

Autonomous Vehicle Trial Scheme in North Lantau

Purpose

This paper aims to brief the Islands District Council (IsDC) on the latest plans of Baidu Apollo International Limited (Baidu) for autonomous vehicle (AV) trial scheme in North Lantau under the new regulatory framework, which came into effect in 2024.

Background

2. Through a combination of policy support, regulatory backing and financial assistance, the Government has been promoting the further development of AV in Hong Kong. Since 2017, to facilitate AV trials, the Transport Department (TD) has been issuing Movement Permits to AVs for trial in accordance with the Road Traffic Ordinance (Cap. 374). To facilitate technological development of autonomous driving, the Government amended the Road Traffic Ordinance and enacted a new subsidiary legislation, the Road Traffic (Autonomous Vehicles) Regulation, in May 2023 and January 2024 respectively. In tandem with the new regulatory framework which came into effect on 1 March 2024, the TD issued the “Code of Practice for Trial and Pilot Use of Autonomous Vehicles”, setting out the detailed technical, safety and operational requirements of trial and use of AVs.

3. The new legislation has a high degree of flexibility to accommodate the rapid-evolving autonomous driving technology, which aims to drive technological breakthroughs, enhance efficiency, and expedite the approval process. The TD makes reference to the applicants’ trial performance results achieved in Hong Kong and other regions, suitably modifies or exempts traffic provisions that are not applicable to AVs, while ensuring road safety and balancing innovation with public interest. To ensure safety, the TD has also

implemented various measures, including stringent vehicle inspections, mandatory insurance requirements, and progressive enhancement of technology in terms of its complexity and challenges. This framework facilitates the industry in conducting wider AV trials and use in Hong Kong in a flexible manner.

4. Under the new regulatory framework, a balance has been struck between operation difficulty and traffic safety for AV technology trial and use, and various breakthroughs have been achieved at the same time. Firstly, the current trial has overcome the traditional limitation of single-vehicle testing, allowing multiple AVs to operate simultaneously. Secondly, the relevant technology will be permitted to commence trial with passengers on specified routes upon passing the open road tests without passengers and safety assessment, which marks a significant elevation of technology maturity. Moreover, the testing scenarios have been expanded from single road sections to cover more complex public roads and district environment, while the speed limit has also been increased. The above progress has surpassed the technology level of the early trials by the industry in Hong Kong.

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5. Taking Baidu's AV trial project on the Airport Island as an example, its trial progress has fully demonstrated the efficiency of the new regulatory framework and has reflected the results of the long-term promotion of schemes related to AV by the Government together with the AV industry. In November 2024, Baidu briefed the IsDC on the AV trial scheme for the first time. Baidu embarked its AV road tests on the Airport Island in December 2024, testing one AV at a time. With the supervision, guidance and efficient approval process of the TD, the number of AVs included in each test under the relevant scheme was approved to increase from one to five since mid-February this year, just two months after the commencement of the scheme. Significant progress has been made regarding the number of vehicles tested within five months, with the

number of AVs involved in each test increased further to 10 in April this year. During the trial period, the speed limit for AVs has also been increased to the maximum speed limit of the trial route (i.e. 50 km/hr).

6. The trial scheme of Baidu has been operating smoothly so far. Trained in-vehicle backup operators were stationed on the AVs to take over their control whenever necessary. The AVs demonstrated stable performance when navigating and sharing different road scenarios with other vehicles, achieving highly autonomous driving (i.e. Level 4 under national and international standards). The 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. After concluding Baidu's experience in the first phase of the trial, the TD has approved Baidu for conducting small-scale trial with passengers on the Airport Island starting from late April as well as expanding the scale of road tests without passenger from a single route to cover public roads with more complex scenarios at the Aircraft Maintenance Area, Aircraft Catering Area and Airport Logistics Area.

7. Given that the above trial has been operating smoothly and the AVs have demonstrated stable performance, Baidu now plans to further expand the trial area to cover Tung Chung for conducting trials simultaneously in different sub-districts. The TD will exercise stringent control with a view to promoting AV trials and use in Hong Kong in a safe and orderly manner, laying the foundation for subsequent remote and cross district operations.

8. Baidu's detailed progress report and proposal for the expansion of the trial are at **Annex**. In its report, Baidu has given details about the experience and progress in the safe and smooth conduct of the trials at the Airport area after meeting with Members in November 2024, and elaborated on its plan to expand

the trial to cover Tung Chung.

Advice Sought

9. Members' views and support are sought on the above AV trial schemes of Baidu.

Transport Department

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