Public Consultation on CIC BIM Specifications
Committee on BIM (Com-BIM) 
Terms of Reference (ToR)

1. To formulate strategies for market transformation, promote the use and facilitate the application of BIM, digital construction, and its related technologies in construction industry (hereinafter known as “BIM”);

2. To promote cross-disciplinary collaboration and adoption of “BIM” in project delivery processes including planning and design, construction, facility and asset management;

3. To develop CIC as a Centre of Excellence for “BIM” in the form of a central hub and of the open sharing platform of “BIM” with specific focus on the following:
   – To develop standards, specifications and common practices for BIM;
   – To develop and promote good practices in both BIM management and BIM operation;
   – To build capacity, develop and operate BIM Development Ladder, BIM Training Ladder, BIM Professional Registration and Accreditation; and their relating training programs and implementation programs.

4. To identify areas which require further investigation, promote research & development for “BIM”.
CIC's Works on BIM

Adoption / Promotion

Training

Standards / Guidelines

Certification and Accreditation

R&D, Funding Support
Three Task Forces under Com-BIM

- Task Force on BIM Training
- Task Force on BIM Standards (Phase 2)
- Task Force on BIM Specifications and Agreement
# The hierarchy of CIC BIM Publications

## Categories of CIC BIM standards, specifications and common practices for BIM

<table>
<thead>
<tr>
<th>Category</th>
<th>Developments</th>
</tr>
</thead>
</table>
| **1 Strategic** | a) CIC Roadmap for BIM Strategic Implementation in Hong Kong Construction Industry (September 2014)  
b) BIM Adoption Survey 2019 (March 2020)  
c) BIM Adoption Survey 2020 (to be conducted in 2020)  
d) Connection to DEVB’s CSDI: 3D and BIM Data Use Case Requirements of the Construction Industry for the Development of Digital Hong Kong for CIC (to be completed in 2020) |
| **2 Management** | a) BIM Standards (General) – BIM Project Execution Plan  
b) Enhancement of BIM Standards (General) (incorporate ISO 19650 good practice) (to be completed in 2020)  
c) **Standard BIM Specifications**, Special Condition of Contract for BIM and BIM Service Agreement (to be completed in 2020)  
d) BIM Terminology & Glossary (to be completed in 2020) |
| **3 Process / Submission** | a) BIM Standards (General) – Modelling methodology  
b) BIM Standards for preparation of statutory plan submission (completed in Dec 2019, to be updated in 2020)  
c) BIM Standards for preparation of MEP statutory submission (to be developed in 2020/21) |
| **4 Discipline-specific Standards** | a) BIM Standards (General) – LOD  
b) BIM Standards for MEP  
c) BIM Standards for UU |
| **5 Data** | a) Production of BIM Object Guide – General Requirements |
Task Force on BIM Specifications and Agreement

Objective:
To provide basic BIM specifications, requirements and contractual materials to facilitate construction industry in Hong Kong to adopt and implement BIM promptly.

Two Working Groups:
Task Group 1 – BIM Specifications
Task Group 2 – Special Conditions of Contracts for BIM and BIM Service Agreement
Survey on the industry’s needs

Total no. of respondents: 191

Sector distributions of the respondents:

- Main Contractor: 30.4%
- Government Works Department: 6.8%
- Project Manager: 3.4%
- Quasi-government (e.g. Airport Authority, MTRC, Hospital): 0.5%
- Non-governmental Organisation (e.g. charities, social): 1.6%
- BIM Service Provider / BIM Consultant: 9.7%
- Civil / Structural Engineering Consultant: 4.2%
- Consultant Land Surveyor: 0.5%
- Consultant Quantity Surveyor / Contract Advisor: 6.6%
- Developer: 4.7%
- E&M Consultant: 4.7%
- E&M Subcontractor: 5.3%
- Architect: 8.9%
- both Consultant and Contractor: 0.6%
- Civil / Building Subcontractor: 2.5%
Survey on the industry’s needs

Total no. of respondents: 191

Do you **have** your own BIM Project Scope of Works and Specification?

- **Yes**, 116, 61%
- **No**, 75, 39%

Do you **need** a standard BIM Project Scope of Works and Specification to be developed by the CIC?

- **Yes**, 139, 73%
- **No**, 52, 27%
Public Consultation Webinar

Objective:
Briefing on draft CIC BIM Specifications to collect comments & views

Consultation Channel:
(1) Download the draft from BIM Portal
(2) Send us your feedback comments through email to bim@cic.hk

Consultation Period:
1 Month {27 April – 27 May}
## BIM Webinar Series – Schedule (April 2020)

<table>
<thead>
<tr>
<th>Date</th>
<th>Category</th>
<th>Title</th>
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<tbody>
<tr>
<td>1/4/2020</td>
<td>Training</td>
<td>CIC BIM Competition Training 2020: BIM Introductory Course - Structure (Revit)</td>
</tr>
<tr>
<td>15/4/2020</td>
<td>CAS</td>
<td>Webinar on Certification of BIM Coordinators and Accreditation of BIM Coordinator Courses</td>
</tr>
<tr>
<td>18/4/2020</td>
<td>Training</td>
<td>CIC BIM Competition Training 2020: Fuzor</td>
</tr>
<tr>
<td>20/4/2020</td>
<td>Training</td>
<td>CIC BIM Competition Training 2020: BIM Introductory Course - MEP (Revit)</td>
</tr>
<tr>
<td>22/4/2020</td>
<td>Adoption/Promotion</td>
<td>Briefing on 2019 BIM Adoption of Hong Kong Survey Results</td>
</tr>
<tr>
<td>27/4/2020</td>
<td>Adoption/Promotion</td>
<td>Public Consultation on CIC BIM Specifications</td>
</tr>
<tr>
<td>28/4/2020</td>
<td>Adoption/Promotion</td>
<td>BIM x CITAC Common Data Environment Webinar Series</td>
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</table>
# BIM Webinar Series – Tentative Schedule (May 2020)

<table>
<thead>
<tr>
<th>Date</th>
<th>Category</th>
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<tbody>
<tr>
<td>5/5/2020</td>
<td>Adoption/Promotion</td>
<td>BIM x CITAC Common Data Environment Webinar Series</td>
</tr>
<tr>
<td>8/5/2020</td>
<td>Training</td>
<td>Webinar on Laser Scanning (BIM Advanced Workshop)</td>
</tr>
<tr>
<td>11/5/2020</td>
<td>Adoption/Promotion</td>
<td>BIM x CITAC Common Data Environment Webinar Series</td>
</tr>
<tr>
<td>13/5/2020</td>
<td>CAS</td>
<td>Webinar on BIM Certification and Accreditation Schemes - Latest Updates, Tips and FAQ</td>
</tr>
<tr>
<td>19/5/2020</td>
<td>Adoption/Promotion</td>
<td>BIM x CITAC Common Data Environment Webinar Series</td>
</tr>
<tr>
<td>25/5/2020</td>
<td>Training</td>
<td>Webinar on BIM Advanced Workshop</td>
</tr>
<tr>
<td>28/5/2020</td>
<td>Adoption/Promotion</td>
<td>Webinar on BIM Talks</td>
</tr>
<tr>
<td>29/5/2020</td>
<td>R&amp;D</td>
<td>CIC Research and Development Fund Series - Optimisation of Rebar Detailing in BIM</td>
</tr>
</tbody>
</table>
# BIM Webinar Series – Tentative Schedule (June 2020)

<table>
<thead>
<tr>
<th>Date</th>
<th>Category</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>1/6/2020</td>
<td>Training</td>
<td>Webinar on BIM Plug-ins (BIM Solution Day)</td>
</tr>
<tr>
<td>2/6/2020</td>
<td>Adoption/Promotion</td>
<td>BIM x CITAC Common Data Environment Webinar Series</td>
</tr>
<tr>
<td>3/6/2020</td>
<td>Training</td>
<td>Webinar on BIM Advanced Workshop</td>
</tr>
<tr>
<td>9/6/2020</td>
<td>Adoption/Promotion</td>
<td>BIM x CITAC Common Data Environment Webinar Series</td>
</tr>
<tr>
<td>15/6/2020</td>
<td>Standards/Guidelines</td>
<td>Webinar on Introduction of CIC BIM Standards on MEP</td>
</tr>
<tr>
<td>16/6/2020</td>
<td>Adoption/Promotion</td>
<td>BIM x CITAC Common Data Environment Webinar Series</td>
</tr>
<tr>
<td>17/6/2020</td>
<td>CAS</td>
<td>Webinar on BIM Certification and Accreditation Schemes - Latest Updates, Tips and FAQ</td>
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<tr>
<td>18/6/2020</td>
<td>Standards/Guidelines</td>
<td>Webinar on BIM Standards (BIM Solution Day)</td>
</tr>
<tr>
<td>22/6/2020</td>
<td>Training</td>
<td>Webinar on BIM Advanced Workshop</td>
</tr>
<tr>
<td>26/6/2020</td>
<td>R&amp;D</td>
<td>CIC Research and Development Fund Series - Automation in GFA Calculation</td>
</tr>
<tr>
<td>29/6/2020</td>
<td>Standards/Guidelines</td>
<td>Webinar on Introduction of CIC BIM Standards on UU</td>
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</table>
CIC BIM Portal (www.bim.cic.hk)
Thank You
Target Users:

Private sector client bodies, small and medium enterprises (SME) who are exploring BIM adoption / without BIM specification/ seeking reference from CIC
Positioning and Goals

Generic for all (or most) projects

Project-neutral

Provides technical requirements

Facilitates the use of BIM for beginners
Contents of CIC BIM Specifications

1. BIM Personnel
   • Qualifications of BIM Managers
     • CIC Certified BIM Manager (CCBM) or the equivalent as specified
   • Qualifications of BIM Coordinators
     • CIC Certified BIM Coordinator (CCBC) or the equivalent as specified
   • Qualifications of Discipline-specific BIM Modellers
Contents of CIC BIM Specifications

2. Deliverables

• 2.1 BIM Execution Plan
  • An outline of the BIM Execution Plan is supplemented in the Appendix of the BIM Specification

• 2.2 BIM Models
  • Contents of Models
  • Level of Development (LOD)
  • File Size of Models
  • Model Federation

• 2.3 BIM Objects
  • Requirements on the guideline compliance and submission of the BIM objects
2. Deliverables

2.4 BIM Uses

Technical requirements of the 20 BIM Uses:

- Design Authoring
- Design Reviews
- Existing Conditions Modelling
- Site Analysis
- 3D Coordination
- Cost Estimation/ 5D Modelling
- Engineering Analysis
- Facility Energy Analysis
- Sustainability Evaluation
- Space Programming

- Phase Planning (4D Modelling)
- Digital Fabrication
- Site Utilization Planning
- 3D Control and Planning
- As-Built Modelling for (AM) and Facilities Upkeep
- Project Systems Analysis
- Maintenance Scheduling
- Space Management and Tracking
- Asset Management
- Drawing Generation (Drawing Production)

2.5 Handover of BIM Deliverables

Requirements of the handover of work-in-progress files and final BIM deliverables.
3. Quality Assurance

• 3.1 Quality Assurance Plan
  • Requirements on the quality assurance plan and quality control measures

• 3.2 Design Review
  • Requirements on model review and drawing review

• 3.3 Model Compliance Check
  • Criteria that the model compliance check shall include

• 3.4 Documentation Compliance Check
  • Scope of the documentation compliance check
Contents of CIC BIM Specifications

4. Training

BUT
HOW
WE DO IT?

AND
WHO
SHOULD DO IT?
4. Training

• 4.1 Training Objectives
• 4.2 Training Preparation
• 4.3 Project Training Requirements
  • Trainings to be provided for the project teams, e.g. trainings on selected BIM authoring software, workflows, or implementation of BIM standards.
• 4.4 Personnel Training Requirements
  • Trainings that the employed party (consultant / contractor) and their sub-consultants / sub-contractors need to attend.
• 4.4 Training Log
5. Hardware and Software Requirement

• 5.1 Hardware and Software requirements
  • Brand-neutral and outcome-based requirements

• 5.2 File Format and Interoperability
  • Brand-neutral and outcome-based requirements
Contents of CIC BIM Specifications

6.

COMMON DATA ENVIRONMENT

Source: Twitter @StiboSystems Little humor MDM Series of marketoons.
6. Common Data Environment (CDE)

“Digital single source of all the information related to a project, used to collect, manage and share this information for multi-disciplinary teams in a controlled process”
Contents of CIC BIM Specifications

6. Common Data Environment (CDE) – paradigm shift
Contents of CIC BIM Specifications

6. Common Data Environment (CDE)
   • 6.1 Functional Requirements of CDE
     • Brand-neutral and outcome-based requirements
   • 6.2 CDE approach in BIM Project Execution Plan
     • Requirements on the CDE Elements that shall be covered in the BIM Project Execution Plan
   • 6.3 CDE Implementations
     • Brand-neutral and outcome-based requirements
7. BIM Standards and Guidelines

OK, BUT WE DO NOT HAVE TO FOLLOW IT, DO WE?

WE BETTER DO!

CONSTRUCTION INDUSTRY COUNCIL 建造業議會
7. BIM Standards and Guidelines

- The mandatory BIM Standards and Guidelines that shall be adopted are listed.

- The reference-only BIM Standards and Guidelines are listed in the Appendix of the BIM Specification.
## Contents in CIC BIM Specifications vs. Contents in Recommended SoW

<table>
<thead>
<tr>
<th>Contents in CIC BIM Specifications</th>
<th>Contents in Recommended SoW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. BIM Personnel</strong></td>
<td></td>
</tr>
<tr>
<td>A. Qualification of BIM personnel</td>
<td>a. The composition of BIM Team (organization chart &amp; required nos. of the BIM roles)</td>
</tr>
<tr>
<td><strong>2. Deliverables</strong></td>
<td></td>
</tr>
<tr>
<td>A. Technical requirements on BIM uses</td>
<td>a. The table of BIM Uses</td>
</tr>
<tr>
<td>B. LOD requirements</td>
<td>b. The LOD responsibility Matrix</td>
</tr>
<tr>
<td>C. Client’s BIM Project Execution Plan Outline</td>
<td>c. The quantity, frequency, file format of deliverables</td>
</tr>
<tr>
<td><strong>3. Quality Assurance</strong></td>
<td></td>
</tr>
<tr>
<td>A. Methodology only. It will be software/tool neutral.</td>
<td>a. The technologies, tools and procedures</td>
</tr>
</tbody>
</table>
## CIC BIM Specification vs. Contents of the project specific scope of work

<table>
<thead>
<tr>
<th>Contents in CIC BIM Specifications</th>
<th>Contents in Recommended SoW</th>
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<tbody>
<tr>
<td><strong>4. BIM Trainings</strong></td>
<td></td>
</tr>
<tr>
<td>A. Training types, purpose, and outcome-based requirements</td>
<td>a. The training details and quantity</td>
</tr>
<tr>
<td><strong>5. Hardware &amp; Software Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>A. Brand neutral requirements on compatibility and interoperability</td>
<td>a. The technologies, tools and file formats</td>
</tr>
<tr>
<td><strong>6. Common Data Environment (CDE)</strong></td>
<td></td>
</tr>
<tr>
<td>A. Brand-neutral requirements</td>
<td>a. The technologies, tools and file formats</td>
</tr>
<tr>
<td><strong>7. BIM Standards &amp; Guidelines</strong></td>
<td></td>
</tr>
<tr>
<td>A. Mandatory BIM Standards and Guidelines</td>
<td>a. Standards and guidelines required by specific Institutions/Associations</td>
</tr>
</tbody>
</table>
Public Consultation
Public Consultation

is LAUNCHED today on 27 April 2020
Public Consultation

Consultation Channel:

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1 Month [27 April – 27 May]
Thank you