

LCQ15: Application of blockchain technology

Following is a question by the Hon Charles Mok and a written reply by the Secretary for Innovation and Technology, Mr Nicholas W Yang, in the Legislative Council today (May 29):

Question:

In the "Hong Kong Smart City Blueprint", the Government has proposed promoting Fintech initiatives and exploring the application of distributed ledger technology (DLT) in different areas, such as trade financing and cross-boundary remittances. Blockchain technology (BCT) is a type of DLT. In October last year, the Hong Kong Monetary Authority (HKMA) launched, in collaboration with 12 local banks, the eTradeConnect, which uses BCT as the backbone to facilitate trade settlement and financing. Furthermore, the application of BCT in supervisory and regulatory technology and other industries (e.g. Smart Contracts of the insurance industry and information authentication system) has gained increasing popularity. It has been reported that the governments of a number of places are currently examining and allocating resources to the application of BCT in public services, in areas including identity authentication, anti-counterfeiting, and enhancement of the security of information system and data, with a view to improving the transparency in the processing of information and the efficiency of public administration, as well as saving in public expenditure. On the other hand, the application of BCT is not yet subject to regulation under the existing legislation. In this connection, will the Government inform this Council:

(1) of the operation of eTradeConnect since its launch, including (i) a breakdown of the registered local banks and enterprises (set out by enterprise scale), and (ii) the number of cases in which trade transactions have been completed successfully through eTradeConnect and the amount of money involved; the follow-up actions taken after the HKMA and the Monetary Authority of Singapore exchanged a Memorandum of Understanding, and the work progress achieved in connecting with the relevant platform in Singapore;

(2) whether it will, by drawing reference from the relevant studies and trial schemes of other advanced places, assess the potential of BCT in enhancing the efficiency of public services, as well as launch BCT trial schemes in areas such as handling of tax returns, land registration, voting and issuance of various types of identification documents;

(3) whether it will formulate strategies aiming at promoting a keen interest of applying BCT within the Government (e.g. requesting government departments to submit plans, objectives and timetables for trial uses of such technology, as well as formulating performance indicators); if so, of the details; if not, the reasons for that;

(4) whether it will allocate more funding for scientific research projects relating to BCT, formulate measures to encourage the application of such technology by commercial organisations, and draw up in the near future strategies for training BCT-related talents; if so, of the details and the timetable;

(5) whether it has examined regulating the application of BCT; if so, of the details; and

(6) of the respective details (including the numbers of participants) of the seminars, workshops, talks and training courses in relation to BCT organised last year by the Innovation and Technology Commission, the Office of the Government Chief Information Officer, the Hong Kong Cyberport Management Company Limited, the Hong Kong Science and Technology Parks Corporation, the Hong Kong Productivity Council as well as other relevant government departments and organisations?

Reply:

President,

Having consulted the Financial Services and the Treasury Bureau (FSTB), the reply to the six parts of the question is as follows.

(1) According to the information provided by FSTB, the eTradeConnect is fully funded by a consortium of 12 major banks in Hong Kong under the facilitation of the Hong Kong Monetary Authority (HKMA). Since the implementation of the platform is still at initial stage, it is premature to announce the specific registration and transaction numbers. Based on the feedback collected from users, banks have started the platform enhancement work, including enhancing its functionalities, preparing to connect the platform to different trade participants and overseas platforms, etc. The next round of customer acquisition will commence after the completion of the related enhancement work.

Since the signing of the Memorandum of Understanding between the HKMA and the Monetary Authority of Singapore (MAS), the two authorities have discussed for several times the operation model and technical details of the "Global Trade Connectivity Network" and reached a consensus to some degree. The HKMA and MAS are jointly working on the preparation work to identify a suitable solution provider. The HKMA will announce more information in due course when available.

(2) and (3) As the Government understands, the adoption of blockchain technology in public services is still at the exploratory and initial stage. The Office of the Government Chief Information Officer (OGCIO) commenced in end 2018 a pilot application of blockchain technology project to explore the applicability and benefits of adopting blockchain technology in government services. The OGCIO is discussing with four departments (the Intellectual Property Department, the Companies Registry, the Environment Protection Department and the Department of Health) on the implementation of

pilot projects in areas including the transfer of intellectual property ownership, change in registered company information, etc. These pilot projects will be completed in phases from end 2019 to 2020.

The results and experience of the pilot projects will help government bureaux and departments (B/Ds) consider adopting blockchain technology in their services, on matters such as the Internet connection speed requirements for handling a large quantity of transactions, the corresponding design and measures for maintaining information security, etc.

In addition, through the recently established Smart Government Innovation Lab, the OGCI0 will invite the industry to submit technology solutions and product suggestions, including the adoption of blockchain technology, that can address the service needs of and challenges being faced by B/Ds. The OGCI0 will also arrange proof-of-concept trials and technology testing for suitable solutions to help B/Ds better adopt information technology (IT) in their businesses and services.

(4) Through various funding schemes of the Innovation and Technology Fund (ITF), the Innovation and Technology Commission has been supporting the research and development work of research institutions, universities and private companies in various technology areas. In the past three years, the ITF has supported 18 projects involving blockchain and Distributed Ledger Technology (DLT) with a total funding amount of about \$67.2 million.

As regards talent, the Reindustrialisation and Technology Training Programme under the ITF subsidises the staff of local enterprises to receive technology training, including those relating to blockchain technology. As for government personnel, the OGCI0 will provide structured training for all government IT staff in 2019-20 and 2020-21 so as to enhance their knowledge of and ability to apply various innovative technologies, including big data, artificial intelligence, blockchain, cloud computing, etc. In the long run, the OGCI0 will continue to provide suitable training for relevant staff having regard to the demand and technological development.

(5) At present stage, relevant government departments will devise the plans to promote the adoption of blockchain technology in different public services with reference to the experience of the pilot projects and the new development of governments in other regions. Based on the demands of individual sectors in adopting related technologies in various areas (such as financial products, land registration, licence application, etc.), relevant government departments will also consider the need to introduce regulatory measures on such technological adoption in light of future development.

(6) In 2018-19, the OGCI0 arranged a total of 13 seminars and courses on blockchain technology for government IT staff, with 270 participants in total.

Cyberport organised or supported the organisation of 11 workshops and talks related to blockchain in 2018-19, with over 450 participants. The concepts of blockchain technology, cryptocurrency, etc. were introduced to

start-ups, students and industry participants.

Since January 2018, the Hong Kong Science and Technology Parks Corporation has organised 13 seminars, workshops, talks and training courses related to blockchain and DLT, attracting over 700 participants. The Hong Kong Productivity Council has also organised blockchain technology-related activities during the same period, including the Blockchain for Industry Applications Summit in September 2018, as well as the Supply Chain Traceability and Authentication by Blockchain seminar in January 2019, which attracted nearly 300 participants in total.

In addition, Invest Hong Kong hosted the Hong Kong FinTech Week in October 2018, which featured panel discussions and new initiatives on blockchain applications, attracting around 2 000 participants.