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Panel on Transport
Meeting on 15 July 2022

**Background brief on the proposal of establishing a regulatory framework
for autonomous vehicles in Hong Kong**

Purpose

This paper provides background information on the Administration's proposal of establishing a regulatory framework for autonomous vehicles ("AVs") in Hong Kong. It also summarizes the major views and concerns expressed by members of the Panel on Transport ("the Panel") on the subject.

Background

2. AVs are one of the elements of the Administration's Smart City Blueprint released in 2017, the Smart Mobility Roadmap in early 2019 and the Smart City Blueprint 2.0 in 2020. According to the Road Traffic Ordinance (Cap. 374) ("RTO"), a motor vehicle must be classified, registered and licenced by the Transport Department ("TD") if it is to be driven on roads. However, AVs are normally not designed, constructed and operated following technical standards and driving rules of conventional vehicles. Thus they cannot be registered and licenced under the existing regulatory framework.

3. Despite the above constraints, TD has been facilitating the trials of AVs by issuing Movement Permits in accordance with the Road Traffic (Registration and Licensing of Vehicles) Regulations (Cap. 374E) ("RT(R)R") since 2017. Authorization of each AV trial is vetted case-by-case and customized conditions are imposed and specified in each Movement Permits issued. To facilitate interested organizations to safely conduct AV trials with due regard to existing regulations, TD issued a new set of "Guidance Notes on Trials of Autonomous Vehicles" ("Guidance Notes") in December in 2019 and a further updated version in December 2020. According to the Administration, Movement Permits were issued to six organizations in respect of 11 AVs as at end April 2021.

Proposed regulatory regime

4. Given that AV technologies are still evolving, the Administration plans to establish a regulatory regime that is flexible enough to allow a wider trial and use of AVs in Hong Kong and at the same time ensure public safety. On this front, TD has set up the Technical Advisory Committee on the Application of AV Technologies in Hong Kong (“the Committee”) in November 2019 to explore suitable regulatory framework for AVs in Hong Kong with a view to promoting its development. It is proposed that a new regulatory framework be set up through creating a new piece of subsidiary legislation under RTO, specifying provisions relating to the creation of a new licensing regime, exemptions from existing legislation which may hinder the trials and uses of AVs in Hong Kong, issuance and revision of a Code of Practice setting out the detailed technical and operational requirements for trials and uses of AVs and legal obligations of AV operators and relevant offences and penalties for effective regulation of trials and uses of AV to ensure road safety. The Administration aims to consult the Panel and relevant stakeholders on the details of the legislative proposal, and introduce relevant legislative proposals into the Legislative Council in 2022.

Major views and concerns of members

5. The Administration briefed the Panel at its meeting on 21 May 2021 on the preliminary proposal for establishing a new regulatory framework for AVs in Hong Kong. Major views and concerns expressed by members are summarized in the ensuing paragraphs.

Development of AVs in Hong Kong

6. Members expressed concern that the development progress of AVs in Hong Kong was lagging behind the Mainland cities like Shanghai and Shenzhen where passenger trial of autonomous buses and taxis had been conducted progressively. They opined that the Administration lacked a vision and strategy and suggested them to devise a blueprint or implementation plan on how to realize autonomous driving in Hong Kong. They also urged the Administration to be forward thinking when mapping out the development of AVs in Hong Kong, considering all relevant factors holistically including safety, road infrastructure, legal obligations and so forth.

7. The Administration advised that it had been keeping abreast of the latest trend and development of AVs worldwide. The facilitation of AV trials was one of the Smart Mobility initiatives set out in the Hong Kong Smart City Blueprint released in December 2017. According to the Society of Automotive Engineer, driving automation was defined by 6 stages, from stage 0 of fully manual to stage 5 of fully autonomous. At present, the development of AV technology in Hong

Kong had already reached stage 4, i.e. high driving autonomy and the progress was on a par with other places worldwide.

8. Noting that Movement Permits were issued to six organizations as of April 2021 and that the trial sites involved were mainly government-related venues, a member commented that without wider private sector participation, AV development in Hong Kong might be constrained. There were also suggestions that TD should work closely with the Innovation and Technology Bureau as well as explore ways to foster a deeper collaboration between research institutions and the private sector in commercializing the research and development (“R & D”) projects in the area of AV development in Hong Kong.

9. The Administration responded that TD had set up the Committee in November 2019 to actively promote the development of AV technologies. The Committee comprised representatives and experts from the trade and relevant R & D institutions. Through close cooperation and liaison with the trade, TD had been gathering experience of local trials of AV technologies. In addition, TD had issued the Guidance Notes in December 2019 and an updated version in December 2020 to provide guidance for interested organizations to conduct AV trials on roads safely under the prevailing regulatory framework. To promote wider participation in AV development, the Administration had set up a \$1 billion Smart Traffic Fund to provide funding support to enterprises and organizations for conducting research and application of innovation and technology. Private organizations could apply for the Fund for undertaking vehicle-related projects such as vehicle-related big data analysis and vehicle-to-everything technology.

Enabling car-hailing feature of vehicles to be adopted in Hong Kong

10. Some members suggested a phased implementation of AV technology in Hong Kong by allowing mature and safe AV technology to be adopted in Hong Kong before full autonomy could be realized. For instance, certain models of electric vehicles had been equipped with a “car-hailing feature” which allowed drivers to remotely control their vehicles within a close distance without having to be physically present inside the car. As parking space in Hong Kong was quite narrow and in some cases the driver concerned could not easily get in or out of the vehicle after parking, they asked whether “car-hailing feature” could be allowed in Hong Kong to bring convenience to drivers.

11. The Administration explained that under existing regulations, a driver was prohibited from vacating a vehicle without having stopped the engine and set the brake. Hence the relevant “car-hailing feature” which enabled the driver to remotely control the vehicle away from the driving seat would contravene the existing legislation and could not be used in Hong Kong. On members’ further enquiry regarding whether the Administration would consider amending relevant

legislation, the Administration advised that it would need to carefully study, among others, issues relating to safety and responsibility in respect of an unmanned but remotely controlled vehicle. A proper balance would need to be struck between convenience of drivers and public safety.

12. When asked under what conditions the Administration would consider it be appropriate to allow the adoption of AV technologies in Hong Kong, the Administration advised that as AV technologies were still evolving and developing, and widely accepted and comprehensive international standards were yet to emerge, it would be necessary to impose more conditions and constraints on the trial and use of AVs in Hong Kong in order to ensure public safety. As and when AV technologies and applicable international standards became available, the Administration would consider further relaxing relevant conditions accordingly.

Obligations and liabilities relating to the trial and use of AVs

13. Since the operation of AVs would be under “driverless mode” and controlled by autonomous systems, members enquired how the legal obligations and liabilities of respective parties including AV operators, drivers and permit holders would be clearly specified under the new regulatory regime, as well as the relevant offences and penalties involved in the trial and use of AVs. In addition, as implementation of AVs in Hong Kong would have wide implications to all road users and changes to existing road infrastructure, driving rules and legislation governing liabilities and obligations were deemed necessary, members called on the Administration to prudently and holistically consider all relevant issues when mapping out the way forward.

14. The Administration pointed out that under existing regulatory regime, the legal obligations and liabilities of drivers or vehicle owners were set out under relevant Movement Permits to ensure that AVs were driven with due regard to the safety of other road users. Also, the presence of a competent driver in the vehicle was required to take control when necessary to ensure safety. In drawing up relevant obligations of different parties and consequences in case of violation under the new regulatory regime, the Administration would make reference to the practice of overseas jurisdictions to see if similar provisions could be made applicable to Hong Kong. TD would work closely with the Department of Justice to study relevant legislation.

15. Noting that relevant penalties stipulated in RT(R)R in case of violation of drivers’ obligations stipulated under Movement Permits would be a fine at level 1, i.e. \$2,000 upon conviction, a member enquired about the penalty in case of an accident involving an AV under trial or use.

16. The Administration explained that for current AV trials, all relevant obligations were set out as conditions imposed to the Movement Permits issued by TD. In case of violations of the stipulated conditions, the level of fine would be \$2,000 upon conviction. Victims of the accident could also seek civil remedies for their loss or inquiry. On enforcement, the Administration advised that at present, AVs were required to install electronic data recording device during trials or use. Such data could provide circumstantial information and evidence to help delineate legal liabilities of responsible parties in case of accidents.

Latest position

17. The Administration will consult the Panel on the legislative proposal for establishing a regulatory regime for AVs to enable wider and more flexible trial and use under RTO.

Relevant papers

18. A list of relevant papers is in **Appendix**.

The proposal of establishing a regulatory framework for autonomous vehicles in Hong Kong

List of relevant papers

Date of meeting	Panel/ Committee	Minutes/Paper	LC Paper No.
21.5.2021	TP	Administration's paper on proposed regulatory framework for autonomous vehicles	<u>CB(4)987/20-21(03)</u>
		Information note on proposed regulatory framework for autonomous vehicles prepared by Legislative Council Secretariat	<u>CB(4)987/20-21(04)</u>
		Minutes of meeting	<u>CB(4)1279/20-21</u>
		Administration's supplementary information on proposed regulatory framework for autonomous vehicles	<u>CB(4)1141/20-21(01)</u>
27.11.2019	Council meeting	<u>Hon Martin LIAO raised a question on development and application of autonomous vehicles</u>	
15.1.2020	Council meeting	<u>Hon Charles Peter MOK raised a question on facilitating the application of information systems and development of autonomous vehicles</u>	