

# **Latest Developments of Autonomous Driving in Hong Kong**

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## 2-4. Latest Developments of Autonomous Driving in Hong Kong

With the rapid advancement in artificial intelligence (AI) technology in recent years, scenarios once depicted in science fiction films may become a reality in the near future. Among the technologies most likely to evolve from cinematic concepts into practical applications, autonomous vehicles (AVs) undoubtedly stand out. We will explore the latest developments of AVs in Hong Kong in this issue of RVM Newsletter.

### Background

In the first Smart City Blueprint for Hong Kong released in December 2017, the Government proposed a range of measures, including the application of innovation and technology (I&T) to address urban management challenges and enhance citizens' lives. Subsequently, in July 2019 and December 2020, the Smart Mobility Roadmap for Hong Kong and the Smart City Blueprint for Hong Kong 2.0 were published in succession, outlining measures that included promoting the trial and application of AVs, as well as vehicle-related I&T research and application. In March 2024, a new regulatory framework for AVs was implemented, providing the industry with flexibility to test and deploy AVs under Hong Kong's complex road conditions, while ensuring road safety. In the Chief Executive's 2025 Policy Address, the Government proposed promoting the use of AVs, encouraging the industry to carry out AV trials in different communities, accelerating the large-scale development of driverless autonomous driving, expediting its transition to commercial operations, and facilitating passenger and freight flow, as well as the industry's expansion to overseas, particularly right-hand-drive markets, using Hong Kong as the platform.

The Electrical and Mechanical Services Department (EMSD) has been actively embracing I&T. In August this year, Mr POON Kwok-ying, Raymond, Director of Electrical and Mechanical Services (DEMS), and Mr WONG Lui, Eric, Assistant Director / Gas and General Legislation (AD/GGL), travelled to the Airport Island, North Lantau, and took a test ride on a Baidu AV trialed in Hong Kong, personally experiencing the operation of autonomous driving technology and unveiling the mysteries of AVs.

### What is Autonomous Driving?

Currently, the industry mainly adopts two autonomous driving classification standards, namely the China National Standards GB/T 40429-2021: Taxonomy of driving automation for vehicles and the SAE International Standard J3016: Taxonomy and Definitions for Terms Related to On-Road Motor Vehicle Automated Driving Systems. Both standards classify autonomous driving into six levels, from Level 0 to Level 5, based on the extent to which autonomous driving systems perform dynamic driving tasks.

Ongoing AV technology trials in Hong Kong can reach up to Level 4 (highly autonomous driving), which means that under specifically-designed operating conditions, the autonomous driving systems can continuously perform all dynamic driving tasks and execute minimal risk strategies. Under the new regulatory framework for AVs, trials for evaluating AVs' performance must comply with GB/T 41798-2022: Intelligent and Connected Vehicles - Track Testing Methods and Requirements for Automated Driving Functions.

# 2-4. Latest Developments of Autonomous Driving in Hong Kong

## Operating Principles of AVs

At present, AVs undergoing trials in Hong Kong operate through three core processes: perception, decision-making and control.

### 1. Perception

The perception process functions like human senses, aiming to capture the vehicle's condition and its surrounding environment.

- Technologies: Various sensors are used, such as cameras, radar, Light Detection and Ranging (LiDAR), ultrasonic sensors and Global Positioning System (GPS).
- Functions: Collecting real-time data to detect other vehicles, pedestrians, traffic signs, road markings and obstacles, while determining the vehicle's own position.
- Objectives: Sensors convert physical quantities into electronic signals, which are analysed and integrated by electronic control units or central computing platforms to build a comprehensive and accurate environmental model.

### 2. Decision-making

The decision-making process resembles the human brain, using algorithms to determine the vehicle's actions based on information gathered from the perception process.

- Technologies: AI, machine learning, reinforcement learning and rule-based technologies are applied to formulate strategies for planning routes and predicting other road users' behaviour.
- Functions: Determining the vehicle's next action, such as accelerating, braking, changing lanes, overtaking, making turns or avoiding obstacles.
- Objectives: Calculations are performed through built-in programmes to determine the vehicle's next action within a short timeframe, so as to deal with complex road conditions.

### 3. Control

The control process is similar to the human motor system, converting decisions into actual vehicle operations.

- Technologies: Decisions are converted into specific mechanical operations through advanced control algorithms.
- Functions: Issuing precise commands to the vehicle's powertrain and braking systems (such as steering, braking and acceleration systems) to control speed, steering angle and vehicle actions.
- Objectives: Through precise control loops, continuous adjustments are made based on sensor data to ensure that the vehicle travels safely and smoothly along planned routes.

These three processes are tightly interconnected, forming a complete information processing cycle: the system first perceives the vehicle's condition and the environment, then makes decisions based on the information gathered from the perception process, and finally executes control commands. Afterwards, it perceives the vehicle's condition and the environment again. The cycle repeats continuously, enabling the vehicles to operate safely and autonomously.

## 2-4. Latest Developments of Autonomous Driving in Hong Kong

### First-hand Account of the AV Test Ride

The DEMS and AD/GGL earlier took a test ride on an AV developed by Baidu Inc. on the Airport Island, North Lantau. They first received a briefing from Baidu representatives on the AV's trial performance, and then personally experienced Apollo Go's autonomous driving technology. During the test ride, the AV travelled through a number of road sections, including Airport North Interchange and Sky City Interchange, demonstrating excellent autonomous driving capabilities. The system not only complied with the Road Users' Code, such as giving way to pedestrians and stopping at traffic signal lights, but also operated safely and stably when sharing roads with other vehicles.

After the test ride, the DEMS and AD/GGL unanimously stated that the experience was unforgettable, lavishly praising the AV's outstanding performance, which gave them full confidence in autonomous driving technology.

### Conclusion

Looking ahead, with the Government's vigorous promotion, AVs will become increasingly popular in Hong Kong. By then, the public will be able to enjoy the convenience brought about by autonomous driving technology, and have more choices for their daily commute.

For details of AVs, please visit the Transport Department's website:

[https://www.td.gov.hk/en/public\\_services/taoav/index.html](https://www.td.gov.hk/en/public_services/taoav/index.html)



## **5. Upcoming Technical Seminar on Vehicle Maintenance (15)**

The Vehicle Maintenance Registration Unit (VMRU) will hold the fifteenth technical seminar on vehicle maintenance, themed “Stepping into the Era of Electric Vehicles – What Vehicle Mechanics Should Know”, on the evening of 10 January 2026 (Saturday). Each participant is eligible to earn three CPD hours. For details and the registration, please refer to the information below.

## 6. Latest Developments of the Registration Schemes

- 1) Registered vehicle mechanics who have switched to work in another vehicle maintenance workshop should notify the Vehicle Maintenance Registration Unit (VMRU) **by e-mail (vmru@emsd.gov.hk) or fax (3521 0243) and provide the name, address and telephone number of the new workshop.**
- 2) If a vehicle maintenance workshop intends to change its registration type or update its registered information (e.g. workshop name, registration number, address, contact number, or business registration certificate number, etc.), the person-in-charge of the workshop should notify the VMRU in writing **within 14 working days** of such change and submit the supporting documents for processing.

### Figures on the Voluntary Registration Scheme for Vehicle Mechanics:

Total number of vehicle mechanics	9 338 <sup>Note 1</sup>
Number of registered vehicle mechanics (as at the end of October 2025)	7 412

### Figures on the Voluntary Registration Scheme for Vehicle Maintenance Workshops:

Total number of vehicle maintenance workshops	2 228 <sup>Note 2</sup>
Number of registered workshops (as at the end of October 2025)	1 842

Note1: Consolidated figures from the latest Manpower Survey by the Automobile Training Board of the Vocational Training Council and database of the VMRU (updated in July 2025)

Note2: Figures from the database of the VMRU (updated in July 2025)

To support environment protection, you are encouraged to opt for electronic copies of the RVM Newsletter and other relevant leaflets. Please send us the completed reply slip by e-mail (vmru@emsd.gov.hk) or WhatsApp (9016 3185). We will contact you through e-mail or mobile communication whenever possible.

### Reply Slip

I/My company would like to receive the RVM Newsletter and other information leaflets by  e-mail/  WhatsApp.

Please provide the relevant contact details for the above selected means of communication:

Name: \_\_\_\_\_ Vehicle Mechanic Registration No.: VM \_\_\_\_\_

E-mail address: \_\_\_\_\_ WhatsApp: \_\_\_\_\_



The electronic copy of the RVM Newsletter is also available on the EMSD website:

[https://www.emsd.gov.hk/en/supporting\\_government\\_initiatives/registration\\_scheme\\_for\\_vehicle\\_maintenance/publications\\_and\\_circulars/rvm\\_newsletter/index.html](https://www.emsd.gov.hk/en/supporting_government_initiatives/registration_scheme_for_vehicle_maintenance/publications_and_circulars/rvm_newsletter/index.html)

### Note

1. Starting from 15 July 2018, new application for registration as Type Four workshop (i.e. a workshop situated at a residential building or a composite building with domestic part) is no longer accepted. Furthermore, requests for conversion from a registered Type One, Type Two or Type Three workshop to a Type Four workshop will not be entertained.
2. Applicants should affix sufficient postage and provide a return address when posting renewal application forms with envelopes not provided by the EMSD. If the postage is insufficient, the EMSD will not pay for any outstanding postage or accept the mail item concerned, which will be returned to the sender (if a return address is provided) or disposed of by the Hongkong Post.

# 7. Prize Quiz Issue No. 51

- Q1.** What measure(s) was/were proposed in the Smart City Blueprint for Hong Kong 2.0 published by the Government in December 2020?
- A Promoting the trial and application of autonomous vehicles (AVs)
  - B Promoting the research and application of vehicle-related innovation and technology
  - C All of the above
  - D None of the above
- Q2.** When did the Government implement a new regulatory framework for AVs, providing the industry with flexibility to test and deploy AVs under Hong Kong's complex road conditions, while ensuring road safety?
- A January 2024
  - B February 2024
  - C March 2024
  - D April 2024
- Q3.** Currently, what autonomous driving classification standard(s) do(es) the industry mainly adopt?
- A China National Standards GB/T 40429-2021: Taxonomy of driving automation for vehicles
  - B SAE International Standard J3016: Taxonomy and Definitions for Terms Related to On-Road Motor Vehicle Automated Driving Systems
  - C All of the above
  - D None of the above
- Q4.** What is the highest level of autonomous driving for ongoing AV technology trials in Hong Kong?
- A Level 2
  - B Level 3
  - C Level 4
  - D Level 5
- Q5.** What is/are the core process(es) through which AVs undergoing trials in Hong Kong operate at present?
- A Perception
  - B Decision-making
  - C Control
  - D All of the above

## How to participate (Issue No.51)

To support environmental protection, please scan the QR code or click the link (<https://vmcpd.emsd.gov.hk>) to log in to the VM Learning Station to submit your answers online. Participants may also complete the form below, circle the correct answers, and send it to the Vehicle Maintenance Registration Unit (VMRU) by post, fax (3968 7646) or e-mail ([vmru@emsd.gov.hk](mailto:vmru@emsd.gov.hk)) before deadline.



Deadline: 31 January 2026

Question	Answer			
Q1	A	B	C	D
Q2	A	B	C	D
Q3	A	B	C	D
Q4	A	B	C	D
Q5	A	B	C	D

Name: \_\_\_\_\_

Vehicle Mechanic Registration No.: VM \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Contact Tel. No.: \_\_\_\_\_












- Participants who correctly answer four of the questions will earn one CPD hour and be notified by the VMRU individually.
- Only registered vehicle mechanics with valid registration may participate, each not more than once in each quiz. Those who have already submitted their answers via the VM Learning Station need not submit them again by post, fax or email.
- In the case of duplicate submissions, only the last set of answers received before the deadline will be considered.
- The decision of the VMRU on the quiz will be final.
- The correct answers will be announced in the next issue of the RVM Newsletter.

The answers for RVM Newsletter Issue No. 50 are as follows:

Question	1	2	3	4	5
Answer	B	C	A	D	D

## 8. Training Institutes

### Providing Continuing Professional Development Courses for Vehicle Mechanics (in random order)

Name of Training Institute	Website/Content	Enquiry Tel. No.	QR Code
Traffic Services Employees Association	<a href="http://www.facebook.com/tseahk">http://www.facebook.com/tseahk</a>	2575 5544	
Pro-Act Training and Development Centre (Automobile)	<a href="http://www.proact.edu.hk/automobile">http://www.proact.edu.hk/automobile</a>	2449 1310	
The Institute of the Motor Industry Hong Kong	<a href="http://www.hkimi.org.hk">http://www.hkimi.org.hk</a>	2625 5903	
Hong Kong Vehicle Repair Merchants Association Limited	<a href="https://www.facebook.com/HKVRMA/">https://www.facebook.com/HKVRMA/</a>	2399 7977	
Hong Kong Vehicle Repairing Industry Employee General Union	<a href="http://www.vrunion.hk">http://www.vrunion.hk</a>	2393 9955	
Occupational Safety and Health Council	<a href="http://www.oshc.org.hk">http://www.oshc.org.hk</a>	2311 3322	
The Society of Operation Engineers (Hong Kong Region)	<a href="http://www.soe.org.hk">http://www.soe.org.hk</a>	2617 0311	
Qualifications Framework recognised courses	<a href="http://www.hkqr.gov.hk">http://www.hkqr.gov.hk</a>	2836 1700	
Association of Auto Batteries and Tyres Industry	<a href="https://www.facebook.com/autobatteriestyres">https://www.facebook.com/autobatteriestyres</a>	6263 2531	
Hong Kong Institute of Vocational Education (IVE) In-service Training Office	<a href="http://EDIT.vtc.edu.hk">EDIT.vtc.edu.hk</a>	2435 9423 9081 5283	
KMB Academy	<a href="https://www.kmb.hk/">https://www.kmb.hk/</a>	2786 6071	

#### Gentle Reminder

The content in each issue helps you catch up on the development of the registration schemes and enhance the quality of service. Please stay tuned!

#### Each issue is available for downloading on the EMSD website:

[https://www.emsd.gov.hk/en/supporting\\_government\\_initiatives/registration\\_scheme\\_for\\_vehicle\\_maintenance/publications\\_and\\_circulars/rvm\\_newsletter/index.html](https://www.emsd.gov.hk/en/supporting_government_initiatives/registration_scheme_for_vehicle_maintenance/publications_and_circulars/rvm_newsletter/index.html)



For enquiries on the content of the RVM Newsletter, please contact the VMRU of the EMSD.

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