

LCQ20: Modular Integrated Construction method

Following is a question by the Hon Doreen Kong and a written reply by the Secretary for Development, Ms Bernadette Linn, in the Legislative Council today (May 31):

Question:

In recent years, the Government has been vigorously promoting the Modular Integrated Construction (known in abbreviated form as MiC) method and has adopted such construction method in a number of construction projects (e.g. public rental housing). However, the transportation of the relevant integrated modules is subject to restrictions under the existing legislation and requirements (for example, if the total width of such modules is in excess of 2.5 metres, it is necessary to apply for a "wide load" permit and make special traffic arrangements (including that escort vehicles to the front and rear of the carrying vehicle concerned are required, etc.)), resulting in an increase in the relevant transportation costs and time. In addition, as MiC is different from traditional construction methods, additional personnel with relevant professional backgrounds are needed to be hired for construction projects using MiC. In this connection, will the Government inform this Council:

(1) whether it has compiled statistics on the current number of personnel in Hong Kong who have mastered MiC technology; if so, of the details; if not, the reasons for that;

(2) whether the Government has plans to enhance the training for personnel mastering MiC technology; if so, of the details; if not, the reasons for that;

(3) as it is learnt that the number of construction projects using MiC is increasing, whether it has plans to offer more relevant training courses to attract more young people to join the industry concerned and enhance their professional knowledge and skills; if so, of the progress; if not, the reasons for that; and

(4) as it is learnt that with the increase in the number of construction projects using MiC, the demand for transportation of the relevant modules has also increased correspondingly, whether the Government has studied amending the legislation to, for example, allow vehicles carrying integrated modules with a total width exceeding 2.5 metres to be exempted from obtaining a "wide load" permit and relax the relevant special traffic arrangements, so as to reduce the transportation costs and time concerned; if so, of the progress; if not, the reasons for that?

Reply:

President,

The construction industry in Hong Kong is facing the challenges of manpower shortage, declining productivity and high construction costs. Since 2017, the Development Bureau (DEVB) has been promoting Modular Integrated Construction (MiC) to enhance the industry's productivity and cost-effectiveness. Under the steer of the DEVB, the Construction Industry Council (CIC) and relevant departments have provided design guidelines, codes and practice notes on MiC. A number of public and non-governmental organisations, including the Hong Kong Housing Authority, the Hong Kong Housing Society, the Urban Renewal Authority, the Hospital Authority, social enterprises and private developers, have started the adoption of MiC and there are over 70 MiC projects at present.

The Chief Executive further mentioned in his 2022 Policy Address that a cross-departmental steering committee would be established for co-ordinating the development of high productivity construction methods such as MiC and Multi-trade Integrated Mechanical, Electrical and Plumbing. Moreover, a dedicated team serving as a one-stop platform would provide technical support for individual projects and strengthen the communication and collaboration with relevant departments in facilitating wider adoption of MiC in the industry. The steering committee would streamline the related approval processes, formulate measures to strengthen the MiC supply chain, and foster collaboration with the Guangdong-Hong Kong-Macao Greater Bay Area. In addition to expediting housing supply, these measures will strengthen the leading regional position of Hong Kong's construction industry in the adoption of MiC.

The reply to the four parts of the question raised by the Hon Kong is as follows:

(1) MiC modules are manufactured, installed, tested in factories, and the completed building modules are packaged and transported to construction sites for assembly. Since MiC building modules are largely completed before being delivered to the sites, MiC effectively eases the current manpower shortage of the construction industry. During on-site assembly of MiC modules, the skilled workers required are similar to those of traditional construction methods, including skilled workers in lifting, structure, electrical and mechanical, and furnishing work categories. Due to the numerous works trade to be involved, please refer to the information regarding the statistics of relevant skilled workers published on the following CIC's website:

www.cic.hk/common/StatisticofRegWorkers/disclaimer.aspx?lang=en-US

(2) To deepen the knowledge of MiC among construction personnel, the Hong Kong Institute of Construction (HKIC) of the CIC has provided the following training programmes, covering MiC project management, site management and assembly process of MiC:

- MiC Project Implementation (Project Managers)
- Certificate in MiC for Foreman
- Certificate in MiC Unit Installation

In addition, the DEVB established the cross-departmental steering committee in early January 2023 for co-ordinating the development of high productivity construction methods. The steering committee will formulate measures to strengthen the MiC supply chain, which include conducting regular reviews with the CIC and other industry representatives of the demand for MiC training to cope with the development of MiC.

(3) In addition to promoting the use of MiC in Hong Kong, the DEVB actively implements "Construction 2.0" and promotes wider adoption of innovation and technology, including Building Information Modelling, digitalisation of public works and the integrated Capital Works Platform to advocate professionalisation and revitalisation as well as to attract more young people to join the industry. Moreover, the DEVB, the HKIC and other relevant stakeholders will regularly review and offer various programmes from time to time with a view to nurturing professional talents and uplift professionalism.

(4) The DEVB has long been working with relevant departments to implement measures to facilitate the industry and promote the adoption of MiC in Hong Kong. The Transport Department (TD) has issued a guideline in July 2022 to assist the industry in applying for "Long Load"/"Wide Load" Permit, which flexibly allows vehicle to carry load with width in excess of 2.5 metres. Under normal circumstances, width of MiC module not exceeding 3 metres is usually transported during daytime, and the TD will determine whether the restriction on the width could be further relaxed after taking into consideration the traffic conditions of relevant roads, cargo sizes, transportation routes, transportation time and other relevant factors of each application.