

Construction Industry Council

Committee on Productivity

Meeting No. 001/19 of the Committee on Productivity (Com-PRO) was held on 26 March 2019 (Tuesday) at 1:30pm in Board Room, 38/F, COS Centre, 56 Tsun Yip Street, Kwun Tong, Kowloon.

Summary Notes of the Com-PRO Meeting No. 001/19:

Agenda Item	Paper	Major Resolutions/ Progress Highlights
1.1	CIC/PRO/M/004/18	Confirmation of Minutes of the Previous Meeting Members confirmed the minutes of the Com-PRO Meeting No. 004/18 without any amendment.
1.2	-	Matters Arising from the Previous Meeting Item 4.2: The approved research entitled “Smartphones on Next-generation Monitoring Devices for Construction-induced Vibrations and Noise” commenced in March 2019, and the Phase 1 study was expected to be completed by September 2019. Subsequent to the endorsement of the report on “Assessing the Performance of the Hong Kong Construction Industry, Key Performance Indicators (KPI): An International Comparison”, Com-PRO agreed to publish the KPIs through CIC’s website using a dashboard format. Members reminded that the presentation should be clear to avoid the impression of inconsistency in the trend of KPIs shown on the dashboard.
1.3	-	Proposal on the Development of On-site Facade Processing Robot Prof. Geoffrey SHEN from The Hong Kong Polytechnic University and Mr. Wen PAN from the Technical University of Munich (the Team) presented their proposal on the development of on-site facade processing robot.

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		<p>The proposal was a 24-month project at a cost of HK\$9.45 million. The first multifunctional construction robot would be tailor made by the Team for the Hong Kong construction industry. Members were concerned about the narrow scope of work to be performed by the robot and the costly R&D investment solely borne by the CIC. Members suggested to explore with relevant companies in the Greater Bay Area the possibility of utilising their capabilities in robotic technologies.</p> <p>Members opined that the CIC had completed its task of developing a prototype and showcasing it to the industry. The Team should engage industry stakeholders to co-invest in further R&D and to ascertain the needs of the industry in formulating the research plan. After deliberation, Members agreed to put the proposal on hold pending availability of interested industry partners.</p>
1.4	-	<p>Proposal on Process Re-engineering for E&M Trades</p> <p>Ir Rocky POON from The Hong Kong Federation of Electrical and Mechanical Contractors Limited (HKFEMC) presented the proposal on process re-engineering for E&M trades.</p> <p>HKFEMC had established a task force on the process re-engineering project and proposed a framework for improving the productivity of various E&M trades. 15 recommendations had initially been proposed under four layers, viz. industry, trades, systems and products. Members noted that the original purpose of process re-engineering for the civil trades were to review some of the long established trade practices, from an industrial engineering perspective, to see whether an improvement in productivity can be achieved. HKFEMC was requested to prioritise their recommendations in line with the above principle.</p> <p>The CIC Chairman, Mr. CHAN Ka-kui, suggested that the proposed study should tackle issues related to E&M trades for expediting the adoption of MiC in Hong Kong. The Secretariat would follow this up with the HKFEMC.</p>
1.5	CIC/PRO/P/002/19 (for approval)	<p>Proposals on (i) Extended Consultancy Service for the Study on Achieving Productivity Leap through Construction Process Re-engineering (CPR) and (ii) Design and Development of a 2.5 Cubic Metres Concrete Skip</p> <p>Mr. Jeff FUNG from the Hong Kong Productivity Council (HKPC) presented his proposals.</p>

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		<p>(i) Proposal on Design and Development of a 2.5 Cubic Metres Concrete Skip</p> <ul style="list-style-type: none"> - HKPC presented the core functions of the proposed concrete skip with a remote control. The project would be a 9-month project at a cost of HK\$750,000. Members suggested adding a check meter to measure the volume of concrete in the skip, and measuring the actual time used for operation and lifting comparing to the use of traditional skips. HKPC took note of Members' suggestions. The Secretariat would follow up with HKPC on the issues of patent and intellectual property rights. <p>(ii) Proposal on Extended Consultancy Service for the Study on Achieving Productivity Leap through Construction Process Re-engineering (the Extended Consultancy Service)</p> <ul style="list-style-type: none"> - HKPC presented the scope of the Extended Consultancy Service to enrich the content of the original CPR consultancy on certain aspects. The Extended Consultancy Service would be a 4-month project at a cost of HK\$170,000. HKPC would conduct site visits and consult relevant industry experts and trade associations on the proposed recommendations. <p>Members approved the two proposals after deliberation.</p>
1.6	-	<p>Progress Update on the Research entitled “Development of Innovative Self-Compacting Backfilling Material for Pavements in Hong Kong Road Network”</p> <p>Dr. Tomi NISSINEN and Dr. Ivan SHAM from the Nano and Advanced Materials Institute (NAMI) presented the progress update on this research project. Members noted that two deliverables had been achieved and field trials in collaboration with relevant works departments will start in Q2 2019.</p> <p>Members were concerned whether the proposed innovative backfilling material (the Material) could replace existing sub-base materials and possess adequate permeability. NAMI replied that the Material could replace existing sub-base materials and no compaction would be required to achieve adequate strength. NAMI would conduct tests on the permeability of the Material.</p> <p>Members agreed for CIC to proceed with the final payment for this research project.</p>

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1.7	CIC/PRO/P/003/19 (for endorsement)	<p>2019 – 2021 Action Plan on Driving the Adoption of DfMA in the Hong Kong Construction Industry</p> <p>The Secretariat presented the 2019 – 2021 action plan on driving the adoption of Design for Manufacture and Assembly (DfMA) in the Hong Kong construction industry. The proposed tasks were grouped under four key strategic directions, viz. engaging industry stakeholders, international benchmarking, tackling technical and policy issues, and uplifting knowledge and skills.</p> <p>The Secretariat also presented a set of proposed Key Performance Indicators (KPIs) for DfMA adoption in different sectors derived through an industry survey, and an initiative to develop a DfMA appraisal framework similar to the Chinese Standard GB/T 51129-2017 for prefabricated building. Members endorsed the action plan.</p> <p>The CIC Chairman reminded the Secretariat to make use of the training capacity and network of the local higher education institutions and professional bodies, in order to equip students and professionals with relevant DfMA knowledge.</p>
1.8	CIC/PRO/P/004/19 (for endorsement)	<p>Research Applications for the CIC R&D Fund</p> <p>The Secretariat reported that CIC had received 9 research proposals related to construction productivity under the revamped CIC R&D Funding Schemes by January 2019. Based on an internal assessment, no research proposal was recommended to Com-PRO for further consideration.</p> <p>Members noted that the Secretariat would organise a de-briefing session to inform the researchers of CIC’s research policy.</p>
1.9	-	<p>Progress Update on the Construction Innovation Expo (CIExpo) 2019</p> <p>The Secretariat reported that the first Organising Committee meeting for CIExpo was held on 22nd March 2019. The Center of Science and Technology Industrial Development under the Ministry of Housing and Urban-Rural Development of the People’s Republic of China, the Development Bureau and the CIC are co-organising the CIExpo 2019.</p>

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		The featured events of the CIExpo 2019 and the proposed list of speakers for the productivity conference (the Conference) were also presented. The CIC Chairman suggested to invite more speakers from mainland China and Singapore for the Conference.
1.10	-	Any Other Business The first International Symposium on Construction Robotics (the Symposium) would be organised with the Hong Kong Science & Technology Parks Corporation (HKSTP) on 3 July 2019. A Memorandum of Understanding on robotics collaboration between the CIC and the HKSTP is suggested to be signed during the Symposium. Members agreed to proceed. The Secretariat reported that a draft itinerary for the proposed technical visit to Japan in July was under preparation. The technical visit would focus on prefabrication and DfMA / MiC, robotics and automation, and site housekeeping. The CIC Chairman reminded the Secretariat should invite industry stakeholders other than the Members of Com-PRO for the technical visit.
1.11	-	Next Meeting 002/19 The next meeting would be held in June 2019. The Secretariat would inform Members once the meeting details are confirmed.

Remarks: The mentioned papers discussed at the Committee on Productivity Meeting No. 001/19 and the full minutes can be made available to Council Members by the CIC Secretariat upon request.