Automobile Training Board

Manpower Update Report
Automobile Industry
2025

ACKNOWLEDGEMENT

The Automobile Training Board (AUTB) would like to express its gratitude to the members of the focus groups for their valuable time and insights on the manpower situation in the automobile industry. Special thanks go to CPJobs and CTgoodjobs, which shared with us their database of job vacancies. The views of focus group members and information from major recruitment websites formed an integral part of this report.

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Introduction

Background

The Automobile Training Board (AUTB) of the Vocational Training Council (VTC) is responsible for determining the manpower demand of the industry, assessing whether the manpower supply matches manpower demand, and recommending to the VTC the development of vocational and professional education and training (VPET) facilities to meet the assessed training needs.

A new approach to collect manpower information is adopted to enhance the effectiveness and better reflect the dynamics of the manpower situation in various industries.

Under the new approach, one full manpower survey is conducted every four years, and

this is supplemented by two Manpower Update Reports. The AUTB completed its last manpower survey in 2023. Two manpower update reports will be conducted in 2025 and 2026.

This 2025 Manpower Update Report comprises:

(a) a focus group meeting collecting views from industry experts on the latest developments in the industry, manpower and training needs, recruitment difficulties, and measures to tackle the challenges which the industry is facing; and

(b) desk research analysing online job advertisements including salaries offered, qualifications, experience and skills required by the principal jobs in the automobile industry.

Objectives

The objectives of the manpower update are:

(i) to examine the latest trends and developments in the industry;

(ii) to explore the job market situation and training needs;

(iii) to identify the recruitment challenges; and

(iv) to recommend measures to meet the training needs and to ease the problem of manpower shortage.

Methodology

Overview

With reference to the 2023 full manpower survey of the automobile industry, this update report aims to provide qualitative descriptions of the recent development of the industry through a focus group meeting, supplemented by referring to quantitative data of online recruitment advertisements obtained from desk research.

Focus Group Meeting

Focus group members are representatives from different industry sectors, including passenger and commercial vehicles dealers, bus company, garages, auto-parts suppliers, government departments and an education institute. All members are experienced and knowledgeable practitioners of the automobile industry.

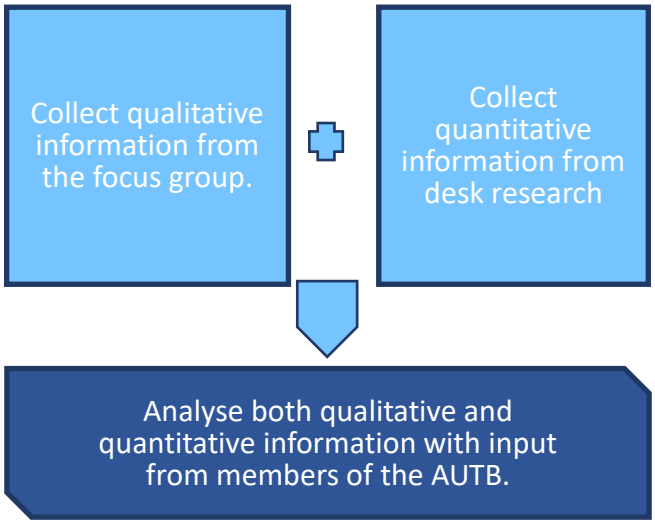
A focus group meeting was conducted on 3 July 2025. A moderator led members to in-depth discussion on topics selected by the Working Party on Manpower Survey of the AUTB. The discussions at the meetings were recorded and transcribed to facilitate analysis.

Desk Research

Recruitment records covering the period between **May 2024 to April 2025** were collected through an employment information system specially developed to capture the relevant data from major online recruitment portals. Some **2229** recruitment records relevant to the automobile industry were collected during the research period and served as indicative information of the job market trend. The list of related companies under the Hong Kong Standard Industrial Classification (HKSIC) was mapped to remove duplicated records.

Data Analysis

The analysis consists of the following three steps:



Limitations

As this is not a full manpower survey, the findings and recommendations of the focus group meeting are more qualitative in nature, and the report focuses mainly on manpower trends. The information on job advertisements was collected from major recruitment websites and the Labour Department. Other channels, such as head-hunting for managerial positions, were not covered. Since the data collected is a snapshot of a particular period without reference to any historical data, this can serve as reference information supplementary to the findings of focus group meeting.

Findings

Factors Affecting the Development of the Industry

Accelerating Global Electrification Trends

The global push towards electrification continues relentlessly in 2025, with electric vehicles (EVs) playing a pivotal role in reducing transportation-related emissions, which still constitute over 25% of worldwide greenhouse gases according to estimates of the United Nations[1]. EV energy efficiency remains superior, often three times that of internal combustion engine (ICE) vehicles. Sales surged in the first half of 2025, reaching 9.1 million units globally—a 28% increase year-over-year—with projections exceeding 20 million for the full year, capturing over 25% of total car sales[2]. This growth is fueled by advancements in battery technology and declining costs, though supply chain disruptions persist, including raw material shortages and production delays. Focus group members from the passenger car sector remarked that while EVs dominate new registrations (over 70% in Hong Kong), the transition accelerates supply chain shifts, requiring the integration of new electronic components and altering repair paradigms. Balancing resources between EV and ICE markets should be emphasised, as ICE vehicles still command the majority of roads and maintenance demands. Consumer preferences increasingly favour EVs due to lower fuel and maintenance costs and greater convenience, provided charging infrastructure expands sufficiently to

[1] IPCC Sixth Assessment Report: https://www.ipcc.ch/report/ar6/wg3/chapter/chapter-10/

[2] Global EV Outlook 2025--Trends in electric car markets: https://www.iea.org/reports/global-ev-outlook-2025/trends-in-electric-car-markets-2

support widespread adoption.

Technological Advancements in Vehicle Intelligence

Smart manufacturing and automation are transforming automotive production, with investments projected to reach US$167 billion by 2027, enhancing productivity by 15-24%[3]. In 2025, AI-driven robotics, predictive maintenance, and digitalisation reduce parts complexity and repair times. Autonomous driving edges closer to mainstream adoption, with consumer trust growing through real-world exposure, though skepticism lingers due to safety and regulatory concerns. The focus group highlighted shorter product cycles (now 1-3 years) complicating manpower planning and inventory management, with parts for EVs evolving rapidly—e.g., batteries shifting to higher-capacity modules. Procurement and auto parts management in the automotive industry require specialised skills. They also pointed to opportunities in value-added services like remote monitoring for driver behaviour and predictive analytics, which could elevate industry professionalism. The integration of over-the-air (OTA) software updates in EVs is reshaping maintenance, allowing remote diagnostics and upgrades, but requires technicians to develop new skills in cybersecurity and software management to address vulnerabilities.

Economic and Operational Challenges

Recovery from the pandemic has been uneven, with rising costs in transportation, raw materials, and operations impacting new model launches and vehicle pricing. Global supply chain issues have led to consumption downgrades, where average transaction prices in Hong Kong fell, with 70-80% of new cars under HK$500,000 before tax[4]. Focus group members from sales and maintenance sectors reported increased challenges, including economic pressures reducing commercial vehicle registrations (20-28% drops in 2023-2024 for goods vehicles) and fleet sizes. A shift towards plug-in hybrids as a transitional technology has been noted, offering repair continuity for ICE components while incorporating EV elements. Rising energy costs and fluctuating raw material prices have driven manufacturers to explore alternative battery chemistries, such as sodium-ion, which could reduce costs but require new training for handling and maintenance.

Local Market Dynamics in Hong Kong

Hong Kong's EV fleet has grown to

[3] How Innovative is China in the Electric Vehicle and Battery Industries: https://itif.org/publications/2024/07/29/how-innovative-is-china-in-the-electric-vehicle-and-battery-industries/

[4] The EV Market in Hong Kong 2025: https://www.j3consultantshongkong.com/j3c-blog/the-electric-car-market-evs-in-hong-kong-2025

approximately 128,600[5] vehicles as of end-July 2025, representing 14.3% of the total, with over 70% of new private car registrations being EVs. However, servicing remains dominated by ICE vehicles, with traditional garages facing difficulties in handling EV high-voltage systems, batteries, and electronics, often relying on manufacturers. Focus group discussions revealed manpower shortages in mechanics and electricians, exacerbated by an aging workforce and generational disconnects, with youths deterred by relatively challenging working environments. Opportunities were identified in electromechanical integration and decorative services like vehicle customisation. The industry's reputation as a traditional trade with less competitive compensation compared to other sectors discourages young talent, though the adoption of advanced technologies in EVs could improve its appeal if promoted effectively.

Commercial Vehicle Shifts and Alternatives

Electrification of commercial vehicles advances, with trials for electric taxis, hydrogen fuel cell (HFC) double-deckers, and heavy vehicles ongoing. The government plans a dedicated roadmap in 2025, subsidising HFC heavy vehicles through the New Energy Transport Fund. Declining registrations for goods vehicles reflect economic factors and scrappage incentives, leading to fleet reductions and manpower adjustments. Some focus group members reported using 70+ electric buses successfully but highlighted charging limitations due to grid constraints and land scarcity. Hydrogen emerged as a preferred alternative for its quick refueling (minutes vs. hours) and potential integration with existing town gas infrastructure (46-50% hydrogen content), with a few hydrogen vehicles operational in 2024. The focus group asked for EV environmental credentials without robust battery recycling, advocating for relaxed regulations to allow private hydrogen use. Retired EV batteries, unsuitable for reuse in vehicles due to stringent specifications, could be repurposed for less demanding applications like smart lampposts or small-scale energy storage, with a producer responsibility scheme needed to ensure proper collection and disposal.

Governmental and Infrastructural Support

Hong Kong's local business environment for EVs is characterised by growing demand, significant government support through tax incentives and charging infrastructure expansion, but also faces challenges like limited space for infrastructure, steep terrain impacting bus technology, and the

[5] Environmental Protection Department--Promotion of Electric vehicles: https://www.epd.gov.hk/epd/english/environmentinhk/air/promotion_ev/promotion_ev.html#News

need to resolve battery recycling and grid capacity. The market is projected for strong growth, with the government actively promoting EV adoption via policies like the Hong Kong Roadmap on Popularisation of Electric Vehicles.

The HKSAR Government's Roadmap targets zero vehicular emissions by 2050, extending First Registration Tax (FRT) concessions for EVs to March 2026 and introducing a $3.5 billion EV-charging at Home Subsidy Scheme (EHSS). Public chargers number 14,553[6] as of June 2025, with plans for 3,000 fast chargers via a $300 million incentive. Hydrogen trials expanded to 26 projects, including cross-boundary goods vehicles. Voluntary registration schemes for mechanics (8,240 registered, ~80%) and workshops (2,064, ~74%) aim to professionalise the trade. Focus group members suggested mandatory schemes with EV-specific categories to attract youth, simplified subsidies for commercial scrappage, and enhanced battery recycling under producer responsibility schemes to address disposal concerns. To meet growing EV demand, the government is exploring vehicle-to-grid technologies to optimize energy use, though focus group members noted that this requires significant grid upgrades and technician training to implement effectively.

Evolving Consumer Expectations and Market Competition

The automotive market in Hong Kong is becoming increasingly competitive, driven by consumer demand for sustainable, cost-effective, and technologically advanced vehicles. Focus group members noted that buyers prioritise affordability, with 70% of new EV buyers citing lower running costs as a key factor, alongside expectations for seamless charging experiences. The rise of Chinese manufacturers gaining market share in the first half of 2025, intensifies competition with established brands, pushing dealers to offer enhanced after-sales services, such as extended warranties and mobile charging solutions. However, limited charging infrastructure and long waiting times at public stations remain barriers. Focus group discussions emphasised that addressing these infrastructure gaps is critical to sustaining consumer confidence and market growth.

Some primary considerations for consumers when selecting vehicles are fuel costs, maintenance expenses, and convenience. Once supporting infrastructure, such as EV charging stations, becomes more widespread, people are likely to increasingly opt for electric vehicles as replacements.

[6] Environmental Protection Department—Promotion of Electric Vehicles: https://www.epd.gov.hk/epd/english/environmentinhk/air/promotion_ev/promotion_ev.html#Charger

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Findings of Desk Research

Out of some **2229 entries** of recruitment advertisement captured through desk research during the desk research period **(May 2024 to April 2025)**, the respective top five principal jobs with the highest number of recruitment advertisements for vehicle servicing and auto/parts retail sectors were identified. Since the use of online recruitment portals is just one of the recruitment channels, the number of recruitment advertisements captured during the desk research period (i.e., May 2024 to April 2025) is presented as supplementary information for reference only.

Vehicle Servicing Sector

	Top Five Principal Jobs with most job advertisements (2025 Desk Research)
1	Vehicle Mechanic (Craftsman Level) (16.7%)
2	Car Detailing Worker (Craftsman Level) (13.7%)
3	Service Adviser (Craftsman Level) (8.5%)
4	Vehicle Electrician (Craftsman Level) (4.8%)
5	Vehicle Body Repairer (Craftsman Level) (3.5%)

Auto / Parts Retail Sector

	Top Five Principal Jobs with most job advertisements (2025 Desk Research)
1	Sales Officer/Executive (Operation/Clerical Support Level) (15.5%)
2	Customer Services Supervisor (Supervisory Level) (6.8%)
3	Customer Services Assistant (Operation/Clerical Support Level) (3.3%)
4	Sales Manager (Managerial Level) (2.7%)
5	Marketing Officer (Supervisory Level) (2.0%)

Trends

The number of ICE vehicles on the road would be gradually replaced by EVs. Therefore, the vehicle servicing workers should be equipped with the new skill sets. A number of job postings now seek talent specialised in EV maintenance or electrical vehicle system. For example, roles like Customer Services Officer now require the ability to provide technical solutions for EV-related issues from call centers, and inter-disciplinary talent will be in demand.

Meanwhile, the supply of new blood cannot fully compensate for the natural wastage (e.g. retirement and retention). Hence, there are vacancies available across different principal jobs in the industry, particularly Vehicle Mechanic, Car Detailing Worker and Sales Officer/Executive.

Training Needs

Amid the shift to EVs, the workforce must blend traditional ICE skills with emerging technologies, as ICE maintenance will persist as there are still many ICE vehicles running on the road while EV demands grow.

Digital Proficiency and Diagnostic Skills

EVs depend on software for diagnostics, requiring computer literacy and English for technical documents. Focus group members described a balanced skill set: one-third craftsmanship, one-third advanced diagnosis (e.g., circuits, modems), and one-third IT applications like calibration (e.g., post-glass replacement lens recalibration). Emerging needs include vehicle condition monitoring systems for predictive maintenance and driver analytics, enhancing safety and efficiency.

High-Voltage and Electrical System Expertise

Traditional garages primarily handle mechanical repairs but need training to safely manage EV high-voltage components, including disconnection protocols. Investment in EV-specific tools grows gradually. Focus group participants called for practical in-service courses on brand-specific issues, air-conditioning systems, and multi-functional roles integrating mechanical and electrical knowledge.

Conventional and Hybrid Vehicle Maintenance

With ICE vehicles dominant, training focuses on electronic components and computerised tools, demanding hybrid skill sets. Focus group members emphasised ESG (environmental, social, governance) training for emissions data management and preventive services to improve industry image. On the other hand, the maintenance of vehicles requires auto parts. Auto parts management has a growing importance in terms of operational efficiency. Job holders should be equipped with the professional skills to handle relevant specialised tasks.

Battery and Alternative Energy Technologies

Battery handling, storage, and recycling require updated legal knowledge. Hydrogen fuel cells offer alternatives, necessitating courses on their integration. Focus group members recommended incorporating remote monitoring, AI for predictive cycles, and hydrogen systems into the curricula for fleet management benefits.

Retired EV batteries may not be suitable for reuse in vehicles due to specification requirements, but they could find a second life in less demanding applications, like powering smart lampposts or small storage systems. Furthermore, adopting a producer responsibility scheme could improve the proper collection and disposal of these used batteries.

Recruitment Challenges

Automobile employers are facing challenges in recruiting and attracting talents to alleviate the impact brought forth by an aging workforce. Focus Group Members shared their views on the possible factors causing the recruitment difficulties.

Shortage of Young Entrants

Youth prefer higher education and industries with better hours, pay, and working conditions, viewing automotive as manual and unappealing. Focus group members reported severe generational disconnects, with most mechanics over 50 and few in their 20s-30s, especially in commercial vehicles where environments are relatively more challenging.

Industry Image and Competitiveness

Viewed as a traditional trade with salaries that may not always compete with other industries, the automobile industry struggles against other fields. EV advancements can improve appeal through tech-forward environments. Focus group discussions noted VTC trainees favouring structured roles in Government, big dealers, or bus companies, leaving other kinds of establishments underserved.

Talent Replacement and Integration Issues

Reliance on apprentices falls short of demand while importing non-local talent faces other challenges. The Vocational Professional Admission Scheme (VPAS) could help via non-local students, but retention depends on valuing technology, clear career paths (e.g., foreman to management), and integration of local culture, etc.

RECOMMENDATIONS

Collaborative measures involving the joint efforts of training institutions, Government, employers, and graduates/employees are essential to address shortages and align with the trend. To attract talents and meet the future development of the industry, the following measures are recommended:

Training Institutions

- Develop EV and hydrogen-focused programmes with industry collaboration, emphasising practical diagnosis, monitoring systems, and AI integration;
- Incorporate ESG, battery handling, and multi-functional skills into the curricula;
- Expand outreach to diverse groups including the ethnic minorities for attracting new blood to join the industry;
- Cooperate with vehicle manufacturers to offer more in-service training courses on new vehicle technologies and auto parts management; and
- Using e-learning and AR/VR to facilitate in-service upskilling.

Government

- Simplify subsidies for commercial electrification and scrappage, enhancing hydrogen infrastructure and recycling regulations; and
- Enhance the trade's professionalism to encourage more young individuals to enter the automotive industry by transitioning the existing Voluntary Registration Scheme for Vehicle Mechanics and Vehicle Maintenance Workshops into a mandatory registration system.

Employers

- Acknowledge the growing demand for enhanced skills and knowledge to meet industry needs, and proactively promote employees' education and training to address those requirements;
- Utilise subsidies, e.g. New Industrialisation and Technology Training Programme (NITTP), for training and support lifelong learning;
- Engage in apprenticeship schemes like Earn & Learn Scheme and Pilot Incentive Scheme to Employers (PISE) to build pipelines;
- Support the Workplace Learning and

Assessment (WLA) which seeks to combine learning with practical experience to evaluate students' hands-on skills and their ability to apply professional expertise; and

- Promote career progression recognising qualifications and technology value.

Graduates and Employees

- Get ready to acquire new skills and expertise in EVs and other new energy vehicles to meet the growing demand and evolving needs for the maintenance of new energy vehicles;
- Pursue EV/hydrogen skills via Vplus Engineering Subsidy Scheme and part-time studies;
- Commit to continuous education through attending skill upgrading courses, workshops, and seminars; and
- If necessary, participate in relevant trade tests to earn recognition of trade skills and meet the registration criteria for the Voluntary Registration Scheme for Vehicle Mechanics.