

**Construction Industry Council**

**Committee on Productivity**

Meeting No. 003/17 of the Committee on Productivity was held on 08 September 2017 (Friday) at 2:30pm at Board Room, 38/F, COS Centre, 56 Tsun Yip Street., Kwun Tong, Kowloon.

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Summary Notes of the Committee on Productivity Meeting No. 003/17:

<b>Agenda Item</b>	<b>Paper</b>	<b>Major Resolutions/ Progress Highlights</b>
3.1	CIC/PRO/R/002/17	<b>Confirmation of the Progress Report of the Previous Meeting</b> Members confirmed the Progress Report of the Com-PRO Meeting 002/17 without amendment.
3.2	CIC/PRO/R/002/17	<b>Matters Arising from the Previous Meeting</b> For item 2.3: The consolidated comments from the Members were sent to Dr Wei PAN on 4.9.2017 for his response and revision of the report where necessary. It is expected to receive Dr PAN's response and revised draft final report in early October.  For item 2.4: The Secretariat has arranged HKPC to carry out site trial of their recommended measures (including re-bar fixing method) in the CIC training centres.  For item 2.5: The Secretariat has arranged Prof SL Chan to deliver a talk to promote the use of design method and software developed under the research project to ArchSD's staff on 11.9.2017.  For item 2.7: With the endorsement by the Members, Secretariat would proceed to prepare contract document for the proposed Consultancy " <i>A Feasibility Study of Lego-inspired Construction with Bendable Concrete</i> " leading by Prof. Victor Li from University of Michigan.

Agenda Item	Paper	Major Resolutions/ Progress Highlights
		For item 2.10: The finalized work plan and budget has been submitted to Com-ANF in August for approval. Slight adjustment was made according to the directives of Com-ANF.
3.3	-	<p><b>Consultancy Service for Assessing the Performance of the Hong Kong Construction Industry, Key Performance Indicators (KPI): An International Comparison Study</b></p> <p>Prof. Thomas NG from HKU presented the findings of the Draft Final Report received in August. After two rounds consultations with Industry Stakeholders, Prof. NG has proposed strategies based on the past trends of the KPIs mainly in productivity, site safety, manpower and construction cost, etc. Com-PRO Members suggested HKU to include GFA and construction GDP per number of employed worker etc. in the KPI measurements as well as take CIC construction workers' data into consideration. The Secretariat would follow up to circulate the Draft Final Report to the Members for more comments.</p>
3.4	-	<p><b>Benchmarking the Construction Trade Productivity in Hong Kong</b></p> <p>Dr. Eric ZHANG from Hong Kong University of Science and Technology (HKUST) presented the research findings of the project which started in February 2015. HKUST had finished data collection across different territories including (i) Hong Kong, (ii) Singapore, and (iii) Mainland China via different approaches to measure and benchmark the productivity of critical trades. With a positive feedback from the Members, Dr. ZHANG would further revise the draft final report accordingly and seek for comments again in due course.</p>
3.5	-	<p><b>Full-scale Testing and Numerical Analysis of Innovative Measures for Minimizing Infiltration and Internal Erosion in Soil Slopes due to Leakage from Pressurized Buried Pipes</b></p> <p>Prof. ZHANG Limin from HKUST presented the research findings funded by the CIC which was target to be completed by the end of September 2017. Prof. ZHANG invented an innovation water pipe protection method by wrapping various geo-materials, e.g. Geo-Membrane, Geo-textile onto the buried pipe to protect the soil slope from failure. HKUST would follow up the Members' suggestions in drafting guidelines that pipe maintenance and material's durability need to be considered to facilitate a better working performance.</p>

<b>Agenda Item</b>	<b>Paper</b>	<b>Major Resolutions/ Progress Highlights</b>
3.6	-	<p><b>Research Proposal on Innovative backfilling materials for pavements in Hong Kong</b> Dr. Ivan SHAM from NAMI<sup>1</sup> presented the revised Research Proposal on a potential replacement for the traditional backfilling materials (e.g. soil) by a flowable backfilling foamed concrete and addressed Members’ comments provided in last meeting. Members concerned about the business plan collaborating with ITF including but not limited to the IP ownership, the licensing fees and royalties before the Committee agreed to provide funding support to the funding proposal.</p> <p>NAMI shall further liaise with its Board on the concerns and to address them before the Committee endorsing the proposal.</p>
3.7	CIC/PRO/P/005/17	<p><b>Investigating the Potentials of Implementing Robotics and Automation in the Context of Large-scale Housing Development for Hong Kong (Proposal for project extension and Phase 2A Supplementary)</b> Prof. Thomas BOCK from Technical University of Munich conducted a research on tailor made Robotics and Automation solutions for Hong Kong Construction Industry. An additional task block named “Phase 2A – In depth case study” was proposed identifying the real needs on local construction sites under an amount which originally specified to be a tax payment on top of the remuneration for the performance of the R&amp;D tasks. The tax was exempted under the German Laws as CIC is a statutory body in Hong Kong. With Com-PRO’s endorsement, the project would be extended by five months to seventeen months until the end of April 2018 in total to enhance the practicality of the research results.</p>
3.8	CIC/PRO/P/006/17	<p><b>Compilation of Productivity Roadmap for the Hong Kong Construction Industry</b> The Committee has commissioned Dr. Wei PAN from the University of Hong Kong to conduct a Study with the aim to improve the productivity and efficiency from December 2015 to June 2017. Based on the strategies and recommendations generated from the aforesaid Study, an additional phase for drawing up a pragmatic and effective productivity roadmap was proposed, which was targeted to be finished in another four months.</p>

<sup>1</sup> *Nano and Advanced Materials Institute*

<b>Agenda Item</b>	<b>Paper</b>	<b>Major Resolutions/ Progress Highlights</b>
		Concerning that the Draft Final Report is still under revision to address the comments from the Members, HKU shall further fine tune the draft Final Report before submitting the above proposal again for Member's endorsement.
3.9	-	<b>Any Other Business</b> The Innovation Award 2017 received a very optimistic response from the Industry. Total 124 applications in three main Categories were received from both from local and overseas submitted their innovative ideas towards the construction industry. Members were invited to attend the final ceremony to be held on 15th December 2017.  A technical visit to NAMI and Hong Kong Science Park on innovative construction materials and construction robotics application was scheduled on 10th Oct 2017. Members were all welcome to join the visit.  The Committee agreed that due to the legal differences between Hong Kong and US, for the Study " <i>Investigating the Potential Application of 3D Printing Technology for Construction Supply Chains in Hong Kong</i> ", legal advice could be sought in order to prepare the contract document with the University of Maryland.
3.10	-	<b>Tentative Date of Next Meeting 003/17</b> The next meeting was scheduled in December 2017. The Committee Secretariat will inform Members once the meeting date is confirmed.

*Remarks: The mentioned papers discussed at the Committee on Productivity and the full progress report can be made available to Council Members from the CIC Secretariat upon request.*