

Construction Industry Council

Committee on Productivity

Meeting No. 003/22 of the Committee on Productivity (Com-PRO) was held on 8 September 2022 (Thursday) at 2:30 pm in the Board Room, 38/F, COS Centre, 56 Tsun Yip Street, Kwun Tong, Kowloon and via MS Teams.

Summary Notes of the Com-PRO Meeting No. 003/22:

Agenda Item	Paper	Major Resolutions / Progress Highlights
3.1	CIC/PRO/M/002/22	Confirmation of Minutes of the Previous Meeting Members confirmed the minutes of the Com-PRO Meeting No. 002/22 without any amendments.
3.2	-	Matters Arising from the Previous Meeting (a) Updates on the Concise Guide on “Adopting DfMA for MEP Works” The concise version of reference materials on DfMA MEP guidebook was published on CIC website in August 2022. It was used as a teaching material in MiC Master Class. Besides, a webinar on the DfMA MEP guidebook will be held in 2022 Q4 for further promotion of MiMEP. (b) Progress update on Construction Innovation Expo (CIExpo) 2022 and the CIC Construction Innovation Award 2022 Over 140 companies were engaged to exhibit at the CIExpo 2022, including 13 sponsors. Guests of Honour and conference speakers were being invited. Members were encouraged to reserve their time for the visit during 13 – 17 December 2022. The application of Innovation Award was closed and 118 valid submissions were received. The judging panel was undergoing the first round of assessment.

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		<p>(c) Progress Updates on ConTech Accelerator 2022 co-organised with Hong Kong Science and Technology Park Corporation (HKSTP) 20 Main Contractors were engaged for the ConTech Accelerator programme. Kick-off ceremony was held on 28 July 2022 with over 650 industry practitioners and tech ventures participated in the event. All problem statements were collected and generalised for onward solution recruitment and matching from September to November 2022. All generalised problem statements were summarised on public platform for solution recruitment. An information session will be held on 14 September 2022 to engage tech ventures to provide practical solutions to the collected problem statements accordingly. Com-PRO Members were welcomed to provide suggestions for the Programme. CIC will report progress of ConTech Accelerator Programme monthly to the members.</p> <p>(d) Progress update on Research Proposal: Development of Advanced Seismic Design Guidelines for MiC Buildings in Hong Kong and in the Greater Bay Area Members’ comments were addressed in the revised proposal to conduct structural analyses on InnoCell for unique behaviour of MiC buildings under earthquakes. The proposed guideline shall cover joint details to illustrate the corresponding design concept and consider the seismic code, conditions and acceptance criteria set out in Mainland China. The project will commence in December 2022 and is expected to be completed by end of 2024.</p> <p>(e) Research Proposal: Logistigraphs.io – A Parametric Modularization Analytics Tool The applicant was still liaising with concerned parties for their comments and support in providing project information of a typical residential building development with substantial offsite components as the use case of the research. The CIC Secretariat will update Members the status once available.</p>

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3.3	-	<p>Consultation on Enhancement of the Buildability Evaluation System for Public Engineering Works Projects</p> <p>Mr. Stephen LO from Development Bureau and the research team from Arcadis introduced the consultation paper on the enhancement of the Buildability Evaluation System for public engineering work projects (BES(E)). The BES(E) was being implemented in 3 stages. Following the completion of Stage 1 Trial in October 2021, the BES(E) scoring system was enhanced with the use of the project data from completed projects collected during the Stage 1 Trial period. The Stage 2 Implementation commenced in November 2021 and the enhanced BES(E) scoring system had been used in the design review before tender invitation for public work contracts. Members were consulted on the key features and scoring system of the BES(E) and the proposed passing scores.</p> <p>On top of cost exceedance, Members suggested using time implications or multi-factors for the assessment of the effect of buildability of a project design. The Consultant responded that time factor had been incorporated in the current scoring scheme. Members opined that the experience of assessor and the criteria of the assessment should be transparent for conducting the buildability evaluation in a fair and robust manner.</p> <p>Members were reminded to raise further comments or suggestions in written by returning the reply slip to the CIC Secretariat by 15 September 2022.</p>
3.4	-	<p>Progress Update on the Funded Research Project – Study of Artificial Intelligence for Road Surface Depression Detection Using 3D LiDAR Data</p> <p>Professor Charles WONG and his research team from the Hong Kong Polytechnic University updated Members on the progress of the funded research. Phase 1 – pre-processing and road segmentation of</p>

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		<p>the project was completed as planned, with a new algorithm developed for automatic road segmentation through a deep learning of the training road data provided by the Highways Department.</p> <p>In Phase 2, the research team had defined measurable standards for three major types of road defects in Hong Kong, including rutting, shoving, and pothole, and proposed the methodology for devising the 3D road defects library. With no adverse comments on the research, KnW requested the research team to present the research results to Com-PRO in due course.</p>
3.5	CIC/PRO/003/22 (for approval)	<p>Application for the CIC R&D Fund: Autonomous Mobile Robot for Material Delivery and Site Inspection</p> <p>Mr. Stone CHAN from Shui On Construction Co. Ltd. presented the proposed research applied for the CIC R&D Fund under the Key Performance Indicators Improvement Project Scheme. The proposal was recommended for Com-PRO's consideration after initial assessment by the CIC Secretariat.</p> <p>The aim of the proposed research was to develop an Autonomous Mobile Robot for heavy loading delivery with auto navigation, safety and progress monitoring. It was expected that the research outcome can contribute to the industry by alleviating labour shortages, reduce safety risk, and enhance construction productivity.</p> <p>The duration of this research was 12 months at a cost of HK\$1,360,000. The amount of CIC R&D Funding requested was HK\$952,000 (i.e. 70% of the project cost). After deliberation, Members approved the paper CIC/PRO/003/22. CIC Secretariat would follow up to prepare the research agreement accordingly.</p>

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3.6	CIC/PRO/004/22 (for approval)	<p>Consultancy Services on Digitalising Construction for Enhancing Project Delivery</p> <p>JsW presented the draft assignment brief of the consultancy study on Digitalising Construction for Enhancing Project Delivery. The study aims to drive the adoption of advanced digital technologies in construction planning, management, and operation processes for enhancing project delivery in terms of productivity, safety, quality, cost and sustainability. The construction projects from private developers, and public / quasi-government bodies including Housing Authority, Airport Authority, Hospital Authority, MTR Corporation Limited, Urban Renewal Authority, etc, would be covered in this study.</p> <p>The objectives of the Consultancy are:</p> <ul style="list-style-type: none">(a) to solicit the best practices of digitalised construction worldwide and the motivation behind;(b) to critically assess the “digital maturity” related to the planning, management, and operation processes of construction projects in Hong Kong;(c) to recommend priorities for driving the adoption of digital technologies in the local construction industry;(d) based on the findings of the above, to compile a best practice guidebook with model specifications for implementing advanced digital solutions in local construction projects; and(e) to design, develop and deliver a training course and prepare relevant training materials to facilitate industry stakeholders adopting digital technologies for smart project delivery. <p>The project duration is 15 months and expected to commence in 2022 Q4. The estimated budget is HK\$1.8M including 20% contingency.</p> <p>Members recommended that impactful construction projects should be selected for case studies. In addition, specific requirement for the project team members with digital construction experiences</p>

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		<p>should be clearly stated in the tender document. Members opined that the guidebook should be able to support digitalisation transformation especially for small or medium size enterprises in the construction industry.</p> <p>With no further comments on the proposed consultancy, Members approved the paper CIC/PRO/004/22 and budget. CIC Secretariat would follow up accordingly.</p>
3.7	-	<p>Updates on MiC / MiMEP Development</p> <p>TsT presented that progress updates on MiC / MiMEP development in the industry.</p> <p>(a) CIC Master Class on MiC Project Implementation (Project Managers): The first master class was completed on 2 September 2022. The next class will be launched in November 2022.</p> <p>(b) Joint Practice Note No. 8: The Joint Practice Note was jointly issued by BD, LandsD and PlanD on 14 July 2022 for enhancing facilitation measures to promote wider adoption of MiC in new buildings. It includes: (i) Granting of Gross Floor Area (GFA) and Site Coverage (SC) concessions and (ii) Minor relaxation of Building Height (BH) restriction. The new measures were disseminated in a meeting with the Real Estate Developers Association (REDA). Further recommendations / suggestions, if any, will be collected from the industry.</p> <p>(c) Strengthening the Adoption of MiC / MiMEP in Hong Kong: A framework for strengthening the adoption of MiC / MiMEP in Hong Kong was recommended in the MiC Joint Working Group meeting on 8 August 2022. It includes (i) policy, (ii) people, (iii) procurement / Contract, (iv) Research / Development, (v) Infrastructure/ Process and (vi) market / demand.</p>

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3.8	-	Any Other Business There was no other business.
3.9	-	Next Meeting 004/22 The next meeting would be held on 1 December 2022 tentatively. The Secretariat would inform Members once confirmation of the meeting details. The meeting was adjourned at 4:40 pm.

Remarks: The mentioned papers discussed at the Committee on Productivity Meeting No. 003/22 and the full minutes can be made available to Council Members by the CIC Secretariat upon request.