

Construction Industry Council

Committee on Productivity

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

Present:	Ringo YU	(RiYu)	Chairperson
	Luen-kiu CHOW	(LKC)	
	Kwok-fai CHUNG	(CKFi)	
	Ivan FU	(FI)	
	Kai-sing KWAN	(KSKn)	For Permanent Secretary for Transport and Housing (Housing)
	Alex KWAN	(KFK)	
	Simon KWOK	(TKK)	
	Eddie LAM	(ELM)	
	Kenneth MO	(KM)	
	Vincent CHOW	(VtCw)	for Permanent Secretary for Development (Works)
	Rocky POON	(LKP)	
	Derek SO	(KLS)	
	Raymond WAN	(RdW)	
	Ken Wong	(KnW)	
In Attendance:	Geoffrey SHEN		(Presenter)
	Wen PAN		(Presenter)
	Jeff FUNG		(Presenter)
	Tomi NISSINEN		(Presenter)
	Ivan SHAM		(Presenter)
	Ka-kui CHAN	(KKCh)	Chairman, CIC
	Albert CHENG	(CTN)	Executive Director, CIC
	Richard PANG	(RPg)	Director – Industry Development
	James WONG	(JsW)	Senior Manager – Construction Productivity
	Terry LAM	(TyLm)	Manager – Construction Productivity
	Carol DU	(CD)	Senior Officer – Construction Productivity
	Eason YUNG	(EnY)	Senior Officer – Construction Productivity
Christy KWONG	(CyK)	Officer – Construction Productivity	
Apologies:	Shujie PAN	(PSJ)	
	Franki YEUNG	(FY)	

MINUTES

Action

1.1 Confirmation of the Minutes of the Previous Meeting

Members confirmed the minutes of the Com-PRO Meeting No. 004/18 without any amendment.

All to Note

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 Phase I of the study is expected to complete 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 (PolyU) and Mr. Wen PAN from the Technical University of Munich (TUM) presented their proposal on the development of on-site facade processing robot.

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.

Members opined that the CIC had completed its task of developing a prototype and showcasing it to the industry for further development. The research team was recommended to engage industry stakeholders to co-invest in this proposed project and the 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 to form a matching fund for this proposed project.

**PolyU and
TUM**

1.4 Proposal on Process Re-engineering for E&M Trades

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.

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 was reminded that the original purpose of conducting study on trade process re-engineering was to improve the long-established design and construction methods and procedures for productivity enhancement. It was suggested to narrow down the study scope with the aim to expedite the adoption of modular integrated construction (MiC) in Hong Kong. The Committee Secretariat would follow this up with the HKFEMC.

**CIC
Secretariat &
HKFEMC**

1.5 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

Mr. Jeff FUNG from the Hong Kong Productivity Council (HKPC) presented his proposals.

(i) Proposal on Design and Development of a 2.5 Cubic Metres Concrete Skip

- 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 Committee Secretariat would follow up with HKPC on the issues of patent and intellectual property rights.

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(ii) Proposal on Extended Consultancy Service for the Study on Achieving Productivity Leap through Construction Process Re-engineering (the Extended Consultancy Service)

- 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.

Members approved the two proposals after deliberation. The Committee Secretariat would liaise with the HKPC and proceed with the two study agreements.

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1.6 Progress Update on the Research entitled “Development of Innovative Self-Compacting Backfilling Material for Pavements in Hong Kong Road Network”

Dr. Tomi NISSINEN and Dr Ivan SHAM from the Nano and Advanced Materials Institute Limited (NAMI) presented the progress update of the research project on the self-compacting backfilling material for pavements. Members noted that two deliverables had been achieved and field trials in collaboration with relevant Works Departments will be conducted in Q2 2019.

Members were concerned whether the backfilling material being developed 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 backfill material as suggested.

Members agreed to proceed with the final payment by CIC for this research project.

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1.7 2019 – 2021 Action Plan on Driving the Adoption of DfMA in the Hong Kong Construction Industry

Dr James WONG 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.

The Committee 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.

The CIC Chairman reminded the Committee 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 the knowledge of DfMA.

1.8 Research Application for the CIC R&D Fund

Mr. Terry LAM 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 the assessment conducted by the CIC Secretariat, no research proposal was recommended to Com-PRO for further consideration. Members agreed with the vetting result.

The CIC Secretariat would organise a de-briefing session to inform the researchers of CIC's research policy.

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1.9 Progress Update on the Construction Innovation Expo (CIExpo) 2019

Dr James WONG 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 have agreed to co-organise the CIExpo 2019 with the CIC.

Members were briefed on the details of CIExpo 2019, and were asked to comment the proposed list of speakers for the productivity conference (the Conference). The CIC Chairman suggested to invite more speakers from mainland China and Singapore for the Conference.

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1.10 Any Other Business

The First International Symposium on Construction Robotics (the Symposium) will be jointly organised with the Hong Kong Science and Technology Park Corporation (HKSTP) on 3 July 2019. A Memorandum of Understanding (MoU) on robotics collaboration between the CIC and the HKSTP is suggested to be signed during the Symposium. Members agreed to proceed.

[Post-meeting note: The MoU was signed in the Ground-breaking Ceremony of the HKSTP's Innocell project dated 20 May 2019.]

The Committee Secretariat reported that a draft itinerary for the proposed technical visit to Japan in July was under preparation. The technical visit will focus on prefabrication and DfMA / MiC, robotics and automation, and site housekeeping. The CIC Chairman reminded the Committee 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 Committee Secretariat would inform Members once the meeting details are confirmed. **All to Note**

The meeting was adjourned at 3:50 pm.