

Construction Industry Council**Committee on Building Information Modelling**

Meeting No. 003/20 of the Committee on Building Information Modelling (Com-BIM) was held on Monday, 29 June 2020 at 2:40pm at the Board Room, 29/F, Tower 2, Enterprise Square Five (MegaBox), 38 Wang Chiu Road, Kowloon Bay, Kowloon, Hong Kong and through web meeting.

Present	: Ada FUNG Yin-suen	(AF)	Chairperson
	Neo CHAN Kang-yuen*	(NCKy)	
	Vincent CHOW	(HKC)	
	Jack CHENG Chin-pang	(JCCp)	
	Donald CHOI Wun-hing	(DC)	
	Daniel CHONG Kwok-ming	(DCg)	
	Clement CHUNG	(CtCg)	
	Ivan FU Chin-shing	(FI)	
	TAM Wing-cheung	(WCT)	
In Attendance	: Eric CHAN	(ECHL)	Development Bureau
	Robert CHENG	(RtCg)	Buildings Department
	Elvis HUI	(EsH)	Urban Renewal Authority
	Mark LAI	(MLai)	Buildings Department
	Rocky POON Lock-kee	(LKP)	Co-chairperson of Task Force on BIM Specifications and Agreement
	Richard PANG	(RPg)	Director - Industry Development
	Alex HO	(AHKK)	Senior Manager – Building Information Modelling
	Serina LAU	(SLau)	Manager - Building Information Modelling
	Ron NG	(RNCw)	Manager - Building Information Modelling
	George WONG	(GWck)	Manager - Building Information Modelling
	MOK Peng-lam	(PMk)	Principal – School of Professional Development in Construction, HKIC
Apologies	: CHUNG Kwok-fai	(CKFi)	
	Eric POON Shun-wing	(EPSW)	
	Billy WONG Chi-pan	(BWCb)	

Kelvin WONG Ka-wo (KWKw)

*Remarks: *attend the meeting through Microsoft Teams*

MINUTES

Action

Before the meeting, AF welcomed DC, a new member of Com-BIM, currently the Chairperson of the Construction and Technology Application Centre (CITAC) Management Board, and the Chairperson of the Working Group on Establishment of a Task Force on Construction Digitalisation. As Com-BIM will be working closely with CITAC and Construction Digitalisation in the coming years, this would help strengthen communication and create synergy.

AF reminded Members to declare conflict of interest if any. No conflict of interest was registered.

3.1 Confirmation of the Minutes of Meeting No. 002/20 of the Com-BIM

Members took note of the Paper CIC/BIM/M/002/20 and confirmed the Minutes of meeting No. 002/20 of the Com-BIM held on Friday, 3 April 2020.

(HKC and ECHL arrived the meeting at 2:44pm)

3.2 Matters Arising from the Previous Meeting

AHKK reported on the matters arising from the previous meeting as follows:

(a) Item 1.2 – Matters Arising from the Previous Meeting

JCCp reported that the Hong Kong University of Science and Technology (HKUST) would pass the information of the Final Year Projects (FYPs) to CIC for sharing onto the BIM Portal.

[Post-meeting note: JCCp shared their information of FYPs, theses of Postgraduates and journal papers to CIC on 10 July 2020. The information was uploaded to the BIM Portal on 17 July 2020.]

(b) Item 2.4 - Progress of the Task Force on BIM Standards (Phase 2)

CIC Secretariat was keeping JCCp, Chairperson of the Task Force on

BIM Standards (Phase 2) and Mr. Marcin KLOCEK, Chairperson of the Task Group 1 on BIM Specifications updated on the development of “Enhancement of CIC BIM Standards (General)”.

In response to HKFEMC’s concern in selecting suitable Mechanical, Electrical and Plumbing (MEP) software for MEP contractors, BIM Department would organise a webinar on MEP solutions on 19 August 2020. CIC Secretariat had informed DCg by email on 12 June 2020.

- (c) Item 2.5 - Progress of the Task Force on BIM Training
A roundtable meeting with the MoU institutions would be arranged in July 2020 to encourage them to include BIM as part of their courses or integrate BIM into student projects. Progress of other issues would be further reported under agenda item 3.6.

- (d) Item 2.8 - Progress of Consultancy Services on the 3D and BIM Data Use Case Requirements of the Construction Industry for the Development of Digital Hong Kong to the HKSAR Government for Construction Industry Council
This would be reported under agenda item 3.9.

- (e) Item 2.9 - Progress Report on BIM by CIC
BIM Awards was renamed to “Celebration of BIM Achievement 2020”. Proposed achievement categories and scoring criteria had been prepared and reviewed by the management. Organising Committee had been formed to discuss the details.

Webinar on the Introduction of CIC Production of BIM Object Guide - General Requirements (August 2019) would be held on 17 July 2020. CIC Secretariat had informed DCg by email on 12 June 2020. CIC Secretariat would further promote the webinar to the manufacturers and suppliers to encourage them to follow the BIM Object Guide in developing BIM objects for their products. AF suggested the manufacturers, especially MEP suppliers to share their BIM objects with the industry through CIC. AF suggested CIC to clear the backlog on completion of processing BIM objects already collected, so that these could be uploaded as soon as possible.

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- (f) Item 2.11 - Any Other Business
To follow up on the concerns in BIM adoption by MEP contractors from the Hong Kong Federation of Electrical and Mechanical Contractors (HKFEMC) especially on training, BIM Department had an internal meeting with the School of Professional Development in Construction (SPDC) of the Hong Kong Institute of Construction (HKIC) to explore ways to fulfill their needs on BIM training on 9

April 2020. AF and representatives from HKFEMC, Hong Kong Construction Association, SPDC and BIM Department had a meeting to explore the options on 7 May 2020. After the meeting, CIC Secretariat sent the SPDC's proposed remote training course on BIM Basic Modelling - Revit and BIM Advanced Modelling (MEP) - Revit Courses to HKFEMC on 11 June 2020. DCg remarked that they need two months for their members to prepare the necessary hardware, software and teaching assistants.

AF suggested HKFEMC to approach CIC to provide assistance to their members, if necessary, to speed up the commencement of the training course.

In addition, Members discussed and agreed that there was a need to develop a training course for industry stakeholders (such as site engineers, foremen, clerk of works and building services inspectors etc.) and government regulators to learn how to review and mark up comments on the BIM models. AHKK suggested that the Task Force on BIM Training to work out the course syllabus. CIC would follow up with SPDC and other training service providers to explore offering pilot courses.

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(DC arrived the meeting at 2:52pm)

3.3 Updated Membership and Terms of Reference for the Task Force on BIM Standards (Phase 2) and Task Force on BIM Training

AHKK briefed Members on the paper CIC/BIM/P/011/20 regarding updated membership and Terms of Reference (TOR) for the Task Force on BIM Standards (Phase 2) and Task Force on BIM Training. Highlights were as follows:

- (a) "Task Force on BIM Standards (Phase 2)" was proposed to be renamed as "Task Force on BIM Standards" without any phases after the name since the development of standards, specifications and common practices for BIM is an on-going task.
- (b) Representatives from the Development Bureau (DEVB) and the Hong Kong Institution of Engineers (HKIE) were proposed to be invited as members of the Task Force on BIM Training.
- (c) AF, Chairperson of the Com-BIM and Co-chairperson of the Task Force on BIM Specifications and Agreement, JCCp, Chairperson of the Task Force on BIM Standards and CtCg, Chairperson of the Task

Force on BIM Training, would be members of all Task Forces so as to ensure the alignment of BIM development.

- (d) The TOR for the Task Force on BIM Standards and the Task Force on BIM Training were proposed to be revised as the focus of the work had changed.
- (e) The Terms of Office for the Members of the Task Force on BIM Standards and the Task Force on BIM Training were proposed to end on 31 January 2022 to align with the Com-BIM. (Typo under point 3.4 in the Paper would be rectified as 2022, instead of 2020)

Members approved the updated membership and TOR for the Task Force on BIM Standards and Task Force on BIM Training.

AF suggested inviting the Chairpersons of the Task Group 1 on BIM Specifications and Task Group 2 on BIM Special Conditions of Contract & Services Agreement to be in attendance of the Com-BIM meetings to ensure the alignment of BIM development.

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3.4 2021 Business Plan

AHKK briefed Members on the paper CIC/BIM/P/012/20 and gave a presentation on the 2021 business plan. Highlights were as follows:

- (a) In 2019, the Com-BIM had developed a 3-Year Strategic Plan (2019-2021) which targeted to increase the adoption of BIM by the industry, train up the practitioners with knowledge of BIM, increase the skill level of BIM personnel and widen the applications of BIM throughout the project life cycle in three years.
- (b) The 2021 business plan and key performance indicators/ deliverables were proposed according to the five key areas, including (1) promotion/ publicity, (2) training, (3) standards/ guidelines, (4) certification and accreditation, (5) Research and Development (R&D).
- (c) The 2021 proposed budget was \$8.127 million, which was similar to 2019 expenditure and 2020 expenditure forecast.

After the presentation, AF suggested the proposed business plan and budget should allow flexibility to cope with the dynamic situation of BIM and IT development. LKP suggested to put higher priority of BIM Standards for rebar modelling and prefabrication and BIM Standards for

safety in the business plan. JCCp responded that the Task Force on BIM Standards would depend on industry's needs to adjust the priority. A draft roadmap for the development of the CIC BIM Standards would be illustrated in agenda item 3.5.

In addition, AF suggested CIC to organise a webinar or seminar with Logistics and Supply Chain MultiTech R&D Centre (LSCM) in promoting their applied R&D projects to the industry. AF also suggested CIC to organise a seminar/ training course on the latest technologies such as blockchain and cyber security. FI suggested CIC to coordinate with developers of plug-in tools to promote their products to the industry.

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Members endorsed the proposed 2021 business plan and budget of Com-BIM for onward processing.

3.5 Progress of the Task Force on BIM Standards

JCCp briefed Members on the paper CIC/BIM/P/013/20 and gave a presentation on the progress of the Task Force on BIM Standards (TF-BS). Highlights were as follows:

- (a) A draft roadmap for the development of the CIC BIM Standards and a draft framework/ hierarchy for CIC BIM publications were shown.
- (b) The assignment brief for the consultancy services for the "Development and formulation of BIM guide for using BIM in generation of MEP digital drawings for statutory submissions" had been endorsed by the TF-BS. The consultancy was targeted to be awarded in Q3 2020. It was proposed that the Com-BIM would delegate the authority to TF-BS to manage and monitor the consultancy services. Final acceptance of the deliverables would be approved by Com-BIM.
- (c) The tender recommendation for the "Enhancement of CIC BIM Standards (General)" was approved by Com-BIM by circulation on 30 April 2020. The project commenced on 20 May 2020. A webinar on stakeholder engagement was held on 22 June 2020.
- (d) Buildings Department (BD) would further consider publishing the Standards/Guidelines with associated deliverables from the CIC BIM Standards for Preparation of Statutory Plan Submissions. The software-specific user guides would be published on the CIC BIM Portal only.

After the presentation, AF suggested CIC to prepare the BIM Standards for facilitating Quantity Take Off (QTO) instead of merely referring to the document being developed by the Hong Kong Institute of Surveyors (HKIS). JCCp would discuss with TF-BS Members.

JCCp

In response to the enquiry on use of BIM for Asset Management (AM) and Facility Management (FM), AHKK reported that SPDC would offer a course on “BIM-Asset Management for Electrical and Mechanical Services Department (EMSD) Projects” in September 2020. RNCw supplemented that CIC Estate Office was preparing the assignment brief for the integration of BIM, radio-frequency identification (RFID) and Internet of Things (IoT) for the CIC Headquarters. JCCp reported that HKUST had carried out research on BIM-FM and was preparing a Digital Twin for their campus. He could share the experience through webinar when ready. AF suggested Com-BIM to discuss this subject at the next meeting in September 2020.

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Members took note of the progress of the work of the TF-BS.

(PMk left the meeting at 4:10pm)

3.6 Progress of the Task Force on BIM Training

CtCg briefed Members on the paper CIC/BIM/P/014/20 regarding the progress of the Task Force on BIM Training (TF-BT). Highlights were as follows:

- (a) Over 400 students attended a webinar on BIM and innovation organised by the CIC at the HKUST on 18 May 2020. A roundtable meeting with the MoU institutions would be arranged on 10 July 2020.
- (b) The Hong Kong Institute of Architects (HKIA) would organise their BIM Pro Training Programme in mid July 2020. The programme would be a mandatory requirement for candidates to become BIM Pro (HKIA). HKIS would organise five BIM-related Continuing Professional Development (CPD) events.
- (c) Task Force Members suggested CIC to invite professional institutions to be supporting organisations for CIC BIM webinars so as to increase the reach to more practitioners.
- (d) Task Force Members considered that, at the moment, it was not appropriate for CIC to accredit all BIM training courses except for

BIM manager courses and BIM coordinator courses in Hong Kong. For quality BIM training courses, practitioners could consider attending the pre-approved list of BIM Training Courses of the Construction Innovation and Technology Fund (CITF) as these pre-approved courses had been assessed with certain assessment criteria by the CITF BIM Vetting Sub-Committee.

After the presentation, JCCp suggested the CIC BIM training courses to include CIC BIM Standards. AF suggested to explore the idea of establishing a platform for BIMers to find BIM-related jobs from employers.

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Members took note of the progress of the work of the TF-BT.

(FI left the meeting at 4:50pm)

3.7 Progress of the Task Force on BIM Specifications and Agreement

AF briefed Members on the paper CIC/BIM/P/015/20 and gave a presentation on the progress of the Task Force on BIM Specifications and Agreement (TF-BSA). Highlights were as follows:

- (a) Considering the similarities in nature between the work of Task Group 2 and Task Group 3, and to ensure consistency of the special conditions of contract and services agreement as an integral set of documents, Task Group 2 and Task Group 3 was proposed to be combined into one Task Group, namely “Task Group 2 on BIM Special Conditions of Contract & Services Agreement”.
- (b) A webinar on public consultation on CIC BIM specifications was held on 27 April 2020. The first draft of the CIC BIM specifications was released on the CIC BIM Portal for public comments from 27 April to 27 May 2020. CIC BIM specifications, samples of recommended scope of works for BIM and BIM dictionary/ glossary were under preparation and would be completed in Q3 2020.
- (c) The assignment brief for the standard special conditions of contract for BIM and BIM services agreement had been approved by Task Group 2.

Members took note of the progress of the work of the TF-BSA.

3.8 Progress Report on BIM Certification and Accreditation Scheme

GWCK gave a presentation on the progress report on the BIM Certification and Accreditation Scheme (BIMCAS). Highlights were as follows:

- (a) There were 284 approved CIC-Certified BIM Managers (CCBM) as of 27 May 2020. The number of approved CCBMs for each organisation type and the number of different organisations/categories with one or more CCBM were analysed and presented to members.
- (b) Since the launch of the Schemes on Certification of BIM Coordinators and Accreditation of BIM Coordinator Courses on 31 March 2020, there were 27 applications of CIC-Certified BIM Coordinators (CCBC) as of 22 June 2020.
- (c) CIC would organise webinars to promote BIMCAS each month. Members were invited to join the webinars and specify CCBM (and CCBC later) as a requirement under their contracts.
- (d) For those applicants who did not meet the relevant degree requirement to apply for CCBM, BIM Certification and Accreditation Board was considering to provide a special route for very experienced applicants.

All to note

Members took note of the progress report of the BIMCAS.

(LKP left the meeting at 5:22pm)

3.9 Progress Report on BIM by the CIC

AHKK gave a brief presentation on the progress report on BIM prepared by the CIC covering the period April to June 2020:

- (a) On behalf of PMk, AHKK reported that the face-to-face classroom training was suspended during the period from 3 February to 15 March, and also from 23 March to 7 May 2020, due to the outbreak of COVID-19. The number of enrolment decreased significantly. Three new BIM training courses would be offered by HKIC, including “BIM-AM for EMSD Projects”, “BIM Coordinator Course” and “BIM – Drawing Generation”.
- (b) Celebration of BIM Achievement 2020 would be held on 10

November 2020 at the CIC-Zero Carbon Park during the Construction Month.

- (c) CIC Digitalisation Award 2021 was planned to be held in November 2021.
- (d) Due to the outbreak of COVID-19, the CIC BIM Space was closed from 3 February to 1 March, and also from 22 March to 3 May 2020. Various knowledge and technology adoption sharing BIM webinars were held to keep the momentum on driving BIM adoption. Total number of attendees of the BIM-related webinars from April to June 2020 was over 9,600.
- (e) The CIC BIM Competition 2020 (Tertiary Student Category) was successfully concluded with an award ceremony held on 13 June 2020. Webinars for awardees sharing would be held on 15 & 22 July 2020.
- (f) A BIM Talks was planned to be held at the Hong Kong Academy for Performing Arts on 8 September 2020. Two webinars on BIM Talks would be held on 27 July and 2 December 2020 respectively.
- (g) The consultancy of the BIM adoption survey 2020 was awarded to “Llewellyn and Partners Company Limited” on 24 June 2020 and would commence in early July 2020.
- (h) Two BIM research projects, viz “BIM-based Rebar Design Optimization and Prefabrication Automation” and “BIM-Automation of Gross Floor Area Calculation, Fire Safety and Prescribed Checking for General Building Plans Preparation”, were in good progress.
- (i) The paper CIC/BIM/P/016/20 regarding the progress summary of ongoing consultancies and research projects under Com-BIM was tabled for Members’ information.

Ms Yvonne CHEU, a representative from AECOM Asia Company Limited, gave a presentation on the progress updates of the Consultancy services on the 3D and BIM data use case requirements of the construction industry for the development of Digital Hong Kong.

After the presentation, AF suggested listing all data available from data providers, and comparing it with the data requesters’ list before ranking the use cases. It was important to find the gap between data providers and data requesters. She reminded that FM was important and it should be

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included in the use cases. AHKK reminded AECOM to include the benefits of the use cases to justify their importance. AECOM was required to revise the use cases. AECOM would follow up and further discuss with the CIC.

Members took note of the progress report on BIM prepared by CIC.

(DC left the meeting at 6:19pm)

(CtCg and RPg left the meeting at 6:45pm)

3.10 Electronic Submission Hub and BIM

WCT gave a presentation on the electronic submission hub (ESH) and BIM development in BD. The initial implementation plan of ESH was as follows:

- (a) Phase 1: plans not requiring cross-department referral would be completed in Q1 2022.
- (b) Phase 2: plans requiring referrals to works departments only would be completed in Q4 2023.
- (c) Phase 3: all types of plans would be completed in Q2 2025.

After the presentation, RtCg supplemented that for the implementation of Phase 2, the system would be made ready for referral of submissions to works departments in Q1 2023. HKC reported that BD would try to complete Phase 3 earlier as well.

AHKK supplemented that a meeting with DEVB and BD was held on 4 June 2020. It was agreed that pilot projects would be identified from several public clients to try using BIM models and drawings generated from these models for submission to BD, with an aim to aid the development of the ESH and to streamline the workflow in the plan approval process. To follow this up, it was proposed to form a “Task Force on BIM submission to BD”. Proposed membership and draft TOR were shown. Pilot project details (such as project name, timeframe, submission schedule) would be consolidated after agreeing the TOR with BD.

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Members took note of the ESH and BIM development in BD.

(JCCp left the meeting at 7:10pm)

3.11 Updates on Digitalisation

AHKK gave a brief presentation on the updates on the CIC core initiative on Digitalisation for Members' information. Highlights were as follows:

- (a) Working Group on Establishment of Task Force on Construction Digitalisation was formed. DC is the Chairperson. Members included AF, FI, JCCp, EPSW, Mr Eric CHONG from CITAC board, Ms Winnie SHIU from HKIS and Mr Conrad WONG from Yau Lee Group.
- (b) The pattern of construction digital transformation in the UK, Germany and Singapore are similar by starting with BIM adoption and setting standards, second step is to expand BIM by integrating with other digital technologies such as IoT, Scanning, third step is to cover the whole project lifecycle by building a fully collaborative and interoperable data environment. It was observed that process re-engineering comes hand in hand for digital transformation. In Hong Kong, the digitalisation adoption follows similar footsteps of other countries.
- (c) There are several observations: Government policy is one of the key driving forces for digitalisation to take off; Subcontractor among other groups is the slowest in technology adoption; and Digital solutions are more readily adopted at design stage, followed by construction stage, least adopted at operation and maintenance stage.
- (d) To cope with the development of construction digitalisation, CIC would:
 - (i) make proposal to DEVB on policies to drive demand and development;
 - (ii) seek support from major project clients and practitioners to promote local and overseas best practices to the industry for adoption;
 - (iii) organise award events to recognise digitalisation leaders, and promote their good work for diffusion downstream to influence and enhance the performance of laggards;
 - (iv) develop standards/ guidance, specifications and incentive mechanisms (CITF), and facilitate CIC R&D fund and other funding;
 - (v) provide training and development through HKIC/SPDC to support the demand for the construction digitalisation initiatives.

Members took note of the updates on digitalisation.

3.12 Any Other Business

No other business was raised in the meeting.

3.13 Date of Next Meeting

22 September 2020 (Tuesday) at 2:30 p.m. at the Board Room, 29/F, Tower 2, Enterprise Square Five (MegaBox), 38 Wang Chiu Road, Kowloon Bay, Kowloon, Hong Kong.

There being no further business, the meeting was adjourned at 7:28pm.

**CIC Secretariat
July 2020**