

NEWSLETTER

Issue 2, 2025

Discipline's Prime News

VTC Solar Car Team Makes History with World Championship for Self-Developed SOPHIE 8x, Triumphant Over Renowned International Institutions to Claim Maiden Title



The Vocational Training Council (VTC) Solar Car Team, which consists of teaching staff and students from the Hong Kong Institute of Vocational Education (IVE), proudly secured the championship title in the demanding Cruiser Class in the 2025 World Solar Challenge in Australia. The team's self-developed solar-powered electric vehicle, SOPHIE 8x, has garnered international recognition!

Details





The IVE Engineering Discipline's VTC Solar Car Team has achieved a historic milestone! The solar-powered electric vehicle SOPHIE 8x, designed and built by the VTC Solar Car Team, conquered 3,000 kilometres of Australian desert and wilderness in the World Solar Challenge 2025. The team took first place in the highly competitive Cruiser Class, surpassing university teams from the University of Minnesota (the USA), Deakin University (Australia), the University of New South Wales (Australia), and the University of Bologna (Italy), bringing immense pride to Hong Kong and the VTC on the global stage.

The VTC Solar Car Team demonstrated exceptional collaboration and creativity throughout the competition. Its members skilfully applied new energy concepts from their coursework, showcasing the innovation and technical prowess of Hong Kong's youth.



The IVE Engineering Discipline has long championed solar vehicle research, encouraging students to explore the potential of renewable energy. This victory highlights the VTC's mission of blending vocational education with cutting-edge industry needs, producing professionals equipped with practical, real-world skills.

SOPHIE 8x combines practicality with innovation, successfully completing a 3,000-kilometre desert journey.

The World Solar Challenge is one of the world's most prestigious solar car races. In 2025, 34 teams from more than a dozen countries, including Australia, Germany, the UK, the USA, Japan, and South Korea, competed across three categories. Over six days, teams traversed Australia from north to south, covering 3,000 kilometres of desert and wilderness. They faced extreme temperature swings, unpredictable weather, and gruelling conditions, testing their technical expertise, teamwork, and resilience.



In the Cruiser Class, which prioritises energy efficiency and practical design for sustainable transportation, the VTC Solar Car Team excelled among eight competitors, with six completing the race. The team showed remarkable professionalism and teamwork, navigating desert roads, charging SOPHIE 8x during the day, and fine-tuning strategies and maintenance protocols at night. These efforts culminated in a triumphant victory.

Since the SOPHIE project was initiated in 2009, the VTC Solar Car Team has competed six times in the World Solar Challenge. Strong connections with alumni, who share valuable insights, combined with collaborative research by the IVE Engineering Discipline and industry partners, have driven continuous improvements to SOPHIE 8x. Facing the challenges of Australia's winter, with short daylight hours and limited battery capacity, the team developed a new drive motor system using third-generation silicon carbide semiconductor technology. This innovation reduced the vehicle's weight, boosted its energy conversion efficiency, and extended its range, showcasing the students' ability to turn theoretical knowledge into practical solutions.

Held every two years, the World Solar Challenge brings together solar vehicles built by universities, corporations, and organisations worldwide for a high-stakes technical competition. The participants include top engineering students from institutions like the University of Michigan, Seoul National University, and Tokai University, making the VTC Solar Car Team's victory an especially remarkable achievement.



The Lift and Escalator Skills Competition 2025 Successfully Concludes for Elevating the Professional Image of Engineering



The inaugural Lift and Escalator Skills Competition 2025 (Competition) was held with great success from 11 to 13 August. Organised by the Electrical and Mechanical Services Department (EMSD) in collaboration with VTC, the Lift & Escalator Contractors Association, and the Registered Elevator and Escalator Contractors Association Limited, this competition sought to enhance the professional image of the lift and escalator industry, attract more talent to this vital sector, and foster technical exchange and knowledge transfer within the industry.

Details



升降機及自動梯技能挑戰賽 2025

Lift & Escalator Skills Competition 2025

戴澤棠

職業訓練局主席



The Competition attracted 31 participating teams, comprising over 60 accomplished professionals, many of whom were either current students or esteemed alumni of the VTC. The event encompassed a range of tasks, such as lift and escalator maintenance, rescue operations, fault diagnosis, and virtual reality simulations. Throughout the event, the participants exhibited consummate skill and engaged in spirited collegial exchange, exemplifying the vital role of Vocational and Professional Education and Training (VPET) in nurturing talent and providing a distinguished platform for the pursuit of technical mastery.

Our role and future development

As the largest VPET provider in Hong Kong, the VTC is the leading local provider of training programmes in the lift and escalator domain. We are committed to continuously refining our curricula and enhancing our training facilities, working in close partnership with the industry to offer students valuable industry placements. Our mission is to cultivate a new generation of engineering professionals equipped with the innovative thinking and practical skills needed to advance the industry and society at large.



In response to the latest developments in the lift and escalator sector, and with the support of the Government of the Hong Kong Special Administrative Region, the VTC is poised to establish a state-of-the-art Lift and Escalator Technology Centre. This pioneering facility will further equip our students with essential skills in the installation and maintenance of modern lift and escalator systems, as well as the application of innovative technologies, helping to drive the sustainable development of the industry.



广州市交通技师学院与职业训练局 合作备忘录签署仪式 2025年9月5日



广州市交通技师学院



职业训练局 (工程学科)

Signing of MoU with the Guangzhou Communications Technician Institute to Jointly Nurture Automotive and Aviation Engineering Talent

On 5 September 2025, the Engineering Discipline of VTC and the Guangzhou Communications Technician Institute signed a landmark memorandum of understanding (MoU) on collaborative talent development in automotive and aviation engineering for Hong Kong and Guangzhou. This agreement marks a new era of partnership between the two institutions, focused on nurturing top-tier engineering professionals.

The collaboration aims to nurture young talent in aircraft maintenance and automotive technology across Hong Kong and Guangzhou. Both institutions are committed to creating an internationally recognised platform for skills development, preparing standout competitors for the WorldSkills Competition.

The MoU covers the following key initiatives:

- Establishing WorldSkills training bases for aircraft maintenance and automotive technology
- Jointly training competition participants
- Co-organising selection processes for candidates from Hong Kong and Guangzhou
- Coordinating intensive training programmes

Through this partnership, the VTC and the Guangzhou Communications Technician Institute will strengthen their collaboration on VPET. By pooling resources and sharing knowledge, they will provide students with a richer, more comprehensive training experience, empowering them to excel on the global stage.

Details





Signing of MoU with the Association of Hong Kong Chinese Middle Schools to Guide Secondary School Students to Plan their Future Careers

The Engineering Discipline of VTC and the Association of Hong Kong Chinese Middle Schools entered into a MoU on 6 May 2025, with the aim of deepening secondary students' understanding of VPET and the Higher Diploma programmes, while also providing them with various activities and career-oriented guidance.

The Engineering Discipline is dedicated to offering secondary school students a diverse, high-quality, and flexible articulation pathway to further education. This enables them to tailor their learning trajectory in accordance with their interests and abilities, ultimately equipping them to contribute to society. VPET constitutes an essential component of Hong Kong's educational framework, emphasising the cultivation of skills and practical competencies to equip students for the workplace, as well as fostering their understanding of industry prospects and professional development pathways.

Through this collaboration, secondary school students will have the opportunity to engage in myriad activities and receive comprehensive career planning support. This exposure to various fields, coupled with practical operations and hands-on experience, will allow them to rekindle their focus and passion for learning. Ultimately, this initiative will empower students to make well-informed decisions as they embark on their future journeys.



Details





柳州职业技术大学与职业训练局 合作备忘录签署仪式 2025年5月27日



柳州职业技术大学



职业训练局 (工程学科)

Signing of MoU with Liuzhou Polytechnic University on Joint Programme Cultivation

The Engineering Discipline of VTC and Liuzhou Polytechnic University formally signed a MoU on a joint programme cultivation initiative on 27 May 2025, marking a new milestone in their collaboration.

This MoU aims to jointly promote the Higher Diploma programmes in Engineering offered to students in Chinese Mainland. It also encompasses cooperation on promoting the Vocational Professionals Admission Scheme (VPAS) to create development pathways in Hong Kong for graduates. Key areas of collaboration include actively facilitating exchange visits for students and teaching staff between the two institutions and implementing mutual credit recognition for modules.

The two parties will work together to deepen their cooperation on vocational and professional education, promote resource sharing, and leverage their complementary strengths, thereby creating an enhanced educational platform for cultivating competitive engineering professionals.

Details



Outstanding Student Achievements

IVE Engineering Discipline Project Exhibition 2025: Innovating for the Future

ENGINEERING DISCIPLINE PROJECT EXHIBITION 2025

27-28 June 2025



Members of VTC Group VTC 機構成員



ENGINEERING

The annual Engineering Discipline Project Exhibition took place on 27-28 June 2025 in the Hall of VTC Tsing Yi Complex. This exhibition is an essential platform for students to demonstrate their knowledge and creativity. The exhibition featured exceptional projects by engineering students from the Hong Kong Institute of Vocational Education (IVE) and Youth College (YC). Students combined their professional expertise with awareness of societal demands to create scientifically robust and innovative solutions.



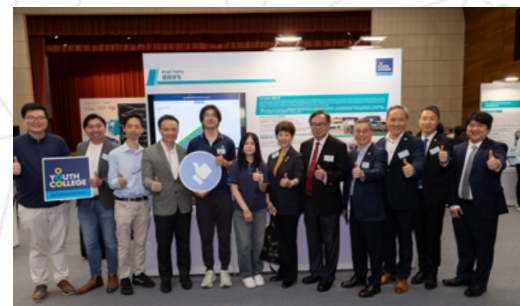


The annual IVE Engineering Discipline Project Exhibition (the Exhibition) serves as a vital platform for students to apply their knowledge and creativity. By connecting academic learning with real-world needs, students develop innovative, science-driven solutions. Collaborating with industry partners allows them to gain firsthand insights into sector challenges, enabling them to create projects that provide fresh perspectives and practical value in the engineering field.

The Exhibition 2025 was held on 27-28 June (Friday and Saturday) in the Hall of the VTC Tsing Yi Complex. The exhibition showcased 20 more student projects across various engineering disciplines, from mechanical and electrical engineering to construction and smart mobility, demonstrating the participants' technical expertise and inventive ideas.

The event was graced by the presence of Ir CHAU Kin Tak, President of the Hong Kong Institution of Engineers (HKIE), as the guest of honour. Additionally, guests from the government, industry, and academic sectors were invited to attend. They were guided through the exhibition, interacting directly with student teams to gain an in-depth understanding of the design concepts behind each project, collectively witnessing the growth and breakthroughs of the new generation of engineering talent.

Representatives of the Hong Kong Institution of Engineers (HKIE), the Hong Kong Institute of Surveyors (HKIS) and the Hong Kong Institute of Construction Managers (HKICM) were also invited to share insights with students into the latest industry trends, challenges, and opportunities.





URA x IVE Innovation Design Competition 2024/25

The URA x IVE Innovation Design Competition 2024/25 marked the eighth year of collaboration between the Urban Renewal Authority (URA) and IVE Engineering Discipline. Under the theme 「智建『安』樂窩」, the competition aimed to inspire young individuals to unleash their creativity and consider sustainable architectural design along with innovative solutions that enhance the safety of older buildings and homes while simultaneously elevating residents' quality of life.

This year's competition attracted 44 teams and over 100 student participants, who showcased how creative thinking can be applied to address community issues.

Details





The project “Smart Building Management Robot (智慧樓宇管理機器人)” won both the Gold Award and the Best Model & Presentation Award. Developed by a student of the Higher Diploma in Building Service Engineering at IVE (Sha Tin), the novel robotic system targets older buildings lacking comprehensive fire protection and professional property management. It integrates artificial intelligence, the Internet of Things, and mobile robotics to detect potential risks such as fire hazards, suspicious activities, structural cracks, and blocked escape routes. The robot collects various environmental data, including gas levels and temperature, which are uploaded to the cloud for real-time analysis. The system also automatically generates building logs, helping managers quickly assess operational conditions and identify potential issues. Overall, this prize-winning project offers a cost-effective and efficient smart safety management solution for ageing buildings.

Prize	Project Name	Awardee, Programme & Campus
Gold Award Best Model & Presentation Award	智慧樓宇管理機器人	LAM Ka Ho HD in Building Service Engineering, IVE (Sha Tin)
Silver Award Smartest Design Award	Digital Triplet (手機分身與 3D 分身)	LO Man Hin, KWAN Ka Hei, CHAN Wah Pan HD in Building Service Engineering, IVE (Tuen Mun) HD in Computer and Electronic Engineering, IVE (Tuen Mun)
Most Sustainable Award	5G AIoT 廚房火焰 識別與資訊顯示系統	LING Pak Wing, NG Ching Wai, SIU Tsz Miu HD in Computer and Electronic Engineering, IVE (Sha Tin)
High Potential Award & Merit Award	Smart LPG Safety Box	CHU Ho Kwan, CHOW Wai Ho, HD in Building Service Engineering, IVE (Sha Tin)
Merit Award	先進排水檢測系統	LEUNG Kam Lun, LI Cho Kwai HD in Building Service Engineering, IVE (Sha Tin)
	家居守護神	LAM Ka Ying, LO Yu Fung HD in Architectural Studies, IVE (Tuen Mun)
	Safe Haven 智安窗	CHAU Nok Hei, CHENG Yu Man, TAM King Yeung HD in Computer and Electronic Engineering, IVE (Sha Tin)
	Intelligent Fire Extinguisher Box	WONG Chun Yin, PAK Ki Cheung HD in Building Service Engineering, IVE (Sha Tin)



IVE Engineering Students Garner Multiple Accolades for “ScentSafe” Project

A team of students from the Higher Diploma in Engineering programme has launched an innovative startup project called “ScentSafe”. The team has excelled in multiple competitions, showcasing its members’ creativity and technical skills and earning recognition from industry experts.

At the ITCC Innovation Awards 2024/25, hosted by the Innovation & Technology Co-creation Centre (ITCC) of VTC, the team won the Gold Prize. They also secured the Bronze Award in the Senior Group of the Dare to Change Business Pitch Competition organised by the Young Entrepreneurs Development Council.

“ScentSafe” stands out for its innovative design and seamless integration with a mobile app featuring voice interaction, drowsiness detection, and emergency alerts. This project cleverly blends smart technology into everyday life, addressing real-world needs and earning high praise from judges.

Beyond cash prizes for startup funding, the student winners of the Dare to Change Business Pitch Competition will gain access to rent-free office space in the Hong Kong Science Park and may be nominated for major regional competitions, paving the way for their entrepreneurial dreams to come true.



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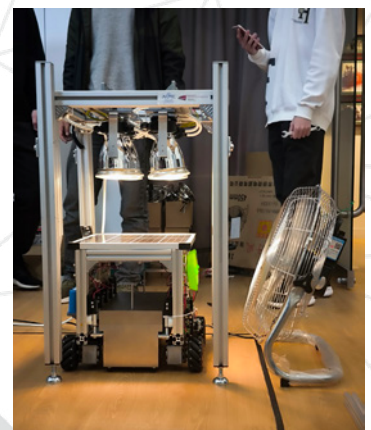




IVE Engineering Students Triumph in the American Society of Mechanical Engineers' Hong Kong Section Student Design Competition 2025

A team of five students from the Higher Diploma in Mechanical Engineering proudly won the championship in the American Society of Mechanical Engineers' Hong Kong Section Student Design Competition 2025, held on 13 April. This year's competition, themed "Harvesting the Sun and Wind", attracted numerous teams from various local universities.

The participants were tasked with designing and building a remote-controlled vehicle capable of collecting and utilising solar and/or wind energy to transport weights within a limited timeframe. The team exhibited remarkable innovation and exemplary teamwork, successfully transporting over three times the total weight carried by their competitors' vehicles. This effort secured them the championship title.



Details





Their achievement testifies to the continuous enhancement of technical skills by our Engineering students throughout the design and hands-on processes. The team not only learned to apply theoretical knowledge in practical scenarios but also engaged in thoughtful consideration of myriad improvement strategies, which are essential for aspiring engineers. Furthermore, inspired by the competition's theme, all of the participating teams gained an in-depth understanding of renewable energy applications and demonstrated the potential to bring their designs to life, offering creative solutions for future transportation technologies.

Awardees:

CHAN Kin San	HD in Mechanical Engineering - Year 2 Student
MOK Ho Sing	HD in Mechanical Engineering - Year 2 Student
CHUI Tsz Ho	HD in Mechanical Engineering - Year 2 Student
WONG Siu Him	HD in Mechanical Engineering - Year 1 Student
CHONG Ming Wai	HD in Mechanical Engineering - Year 1 Student

BIM COMPETITION 2025 AWARD PRESENTATION

建造業議會建築信息模擬比賽

1ST RUNNER-UP



IVE Engineering Students Win Awards at CIC BIM Competition 2025

The CIC BIM Competition 2025 (“the Competition”), organised by the Construction Industry Council (CIC) and held on 7 June, was a great success. Designed to bring together engineering students from construction-related programmes, the Competition encouraged participants to collaboratively redesign the Tai Po Training Ground of the Hong Kong Institute of Construction into a “Centre for New Generation Architecture”, using their expertise in the Building Information Modelling (BIM).

Calls for entries to the Competition met with an overwhelming response, attracting over 160 students from 38 teams, including 8 joint teams of Higher Diploma students specialising in Architectural Technology and Design. Three teams distinguished themselves with outstanding work, advancing to the final round and ultimately receiving first runner-up, second runner-up, and merit awards.

In the preliminary round, teams submitted creative solutions based on real environment data, employing at least two types of BIM software. The final round lasted for 12 hours, challenging teams to refine their preliminary entries in real time and incorporate new requirements announced on the spot, before presenting their results to the jury. The Competition gave the participants opportunities to showcase their learning, apply problem-solving skills, and effectively leverage BIM technology. Furthermore, the joint-team system fostered cross-institutional collaboration, enabling the student teams to support each other and expand their expertise in real-world applications.

Details



Award winners from the IVE Engineering Discipline:

First runner-up

Project: "Blueprint Creator"

CHUNG Wing Hong
CHENG Sin Him
TSE Cheuk Hei
WOO Hong Yiu

Second runner-up

Project: "SH GOBLIN"

LEE Ka Hei
YU Chun Hang
CHIANG Kai Ming
CHEN Zekai

Merit award

Project: "Green is More"

CHOY Ka Kuen
LAM Chi Chun, Jaden
FUNG Ka Ming
WONG Ka Fai