Academy to meet the needs of the users with the following objectives:

1. Foster innovation development by creating a hub for interdisciplinary knowledge exchange and experiment, that combines science, technology, engineering, arts, and mathematics (STEAM), in different fields of interest such as Smart City and IoT Technology, AI and Robotics, and Carbon Neutrality;
2. Provide educational and learning spaces that could offer a variety of programmes and learning activities, including not only traditional classroom learning but also workshop, extracurricular activities and competitions that cater to different interests;
3. Foster a culture of creativity, experimentation and collaboration among students, school teachers and university lecturers & experts;
4. Partner with industry partners that can provide mentorship, internship, and career opportunities for the students;
5. Promote social, economic & sustainable development awareness and responsibility in our built environment.

### 3.5 The Site

The Site selected is currently used by CIC as a Zero Carbon Park (ZCP) located at 8 Sheung Yuet Road, Kowloon Bay, Hong Kong. It is assumed that the ZCP will be relocated and the existing building will be converted or demolished for other purposes. The site is originally an open space bounded by Wang Chiu Road, Lam Fung Street, Sheung Yee Road and Sheung Yuet Road with the existing CIC Zero Carbon Building (ZCB).

#### Site Information and Development parameters for this Competition are as follows:

- Site Area: 14,700 m<sup>2</sup> #
- Maximum building height: Low-rise three-storey structure shall be permitted with mean street level at 6mPD and the proposed building height not exceeding 24mPD
- Proposed Total Gross Floor Area: 5,000 - 6,000 m<sup>2</sup> approximate
- Permitted Plot Ratio (PR): N/A
- Permitted Site Coverage (SC): 40% max.
- Proposed Greenery Coverage: 30% (recommended)
- Vehicular ingress and egress are provided at Sheung Yee Road

#### *Information for reference*

# : The footprint of the existing Zero Carbon Building is about 1,600m<sup>2</sup> which accommodates a 3-storey building of approximately 3,000m<sup>2</sup> with basement. About 50% of the site is covered by greenery with urban native woodland. For the purpose of this Competition, participants can choose to ignore the existing underground drainage culvert that runs across the northeast and southwest corner of the site.

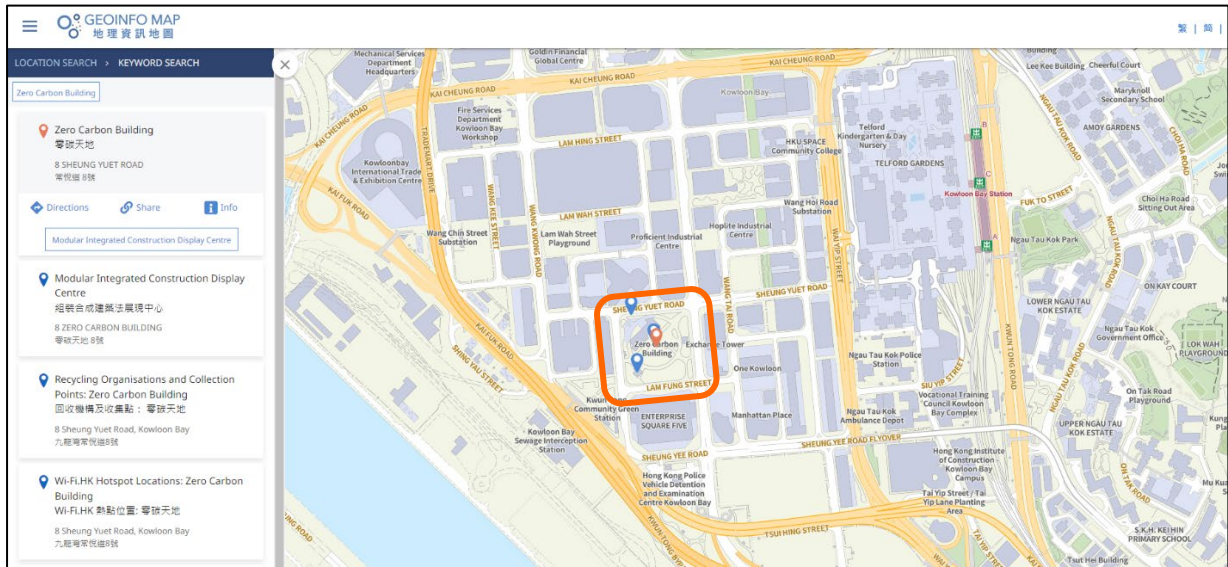
### 3.6 Provisions of Facility

To provide educational and learning facilities that support the development and enhancement of students' creativity and skills in innovation education and encourage collaboration among students, teachers and guests (external experts), the following facilities are proposed for reference. Participants of this Competition are encouraged to scrutinise the proposed provisions and counter-propose facilities that they see fit. Please refer to section 3.8 for details of Schedule of Accommodation.

- General purpose meeting and learning spaces (co-working spaces);
- Resource centres / Libraries;
- General purpose education spaces (classroom);
- Studios & workshops with specific equipment, for example 3D printer, computer, AI & robotics, prototyping workshop, AR/VR equipment;
- Exhibition spaces, Performance spaces, Halls, (E-sport arena), both indoor & outdoor (e.g. for the display, showcasing & presentation of student's works and projects; for hosting exchange events or competition tournaments);
- Administrative space, including office spaces and meeting rooms;
- Amenity facilities, including cafes and snack bars, shops, lounges, etc.;
- Landscape area (for the recreation and relaxation of the students and visitors).



## a. Location Map



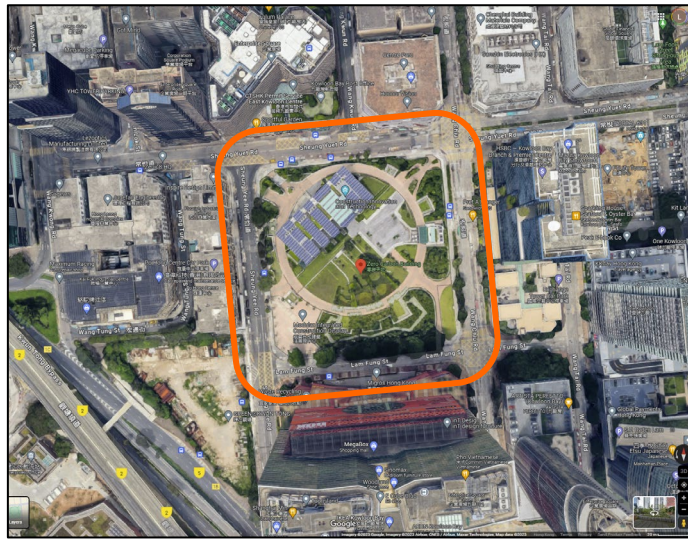
The Proposed Site

## b. Images of the existing ZCP (for reference)



The Existing CIC-ZEP





Aerial image



The site area is approximately 14,700 m<sup>2</sup>



Successfully registered participants will be provided with a basic BIM model in .IFC format (an open format) indicating the site boundary and the basic layout of the site surrounding context. Participants may consider making reference to 3D Photo-realistic Models that available at Planning Department, website:

[https://www.pland.gov.hk/pland\\_en/info\\_serv/3D\\_models/download.htm](https://www.pland.gov.hk/pland_en/info_serv/3D_models/download.htm)

### 3.7 Design Proposal

The building should foster a stimulating and inspiring learning environment and create a vibrant and attractive aesthetic for both students / teachers and visitors. Sustainable building design strategies (both active and passive design techniques) should be adopted. The building's relationship with the neighbourhood and site context should be carefully considered and responded with positive contributions. The building massings, relationship of different activities, circulation strategies, and choice of materials should also be carefully considered. Selection of structural systems, building service systems (such as air-conditioning, ventilation, lighting, electricity, water, fire services, etc.) and construction methods should also be carefully considered.

Participants could brainstorm ideas on how to generate innovative concepts aimed at revitalizing, enriching, or rejuvenating the current state of the building. Alternatively, they could propose a new building design that elevates its functionality, aesthetics, and sustainability to new heights.

It is possible to provide adaptable and flexible layouts that allow for different events / activities and configurations of spaces for different modes of teaching, learning and sharing, such as collaborative, group project-based, team coaching and individual task.

Carbon footprint and Carbon performance should be considered – in terms of carbon legacy (reuse of existing building), embodied carbon, construction carbon and operation carbon. The proposed building should be able to integrate with the surrounding urban context in terms of the social & economic and sustainability requirements of the area throughout the project development lifecycle.

### 3.8 Schedule of Accommodation (SOA)

Student numbers: 30 - 150 approximate  
 Staff numbers: 20 - 40 approximate  
 Visitor numbers to Event: 500 approximate

Space	Area*	Nos	Remarks
<b>Meeting and Learning Space</b>	800	-	Co-working areas with various size and purposes,  e.g. 20 people workshop, 12 people workshop, 6 people workshop etc.
<b>Resources Centre / Library</b>	250	2	Resources Centre for study and research,  e.g. material library

<b>Classroom</b>	100	4	More formal learning spaces
<b>Training Workshop / studio</b>	150	4	Specific purpose workshop, e.g. prototyping with 3D printing, woodworking etc.
<b>Information Technology Lab</b>	100	4	Specific purpose laboratory, e.g. electronic workshop etc.
<b>Exhibition Gallery / Performance space</b>	250	2	Display, showcasing & presentation of student's works and projects and performance
<b>Conference Hall / Arena</b>	250	-	Seminar and Conferences; Stages for e-sports or robotics competition
<b>Entrance Foyer and Reception</b>	50	-	A welcoming area
<b>Administrative Office</b>	300	-	For the management & operation of the facility
<b>Staff Meeting Room</b>	50	2	For the management & operation of the facility
<b>Café / Snack bar</b>	50	2	Seating and F&B area
<b>Landscape Garden and Outdoor (exhibition) Area</b>	1000	-	Recreation and relaxation of the students and staff
<b>Car parking</b>	-	2	Accessible Carpark; Staff & Visitor
<b>Loading &amp; Unloading / Lay-bys</b>	-	1 to 2	-

\* Net Operating Floor Area (NOFA) in m<sup>2</sup>, not exceeding ±10% variation

Reference notes:

- All teaching and learning spaces should be equipped with modern standards building services and advanced computer hardware and software, such as projectors and screens.

## 4. Submission and Deliverable Requirements

### 4.1 Competition Round 1 - Online Submission and Requirements

All submission files shall be archived in a Common Data Environment (CDE) structure and are readily available for retrieval by the CIC and the judging panel for assessments.

#### A. Presentation slides

The slides shall document and present the following:

- Design concept and approach to site planning and building design issues.
- Compliance of spatial requirements - SOA with justification by the use of automatic area calculation in BIM software. Area schedules comparing between the proposed design and the spatial requirements - SOA.
- Passive sustainable design being adopted, and justification through daylight study, solar shadow study, (optional: energy model and analysis, natural ventilation simulation as advanced BIM use), etc.
- Prove sustainable designs and design optimisation by showing the iteration process in software.
- Information of team organisation, division of work, list of BIM software used (with version) & platform for collaboration, diagram to illustrate the data transfer among various BIM software, etc.
- Workflow and deliverables of adopting CDE and openBIM for information management using BIM as a collaboration platform throughout the development process.
- Prove embodied carbon calculation and optimisation by comparing the initial design and the final design using the CIC CAT. (optional)
- Maximum 20 pages in English.
- PowerPoint slides in .ppt or .pptx formats. Please refer to the Template provided (CIC\_BIM\_Competition\_2024\_Submission\_Slide\_Template.pptx).

#### B. Posters

- The posters should identify the key points in design and how BIM is applied in design process collaboratively to achieve design challenge.
- 4 nos. of A1 size and portrait orientation layout in English.
- Minimum resolution 200 dpi. Electronic format in .jpg or .png.
- Please refer to the Template provided (Document: CIC\_BIM\_Competition\_2024\_Submission\_Poster\_Template.pptx).

#### C. Video

- To demonstrate design concept and development, BIM implementation in design visualisation (walk-through with material indication), team collaboration, BIM coordination process, creative BIM uses, passive sustainable design, design analysis, simulation and optimisation, etc.
- Maximum 2.5 minutes. Electronic format of video in .avi or .mpeg format, with annotation/sub-title and music, and voice-over (optional).

#### D. BIM models (Information model)

- BIM models shall include all geometries of the design, relevant information embedded in building elements, different views, images, area schedules comparing between the proposed design and the spatial requirements - SOA, quantity schedules of major building systems .
- All BIM models in both native file format and open format (.ifc) shall be collaborated in CDE.

#### E. Scripting (optional)

- To showcase computational design, engineering, analysis and optimisation, which will be defined as one of the advanced BIM use.
- A verifiable script in Dynamo, Grasshopper, Generative Component or other computer language scripting applied.

### 4.2 Competition Round 2 - Onsite Competition Format and Requirements

- 1) To incorporate CIC's design changes in onsite competition, such design changes requirements and details will be announced on the day of Round 2 competition.
- 2) Onsite update of models and production of required output (including presentation slides) in 12 hours (9:00 am to 9:00 pm).
- 3) A max. 25 pages PowerPoint slides in English in .ppt or .pptx format (an update on top of those to be submitted in Round 1 showing the changes for Round 2).
- 4) 4 nos. of A1 Posters in English with at least 200dpi in .jpg or .png, layout in portrait format (an update on top of those to be submitted in Round 1).
- 5) A max. 2.5 minutes video to demonstrate design concept and development, BIM implementation in design visualisation (walk-through with material indication). It may also consider including team collaboration, BIM coordination process, creative BIM uses, design analysis, simulation and optimisation etc. (as an update on top of those in Round 1). Video in .avi or .mpeg format, with annotation/sub-title and music, and voice-over (optional).
- 6) BIM models shall include all geometries of the design, relevant information embedded in building elements, different views, images, area schedules comparing between the proposed design and the spatial requirements - SOA, quantity schedules of major building systems and components. A verifiable script in Dynamo, Grasshopper, Generative Component or other computer language scripting applied, if any, in this Competition to showcase computational design, engineering, analysis and optimisation (an update on top of those to be submitted in Round 1).
- 7) Presentation sequence will be based on drawing lots on the spot.
- 8) Presentation in 15 minutes and followed with a Q&A session hosted by the judging panel for 5 minutes.

### 4.3 Online Submissions

Registration will be opened until 21 February 2024 (deadline for registration), unless waiver is granted by the CIC. Successful registration will be notified via email by the CIC. For submission, Participant is required to self-create a Google account and store the requested deliverables (refer to Section 1)) in the Google Drive, and email the shared Google Drive link by 27 May 2024 (12:00nn HK time) to [bim@cic.hk](mailto:bim@cic.hk)



## 5. Assessment Scoring Criteria

Scoring Criteria	%
<b>1<sup>st</sup> Round</b>	
Use of Information and Compliance of Brief Requirements	20
Computational Design, Engineering, Analysis and Optimisation	20
Creative BIM Uses, Innovation & Technologies, Originality	25
Communications and Presentation Skills	15
Use of CDE	10
Use of OpenBIM	10
<b>TOTAL</b>	<b>100</b>
<b>2<sup>nd</sup> Round (On-site competition)</b>	
1 <sup>st</sup> round score	20
Compliance of Design Information, Design Flexibility & Responses	20
Creative BIM Uses, Innovation & Technologies, Originality	25
Collaboration & Teamwork	20
Communications and Presentation Skills	15
<b>TOTAL</b>	<b>100</b>

## 6. Awards and Prizes

Prizes	
<b>First Prize</b>	Plaque + Certificate <b>A Chance to Participate in an Overseas Event</b>
<b>Second Prize</b>	Plaque + Certificate
<b>Third Prize</b>	Plaque + Certificate
<b>Max. 7 Merits</b>	Plaque + Certificate
<b>All</b>	E-Certificate of Participation E-Certificate of Attended Training Webinars

## **7. The Challenges and Example of Creative BIM Uses**

Participants are required to submit innovative proposal to be generated from use of BIM and related tools throughout the development process. The proposal could consider including the following:

### **7.1 Innovative technologies**

As the theme emphasises on innovation and creativity, participants are encouraged to embrace innovative technologies and construction methods such as Modular Integrated Construction (MiC) and Design for Manufacture & Assembly (DfMA) in project designs. MiC offers the advantages of factory assembly and reduced on-site construction, mitigating challenges like weather conditions and labor shortages. DfMA focuses on efficient manufacturing and assembly, enhancing productivity, safety, quality, and sustainability. Additionally, the use of Multi-trade integrated MEP (MiMEP) components further optimises project delivery. Participants are also encouraged to use the CIC Carbon Assessment Tool (CAT) to justify carbon emissions performance, achieve sustainable design, reduce carbon emissions, and contribute to the vision of a livable and sustainable city.

### **7.2 Innovative Design through Collaboration**

Collaborative design is a process that team members bring together different ideas and work together for a common goal to achieve the intended purpose. The adoption of Common Data Environment (CDE) for information management using BIM is required as a collaboration platform to demonstrate good project collaboration and coordination, including documentation for tracking design, construction activities and archiving information for next projects.

Participants may consider openBIM approach for cross BIM software collaboration. Reference can be made to the Industry Foundation Classes (.ifc) data.

### **7.3 Integration of Building & the Open Space cum Activities**

In response to the local context of tall buildings, streetscapes and circulation patterns (pedestrian & vehicular) in the vicinity, the proposed design needs to strike a balance between building structures and open space with the following considerations:

- Building form and placing structures in a park layout for activities, recreation and landscaping;
- Provide a unique character and identify of the place that meet the intention of the STEAM Centre in CIC-ZCP, enhance the spatial qualities of the surrounding environment and deliver the message of a green and sustainable built environment.

The selections of planting species such as trees and shrubs are optional in this submission.

### **7.4 Passive Sustainable Design**

Below is a reference of measures in addressing passive sustainable design. Analysis and illustration utilising BIM model for any proposal passive sustainable design elements should be demonstrated:

- Building massing design
- Building orientation and building openings

- Basic selection of building materials
- Application of building elements like sun shading devices, wind catchers, etc.
- Other means of passive sustainable design (not exhaustive)

Participants can set targets based on current CIC-ZCP/ZCB Information and demonstrate how the design proposal can achieve the objectives with illustrations using BIM model.

### 7.5 Creative BIM Uses

In this Competition, the CIC aims at promoting BIM as an effective design, collaboration and integrated review tool in achieving better design quality. Uses of BIM are listed in the CIC BIM Standards - General (2021) as follows:

- 1) Design authoring of core disciplines / building systems
  - Possible use of generative design in BIM
  - Explore design options and optimise design resolution
- 2) Design reviews
- 3) Existing conditions modelling
- 4) Sustainability evaluation and Site analysis
  - BIM-based study on environmental impacts to the site and building design, and passive sustainable design in addressing such impacts
- 5) 3D / Spatial coordination
- 6) Space layout and programming
- 7) Engineering analysis defined as advanced BIM use
- 8) Digital Fabrication
  - Design for Manufacture and Assembly (DfMA)
  - Modular Integration Construction (MiC)
  - Multi-trade integrated MEP (MiMEP)
- 9) CDE for information management using BIM
- 10) Use of spatial data from the Hong Kong GeoData Store or CSDI

Participants are encouraged to adopt any other BIM Standards and Guidelines published from the CIC and are encouraged to make use of the BIM Objects available from the CIC's BIM Portal ([https://www.bim.cic.hk/en/resources/bim\\_objects](https://www.bim.cic.hk/en/resources/bim_objects)) whenever possible.

### 7.6 Use of BIM Software and CDE for information management using BIM

Participants are required to use a minimum of two (2) BIM authoring (modelling) software (e.g. Architectural model using software A meanwhile Structural model using software B; Architectural model using software C while MEP model using software D). Participants are encouraged to design in BIM rather than 2D CAD software. There is no preference of specific BIM software and BIM Cloud Collaboration Platform (also known as CDE for information management using BIM) in this Competition.

In the submission files such as the presentation slides, poster and video, participants are required to:

- 1) Provide a list of the software (BIM, GIS and sustainable design analysis tools, with their version) and CDE used in this Competition.

- 2) Prove the uses of the software (BIM, GIS and sustainable design analysis tools) and CDE by capturing the design development, design coordination, energy analysis, and collaboration, etc.) within the relevant software user interface.
- 3) Prove the uses of CDE by showing the adoption of relevant standards and workflow as specified in the CIC BIM Standards - General (2021), which aligns with ISO19650's Information Management principles, workflows and requirements.
- 4) Prove the uses of sustainable design analysis tools by showing the iteration process of computational design, engineering, analysis, and optimisation.

## 8. Guidance and Support

### 8.1 Competition Briefing Webinar

- Date: 24 Jan 2024 (Wed)

### 8.2 Supporting BIM Partners

- ACID – IM-CDE
- AMBIT – SkylineGlobe system
- Autodesk – BIM 360 and Dynamo
- Bentley – ProjectWise, OpenRoads Designer, OpenBuildings Designer and Synchro
- BIMSONS - Bimsync
- BIMTrack
- Bricsys – BricsCAD
- CivilConnect
- Esri – ArcGIS
- Forida – Enscape
- GeoSys – SuperMap
- Graphisoft – ARCHICAD
- IES – IESVE
- isBIM – Jarvis
- Kalloc – Fuzor
- Llewellyn & Partners Co. – AutoCDE
- MES – ShareBIM
- Oakley – BIM eLearn
- Trimble – Tekla
- Vircon
- White Frog
- Hilti - Profis MSE

*Training webinars and free software licenses will only be arranged for participating teams*

### 8.3 BIM Mentoring Support

- Mentors from the CIC-Certified BIM Manager (CCBM), CIC-Certified BIM Coordinator (CCBC), Members of HKIBIM and HKABAEIMA (including HKICBIM, HKGISA) and buildingSMART Hong Kong Chapter
- Mentoring support will only be arranged for participating teams



## 9. Useful References

- 1) Common Spatial Data Infrastructure (CSDI)  
<https://csdi.gov.hk/>
- 2) Hong Kong GeoData Store (alpha version of CSDI Portal)  
<https://portal.csdi.gov.hk/csdi-webpage/>
- 3) Geospatial Lab  
<https://csdigeolab.gov.hk/en/>
- 4) CIC BIM Standards - General (Version 2.1 - 2021)  
[https://www.bim.cic.hk/en/resources/publications\\_detail/100](https://www.bim.cic.hk/en/resources/publications_detail/100)
- 5) CIC BIM Standards Architecture and Structural Engineering (Version 2.1 - 2021)  
[https://www.bim.cic.hk/en/resources/publications\\_detail/115](https://www.bim.cic.hk/en/resources/publications_detail/115)
- 6) CIC BIM Standards for Mechanical, Electrical and Plumbing (Version 2 - 2021)  
[https://www.bim.cic.hk/en/resources/publications\\_detail/110](https://www.bim.cic.hk/en/resources/publications_detail/110)
- 7) CIC BIM Standards for Underground Utilities (Version 2 - 2021)  
[https://www.bim.cic.hk/en/resources/publications\\_detail/111](https://www.bim.cic.hk/en/resources/publications_detail/111)
- 8) CIC Production of BIM Object Guide - General Requirements (2021)  
[https://www.bim.cic.hk/en/resources/publications\\_detail/112](https://www.bim.cic.hk/en/resources/publications_detail/112)
- 9) CIC BIM Dictionary (2021)  
[https://www.bim.cic.hk/en/resources/publications\\_detail/113](https://www.bim.cic.hk/en/resources/publications_detail/113)
- 10) Official website of ZCP  
<https://zcp.cic.hk/>
- 11) The knowledge of ZCBs can be found as follows:
  - ZCB Journal – Vol 1 January 2014 The Making of the ZCB
  - <http://zcp.cic.hk/eng/story-of-zcb>
  - <http://zcp.cic.hk/eng/how-the-building-works>
  - <http://zcp.cic.hk/eng/active-systems>
- 12) Development Bureau's Technical Circular (Works) No. 2/2020: MiC  
<https://www.devb.gov.hk/filemanager/technicalcirculars/en/upload/375/1/C-2020-02-01.pdf>
- 13) Buildings Department's Practice Note for Authorised Persons (ADV-36): MiC  
<https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/ADV/ADV036.pdf>
- 14) Buildings Department's Pre-accepted MiC Systems / Components  
[https://www.bd.gov.hk/en/resources/codes-and-references/modular-integrated-construction/mic\\_acceptedList.html](https://www.bd.gov.hk/en/resources/codes-and-references/modular-integrated-construction/mic_acceptedList.html)
- 15) General information on DfMA and MiC issued by the CIC  
<http://www.cic.hk/eng/main/mic/>  
[http://www.cic.hk/eng/main/dfma\\_alliance/](http://www.cic.hk/eng/main/dfma_alliance/)
- 16) Reference Material on Adopting DfMA for MEP Works (A Concise Guide) (August 2022)  
[https://www.cic.hk/files/page/51/Reference%20Material%20on%20Adopting%20DfMA%20for%20MEP%20Works%20\(A%20Concise%20Guide\).pdf](https://www.cic.hk/files/page/51/Reference%20Material%20on%20Adopting%20DfMA%20for%20MEP%20Works%20(A%20Concise%20Guide).pdf)
- 17) Reference Material on Use of Digital Technologies for QA/QC of MiC Modules in MiC Factories (June 2022)  
[https://www.cic.hk/files/page/51/20220616%20Use%20of%20Digital%20Technologies%20for%20QAQC%20of%20MiC%20Modules%20\(final\).pdf](https://www.cic.hk/files/page/51/20220616%20Use%20of%20Digital%20Technologies%20for%20QAQC%20of%20MiC%20Modules%20(final).pdf)
- 18) Reference Materials - Logistics and Transport for MiC Projects (December 2021)

<https://www.cic.hk/files/page/51/202111214%20Logistics%20%26%20Transport%20for%20MiC%20Projects.pdf>

19) Adopting MiMEP - From the Government's Perspective issued by the ArchSD:

[https://mic.cic.hk/files/Education/5/File/Adopting\\_MiMEP\\_%E2%80%93%93\\_From\\_the\\_Government%E2%80%93s\\_Perspective.pdf](https://mic.cic.hk/files/Education/5/File/Adopting_MiMEP_%E2%80%93%93_From_the_Government%E2%80%93s_Perspective.pdf)

## 10. Terms and Conditions

By participating in this Competition, each team shall make a registration to participate in this Competition, refer as the "Participating Team", and each Team Member unconditionally accepts and agrees to comply with and abide by the Terms and Conditions in the Design Brief and the decisions of the CIC, which shall be final and binding in all respects.

### 10.1 Registration

- 1) No registration fee is required. The registrants are solely responsible for their own expenses in preparing all submissions and deliverables.
- 2) Eligibility: The participants shall be studying a full-time undergraduate or postgraduate program in a registered higher education institution in Hong Kong, or pursuing a part-time top up degree, as of the 21 February 2024. For overseas students, only of those who hold a valid Hong Kong Identity card is eligible for the participation. There is no limit to the number of participating team to register this Competition.
- 3) Every participant is restricted to joining 1 team only for this Competition.
- 4) Each Participating Team shall have 3 to 6 members (including the team leader), with students from minimum 2 construction-related disciplines (including, but not limited to, Architecture, Civil/Geotechnical Engineering, Building Services Engineering, Environmental Engineering, Surveying, Construction, Building and Real Estate, Urban Planning and other construction-related disciplines). [\*NOTE: For those who may not be able to form a multi-disciplines team, they may also register before the due date, and the CIC will assist them to form teams if necessary.]
- 5) The staff of the CIC and their families are not allowed to participate in this Competition.
- 6) Each Participating Team is encouraged to attend the briefing, online training and hands-on training webinars, if any, organised by the CIC or its representative or supporting organisations.
- 7) The participants are required to update the CIC for replacement or update on members and to submit the new name list latest by the deadline for registration.
- 8) Only the registered team members who completed the full submissions to this Competition are qualified to receive the electronic certificates of participation.
- 9) The CIC has the final decision on the eligibility of the participants and reserves the right to reject any participant who does not meet the eligibility criteria.
- 10) The CIC reserves the final decision on this Competition and has the right to cancel and/or modify any terms and conditions at any time in this Competition without prior notice.
- 11) The CIC reserves the final decision on this Competition and has the right to cancel or change the awards and other arrangements for this Competition without prior notice.
- 12) The participants shall bear full legal and related responsibilities arising from any possible breach of intellectual property rights in respect of their registration and

competition, and shall indemnify the CIC and other concerned parties against any claims and liabilities arising from any such breach.

- 13) All participants who submit registration to this Competition, agree to assign the intellectual property rights of their designs to the CIC on promotion, exhibition, demonstration and training purposes both locally and internationally.
- 14) If a participant is found to have disposed to a third party, such as by assignment, transfer or provision as security, or is making registration procedures, etc., for all or any part of the intellectual property rights or any other rights concerning the submitted registration after the submission, the submission will be made invalid.
- 15) All works must be original works of the participant. The registration will not be shown in other competitions or published. Participants are required to indicate that they are not infringing upon the rights (including design rights and copyright) of the submission.
- 16) Any teams are subject to investigations regarding originality and eligibility for Intellectual Property Rights, design rights or copyright registration. If they do not comply with the requirements, the CIC has the sole discretion to disqualify and forfeit the prizes involved without any liability to the selected participants or any other persons, and other Participating Team may be selected as the winner.
- 17) Participants are required to agree to the CIC's publication of their name and authorise the CIC to collect, process and use their personal data for the event's liaison and promotion. All materials are kept strictly confidential except for the above purposes.
- 18) If any participant provides incorrect, incomplete or inaccurate information, or violates any registration terms or conditions of this Competition, the CIC has the final decision to cancel such participant's qualifications and reserves the right to withdraw the relevant awards.

## **10.2 Pre-Competition**

- 1) The Participating Teams shall complete this Competition at their own premises for the first round.
- 2) For the second round, the Participating Teams shall bring along their own computers and software. They are advised to take all necessary precautions to ensure that the competition areas, equipment and machines are safe for use by the team members. The CIC shall not be held responsible for any accidents, damages or mishap that may happen to the participants during the competition.
- 3) Participants may use any BIM authoring software or tools. It is recommended that the BIM authoring software or tools and other supporting analysis / simulation software or graphic and presentation tools for this Competition to be openBIM compliant including the support of import and export files in Industry Foundation Classes (.ifc) format.
- 4) Participants will be notified through email if any changes incurred on submission or presentation time and venue.
- 5) The event will be cancelled if a No. 8 typhoon signal or above is hoisted or the black rainstorm warning signal is raised three hours prior to the original start time of the event. The event will be then re-scheduled to the next available date.

## **10.3 During Competition**

- 1) All participants must comply strictly with all terms and conditions of this Competition defined by the CIC. The Judges and the CIC reserve the rights to disqualify any

participant if he/she suspects, in its sole discretion, that the participant did not follow any terms and conditions.

- 2) Failure by the participant to comply with instructions given by the Judges or the CIC, or participants caught in cheating and not producing genuine works, may also incur loss of score. Continuous violation of any terms and conditions, may result in suspension or termination from this Competition.
- 3) The participant shall report to the CIC / Judges as soon as possible, if any grievances. Appeals after this Competition will not be entertained. The Judges' decision shall be final.
- 4) Any participants from the shortlisted team must inform the CIC as early as practicable if he/she could not participate on the day of the second round competition.
- 5) No replacement of any team member is allowed due to whatever reasons. The same full team shall participate the second round competition for the best result, however, minimum one member of a team can still proceed the second round competition.
- 6) The participants shall bring along their own computers with all necessary software and tools with legal licenses to the competition venue for the completion of the competition.
- 7) Any illegal stuffs such as un-authorized software licenses are prohibited. The competition venue with power supplies and power extension cord will be provided by the CIC. Internet connection will not be provided by the CIC for the second round competition. The participants shall arrange and provide their own internet connection if needed.

#### **10.4 Assessment and Judging**

- 1) The submissions are assessed based on the assessment scoring criteria.
- 2) The results of this Competition will be decided by judging panel and are final. There is no mechanism to appeal or object.
- 3) The judging panel will be composed of representatives of the CIC and the industry BIM experts.
- 4) The panel of Judges shall abstain from evaluating a team where there may be conflict of interest issues. In such a case, the chief judge to be elected by the panel shall make the final decision.
- 5) Assessment shall not be done in the presence of the participants.
- 6) If any stated prizes are unavailable, the CIC reserves the right to substitute one or more items, in its sole and absolute discretion. No prize is exchangeable, transferable, or redeemable for cash.

#### **10.5 Post-Competition**

- 1) All submissions will not be returned, and the participant agrees to authorise the CIC to modify, use, reproduce, publicly display or display the registration on the Internet or other media for promotional purposes without prior obtaining the participant's agreement or pay royalties to them.
- 2) The CIC shall retain and hold exclusive rights for promotion, exhibition, demonstration and training purposes both locally and internationally. The exclusive rights include Intellectual Property rights, Design rights, Patent, Trademark, Copyrights, media rights, overall deliverables, including but not limited to the BIM models, posters, reports, multimedia, scripts, materials and projects created and submitted for this Competition.



- 3) All decisions made by the CIC and Judges are final. No correspondence or appeals shall be entertained.
- 4) The top three prize winners and the merit winners may be invited for joining in CIC's coming events and activities.

~ THE END ~