Supplementary Guide on Preparing the Application for Certification as CCBM or CCBC

CONSTRUCTION INDUSTRY COUNCIL
建造業議會

CIC BIM CERTIFICATION AND ACCREDITATION SCHEMES
建造業議會建築信息模擬認可及認證計劃

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CONSTRUCTION INDUSTRY COUNCIL
BUILDING INFORMATION MODELLING
CERTIFICATION AND ACCREDITATION SCHEMES

Purpose of the guide

- This Supplementary Guide is to provide guidance to applicants for CCBM/CCBC for their preparation of application submissions and for interview assessments.

- The topics being covered include:
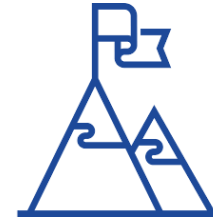
A. How to prepare the application submissions?
1. Understand the importance of completing the application form properly.
2. Understand the application process.
3. Study the requirements of the application guides.
4. Prepare the competency statement.
5. Prepare a portfolio.
6. Submit all necessary documents.

B. How to prepare for the interview assessment?
1. Understand the timeframe of application and assessment.
2. Understand the process of interview assessment.
3. Understand the core competencies.
4. Understand the core subjects.
5. Understand the key topics.
6. Access the useful resources for better preparation.

(A) How to prepare the application submissions?

A1. Why it is important to complete an application form properly and to prepare document submissions adequately?

1. Avoid delaying the whole application process and facilitating faster vetting process
   - The Case Officer in CIC will vet the application form and request any missing details or document proof.
   - The application will be passed to the Assessment Panel only when the application submissions fully comply with the requirements.
   - A properly completed application form and well-prepared document submissions will facilitate faster vetting process.

2. Demonstrate BIM competency
   - The competency section is one of the most important sections for Assessors to evaluate an applicant's BIM competency.
   - For CCBC, interview assessment may be waived if the application submissions demonstrate the applicant can fully meet the competency requirements of a CCBC.

3. Well document your competence and experience
   - Assessors will read through the application form and documents. A properly written and well-organised submission can demonstrate the applicant's experience and knowledge in BIM implementation.

A2. Application and registration process

The applicant visits www.bim.cic.hk and read the application guide.

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The applicant prepares and submits the application form with supporting documents and an application fee.
- Application [Online Form]
- [CCBM] Application fee: ~~HK$2,000~~ HK$1,000 (Valid from 1 Jan 2022 to 31 Dec 2023)
- [CCBC] Application fee: ~~HK$1,000~~ HK$500 (Valid from 1 Jan 2022 to 31 Dec 2023)

↓

CIC verifies application.

↓

Assessment panel conducts interview with the applicant. (For CCBC, Interview may not be required)

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CIC notifies the applicants of the result.

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Renewal of registration by CCBM/CCBC every year.
- [CCBM] 12 BIM-related CPD hours and renewal fee ~~HK$1,000~~ HK$500 (Valid from 1 Jan 2022 to 31 Dec 2023)
- [CCBC] 12 BIM-related CPD hours and renewal fee ~~HK$500~~ HK$250 (Valid from 1 Jan 2022 to 31 Dec 2023)

The **order of assessment of applications** by the assessment panel depends on:

- Date of the application received by CIC, or
- Date of the full submission of required documents and information, whichever the latest.

(**The whole vetting and assessment process can be completed within 3 months**, depending on the completeness and quality of the submission)

QR Code to CIC BIM Portal

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A3. Study the application guides

Before submitting the application, please carefully read the documents below, to have a better understanding of the requirements and criteria of the certifications:

For CCBM

➢ Latest Application Guide for CCBM
- Provide comprehensive information for the CCBM application such as:
- Eligibility Criteria for Certification of BIM Managers
- Core Competencies of a BIM Manager
- Assessment Criteria
- Processing and Assessment
- Notification of Assessment Result
- Renewal of Registration
- List of Core Subjects of a BIM Manager

➢ Sample Application Form
- Provide example on what should be provided in the application form

➢ And more, available at:
https://www.bim.cic.hk/en/certification_and_accreditation/certification_manager_downloads
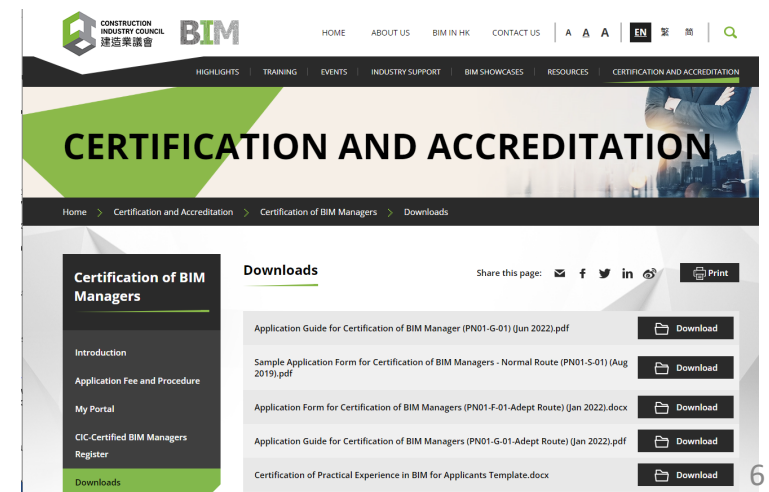
For CCBC

➢ Latest Application Guide for CCBC
- Content is similar to that of CCBM

➢ Sample Application Form

➢ And more, available at:
https://www.bim.cic.hk/en/certification_and_accreditation/certification_coordinator_downloads

A4. Prepare the competency statement

The competency statement helps the applicants to demonstrate their practical experience in BIM and English writing skills. Plagiarism is not allowed. Honesty is an important element of professional ethics, an applicant who has misconduct will not be considered for certification.

On the other hand, during the preparation of the competency statement, the applicant is doing revision of the BIM knowledge and standards.

1. Content of the competency statement should be
   - Concise, and
   - Informative – on your experience gained and the core competencies involved.

Reminder

(E.g. many applicants have not written/elaborated enough for CC3 and CC4 in Section 6c of CCBC application form. It should be well written to demonstrate their practical BIM project coordination experience and relevant BIM knowledge.)

2. Be proficient in the things being laid down in the competency statement
   - Assessors would expect applicants to have an adequate understanding of the things that they have written down and may ask for detail during the interview.

Reminder

(E.g. many applicants have written down the BIM standards being referenced and the software being used in projects. The applicants should also be able to tell what areas of the standards have been followed in the projects, and how the BIM software is being adopted or applied in different stages of the projects.

A4. Prepare the competency statement (con't)

3. Not just a record of project features
   - Applicants should write the competency statement **CLOSELY RELATED** to the core competencies and the core subjects (refer to annexes of the application guides). It might not be enough by just telling what is the scope of the project.

4. Be smart on presentation
   - For the areas that applicants may not have relevant/adequate job experience, try to mention the concept/theory of those areas and to provide explanation, evaluation or views, and to correlate them to their BIM project experience as far as possible.

Reminder

(E.g. there are some applicants just copying colleagues' or other people's work, or just copying corporate/project images and presentation materials without much explanation; assessors would doubt the applicants' true BIM roles and responsibilities in the projects.)
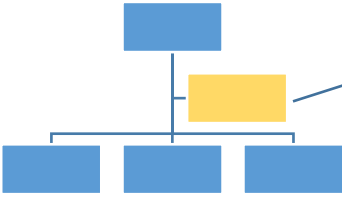
Reminder

(E.g. some applicants may not have experience in creating BIM QA/QC mechanism, nor as an BIM auditor to check the BIM processes/models in their BIM projects. They could still use the relevant knowledge gained in the accredited courses to correlate, review or evaluate the duties they have performed in their projects.)

A5. Prepare a portfolio

Prepare a **Portfolio** including all the projects being listed on Section 6 **and the responsibilities and experience gained** and indicate which **core competency** is achieved, in order to let Assessors know the applicant is a competent BIM Manager/Coordinator.

- **Good practice in preparing a Portfolio**

Project name:	
Project description:	
Project period:	
Organization Chart:	

Highlight applicant's name in the O-chart of the project team.

Scope, responsibilities and experience gained:	Core Competency:
1. **Manage the BIM modeller to convert 2D drawings into a 3D model** **Software used: Revit, ArchiCAD** **Technologies used: N/A** image image Experience gained: 1. **Each view can only be used in one sheet.** 2. **View depth and view range are important parameters in controlling the visibility of elements in drawings.**	**CC2 - BIM Software and Technologies**

Describe applicant's **responsibilities and experience gained** from the project & illustrate with screen capture / rendering. And indicate which **core competency** is achieved.

A5. Prepare a portfolio (con't)

- ## Good practice in preparing a Portfolio

Scope, responsibilities and experience gained:	Core Competency:
2. Check and review the models before submitting to shared folder. **Software used: Projectwise** **Data/file exchange format: IFC** **Experience gained:** 1. Understood and handled the data/information loss in IFC exchange 2. Explained to colleagues the standard of model requirement	**CC4 - Digital Information Management, Collaboration and Integration**

A6. Necessary documents to be submitted for CCBM application

To avoid delaying the vetting and application process, application form and necessary documents should be properly prepared and submitted to the Construction Digitalisation (CD) Department of CIC. Necessary documents should at least include:

1.	Completed and signed application form.	❏
2.	Proof of academic qualification. • Membership certificates (e.g. corporate membership of HKIA, HKIE or HKIS), or • Academic qualification certificates related to a degree as recognised by CIC **(refer to the application guide Section 4.1 (c) for detail)**	❏
3.	Proof of industry experience. **(e.g. appointment letters, employment letters or reference letters, etc.)** • Work proof(s) of minimum 5 years of relevant post-degree experience (stationed in Hong Kong for at least 6 months)	❏
4.	A portfolio. • A portfolio of project experience that proves the applicant has in the past 5 years gained at least 2 years of practical experience in BIM (stationed in Hong Kong for at least 6 months) **(refer to the application guide Section 4.1 (d) for detail)**	❏
5.	Completed and signed the document of Certification of Practical Experience in BIM. • **The Certification of Practical Experience in BIM for Applicants Template could be downloaded at https://www.bim.cic.hk/en/certification_and_accreditation/certification_manager_downloads**	❏
6.	A competency statement. **(incorporated in the application form Section 7)**	❏
7.	Certificate of successful completion of a CIC-accredited BIM Manager Course.	❏
8.	A curriculum vitae.	❏

A7. Necessary documents to be submitted for CCBC application

1.	Completed and signed application form	❑
2.	Proof of academic qualification • Membership certificates (e.g. corporate membership of HKIA, HKIE or HKIS), or • Academic qualification certificates related to a diploma (or equivalent) in Qualifications Framework (QF) Level 4 or above as recognised by CIC **(refer to the application guide Section 5.1 (c) for detail)**	❑
3.	Proof of industry experience **(e.g. appointment letters, employment letters, reference letters, etc.)** • Work proof(s) of minimum 3 years of full-time relevant industry experience (stationed in Hong Kong for at least 6 months)	❑
4.	A portfolio **(for the selected project(s) in Application form Section 6c)**	❑
5.	Completed and signed employer evaluation form **(refer to the application guide Section 5.1 (d) for detail)** • **The employer evaluation form is available in the online portal, or template could be downloaded at https://www.bim.cic.hk/en/certification_and_accreditation/certification_coordinator_downloads**	❑
6.	Completed and signed client evaluation form **(Optional)** **(refer to the application guide Section 5.1 (d) for detail)** • **The client evaluation form is available in the online portal, or template could be downloaded at https://www.bim.cic.hk/en/certification_and_accreditation/certification_coordinator_downloads**	❑
7.	A competency statement **(incorporated in the application form Section 6c)**	❑
8.	Certificate of successful completion of a CIC-accredited BIM Coordinator Course.	❑
9.	Evidence of completing a at least one BIM software/platform training course in operation level or relevant certification **(refer to the application guide Section 5.1 (e) b. for detail)**	❑
10.	A curriculum vitae	❑

QR Code to CCBC download page

A8. Other useful tips

1. **Email** is the primary communication channel between CIC and the applicants. Applicants are recommended **to regularly check the mailbox** of their email address(es) provided to CIC in their application forms.

2. [CCBC] Streamlined approach on submission of the client evaluation form **(preferred but not mandated)**
   - The form will be sent to your client(s) by email through the online system upon online application submission. Please remind your client(s) to complete the online evaluation forms using the link provided in the email.

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Section 6c Selected practical experience in BIM project coordination and related tasks (In reverse order)*

In the past 5 years at least 1 year full-time relevant practical experience in BIM project coordination and related tasks (stationed in Hong Kong for at least 6 months).

You are required to select at least one project from Section 6a that able to demonstrate you possess the required levels of the Core Competencies stipulated in the Certification of BIM Coordinators. You should duplicate this section separately and attach it to the corresponding Client Evaluation Form and Employer Evaluation Form. If the selected project cannot show 1 year ~~[practical]~~ experience in BIM, you may need to provide more than one BIM project and ~~[more]~~ ~~[Em]~~ployer Evaluation forms such that the required 1 year of practical ~~[experience]~~ ~~[calculation]~~ can be satisfied.

In case client evaluation form cannot ~~[...]~~ ~~[p]~~eriod of your practical experience in BIM coordination ~~[...]~~ ~~[as]~~sessed based on the available details. The submiss~~[...]~~ your application as the BIM Assessment Panel (BIM~~[...]~~ experience and capability in BIM coordination works~~[...]~~

(Remark: For Grandfat~~[...]~~ ~~[t]~~wo years of full-time experience in BIM project coordin~~[...]~~ ~~[for at least 1 year]~~ on or before 31 December 2019.)

Client evaluation form not mandated but advisable

Selected?	Project Ref.**	From (mm/yy)	To (mm/yy)	~~[...]~~ this project	~~[...]~~ project **in HK**	~~[...]~~r project (HK or overseas)	No. of Project team members	Your position in this Project
✓	PR01							

- To facilitate the BIM practitioners applying for CCBC, **in case client evaluation form cannot be submitted or cannot cover the required period of the applicant's practical experience in BIM coordination and related tasks, the applicant's application will be assessed based on the available details**.

- Nevertheless, **the submission of full client evaluation form will give an edge to your application** as the BIM Assessment Panel (BIMAP) can have a more thorough understanding of your experience and capability in BIM coordination works when doing assessment.

(B)
How to prepare for the interview assessment

B1. Process of interview assessment

Photo of the Interview Room
(for reference only)

1. Self-introduction (~5 mins)
   - CCBM – self-introduction in English.
   - CCBC – applicant can conduct the self-introduction in Cantonese or English.
   - No cue card / note / presentation slide

2. Discussion – Assessors will ask questions and have discussion with the applicant. (CCBC ~25 mins) (CCBM ~35 mins)
   - **No slide/animation presentation** is needed during the interview;
   - Each of the Core Competency as required by the certification will be assessed in the interview. For details of the required Core Competencies and Core Subjects, please refer to the annexes of the application guides;
   - Applicant needs to pass **ALL** the Core Competencies in order to get the certification;
   - The final result of the application will be announced after the decision made by the Board (BIMCAB), based on the recommendation of the Assessment Panel;
   - For applicants who have attended the interview but the results are disapproval, the result letters will indicate which Core Competency(s) they have failed. Applicants should make improvement on the weak Core Competencies and re-apply again.
   - There **is no suspension period** for failed applicants, they are welcome to re-apply for the certification once they are ready.

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B2. CCBM – Performance of interviewees in the interview assessment

As at 1 Aug 2022, there were 510 applicants attended interview assessment, and 268 of them (52.5%) were disapproved as they did not fulfil the requirement of one or more of the core competencies 1 to 6 of the Scheme.

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| The Core Competencies of a BIM Manager |
|---|
| **CC1 BIM Initiation** (Ability to describe BIM concept definitions and scope, BIM standards and guidelines in the Hong Kong and global contexts). [Level 2] |
| **CC2 BIM Software and Technologies** (Ability to explain BIM software and the modelling process, and current and upcoming technologies). [Level 2] |
| **CC3 BIM Uses and Processes** (Ability to understand BIM uses and BIM software applications, and to design and manage the overall process of a BIM project). [Level 4] |
| **CC4 Digital Information Management, Collaboration and Integration** (Ability to plan and execute the setting-up of a common data environment and data quality control system for effective use and sharing of digital information in a BIM project). [Level 4] |
| **CC5 Commercial and Contractual Aspects** (Ability to describe commercial and financial issues of BIM as well as BIM-related contractual issues). [Level 2] |
| **CC6 Communication Skills** (Ability to apply effective interpersonal and communication skills in a variety of public and interpersonal settings, such as presentations, meetings, report / training material writing, etc.). [Level 4] |

Percentage of the core competencies that the applicant cannot fulfill during the interview assessment

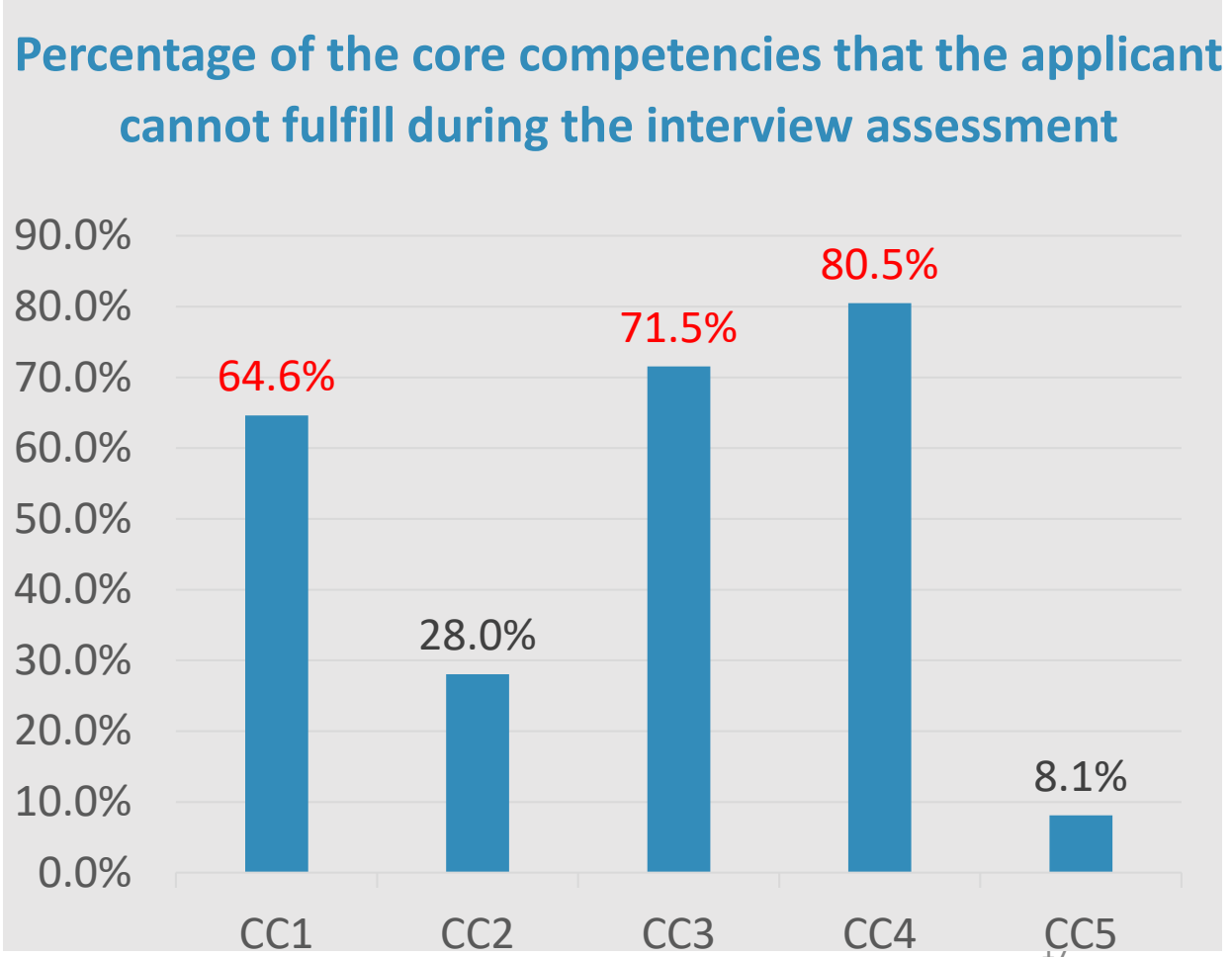|	Percentage
CC1	57.5%
CC2	41.0%
CC3	71.3%
CC4	80.6%
CC5	44.8%
CC6	5.6%

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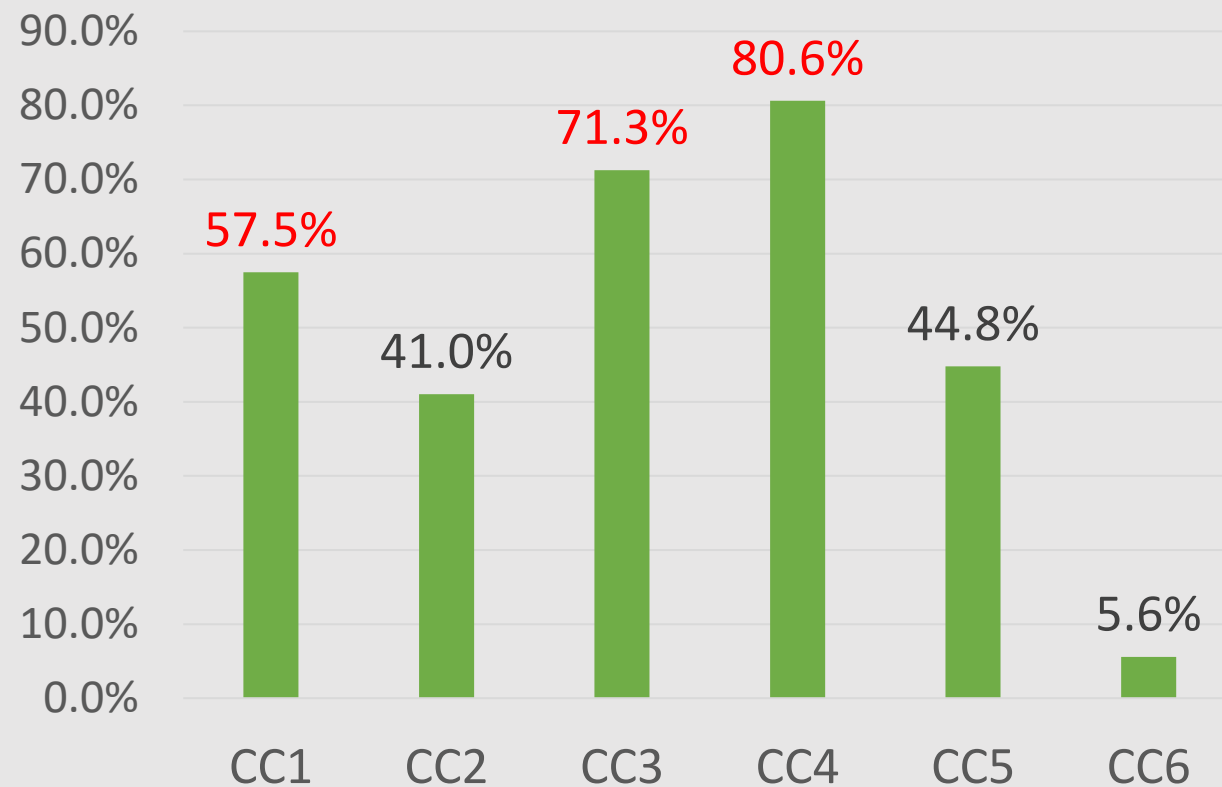
B3. CCBC – Performance of interviewees in the interview assessment

As at 1 Aug 2022, 538 applicants were required to attend interview assessment, and 246 of them (45.7%) were disapproved as they did not fulfil the requirement of one or more of the core competencies 1 to 5 of the Scheme.

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The Core Competencies of a BIM Coordinator
CC1 BIM Initiation (Ability to describe BIM concept definitions and scope, BIM standards and guidelines in Hong Kong and global contexts). [Level 2]
CC2 BIM Software and Technologies (Ability to operate BIM software and the modelling process, and describe current and relevant technologies). [Level 3]
CC3 BIM Uses and Processes (Ability to understand BIM uses, apply BIM software applications, and to execute and administer the responsible BIM tasks for individual or cross-disciplinary BIM project coordination). [Level 3]
CC4 Digital Information Management, Collaboration and Integration (Ability to execute and administer the operation of a common data environment and data quality control system for effective use and sharing of digital information in a BIM project). [Level 3]
CC5 Communication Skills (Ability to apply interpersonal and communication skills in meetings, report / training material writing, etc.). [Level 3]

Percentage of the core competencies that the applicant cannot fulfill during the interview assessment

CC	Percentage
CC1	64.6%
CC2	28.0%
CC3	71.5%
CC4	80.5%
CC5	8.1%

B4. List of Core Subjects

Apart from the description on each of the core competency for CCBM and CCBC, there are detail lists with required level of competency on each of the core subject that a CCBM or CCBC should possess. They are available in the application guides and applicants are highly recommended to study thoroughly.

List of Core Subjects on CC4 of CCBM

			L1	L2	L3	L4
4.1.		**Digital Information Management**				
	4.1.1	Value of data & how it should be managed		✓		
	4.1.2	Interoperate data/information to facilitate cross-disciplinary and cross-BIM platform collaboration		✓		
	4.1.3	Limitation of BIM software in relation to information management		✓		
	4.1.4	Determine level of development in the context of graphics and information in different stages under LOIN				✓
	4.1.5	Determine level of integration of digital information into asset & facility management				✓
	4.1.6	Oversee the process and quality of information exchange in different formats (BCF, IFC, IDM, bsDD, COBie, MVD, etc.)				✓
4.2.		**Common Data Environment (CDE)**				
	4.2.1	CDE solution and workflow		✓		
	4.2.2	Overview of CDE solutions in the market		✓		
	4.2.3	Setup of CDE			✓	
	4.2.4	Assessment and selection of CDE			✓	
	4.2.5	Management of CDE				✓
	4.2.6	Limitation of CDE		✓		
4.3		**Data Quality Control & Assurance across various stages**				
	4.3.1	System checking (including software and hardware)				✓
	4.3.2	Model audit				✓
	4.3.3	Model checking				✓
	4.3.4	Audit reporting				✓

(Left margin: 4. Digital Information Management, Collaboration and Integration)

QR Code to CCBM download page

QR Code to CCBC download page

List of Core Subjects on CC3 of CCBC

			L1	L2	L3	L4
3.1.		**– BIM Uses and Processes**				
	3.1.1	General understanding of the workflows in local construction projects	✓			
	3.1.2	BIM strategy, BIM uses, BIM processes		✓		
	3.1.3	Key personnels in relation to BIM and their roles and responsibilities	✓			
	3.1.4	BIM related documents such as Exchange Information Requirements (EIRs), Asset Information Requirements (AIRs), BIM Execution Plan (BEP) throughout the full project life-cycle				✓
	3.1.5	Applications of various technologies to achieve BIM uses		✓		
3.2.		**– Administration of the BIM projects as a project BIM coordinator**				
	3.2.1	Project implementation following the BEP				✓
	3.2.2	Setup, creation and publishing of BIM models following BIM related documents such as BEP or BIM standards				✓
	3.2.3	Establish and maintain data structures or links throughout the BIM processes				✓
	3.2.4	Administration and maintenance of BIM models in BIM project				
		3.2.4.1 Monitor overall BIM models work progress				✓
		3.2.4.2 Coordination of BIM models with internal or other disciplines				✓
		3.2.4.3 Maintain the BIM models appropriately and compile with BIM documents such as BEP or BIM standards				✓
3.3.		**– Execution of BIM Uses for single and multi-disciplinary coordination in BIM project**				
	3.3.1	Spatial Coordination and 3D Construction Coordination (As stated in CIC BIM Standards General)				✓
	3.3.2	Phase Planning (4D Modelling) (As stated in CIC BIM Standards General)				✓
	3.3.3	Design Reviews (As stated in CIC BIM Standards General)				✓
	3.3.4	Drawing Production directly from BIM software / platform				✓
3.4.		**– Assist in BIM related meetings**				
	3.4.1	Meeting with appointing party				✓
	3.4.2	Meeting with Lead Appointed Party and/or Appointed Parties				✓
	3.4.3	Internal meeting				✓
	3.4.4	Multidiscipline collaboration meeting				✓
	3.4.5	Site co-ordination meeting				✓

(Left margin: 3. BIM Uses and Processes)

B5. Hot topics being asked during interview (for reference only and not exhaustive)

HELPFUL TIPS

CC1 – BIM Initiation	CC2 – BIM software and Technologies	CC3 – BIM Uses and Processes	CC4 – Information Management	CC5 (CCBM) – Commercial and Contract	CC6(CCBM)/ CC5(CCBC) - Communication
• LOD-G • LOD-I • LOIN • BIM Standard • DevB Technical Circular • ISO 19650 • OpenBIM	• Different software (e.g. Revit, Civil3D etc.) • Different technologies (e.g. UAS, AR/VR, MiC etc.)	• Different BIM uses • BIM Execution Plan • EIR, AIR, SIR • Cross discipline BIM uses • 4D, 5D BIM • BIM audit	• CDE (e.g. workflow, status code, revision) • IFC • COBie (e.g. Process of converting BIM data to COBie, scope and content of COBie spreadsheet, etc) • QA/QC (e.g. Visual, Interference, Standards, Model data Integrity check, etc.) • OIR, PIR, AIR, EIR, PIM, AIM	• BIM contract • BIM specifications • Contractual implication • Potential contractual risks	• Fluency and confidence in communication • Answer clearly and quick to the point

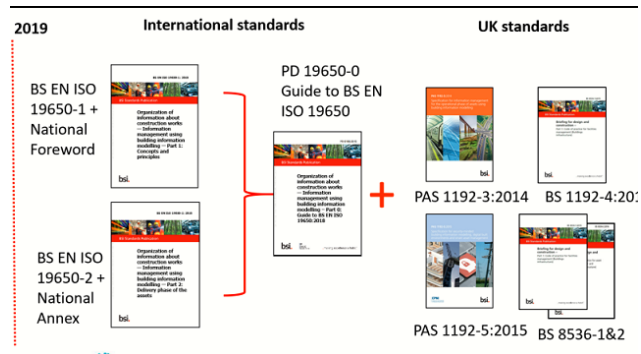# B6. Some useful resources for better preparing the interview
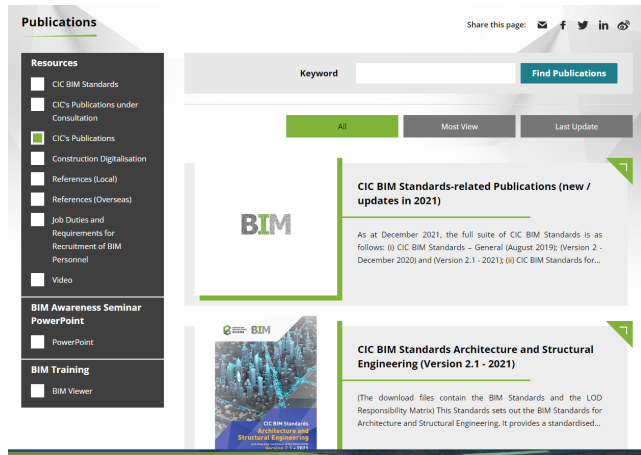
CIC BIM related publications (e.g. latest version of BIM Standard General)

https://www.bim.cic.hk/en/resources/publications
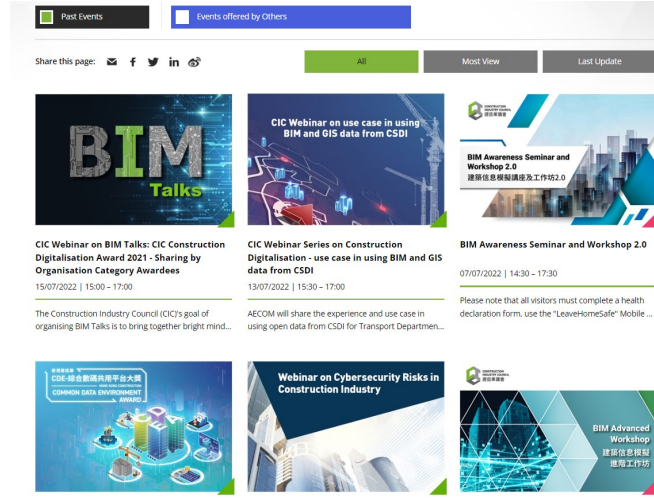
CIC BIM related events (upcoming or past, e.g. BIM Talks, CDE Series)

https://www.bim.cic.hk/en/events/list

Some other resources
EMSD BIM-AM
https://www.emsd.gov.hk/en/engineering_services/project_management_consultancy/highlights_of_work/bim_am/
openBIM
https://www.buildingsmart.org/about/openbim/
ISO19650
https://www.iso.org/news/ref2364.html

B7. Timeframe for inviting to interview assessment and announcement of result

1. Timeframe for inviting to the interview assessment

   a) Upon satisfaction on the submission of application forms and required documents by the CD Department of CIC, the application will be passed to the assessment panel for assessment.

   b) In general, the interview can be arranged within 1-2 months after full submission of application documents unless there is a surge of applications in that period of time

   c) The case officers will normally inform the applicants 1-2 weeks before the date of interview.

2. Timeframe for announcement of result

   a) The final result will be announced after the decision made by the Board (BIMCAB), based on the recommendation of the Assessment Panel. The notice will be mailed to the applicant.

   b) In general, the applicant should be able to receive the result letter within 2 months after the interview assessment.

CIC Webinar on BIM Certification and Accreditation Schemes - Latest Updates, Tips and FAQ

The latest webinar of the captioned topic was conducted on 10 Aug 2022, which has covered:

a) Why do you need the certification?

b) BIM Career Path

c) Latest updates of the Schemes
    a) Adept Route to CCBM
    b) Enhanced BIM Coordinator courses
    c) Top-up courses to CCBM and CCBC

d) Application Requirements

e) Tips for preparing application submissions and interview assessments

QR Code to the webinar

The replay link of the webinar is:

CITAC - Innovation Learning Details (cic.hk)

END