

LCQ1: Development of autonomous vehicles

Following is a question by the Hon Shang Hailong and a reply by the Secretary for Transport and Logistics, Ms Mable Chan, in the Legislative Council today (May 14):

Question:

The Government has implemented schemes for trials of autonomous vehicles (AVs) at locations such as the West Kowloon Cultural District since 2017, and a new regulatory regime for AVs also came into operation last year to allow wider and more flexible trials of AVs on the roads. However, there are views pointing out that the development of unmanned driving technology and the relevant laws and regulations in Hong Kong have not kept pace with the times, and that the application of commercial unmanned driving has not been subject to clear regulation. In this connection, will the Government inform this Council:

(1) whether it has assessed the effectiveness of the staged trials of various projects related to AVs and Vehicle-to-Everything technology subsidised by the Smart Traffic Fund;

(2) given that as at the end of last month, a total of two AV pilot licences have been issued by the Government to enable applicants to conduct trials on 12 AVs respectively, of the progress of such trials, and the expected time when such vehicles will be formally deployed in Hong Kong; and

(3) given that the Government will enact legislation to develop a framework for the regulation of online car hailing platforms, whether the Government will conduct a forward-looking study on the incorporation of the technical standards and safety requirements for unmanned vehicles, so as to develop a framework for the regulation of online hailing of AVs?

Reply:

President,

The Government has been promoting the development of autonomous vehicles in Hong Kong in an active and orderly manner through a multi-pronged approach by providing policy support, regulatory backing and financial subsidy. The new regulatory regime for AVs came into operation in March last year, which allows the Transport Department (TD) to provide flexibility for AV trials while ensuring road safety, so as to foster the testing and application of more advanced AV technologies in Hong Kong. In addition to a forward-looking regulatory system, Hong Kong boasts a well-developed road network and highly standardised transport infrastructure, creating an ideal environment for the research and application of AVs. Moreover, our vibrant financial market and fertile ground for innovation have also successfully attracted numerous AV

technology companies to establish research and development centres, experiment with AVs and related technologies, and raise funds through listing in Hong Kong. This not only injects vitality into the local economy, but also accelerates the realisation of the smart mobility vision.

In consultation with the TD, my consolidated reply to the question raised by the Hon Shang Hailong is as follows:

(1) The Government subsidises enterprises or organisations conducting innovative technology research and application related to vehicles through the Smart Traffic Fund. As of last month, the fund has subsidised five and eight projects related to AVs and vehicle-to-everything (V2X) respectively, with a funding amount of approximately \$170 million.

Among these, AV projects cover multiple road scenarios in Hong Kong, such as different types of junctions, pedestrian-priority zebra crossings and public transport interchanges, steadily enhancing the capability of AVs to handle Hong Kong's complex road conditions. Regarding V2X technologies and related auxiliary projects, efforts are being made to progressively expand V2X scenario applications and enhance system compatibility. For instance, some projects have significantly increased the number of application scenarios to over 20, while others enable communication between at least two AVs brands, allowing multiple AVs to operate simultaneously. These projects further enhance the road safety and operational efficiency of supporting infrastructure for AVs.

Through projects under the Smart Traffic Fund, the Government, the industry, and the academia have collectively accumulated experience. Coupled with cross-departmental collaboration, we have attracted multiple technology companies to invest in AVs and related technologies in Hong Kong. Current trials in Hong Kong have achieved highly autonomous driving, which is Level 4 under national and international standards, where AVs can continuously perform all dynamic driving tasks under specific operational conditions and automatically execute minimal risk strategies, a technical level comparable to that of the Mainland and other parts of the world.

(2) Under the new regulatory regime, the testing and application of AVs in Hong Kong are enhancing speed and efficiency. The TD has issued two pilot licenses to allow 12 AVs to be tested in North Lantau and the West Kowloon Cultural District (WKCD) respectively.

Significant progress has been made in the trial in North Lantau since its commencement from end of last year and various breakthroughs have been achieved: (1) the scale of trial has been expanded from a single vehicle to 10 vehicles operating simultaneously, in order to collect data of multiple vehicles running in parallel; (2) carrying passengers on specified routes after safety assessment; (3) conducting trial on more complex roads; current trial routes at the Airport Island have been expanded, with plans to conduct trial in Tung Chung in the future simultaneously; and (4) allowing the increase of the speed limit to 50 km per hour in accordance with the maximum speed limit of the trial route. With the TD's efficient approval process, relevant project achieves the aforementioned breakthroughs within five

months. The project applicant also plans to expand the trial to Cyberport in Hong Kong South. Another project, located at the WKCD, will trial autonomous light buses equipped with autonomous driving system that follows Hong Kong's left-handed traffic rule. Upon completion of the entire system development and when the system has been proven safe to operate, trials with passengers will be carried out on public roads in the WKCD. Based on the current progress, we would expect AV application in selected communities within the next one to two years.

Looking forward, with safety as its guiding principle, the Government will continue to consolidate the experience gained from various projects, refine technical standards and share research outcome with the industry to promote the development of AVs keenly in a steady manner. In addition to the aforementioned projects, we are also actively advancing other initiatives in different districts, such as autonomous light buses running between the Hong Kong Science Park in Sha Tin and MTR University Station, and an autonomous transportation system connecting the SKYCITY at Hong Kong International Airport and the Hong Kong Port Island of the Hong Kong-Zhuhai-Macao Bridge.

(3) The Government has all along been committed to enhancing the quality of personalised point-to-point transport services. Regarding the regulation of online car hailing platforms, the TD is actively conducting a study on the overall demand and supply of personalised point-to-point transport services. The Government will formulate legislative proposals on the regulation of online car hailing platforms, including licensing requirements on the platforms, vehicles and drivers, within this year after it has fully considered the report of the relevant Working Group under the Transport Advisory Committee and the views and the quantitative data collected. The legislative proposals will then be presented to the Legislative Council.

The advancement of AV technology is rapid. We note that many regions have started to apply AVs to commercial operation of passenger and goods transport, etc, and autonomous taxis are being trialed in several cities in the Mainland, demonstrating the significant potential of the integration of the two. The Government will continue to closely monitor the technological advancement and industrial development of AVs, provide appropriate guidance and support, and consider the development direction and the future relevant regulatory requirements in a forward-looking manner.

Thank you, President.