



KNOWLEDGE TRANSFER

ANNUAL REPORT 2024 | 2025

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The Hong Kong University of Science and Technology
Clear Water Bay, Kowloon, Hong Kong



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Executive Summary

Over 2024-2025, the final year of the current triennium, HKUST has continued to robustly reinforce its comprehensive knowledge transfer system and deepen connectivity with diverse organizations beyond the campus to serve as a flagship institution for Hong Kong, the Greater Bay Area (GBA), and their development into international technology and innovation hubs. The University also celebrated 25 years of leadership in entrepreneurship development.

Demonstrating the international recognition of HKUST's education, research, and knowledge transfer, the University was among the top local institutions in Times Higher Education (THE)'s World University Rankings in 2025 and in the top 20 globally in the sustainability-focused THE Impact Rankings. On-going high performance facilitated the strengthening of collaborations with different sectors of society, as set out in HKUST's Strategic Plan 2031, to drive impact. This saw multiple joint labs, collaborations, and Memoranda of Understanding with major international collaborators established over the year. The fusing of AI and engineering into the University's biomedical research and applications spurred leading medical partnerships seeking to improve treatments for patients, while national and global cooperation are now being fueled with the 2025 launch of the HKUST-led Hong Kong Space Robotics and Energy Center (HKSREC), under the Hong Kong government's flagship InnoHK collaborative R&D initiative. In a further exciting development, the University launched the Shanghai Center, its first industry-academia-research base in the Yangtze River Delta.

The University's pioneering role in fostering a local start-up culture was also commemorated and propelled forward during the year by a series of high-profile start-up and innovation showcases, including the University's iconic annual Unicorn Day, Industry Engagement Days at Clear Water Bay, and InnoTech, at HKUST(GZ). These highly successful gatherings attracted thousands of local and overseas visitors, ranging from government, industry, and community organizations to investors and international community representatives, helping to forge connections and reinforcing the position of the University, Hong Kong, and the GBA as hi-tech cluster hot spots. Further afield, HKUST breakthroughs once again shone at the 50th International Exhibition of Inventions Geneva, Consumer Electronics Show (CES), and Silicon Valley International Invention Festival. In addition, HKUST's growing profile as a global impact incubator drew attention in the Middle East and Belt and Road countries through technology showcases and thought leadership at prominent innovation events.

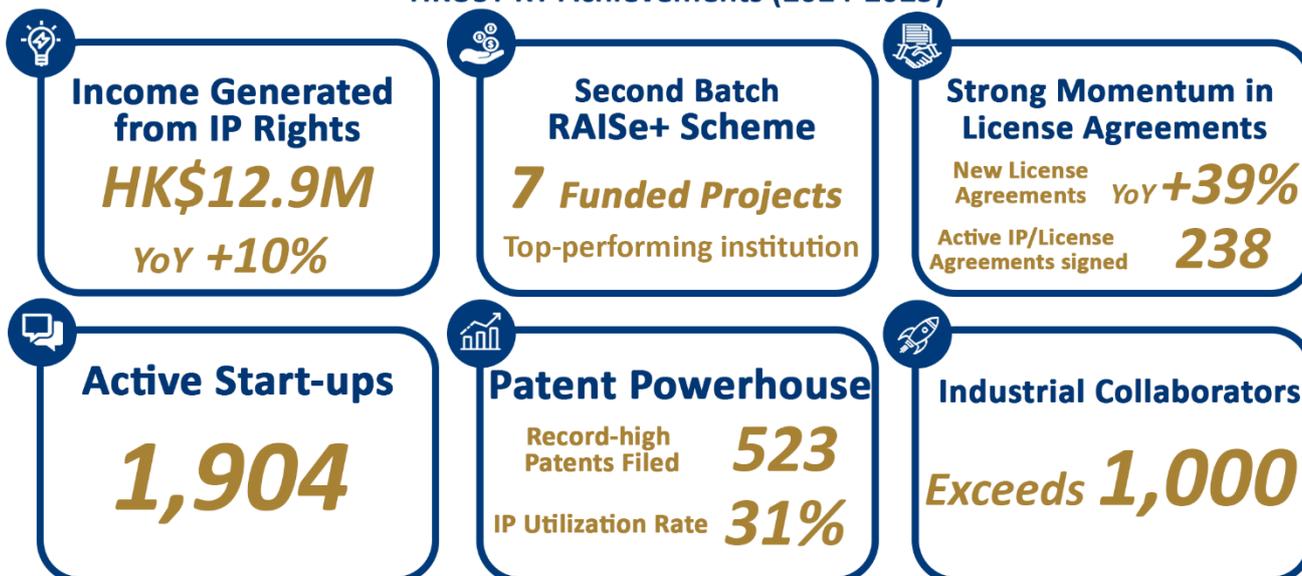
Key achievements over 2024-2025 include:

- **Strong Industry Engagement and DeepTech Commercialization:** Record high of 50 new licenses signed and 238 active license agreements, involving over 1,000 industry collaborators.
- **Strategic IP management:** Record-breaking 324 invention disclosures and 523 patents filed; whilst IP utilization rate stood at 31%, in leading position with top global research institutions.
- **Leader in Research, Academic, and Industry Sectors One-plus (RAISE+) Scheme:** Seven HKUST proposals awarded funding in the second round of the Hong Kong government's HK\$10 billion RAISE+ Scheme, the highest among all universities.
- **Tapping into Fast-growing Sectors of Significance:** Focused R&D in emerging areas of importance, such as AI, the low-altitude economy, space tech, climate tech, and robotics, and including the release of HKGAI V1, the first large language model based on the DeepSeek open-source model and optimized for Hong Kong.
- **Prominent Industrial Partners:** Collaborations instituted with Alibaba, China Telecom, CATL, Taiping Reinsurance, and 20 leading medical institutions, among others.
- **Recognized Entrepreneurship Development:** Eight HKUST community members from six start-ups named in the Forbes 30 Under 30 Asia 2025, two University-related start-ups achieved IPOs, bringing the successful exits to 17, including 11 IPO. Overall, HKUST-related active start-ups reached 1,904.

Thus, in a challenging triennium, marked by COVID-19 recovery and rising geopolitical uncertainties, HKUST has effectively developed the reach and activities of its knowledge transfer, positioning the University to build on these multiple endeavors in the next triennium and to deliver societal and economic impact through its dedication to excellence in performance and achievement, and commitment to improving people's lives.



HKUST KT Achievements (2024-2025)



Impact Cases

SPEEDING UP SMART URBAN MOBILITY AND EASING COMMUTER STRESS

A city free of traffic jams and transport service delays may seem an impossible goal, with daily snarl-ups and unexpected disruptions causing journey holdups, operational challenges, and stress to commuters. Now the capability to unblock the urban travel experience is being driven into reality following the deployment of dynamic transportation modeling and systems developed by Prof. Hong K. LO, Director of the GREAT Smart Cities Institute and HKUST-MTR Joint Research Lab, and his research team. Prof. Lo, a global trailblazer in intelligent transportation research, and his multidisciplinary researchers have accelerated the field forward through DeepTech development of novel software and traffic management models, in combination with big data and AI. More recently, they have transferred their work into the community, assisting transport operators, travelers, and transportation authorities in Hong Kong and beyond.



Prof. Hong K. Lo (front row, center) and his researchers are unblocking the urban travel experience through dynamic traffic management models, big data and AI.

One key example is the research team's Dynamic Intersection Signal Control Optimization (DISCO) system. Working together with the Transport Department and District Councils, DISCO has been effectively deployed to reduce delays through two newly signalized roundabouts (Hong Kong's first) and at eight junctions in three different areas of the New Territories. Thousands of commuters have further benefited since the Kwun Tong Police collaborated with the HKUST researchers to roll out a smart traffic management plan utilizing DISCO findings in 2023. The plan, which received a gold medal in the police's Service Quality Award Scheme 2023, has resulted in a 34% drop in bus journey times and up to 65% in private journey times. Crucially, it has proved sustainable in terms of manpower, reducing the police and traffic wardens required by 80%.

Working through the HKUST-MTR Joint Research Laboratory, the university's transportation researchers have also successfully employed a "dynamic simulation digital twin model" to integrate daily operational data from the MTR, bus routes, trams, and ferries to simulate and forecast changes in Hong Kong travel patterns and passenger flows. This has enabled MTR operations staff to devise plans to handle a range of different challenges, including crowd distribution and effective management measures, among others. The outstanding modeling solution, which can simulate daily trips of over four million active travelers in the city, received numerous honors at Hong Kong's prestigious ICT Awards 2024. Recognitions included the Award of the Year, the event's highest accolade.



The model was then enhanced to assist management of real-time service disruption, enabling metro operators such as the MTR to analyze immediate ridership impact in the wake of an event. The integrated solution uses machine learning to capture passenger rerouting behavior, producing predictions in minutes. It received a Gold Medal with Congratulations of the Jury at the 2025 International Exhibition of Inventions Geneva.

Moving forward, Prof. Lo and his team are revving up to further speed Hong Kong ahead as a hub of smart mobility by spearheading more sustainable development initiatives as well as extend their reach. Bangkok Metropolitan Authority in Thailand, for example, has already run successful DISCO trials at heavily congested intersections and implemented timing plans in November 2024. This, the team hopes, will be just one of many cities where their cutting-edge modeling systems can reduce congestion, boost the efficiency of transport operators and networks, and enhance the journey experience for millions of travelers.

METAMATERIALS CONTROLLING NOISE FOR BETTER LIFE CONDITIONS

Tired of reaching for headphones to decrease the sound of drilling? Or having to cover your ears to walk past a construction site? Happily, a quieter world is now being ushered in by pioneering HKUST sound pollution mitigation researchers-turned-entrepreneurs. The team has introduced the world's first broadband metamaterial noise technology with low frequency coverage to the multi-billion-dollar global noise mitigation industry, bringing high-performance, cost-effective materials for uses ranging from road and building noise to home appliances. What's more, the "acoustic metamaterials" that form the basis of such products are also seeking to improve sustainability through the use of recycled plastics as raw materials.



AMG's innovative noise abatement products aim to usher in a more peaceful urban lifestyle.

Acoustic metamaterials are a result of field-establishing discoveries for soundwave manipulation by HKUST physicist Prof. Ping SHENG and colleagues at the turn of the millennium. Continuously explored and developed by Prof. Sheng and his team to optimize performance since the initial breakthroughs, such materials were found to have key properties that could underpin highly competitive technologies compared with standard noise remediation materials. These capabilities include absorption of annoying and hard-to-eliminate low frequency noise that also covers broadband frequencies, customization of the absorption spectrum, and high-efficiency noise absorption alongside high ventilation. In 2014, research team members set out to take them into society through their start-up: Acoustic Metamaterials Group (AMG).

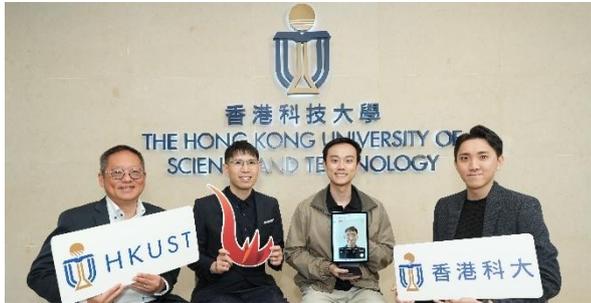
All-round support from OKT colleagues followed to fortify the AMG team's journey from lab to market, including help with filing US and China patents, successful applications for government TSSSU seed-funding, contract reviews, and promotional materials. The assistance proved effective and AMG has since gone on to establish its novel products in diverse sectors locally, nationally, and overseas. In Hong Kong, the company's outdoor soundproofing materials, such as noise barriers and road barriers, have been used by developers at numerous construction sites since 2020, while indoor building noise control materials in offices and hotels have positively impacted tens of thousands of people. The company's products are also exported to the Mainland, Japan, EU, and the UK. Also in 2020, AMG expanded its lines to consumer goods, notably high-quality hi-fi components that utilize acoustic metamaterials to enhance sound reproduction. Matrice Ltd. was then established in 2024 to focus on commercialization of these products.

Meanwhile, manufacturing and R&D moved forward with the setting up of Lumi Technology Company Ltd. in 2021 to explore the use of recyclable plastics as raw materials for AMG's high-efficiency noise-absorbing products. In 2023, Lumi received a grant of over HK\$3 million from the government's Green Tech Fund to advance the company's mass production technology for upcycling of plastic waste. In addition, it was one of only two to have its role in promoting green industry development in Hong Kong referenced in the Chief Executive's 2024 Policy Address.



Looking ahead, a future goal is to establish a green factory in Hong Kong to transform thousands of tons of plastic waste into metamaterials for use in the construction of the mega Northern Metropolis development. The move seeks to bring sustainability and noise control together, putting serenity at the heart of next-generation urban lifestyles.

FIRST CONTACTLESS PULSE RATE MEASUREMENT APP APPROVED BY FDA



The PanopticAI team's Vital Signs app is the world's first FDA-cleared app for contactless pulse rate measurement.

Catapulting forward post-pandemic interest in personal health, HKUST start-up PanopticAI is robustly moving wellness checks into everyday life through its novel mobile application. The app leverages proprietary AI and signal processing algorithms to provide medical-grade remote monitoring of vital signs such as heart rate and respiration rate via daily-use electronic devices, including smartphones, tablets, and computers. Founded in 2020 and driven by its mission to “provide everyone everywhere with an equal opportunity to live healthily and take charge of their health

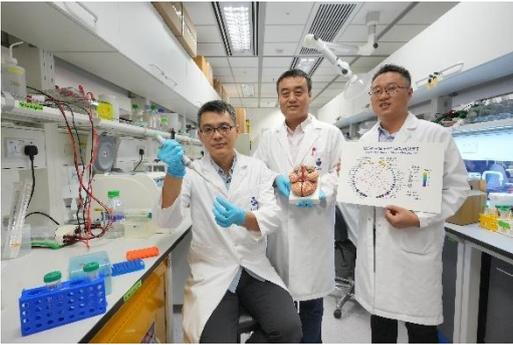
and well-being”, PanopticAI and its multidisciplinary team of HKUST School of Engineering alumni co-founders recently pioneered the way globally when the PanopticAI Vital Signs mobile app became the world's first US Food and Drug Administration (FDA)-cleared mobile app for contactless pulse rate measurement. It was also the first Hong Kong-based company to gain FDA clearance for a Software as a Medical Device (SaMD). In further overseas recognition, PanopticAI was listed in Forbes Asia 100 to Watch 2023 and two of PanopticAI co-founders, Dr. Kyle WONG (CEO) and Teric CHAN (Chief Scientific Officer), were featured in the 2024 Forbes 30 Under 30 Asia list for Healthcare & Science.

PanopticAI is a sterling example of the effectiveness of HKUST's holistic knowledge transfer system in propelling original University research from conception to use in society. In collaboration with Prof. Richard SO, Department of Industrial Engineering and Decision Analytics and Department of Chemical and Biological Engineering, team members leveraged leading AI and signal processing advances along with the in-built camera of personal electronic devices to develop an app that could analyze an individual's skin color changes to accurately measure heart rate, and other digital biomarkers in just 30 seconds. Assisted by HKUST's Office of Knowledge Transfer (OKT) and the Entrepreneurship Center (EC), the team successfully applied for support to sustain company development from multiple start-up funding schemes (for example, the University's Lo Kwee Seong Technopreneurship [Tech-Ship] Fund, Bridge Gap Fund, HKUST Entrepreneurship Fund, and the government's TSSSU-O, TSSSU+) and received backing from external investors (Alibaba Entrepreneurs Fund, Gobi Partners). Demonstrating their solution's flexibility and extensive uses, company and healthcare provider collaborations locally have ranged from hospitals (e.g. Gleneagles Hospital, Queen Mary Hospital, and Prince of Wales Hospital) to major wellness retailing chains (Mannings) and socially oriented ventures (The Hong Kong Council of Social Service). In 2023, international health insurance company Bupa combined the start-up's technology into its “Blua Health” one-stop health and wellness mobile app. PanopticAI has also worked with FWD on the insurance sector's first “Living Lab” for clients visiting the company's premier business center; and partnered with Sino Group on the launch of the Sino Inno Lab in the Northern Metropolis.

Powering onward, the company has recently engaged in another round of fund-raising to boost on-going development. Future moves include enhancing the accuracy of contactless blood pressure measurement techniques to tackle the major challenge of hypertension locally and globally. Additionally, the company is seeking to deepen its current presence within the Greater Bay Area, Southeast Asia, Middle East and North Africa, and extend beyond.



MAINLAND HEALTHCARE AUTHORITY APPROVED GLIOMA TREATMENT



Prof. Wang Jiguang (left) and his co-researchers are striving to uncover novel therapeutic pathways for doctors and glioma patients.

Associate Professor of Life Science in HKUST's Division of Life Science and Department of Chemical and Biological Engineering. Excitingly, the team's leading-edge work has contributed to the repurposing of a novel small molecule targeted drug that in April 2024 was granted approval by China's National Medical Products Administration (NMPA) for the treatment of certain glioma patients.

With over 240,000 people worldwide dying annually as a result of brain or nervous system cancers, and glioblastoma the most common and deadly form, alternative therapeutic pathways are desperately needed for patients and doctors. Standard treatments for gliomas involve surgery followed by radiation and chemotherapy. Yet tumors frequently reoccur, with patients diagnosed with glioblastoma (Grade IV) typically facing life expectancy averaging around 14 months and most Grade II and III tumors progressing to Grade IV. Recently, this bleak outlook has been injected with fresh hope, following ground-breaking basic science breakthroughs by a HKUST research team led by computational biologist Prof. Jiguang WANG, Padma Harilela

Since joining HKUST in 2016, Prof. Wang and the Wang Lab@HKUST have sought to integrate data science, cancer biology, and medicine to provide greater understanding as to how gliomas evolve and resist current treatment. By doing so, the researchers have leveraged statistical methods, machine learning tools, and cancer evolution modeling to productively build up a body of innovative insights related to why, how, and where precision therapies for gliomas can be most efficaciously targeted. Working in partnership with clinical practitioners and scientists at Beijing Tiantan Hospital, the researchers for the first time mapped the fundamental process of glioma progression and identified the key role of METex14 gene alterations in such progression. Further collaboration with Avistone Pharmaceuticals Biotechnology Co. Ltd., a company focused on precision oncology therapeutics, then led to the repurposing of a drug for glioma patients targeting MET alterations.

The consequential result has been Vebreltinib, which successfully underwent three phases of clinical trials in China before receiving NMPA approval. The orally bioavailable drug fills a critical gap in precision medicine capabilities for gliomas and enhances diagnostic and treatment options by helping to prolong patient survival without compromising quality of life. More than 300 glioma patients with MET alterations have currently received treatment with Vebreltinib in China, with around 5,000 of the country's glioma patients potentially benefiting from the drug every year. Avistone has also benefited, with the best-in-class drug generating substantial revenue for the company in just the first six months of commercialization.

With the help of OKT colleagues, Prof. Wang has filed one patent in China related to glioma research on another novel target ERAS gene fusion. He has also been continuing his quest to assist glioma sufferers. He has led an international research team to further discoveries on how primary brain tumors evolve under therapy; and developed an AI-powered model (CELLO2) for patients and doctors to evaluate the prognosis, after initial diagnosis, via an interactive open-access web portal. In addition, the team is working with hospitals to develop an AI platform combining imaging and multiomics data to drive forward precision neuro-oncology.

25 YEARS LEADERSHIP IN ENTREPRENEURSHIP DEVELOPMENT

In 2024, HKUST celebrated the 25th anniversary of its strong drive in entrepreneurship development symbolized by the Entrepreneurship Center, with the lively four-day E-25th Entrepreneurship Carnival that formed the cornerstone of the commemorative events aptly demonstrating the many entrepreneurial development achievements achieved by HKUST in the past quarter century.





Around 100 student and alumni start-up booths and 3,500 visitors celebrate HKUST's impactful role in campus innovation and knowledge transfer over the past quarter century at the E-25th Entrepreneurship Carnival.

As the only Hong Kong university to specifically include economic and social development in its mission, even before the launch of the Entrepreneurship Center in 1999, the University had laid the foundations for its leadership role as a campus start-up powerhouse. In 1993, just two years after HKUST's establishment, Hong Kong SuperNet made its debut as the University's initial business venture, going on to become the city's first licensed internet service provider. The subsequent formation of the Entrepreneurship Center, Hong Kong's earliest university-based center of its kind, progressively unleashed enthusiasm among the HKUST community. It now incubates around 80-100 start-ups annually through its full-journey Ideation, Prototyping, Implementation, and Commercialization support structure, involving business know-how, funding, mentorship, and resources.

Alongside, the Entrepreneurship Program, also initiated in 1999, heralded Hong Kong's first in-campus incubation program with institutional support. Striving in particular to realize the transfer of HKUST's leading-edge DeepTech research from lab to market, the program has successfully nurtured 68 companies to date. Perception Digital (1822.HK), GoogolTech (301510.SZ), and APT Electronics (2551.HK) have gone public. Unicorn DJI, a global leader and dominant market player in civilian drone technology and aerial solutions was benefited from the program.

From 2011, the HKUST One Million Dollar Entrepreneurship Competition joined the University's pioneering start-up activation activities. Well received from the outset, the contest later extended the University's kick-start business impetus to seven regions and major cities in the Mainland, attracting 10,000 project submission over the years. In 2024, the competition went global when the Hong Kong Regional Competition initiated an international student track, attracting participants from 15 countries and regions.

Meanwhile, individual faculty such as highly successful academic-entrepreneurs Prof. LI Zexiang and Prof. Ping Keung KO (co-founders of GoogolTech, among other companies) have also contributed back by establishing major incubation platforms that have not only helped fuel University start-ups but fostered wider recognition of Greater Bay Area innovation internationally. Hong Kong X, Shenzhen InnoX Academy, and XbotPark now draw together innovators, industry, and investors from around the world.

The outcome of all these enterprising moves over the past 25 years is HKUST's unrivalled local record of over 1,900 active University-related start-ups, including 10 unicorns and 17 successful exits, as celebrated at the E-25th Entrepreneurship Carnival. With plans to extend international collaborations, foster cross-boundary entrepreneurial exchanges, establish incubators in the Mainland and partner overseas incubators, the next 25 years are expected to be even more dynamic.

KT Strategic and Infrastructure Development

STRATEGIC INTELLECTUAL PROPERTY MANAGEMENT

HKUST set a commanding pace for Intellectual Property (IP) and licensing outcomes over 2024-2025, receiving a historic high 324 invention disclosures, 523 IP filed, and 109 new IP utilized. The University was also a top scorer in the Times Higher Education (THE)'s 2025 industry index, adding to its No.1 position in China under Nature Index's patent influence metric (2022). By June 2025, utilization of patents owned by HKUST Clear Water Bay stood at 31%. Third-party utilization accounts for nearly one-third of HKUST patents, a proportion in line with top global research institutions. In addition, HKUST achieved a record 238 active license agreements, taking IP income to HK\$12.9 million in 2024-2025.



FOSTERING INNOVATION THROUGH ACADEMIC-INDUSTRY IP COLLABORATION

To strengthen industry collaboration and accelerate knowledge transfer, HKUST has aligned its IP portfolio with top-tier international academic institutions by joining the University Alliance in Talent Education Development. This strategic partnership aims to promote innovation-driven programs that contribute to global sustainability and professional development of future talents. By leveraging academic excellence and shared IP resources, alliance membership will enhance HKUST's capacity to co-develop impactful solutions and foster long-term innovation ecosystems.

MANAGEMENT SYSTEM ENABLED REAL-TIME MONITORING OF IP DEVELOPMENT

The University's digitalization of IP workflows continued to enhance operational efficiency by streamlining processes and minimizing manual administrative tasks. Centralized digital repositories enabled quick and easy access to IP records, fostering better collaboration and faster decision-making across teams. The systems improved the organization and traceability of IP-related data, supporting more effective analysis and strategic planning. Built-in reporting and analytics tools also provided actionable insights into the effectiveness of IP management.

IP TRAINING FOR RESEARCH & START-UP COMMUNITIES

A series of workshops by legal experts over 2024-2025 enhanced awareness and understanding of IP among HKUST researchers. Sessions covered invention disclosure, patent management, and IP strategy, among others, serving as effective platforms for building foundational knowledge, encouraging innovation, and reinforcing the importance of IP protection. Subsequent feedback from participants indicated increased confidence in navigating IP procedures and greater engagement in innovation-related activities, strengthening the University's IP culture.



Finding out more about patent management for researchers.

TOP 20 SPOT IN GLOBAL IMPACT RANKINGS

HKUST raced up to No. 19 in the 2025 Times Higher Education (THE)'s Impact Rankings, rising from No. 36 in 2024 and retaining its position as Hong Kong and the Mainland's leading institution for the second consecutive year. The rankings assessed 2,500 universities worldwide for their impact in advancing the United Nations' Sustainable Development Goals (SDGs), with HKUST recognized in particular for contributions to SDG 9 (Industry, Innovation, and Infrastructure), SDG 11 (Sustainable Cities and Communities), and SDG 15 (Life on Land).

INNOBAY SET TO ACCELERATE INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT

Over 2024-25, plans moved ahead for two pivotal HKUST initiatives to extend the University's far-sighted knowledge transfer ecosystem. Helping to kickstart the expansion, **HKUST InnoBay@Innovation Building** is set to launch in Q4 2025 on completion of the new Innovation Building. The incubator is specifically designed to support and accelerate early growth of DeepTech start-ups by providing access to critical resources, such as mentorship, funding, and infrastructure. In addition, **HKUST InnoBay@Lohas Park** is being strategically designed to bridge academic research with real-world market applications. Scheduled to be operational by 2030, the InnoBay park will strive to elevate HKUST's knowledge transfer by advancing technology readiness of research discoveries, expediting commercialization.



A DeepTech incubator is planned for the new Innovation Building at the Clear Water Bay Campus.

INNOHK CENTERS' RESEARCH EXCELLENCE CREATES SOCIETAL IMPACTS

It has been a productive year for the diverse HKUST-led InnoHK centers that form part of the Hong Kong government-initiated R&D platform to encourage world-class collaborative applied research between local and international institutions in strategic fields. The January 2025 launch of a new center led by HKUST began the new year on a dynamic note. **The Hong Kong Space Robotics and Energy Center (HKSREC)** will focus on cutting-edge contributions to space and aerospace technology innovation, with HKUST working together with four local



universities, and Mainland and international top-edge space technology institutions. The China National Space Administration has appointed HKUST to lead an international collaboration project for the Chang'E 8 space mission, which is set to be a cornerstone of China's fourth phase lunar exploration programs. In bench-to bedside therapeutic breakthroughs, the **Hong Kong Center for Neurodegenerative Diseases (HKCeND)** has unveiled a novel "one-for-many" genome-editing strategy enabling much-needed development of a long-lasting, disease-modifying treatment for familial Alzheimer's disease, an aggressive, early-onset form of Alzheimer's that affects an estimated two to three million people globally. Powering forward foundational AI models and applications, the **Hong Kong Generative AI Research and Development Center (HKGAI)** released its HKGAI V1 large language model in February 2025, based on the DeepSeek open-source model. The Center also received a generous HK\$200 million donation from a Group to support further development of HKGAI V1-based HKChat, a novel localized AI chatbot. The **AI Chip Center for Emerging Smart Systems (ACCESS)** incubated its first spin-off company, HarbourTek Limited, which will offer edge AI computing solutions, in particular for the latest large language models (LLMs) such as DeepSeek. In further moves, ACCESS signed an agreement with Vivo Mobile Communication Co. Ltd. to provide research services and licensed its leading AC-Copilot toolchain and AC-Transformer technologies for evaluation in real-world application scenarios. In addition, the **Hong Kong Center for Construction Robotics (HKCRC)**'s innovative rebar tying robot received the 2023-2024 Hong Kong Awards for Industries: Equipment and Machinery Design Award. The accolade recognized the robot's dual benefits in boosting efficiency and enhancing worksite safety while addressing the industry's labor shortage and aging workforce, and strong market potential.

STRONG MOMENTUM IN DRIVING INNOVATION THROUGH MISSION-DRIVEN RESEARCH UNITS

HKUST's strategically planned research infrastructure provides a flexible and evolving array of platforms that enable the University's researchers to continuously deepen and widen HKUST knowledge discovery and translation into real-world impact. As of 30 June 2025, the University had a total of 81 research units, comprising 15 research institutes, 41 research centers, and 25 joint research units. Sixteen new units were established over the reporting year. They included: one institute, one center, and five joint laboratories with industry related to diverse aspects of AI and robotics; two institutes and three centers in the key areas of the new low altitude economy, health innovation, integrated circuits and systems, climate resilience, and decarbonization. In addition, centers were set up to support research across Schools, ranging from philosophy to business, smart fibers, and smart media.

SETTING NEXT BIG THING: LOW ALTITUDE ECONOMY

HKUST launched its dynamic interdisciplinary Low Altitude Economy Research Center in January 2025. The Center integrates AI, engineering and business to foster the development of a low altitude economy ecosystem through four pillar avenues of innovation. These comprise aerial control and engineering planning, leading to further explorations of airspace, route, and service planning. Research is expected to be translated into applications through public-private-academic collaboration. In March 2025, HKUST research endeavors were among those included in the first batch of 38 low altitude economy Regulatory Sandbox pilot projects, selected for implementation following evaluation by the Hong Kong government. The University also serves as the supporting organization for the Sandbox.

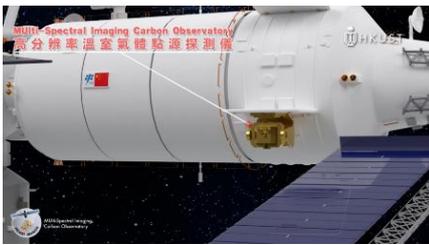


Chief Executive Mr. John Lee at the launch of the Low-altitude Economy Regulatory Sandbox with HKUST pilot projects among those chosen for implementation.

ROCKETING FORWARD SPACE SCIENCE AND LEADING SPACE TECHNOLOGY

The Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences (CSU.CAS), which is responsible for China's manned space research and applications, has commissioned HKUST to lead development of the world's first lightweight, high-resolution high-precision carbon dioxide (CO₂) and methane (CH₄) synergistic observatory payload. The project is set to make history as it will become the HKSAR's first payload





HKUST's observatory is set to make HKSAR history as the city's first payload to China's Tiangong Space Station.

for China's Tiangong Space Station. It will travel there aboard the Tianzhou cargo spacecraft. The observatory will assist research and applications by serving as a core platform for real-time monitoring of CO₂ and methane emissions, quantifying emission fluxes, and providing critical data for formulating and assessing carbon reduction policies. In January 2025, HKUST and CSU.CAS signed a framework agreement to enhance collaborative research projects at local, regional, and international levels. They will also strive to create an academic exchange platform on space science and applications for global experts, among other initiatives.

LEADING RESEARCH EXCELLENCE SECURES OVER HK\$300 MILLION

HKUST attracted HK\$345.9 million in funding for 177 collaborative research projects over 2024-2025. Hong Kong Research Grants Council awarded HK\$88.5 million under its **Areas of Excellence Scheme** to a proposal to revolutionize elderly care through AI and robotics. The **Theme-based Research Scheme** allocated HK\$62.9 million to create a predictive digital twin of Hong Kong's coastlines, enhancing the city's readiness for extreme storm surges; and HK\$61.2 million to strengthen Hong Kong's supply chain capabilities using Fintech and data analytics. The **Collaborative Research Fund** greenlighted seven science and engineering initiatives totaling HK\$36.4 million while the **Research Impact Fund** provided funding of HK\$4.5 million for developing mobile orthodontic tools and HK\$5.3 million for low-carbon printable concrete. Three projects focusing on blockchain security, cloud infrastructure, and air pollution respectively received a total of HK\$9.75 million from the **National Natural Science Foundation of China/Research Grants Council Collaborative Research Scheme**. HKUST also secured HK\$78.2 million from the **Innovation and Technology Fund** to advance 31 applied research projects; and HK\$4.94 million from the **Strategic Public Policy Research Funding Scheme** to design low-altitude infrastructure in the Greater Bay Area.

HKUST FOUNDATION ENGAGES COMMUNITY TO FUEL UNIVERSITY INNOVATION

Over 200 leaders from academia, industry, and philanthropy joined HKUST's Gala Dinner to celebrate the official launch of the HKUST Foundation in May 2025. Established under the University Council, the HKUST Foundation is envisioned as a vital bridge uniting community supporters. The landmark occasion raised over HK\$35 million to advance HKUST's development of world-class talent and innovation. Guests attending the event included Dr. LI Ning, Chairman of Viva Group, Dr. the Hon. Vincent LO, Founder and Chairman of Shui On Group and HKUST Honorary Court Chairman, and Dr. the Hon. Henry TANG, Chairman of the West Kowloon Cultural District Authority Board. HKUST Council Chairman Prof. Harry SHUM, President Prof. Nancy IP, and HKUST Foundation Chairman Prof. Albert IP were among the University leaders present.



NVIDIA Founder and CEO Dr. Jensen Huang, a University honorary doctorate recipient in 2024, contributes two signed leather jackets for fund-raising at the HKUST Foundation launch celebration.

Strengthening Entrepreneurship Development

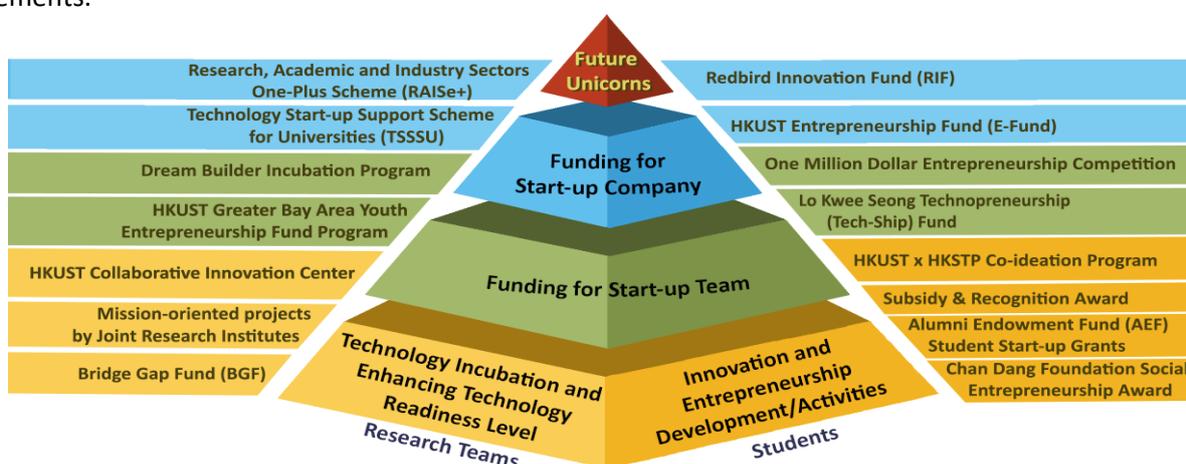
With knowledge transfer being one of the pillars of HKUST's strategic development, the University has successfully made entrepreneurship and University start-up funding a core component of its provision, leading to a notable 1,904 HKUST-related active start-ups in total. Over 2024-2025, HKUST continued to effectively support the entrepreneurial journeys of students, alumni, researchers, and faculty through its continually evolving knowledge transfer ecosystem and opportunities.

FROM IDEA TO COMPREHENSIVE START-UP SUPPORT

The University's step-by-step **IPIC incubation model**, covering **Ideation**, **Prototyping**, **Implementation**, and **Commercialization**, ensures University entrepreneurial teams receive tailored support from the earliest stages of business formation onward, with some 80 to 100 start-ups undergoing incubation annually. In the **Ideation**



phase, the **Dream Builder Program** enables HKUST members to develop start-up ideas, offering seed funding, mentorship, and training while the **Subsidy & Recognition Award** encourages students to participate in recognized innovation and entrepreneurship competitions. During the **Prototyping** stage, the **HKUST x HKSTP Co-Ideation Program**, with Hong Kong Science and Technology Parks Corporation (HKSTP), offers funding, training, and a fast track to HKSTP’s Incubation Program. At the **Implementation** phase, the **Lo Kwee Seong Technopreneurship (Tech-Ship) Fund** encourages teams to apply HKUST technologies in real-world applications. Later, at the **Commercialization** stage, the government-supported **HKUST Greater Bay Area Youth Entrepreneurship Fund** provides funding and learning opportunities to HKUST members to expand into the GBA. Additionally, HKUST leverages the government-initiated **Technology Start-up Support Scheme for Universities (TSSSU)**, which assists the formation of technology-focused start-ups. In 2024, 26 start-ups were selected for TSSSU-O funding and eight for TSSSU+, taking the total number of HKUST-affiliated TSSSU companies to 131. Social innovation is nurtured throughout the incubation journey by the **Chan Dang Foundation Social Entrepreneurship Award**. Meanwhile, the pioneering **HKUST Entrepreneurship Program (EP)**, launched in 1999 and admitting 68 companies to date, continued to nurture a raft of DeepTech start-ups. Four EP companies have already gone public through IPOs, with three listed in Hong Kong, and one Unicorn listed in Shenzhen. Another Unicorn is privately held, while a further portfolio company was acquired by a Fortune 200 US-based firm. Over 2024-2025, the University overall added 27 new DeepTech start-ups, resulting in a record 143 active DeepTech HKUST start-ups that have utilized and/or are utilizing innovative University technologies via licensing agreements.



HKUST’s holistic KT activation and funding support structure.

INVESTING IN THE FUTURE

In March 2025, the University’s **Redbird Innovation Fund (RIF)** announced its first partnership. The new Hong Kong Biotechnology Fund, managed by SIIC Capital, will assist HKUST medical start-ups and innovation in the life science sector. Launched in 2024, RIF is a HK\$500 million initiative focused on seed to series A/B funding. It seeks to create multiple venture investment funds, worth HK\$2 billion, in collaboration with experienced venture capital investment partners. In addition, the **HKUST Entrepreneurship Fund (E-Fund)**, continued to bridge the gap at seed, angel, or pre-A funding stages, ahead of University start-ups attracting sufficient external funding to grow or expand on their own. The E-Fund, launched in 2019 with University investment funding of HK\$50 million, works together with co-investment partners or through self-initiated support. Funding was extended by HK\$50 million in 2023-2024, reinforcing HKUST’s entrepreneurship pipeline.



Celebrating the start of the RIF-Hong Kong Biotechnology Fund partnership.

FOSTERING DEEPTeCH INCUBATION

The University’s **Bridge Gap Fund**, which encourages researchers to focus on applied research with strong IP and commercialization potential and offers initial support, introduced a two-track approach over 2024-2025.



The Start-up Track now provides an avenue for HKUST research teams wanting to form a company while the Technology Transfer Track targets research teams seeking to license technology to an external organization. The move aims to provide more specific funding and resources to foster industry collaborations, improve readiness to form start-ups, and license cutting-edge technology. Successful applicants also gain access to the **DeepTech Incubation Program**, incorporating training in business strategy, IP management, and fundraising skills, as well as close collaboration with the Office of Knowledge Transfer. The updated program has already attracted 42 applicants, demonstrating the strong interest in entrepreneurship among University researchers. On the infrastructure side, the HKUST Start-up Zone had provided incubation space to a total 131 DeepTech start-ups by the end of June 2025, further nurturing a vibrant innovation ecosystem.

LEADING THE WAY IN 2025 RAISE+ SCHEME



HKUST shines in the second round RAISE+ Scheme.

In the second call for proposals for the Research, Academic, and Industry Sectors One-Plus (RAISE+) Scheme, seven HKUST teams had their proposals accepted, the highest among local institutions. Initiated by the Hong Kong Innovation and Technology Commission, the RAISE+ Scheme seeks to foster academic and industry collaboration, build on R&D outcomes, and drive commercialization. Innovation and technology fields covered include health and medical sciences, new materials and new energy, AI and robotics, electrical and electronic engineering, and advanced manufacturing. HKUST provides all-round backing for its research teams to take forward their funding applications.

LISTING OF ALUMNUS' ELECTRONICS FIRM DRAWS PUBLIC HYPE

In November 2024, APT Electronics, co-founded by HKUST alumnus Dr. David Xiao, was successfully listed on the Main Board of the Hong Kong Stock Exchange. Originating from HKUST's Entrepreneurship Program in 2003, the company has evolved into a leading provider of intelligent vision products and system solutions, integrating "LED+" technologies in automotive vision, high-end lighting, and advanced displays. Public demand achieved a new record for a technology company listing in Hong Kong, achieving a subscription rate 5,678 times the number of retail shares initially on offer.

ENTREPRENEURIAL LEADERSHIP RECOGNIZED BY FORBES 30 UNDER 30 ASIA



Eight HKUST community members across diverse sectors feature in the 2025 Forbes list.

The University was proud to see eight HKUST community members from six University-related start-ups named in the Forbes 30 Under 30 Asia 2025 lists. The rising stars were recognized across categories including AI, consumer enterprise technology, industry, manufacturing and energy, social impact, and the arts, spotlighting the strength and diversity of University's entrepreneurial talent. Many of the young companies are beneficiaries of HKUST's holistic start-up ecosystem. They comprise: Libpet Tech (AI-powered stair-climbing smart wheelchairs); Vidi Labs (wearable AI for the visually impaired); D-Engraver AI (blockchain for LegalTech solutions); Comfy Deploy (AI-powered platform simplifying the creative process for content generators); Turing Space (blockchain for tamper-proof certificates); and XOXO Beverages (smart cocktail machines).

IMPACT BEYOND BORDERS – HKUST START-UPS SHINE AT ICONIC UNICORN DAY

The third HKUST Unicorn Day, now an iconic Hong Kong Innovation & Technology event, attracting extensive media coverage, drew around 120 HKUST-related start-ups and 1,500 guests worldwide to the University's Shaw Auditorium on the Clear Water Bay campus in June 2025. Industry leaders, government representatives, and academics from over a dozen countries and regions attended the inspiring occasion, one of the largest



entrepreneurial events in the city’s higher education sector. Highlights included the announcement of three major HKUST collaborations: with pharmaceutical giant AstraZeneca to advance AI in healthcare and treatment; venture capitalist firm Gobi Partners to foster knowledge transfer, incubation and technology commercialization; and the Ministry of Science and Technology-approved National Innovation Center par Excellence to provide HKUST start-ups with incubation support and resources in the Yangtze River Delta. For the first time, an “International Pavilion” gathered global innovators to share best practices and explore partnerships, while a “Marketplace” featured commercially ready products. A symposium and the Startup World Cup 2025 Hong Kong regional final were also part of the dynamic day.



Consuls general and senior officials from around the world participate in the HKUST Unicorn Day

ONE MILLION DOLLAR ENTREPRENEURSHIP COMPETITION GOES GLOBAL



Grand Final of the University's flagship One Million Dollar Entrepreneurship Competition 2024.

The University’s flagship One Million Dollar Entrepreneurship Competition branched out in diverse ways in its regional contests (Hong Kong, Beijing, Guangzhou, Foshan, Shenzhen) in 2024, with UMaterialia Technology Limited, winner of the Shenzhen region, eventually surpassing over 1,160 projects in the national Grand Final to take the top spot. UMaterialia has devised a giant electrorheological (GER) fluid for shock absorption, which can reduce the impact of vehicle collisions, among other uses. Ahead of the Grand Final, a record 340 teams took part in the Hong Kong regional edition, following the introduction of an international student track for overseas universities. Around one-quarter of the teams came from overseas, spanning 15 countries and regions including Australia, Singapore, the US, and Vietnam. The Foshan region featured a new quality productivity main track while the Guangzhou contest was integrated with the Guangzhou S&T Start-up Competition for the first time.

FOUNDERS’ CLUB COMMUNITY EXPANDS

The HKUST Founders’ Club, hosted by the HKUST Entrepreneurship Center, continued to thrive over 2024-2025, enhancing connections among University entrepreneurs and providing valuable support for their business endeavors. Over the year, the community expanded to 230 fellows and members. Activities ranged from a Club dinner and exhibition showcase to a fireside chat on technology, leadership, and entrepreneurship with Dr. Jensen Huang, Nvidia CEO and HKUST Honorary Doctor of Engineering, and Prof. Harry Shum, University Council Chairman. A Founders’ Club vending machine was also rolled out at The Base to highlight and sell products developed by HKUST Founders.



HKUST Founders’ Club fellows at the Fireside Chat featuring Nvidia CEO Dr. Jensen Huang and HKUST Council Chairman Prof. Harry Shum.

MODERNA CO-FOUNDER CAPTIVATES INAUGURAL HKUST INNOVATION MASTER CLASS

MIT biomedical guru Prof. Robert LANGER captivated staff, students and alumni at the first HKUST Innovation Master Class in November 2024. Held at the Clear Water Bay campus and organized by the Office of Knowledge Transfer, the prolific academic-entrepreneur shared his inspiring story of transforming scientific breakthroughs into real-world innovations. Prof. Langer has significantly reshaped technology and healthcare, publishing 1,500 scientific papers, licensing patents to over 400 companies, and a founder of more than 40 start-ups. Among his success stories was the co-



MIT academic-entrepreneur Prof. Robert Langer enthalls the HKUST audience.



founding of biotech firm Moderna, one of the select companies to develop an mRNA vaccine against COVID-19. The Master Class received a full house of participants who gained productive insights into how to create lasting global impact.

HULT PRIZE AT HKUST INVIGORATES SOCIAL ENTREPRENEURSHIP



HKUST teams respond to the challenge to develop solutions for pressing issues in the Hult Prize 2025.

In the 2025 HKUST edition of the international Hult Prize, 10 teams vied for the top award through developing impactful solutions aligned with the UN's Sustainable Development Goals. The contest, referred to as the "Nobel Prize for students" by Nobel laureate Muhammad Yunus, challenges young people around the world to solve the planet's most pressing issues through social entrepreneurship. Eleuto went on to win the Gold Award at HKUST for their transformative device that allows paralyzed individuals who cannot write or speak to converse with carers and others through blinking or eye-tracking and novel text-to-speech conversion.

RACING ENTREPRENEURSHIP FORWARD IN THE GBA

HKUST Mainland platforms vigorously fueled academic-industry knowledge transfer in the Greater Bay Area over the reporting year. Fifty-two start-ups came on board the **Blue Bay** incubation program in 2024-2025, with seven securing a total of RMB70 million-plus in external investment. More than 20 entrepreneurial events boosted government, industry, and capital fund connections. Blue Bay also launched the CXO program to pair business and professional alumni with Blue Bay incubatees and help the latter reduce risk and secure resources. The November 2024 opening of the **HKUST(GZ) Innovation and Technology Transfer Base** in Nansha, will further support the transfer and commercialization of science and technology discoveries in GBA. Jointly established by the Guangzhou Municipal Government, Nansha District Government, and HKUST(GZ), the base has already attracted over 20 HKUST-related start-ups. In addition, **HKUST Foshan Center for Technology Transfer and Commercialization** organized 13 innovation and entrepreneurship events to strengthen industry-academia collaborations over year. The Center has now nurtured 38 start-ups from HKUST and Foshan since it got underway in 2022.

Commercialization and Industrial Collaboration

AWARD-WINNING ORIGINALITY IN THE SPOTLIGHT AT INTERNATIONAL INNOVATION SHOWCASES



HKUST start-up teams at the Hong Kong Tech Pavilion at CES2025.

Start-ups from HKUST and HKUST (GZ) respectively received CES Innovation Awards at the high-profile US **Consumer Electronics Show (CES) 2025**, while 10 other novel University businesses were featured in the Hong Kong Tech Pavilion at the event, demonstrating HKUST's position as a leading institution in the global technology landscape. Award-winners comprised Vidi Labs Limited for its groundbreaking Seekr AI wearable for the visually impaired (Accessibility & Agetech category); and Yuanhuo Technology (Guangzhou) Co. Ltd., which blends holographic displays with advanced language models for immersive learning experiences (AI category). HKUST research teams also achieved resounding recognition at the **Silicon Valley International Invention Festival** in 2024, securing three gold medals and one silver medal for their four entries. The HKUST applications have the potential to advance fields ranging from finance and healthcare to agriculture and environmental sustainability.



INTERNATIONAL SHOWCASE HIGHLIGHTS HKUST AS POWERHOUSE OF CREATIVITY AND INVENTION

Record-breaking HKUST results at the **50th International Exhibition of Inventions Geneva** brought 38 awards for 37 University teams, including two special grand prizes, 22 gold medals (seven receiving Congratulations of the Jury), and multiple silver and bronze medals. Areas covered included life and health technologies, AI and data science, and new energy technologies, among others. Many of the innovations also showcased HKUST's strong collaborations with industry and government departments. The Geneva exhibition is the world's largest annual event devoted exclusively to inventions.



The award-winning HKUST teams at the 2025 Geneva Exhibition

INDUSTRY ENGAGEMENT DAY PLUS BOOSTS INDUSTRY-ACADEMIC COLLABORATIONS

To strengthen HKUST start-up and research partnerships with the business sector, four **Industry Engagement Day Plus (IED+)** events gathered experts, industry pioneers, and academic trailblazers over the reporting year to explore cutting-edge innovations in specific areas. In July 2024, **IED+ Transformation to Edge AI 2.0** discussed the potential of the next phase of Edge AI, a development reconfiguring data processing and analysis. It also featured 14 technology displays, presenting the latest products, services, and technologies driving Edge AI and drawing hundreds of participants. **IED+ Safer, Greener, Better: Make Our City Smarter with Technology** in November 2024 featured 20-plus homegrown or potential start-ups centered on innovative urban solutions to connect up inventors and investors. One month later, **IED+ Frontiers of Advanced Material to Shape a Sustainable Future** brought together international specialists in materials science to exchange views on advances in the field and its pivotal role in sustainability. In April 2025, **IED+ Biomedical AI Revolution: Shaping the Future of Healthcare** focused on the fast-evolving role of AI in diagnostics, treatment, and patient care.

SHAPING THE FUTURE OF HEALTHCARE THROUGH MEDTECH AND AI

HKUST demonstrated both its medical technology achievements and thought leadership at the 2025 Asia Summit on Global Health in May 2025 to hundreds of participants from around the globe, including policymakers, healthcare experts, industry leaders, start-ups, and investors. The summit was co-organized by the HKSAR Government and Hong Kong Trade Development Council, with HKUST serving as the event's exclusive Thematic Session and Health Innovation Partner. HKUST President Prof. Nancy IP took part in the inaugural plenary session on "Shaping a More Equitable and Sustainable Health System", while HKUST start-ups and researchers presented innovations spanning AI-driven Alzheimer's detection via blood biomarkers, real-time AI cancer diagnostics, and non-invasive eye care drug delivery systems. To translate innovation into real-world impact, HKUST has forged over 20 partnerships with leading medical institutions worldwide.

INNOTECH2025 CREATES A BUZZ IN GBA

The premier INNOTECH2025 entrepreneurship showcase was successfully held at HKUST(GZ) in June 2025. The mega two-day annual event featured over 140 innovative projects, mainly originated by HKUST and HKUST(GZ) alumni, faculty, and students, and attracted over 2,500 visitors, including numerous investors and industry leaders. First launched in 2023, the event has rapidly become one of the most influential university sci-tech innovation showcases in the Greater Bay Area. Highlights in 2025 included the debut of a "Robo Gala" for attendees to experience cutting-edge breakthroughs in embodied AI, the establishment of strategic cooperation between HKUST(GZ) and INSEAD, a world-leading business school, and a cooperation agreement with the Association of Chartered Certified Accountants Guangdong Representative Office on collaborative professional course and student/member development.



HKUST AND ALIBABA TO ESTABLISH JOINT LAB FOR BIG DATA AND AI

An MoU signed with the Alibaba Group in July 2024 enables HKUST and the diverse global business leader to propel ahead plans to set up the HKUST-Alibaba Joint Laboratory on Big Data and Artificial Intelligence. The lab will foster forward-looking research in emerging technologies, including AI, data science, language models, multimodal training and inference, computational infrastructure, and system software, and cultivate future-ready young talents. Since 2018, HKUST has engaged in over 10 collaborative research and talent-nurturing projects with Alibaba. The company has also been a strong supporter of HKUST initiatives in innovation and entrepreneurship.

TEAMING UP WITH MICROSOFT RESEARCH ASIA ON FUTURE MEDICAL EDUCATION AND RESEARCH

HKUST and Microsoft Research Asia will jointly nurture talent, revolutionize smart healthcare, and develop enabling research in the medical health sector of today and tomorrow following an MoU agreed in January 2025. The two parties will strive to foster exchange and collaboration through pioneering medical pedagogies that utilize innovative technology to nurture next-generation medical talents; exploring emerging healthcare service models to promote more efficient and intelligent medical services and improve patient care; and advancing frontier medical health research, particularly in AI, to facilitate integration of basic medicine, clinical research, and public health.

CROSS-DISCIPLINARY PARTNERSHIP WITH CATL TO ADVANCE INNOVATION IN NEW ENERGY TECHNOLOGY

In October 2024, HKUST became the first university in Hong Kong to establish a collaboration with global tech giant Contemporary Amperex Technology (CATL), the world's largest electric vehicle battery manufacturer. The partnership will promote research innovation and talent development in sustainable development and new energy, with CATL providing funding to HKUST over five years. Areas of exploration for collaborative research and knowledge transfer include advanced materials and zero-carbon technologies. A venture capital fund will be established to support high-potential technology start-ups. Part of the contribution will also recognize exceptional doctoral and master's students involved in relevant research. Awardees may have priority for job opportunities at CATL after graduation.

MOU TO EVOLVE TECHNOLOGIES TO TACKLE EMERGING INDUSTRY CHALLENGES AND ENHANCE DISASTER RISK CAPABILITIES

In March 2025, HKUST and Taiping Reinsurance Co., Ltd. signed a Memorandum of Understanding (MoU) to jointly develop solutions to solve insurance industry challenges. Under the MoU, the two parties will seek to transfer new technologies and establish a long-term partnership that would deepen industry-academia-research integration and explore practical cooperation in education and training, the low-altitude economy, risk mitigation, and big data analytics, among others. The arrangement would also enhance disaster risk management capabilities in the Greater Bay Area and support Hong Kong's development as an international risk management center.



MoU signing ceremony between HKUST and Taiping Reinsurance Co. Ltd.

CREATIVE AUDIO AND AI TELECOMS COLLABORATIONS AND SHOWCASE

Researchers at the Division of Arts and Machine Creativity (AMC), under the Academy of Interdisciplinary Studies, have entered into collaborations with two telecommunication giants. A partnership with China Mobile Hong Kong is set to establish audio data governance frameworks, develop intent alignment methodologies, and advance foundational research in audio acceleration models. Additionally, as part of the HKUST-China Telecom Artificial Intelligence Innovation Laboratory established in March 2025, AMC academics will lead research on quantization deployment optimization and chain-of-thought reasoning enhancement in large language models. In other machine creativity applications, the



HKUST Provost and HKGAI leader Prof. Yike Guo (right) demonstrates Hum2Song for Secretary for Innovation, Technology and Industry Prof. Sun Dong (left) at InnoEx 2025.



HKUST-led Hong Kong Generative AI R&D Center (HKGAI) under the Hong Kong government's InnoHK initiative, showcased the innovative Hum2Song at Hong Kong's InnoEx 2025, Asia's premier annual innovation and technology event. The technology can create personalized song snippets in as little as two minutes, generating 300 songs and attention from government officials, media, and visitors at the event. It can support Cantonese, English, and Mandarin.

INVESTLM BROADENS GENAI KNOW-HOW AMONG FINANCIAL SERVICES SECTOR

The University launched its trail-blazing InvestLM Generative AI Platform to support and promote wider exploration of the potential of GenAI technology among the local financial services sector, particularly small and medium-sized firms. The open-source platform recognized in the Hong Kong government's Policy Statement on Responsible Application of Artificial Intelligence in the Financial Market and adopted by the Hong Kong Monetary Authority (HKMA), accessed via free registration, is capable of handling finance-related GenAI tasks and generating human-like responses comparable to well-known general-purpose chatbots. Goals include improving the efficiency of finance and investment professionals in summarizing financial news and reports, conducting market sentiment and topic analysis, performing ESG analysis, supporting AI adoption in local financial institutions, and similar endeavors.

Social Impact and Support for Community

FOUR NOBEL LAUREATES ATTEND MOLECULAR FRONTIERS SYMPOSIUM AT HKUST



Nobel Laureates engage with students and the general community at HKUST.

A host of leading international scientists, including four Nobel Laureates, attended the three-day Molecular Frontiers Symposium at the Shaw Auditorium at HKUST in November 2024, marking the first time the eminent event had taken place in China. Over 1,500 participants, including hundreds of students from Hong Kong and other cities in the Greater Bay Area, scholars, biotechnology and biomedical industry representatives, and the general community, took the opportunity to engage with top global scientists at the lively occasion. Laureates Prof. Stefan HELL,

Sir Tim HUNT, Prof. K. Barry SHARPLESS, and Sir Gregory WINTER were among the renowned guests sharing perspectives on the latest scientific developments to motivate young science and innovation talents, foster cross-regional collaborations, and raise public awareness of the field. The symposium was organized by the renowned Molecular Frontiers Foundation, founded with the support of the Royal Swedish Academy of Sciences.

WORLD'S SMALLEST MULTIFUNCTIONAL BIOMEDICAL ROBOT FOR DIAGNOSIS AND TREATMENT DEVELOPED

HKUST engineers have developed the world's smallest multifunctional biomedical robot, capable of imaging, high-precision motion, and diverse functions, such as sampling, drug delivery, and laser ablation. Sixty per cent smaller than current models, the robot, developed by Prof. SHEN Yajing and his team, offers competitive imaging performance and a tenfold improvement in obstacle detection. The exciting advance has great potential for clinical applications, paving the way for robotic applications in narrow and challenging channels of the human body, such as the lung's end bronchi and the oviducts.

DEEP-SEA HABITATS EXPEDITION FOR UN DECADE OF MARINE SCIENCE IN THE SPOTLIGHT

The HKUST-based Hong Kong Branch of the Southern Marine Science and Engineering Guangdong Laboratory (Guangzhou) partnered with the China Deep Ocean Affairs Administration to organize a series of events to celebrate the return of the China research vessel *Shenhai Yihao* and submersible *Jiaolong* from the 2024 Western Pacific International Cruise, including a visit to Hong Kong. The expedition was co-led by HKUST as part of "Digital Deep-Sea Typical Habitats", the first large-scale scientific program initiated by China under the United



Nations' Decade of Ocean Science for Sustainable Development (2021-2030). It was also the first time an international team had participated in a Chinese-led deep-sea expedition. The team comprised 11 scientists across nine countries/jurisdictions. Additionally, seven researchers came from Mainland marine research institutions. Celebrations included a launch ceremony, an international forum and roundtable discussion, a live-streamed deep-sea classroom, and public talks. The activities attracted nearly 1,000 participants from students to marine scientists, industry representatives and the public.



At the launch ceremony on the research vessel.

Mainland and International Collaboration

INAUGURAL MEETING OF ASIAN UNIVERSITIES' ENTREPRENEURSHIP NETWORK

The inaugural meeting of the Asian Universities Alliance (AUA) Innovation & Entrepreneurship Network took place at HKUST in November 2024, bringing together representatives from nine AUA institutions. The University spearheaded the establishment of the network in 2024 to strengthen regional collaboration in entrepreneurship and innovation by promoting entrepreneurship education, sharing best practices, and fostering start-up development across the region. At the November meeting, HKUST was appointed the convener university for the network's first term (2024-2025), with quarterly meetings set to advance joint initiatives and knowledge exchange.



Hosting the first meeting of the AUA Innovation & Entrepreneurship Network.

EXTENDING MIDDLE EAST CONNECTIONS

It was a fruitful year of expansion for HKUST's Middle East technopreneurship connections and networking. The University joined the 8th Edition of Saudi Arabia's Future Investment Initiative, spotlighting diverse HKUST start-ups to global audience. Useful discussions on IP management and technology commercialization also took place with the country's Research, Development, and Innovation Authority. At the United Arab Emirates' (UAE) Dubai Future Forum, which brought together scientists and experts from over 100 countries and regions, HKUST faculty shared insightful perspectives on forthcoming changes and challenges, while a University knowledge transfer specialist connected HKUST DeepTech start-ups with Dubai Future Labs R&D facility. Locally, HKUST welcomed UAE Consul General Shaikh Saoud Ali AL MUALLA to campus to celebrate the 53rd Eid Al Etihad (UAE Union Day). As a further indication of growing ties, three elite Emirati students on full government scholarships have joined HKUST.



HKUST takes part in the panel discussion at the Dubai Future Forum.

NAVIGATING NEW FRONTIERS IN THE BELT AND ROAD INITIATIVE

The HKUST Belt and Road Forum in October 2024 brought together diplomatic representatives from five countries to exchange insights and perspectives on fostering international cooperation, and enhancing connectivity and prosperity through the initiative. Guest of Honor Mr. Nicholas HO, the Hong Kong government's Commissioner for Belt and Road, gave the opening remarks, followed by a panel discussion between the consul generals. Nearly 100 students, faculty, staff, and alumni attended the event. Later, in June 2025, delegates from Nazarbayev University in Kazakhstan



Five consul generals from Belt and Road countries share their perspectives on the multilateral initiatives.



visited the Office of Knowledge Transfer to explore potential collaboration, including joint projects, co-incubation, and exchange of talents.

HKUST SHANGHAI CENTER LAUNCHED

In January 2025, the HKUST Shanghai Center opened in the Shanghai AI Tower in the West Bund, in collaboration with the Xuhui District Government, and Caohejing Hi-Tech Park Development Corporation. The Center marks the University's first industry-academia-research base in the Yangtze River Delta, complementing HKUST's existing hubs in the Greater Bay Area. Leveraging the University's strengths in chips, AI, and biomedicine, the Center will seek to collaborate with universities and enterprises in Shanghai and beyond to create an international ecosystem that fosters talent development as well as innovation and technology. Xuhui District is home to over 100 national and local research institutions and 15 higher education institutions. At the launch, strategic cooperation agreements were signed with nine companies, while 11 other businesses have committed to establish operations at the Center, and 18 companies are set to provide internships for HKUST students.

JIANGSU ROADSHOW GENERATES START-UP SUPPORT AND INDUSTRY-ACADEMIA-RESEARCH COOPERATION



Introducing a novel University technology to Financial Secretary Mr. Paul Chan, HKTDC Chairman Dr. Peter Lam, and Mr. Fang Wei, Vice Governor of Jiangsu Provincial People's Government, at the HKTDC Jiangsu Conference.

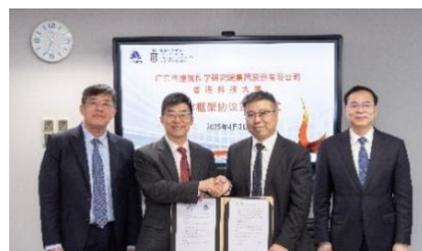
A high-level University delegation, led by President Nancy Ip and including 20 HKUST DeepTech start-ups, had productive visits to Nanjing and Wuxi in Jiangsu Province in August 2024, deepening the University's reach and relationships in the Mainland. During the five-day trip, the start-ups explored potential business partnerships with over 100 local enterprises. HKUST also signed a cooperation agreement with Wuxi Economic Development Zone to jointly promote innovation and start-up incubation, fostering industry-academia-research collaborations between Hong Kong and Jiangsu.

GUANGZHOU MUNICIPAL GOVERNMENT AGREEMENT TO DRIVE TRIPARTITE COLLABORATION ENDEAVOURS, INNOVATION, AND TRAINING OF TALENTS

The signing of a comprehensive strategic agreement between HKUST and the Guangzhou Municipal People's Government in January 2025 is set to facilitate long-term and in-depth collaboration in three major areas: industry-academia-research integration; life sciences research and medical innovation; and training of innovative talents. The agreement builds on the longstanding partnership between HKUST and Guangzhou, in particular the joint establishment of HKUST(GZ) by the two parties and Guangzhou University in 2022. The new collaboration will focus on development of the HKUST(GZ) innovation zone. It will strive for more landmark results in scientific research, the transformation of research outcomes, and talent development through deeper collaborative innovation between industry, academia, and research; and hence to contribute to the establishment of an international technology innovation center and high-level talent hub in the Greater Bay Area.

DEVELOPMENT OF GBA CONSTRUCTION TECHNOLOGIES

In April 2025, HKUST and the Guangdong Provincial Academy of Building Research Group Co. Ltd. signed an MoU to jointly develop and transfer new technologies to solve construction industry challenges and to gradually develop a partnership for the long term. The MoU will help deepen research cooperation between Guangdong and Hong Kong in areas including education and training, engineering testing, as well as intelligent construction, extending mutually beneficial cooperation and facilitating Greater Bay Area development.



The MoU signing ceremony with Guangdong Provincial Academy of Building Research Group Co. Ltd.



CMA COLLABORATION CREATES EXCITING OPPORTUNITY FOR INNOVATION IN METEOROLOGICAL RESEARCH AND GLOBAL CLIMATE RESILIENCE

HKUST and the China Meteorological Administration (CMA), a global leader in meteorological science, signed a partnership agreement to drive innovation in meteorological science and education in December 2024. Leveraging the parties' complementary strengths and in line with both national and United Nations' goals, the collaboration seeks to enhance early warning systems, strengthen disaster preparedness, and build climate-resilient communities. They will also strive to develop collaborative research platforms and boost meteorological next-generation talent through joint PhD programs, international exchanges, and professional training initiatives.

UNESCO-BACKED INITIATIVE TO SPEARHEAD GLOBAL COLLABORATION ON CLIMATE RESILIENCE

An international transdisciplinary endeavor to advance climate resilience and sustainability worldwide, led by HKUST and with a particular focus on least developed countries, has received endorsement from the United Nations Educational, Scientific and Cultural Organization (UNESCO) as part of its International Decade of Sciences for Sustainable Development. The "Seamless Prediction and Services for Sustainable Natural and Built Environments" (SEPRESS) program aims to translate progress in weather-to-climate prediction research into scalable solutions and foster global partnerships to deliver actionable outcomes. By May 2025, SEPRESS had secured US\$2.5 million in research funding and six projects were already contributing to its objectives. Twelve partners were also onboard, including universities, national meteorological and hydrological agencies, and research centers from the Mainland, Nepal, Egypt, Russia, Pakistan, Uganda, Tanzania, and Thailand.

BUILDING CROSS-BORDER ENGAGEMENT AT PUJIANG INNOVATION FORUM

HKUST was the only Hong Kong university invited to participate in the Global Entrepreneurial Investment Conference (WeStart), a key event at the Pujiang Innovation Forum co-hosted by the Ministry of Science and Technology and Shanghai Municipal Government in September 2024. Under the theme "AI Innovation: Powering the Future", HKUST hosted a dedicated sub-forum to showcase the latest developments of its Shanghai Center and share new directions in AI education. Eight HKUST-affiliated start-ups exhibited on site, with over 10 teams participating in pitching sessions, highlighting the University's growing engagement in cross-border innovation and entrepreneurship.



HKUST was the sole Hong Kong university invited to join the Pujiang Innovation Forum.

FRENCH CONSULATE GENERAL AND HKUST RENEW PARTNERSHIP

HKUST renewed its Memorandum of Understanding (MoU) with the Consulate General of France in Hong Kong and Macau for the third time, deepening the two parties' eight-year collaboration. The latest agreement strengthens joint efforts to address global sustainability challenges, including the Anita Conti Sustainable Innovation Fellowship, an initiative designed to foster next-generation researchers, innovators, and environmentalists. It is the first program of its kind in Hong Kong, opening up the opportunity for HKUST researchers to engage in short-term sustainability projects at leading French academic institutions. HKUST will also host PhD students and post-doctoral fellows from France, enabling them to conduct sustainability-related research for up to three months.

UNIVERSITY OF STRATHCLYDE PARTNERSHIP DEEPENS

HKUST and the University of Strathclyde in Scotland propelled forward their partnership by planning a second call for research proposals. The latest initiative will focus on early career researchers and prioritize interdisciplinary themes, including sustainability, health, public policy, and basic sciences. A visit to HKUST in October 2024 by Strathclyde Principal and Vice-Chancellor Professor Sir Jim McDonald also opened up



discussions on deeper collaborative opportunities, such as a PhD program, as well as cooperation on faculty and student exchanges with HKUST(GZ).

Triennium Review and Looking Forward

During the COVID-19 crisis, HKUST demonstrated its research excellence and the power of collaborative innovation by rapidly translating novel applications, technologies, and solutions into societal impact. Through coordinated efforts across University teams and diverse community partnerships, HKUST played a pivotal role in Hong Kong's fight against the virus. This momentum carried into the 2022–2025 triennium, marking a watershed moment for both the University and the city. In line with HKUST's unique mission to assist in the economic and social development of Hong Kong and its Strategic Plan 2031, HKUST emerged from the pandemic with a renewed focus on collaboration as a catalyst for technological advancement, knowledge transfer, and entrepreneurship, the University has demonstrated its commitment and dedication through the launch of the HK\$500 million Redbird Innovation Fund (RIF) and burgeoning participation and recognition in the globally renowned KT events, including the Consumer Electronics Show and the International Exhibition of Inventions Geneva. The University's effort has been well-recognized by the Times Higher Education (THE)'s University Impact Ranking and has been convincingly demonstrated by the over 30% IP utilization rate; nearly doubling of the successful exits of HKUST start-ups throughout the Triennium, and the growth in the number of active start-ups to nearly 2,000. The University has boldly embraced and promoted an increasingly diverse range of partnerships and cooperative ventures with government, industry, institutions, and community organizations.

To power forward this connectivity and Hong Kong's standing as a global innovation hub, the University's holistic KT ecosystem is now looking to extend its activities in the next triennium through a series of wide-reaching strategic development initiatives. At HKUST's Clear Water Bay campus, KT units will facilitate implementation of the DeepTech Incubation Program framework in conjunction with the 2025 Bridge Gap Fund revamp to assist University teams in developing their KT know-how, and to optimize new facilities and opportunities at HKUST InnoBay@Innovation Building. The building is scheduled for launch in Q4 2025 and will serve as a critical infrastructure for DeepTech incubation. In the Mainland, HKUST's Shanghai Center incubator, launched in 2025 in the Yangtze River Delta, will add significant openings on top of those generated through Greater Bay Area platforms. Partnerships with international incubators and promotion of HKUST innovation to different areas of the world, including Asia, the Middle East, and Belt and Road countries and regions, will widen global relationships and reach. Alongside, ties within the HKUST community will continue to be strengthened. The Founders' Club, launched over the current triennium, is one successful example, connecting the University's alumni-entrepreneurs with its aspiring start-up teams.

These developments will be fortified by capacity-building of KT teams to extend and deepen their role in propelling forward HKUST innovation, entrepreneurial culture and fruitful partnerships. Key avenues include strengthening professional support to facilitate researchers' applications and implementation of major Hong Kong government collaborative funding schemes, enhancing international reach and impact of HKUST's global KT efforts by strategic positioning of HKUST as a leader in entrepreneurship development through participation in prominent innovation events, competitions, and showcases locally and abroad, collaborations with leading global industry players, innovation organizations and incubators, as well as establishing mission-driven innovation infrastructure, funding and incubation programs to accelerate the growth of HKUST start-ups. Efforts will also focus on nurturing entrepreneurs and innovators by enhancing the synergy between entrepreneurship education and activities. This includes stepping up of alumni network building internationally as mentors to next-generation stars and ambassadors of the HKUST "brand". Upscaling of collaborative investment capacity is also planned to drive strategic start-up growth through development of the University's RIF in partnership with venture capital firms. All these ventures encourage the enhancement of support for the University's lab-to-market journey, offering an exciting landscape for future knowledge transfer to thrive. It also indicates that, despite prevailing geopolitical uncertainties, the outlook for innovation and impact over the next triennium looks upbeat for HKUST, Hong Kong, the Greater Bay Area and beyond.



Appendix A – Key Performance Indicators

Performance Indicators	2023/2024 (Achieved)		2024/2025 (Achieved)	
Inventions, Patents, Licenses, IP, Contracts, and Services				
Number of invention disclosures received ^{Note 1}	261		324	
Number of patents filed in the year ^{Note 1 & Note 2}	462 ^{Note 3}		523 ^{Note 4}	
Number of patents granted in the year ^{Note 1 & Note 2}	386 ^{Note 5}		191 ^{Note 6}	
Number of patents used based on new contracts (according to contract date) ^{Note 7}	90		109	
Number of active patents used (by the end of the reporting year) ^{Note 8}	605		659	
Number of new intellectual property (IP)/license agreements signed in the year ^{Note 9}	36		50	
Number of total active IP/license agreements signed ^{Note 9}	199 ^{Note 10}		238 ^{Note 11}	
Income (on a cash basis) generated from IP rights ^{Note 12}	\$11.7M		\$12.9M	
Number of collaborative researches, and income thereby generated ^{Note 9 & Note 13}	231	\$1,290.4M	253	\$873.4M
Number of contract researches (other than those included in “collaborative researches” above), and income thereby generated ^{Note 9}	245	\$100.7M ^{Note 14}	208	\$104.7M ^{Note 15}
Number of consultancies, and income thereby generated ^{Note 9}	72	\$11.6M ^{Note 16}	48	\$10.2M ^{Note 17}
Number of equipment and facilities service agreements, and income thereby generated ^{Note 9}	455	\$4.8M	433	\$4.1M
Sub-total Income	\$1,419.1M		\$1,005.4M	

The figures reported for 2024-2025 are subject to year-end adjustments. Figures may not add up to the corresponding totals owing to rounding.

^{Note 1} Starting from 2013-2014, the number reported also includes invention disclosures, and patents filed, granted and used by Mainland platforms and InnoHK.

^{Note 2} The numbers are counted based on the definition laid down by the University Grants Committee (UGC) under the Common Data Collection Format (CDCF) according to (1) the number of countries where patents are filed, and (2) the number of patent types, defined in accordance with the international patent classification (i.e., technology area) of the patents.

^{Note 3} CDCF Table 65: The number of patents filed came to 462 and the number of inventions involved totalled 336 during 2023-2024.

^{Note 4} CDCF Table 65: The number of patents filed came to 523 and the number of inventions involved totalled 399 during 2024-2025.

^{Note 5} CDCF Table 66: The number of patents granted came to 386 and the number of inventions involved totalled 183 during 2023-2024.

^{Note 6} CDCF Table 66: The number of patents granted came to 191 and the number of inventions involved totalled 103 during 2024-2025.

^{Note 7} Refers to the number of patents utilized by licensing during the reporting period, including rights granted as background intellectual property (IP) in newly signed contracts with value according to the contract date. All patents used are only counted once if included in more than one contract.

^{Note 8} Refers to the number of active patents utilized at least once by means of licensing in the current and past reporting periods, including rights granted as background IP in all signed contracts (both active and inactive contracts) with value. All used patents only counted once even if it is included in more than one contract. Only active patents/pending patents are counted, expired patents before or end of a specific year will not be counted.

^{Note 9} Starting from 2017-2018, the number reported also includes the number of new IP/license agreements signed, total active IP/license agreements signed, collaborative researches, contract researches (other than those included in “collaborative researches”), consultancies, equipment and facilities service agreements, and income thereby generated by Mainland platforms.

^{Note 10} The number reported comprises 181 patents and software license agreements, and 18 assignments on technology transfer managed by HKUST R and D Corporation Ltd. (RDC).

^{Note 11} The number reported comprises 220 patents and software license agreements, and 18 assignments on technology transfer managed by RDC.

^{Note 12} Includes licensing income from patents via RDC and Mainland platforms as well as copyright of courseware via the University. The reporting period for copyright of courseware via the University is 1 April to 31 March of the respective financial year, as data for 1 July to 30 June of the respective financial year are not available by the date of submission for the Knowledge Transfer Annual Report.

^{Note 13} The number reported comprises the number of InnoHK projects and income thereby generated.

^{Note 14} The total number of new contracts and contract value of contract research agreements signed in the 2023-2024 period are 101 and \$137.6M respectively.

^{Note 15} The total number of new contracts and contract value of contract research agreements signed in the 2024-2025 period are 148 and \$123.9M respectively.

^{Note 16} The total number of new contracts and contract value of consultancy agreements signed in the 2023-2024 period are 39 and \$7.2M respectively.

^{Note 17} The total number of new contracts and contract value of consultancy agreements signed in the 2024-2025 period are 26 and \$1.9M respectively.



Performance Indicators	2023/2024 (Achieved)	2024/2025 (Achieved)
Entrepreneurial Education and Culture		
Accelerator: number of teams/start-up companies ^{Note 18}	133	149
Number of students engaged in start-ups and entrepreneurship ^{Note 19}	4,969	6,319
Start-up and Spin-off Companies		
Number of start-up companies ^{Note 20 & Note 21}	257	323
Number of spin-off companies ^{Note 20 & Note 21}	376	425
Total number of start-up and spin-off companies	633	748
Contributions to the Public		
Number of student contact hours in short courses or e-learning programs specially tailored to meet business or Continuing Professional Development (CPD) needs	1,927,707 hours ^{Note 22}	1,940,128 hours ^{Note 23}
Income received from Continuing Professional Development (CPD) courses	\$844.7M ^{Note 22}	\$924.9M ^{Note 23}
Number of public lectures/symposiums/exhibitions and speeches to a community audience	601	700
Number of performances and exhibitions of creative works by staff or students	41	62
Number of staff engaged as members of external advisory bodies including professional, industry, government, statutory or non-statutory bodies	551	653
Total KT Income	\$2,263.8M	\$1,930.3M

The figures reported for 2024-2025 are subject to year-end adjustments. Figures may not add up to the corresponding totals owing to rounding.

^{Note 18} Accelerator includes funding programs and co-working space programs for HKUST start-up teams and companies, such as the HKUST Dream Builder Incubation Program, Lo Kwee Seong Technopreneurship Fund (Tech-Ship), Chan Dang Social Entrepreneurship Award and HKUST X HKSTP Co-Ideation Program and entrepreneurship training programs.

^{Note 19} Student participation in Entrepreneurship Center (EC) entrepreneurship events over the reporting year (by headcount).

^{Note 20} Includes economically active start-up and spin-off companies being funded or incubated by HKUST entrepreneurship programs at the Clear Water Bay campus and via Mainland platforms. Programs include: the HKUST Entrepreneurship Program (EP), Technology Start-up Support Scheme for University (TSSSU) Program, U*STAR Award, Yeung Wing Yee Entrepreneurs Fund (YWYEF), HKUST Entrepreneurship Acceleration Fund (EAF), Alumni Endowment Fund (AEF) Student Start-up Grants, HKUST One-Million-Dollar Entrepreneurship Competition (regional competitions inclusive), Mentorship Network, HKUST Dream Builder Incubation Program, Entrepreneurship Development Fund, HKUST Greater Bay Area Youth Entrepreneurship Fund, other entrepreneurship programs such as Tech-Ship Program, Chan Dang Foundation Social Entrepreneurship Award, HKUST x HKSTP Co-ideation Program, The BASE facility user, HKUST Entrepreneurship Fund (E-Fund), companies under InnoHK; programs under the Blue Bay Incubator, Blue Bay X of HKUST R and D Corporation (Shenzhen) Limited (RDSCZ) and HKUST Shenzhen – Hong Kong Collaborative Innovation Research Institute (SHCIRI) in Shenzhen; programs under Guangzhou HKUST Fok Ying Tung Research Institute (FYTRI) in Nansha; and programs under HKUST LED-FPD Technology R&D Center at Foshan (FSC) in Foshan. Companies funded or incubated by more than one program or with offices in more than one location are only counted once.

^{Note 21} The reporting period is 1 January to 31 December of the calendar year, as per UGC under the CDCF requirement.

^{Note 22} Starting from 2017-2018, the number reported includes taught postgraduate programs (including EMBA, MBA, MSc, MA, PgD) with reference to the definition of Continuing Professional Development (CPD) courses laid down by UGC under the CDCF. As the compiled income of the programs above for 2023-2024 was not yet available by the date of submission for the Knowledge Transfer Annual Report, 2023-2024 data reported is based on data collected in 2022-2023.

^{Note 23} As the compiled income of the programs above for 2024-2025 was not yet available by the date of submission for the Knowledge Transfer Annual Report, 2024-2025 data reported is based on data collected in 2023-2024.



Appendix B – Other Activities Highlights

1. Strategic Alliance and Collaboration with Industrial and Institutional Partners

TRADITIONAL CHINESE MEDICINE COLLABORATIONS DRIVE THERAPEUTIC ADVANCES

Division of Life Science researchers, led by Prof. Karl TSIM, are collaborating with Nanjing University of Chinese Medicine to synergize herbal formula Kai-Xin-San with fluoxetine to reduce side effects of anti-depressant treatment, including treatment resistance and gut microbiota. Fluoxetine is a common anti-depressant, but severe side effects are a major concern in clinical application. Kai-Xin-San (開心散) is a frequently used anti-depressant formula that has a safe record and less side effects. The gut-brain axis regulation strategy opens a new therapeutic approach for treating depression. In a further partnership, Division of Life Science researchers are partnering Wuyi University in Jiangmen, Guangdong, on standardization on well-known Chinese herbal medicine *Citri Reticulatae Pericarpium* (CRP or *chenpi*), comprising dried and aged tangerine peel. The research is seeking to contribute to quality standards to assess CRP and future utilization of citrus peel as a nutraceutical food product.

CEDD SIGNS MOU ON SUSTAINABLE INFRASTRUCTURE AND LAND FORMATION RESEARCH

The Hong Kong government's Civil Engineering and Development Department (CEDD) signed a Memorandum of Understanding (MoU) with HKUST in February 2025 to set out a framework for collaboration on research related to sustainable infrastructure development and land formation. The MoU covers research in novel construction materials, innovative landslide mitigation strategies, digitalization, AI technology, as well as innovative engineering and sustainable solutions. The synergy of HKUST's multidisciplinary research expertise and CEDD's practical experience, work data, and scenario applications is expected to lead to creative and practical solutions.

PARTNERSHIPS POWER UP AI-DRIVEN BUSINESS INNOVATION AND TAX TECH

Three separate MoUs between HKUST Business School researchers and leading companies are fueling advances in different sectors. Work with Microsoft Hong Kong will continue to advance AI innovation, and extend its collaboration with HKUST Business School on Hong Kong's first MBA elective featuring an AI curriculum. The AI Business School 3.0 Strategic Collaboration represents the third time both parties have committed to jointly promoting AI-related developments. In a partnership with EY, faculty and EY tax experts will work together on tax technology case studies. Students will also benefit from hands-on experience in research projects and internship/career opportunities, equipping them with the skills to thrive in the digital tax era. In addition, a collaboration with AVO Insurance Company Ltd. has paved the way for development of an AI-powered Q&A agent leveraging InvestLM, Hong Kong's pioneering open-source generative AI model for finance and investment. The joint endeavor will leverage InvestLM to provide real-time, in-depth company and industry insights, transforming the personalization and delivery of insurance solutions.

HKUST PARTNERS WITH ATGL TO ESTABLISH ALPHAMIND LAB

The University joined with Nasdaq-listed Alpha Technology Group Limited to launch AlphaMind Lab. The lab will focus on developing the "Alpha Engine" to overcome the traditional AI development bottleneck related to dependence on large quantities of high-quality data and manual annotation. The initiative seeks to promote the inclusive advancement of AI technology.



AlphaMind Lab signing ceremony between HKUST and Nasdaq-listed Alpha Technology Group Limited.

STRENGTHENING PARTNERSHIP WITH OCEAN PARK

A new agreement between HKUST and Ocean Park Corporation in October 2024, established a robust framework to leverage shared resources and expertise in zoology, environmental conservation, data science, and creative media. It also aims to enrich education and research by providing practical learning opportunities through student internships and research projects.



MAINLAND PARTNERSHIP TO ELEVATE CONSTRUCTION INDUSTRY AUTOMATION WITH SMART TOWER CRANES

The HKUST-led Hong Kong Center for Construction Robotics has signed a strategic cooperation agreement with Zhejiang Construction Engineering Machinery Group to jointly advance the development and application of intelligent construction equipment. The two parties will focus on smart tower crane systems to enhance automation, safety, and efficiency. They will also work together to accelerate commercialization and implementation of technological discoveries.

GLOBALIZATION CENTER MOU TO HEIGHTEN INTERDISCIPLINARY EDUCATION AND TALENTS

The Center for Globalization Hong Kong signed a Memorandum of Understanding (MoU) with HKUST's Academy of Interdisciplinary Studies to advance strategic collaboration on interdisciplinary education. The understanding seeks to cultivate talents with global perspectives who can address the complex challenges of today. The two parties will jointly develop high-quality interdisciplinary courses focused on strategic decision-making to equip corporate leaders with the knowledge and skills to navigate the complex challenges of today's global landscape.

SCHOOL OF ENGINEERING AND PACIFIC COFFEE ENHANCES STUDENT LEARNING THROUGH STATE-OF-THE-ART ROBOTIC MACHINE

The School of Engineering partnered with Pacific Coffee Company Limited to promote student learning through the latter's state-of-the-art robotic coffee machine. The machine, housed in the Engineering Commons, is a fully automated device that uses robotics technology to handle the entire coffee-making process, from grinding beans to frothing. It also incorporates AI to customize coffee preferences, such as flavor and temperature, and can learn user preferences over time to offer personalized recommendations. The partnership aims to enhance education innovation and provide students with hands-on experience in engineering principles, design thinking, and business operations.

MEDIA ARTICLES EXTEND REACH OF WISERS-HKUST TOURISM INDEX

The Wisers-HKUST Tourism Index (<https://tourismindex.hkust.edu.hk>), a collaborative initiative between HKUST and Wisers Information Limited, amplified its reach in the reporting year through a monthly op-ed series in the *Hong Kong Economic Times*. The index helps monitor and forecast tourism trends in Hong Kong through advanced big data analytics and AI. The newspaper articles distilled complex data into accessible insights, trend analyses, and policy recommendations to enhance public understanding and serve as a decision-making tool for industry stakeholders.

2. Powerhouse of Entrepreneurship

ENHANCING START-UP SKILLS AND MINDSET THROUGH MENTORING



Well-received Mentorship Network event at the Base.

The HKUST Mentorship Network launched a new online mentoring platform to facilitate connections between mentees and mentors globally, facilitating initiatives such as mentor experience sharing, speed matching for mentors and mentees, and industry company visits. Unlike traditional mentorship models, the Mentorship Network helps mentees connect with different mentors based on their business needs. By May 2025, the network had attracted 50 mentors from diverse industries and over 180 mentees from over 55 incubating start-ups across different sectors. Another 38 start-ups had successfully completed their mentoring period and progressed to the next stage of growth.

HKUST CONTINUES TO HOST STARTUP WORLD CUP FOR HONG KONG

In 2025, HKUST hosted the Startup World Cup Hong Kong Region for the second consecutive year, reinforcing its role as a vibrant hub for innovation and entrepreneurship. The event once again provided a valuable platform



for showcasing emerging start-ups and connecting them with global investors and industry leaders. For example, PanopticAI, the 2024 Hong Kong Regional Champion and a HKUST-affiliated start-up, went on to be selected as one of the top 10 finalists in the global grand finale held in San Francisco. The Startup World Cup, a prestigious international competition, spans over 100 regional events across six continents.

IN THE SPOTLIGHT AT HONG KONG TECHATHON+ 2025

University teams comprising students and alumni proved high-flying performers at Hong Kong Techathon+ 2025, securing 20 of the 42 awards. Accolades included the Grand Award – New Innovation, along with three gold and best presentation. Among HKUST winning teams, **Eleuto** (New Innovation Award, Gold Award - Sustainability & ESG category) has developed an AI-powered, customizable communication software for individuals with speech and language impairments. The company has also recently collaborated with Meta and Google researchers. The other gold awardees were **AIVOICE LIMITED**, which specializes in voice AI research with a focus on Cantonese, and **Cofluence** for its novel approach to influencer marketing. The competition is organized by Hong Kong Science Park and 13 Hong Kong universities and institutions.



HKUST teams collected a total of 20 awards at Hong Kong Techathon+ 2025.

AUA-HKUST BOOTCAMP RETURNS

The second AUA-HKUST Entrepreneurship Bootcamp for students from members of the Asian Universities Alliance took place in July 2024, bringing together 44 participants from 14 universities. Participants engaged in a dynamic program that included seminars, workshops, company visits, and pitch contests, covering ideation, design thinking, and financial management, among others. The bootcamp also featured networking opportunities with successful entrepreneurs, who offered valuable feedback on participants' business ideas.

CONTESTS HONE COMPETITIVE EDGE AND HIGH-FLYING ACHIEVEMENT

HKUST teams and related enterprises enjoyed a bumper year of awards at local, national, and global competitions that foster innovation and the entrepreneurial spirit. At **JUMPSTARTER for One Earth Global Pitch Competition 2025**, organized by Alibaba Entrepreneurs Fund, HKUST-affiliated healthcare start-up E3A earned the prestigious Top AI Application Startup Award. In **National Youth Innovation and Entrepreneurship Competitions**, HKUST innovators received a total of 14 awards. Locally, University teams captured five awards at the **City I&T Grand Challenge** across the themes of "I&T for Nature (Yama)" and "I&T for Community (Community Wellness)", including both championships in the University/Tertiary Group, and 17 awards at the **Hong Kong ICT Awards 2024**, including the Award of the Year, the highest honor. Two HKUST-incubated start-ups were also recognized by the prestigious **Hong Kong SciTech Pioneers Award** initiative, organized by Y-LOT Foundation.



HKUST teams shine at innovation competitions.

DYNAMIC START-UPS ADD TO GBA INNOVATION

In HKUST-related Greater Bay Area start-up success stories, **Daimon (Shenzhen) Robotics Technology Company Ltd.**, incubated by **Blue Bay**, has launched the world's first vision-tactile sensor DM-Tac W, a dexterous five-finger manipulator DM-Hand1, and teleoperation system DM-EXton. The company's product family seamlessly integrates "perception-operation-learning" capabilities, delivering the industry's first embodied intelligence one-stop solution leveraging disruptive technologies to accelerate industrial adoption. In 2024, Daimon secured over RMB100 million in funding from investors ranging from listed companies to state-owned enterprises.



NED Optics' GOOVIS Art head-mounted virtual screen received China's first Visual Health Certification for XR Devices from China Telecommunication Technology Labs (CTTL) in 2024. The same year, the company was designated a national-level "Little Giant" enterprise (國家專精特新小巨人) for its XR technological innovation, core competitiveness, and growth potential. The company was also selected as one of HKUST's Top 10 Potential Unicorns.

In addition, three HKUST-related companies were accepted into **HKUST RDCSZ T-Camp**, a 2,200-plus square-meter space in the HKUST Shenzhen Industry, Education and Research (IER) Building that facilitates technology transfer among start-ups with University IP licensing agreements. **Incus** is developing next-generation hearing aids, with year-on-year turnover growing by 25% in 2024-2025. **Foundation Biotech** proactively engages with government, conducts deep collaboration with HKUST academics, and has established research collaborations with renowned Mainland medical colleges and hospitals, driving technology transfer in clinical settings.

3. Leader in Sustainability Innovation

FIRST HONG KONG CAMPUS NET-ZERO ACTION PLAN

In April 2025, the University unveiled an action plan to achieve a 50% decrease in emissions by 2035 and net-zero by 2045. HKUST is the first higher education institution in Hong Kong to adopt a comprehensive framework and multiple strategies to achieve its net-zero goals. The plan is supported by a commitment of HK\$30 million earned from campus renewable energy generation to accelerate research and adoption of new decarbonization solutions on campus. Stringent design and operational guidelines for new and renovated buildings are also among the plan's key components, along with climate technology solutions and boosting campus resilience to extreme weather.

WORLD'S FIRST KILOWATT-SCALE ELASTOCALORIC GREEN COLLING DEVICE SEEKS TO BOOST ZERO-EMISSIONS AIR CONDITIONING INDUSTRY

Mechanical and Aerospace Engineering researchers at HKUST have achieved a significant breakthrough in the commercialization of elastocaloric solid-state cooling technology, which offers a high-potential eco-friendly way to address rising demand for air conditioning and cooling as global warming intensifies. By overcoming previous limitations on cooling power and heat transfer efficiency through innovations such as a novel multi-cell architecture design and replacing distilled water with graphene nanofluid, the pioneering HKUST device has achieved leading cooling power and temperature lift performance that for the first time breaks through the kilowatt-scale cooling threshold. The technological advances bring the zero-emission, energy-efficient cooling technology closer to market readiness and add impetus to a key technical solution to assist carbon neutrality. They also herald positive impact on consumers, offering the potential for lower energy bills as well as more compact cooling devices that save indoor space.

SUSTAINABILITY THOUGHT LEADERSHIP AND INNOVATION ON DISPLAY AT INTERNATIONAL CONGRESS

Eco-focused HKUST academics and senior management demonstrated their international thought leadership at the Global Sustainable Development Congress in Istanbul, Turkey, in June 2025, where they shared their expertise and led discussions on cutting-edge initiatives and solutions to improve lives and tackle climate challenges. Building on the 2024 joint-university declaration initiated by HKUST to drive campus carbon neutrality worldwide, the University gathered partner institutions to share progress. Several of HKUST's latest sustainability technologies were also displayed. Some 5,000 thought leaders, innovators, and policymakers attended the Congress, convened by Times Higher Education (THE).



RAISING AWARENESS OF THE SIGNIFICANCE OF OCEANS



Looking at plankton samples under a microscope during HKUST Ocean Day 2025.

In February 2025, HKUST Ocean Day celebrated the world's oceans and raised awareness of their critical importance to the planet. Highlights included a virtual reality marine experience, equipment showcase, and plankton workshop, which encouraged participants to actively preserve marine life and habitats. The two-day event was organized by the Department of Ocean Science. The Department also held a well-received one-day program at HK SciFest 2025, in collaboration with the Hong Kong Science Museum. "Exploring Ocean Science @ HKUST" highlighted the wonders of the field through a seminar and interactive hands-on coral restoration workshop.

HKUST HOSTS FIRST GATHERING OF DEEP-SEA BIOLOGY SYMPOSIUM IN ASIA

In January 2025, HKUST hosted the 17th Deep-Sea Biology Symposium, the first time the symposium had been held in Asia since it began in 1977 and marking a milestone for the Asian deep-sea biology community. The six-day event attracted nearly 400 participants from over 30 countries and regions. Topics under discussion focused on biodiversity conservation, ecological protection, genomics, climate change, new methodologies and practices, and deep-sea environmental policies and management. The gathering brought a wealth of knowledge to the Asian marine biology community, assisting the nurturing of next-generation talent and global collaboration.



17th Deep-Sea Biology Symposium attendees at HKUST.

IDENTIFYING RISKS AND BUILDING RESILIENCE AGAINST EXTREME HEAT

HKUST environmental research to address extreme heat and vulnerable populations was featured in an international workshop focused on urban Southeast Asia, specifically Bangkok. The workshop, held in collaboration with Thailand's National Housing Authority and the Stockholm Environment Institute Asia Centre in December 2024, identified critical research needs for risk assessment and encouraged innovative coping strategies, fostering collaboration and generating actionable insights.



Senior officials from Thailand's National Housing Authority, together with workshop organizers from HKUST and the Stockholm Environment Institute Asia Centre.

FIRST HONG KONG GREEN TECH SUMMIT

The HKUST Green Finance Research Project, in collaboration with industry leaders GoImpact and MioTech, organized the first Hong Kong Green Tech Summit in October 2024. The two-day event gathered over 50 experts from both public and private sectors and attracted 350 participants from various fields. Speakers included Mr. Christopher HUI, Secretary for Financial Services and the Treasury, and Prof. SUN Dong, Secretary for Innovation, Technology and Industry, industry experts, and HKUST academics who shared their perspectives in a range of panel discussions. The summit also featured innovative green technology projects led by HKUST research teams, including the Hong Kong Climate Policy Uncertainty Index and HKUST-FYBB#1 Satellite. The event concluded with a Climate Risk Workshop, hosted by the Hong Kong-based Network of Environmental Student Societies. The workshop provided businesses with useful insights into climate risks and practical solutions for effective management and mitigation.

JOINT SUSTAINABLE FINANCE CERTIFICATE PROVES ON-GOING HIT

A certificate program jointly launched by HKUST Business School and the Hong Kong Green Finance Association (HKGFA) in 2022 has continued to successfully build and upskill ESG talents since then. The HKGFA-HKUST Certificate in Sustainable Finance gives a comprehensive overview of ESG and sustainable finance issues, offering case studies along with academic and industry insights. By November 2024, five cohorts of around 200 participants had benefited. The program enrolled its sixth cohort in June 2025.



4. Widening Engagement with the Community

AI-ENHANCED 3D PRINTING SOLUTION ADVANCES PERSONALIZED FOOD CREATION

A novel AI-assisted 3D food printing solution, developed by HKUST Division of Integrative Systems and Design researchers, has paved the way for the transformation of personalized food creation. The novel AI-enhanced system overcomes the challenges of traditional 3D food printing methods by combining extrusion-based printing with simultaneous infrared heating to precisely control the cooking process of intricate starch-based food. It thus enables safer, more efficient, and visually appealing food production. Meanwhile, the use of AI to help craft the intricate food patterns makes the design process accessible even to computer novices. The solution opens up exciting prospects for tailored nutrition, ranging from individuals with special dietary needs such as patients with dysphagia to enhanced meal customization in elderly care centers and fresh culinary experiences in restaurants.

HIGH-RESOLUTION GROUNDWATER SULFATE DISTRIBUTION MAP UNCOVERS GLOBAL PUBLIC HEALTH RISKS

In a world first, HKUST Civil and Environmental Engineering researchers have developed an unprecedented high-resolution map that can uncover populations at risk from high concentrations of sulfate in groundwater, a vital source of drinking water for billions of people globally. High concentrations of sulphate in groundwater can directly cause diarrhea and dehydration as well as trigger the release of heavy metals from pipeline corrosion, indirectly leading to other health conditions and economic costs. Yet sulfate levels often go unmonitored. The researchers' one-kilometer resolution map, the first of its kind, provides a practical tool for water quality assessment, enabling the research team to establish around 194 million people worldwide are exposed to groundwater sulfate concentrations exceeding the WHO-recommended threshold and the urgent need to incorporate sulfate into global water safety management practices. The map was developed as part of a collaborative study with Princeton University, City University of Hong Kong, and Beijing Institute of Technology.

HANG LUNG MATHEMATICS AWARDS BRING FIELD ALIVE FOR YOUNG TALENTS

The biennial Hang Lung Mathematics Awards (HLMA), organized together with HKUST since 2021, arranged a series of events over the reporting year to inspire and motivate school students to prepare for the 2025 awards and consider math as a future career. The first HLMA x HKUST Lab Visit and Tour attracted over 150 secondary school students and teachers to the University campus in November 2024. Earlier, a Teachers' Forum in August 2024 assisted more than 50 secondary school mathematics teachers in identifying young math talents and provided tips for guiding students through the HLMA competition process and research journey. In early 2025, online sharing sessions with HKUST math academics and University-led information sessions and research workshops enabled school students to gain insights into the joys of math discovery and academic life. Some 2,600 students from over 200 high schools have participated in the awards since launch in 2004.

BROADENING UNDERSTANDING OF GENERATIVE AI AMONG SMALL AND MEDIUM-SIZED FINANCIAL SERVICE PROVIDERS

To support Hong Kong's financial services industry in harnessing the transformative potential of Generative AI, particularly small and medium-sized financial institutions, HKUST Business School co-hosted a seminar with the Hong Kong Monetary Authority in December 2024 that introduced the HKUST-developed InvestLM Generative AI Platform for finance and investment to over 80 senior bank representatives. A month earlier, the InvestLM research team gave a presentation at a Mandatory Provident Fund Schemes Authority forum to around 200 trustees and service providers. The team discussed the applications of GenAI in wealth and pension fund management and showcased the InvestLM system, allowing participants to experience a large language model for the finance and investment domain.

HARNESSING AI AND VIRTUAL REALITY TO TRANSFORM ENGLISH LEARNING FOR SECONDARY SCHOOL STUDENTS

The HKUST Center for Language Education and HKUST Academy for Interdisciplinary Studies have teamed up with Trumpteck, a Hong Kong education technology company, to launch a pioneering initiative aimed at



transforming English education for local secondary school students. The three-year project has secured a funding grant of over HK\$30 million from the Quality Education Fund (QEF) to develop an advanced AI-powered English assessment and learning system, with free access offered to all secondary school students in Hong Kong to promote education equity among diverse students and education equality among schools. The dynamic initiative focuses on an AI-assisted self-directed virtual reality learning approach to spoken English. The system will help evaluate students' performance and offer personalized feedback and recommendations, enabling learners to develop their communication skills at their own pace.

LIBRARY EXHIBITION CELEBRATES CHINESE CALLIGRAPHY



Over 300 guests attended the opening of the exhibition on Dr. Sze Chi-Ching's calligraphy.

HKUST Library held an exhibition featuring works by renowned local calligrapher Dr. SZE Chi-Ching from May to July 2025. Dr. Sze has spent over eight decades refining a style that blends classical tradition with personal expression, and his work has been widely exhibited, including a solo exhibition at HKUST in 2009. The latest Library exhibition, a collaborative undertaking with the Development and Alumni Office, featured interpretations of ancient poetry and classic sayings, reflecting his mastery of the art form and distinctive aesthetic approach. He also contributed complimentary copies of his edited volume 《書法學習課程》 to the exhibition, encouraging self-directed learning and deeper appreciation of Chinese calligraphy among the HKUST community and visitors.