

Construction Industry Council

Committee on Productivity

Meeting No. 004/21 of the Committee on Productivity was held on 7 December 2021 (Tuesday) at 2:30 pm in the Board Room, 29/F, Tower 2, Enterprise Square Five (Megabox), 38 Wang Chiu Road, Kowloon Bay

Present:	Ken WONG *	(KnW)	Chairperson
	Thomas HO	(TH)	
	Simon KWOK	(TKK)	
	Kenneth MO *	(KM)	
	Tai-hing MOW*	(THM)	
	Shujie PAN	(PSJ)	
	Derek SO	(KLS)	
	Dennis WAN *	(DsW)	for Permanent Secretary for Development (Works)
	Rayson WONG *	(RnWg)	for Permanent Secretary for Transport and Housing (Housing)
Franki YEUNG *	(FY)		
In Attendance:	CHAN Ka-kui	(KKCh)	Chairman, CIC
	Albert CHENG	(CTN)	Executive Director, CIC
	Daniel SUEN	(DSn)	Director – Industry Development
	James WONG	(JsW)	Senior Manager – Industry Development
	Bonnie TZE	(BeT)	Manager – Industry Development
	Eason YUNG	(EnY)	Assistant Manager – Industry Development
	Norelle MAK	(NeM)	Senior Officer – Industry Development
	Christy KWONG	(CyK)	Officer – Industry Development
	Wei PAN*		(Presenter)
	Nuno FERREIRA *		(Presenter)
	Louis WONG*		(Presenter)
	George WONG		(Presenter, CIC)
	Apologies:	Kwok-fai CHUNG	(CKFi)
Ivan FU		(FI)	
Eddie LAM		(ELM)	
Tat-wai LI		(LTWi)	
Rocky POON		(LKP)	

* Members and presenters attended the meeting online via MS Teams.

MINUTES

Action

4.1 **Confirmation of the Minutes of the Previous Meeting**

Members confirmed the minutes of the Com-PRO Meeting No. 003/21 without further amendment.

All to Note

4.2 **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 concise version of the reference material on DfMA MEP was being compiled. The draft will be circulated to Members for review and approval in January / February 2022. The booklet was expected to serve as a practical guide for industry stakeholders’ reference and as training materials for DfMA course organised by the CIC.

(ii) **Progress Update on the Construction Innovation Expo (CIExpo) 2022 and the CIC Construction Innovation Award 2022:** The official launch for the CIExpo 2022 was held on 2 December 2021 at the Government House. The tender interview to engage the vendor for managing the CIExpo 2022 was held on 23 November 2021. Tender recommendation would be submitted to the Council for approval on 17 December 2021. Details of the CIExpo 2022 and the CIC Construction Innovation Award 2022 were also announced through the CIC Power Talk on 3 December 2021. The Secretariat will proactively engage exhibitors and award applicants by organising a series of promotional activities in 2022.

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(iii) **Benchmarking and target setting on DfMA levels and productivity:** A total of 12 public / private building clients were invited to provide relevant data on the DfMA adoption levels and project performance. It was targeted to collect data from 30 completed / on-going building projects. Findings would be shared with Members in the next meeting for further deliberation.

(iv) **Advisory Services by Mr Tim HALL:** Appreciation letter was sent to Mr Tim HALL on 9 November 2021, expressing the gratitude from the CIC for his contribution on driving the DfMA in the Hong Kong construction industry. The Secretariat would keep contact with both local and overseas experts for the continuous support on the promotion and adoption of the DfMA in the industry.

- (v) **Proposed Consultancy Project on Development of a Productivity Assessment Scheme (PAS) in Hong Kong:** The aim of this 9-month Consultancy was to deliver a practical scheme for assessing buildability and productivity for building projects in Hong Kong. Tender would be issued in December 2021. The consultancy was expected to commence in February 2022.
- (vi) **Applications for the CIC R&D Fund**
- i) **Study of Artificial Intelligence for Road Surface Depression Detection Using 3D LiDAR Data:** Research agreement was signed and the study commenced on 1 December 2021.
- ii) **Performance Improvement Analysis of Adopting an External Wall Painting Robot in Public Housing Project in Hong Kong:** Since no further justification was provided by the applicant regarding the applicability of the painting robot for various types of buildings in Hong Kong, the application was considered as unsuccessful.
- (vii) **International Symposium on Construction Robotics and Automation:** The international symposium, co-organised with the Hong Kong Science and Technology Park (HKSTP), would be held at the Science Park on 10 December 2021. Conference session was scheduled in the morning, with around 1,100 registrants, followed by a Business Matching session (with suppliers in the CITF pre-approved lists and companies from the Science Park) in the afternoon, with around 50 business matching meetings confirmed.

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4.3 **Study on Construction Productivity Measurement in Hong Kong**

Mr. Dennis WAN from DEVB updated Members that the 1-year study commenced in late September 2021, with initial findings expected by Q2 2022.

Prof. Wei PAN from The University of Hong Kong presented the objectives of the study: i) to develop a system for construction productivity measurement for both public and private sectors, covering industry, project and task levels as well as pre-construction, construction and post-construction stages; ii) to develop methodology

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with KPIs formula and measurement process; iii) to identify the available data, challenges in data collection as well as recommendations on way forward. Invitations for interviewing industry stakeholders would be sent out starting from December 2021.

Members opined that the data to be collected should be feasible and practical for revealing the status and trend of construction productivity. Reasons for variations in productivity across time / projects should then be identified through the measurement. Focus should be kept on the building sector due to its comparability and potential for productivity enhancement. KKCh suggested to make reference to the relevant methodology and data in the Mainland China. The research team would present the findings to Com-PRO in due course.

4.4 Progress Update on Application of Maturity Method for Determination of Early-age Concrete Strength in the Hong Kong construction industry

Dr Nuno FERREIRA from Arup presented the summary and findings of the site trial results as well as the highlight of the guidebook for applying the maturity method for determination of early-age concrete strength. The study commenced in November 2020 and was expected to be completed in January 2022. It aimed to assess the applicability of maturity method and maturity functions in predicting the early-age development of common Hong Kong concretes, and to compile practical guidelines to facilitate wider application of the maturity method in the industry.

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Members had no adverse comment on the site trial results and the guidebook. Once endorsed by the Working Group for the research, the guidebook would be circulated to Members for approval.

4.5 Applications for the CIC R&D Fund – Development of Artificial Intelligence Rock Type Classification APP for Geotechnical Logging

Dr Louis WONG from The University of Hong Kong presented the proposal of an 18-month research requesting the funding from CIC at HK\$1,181,350. The key objectives of the proposed research include i) to train an A.I. model for automatically identifying fractures in rock cores; and ii) to derive algorithms for calculating the fracture indices used for quantitative description of the fracture state of the rock cores.

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Members approved the proposed research but preferred to shorten the project duration. The Secretariat would review with Dr. WONG on the duration and prepare the research agreement accordingly.

4.6 Proposed Action Plan on Construction Digitalisation Roadmap for Hong Kong – “Smart Offsite Fabrication and Delivery” and “Smart Site Management”

Mr. George WONG from CIC’s Construction Digitalisation team presented the proposed action plan. Two of the Digital Application Areas (DAs) – DA4: Smart Offsite Fabrication and Delivery and DA5: Smart Site Management would require support and action from Com-PRO. The Secretariat reported that most of the strategies in DA4 would be covered in the Com-PRO’s 3-year Strategic Plan.

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Members had no adverse comment on the proposed action plan and agreed to take actions under DA4 and DA5 accordingly. Since some of the strategies such as the development of business directory, establishment of digital platform and enrichment of site safety training require other committees’ involvement, the Secretariat would further liaise with the corresponding committees for appropriate onward actions.

4.7 Any Other Business

i) Proposed Strategies on Improving Time, Cost and Quality (TCQ) Performance of the Hong Kong Construction Industry

The Secretariat presented the proposed strategies on improving time, cost and quality under four focus areas: i) Shifting to Industrialisation; ii) Streamlining Approval Processes; iii) Driving Innovation; and iv) Enhancing Project Management and Procurement. The draft final report was submitted to Steering Committee for endorsement in December 2021 and to be submitted to the Council in Q1 2022 for approval.

Members opined that further elaboration is required to illustrate the pragmatic action plans under the proposed strategies. The Secretariat took note of that and would follow up accordingly before submitting to the Council.

ii) Vote of thanks to Chairman of the CIC

Chairman of the Com-PRO, Ir Ken WONG, expressed his gratitude for Mr. CHAN’s leadership and contributions to the CIC and the industry as a whole during his six-year tenure of CIC Chairmanship, which would expire by 31 January 2022. .

4.8 Next Meeting 001/22

The next meeting would tentatively be held on 10 March 2022. The Secretariat would inform Members once the meeting details are confirmed. **All to Note**

The meeting was adjourned at 5:00 pm.