

**Construction Industry Council**

**Committee on Building Information Modelling**

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Meeting No. 003/22 of the Committee on Building Information Modelling (Com-BIM) was held on Tuesday, 27 September 2022 at 2:30pm at Board Room, 29/F, Tower 2, Enterprise Square Five (MegaBox), 38 Wang Chiu Road, Kowloon Bay, Kowloon, Hong Kong.

Present	: Ada FUNG Yin-suen	(AF)	Chairperson
	Antonio CHAN Chi-ming*	(ACHAN)	
	Neo CHAN Kang-yuen	(NCKy)	
	Aaron CHAN Wing-kai	(WKCn)	
	Jack CHENG Chin-pang	(JCCp)	
	Clement CHUNG	(CtCg)	
	FUNG Chi-yiu*	(FCY)	
	Francis LEUNG Chi-suen	(FLCs)	
	Eric POON Shun-wing*	(EPSW)	
	TANG Man-hei	(MHT)	
	Kelvin WONG Ka-wo	(KWKw)	
	Michael WONG Wai-lun	(MWWL)	
	Rosana WONG Wai-man	(RnWg)	
	YIP Yin-yung*	(YYY)	
	Alfred WONG Kwok-fai	(WKF)	Principal Assistant Secretary (Works) 3, Development Bureau
	Tommy TAM Wing-cheung	(WCT)	Assistant Director/Corporate Services, Buildings Department
In Attendance	: Thomas HO On-sing	(TH)	CIC Chairman
	Albert CHENG*	(CTN)	Executive Director
	Alex HO	(AHKK)	Assistant Director - Industry Development
	Daniel CHIU	(D1C)	Principal - School of Professional Development in Construction (Acting)
	George WONG	(GWck)	Senior Manager - Industry Development
	Sunny CHOI	(SLC)	Manager - Industry Development
	Shirley LAM	(SHLm)	Manager - Industry Development
	Serina LAU	(SLau)	Manager - Industry Development
	Lawrence LEUNG	(LLTY)	Manager - Industry Development
	Ron NG	(RNCw)	Manager - Industry Development
	Evan MAK	(EMYw)	Assistant Manager – Industry Development

Javin CHENG (JCCh) Officer - Industry Development

Apologies : Donald CHOI Wun-hing (DC)  
CHUNG Kwok-fai (CKFi)

*Remarks: \*represents the attendee attended the meeting through video conference (Microsoft Teams).*

## **MINUTES**

### **Action**

AF welcomed TH, Chairman of the Construction Industry Council (CIC), CTN, CIC Executive Director, and WKF, a successor to the position of the Principal Assistant Secretary (Works) 3 of the Development Bureau (DEVB), to attend the meeting.

*(RnWg and KWKw attended the meeting at 2:32pm)*

AF reminded Members to declare conflict of interest, if any.

*(CTN attended the meeting at 2:36pm)*

### **3.1 Confirmation of Minutes of the Previous Meeting**

Members took note of Paper CIC/BIM/M/002/22 and confirmed the Minutes of Meeting No. 002/22 of the Com-BIM held on Wednesday, 15 June 2022.

### **3.2 Matters Arising from the Previous Meeting**

Members received the progress report on matters arising from the previous meeting, circulated on 20 September 2022 with no further comments:

Item 1.5 on the BIM personnel – the DEVB was working with the CIC a plan of a rolling bi-monthly exercise to request course providers to offer CIC-Certified BIM Manager (CCBM) and CIC-Certified BIM Coordinator (CCBC) training courses for personnel involved in public works projects, and appealing the Works Departments' supports in arranging relevant staff of their departments, consultants and contractors working for their projects to enroll the said courses. The

DEVB aimed at having the said personnel completed the CCBM and CCBC training courses in end Q3 2023.

The CIC had been liaising with The Hong Kong Institute of Architects (HKIA) and The Hong Kong Institution of Engineers (HKIE) on ways to boost their members to become CCBM or CCBC. The HKIA was developing their own CCBM course to be accredited by the CIC, which would be one way to encourage the HKIA's members to complete the accredited BIM manager course and become CCBM. No particular proposal had been received from the HKIE on encouraging their members to become CCBM or CCBC.

A separate meeting for a thorough discussion of the supply issue of BIM personnel was held on 7 September 2022. Details was reported under agenda item 3.6.

Item 2.3 on the possibility for the CIC to provide financial subsidies to the professional institutes in organising in-house BIM training courses – the Construction Innovation and Technology Fund (CITF) could subsidise professional institutes in organising local collaborative courses of the Manpower Development funding category with a fund ceiling of HK\$300,000 per course on a reimbursement basis.

For the suggestion on developing BIM for e-tendering submission related guidelines in 2023, the CIC was exploring to form a Task Force on Contractual BIM. The suggestion was also shared with the DEVB for consideration.

Item 2.4 on preparing guidelines for the certification interviews – the Building Information Modelling Certification and Accreditation Board Secretariat had prepared some guidelines or tips on how to prepare for the certification. Such guidelines had been uploaded to the CIC BIM Portal and provided to the accredited course providers for presentation in classes to draw applicants' particular attention to the application process and the core areas to be prepared for the certification interviews.

Item 2.5 on progress of the Construction Digitalisation Roadmap (CDR) – for achieving the target of adoption of BIM, Common Data Environment (CDE) and Digital Works Supervision System in project contract sums over HK\$300 million, ACHAN reported that The Hong Kong Federation of Electrical and Mechanical Contractors had coordinated with the CIC to offer two BIM Viewer training sessions to its Council Members at the CIC BIM Space on 19 August 2022, in order to engage them to become BIM Viewers. As most of the Council Members were at directorate level, enabling them to participate as a

BIM Viewer would be of help in pushing BIM adoption in mechanical, electrical and plumbing companies. During the meeting, FCY updated Members that the Hong Kong Construction Association (HKCA) encouraged large companies to conduct in-house trainings on BIM personnel. The HKCA Secretariat was also liaising with the CIC to set up group classes for the HKCA in training BIM personnel and to explore ways to simplify the relevant accreditation process.

For achieving the target of “BIM for everyone” (i.e. those who are responsible for works projects should at least be able to view BIM models), MHT reported that the Federation of Hong Kong Electrical & Mechanical Industries Trade Unions (EMF) agreed to promote the importance and basic skills of BIM to its members who are mostly foremen and frontline workers. Several 1.5-hour seminars with topics related to BIM were also carried out. In addition, the EMF was considering to carry out approximately 10-hour workshops to train BIM Viewers. On the other hand, MWWL reported that Facility Information Modelling (FIM) was fully adopted in supply chain management in Hip Hing Construction Company Limited to facilitate the manufacturing process by the subcontractors. Detailing for fabrication, assembly, and installation, i.e. FIM, to be executed down to earth and cast real benefits to the projects. For the digital application to the site staff, Integrated Digital Management Hub was adopted to improve operation productivity, safety and quality in a single platform. With the use of 5G network and advance BIM technology, they could motivate frontline workers to use the validated information on the site effectively, such as progress monitoring, payment application and defect checking, etc.

Item 2.9 on developing city information modelling (CIM) – the CIC had initiated a discussion at a separate meeting with the Task Force on BIM Standards (TF-BS) on 1 August 2022 on the potential enrichment of the “DEVB BIM Harmonisation Guidelines for Works Departments” (“the Guidelines”), by setting out clear requirements specifically for projects in private sector with the aim to facilitating private sector to contribute BIM models for better supporting the development of the Lands Department (LandsD)’s 3D digital map initiatives, which could contribute to the development of CIM. After further deliberation in the TF-BS meeting on 16 August 2022, the CIC would touch base with the LandsD and some companies or organisations in public and private sectors on the requirements concerned before taking forward such initiative. For the CIC’s proposed consultancy study on the potential enrichment of the Guidelines, the CIC would identify the scope of consultancy studies and would circulate to the Task Force Members for comment and further discussion.

To complement the work plan outlined above, the CIC promoted the Guidelines through several channels, including to show the document and hyperlink of the DEVB's Technical Circular (Works) No.8/2021 on the CIC BIM Portal, and organised a webinar on 1 June 2022 with a session for the representatives from the Civil Engineering and Development Department (CEDD) and the DEVB to introduce or promote the CEDD's BIM Harmonisation Study and the Guidelines.

A separate meeting for a further discussion on the development of CIM would be held on 19 October 2022.

### **3.3 Applications for the CIC R&D Fund**

This item was discussed after item 3.5.

Members took note of Paper CIC/BIM/P/022/22.

JCCp declared that he was the project-in-charge of the research proposal applications of both the "Automated BIM-based Clash-free Rebar Design for Reinforced Concrete Components with Extended Types and Irregular Shapes" and "Automatic Generation of Bill of Quantities from BIM Drainage Network in accordance with Standard Method Measurement for Civil Engineering Works". In addition, RnWg declared that she was the project-in-charge of the research proposal application of the "Assessing KPI for BIM: The Development of New Auditing Platform for CDE". AF decided JCCp and RnWg could continue to attend the meeting and participate in the discussions in their related items, whilst abstaining their voting rights.

ACHAN also declared interest as his company was associated with RnWg and thus, he would not vote in the research proposal application of the "Assessing KPI for BIM: The Development of New Auditing Platform for CDE".

A presentation session on the research proposals applications was organised to Members on 22 September 2022. GWCK briefed Members on the four research proposal applications recommended by the CIC Secretariat, and the questions raised by Members during the presentation session.

*(JCCp and RnWg left the meeting at 4:36pm)*

*(TH left the meeting at 4:38pm)*

*(EPSW left the meeting at 4:53pm)*

Upon deliberations, Members approved the following three research proposal applications if the respective condition(s) was(were) met:

- (a) Automated BIM-based Clash-free Rebar Design for Reinforced Concrete Components with Extended Types and Irregular Shapes  
This research proposal application was approved based on the conditions that the research could deliver clash-free rebar designs and the disclosure of its optimisation methodology.
- (b) Automatic Generation of Bill of Quantities from BIM Drainage Network in accordance with Standard Method Measurement for Civil Engineering Works  
This research proposal application was approved based on the condition that openBIM environment could be adopted.
- (c) Assessing KPI for BIM: The Development of New Auditing Platform for CDE  
This research proposal application was approved based on the conditions that 100% project cost could be funded by the CIC, the intellectual property right would solely be on the CIC, and an auditing platform for both submission and auditing could be developed.

The CIC Secretariat would follow up with the above applicants to ensure their research proposal applications fulfilled the respective condition(s) before approval.

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Members disapproved the following research proposal applications:

- (a) Developing an Aerial Thermography-based BIM Platform for Automatic Building Energy Performance Calibration and Thermal Defect Management  
Members were concerned about the accuracy of the product and opined that similar products were available in the market and thus, the research value was low. Majority of Members did not recommend this research proposal application.
- (b) AI-based automated segmentation of 3D point-clouds for classification of underground piping facilities  
Members agreed not recommending this research proposal application.
- (c) Digital Twin-enabled Smart BIM for Fit-out Construction in Hong Kong  
Members agreed not recommending this research proposal application.

*(JCCp re-attended the meeting and MHT left the meeting at 5:10pm)*

*(ACHAN left the meeting at 5:13pm)*

**3.4 Assignment Brief and Project Plan for Provision of Supply and Installation of LED Immersive Cave Automatic Virtual Environment (CAVE) for the Construction Industry Council**

Members took note of Paper CIC/BIM/P/023/22.

GWCK briefed Members the project details of the LED Immersive CAVE (LED CAVE) at the CIC BIM Space, and informed Members that the budget of HK\$3 million for purchasing and installation of the LED CAVE with HK\$0.4 million for related renovation of the CIC BIM Space was approved in the Council Meeting on 19 August 2022. The LED CAVE would be used for conducting trainings in different areas including safety, procedures and installation, for reviewing designs with BIM model in 1:1 scale, and for demonstrating as a control center in monitoring construction sites. The installation of the LED CAVE was targeted to be completed in 2022.

RnWg suggested to optimise the utilisation rate of the LED CAVE. WKCn enquired on the possibility of renting the LED CAVE to external parties. JCCp echoed with WKCn's idea and suggested to adopt a similar operation model with the CIC-Zero Carbon Park which gives priority to the use of the CIC's events and allow commercial companies to use the facilities with rental fees. The CIC would explore the feasibility.

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TH emphasized that the content of the LED CAVE was crucial and hoped Members, such as RnWg and FCY, could contribute the BIM models. The CIC would collect BIM models from public clients and contractors.

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YYY suggested the CIC to consider maximising the height of the LED CAVE so as to avoid distortion of different BIM models, and KWkw reminded the CIC Secretariat to enhance the scope of software of the LED CAVE on how to interface with different BIM models.

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Upon deliberations, Members approved in principle the assignment brief and project plan for provision of supply and installation of the LED CAVE. The CIC would issue the open tender accordingly.

*(CTN left the meeting at 2:59pm)*

### 3.5 CIC Beginner's Guide on Construction Digitalisation

Members took note of Paper CIC/BIM/P/024/22.

In response to TH on the differences between the various publications in the series of the CIC Beginner's Guide on Construction Digitalisation, AHKK explained as follows:

(a) "CIC Beginner's Guide on Construction Digitalisation – Adoption of BIM in Small and Medium Enterprises (SMEs)"

It was designed to facilitate SMEs to start adopting BIM, including the hardware and software required and the training courses to attend etc.

(b) "CIC Beginner's Guide on Construction Digitalisation – Adoption of CDE"

It was targeting on project clients, lead consultants and contractors, on the selection of CDE.

(c) "CIC Beginner's Guide on Construction Digitalisation – Digital Platform for Construction Work Management"

It was focusing on the smart site monitoring technologies and products on site operation available in the market, including safety, progress and situation, for proper selection of the digital platform.

AF and TH opined that it would be more effective and powerful to publish the abovementioned three CIC Beginner's Guides in one go. AF suggested organising a launching webinar. TH supplemented that the CIC could develop a promotional plan for encouraging SMEs to use the "CIC Beginner's Guide on Construction Digitalisation – Adoption of BIM in SMEs" and making good use of the CITF.

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JCCp updated Members that the "CIC Beginner's Guide on Construction Digitalisation – Cybersecurity Awareness" would only be available in Q1 2023, as an external consultant would be engaged in preparing this publication. Taking this opportunity, he also suggested to review the CDR as it had been launched for almost one year.

Upon deliberations, Members approved in principle the issuance of the "CIC Beginner's Guide on Construction Digitalisation – Adoption of CDE".

[Post-meeting note: "CIC Beginner's Guide on Construction Digitalisation – Digital Platform for Construction Work Management" was renamed to "CIC Beginner's Guide on Construction Digitalisation – Smart Site Digital Platform". Rollout plan of the series of the CIC



Beginner's Guide on Construction Digitalisation was prepared.]

### **3.6 Summary Notes of a Separate Meeting to Boost the Supply of BIM Personnel**

Members took note of Paper CIC/BIM/P/025/22.

GWCK briefed Members on the key points raised during the separate meeting to boost the supply of BIM personnel held on 7 September 2022. He also reminded Members on the figures of BIM personnel in 2023 major key performance indicators of the Com-BIM.

A new Task Force co-chaired by NCKy and RnWg, with ACHAN, WKCn, FCY and FLCs as members, would be formed to develop and publish a white paper/ action plan on BIM personnel by the end of 2022. AF expected some updates on the progress of the white paper/ action plan in the next Com-BIM meeting.

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AF shared her concern with Members that tertiary students were not able to access to free BIM software for self-study, which would hinder the promotion of BIM and BIM literacy to higher education. AHKK suggested discussing with CKFi for exploring with the Industrial Centre of the Hong Kong Polytechnic University to conduct accredited BIM courses for all relevant students. The CIC Secretariat would discuss with the software vendors and to provide a list of free BIM software licenses and update the higher education institutions afterwards.

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*(YYY left the meeting at 5:26pm)*

*(KWKw and MWWL left the meeting at 5:29pm)*

### **3.7 Update on Progress Reports**

Members took note of Paper CIC/BIM/P/026/22.

GWCK briefed Members on the key points of the progress updates on the BIM Certification and Accreditation Schemes and the key events by the Construction Digitalisation Department. He highlighted that the CIC-BIM Network Sharing Session and the CIC Master Class on CDE (Project Managers) Kick-off Ceremony were successfully held on 1 September 2022. He encouraged Members to participate in the Hong Kong Construction CDE Award as the application deadline was 30 September 2022.

### **3.8 Progress of the Construction Digitalisation Roadmap**

Members took note of Paper CIC/BIM/P/027/22.

GWCK briefed Members on the key points of the progress updates on the CDR. AF asked for the updates on the area of smart asset/ facility management. GWCK responded that webinars would be organised to share the good practices in the industry, followed by a publication of Beginner's Guide in the next year.

### **3.9 ★Progress of the Task Force on BIM Standards**

Members took note of \*Paper CIC/BIM/P/028/22\*.

The progress of the TF-BS was presented under the starred paper. JCCp, Chairperson of the TF-BS, updated Members on the progress of the TF-BS.

WKF pointed out the term “Harmonisation” was intended to be used only for “the Guidelines”, and opined that it might be inappropriate for the term “Harmonisation 2.0” to be used by the CIC as a generic term, especially when it comes to the issues related to the private sector. AF suggested to use the term “Digital Hong Kong Harmonisation” as a substitute. The CIC Secretariat would discuss with the TF-BS on the naming.

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*(FCY left the meeting at 5:54pm)*

### **3.10 ★Progress of the Task Force on BIM Training**

Members took note of \*Paper CIC/BIM/P/029/22\*.

The progress of the Task Force on BIM Training was presented under the starred paper.

GWCK supplemented that the next meeting of the Task Group on BIM-enabled Modern Construction Training for Higher Education would be held in mid-October 2022.

### **3.11 ★Progress of the Task Force on BIM Submissions to the Buildings Department**

Members took note of \*Paper CIC/BIM/P/030/22\*.

The progress of the Task Force on BIM Submissions to the Buildings Department (TF-BSBD) was presented under the starred paper. AF, Chairperson of the TF-BSBD, updated Members on the progress of the TF-BSBD.

The reappointment of Chairperson and Members to the TF-BSBD from 22 July 2022 to 31 January 2023 was approved by the Com-BIM through circulation on 30 June 2022 (paper no. CIC/BIM/P/018/22).

The formation of the Task Force on Development of BIM-related Digital Solutions (TF-DBDS) was approved by the Com-BIM through circulation on 5 August 2022. AHKK supplemented that the first meeting of the TF-DBDS was held on 31 August 2022, and the TF-DBDS was identifying and prioritising a list of BIM-related digital solutions for development and adoption by the industry.

### **3.12 Any Other Business**

No other business was raised in the meeting.

### **3.13 Date of Next Meeting**

The next meeting was scheduled for 6 December 2022 (Tuesday) at 2:30pm at Board Room, 29/F, Tower 2, Enterprise Square Five (MegaBox), 38 Wang Chiu Road, Kowloon Bay, Kowloon, Hong Kong.

**All to note**

There being no further business, the meeting was adjourned at 6:03pm.

**CIC Secretariat  
September 2022**