

Construction Industry Council

Committee on Productivity

Meeting No. 003/18 of the Committee on Productivity was held on 19 September 2018 (Wednesday) at 2:30 pm in Board Room, 38/F, COS Centre, 56 Tsun Yip Street, Kwun Tong, Kowloon.

Present:	Ringo YU	(RiYu)	Chairman
	Luen-kiu CHOW	(LKC)	
	Kwok-fai CHUNG	(CKFi)	
	Kai-sing KWAN	(KSKn)	for Permanent Secretary for Transport and Housing (Housing)
	Ricky LEUNG	(RL)	for Alex KWAN of the Airport Authority Hong Kong
	Simon KWOK	(TKK)	
	Vincent CHOW	(VtCw)	for Permanent Secretary for Development (Works)
	Shujie PAN	(PSJ)	
	Rocky POON	(LKP)	
	Derek SO	(KLS)	
Raymond WAN	(RdW)		
In Attendance:	Tim HALL		(Presenter)
	Thomas LINNER		(Presenter)
	Geoffrey SHEN		(Presenter)
	Thomas NG		(Presenter)
	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
Apologies:	Ivan FU	(FI)	
	Kenneth MO	(KM)	
	Sze-chun WONG	(SCW)	
	Franki YEUNG	(FY)	

MINUTES

Action

3.1 **Confirmation of the Minutes of the Previous Meeting**

Members confirmed the minutes of the Com-PRO Meeting No. 002/18 without any amendment.

All to Note

3.2 **Matters Arising from the Previous Meeting**

Item 2.2: For the Consultancy on “Achieving Productivity Leap through Construction Process Re-engineering”, the Hong Kong Productivity Council (HKPC) had conducted additional site visits and consulted relevant trade associations to review the recommendations. Members had no further comment and endorsed the revised documents. RiYu encouraged HKPC to submit a proposal on re-engineering a few other key trades that have a high chance of success, for Com-PRO’s consideration.

The final report of the consultancy study on “A Comprehensive Productivity Appraisal of the Hong Kong Construction Industry” was endorsed by Members. Some of the suggested measures in the study have been incorporated in the 3-year work plan and the action list (“long-list”) of Com-PRO.

Item 2.5: The Committee Secretariat has circulated the draft Final Report of the consultancy study on “Investigating the Potential of Implementing Robotics and Automation in the Context of Large-scale Housing Development for Hong Kong” to Members for their review.

Item 2.8: Members endorsed the Phase 1 work of the research proposal entitled “Smartphones as Next-generation Monitoring Devices for Construction-induced Vibrations and Noise”. The Committee Secretariat would follow up on the research agreement.

**CIC
Secretariat**

3.3 **Proposal on the Establishment of Buildoffsites Hong Kong**

Mr. Tim HALL from Buildoffsites UK (BoS-UK) presented a proposal on the establishment of Buildoffsites Hong Kong (BoS-HK), as a 15-month pilot scheme, at an estimated cost of HK\$1.42 million. The proposed BoS-HK aims to link up a wide range of industry stakeholders for promoting the adoption of prefabrication in local construction projects. There would be regular events and publications by BoS-HK.

Members had concerns on the extent of government’s involvement, the roadmap, and the likely degree of success of BoS-HK, e.g. establishing local standards, amending existing statutory requirements / procedures, and providing incentives to facilitate adoption of offsite construction. After much deliberation, Mr. HALL was requested to prepare a revised proposal focusing on: (i) setting of targets in the adoption of offsite

construction in Hong Kong via government policy initiatives or other incentives; (ii) tackling of difficulties or constraints in adopting offsite construction; and (iii) recommendations on the establishment of a local prefabrication yard.

RiYu suggested to scale down the proposed plan for BoS-HK, and the revised budget should be submitted to CTN for final endorsement.

**CIC
Secretariat**

3.4 Proposal on the Follow-up Projects on Investigating the Potential of Implementing Robotics and Automation in the Context of Large-scale Housing Development for Hong Kong

Dr.-Ing. Thomas LINNER from the Technical University of Munich and Prof. Geoffrey SHEN from the Hong Kong Polytechnic University (the Team) presented their proposal on two follow-up projects, viz. (i) full-scale facade processing robot development (Project 1), and (ii) accreditation framework establishment for construction robot and automation system (Project 2). Project 1 would take 15 months for robotics development, at a cost of 550,000 Euros. Project 2 would take 12 months to complete, at a cost of 85,000 Euros. The facade processing mock-up robot, at an additional cost of 23,000 Euros for delivery and installation at the Construction Innovation and Technology Application Centre (CITAC), was also presented and Members had no comment on the above mentioned arrangement of displaying the mock-up robot at CITAC.

Members asked the Team what functions the proposed robot could perform, the required working environment for the robot and the business case to support the proposed additional robotic research and development project. After deliberation, the Team was requested to provide more details on the tasks to be performed by the proposed robot focusing on the needs of our industry and what a robot could do better than humans, to be supported by a business case argument to justify the CIC's investment.

RiYu suggested the Committee Secretariat to explore other research resources locally and in nearby areas for taking forward the development of construction robotics.

**CIC
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3.5 Progress Update on the Consultancy Study on Assessing the Performance of the Hong Kong Construction Industry, Key Performance Indicators (KPI): An International Comparison

Prof. Thomas NG from the University of Hong Kong (HKU) presented six sets of KPIs for measuring the performance of the Hong Kong construction industry, viz. with respect to productivity, safety,

environment, manpower, cost, and additional aspects. Recommendations to improve the industry's performance were also presented.

Members queried that the KPI "P5" related to labour productivity should not decline nearly by a half from 2005 to 2017, and also expressed their views on the decrease of labour productivity, mainly due to aging workforce and the tighten requirement in safety and other aspects.

Prof. NG would address the comments from Members on the draft final report. The Committee Secretariat would circulate the draft final report to Members for comments once it is ready.

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3.6 CIC Research and Technology Development Fund and Research Agenda

JsW presented the revamped CIC Research and Technology Development Fund model with a streamlined operational framework. The new funding model consists of three schemes, viz. Explorative Project Scheme and associated Site Trial Scheme, Collaborative Project Scheme, and Key Performance Indicator (KPI) Improvement Project Scheme.

JsW also presented some proposed research agenda for productivity enhancement, which might include the following topics: (i) Development of robotics and automation, (ii) Novel buildable design or construction methods, (iii) Optimization of prefabrication, (iv) Development of advanced technologies for inspection, retrofitting and demolition of ageing buildings, and (v) Management tools for efficient project delivery.

3.7 Progress Update on the Proposed Construction Innovation Expo 2019

JsW presented the business plan for the proposed Construction Innovation Expo 2019 (the Expo), which included a proposed programme, a budget plan and key milestones. The Expo is planned to be held at the Hong Kong Convention and Exhibition Centre (HKCEC) from 18 to 20 December 2019 tentatively. The Expo would consist of (i) a 3-day exhibition, (ii) a half-day technical seminar cum award presentation ceremony for the CIC Construction Innovation Award 2019, and (iii) a 1.5-day international conference on construction productivity; and (iv) a 1.5-day BIM summit.

The exhibition would focus on four aspects, viz. (i) offsite construction, (ii) mechanised construction, (iii) digital construction, and (iv) advanced materials and technologies. The Committee Secretariat would issue an Expression of Interest (EOI) in October 2018, to invite parties to express interest in taking part as one of the exhibitors at the Expo. The progress of work on this initiative would be reported to the Com-PRO regularly.

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3.8 Any Other Business

There was no other business.

3.9 Next Meeting 004/18

The next meeting would be held in December 2018. The Committee Secretariat would inform Members once the meeting details are confirmed.

All to Note

The meeting was adjourned at 5:40 pm.