

Construction Industry Council

Committee on Productivity

Meeting No. 001/22 of the Committee on Productivity (Com-PRO) was held on 10 March 2022 (Thursday) at 2:30 pm via MS Teams.

Summary Notes of the Com-PRO Meeting No. 001/22:

Agenda Item	Paper	Major Resolutions / Progress Highlights
1.1	CIC/PRO/M/004/21	Confirmation of Minutes of the Previous Meeting Members confirmed the minutes of the Com-PRO Meeting No. 004/21 without any amendment.
1.2	-	Matters Arising from the Previous Meeting (i) Updates on the Consultancy Study on “Driving DfMA to Enhance Productivity for E&M Works in HK Building Projects”: The guidebook was published on CIC’s website and would be promoted to the industry via a webinar to be held on 25 March 2022. The concise version of the reference material on DfMA MEP was being updated and would be circulated to Members for review once available. The Secretariat targeted to publish the concise version in April / May 2022. (ii) Progress Update on “Application of Maturity Method for Determination of Early-age Concrete Strength in the Hong Kong Construction Industry”: The practical guideline was approved by Members and published on the CIC website as reference materials. Two webinars would be organised to introduce the maturity method to the industry. Suppliers of the maturity meter would also be invited to exhibit their products at the CITAC. (iii) Summary on Successful Application of R&D Fund: The approved research project “Study of

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		<p>Artificial Intelligence for Road Surface Depression Detection Using 3D LiDAR Data” (conducted by PolyU and the Highways Department as an industry partner) commenced in December 2021, and another approved research “Development of Artificial Intelligence Rock Type Classification APP for Geotechnical Logging” (conducted by HKU) would commence on 28 March 2022. Invitation for further research proposals was in progress, with deadline set at the end of March 2022. Qualified submissions would be submitted to Com-PRO for approval.</p> <p>(iv) International Symposium on Construction Robotics and Automation (co-organised with HKSTP): The Symposium was successfully conducted on 10 December 2021. Over 1,100 participants attended online and in-person at the Hong Kong Science Park. And 94 sessions were successfully matched in the Business Matching Session.</p> <p>(v) Progress Update on the Construction Innovation Expo (CIExpo) 2022 and the CIC Construction Innovation Award 2022: The second eDM was disseminated to the industry in February 2022 via i-Club. Around 20 exhibitors expressed their intention on booth application, and a few companies expressed their interests on sponsorship. The Secretariat proposed a list of GoHs and speakers to be invited, and would engage large-scale organisations for pavilions and develop contingency plans under the COVID situation.</p> <p>(vi) Proposed Consultancy Project on Development of a Productivity Assessment Scheme (PAS) in Hong Kong: Submission of tender on the consultancy was closed on 28 January 2022, with only one tender received. The proposed consultancy was put on hold until solid findings would be available from the study on productivity measurement commissioned by the DEVB.</p>
1.3	-	Study on Construction Productivity Measurement in Hong Kong

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		<p>Prof. Wei PAN from The University of Hong Kong presented the latest updates on the study and views from industry stakeholders through twelve interviews conducted since December 2021. Methods of measuring construction productivity at the industry level and the project level were proposed.</p> <p>Some members suggested conducting more consultation sessions to collect industry’s views and suggestions. Members opined that the productivity rates based on the proposed measurement method should be able to allow benchmarking with other countries for meaningful comparison. The productivity improvement due to the adoption of innovation should be reflected. In response to the query on the purpose of the study and how the industry could benefit from it, DsW and Prof. PAN elaborated that the productivity trends should be able to indicate the improvement arising from various initiatives / policies implemented. On the other hand, project decision makers could use the data for selecting appropriate construction methods, technologies, and/or design options. Members also suggested relevant data should be collected as early as possible for verifying the feasibility and practicality of the proposed measurement method. The research team took note of Members’ opinions and would present further findings to Com-PRO in due course.</p>
1.4	-	<p>Progress Update on Data Collection on DfMA Adoption Levels</p> <p>With the aims to gauge the current DfMA adoption levels in the building sector, and to examine the project performance under different levels of DfMA adoption, relevant data of 17 building projects were collected and analysed. The initial results showed that the adoption of DfMA in building projects was generally conducive to the project performance in terms of productivity, safety, sustainability and quality.</p> <p>DsW had reservation in the calculation methodology of “DfMA score” presented as it was not supported by any relevant research / studies. Members opined that the relationship between the adoption of DfMA and project performance may not be obvious due to rather small sample size,</p>

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		limiting the statistical power to draw solid conclusions. Members suggested considering the results as a reference only.
1.5	-	<p>Brainstorming Session: Com-PRO’s Key Initiatives and Action Plan</p> <p>The following was presented for Members’ discussion.</p> <p>i) <u>Introduction of Accelerator Programme by the Hong Kong Science and Technology Park Corporation (HKSTP)</u> Mr. Michael AU from the HKSTP presented a potential collaboration between CIC and HKSTP namely, “Accelerator Programme”, aiming at driving innovation in construction through a platform for adopting pre-ready solutions. The Programme intends to solve pain points faced by the industry through local/international solution sourcing and business matching to create safer, more efficient, and more sustainable environment for the industry. Initially, it was targeted to collect problem statements from local main contractors, subsequently allowing both contractors and solution providers to co-create market-fit solutions. Members supported to launch the Programme in 2022 Q2 / Q3. CIC Secretariat would follow up with HKSTP and take necessary action.</p> <p>ii) <u>DEVB’s directive on Productivity Improvement</u> JnK briefed members that DEVB has been actively promoting the adoption of the Modular Integrated Construction method (MiC) and Multi-trade integrated Mechanical, Electrical and Plumbing (MiMEP) to tackle the challenges facing the industry. Some off-site manufacturing system, such as flat pack system, may not be effective to enhance on-site productivity. To maximise productivity, it is important to apply the three major principles viz., “off-site prefabrication”; “multi-trade integration and module maximisation”; and “plug and play”.</p>

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		<p>iii) <u>Key initiatives of Com-PRO</u> The Secretariat recapped the term of reference of Com-PRO and key initiatives on driving productivity enhancement under a wide spectrum of modern methods of construction (MMC), including MiC, MiMEP, robotics, smart site management and smart offsite construction. DsW emphasised that, for construction methods enhancing productivity, the government’s policy is to focus on MiC and MiMEP.</p> <p>Members raised concerns on i) technical hurdles (e.g. logistics, site restrictions); and ii) the limitations on adopting MiC only to cope with various project challenges. CIC Chairman concurred with DEVB on putting CIC’s effort on driving MiC and MiMEP through the adoption of the three principles. The principles should be well defined and translated into Chinese for further promotion. Good practices should be promoted for wider adoption in the industry, especially for the upcoming housing and hospital development. The Secretariat took note on Members’ comments and will prepare the 2023 business plan accordingly.</p>
1.6	-	<p>Any Other Business</p> <p>i) Proposed speakers for conferences under Construction Innovation Expo (CIExpo 2022) The Secretariat proposed a list of speakers for the International Conference on Smart Construction under the CIExpo 2022. CIC Chairman suggested inviting an expert from Singapore. Subsequent to this minor amendment, the proposed speaker list would be submitted to the OC for further deliberation.</p> <p>ii) Request for EOT on the consultancy study for “Establishing a Certification Scheme for Construction Robots”</p>

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		<p>Corresponding to the additional time for addressing the comments from the Expert Group, and incorporating the newly issued National Standard of the People's Republic of China on construction robots into the proposed certification scheme, the Consultant, SGS, requested for extension of time to June 2022 in order to complete the study. Members approved the EOT request with no adverse comments.</p> <p>iii) Progress update on “Improving Time, Cost and Quality (TCQ) Performance of the Hong Kong Construction Industry” The Secretariat reported that the Steering Committee meeting was held on 14 Dec 2021. The Steering Committee Members suggested enhancing the practicality and impact of the proposed action plan. Members agreed to update the strategies to align with the above-mentioned three major principles to enhance productivity and the Discussion Forum with Council Members should be held as soon as possible.</p>
1.7	-	<p>Next Meeting 002/22 The next meeting would tentatively be held on 9 June 2022. The Secretariat would inform Members once the meeting details are confirmed.</p>

Remarks: The mentioned papers discussed in the Committee on Productivity and the full Minutes can be made available to Council Members from the CIC secretariat upon request.