[Housing Bureau and HKCRC sign MOU on innovative construction technologies](#)

   The Housing Bureau (HB) signed a Memorandum of Understanding (MOU) with the Hong Kong Center for Construction Robotics (HKCRC) today (January 16) for the establishment of a strategic partnership, with a view to jointly foster the upgrading and transformation of the construction industry, and provide solutions to address challenges including large-scale housing production, the shortage of the construction labour force, continuous enhancement of site safety, etc. Taking advantage of the vast supply, standardised design and highly repetitive nature of public housing by the Housing Department (HD) (the executive arm of the Hong Kong Housing Authority), it can provide a sufficient testing ground for trials of new technologies to facilitate testing and improvement of research outcomes before making them available in the market.

   Speaking at the signing ceremony, the Secretary for Housing, Ms Winnie Ho, said that she felt honoured to work with the HKCRC led by Professor Li Zexiang of the Hong Kong University of Science and Technology Department of Electronic and Computer Engineering. With the HKCRC's rich experience in research and development as well as application, the HB expects that by utilising public housing sites as a testing ground, the collaboration can inject more innovation and technology impetus into Hong Kong's construction industry and turn the immense market demand and challenges faced by the industry into development opportunities for construction technologies.

   Witnessed by Ms Ho; the Acting Secretary for Innovation, Technology and Industry, Ms Lillian Cheong; and the Chairman of the Board of the HKCRC, Dr Kim Shin-cheul, the Permanent Secretary for Housing/Director of Housing, Miss Rosanna Law, signed the MOU with the Associate Director of the HKCRC, Dr Liang Haobo. The three main directions of this collaboration are:

- Smart Tower Cranes – The HD and the HKCRC will jointly develop a smart tower crane system to first enable workers to remotely control the tower crane at ground level or indoors, thus providing a more comfortable and safer working environment for tower crane operators. An auxiliary control system with artificial intelligence (AI) functions including automatic lifting route planning and obstacle avoidance will be developed in the next stage to realise "unmanned" cranes in the long run and make crane operations simpler and more efficient.

- Smart Construction Sites – The HKCRC has developed different types of construction robots, such as rebar tying robots and floor grinding robots, to enhance on-site efficiency and safety at construction sites. Various high-performance digital equipment such as mobile scanners, intelligent Internet of Things (IoT)-based digital inclinometers and precast component scanners, which are already in the practical application stage, help to enhance project quality and efficiency of

inspection works. Through collaborating with the HD, such research can be put for on-site testing and improvement by utilising the vast supply, standardised design and highly repetitive nature of public housing. The mature products can then be showcased and promoted to the industry, thus fostering the upgrading and transformation of the construction industry.

- Smart Estates – The adoption of different smart equipment and innovative technologies, such as cleaning robots and transportation robots, and the utilisation of the IoT, AI and mobile devices, will facilitate daily estate management, enhance work efficiency of frontline staff, and optimise property management.

The HD has been committed to promoting the digitalisation of public housing development. Apart from embracing innovative construction technologies, including the wider adoption of Modular Integrated Construction methods and various construction robots to continuously enhance the safety, efficiency, productivity and sustainability of public housing construction, the HD also actively promotes smart estate management to enhance management efficiency and service quality of nearly 200 public housing estates.