CIC BIM Competition 2022

Competition Design Brief

Version R1

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Version Control

Version	Description	Date
R1	Section 3.3 (Site Area is updated) Section 3.3 (2nd paragraph is updated) Section 3.3.2 (Note 2 is added) Section 3.7 (information of the basic BIM model is provided)	7 March 2022

1. General Brief

1.1 The CIC BIM Competition 2022, 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 This document contains the design brief, competition detailed requirements, submission deliverable requirements, guidance, assessment scoring criteria, awards and prizes, terms and conditions defined for the Competition.

1.3 All the information 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 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. 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 be given project design requirements to develop **transitional housing for a proposed site using BIM for planning and design of modular housing which can be reused / relocated to other sites**.

2.2 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

The Competition is only eligible to full-time higher education (post-secondary) students in forming up a team of 3 to 5 members, with students from a minimum of 2 construction disciplines. (Refer to Section 8.1 – Registration)

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

2.4 Competition Schedule

Date	Activities
Dec 2021	Open for Registration
15 Dec 2021	Competition Briefing Webinar
Dec 2021 – Apr 2022	Online Training Materials
28 Jan 2022	Deadline for Registration
Feb 2022 – Apr 2022	Hands-on BIM Software Training Webinars
Feb 2022 – Jun 2022	Free BIM Software Licenses
Mar 2022 – Jun 2022	BIM Mentoring Support
1 Jun 2022 (Wed) (12:00nn)	Submission Deadline for 1st Round Competition
9 Jun 2022 (Thu)	Judging Panel selects teams for 2nd Round Competition
17 Jun 2022 (Fri)	2nd round onsite competition (9:00am-9:00pm) (Finalists being selected to compete onsite within 12 hours)
18 Jun 2022 (Sat)	2nd Round Onsite Competition am: Team presentation to Judging Panel pm: Award Presentation Ceremony

3. Design Brief, Competition Details and Requirements

Design Competition on Transitional Housing with Use of BIM

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

3.1 Objective and Background

The theme of the competition is **Modularity & Adaptability in Transitional Housing Design with Use of BIM**.

This competition aims to challenge the participant's creativity and innovation in the design of transitional housing with the use of BIM.

Hong Kong has long been facing challenges of housing supply for years, especially inadequate quantum of public housing for the low-income families.

To relieve the pressure of families living in unpleasant conditions and addressing the problem of long waiting time for public rental housing, the HKSAR Government decides to provide a total of 10,000 transitional housing units within the next three years as interim measures. This short-term initiative involves the participation of Non-Government Organisation (NGO), developers and owners of properties.

In this competition, participants may assume they are appointed by an **organisation (CIC) to develop transitional housing for a proposed site using BIM for planning and design of modular housing which can be reused / relocated to other sites.**

3.2 Goals

Participants are required to design a single or cluster of residential block(s) by reusable Modular Integrated Construction (MiC) units. The modular units would be stacked two to four storeys on the Site. Other supporting facilities, such as activity rooms, ancillary communal facilities and management office, together with landscape area are to be provided on promoting better quality of living in the transitional housing. With the spatial data currently available at the Hong Kong GeoData Store (alpha version of Common Spatial Data Infrastructure (CSDI) Portal), participants are required to submit innovative proposal to be generated from use of BIM tools and collaboration platform throughout the development process.

3.3 Site Selection and Assumptions

The Site selected is currently used by HKIC as training centre. The Sheung Shui training centre will be relocated and the existing building will be demolished leaving the site vacant for other long-term development. In the interim, the site is proposed to be used for temporary use of providing transitional housing units for a short period of time. It is assumed the site will be granted for a short lease of five years and no planning permission from the Town Planning

Board is required for temporary use which is always permitted under the Outline Zoning Plan. *(Note: Conversion of the existing building is not to be considered for the purpose of this competition.)*

The site is surrounded by Fung Nam Road and Tin Ping Road, Sheung Shui, New Territories, Hong Kong. For the purpose of this competition, the following development parameters will be used as reference in accordance with the First Schedule of the Building Regulations for domestic building not exceeding 43 m height for class B site:

Class of Site: B

Site Area: 8,257 m^2 (including reserved area)

Permitted Plot Ratio (PR): 6.1

Permitted building height under lease conditions: 43 m

Permitted Site Coverage (SC): 44%

Maximising site development potential is not required for the purpose of this Competition. Participants are required to provide 300 dwelling units together with supporting facilities in accordance with the Schedule of Accommodation (SOA) and work out the plot ratio and site coverage to be shown in the submissions.

### 3.3.1 The Proposed Site and Location

Location

The Site

Successfully registered participants will be provided with a basic BIM model (or 'information model') in .IFC format (an open format) indicating the site boundary and the basic layout of the site surrounding context.

3.3.2 Footprint and images of the existing building (for reference)

(Note 1: For the purpose of this Competition, please assume that all existing building will be demolished)

(Note 2: Angle to True North = 289.00°)
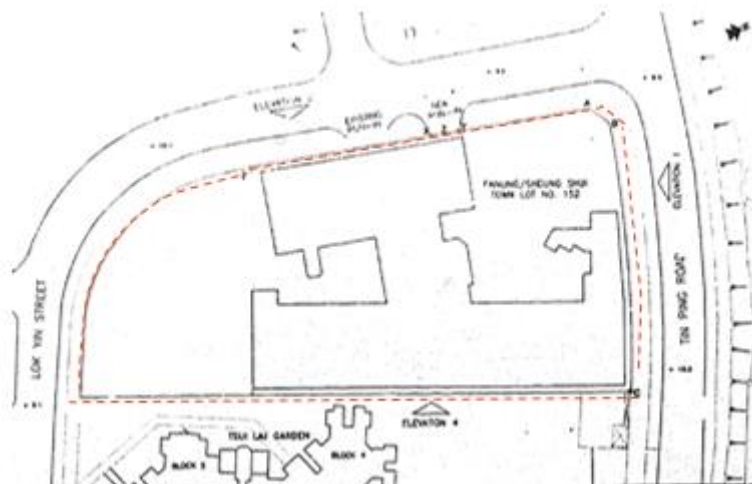
3.4 Schedule of Accommodation (SOA)

1. Dwelling Units

   A target of about 300 units to be provided with the requirements as follows:

Types of Unit	Number of Units*	Internal Floor Area** in m^2	Provisions in each Unit
1-person (Studio)	60	12 – 15	Pantry and bathroom
2-person (1-Bedroom Unit)	75	15 – 20	Kitchen and bathroom
3-person (2-Bedroom Unit)	150	25 – 30	Kitchen and bathroom
4 to 5-person Barrier-Free Unit	15	30 – 33	Kitchen and disabled bathroom
Total	300 units		

*Allow +/- 10% variation of spatial area/provisions requirements.

**Internal Floor Area refers to the area contained within the external walls of a unit, including all internal partitions and columns within the unit.

Detailed Provisions:
(i)   Bathroom should be provided with a wash-basin, water closet and shower.
(ii)   Kitchen (including open kitchen) should be provided with a sink and cooking facilities.
(iii)   Pantry should be provided with a sink.
(iv)   Provisions of access and facilities for people with disability is required for all Barrier-free Units.
(v)   Exterior windows in living space, bedroom(s), kitchen and bathroom are required to allow natural lighting and ventilation.
(vi)   Number of storeys should not exceed 4, and provision of lift is NOT required.

Remarks:
(i)   Balcony or patio can be considered as semi-outdoor space.
(ii)   Open corridors and stairs should be weather protected with screens.
(iii)   Proposed furniture layouts are required to demonstrate functional use of dwelling spaces.

2. Management Office
Two units each 120 to 200 m^2 with toilet, storage and pantry facilities.

3. Convenience Store & Social facilities
Provide space and facilities for convenience shop/communal/neighbour/children play activities and social functions to be organised by sponsored operators. The design and the provisions should address the difficulties and concerns of tenants who are temporarily accommodated in an unfamiliar living environment.

4. Open space
The provisions of open/recreational space and community/children play facilities should give good quality of living and green environment.

5. About 10 parking spaces for loading/unloading and one refuse collection point are required. The provision of Emergency Vehicular Access (EVA) should meet the requirements of Building Authority and Fire Services Department.

3.5 The Challenges and Requirements

Participants are required to submit innovative proposal to be generated from use of BIM tools throughout the development process. The proposal should be able to demonstrate the following:
1. Planning & Design Solution
2. Passive Sustainable Design
3. Modular Integrated Construction (MiC)
4. Design for Manufacture & Assembly (DfMA)
5. Multi-trade Integrated MEP (MiMEP)
6. Buildability and Logistics Planning with use of DfMA, MiC & MiMEP
7. Innovative Design through Collaboration
8. Creative BIM Uses
9. Use of BIM software & CDE Platform
10. openBIM Approach
11. Use of spatial data available at Hong Kong GeoData Store

3.5.1 Planning & Design Solution
- Plan and design with people-oriented objective and promote a sense of neighbourhood with aims to strengthen social interaction amongst local communities, though these dwelling units are catering for temporary accommodation. The overall design should respect predominant local surroundings, and give a sense of place with distinctive local characteristics.

- Adopt Passive Sustainable Design towards advancing net zero carbon and ensure all sources of emissions, including embodied carbon are addressed.
- Provide an overall design that would be economically viable and efficient to build with the use of MiC, DfMA and MiMEP. (See below)
- Provide design of modules and use of materials that would be adaptable in different site locations, i.e. easy to dismantle, store, transport and re-assemble.
- Document the development progress, workflow and project milestones in the BIM Execution Plan (BEP) from the beginning throughout the design process.
- Provide a documentation to facilitate future relocation of the MiC dwelling units effectively in other sites.

3.5.2   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)

3.5.3   Modular Integrated Construction (MiC)

Modular Integrated Construction (MiC) is an innovative construction method. By adopting the concept of "factory assembly followed by on-site installation", MiC helps to ease some of the current challenges faced by the local construction industry. In this method, free-standing integrated modules (completed with finishes, fixtures and fittings) are manufactured and assembled in a factory. By transferring on-site construction processes to a controlled factory environment, buildings can be substantially completed off-site. The adverse impacts of weather conditions, scarce labour resources and site constraints can all be substantially reduced. MiC provides a great degree of production quality control, and can improve construction productivity, safety and sustainability. Modular housing unit can be equipped with bathroom and cooking facilities in factory. Apart from dwelling unit, module can be adopted for laundry, clinic, games or recreational facilities.

3.5.4   Design for Manufacture & Assembly (DfMA)

DfMA is an eco-digital design approach focusing on ease of manufacture and efficiency of assembly. DfMA enables offsite manufacture of high-quality construction components and efficient assembly of the components on site. With the supply chains building up around components and systems, DfMA accomplishes significant improvements in productivity,

safety, quality and sustainability. Applying DfMA enables identification, quantification and elimination of waste or inefficiency in product manufacture and assembly to achieve lean construction. It also minimises the risk of site accidents and a well-planned offsite logistics helps reducing the number of vehicle movements for staff and material improving safety in the site locality.

3.5.5 Multi-trade integrated MEP (MiMEP)

DfMA is a design approach for effective construction project delivery, and Multi-trade integrated MEP (MiMEP) is an emerging trend in construction projects for adoption of DfMA for Mechanical, Electrical and Plumbing (MEP) components and equipment by integrating them into a sub-assembly off-site and then deliver to and installed on site.

3.5.6 Buildability and Logistics Planning with Use of DfMA, MiC & MiMEP

Given the benefits of using DfMA / MiC / MiMEP approach, participants are recommended to adopt the technologies for building components (kit-of-parts or modules) in the proposed design. The study and application in using the approach can include the study of buildability and transportation logistics:

1) 4D modelling: to demonstrate buildability and transportation logistics of DfMA / MiC / MiMEP design, through the use of BIM construction simulation.

2) Logistics planning: to identify critical junctions during the process of modules transportation from the factory to the site, through routing study/investigation.

3.5.7 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. Innovative design through collaboration requires participants to demonstrate how they collaborate to design with the adoption of BIM tools and process. The participants shall generate the design through maximising usage of BIM and its collaboration platform. The use of Common Data Environment (CDE) is required as collaboration platform to demonstrate good project coordination and collaboration, including documentation for tracking design, construction activities and archiving information for next built project.

3.5.8 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

- o Possible use of generative design in BIM
- o Explore design options and optimise design resolution
2) Design reviews
3) Existing conditions modelling
4) Sustainability evaluation and Site analysis
   - o 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

   - o Design for Manufacture and Assembly (DfMA)
   - o Modular Integration Construction (MiC)
   - o Multi-trade integrated MEP (MiMEP)

9) BIM Execution Plan (BEP)

   - o Check Section 4.1 for details

10) Common Data Environment (CDE)

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

3.5.9 Use of BIM Software and CDE Platform

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 Common Data Environment (CDE)) in this Competition. However, participants are encouraged to explore different available solutions and apply those they consider appropriate for their design and collaboration. When sharing the BIM models, participants need to consider the following challenges, like:

1) BIM model and data compatibility and interoperability between BIM software
2) BIM Model sharing method
3) Data assess and security control
4) Version control

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.

3.5.10 openBIM Approach

Participants may consider openBIM approach for cross BIM software collaboration. Reference can be made to the Industry Foundation Classes (IFC) data. IFC is a platform neutral, open file format specification that is not controlled by a single BIM software. It is an object-based file format with a data model developed by buildingSMART International to facilitate interoperability in Architecture, Engineering, Construction, Operations and Owner (AECOO) industry, and is a commonly used collaboration format in BIM based projects.

3.6 Reference

1) Legislative Council. (2019). Transitional housing in selected places. Retrieved August 8, 2020, from
   http://www.legco.gov.hk/research-publications/english/1819fs06-transitional-housing-in-selected-places-20190218-e.pdf

2) Lok Sin Tong Modular Social Housing Scheme at the Junction of Sung Wong Toi Road and To Kwa Wan Road Project - The Lok Sin Tong Benevolent Society Kowloon
   https://www.loksintong.org/lok-sin-tong-modular-social-housing-scheme-at-the-junction-of-sung-wong-toi-road-and-to-kwa-wan-road-project

3) Fact Sheet Transitional Housing in selected places
   https://www.legco.gov.hk/research-publications/english/1819fs06-transitional-housing-in-selected-places-20190218-e.pdf

4) Buildings Department's Practice Note for Authorised Persons (ADV-36): Modular Integrated Construction
   https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/ADV/ADV036.pdf

5) Information on DfMA and MiC can be found in the following websites:
   http://www.cic.hk/eng/main/mic/

6) Development Bureau's Technical Circular (Works) No. 2/2020: Modular Integrated Construction (MiC)

   https://www.devb.gov.hk/filemanager/technicalcirculars/en/upload/375/1/C-2020-02-01.pdf

7) Adopting MiMEP – From the Government's Perspective

   https://mic.cic.hk/files/Education/5/File/Adopting_MiMEP_%E2%80%93_From_the_Government%E2%80%99s_Perspective.pdf

8) Common Spatial Data Infrastructure (CSDI)

   https://csdi.gov.hk/

9) Hong Kong GeoData Store (alpha version of CSDI Portal)

   https://geodata.gov.hk/gs/

10) Geospatial Lab

   https://csdigeolab.gov.hk/en/

11) Open Data (Geospatial)

   https://www.landsd.gov.hk/en/spatial-data/open-data.html

3.7 Basic BIM model (or 'information model') in .IFC format (an open format)
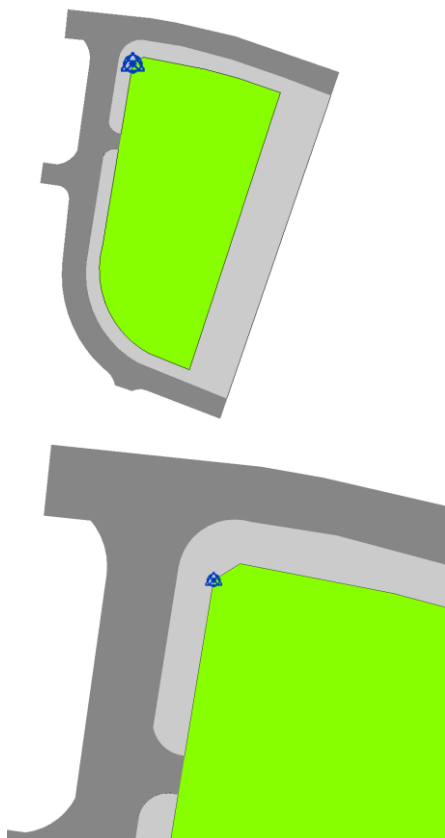
True North is applied.

Green region = Site Area

Light grey region = Pavements (with adjacent buildings at the East)

Dark grey region = Roads

Elevation of G/F = 9900 (mm)

Project Base Point (the blue symbol) = Survey Point:

N: 841064.0 (m)

E: 831215.0 (m)

Note: Students are required to adjust this Basic BIM model after loading it into BIM authoring software. Adjustments include the Project Base Point, Survey Point, Orientation and Elevation.

4. Submission and Deliverable Requirements

4.1 Round 1 - Online Submission

All submission files shall be archived in CDE and are readily available for retrieval by the CIC and the panel of judges for assessments.

1) Presentation slides

    The slides shall document the following:

    - Design concept and approach to site planning and building design issues.
    - Compliance of spatial requirement with justification by the use of automatic area calculation in BIM software.
    - Creative BIM uses.
    - Illustration of the use of Modular Integration Construction (MiC), Design for Manufacture & Assembly (DfMA), Multi-trade Integrated MEP (MiMEP) for developing the dwelling units and supporting facilities.
    - Workflow and deliverables of using Common Data Environment (CDE) as collaboration platform throughout the development process.
    - 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.
    - 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.
    - Maximum 20 pages in English.
    - PowerPoint slides in .ppt or .pptx formats. Please refer to the Template provided (CIC_BIM_Competition_2022_Submission_Slide_Template.pptx).

2) 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_2022_Submission_Poster_Template.pptx).

3) Video
    - To demonstrate BIM implementation in design visualisation (walk-through with material indication), collaboration across disciplines and BIM coordination process, creative BIM uses, MiC, DfMA and MiMEP and passive sustainable design.

- Maximum 2.5 minutes.
- Electronic format of video in .avi or .mpeg format, with annotation/sub-title and music, and voice-over (optional).

4) BIM models (Information model)
- All BIM models in both native file format and open format (.ifc) shall be collaborated in CDE.
- BIM models shall include all geometries, building and element information, views, images, area schedules (to show the comparison of schedule of area between requirements and proposed design), assembly and dis-assembly of MiC dwelling units.

5) Pre-appointment BIM Execution Plan (BEP)
- To develop a pre-appointment BEP according to the required contents as specified in the Section 'Pre-appointment BEP Content' of the CIC BIM Standards – General (2021).
- Please refer to the Template provided (Document: CIC_BIM_ Competition_2022_Submission_PreAppBEP_Template.docx).

6) 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 Round 2 - Onsite Competition Format
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) on 17 Jun 2022(Fri);
3) Presentation will be held on 18 Jun 2022 (9:00 am – 12:00 noon, Sat) and presentation sequence will be based on drawing lots on the spot;
4) 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);
5) 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);
6) BIM models (information model) in native format, the models shall include all geometries, building and element information, drawing sheets, views, images, area schedules (an update on top of those to be submitted in Round 1) shall be collaborated in CDE;

7) A pre-appointment BEP (an update on top of those to be submitted in Round 1);

8) A verifiable script in Dynamo, Grasshopper, Generative Component or other computer language scripting applied, if any, in the Competition to showcase computational design, engineering, analysis and optimisation (an update on top of those to be submitted in Round 1); and

9) Presentation for 15 minutes and be followed with Q&A session by panel of judges for 5 minutes.

4.3 Online Submissions

1) Registration will be opened until 28 Jan 2022 (deadline for registration), unless waiver is granted by the CIC. Successful registration will be notified via email by the CIC.

2) For submission, Participant is required to self-create a Google account and store the requested deliverables (refer to Section 4.1) in the Google Drive, and email the shared Google Drive link by 1 Jun 2022 (12:00nn HK time) to bim@cic.hk

5. Guidance and Support

Competition Briefing Webinar
- Date: 15 Dec 2021 (Wed)

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
- GVDC – Ecodomus
- IES – IESVE
- isBIM – Jarvis
- Kalloc – Fuzor
- Llewellyn & Partners Co. – AutoCDE
- MES – ShareBIM
- Oakley – BIM eLearn
- Trimble – Tekla
- Vircon
- White Frog
- Training webinars and free software licenses will only be arranged for participating teams

BIM Mentoring Support
- Period: Mar 2022 – Jun 2022
- 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

6. Assessment Scoring Criteria

Scoring Criteria	%
1st Round	
Use of Information and Compliance of Client's Requirements	25
Computational Design, Engineering, Analysis and Optimisation	25
Creativity, Innovation & Technologies, Originality	25
Communications and Presentation Skills	25
TOTAL	**100**
2nd Round (On-site competition)	
1st round score	20
Compliance to Design Information, Flexibility & Responsiveness	30
Collaboration & Teamwork	20
Communications and Presentation Skills	20
Creativity, Innovation & Technologies, Originality	10
TOTAL	**100**

7. Awards and Prizes

Prizes	
First Prize	Trophy + Certificate **A Chance to Participate in an Overseas Inspiration**
Second Prize	Trophy + Certificate
Third Prize	Trophy + Certificate
Max. 7 Merits	Certificate
All	E-Certificate of Participation E-Certificate of Attended Training Webinars

8. Terms and Conditions

By participating in the Competition, each team shall make a registration to participate in the 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.

8.1 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 as of the 31 January 2022. 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 the Competition.
3) Every participant is restricted to joining 1 team only for the Competition.
4) Each Participating Team shall have 3 to 5 members (including the team leader), with students from minimum 2 construction 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 the 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 the 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 the Competition and has the right to cancel and/or modify any terms and conditions at any time in the Competition without prior notice.
11) The CIC reserves the final decision on the Competition and has the right to cancel or change the awards and other arrangements for the 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 the 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 the Competition, the CIC has the final decision to cancel such participant's qualifications and reserves the right to withdraw the relevant awards.

8.2 Pre-Competition

1) The Participating Teams shall complete the 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 the 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.

8.3   During Competition

1) All participants must comply strictly with all terms and conditions of the 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 the Competition.

3) The participant shall report to the CIC / Judges as soon as possible, if any grievances. Appeals after the 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-authorised 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 there is a need.

8.4   Assessment and Judging

1) The submissions are assessed based on the assessment scoring criteria.

2) The results of the 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.

8.5 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 the 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 ~