香港浸會大學
HONG KONG BAPTIST UNIVERSITY

Knowledge Transfer Office
知識轉移處

2024-25
KNOWLEDGE TRANSFER ANNUAL REPORT

CONTENTS

1 EXECUTIVE SUMMARY

Hong Kong Baptist University (HKBU) believes in the power of knowledge transfer and is continually working to connect people and organisations whose combined energies can spark positive change. The University has long experience of harnessing new connections at the forefront of innovation and entrepreneurship, bringing many benefits to the institution, its staff and students, business sectors, and society at large. This dedication to real-world impacts is one of the key factors propelling HKBU's ongoing rise in international rankings. The University has risen from the 101– 200th band last year to 69th place in the Times Higher Education (THE) Impact Rankings 2025. It has also maintained its second-place global standing in 'SDG 4: Quality Education' for two consecutive years.

In the year 2024-2025, HKBU has been expanding and accelerating its knowledge transfer efforts across all these areas, and is set to deliver a number of imminent landmarks for the city and the wider region. The Chinese Medicine Hospital of Hong Kong is set to open its doors to the public later this year. HKBU has been appointed as the Contractor, with the HKBU Chinese Medicine Hospital Company Limited serving as the Operator. This marks the beginning of a new era of care through Chinese medicine and positions Hong Kong at the forefront of efforts to share this expertise with the rest of the world. At the same time, the University is preparing to establish a Frontier Translational Medical Research Institute to promote medical innovation and technology transfer.

In a very busy year for infrastructure, the University has also established an Art Tech Incubation Hub and a Creativity Campus in Hong Kong in partnership with the Jockey Club, as well as opening a Humanities and Social Sciences Research Base in Shenzhen together with the Chinese Academy of Social Sciences (CASS).

These milestone projects come with a host of other government and business partnerships across the Greater Bay Area (GBA) and beyond aimed at translating innovation into successful business solutions. Notable agreements HKBU has signed in the fields of medicine and art tech are with Shanghai Industrial Investment (Holdings) Co., Ltd., TCM-Klinik Bad Kötzting (TCM-KBK), and Alibaba DAMO Academy.

The University has also secured funding for further research, innovation, and collaboration from businesses at the cutting edge of their fields, including China Prosperity Capital (Shenzhen) Equity Investment Management Co., Ltd. (CPC Fund), Jiangsu Industrial Technology Research Institute (JITRI), the Shanghai Yangtze Delta Innovation Institute, and Infinitus (China) Company Limited.

Recent HKBU innovations employing AI and other cutting-edge technologies have been showcased at numerous events and symposiums around the world, where they have won a number of prestigious awards. In particular, HKBU projects were presented with nine awards and three special excellency prizes at the 50th International Exhibition of Inventions in Geneva, recognising the University's uniquely innovative research projects and their potential to improve people's lives.

This report spotlights four impact cases that demonstrate HKBU's breadth of successful knowledge transfer in the year 2024-2025: **1) a pioneering disease detection platform recommended by the World Health Organization (WHO) and a new Chinese herbal medicine now in drug trials**, **2) an experiential cinema system exhibited at Hong Kong International Airport**, **3) an impactful stroke prevention and rehabilitation scheme, linked with a large-scale Chinese medicine mental health community project**, and **4) a symposium at the Paris Olympics showcasing the University's achievements in the field of sports and athletics**.

These cases and the many other events and initiatives covered in this report speak to HKBU's keen focus on knowledge transfer – from innovation, to entrepreneurship, to positive real-world impacts.

43

Newly Filed Patents

388

Entrepreneurship Activities

13,378

Participating Students

512

Public Speeches

65

Performances and Exhibitions

84

Start-up Companies

2 INFRASTRUCTURE DEVELOPMENT AND ENHANCEMENTS

2.1 Chinese Medicine Hospital of Hong Kong Set to Open in Late-2025

The Chinese Medicine Hospital of Hong Kong in Tseung Kwan O will serve as a flagship for TCM clinical services and research.

Hong Kong Chinese Medicine Hospital unveils its newly appointed core management team.

Hong Kong's first Chinese medicine hospital is set to open at the end of 2025. Located in Tseung Kwan O, the Chinese Medicine Hospital of Hong Kong (CMHHK) will be a flagship hospital for Chinese medicine and a centre for scientific research. It will help to develop talent and knowledge in the field and to promote Chinese medicine on the global stage, in accordance with the goals of the Chinese Medicine Hospital Project Office (CMHPO) under the Health Bureau of Hong Kong.

Having long been at the forefront of Chinese medicine education and research in Hong Kong, HKBU has been appointed as the Contractor, with the HKBU Chinese Medicine Hospital Company Limited serving as the Operator. The hospital will provide general outpatient clinics, referral clinics, daytime, and inpatient services, involving both Chinese medicine and mixed use of Chinese and Western medicine.

In addition, the CMHHK will undertake key missions in training and education, research, collaboration, and creating health values, including offering clinical internships to students of the three local universities with schools of Chinese medicine and serving as a clinical training platform for Chinese medicine practitioners. It will also work alongside universities and education institutions on clinical research, developing medicines, and other Chinese medicine-related research.

2.2 Preparation Begins for Frontier Translational Medical Research Institute

HKBU is preparing to establish a Frontier Translational Medical Research Institute to promote medical innovation and technology transfer. Announced in February 2025, the institute will serve as a hub for cutting-edge research and development in medical science and healthcare. Its key focuses will be on medical devices, diagnostics, vaccines, integrative medicine, Chinese medicine, and other biomedical sciences, as well as translating these technologies into clinical applications and commercialisation.

The institute is intended to become a powerhouse of medical innovation and prepare the world for looming health challenges, such as various communicable and non-communicable diseases, ageing populations, and pandemics, all of which is closely aligned with the University's unique East-meets-West approach to medical research and education.

The Frontier Translational Medical Research Institute will be co-led by 2020 Nobel laureate Sir Michael HOUGHTON, Professor Johnson Yiu-nam LAU, Adjunct Senior Investigator of the Institute for Innovation, Translation and Policy Research (ITPR) at HKBU, and Dr Manson Man-Shun FOK as founding members. Drug development expert Dr Robert SPIEGEL will also join as a member of the institute.

With the backing of experts, including a Nobel laureate, HKBU announces its plan to establish a translational medical research institute.

2.3 New Art Tech Incubation Hub CHRYSALIS Fuels Creative Industry Growth

In September 2024, the University launched the HKBU Art Tech Incubation Hub CHRYSALIS to foster cutting-edge, innovative art tech translational projects and entrepreneurial ventures. The new hub aims to bridge the gap between artistic vision and technological innovation, generating social, economic, and cultural impacts, while also serving as a vibrant space for a multitude of art tech events and showcases to promote collaboration.

Located at the Jockey Club Creative Arts Centre in Shek Kip Mei, CHRYSALIS is a unique platform that supports the transformation and application of HKBU's art technology outputs to nurture artistic innovation and creativity, and to inject new impetus into the city's creative industries. It also provides a creative environment for innovators and artists to excel and explore new frontiers in art and technology.

CHRYSALIS is equipped with an impressive array of state-of-the-art facilities designed for art tech translation, including the following spaces.

- Full Dome Theatre
- Mechatronics Studio
- Sound-Recording and Mixing Studio
- Harmonix Innovation Lab
- Materials Discovery Corner
- Multipurpose Space
- Co-Working Space

2.4 Humanities and Social Sciences Research Base Launched in Shenzhen to Advance GBA Collaboration

Marking an important chapter in HKBU's strategy for cross-border collaboration and innovation in the Greater Bay Area (GBA), the University has established a Humanities and Social Sciences Research Base in Shenzhen, in partnership with the Chinese Institute of Hong Kong under the Chinese Academy of Social Sciences (CASS) and the HKBU Shenzhen Research Institute.

Officially unveiled at the Virtual University Park in Shenzhen in March 2025, the new base is designed to transcend conventional academic boundaries by fostering transdisciplinary collaboration in humanities and social sciences across the GBA. Harnessing HKBU's dynamic academic culture, CASS's authoritative research infrastructure, and Shenzhen's strategic location, the base aims to become a powerhouse of ideas in fields as diverse as digital governance, cultural innovation, AI and society, and social development.

The base also arranges exchanges, student visits, collaborative workshops, and joint publications involving all three founding institutions as part of a strategy to advance humanities and social sciences research with global relevance and local roots. Looking ahead, HKBU envisions the base as an evolving hub – attracting global talent, deepening regional integration, and tackling common challenges.

2.5 Jockey Club Campus of Creativity Opens in Kowloon

In March 2025, HKBU hosted a grand opening ceremony for the Jockey Club Campus of Creativity, marking a significant milestone in the implementation of HKBU's Institutional Strategic Plan 2018-2028. With art tech as a strategic focus, the campus is designed to ignite a fusion of art and technology, serving as a key pillar for Hong Kong's creative industries and reinforcing the city's long-term position as a regional and global cultural hub.

Located at Renfrew Road in Kowloon Tong, the new campus is equipped with state-of-the-art facilities for a range of creative disciplines and provides accommodation for over 1,700 students. Beyond its role as a physical campus, the institution is designed to effect knowledge exchange, innovative collaboration, and transformative change, including interdisciplinary projects and collaboration between academia and industry.

As such, it is poised to become a vital base for creative education, and supports the vision outlined in the National 14th Five-Year Plan to develop Hong Kong into a hub for arts and cultural exchange between China and the rest of the world.

The Jockey Club Campus of Creativity

3 KT STRATEGIC & INDUSTRIAL COLLABORATION

3.1 HKBU and SIIC Join Forces to Drive Medical Excellence and Innovation

HKBU has announced a strategic partnership with Shanghai Industrial Investment (Holdings) Co., Ltd (SIIC), aimed at harnessing the two institutions' respective strengths and helping drive Hong Kong's development into an international hub for medical training, research, and innovation. Together, the two institutions will focus on innovative education to train high-quality doctors and meet the clinical needs of a rapidly ageing society.

As part of the agreement, SIIC and its subsidiary Shanghai Pharmaceuticals Holding Co., Ltd (SPH) will actively participate in HKBU's planned Frontier Translational Medical Research Institute (FTMRI), a recently announced initiative to advance cutting-edge research and development in medical science and healthcare. Focused on medical devices, diagnostics, vaccines, integrative medicine, Chinese medicine, other biomedical sciences, and translating these technologies into real-world applications, the FTMRI will propel medical discoveries, accelerating innovative medical applications and their path to commercialisation and industrialisation.

3.2 HKBU and Alibaba DAMO Academy Begin Collaboration

In another new partnership, HKBU has signed a memorandum of understanding (MOU) with Alibaba DAMO Academy to begin collaboration to advance technology in health science and art tech. Announced at innovation and technology extravaganza JUMPSTARTER 2025, the relationship between the two institutions is intended to foster innovation and entrepreneurship.

By leveraging the expertise of the DAMO Academy in AI and other technologies, HKBU aims to accelerate the development of novel medicines and treatments as well as innovations in the creative industry. The inaugural project will focus on drug development between Alibaba DAMO Academy and HKBU's Centre for Chinese Herbal Medicine Drug Development.

The agreement follows a series of exchange meetings and visits by the two institutions. HKBU leaders visited Alibaba's headquarters in Hangzhou in 2024 to explore DAMO's cutting-edge AI technologies in life sciences and other fields, and later toured its labs to further discuss collaboration opportunities. A DAMO Academy delegation also made several visits to HKBU's Kowloon Tong Campus, including the Visualization Research Centre, Life Science Imaging Centre, and several specialised laboratories.

3.3 CPC Fund Invests to Accelerate Start-up Commercialisation

Another MOU has been signed with China Prosperity Capital (Shenzhen) Equity Investment Management Co., Ltd. (CPC Fund), with the fund agreeing to invest a minimum of HK$10 million in HKBU start-ups to support the commercialisation of research outputs.

CPC Fund has rich experience in commercial operations and a well-established business network. The signing of the MOU with CPC Fund will enhance HKBU's ability to succeed in business operations and market development for its start-ups, while also supporting the University's efforts in knowledge transfer to create even more impact.

Mr Edmond Kwok-yin LAM, Director of Knowledge Transfer Office at HKBU, remarked that, "Investment of capital and resources from market-oriented organisations is needed to support the promotion of knowledge transfer and translation of research output into productivity in practice. With its wealth of experience in innovation and entrepreneurship, CPC Fund will be able to offer invaluable support to HKBU's knowledge transfer efforts."

3.4 Partnership Boosts Innovation and R&D in Yangtze River Delta

The Jiangsu Industrial Technology Research Institute (JITRI) and the Shanghai Yangtze Delta Innovation Institute have committed RMB 20 million to support joint projects with HKBU, as part of a strategic partnership to advance technological innovation and industrial research and development in the Yangtze River Delta region.

The landmark MOU was signed in April 2025 at the Jiangsu-Hong Kong Technology Innovation Cooperation Conference, matching HKBU's capabilities with the expertise and funding of the two technology research institutes in order to boost applied research, talent development, and start-up incubation.

3.5 Strategic Partnership Agreed with Infinitus (China)

The University has also signed a recent MOU with Infinitus (China) Company Limited ('Infinitus (China)'), marking the beginning of a strategic collaboration in conducting research projects related to food as medicine. Under the MOU, Infinitus (China) has committed to providing at least HK$11 million to HKBU to establish a joint laboratory named the Infinitus-Hong Kong Baptist University Joint Laboratory of Polysaccharide Research, which will explore the potential health benefits of herb polysaccharides and their applications in the field of nutrition and Chinese medicine.

The establishment of the joint laboratory will initiate a number of polysaccharide research projects for a duration of three years, a period which could be extended by a further two years. The research will explore the structure of polysaccharides and their mechanisms of action, the interactions between polysaccharides and small molecules, and the development of active polysaccharide structures and their compositions. The partnership thus not only contributes valuable insights that could enhance health and nutrition practices, but will also strengthen collaboration between academia and industry in addressing contemporary health challenges.

3.6 Innovation Exchange Conference Opens Up Cross-Border Industrial Collaboration

The 2024 Zhuhai National High-tech Industrial Development Zone – Hong Kong Innovation and Entrepreneurship Exchange Conference was held on the HKBU campus, bringing together innovations from Hong Kong and Zhuhai. The conference was organised by the Knowledge Transfer Office to help accelerate the ongoing connection of resources and coordinated development of industries between the two cities, enhance innovation cooperation and exchange, and promote the integration of projects, talent, technology, industries, and other resources.

The event showcased innovative projects and explored collaborative opportunities, while also underscoring the importance of cross-regional collaboration in driving technological advancement and entrepreneurial growth. Start-ups from both the High-tech Zone and Hong Kong's universities were invited to participate, enriching the shared dialogue and broadening the scope of shared knowledge and opportunities.

Participants were introduced to the business environment and preferential policies of the High-tech Zone, as well as the support available for establishing businesses in Zhuhai. These demonstrations provided the High-tech Zone with valuable insights, and highlighted the potential for innovative Hong Kong companies to expand into the Greater Bay Area or the wider mainland market.

3.7 HKBU Professor Sparks Industry-Academic Collaboration at Shanxi Science and Technology Week

Professor ZHU Furong, Associate Dean (Research and Postgraduate Studies) and Director of the Institute of Advanced Materials at HKBU, was invited to join a Science and Technology Week in Jinchuang Valley, Datong, Shanxi Province, in late May 2025. At the event, he delivered a keynote speech on **Non-destructive Testing Technology for Fruit Quality**, in keeping with the week's focus on high-end equipment for modern agriculture.

While on the ground, Professor ZHU and other academic leaders held in-depth discussions on the development of the tomato industry and tomato quality testing technology in nearby Yanggao County together with the local Municipal Science and Technology Bureau, Datong Economic Development Zone Science and Technology Innovation Service Centre, relevant county department heads, and various local entrepreneurs and cooperative leaders.

HKBU and Shanxi Agricultural University professors discuss tomato industry and quality testing with Yanggao officials. (Image source: 大同日報)

The event showcased tech achievements in AI, advanced equipment, and modern agriculture. (Image source: 大同日報)

3.8 Digital Revolution on Display at HKBU-NVIDIA Joint Symposium 2025

The HKBU-NVIDIA Joint Symposium, held in early 2025, showcased the remarkable ongoing digital transformation taking place in both arts and sciences. Jointly organised by HKBU and NVIDIA and hosted by HKBU's Department of Computer Science, this annual symposium reinforces the vital connection between academia and industry, fostering cross-disciplinary collaboration since 2022.

The first phase of this year's symposium opened in February and featured nine distinguished speakers, including captivating keynote speeches on areas of AI application in the arts, such as its transformation of cultural organisations, the evolution and disruption of generative AI, and authenticity challenges. This was followed by discussions on cutting-edge topics such as visual language models, 3D modelling, virtual avatars, and multimodal AI assistants. A poster session then further facilitated vibrant exchanges between young scholars, researchers, and industry practitioners.

The concluding session of the symposium in March featured a further 12 distinguished speakers, who shared cutting-edge insights into advanced medical technologies. Research presentation sessions followed, which sparked lively discussion among researchers, industry leaders, and academics, fostering collaboration to drive innovation and enhance patient outcomes in the rapidly evolving healthcare technology sector.

4 KNOWLEDGE TRANSFER AND COMMERCIALISATION

4.1 KTO Brings Together IP Experts at Flagship Forum

As part of the Knowledge Transfer Office's (KTO) mission to drive innovation and collaboration by protecting inventive ideas, it hosts the HKBU Intellectual Property Forum (IP Forum) on campus each year. This flagship event is designed to promote the importance of patents for innovation and commercialisation. With the theme, '**Can AI be the Master of Creation?**', the IP Forum 2024 saw discussion and valuable insights around key IP challenges in the era of AI, including implications for copyright law.

The forum brought together approximately 200 participants, including esteemed intellectual property experts from both government and the private sector, to discuss a diverse array of topics related to IP rights. Alongside representatives from the Intellectual Property Department of the HKSAR Government and HKBU were speakers from renowned IP law firms and think tanks, including Deacons, P C Woo & Co, Solicitors & Notaries, and the International IP Commercialization Council.

The KTO strives to be at the forefront of IP, offering a range of services to ensure that University's IP is always protected. Its holistic IP management and protection strategy guides innovations from the initial stages of patent applications through to copyright and trade mark registration. HKBU's own IP portfolio is expanding year on year, with 43 new patent applications filed in seven jurisdictions in 2024-2025 – each of which has the potential for high commercialisation value.

4.2 HKBU Showcases Innovations in Diverse Fields

HKBU participated with five companies and projects, showcasing our achievements at BIP Asia 2024.

Professor ZHAO Jun shares his project on producing advanced catalytic hydrogen from biowaste.

HKBU is continually generating innovations across all practice areas, developing these advances into registered IP, and securing partnerships with interested businesses. Five such outstanding recent inventions, along with the companies involved, were showcased at the Business of IP Asia Forum, held at the Hong Kong Convention and Exhibition Centre in December 2024.

Professor ZHAO Jun, Associate Professor, Department of Biology, introduced an innovative catalysis system that efficiently converts municipal solid waste into hydrogen at low temperatures and low pressures.

Professor Ken Cham-fai LEUNG, Associate Professor, Department of Chemistry, presented new ultrasound-assisted nanofibre coating technologies which can enhance thermal stability, resist corrosion and scratching, and more.

Professor Anna Lai-yin QIN, Assistant Professor, Academy of Visual Arts, introduced a portable automatic shower system designed for individuals with mobility limitations, including wheelchair users.

Professor CHEUNG Yiu Ming, Chair Professor, Department of Computer Science, introduced a new verification system, where a user's personal identity is authenticated by simultaneously matching both password information and behavioural characteristics of lip motion.

Professor Janice Jun PAN, Director and Professor, Academy of Language and Culture, presented an advanced language model which combines AI with human-supervised language services to provide real-time interpretation.

4.3 Nobel Laureate Sir Michael Houghton Shares Insights at HKBU Symposium

HKBU was honoured to invite Nobel laureate Sir Michael Houghton to deliver a captivating lecture at the Nobel Laureate Symposium – Hepatitis C Virus and Drug Development, hosted at the University in February 2025. Awarded the Nobel Prize in Physiology or Medicine in 2020 for his pioneering work in discovering the Hepatitis C Virus (HCV), Sir Michael presented his lecture titled **'Discovery of Hepatitis C Virus (HCV): The Nobel Prize in Medicine 2020'**, recounting the remarkable journey of his discovery. He also shared valuable insights on drug development and offered suggestions to young scientists.

As a distinguished collaborator of Sir Michael, Professor Johnson Yiu-nam LAU, Adjunct Senior Investigator at HKBU, also shared some reminiscences about anti-HCV development, while Dr Robert SPIEGEL, former Chief Medical Officer and Senior Vice President at Schering-Plough Research Institute (now Merck & Co), contributed insights on the challenges and opportunities in drug development.

These speeches set the stage for a dynamic panel discussion, which delved into the future of drug development and biomedical innovation and sparked engaging conversations with the participants about potential pathways forward.

4.4 Forums Set the Stage for Fresh Advances in Medicine

The University has been actively involved in bringing together Hong Kong's full range of pharmaceutical expertise to advance medical frontiers through innovative technologies, new partnerships, and the integration of Chinese and Western medicine.

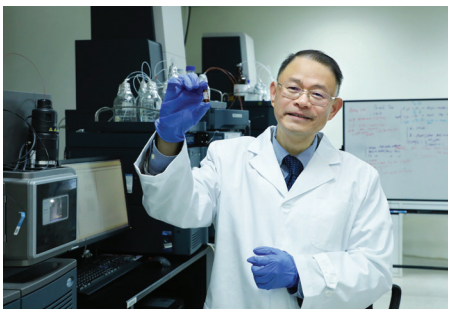
HKBU's School of Chinese Medicine (SCM) organised The 6th International Summit on Innovative Drug Discovery on campus. The summit hosted a group of distinguished scholars and pioneers from the fields of drug discovery and the pharmaceutical industry to discuss the trends and challenges of innovative drug development and share their personal experiences of translational research in drug discovery. Over 400 people attended in person and online. This important annual event serves as a key platform for academic exchange and transdisciplinary collaboration to advance new drug development.

In another major gathering for the medicine sector in Hong Kong, the Wu Jieh Yee Institute of Translational Chinese Medicine Research at HKBU helped organise the Drug Development – Roadmap to U.S. FDA Clinical Trial symposium at Hong Kong Science Park, alongside the Institute for Innovation, Translation and Policy Research (ITPR) and with support from the Hong Kong Science and Technology Parks Corporation. The symposium was designed to showcase advances in pharmaceutical development at HKBU, as well as to foster knowledge transfer and partnerships between academia, government, industry, and the investment community. The event also highlighted various projects that are developing traditional Chinese medicines into approved Western drugs.

4.5 CDD Develops Promising New Treatment for Ulcerative Colitis

The Centre for Chinese Herbal Medicine Drug Development (CDD) at HKBU has developed a novel Chinese herbal formulation for maintaining remission in patients with ulcerative colitis. This aggressive form of inflammatory bowel disease is becoming increasingly prevalent, with rising morbidity in China and other Asian countries. Existing treatment options cannot completely maintain remission, nor prevent its recurrence. In search of more effective ways to relieve the condition, the research team at CDD developed a Chinese herbal formulation, CDD-2103, using a combination of nine Chinese herbal medicines, including codonopsis root (Codonopsis radix, 黨參) and turmeric (Curcumae longae rhizoma, 薑黃). A clinical study showed CDD-2103 effectively suppresses the progression of colitis – findings which were published in a number of scientific journals, including the ***Journal of Advanced Research, Phytomedicine***, and the ***Journal of Ethnopharmacology***. The formulation has been authorised by China's National Medical Products Administration (NMPA) for clinical trials, set to take place in 2025. The breakthrough has also received international acclaim, winning the highest award, the Gold Medal with Congratulations of the Jury, at the 50th International Exhibition of Inventions in Geneva in April 2025.

4.6 Pioneering Innovation Sparks Hope for Rare Bone Disease Patients



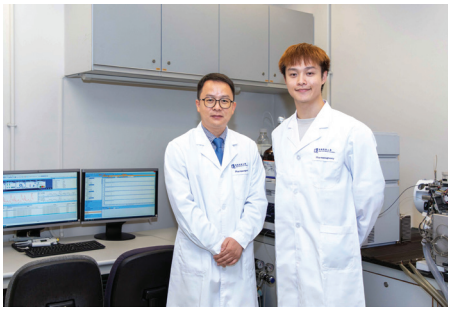
Professor ZHANG Ge and his team developed an aptamer for X-linked hypophosphatemia with US FDA orphan drug status.

A groundbreaking discovery by researchers at HKBU and the Shanghai Sixth People's Hospital has offered new hope for treating X-linked hypophosphatemia (XLH), a rare bone disease. The innovative approach uses an aptamer originally developed by HKBU for osteogenesis imperfecta, which has recently received special recognition from the U.S. Food and Drug Administration (FDA) as both an Orphan Drug and a Pediatric Rare Disease treatment. These key designations provide advantages such as fewer required clinical trial samples and a seven-year market exclusivity period.

XLH is characterised by hypophosphatemia (low phosphate levels in the blood), and results from a mutation in a gene responsible for regulating phosphate levels. When phosphate levels drop too low, proper bone mineralisation is hindered, leading to softer bones that can cause deformities and growth issues. Adults with XLH may experience pain, changes in body shape, shorter stature, and/or pseudo-fractures, leading to reduced mobility or even disability. The breakthrough aptamer paves the way for significant improvements in quality of life and overcoming barriers that have long challenged patients and clinicians.

The research team identified an oligonucleotide aptamer, Apc001, which can promote bone formation without increasing cardiovascular risk. Apc001 is now on a fast track for clinical trials, promising potential relief for patients. Currently, pilot-scale production of Apc001 has been completed, and it is undergoing preclinical toxicological assessment by a third party. Apc001 is now scheduled to enter clinical trials in both mainland China and the US. This milestone marks a powerful step toward in delivering cutting-edge therapies to those affected by rare diseases, and reaffirms HKBU's leadership in impactful translational medical research.

4.7 Award-Winning Innovation Boosts Food Safety and Quality



Dr XU Jun (left), and Mr CHAN Kam Chun (right)

A research team at HKBU has developed a new approach for inspecting sulphur-treated food and Chinese herbal medicinal products using a new chemical marker called tryptophan sulfonate. This approach is faster, more accurate, and more efficient for large sample quantities compared to the most common current testing method.

The research findings were published in the international scientific journal ***Food Chemistry*** in February 2024. They mark a potential advance in food safety and quality assurance, providing the industry with a robust new tool for inspecting sulphur-treated food and Chinese herbal medicinal products.

Sulphur treatment is a common preservation method employed in the food and Chinese herbal medicinal industries. However, excessive consumption of preservative sulphites can lead to respiratory symptoms and compromised nutritional value and safety.

Through testing, Professor XU Jun, Assistant Professor of the Teaching and Research Division of the School of Chinese Medicine at HKBU, and his research team identified a chemical compound called tryptophan sulfonate in sulphur-fumigated samples using untargeted metabolomics. Through testing, they determined that a tryptophan sulfonate test is a faster, more accurate, and more efficient testing approach than the sulphite tests commonly used at present.

The research team, which was awarded a Gold Medal for their discovery at the 4th Asia Exhibition of Innovations and Inventions Hong Kong held in December 2024, hopes to further develop the tryptophan sulfonate test for commercial applications in the near future.

4.8 Global Health Innovations Showcased at GSDC 2025

HKBU presented its comprehensive and transdisciplinary approach to health and wellness at the Global Sustainable Development Congress (GSDC) 2025, held in Istanbul in June 2025, where the University was the Global Health Innovation Partner and sponsor of the Health and Well-being Track. Co-hosted by Turkey's Council of Higher Education and convened by Times Higher Education (THE), the four-day international summit brought together over 5,000 academics and specialists to address sustainable health, drive new alliances, and create positive action for a more sustainable future.

Global Sustainable Development Congress 2025

At the Summit, HKBU introduced a new initiative, a 6,000-square-foot 'Well-being Zone' specially designed to promote health and wellness. This space provided interactive experiences and insightful presentations ranging from mindfulness exercises to digital well-being research, as well as hosting talks on global health trends, mental well-being, and the applications of Chinese medicine and AI in healthcare.

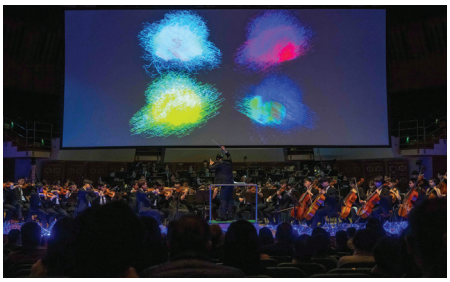
HKBU's 'Well-being Zone'

In collaboration with Elsevier, HKBU also took the opportunity to launch a new report ***Evolving Legacy: Decoding the Scientific Trajectory of Chinese Medicine***, which examines the ongoing development and evolving research landscape within Chinese Medicine and its growing influence on modern healthcare.

The University's contributions at GSDC showcased its commitment to addressing pressing global sustainability challenges through cutting-edge research. As part of its work in the research cluster of Health and Drug Discovery, HKBU is using sustainability and transdisciplinary research to advance sustainable development at a strategic level.

4.9 HKBU Symphony Orchestra Holds Annual Gala Concert

The HKBU Symphony Orchestra held its Annual Gala Concert at the start of April at the Hong Kong Cultural Centre Concert Hall, where an enchanting performance took nearly 1,200 audience members on a musical odyssey through classical virtuosity, choral harmony, technological innovation, and emotional resonance.


Blending music creativity and brainwave technology at the Gala Concert.

Conducted by Professor Johnny Ming-lun POON, Associate Vice-President (Interdisciplinary Research), Founding Dean of the School of Creative Arts and Dr Hin Shiu HUNG, Endowed Professor in Music at HKBU, the event featured performances of Mahler, Brahms, Arnold Schoenberg, and Leonard Bernstein. Rising Spanish violinist Raquel Areal Martínez also performed Max Bruch's emotive and technically demanding *Violin Concerto No.1 in G minor, Op.26*.

For the performance of Gustav Mahler's *Symphony No.1 in D major, IV. Stürmisch beweget*, HKBU took the laboratory to the concert hall in an extraordinary meeting of art and neuroscience. The musicians playing the piece wore functional Near-Infrared Spectroscopy (fNIRS) devices that used near-infrared light to monitor and display levels of blood oxygenation in their brain tissues in real time. This created a singular visual and emotional experience for the audience by capturing the brainwave patterns of the performers and translating these into fluid images using AI.


HKBU Orchestra's Mahler Symphony, conducted by Professor Johnny Ming-lun POON, uses AI to translate brainwaves.

The concert was a rich, immersive performance that explored the deep connection between sound and the complex functions of the human mind, while also resonating deeply with both heart and intellect, redefining the boundaries of what art can be.

4.10 AI-powered Art Tech Showcased at FILMART 2025

The HKBU pavilion at FILMART 2025

Visitors enjoy an immersive experience with the 'VotR.AR' installation.

Mr CHEN Yimin moderates the [AI Hub Programme Series] discussion 'Gearing up for the AI Opportunities'.

Together with its art tech start-ups, HKBU was on the ground at the Hong Kong International Film and TV Market (FILMART) 2025, showcasing the University's innovative art tech projects.

At the HKBU pavilion, visitors could explore cutting-edge projects powered by AI and future cinematic education. Key highlights included an AI-driven system for adaptive motion generation, which facilitates interactive animation and immersive storytelling, as well as a 'DigitalGuardian', which uses AI to safeguard digital creators' intellectual property by embedding imperceptible markers into digital assets.

Two VR projects inspired by writer Stanisław LEM as well as traditional folklore were designed to 'Create New Universes', while an augmented reality installation allowed visitors to explore Leonardo da Vinci's Virgin of the Rocks in a virtual 3D environment. Finally, a platform called 'Future Cinema Systems' offered immersive cinematic experiences with next-generation art technologies.

Professor Terence Lok-ting LAU, Interim Chief Innovation Officer at HKBU spoke at the event, emphasising HKBU's role in driving art tech development and promoting cultural diversity. Professor Johnny Ming-lun POON highlighted the University's transdisciplinary research and collaboration with industry partners, while Professor Shin Dong KIM discussed the integration of cutting-edge technologies into film education.

The pavilion, which was arranged to foster collaborations and innovations with the creative industry, also featured eight art tech start-ups which use advanced technologies for creative and cultural innovation. Additionally, HKBU experts participated in FILMART's seminar sessions, focusing on AI opportunities and its future in filmmaking.

4.11 Power of Gen-AI Discussed at Dedicated Event on Campus

The panel discussion during the event.

The event drew 300 registrants, including students, alumni, donors, and guests from other institutions.

The University's Faculty of Science and its Alumni Affairs Office jointly presented a talk in April titled **'Generative AI for Healthcare and Beyond'**, which provided a broad introduction to Generative AI (GenAI), focusing on its applications in the healthcare sector and exploring its future trends across various industries. The event attracted 300 registrants, including students, alumni, donors, and guests from other institutions.

Speeches covered AI's rapid transformation of healthcare and other fields, as well as the University's proactive efforts in preparing students for an AI-driven future. This was followed by a panel discussion which explored the significance of GenAI, its opportunities and challenges, and the AI integration gap between university education and industry. The panellists then engaged in a lively Q&A session, which raised thought-provoking questions for further discussion.

This gathering was part of a series of talks shining a spotlight on the significant contributions made by HKBU's pre-eminent faculty members, professors, and alumni in their remarkable journey of knowledge discovery. Through this engagement initiative, the organising offices aimed to highlight the achievements of our faculty members, nurture future-shaping students, and engage with alumni who are achieving transformative impacts for society.

4.12 Guardian3D Leads Way in Protecting IP for 3D Assets

Developed by Professor WAN Renjie, Department of Computer Science, 'Guardian3D' is an innovative IP protection solution for 3D assets, using encryption and dynamic watermarking to prevent unauthorised access and duplication.

By embedding invisible, traceable watermarks directly into 3D models, Guardian3D enables verifiable ownership and accountability even if the asset is modified. This IP protection solution offers comprehensive analytics and real-time monitoring, allowing creators to track asset usage across different platforms and enforce licensing agreements, and empowering creators to protect and monetise their work in a digital world.

The innovation was presented with an award at the 50th International Exhibition of Inventions held in April 2025 in Geneva.

Professor QIU Jianwen and his team discovered Placuna aestuaria and Placuna vitream.

4.13 New Blockchain Efficiencies Discovered by Research Team

Professor XU Jianling, Department of Computer Science, and his research team have created an innovative and economically effective solution to address pressing challenges for the development of blockchain and cryptocurrency.

The project, titled **'Gas-efficient Blockchain Technology for Trustworthy Data Storage and Retrieval'**, can reduce the cost of processing blockchain operations by up to 78% and ensure the accuracy of retrieved data. "Our solution proposes a blockchain search system that provides a cost-effective way to manage blockchain data by improving gas [processing] efficiency and ensuring the integrity of queries within a blockchain network," says Professor XU.

Professor XU is focusing on more innovations ahead, saying, "Our research team is committed to pursuing further breakthroughs that can be translated into practical solutions and technologies to improve people's quality of life."

4.14 Marine Biology Team Makes Waves with Discovery of New Species

The groundbreaking work of Professor QIU Jianwen and his team at HKBU's Department of Biology was featured in popular newspaper *Wen Wei Po* in May 2025. In the exclusive interview, Professor QIU highlights the rich diversity of Hong Kong's marine ecosystem and explains his team's work to unravel the complex interaction of species beneath the waves by comparing reference materials, analysing DNA and morphology, and conducting on-site dives. As an expert in new marine discoveries, Professor QIU has successfully identified 30 new species, including shellfish such as moon shells and mussels, as well as molluscs such as sea caterpillars, jellyfish, slugs, and corals.

Professor QIU Jianwen photographed for the Wen Wei Po.

Most recently, Professor QIU's team has discovered two new species of windowpane shell at Mai Po, Hong Kong and in the South China Sea. The windowpane shell is a small group of saltwater bivalves belonging to the genus *Placuna* under the family *Placunidae*, whose worldwide number has now risen from five to seven. The team has named the new species *Placuna aestuaria* and *Placuna vitream*. Their findings have been published in the academic journal ***Ecology and Evolution***.

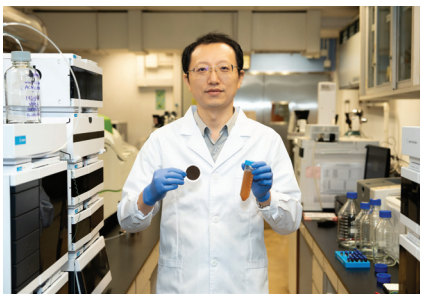
4.15 Chitin Production Breakthrough Wins Gold Award in Geneva

Professor Matthew Yuk-yu LUI and his team at the Department of Chemistry have developed an innovative way to produce chitin (an aminopolysaccharide polymer) using green and recyclable ionic liquid.

An eco-friendly, recyclable ionic extractant is used to isolate chitin from crustacean shells, enabling the production of a purer, high-quality grade of the polymer for use in various industries, including healthcare and food packaging. While enhancing the efficiency of chitin production, the new method also reduces chemical use and waste.

This innovative project was awarded a gold medal at the 50th International Exhibition of Inventions in Geneva in April 2025.

4.16 Biology Research Team Makes Major Advances in Waste Management



Research teams led by Professor ZHAO Jun, Department of Biology at HKBU, have developed a number of cutting-edge green solutions for dealing with waste materials, including plastics, wastewater, and biomass waste.

In a major step forward for environmental protection and carbon emission reduction, Professor ZHAO's team has developed a new method of catalytic pyrolysis to transform plastic waste into oil and valuable products. The catalysts developed by the team require less time and energy to create more high-value products, offering new hope for overcoming the global challenge posed by plastic waste.

Another project by the team has produced a catalytic membrane which can clean wastewater more efficiently using oxygen. This innovation contributes to the effort to tackle environmental pollution by offering a safer, more cost-effective, and environmentally friendly solution for wastewater treatment. The research findings from this breakthrough have been published in the international academic journal ***Advanced Functional Materials***.

A third catalytic system developed by the team converts wet and dry waste such as food waste, wastepaper, and yard waste into hydrogen, offering high efficiency, low operating costs, and energy savings. This innovative project was awarded a gold medal at the 50th International Exhibition of Inventions in Geneva, and secured a gold medal at the 15th International Invention Fair in the Middle East.

4.17 Iconic Chinese Paintings Transformed into 3D Teaching Models

Professor Sammy Kin-sum LI developed a 3D ancient painting platform, which has been adopted by 30+ schools to enrich Chinese history and art learning.

A team from HKBU's Department of History has developed 3D models of antique Chinese paintings into an e-learning platform, which has now been adopted by more than 30 primary and secondary schools.

This up-close introduction to a selection of famous Chinese paintings through the ages, from the cave murals of Mogao to Qing dynasty imperial scrolls, enables teachers to introduce Chinese history and culture in a more vivid and tangible way. Users can access the 3D models online or through mobile, where they can rotate, move across, zoom in, or view the paintings from different angles.

The team used the 3D models in conjunction with the newly revised Chinese History curriculum to create supplementary art history teaching materials. Through these courses, students master a knowledge of perspective and dynamic multi-perspective painting techniques to analyse paintings, compare and contrast ancient Chinese and European classical paintings, and recognise the unique characteristics of Chinese art in the context of global art history.

In the year ahead, Professor Sammy Kin-sum LI at the Department of History hopes to promote the platform to more schools and work with university academic offices to share it overseas. For example, he recently worked with teachers in Bangladesh to share antique Chinese paintings with local students through Zoom. "Art is the common language of mankind," says Professor LI. "Even if you don't know Chinese, this is something you can learn."

4.18 New Athlete Monitors Used at Major Sports Competitions

Professor Patrick Wing-chung LAU interviewed by Xinhua News in Hong Kong.

Wearable performance sensors for athletes, developed by HKBU's Department of Sports and Health Sciences, have been put into use at international events such as the Paris Olympics, the Ironman World Championship, and the Hong Kong Marathon.

The world-leading technology monitors athletes' physiological indicators in real time, helping to protect their health and safety during competitions. Wireless and lightweight, the sensors track athletes' heart rate, blood pressure, sweat loss, and other physiological indicators, as well as the amplitude and distance of each step. The data is sent to a dashboard for researchers to view and analyse.

Professor Patrick Wing-chung LAU of the Department of Sports and Health Sciences explains that the system developed by his team operates on a 'traffic light' system of red, yellow, and green. When all the athletes' physiological indicators are in a safe state, the system will give them a 'green light', which means they can increase their intensity and speed; a 'yellow light' means that a critical point has been reached and they must be extra careful; a 'red light' means they must stop immediately.

"Our vision is to ensure the safety of athletes and improve their abilities and performance," says Professor LAU. The team is actively collaborating with science and technology companies to continue enhancing the equipment and introducing new functions.

5 SOCIAL IMPACT AND COMMUNITY ENGAGEMENT

5.1 TV Series Shares Key Public Health Information

A six-part TV programme, *Health Concern Group (健康關注組)*, created by the Nursing Education Division from HKBU's School of Continuing Education, was broadcast on HOY TV in July 2024. Focusing on home care for patients with respiratory conditions and heart problems, the series offered accessible professional advice that empowered individuals to manage health conditions at home. The series provided both theoretical guidance (such as monitoring blood pressure) and practical skills (such as wound dressing) to equip viewers with essential health knowledge, enhance self-care, and improve safety measures. The ultimate goal was to reduce preventable complications and hospital burdens, improve community self-care capacity, boost health awareness, and strengthen public trust in healthcare guidance.

5.2 Internet-based Therapy Programme Offers Support for Students

An online Cognitive Behavioural Therapy (iCBT) programme developed by Professor PAN Jiayan, Department of Social Work, and her team has demonstrated remarkable efficacy in improving the mental health of Hong Kong university students. Named **REST Online**, the 10-week guided iCBT programme is a goal-oriented psychotherapy course that helps people cope with life challenges by adjusting their patterns of thinking or behaviour. The programme has shown a significant alleviation of psychological distress, depressive and anxiety symptoms, and negative thoughts and emotions, together with a notable increase in positive thoughts and emotions. As many university students struggle to access the support and treatment they need, this course offers a more effective and cost-efficient way to support them.

5.3 Karate Training Sessions Improve Mental Health for Vulnerable Groups

Mr Aron Chun-hei CHEUNG, Founder of Sportcanheal852 (1st right), with the guests.

Sportcanheal852, a student-led social enterprise established through HKBU, launched the **Win Chuen's Journey of Love and Soul – Exploring Karate and Mental Health Training** programme in 2024, with support from the Win Chuen Charitable Fund. This programme offered basic karate training to the elderly, children from low-income families, and ethnic minority teenagers, enabling them to relieve stress, build resilience, and boost their mental well-being through sport. To share the programme's success, a graduation ceremony was held at HKBU in November 2024, attracting over 100 guests.

5.4 Art Tech Used to Promote Community Conservation

The exhibition was held at a shopping mall in Kai Tak.

Artists from HKBU partnered with Nan Fung Group's community initiative **In Time Of** to present a multimedia art exhibition in Kai Tak in November 2024. Using 3D scanning, artificial intelligence (AI), and augmented reality (AR), the exhibition presented the stories of traditional local shops that repair old appliances, alter clothing, and mend shoes. Visitors to **Foreseen Property 2099: Journey of Future Archaeology** were invited to reflect on the value and cultural significance of local shops and items imbued with memories, while exploring issues related to community conservation. An online data archive of the old shops was also created and made accessible to the public, with the aim of preserving these spaces and memories in a digital format.

5.5 Nature Awareness Project Involves Hong Kongers of All Ages

The **Environment and Conservation Fund (ECF) Nature Connection: First Steps into Nature – Biodiversity Explorer** project, hosted by the HKBU School of Continuing Education Environmental Education Group, concluded in 2024 after two successful years. Funded by the Environment Conservation Group, the project raised awareness and promoted understanding of local biodiversity and the natural environment among primary and kindergarten students, as well as teachers and parents. Teacher training sessions, on-site biodiversity workshops, and storytelling sessions were organised for more than 700 participants, garnering positive feedback from all involved. Community awareness of the diversity of local animals and plants was further enhanced through a Hong Kong-wide drawing competition, a community exhibition in Times Square, and an online video campaign.

5.6 Jockey Club InnoFamily Awards Presented on HKBU Campus

'GingFM', 'Daddy Rescue', and 'NeuroAllies' win the top three prizes at the InnoFamily Award 2025.

The Department of Social Work organises the InnoFamily Award to empower families through technology.

The grand final of the InnoFamily Award, an initiative under the Jockey Club SMART Family-Link Project and organised by the HKBU's Department of Social Work, concluded on campus in May 2025. The award showcased participants' boundless creativity in enhancing Hong Kong's family services through digital communication technologies. Students from all institutions in Hong Kong were invited to join the competition and collaborate in developing innovative solutions to enhance family services using information and communication technology. In the workshops stage, participants received free guidance from senior experts on applying advanced technologies such as AI and VR in the field of social services and obtained personal certificates. Each team then submitted a creative proposal, the top three of which were awarded prizes ranging from HK$5,000 to HK$20,000, sponsored by the Hong Kong Jockey Club Charities Trust. The competition attracted over 200 students from 14 local tertiary institutions across various disciplines. Over an eight-month creative learning journey, participants addressed various pain points in family services, transforming innovative ideas into impactful service proposals, and driving progress and innovation in social services.

5.7 Water Misting System Improves Showers for Wheelchair Users

A water misting system designed to enhance the bathing experience of wheelchair users has shown considerable promise and received international recognition. Developed by Professor Anna Lai Yin QIN from the Academy of Visual Arts and her team at HKBU, this revolutionary, portable water misting system operates by generating two types of intersecting water mists: a fine, even mist and a more concentrated, powerful one. These options allow users to cleanse themselves effectively in a temperature-controlled environment, while significantly reducing water consumption compared to traditional showers.

The system features adjustable intensity, voice control, and pre-programmed settings, enabling wheelchair users to operate and control the mist independently without assistance. Its zero-installation, wireless design offers flexibility and adaptability within a variety of bathroom environments and layouts, delivering safer, more comfortable, and more independent bathing for people with mobility limitations. The system was presented with an award at the 50th International Exhibition of Inventions Geneva.

5.8 Free Chinese Medicine Treatment Delivered on Community Day

HKBU's School of Chinese Medicine held an HKBU Chinese Medicine Community Day in May 2025, where nearly 40 Chinese medicine practitioners provided free consultations and treatments at seven HKBU Chinese medicine clinics across Kowloon and Hong Kong Island. Over 1,000 individuals received two doses of basic Chinese medicine. Visitors also enjoyed some Chinese herbal tea and participated in guided tours at Lui Seng Chun to learn about the culture and history of Chinese medicine. The free consultation services can be expanded to more locations in future years, helping promote Chinese medicine and public health awareness in the community.

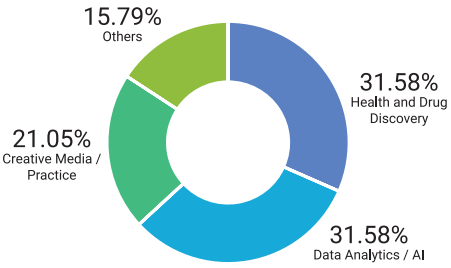
6 PROMOTION OF ENTREPRENEURSHIP

6.1 TSSSU Scheme Fosters New Entrepreneurship

HKBU TSSSU is a 'technology start-up' scheme that brings R&D results from campus to the real world by encouraging more entrepreneurial activities at HKBU. The programme facilitates greater commercial development of HKBU's intellectual property rights (IPR) and technology developed at HKBU, and motivates spin-off companies to commercialise them.

In 2024-2025, 19 companies received funding through TSSSU amounting to HK$16 million. Eight of these companies went on to apply for funding from The Hong Kong Science and Technology Parks Corporation (HKSTP), all of which were granted; six were accepted into the HKSTP Incubation Programme and two into the HKSTP Ideation Programme.

Distribution of TSSSU-Funded Companies by Sector (2024-25)



6.2 HKBU Inno Realisation Fund Prepares New Companies for Success

The HKBU Inno Realisation Fund has provided up to HK$1.2 million to six companies (Cohort 2) in 2024-2025, as well as conditional offers from the HKSTP Co-Ideation Programme, resulting in additional funding of up to HK$600,000. The fund aims to foster an innovative and entrepreneurial culture within the HKBU community, facilitate knowledge transfer, and propel the commercialisation of HKBU's innovations and know-how.

During its first five months, the fund concentrated on transforming knowledge outcomes into viable business and action plans. In the following seven months, the fund will shift its focus toward business development and industry collaboration. The Knowledge Transfer Office (KTO) will groom projects in preparation for external support schemes such as the Technology Start-up Support Scheme for Universities (TSSSU), Hong Kong Science and Technology Parks Corporation (HKSTP), and Cyberport incubation programmes to further their impacts.

6.3 Entrepreneurial Learning Team Offers Help and Advice

The Entrepreneurial Learning Team (ELT) at the Career Centre promotes an entrepreneurial culture on campus through holistic start-up training and support. In 2024-25, the Career Centre organised over 40 start-up-related training sessions, exploration trips, consultations, and competitions. It supported 610 students in enriching their entrepreneurial skill sets and provided them with opportunities to actualise their business plans. A total of eight student start-up teams has been formed and nurtured by the ELT, four of which have set up companies and begun business operations.

Career Centre 事業策劃中心

Start-up Saturday is a campus-wide student competition run by the ELT, which offers holistic support and HK$30,000 in seed funding for selected start-up teams. One winning start-up, Bio-Leisure, uses digital tools to foster a deeper connection with our planet and has since been admitted to the HKSTP Ideation Programme. Another, SportscanHeal852, is a social enterprise that improves mental health through sports that has secured HK$200,000 from a private donation and is also running classes to generate revenue.

The ELT also provides a selection of masterclasses on key entrepreneurial topics, day trips to the GBA to engage with the region's thriving start-up culture, one-on-one meetings to discuss business ideas, and access to Inno Space start-up training facilities.

6.4 HKBU Start-ups Pitch Ideas at StartMeUpHK 2024

Six HKBU start-up teams were selected by the Entrepreneurship Innovation Centre (EIC) of the School of Business to compete in the 'Star Ferry Radical Pitch Debate' as part of the StartMeUpHK Festival 2024. The event was hosted by LOUDER Connect, a platform that fosters collaboration between entrepreneurs and industry professionals.

Held on the Star Ferry, the event paired start-ups working on similar problems and challenged the teams to pitch their ideas head-to-head in a fast-paced, high-pressure environment. Debate topics included the use of AI algorithms in mentorship platforms, the role of AI in education, and environmental conservation. The teams also joined a networking session at the Maritime Museum, where they met industry experts, explored potential partnerships, and gained insights from experienced mentors.

6.5 Start-up Wins Award at Global Innovation and Entrepreneurship Contest

MicroFlow Innovation Limited, a spin-off company from a research team led by Professor REN Kangning, Department of Chemistry, has achieved global recognition for its **All-scenario Rapid Testing Platform against Antimicrobial Resistance**. Out of more than 150 local innovation projects, the project was named the second runner-up at the 2024 'Maker in China' SME Innovation and Entrepreneurship Global Contest – Hong Kong Chapter (MiCHK) Final in September and at the Global Final in December 2024.

The project addresses a major hurdle in combating antimicrobial resistance by delivering antimicrobial susceptibility testing (AST) results within three hours and identifying the most effective antibiotics before prescription. This technology has recently been patented by the company as a reliable, cost-effective, and resource-independent tool for large-scale screening.

6.6 HKBU Teams Impress Innovation Judging Panel in Zhuhai

After a series of exciting preliminary and semi-final rounds at the 2024 JingNiuHui Cup Innovation and Entrepreneurship Competition, held at the UIC Maker Center in Zhuhai, three outstanding teams from HKBU were selected from among many competitors to advance to the finals.

At the final presentations, the shortlisted teams showcased the depth and breadth of their innovative projects through impressive presentations. The judging panel of experts praised the participants' performances and encouraged them to continue their efforts, laying a solid foundation for their future paths in innovation and entrepreneurship.

In the end, the **'FIP Analyzer'** project won the Silver award, while the **'EZone Project'** won the Bronze award, and 'CineArtLink' received the Excellence Award.

6.7 BIG Mentoring and Sponsorship Programme Returns in 2025

The Dean's Cup Business Innovation Gymnasium (BIG) 10.0, held from April to May 2025, saw over 150 innovative business proposals from HKBU students vying to win a fully funded trip to Web Summit 2025 in Lisbon. This year's winner, 'Small Potato BIG Dream', is a social enterprise dedicated to empowering individuals with Special Education Needs (SEN) through tailored training.

Hosted by the Entrepreneurship and Innovation Centre (EIC) of the School of Business, BIG is a business idea competition which provides a platform for students to develop their business ideas. The competition has evolved into a start-up bootcamp offering a strong mentoring component, with the aim of upskilling students through immersive and interactive learning provided by a team of dedicated mentors.

7 KT EVENTS AND INDUSTRY ENGAGEMENTS

7.1 HKBU Knowledge Transfer Awards Showcase Initiatives with Social Impact

Established in 2014, the HKBU KT Awards are presented every year to HKBU staff who have made exceptional contributions to knowledge transfer. In 2025, these awards were presented to two projects which highlight HKBU's commitment to social well-being, translating research into community benefits.

The Innovation Award was presented to Dr Ashok IYASWAMY from the School of Chinese Medicine for his groundbreaking development of **'Engineered Extracellular Vesicles and Phytochemicals'** that can cross the blood-brain barrier effectively, offering a major breakthrough in the early diagnosis and treatment of Alzheimer's disease. Meanwhile, the Knowledge Transfer Award was presented to Professor Ada Wai-tung FUNG from the Department of Sport, Physical Education and Health* for her platform called **'The Hong Kong-Vigilance and Memory Test'**, which provides free digital cognitive screening for elderly people.

Dr Ashok IYASWAMY (3rd right) and Professor Ada Wai-tung FUNG (3rd left), at the HKBU KT Awards 2025 recognising exceptional knowledge transfer for social wellbeing.

Notes:

* Department of Sport, Physical Education and Health has been renamed as Department of Sports and Health Sciences from 1 March 2025.

7.2 University Unveils Green Tech Innovations at ReThink HK

In September 2024, HKBU had the privilege of welcoming Hong Kong's Secretary for the Environment and Ecology, Mr TSE Chin-Wan, to its booth at ReThink HK, an event created to bring together business leaders, sustainability experts, and individuals tasked with researching and implementing net-zero and ESG strategies. Mr TSE explored HKBU's latest innovative projects, which focus on sustainability and environmental impact, including green hydrogen production technology, thermostable pigment coatings, and eco-friendly bioplastics made from organic waste.

Professor ZHAO Jun from the Department of Biology spoke at the event about his research project on converting urban organic solid waste into hydrogen, while Professor Ken LEUNG from the Department of Chemistry delivered a keynote speech on sustainable innovations.

Professor Ken Cham-fai LEUNG delivers a keynote speech during the 'Tech Talks: Sustainable Technology' session.

7.3 Start-up Projects Spotlighted at HKTDC Entrepreneur Day 2024

HKBU's Knowledge Transfer Office and Student Affairs Office's Career Centre jointly participated in the Hong Kong Trade Development Council's Entrepreneur Day 2024, a flagship event promoting entrepreneurship, with opportunities and tailored support services for start-ups.

Eight promising student start-ups and innovative teams from HKBU were invited to showcase their projects, two of which were supported by the HKBU Inno Realisation Fund. Domain Technology Limited transforms 2D images into realistic 3D models using AI and computer vision techniques, while Motion Expert Hong Kong Limited brings together a cinematic database and an AI engine to unleash creativity in Hong Kong cinema. The Entrepreneur Day was an ideal opportunity for the two companies to engage with potential industry partners and discuss future opportunities for collaboration.

7.4 Tech and Translation Breakthroughs Showcased at JUMPSTARTER

HKBU made its debut at the innovation and technology extravaganza JUMPSTARTER 2025 at the AsiaWorld-Expo, where the University introduced its cutting-edge art tech and sustainability development projects, and the technology translation achievements of its start-ups.

The University showcased three start-ups dedicated to green technologies, all of which have identified partners to develop application solutions or scale-up for industries, as well as a 3D audiovisual art tech installation **'Horizon_25'**. One of the green projects, BioH2 Tech Limited, was shortlisted at JUMPSTARTER for the 'One Earth Global Pitch Competition', focusing on AI and sustainability.

At the event, HKBU also announced a collaboration with Alibaba DAMO Academy to initiate joint efforts in advancing technology for health science and art tech development. Professors from both institutions also spoke about transdisciplinary innovations aimed at addressing modern healthcare challenges in a fireside chat titled 'The Impact of AI on Current Medical Diagnosis and Future Development Trends'.

Ms Lillian Man-lei CHEONG, Under Secretary for Innovation, Technology and Industry of the HKSAR Government (centre), and Ms Cindy Lok-mei CHOW, Executive Director and CEO of Alibaba Entrepreneurs Fund (3rd left), visit HKBU's booth and learn about the University's pioneering green innovations.

7.5 Start-up Teams in the Spotlight at International Healthcare Week

Over 10 start-up projects showcased HKBU's cutting-edge medical research at the 4th International Healthcare Week, including the Asia Summit on Global Health and the Hong Kong International Medical and Healthcare Fair. Ranging from community health to medical devices and treatments, these projects caught the eye of investors, medical professionals, and attendees, leading to some promising networking and collaboration opportunities.

Dr Jenny Chui-yiu NG from the Department of Biology received a commendation for her pitch presentation highlighting HKBU's strength in research and innovation. Dr NG and her colleague Professor Jill Man-ying CHIU have developed compounds that can eliminate the endocrine-disrupting and carcinogenic risks associated with chemical sunscreens while preventing skin absorption. Their project won a gold medal at the 50th International Exhibition of Inventions in Geneva.

Meanwhile, HKBU's RAISe+ project **'Automated Multiplex Diagnostics System'** announced a partnership with Gleneagles Hospital to integrate advanced medical technologies into clinical practice.

7.6 HKBU Inventions Shine at Asia Exhibition of Innovations and Inventions

Dr XU Jun's research wins Gold at AEII for detecting sulfur-treated food products using tryptophan sulfonate.

Innovative research projects conducted by HKBU researchers received three prizes at the 4th Asia Exhibition of Innovations and Inventions Hong Kong (AEII), held in December 2024. This annual exhibition celebrates innovations and inventions from across the region.

Tryptophan sulfonate, developed by Professor XU Jun of the Chinese Medicine – Teaching and Research Division, School of Chinese Medicine, won a gold medal at the event. This new chemical marker allows sulphur-treated food and Chinese herbal medicinal products to be inspected with greater speed, accuracy, and efficiency.

A medical innovation developed by Professor WANG Jun from the Department of Chemistry won a silver medal for its anti-inflammatory potential and neurobiological benefits. Another silver medal-winning project developed by Professor YU Zhiling of the Chinese Medicine – Teaching and Research Division, School of Chinese Medicine, uses a new compound to produce effective anti-arthritic impacts with reduced side effects.

7.7 Inventions Win Four Gold Medals at Middle East Fair

Four HKBU inventions are awarded gold medals.

HKBU won four gold medals at the 15th International Invention Fair in the Middle East (IIFME), held in Kuwait in February 2025, marking the University's debut at the event. The medals were won for projects in a wide range of areas: identity verification based on lip motion, a polysaccharide derived from Chinese herbal medicine, sustainable and energy-saving nanofibre technology, and catalysts for converting biomass waste into high-yield green hydrogen.

Organised by the Kuwait Science Club, IIFME is one of the largest specialised exhibitions of inventions and innovations in the Middle East. The 2025 event was held in collaboration with the International Federation of Inventors' Associations, the World Intellectual Property Organization, the United Nations Educational, Scientific and Cultural Organization, and the International Exhibition of Inventions of Geneva.

7.8 Multiple Breakthroughs Recognised for Innovation in Geneva

HKBU scholars receive nine prizes.

HKBU's deep commitment to innovation with practical applications was on full display in Geneva at the 50th International Exhibition of Inventions in April 2025. The University's projects won nine awards at the exhibition, including two which received the highest acclaim, the Gold Medal with Congratulations of the Jury.

The first top prize-winning project, developed by Professor BIAN Zhaoxiang and Professor TAN Hor-yue of the Centre for Chinese Herbal Medicine Drug Development, is a novel formulation of Chinese herbal medicines, CDD-2103, which helps stabilise remission in patients with ulcerative colitis, an aggressive form of inflammatory bowel disease that is becoming increasingly prevalent in the Asia Pacific region.

Another project to win the highest honour in Geneva is a method for producing an unusual monoterpenoid, developed by Professor LIAO Pan of the Department of Biology. This invention provides a cost-effective method for producing a compound commonly used in the perfume and fragrance industry. The method is expected to be less expensive than traditional approaches and more environmentally friendly.

Three further HKBU innovations also received Gold medals in Geneva. The first, developed by Professor ZHAO Jun, Department of Biology, is an advanced catalytic system that converts wet and dry waste such as food waste, wastepaper, and yard waste into hydrogen, offering high efficiency, low operating costs, and energy savings. The second Gold medal-winning project, developed by Professor Jill Man-ying CHIU, Department of Biology, is an advanced sunscreen technology that provides protection across a broader spectrum of light than traditional sunscreens and limits the risks of absorbing harmful chemicals. The third Gold medal winner, developed by Professor Matthew Yuk-yu LUI, Department of Chemistry, is a new, more eco-friendly method to produce the polysaccharide chitin for use in healthcare and food packaging.

HKBU's award-winning projects at the 50th International Exhibition of Inventions Geneva exemplify the University's unwavering dedication to translating research outcomes into practical applications for the benefit of mankind. The exhibition is an annual global event devoted exclusively to inventions, attracting over 28,000 people from around the globe in 2025. A total of 1,050 inventions from over 40 countries and regions were evaluated by a panel of professional judges.

Aspiring to be a leading research-led university in Asia, HKBU engages in cutting-edge, innovative, and transdisciplinary research and knowledge transfer endeavours that push the boundaries of knowledge, address global issues, and contribute to the well-being of both local and international communities.

8 LOOKING AHEAD

As a leading knowledge transfer hub, HKBU remains committed to the task of harnessing new innovations which hold out great potential for improving economic and social wellbeing. In the year ahead, the University's growing involvement in infrastructure development—such as the imminent opening of the city's first Chinese medicine hospital, CMHHK, for which HKBU has been appointed as the Contractor and HKBU Chinese Medicine Hospital Company Limited will serve as the Operator—will help to propel innovation and reinforce Hong Kong's position on the global stage. HKBU's ongoing drive to modernise and standardise Chinese medicine, backed by large-scale clinical data and strategic knowledge transfer initiatives, will play a key role in raising health standards across Hong Kong society.

The University's wide variety of knowledge transfer efforts are in line with the Government's policies and measures to support the long-term development of the city's medical system, innovation and technology (I&T) industry, and education sector, as announced in the 2025-2026 budget. HKBU welcomes the Government's proposed support in these areas, and is keen to be involved on all fronts. Key initiatives in innovative technology, R&D, and translational research will help promote industry-university-research collaboration.

As well as working with government to generate further innovations and knowledge transfer, the University also plans to deepen its strategic collaboration with industry and international partners. Its particular focus will be on expanding connections in the GBA, joining Belt and Road initiatives, and strengthening partnerships in the Middle East and overseas. Strategic agreements have recently been signed with partners in some of these regions and further afield. With many more such collaborations on the horizon, the University is eager to build strong connections and drive impactful projects that can help develop Hong Kong as a key hub for regional and international knowledge transfer.

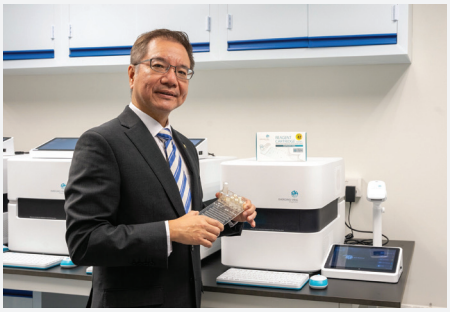
HKBU Knowledge Transfer Office 2024-2025

9 IMPACT CASES

9.1 Two RAISe+ Projects Gain International Recognition

Two recent HKBU projects funded through Hong Kong's Research, Academic and Industry Sectors One-plus (RAISe+) Scheme have received recognition and approval from the WHO and the US Food and Drug Administration, respectively. Professor Alexander Ping-kong WAI, President and Vice-Chancellor of HKBU, commented that:

"Securing funding from the RAISe+ Scheme exemplifies the University's commitment to advancing cutting-edge research and translating it into applications that directly benefit society. This achievement underscores the University's dedication to driving innovations in Health and Drug Discovery, one of our key research clusters."



The Automated Multiplex Diagnostics System developed by Professor Terence Lok-ting LAU, Interim Chief Innovation Officer of HKBU.

Professor BIAN Zhaoxiang's new Chinese medicine for constipation in the elderly secures RAISe+ funding.

Launched in October 2023, the RAISe+ Scheme aims to unleash the potential of local universities in the transformation and commercialisation of research and development outcomes, and to facilitate relevant collaboration between government, industries, universities, and research sectors.

The Automated Multiplex Diagnostics System, a pioneering detection platform for disease diagnosis developed by HKBU and supported with funding from the RAISe+ Scheme, has been recognised by the World Health Organization for its potential to significantly enhance health systems and access in low and middle-income countries.

Officially recommended in the WHO's 2024 Compendium of Innovative Health Technologies for Low-resource Settings, the platform is capable of detecting 42 respiratory pathogens, including 28 viruses, 11 bacteria, and three fungi in less than 1.5 hours. Better still, this is achieved without the need for a resource-intensive laboratory, multiple equipment, or specially trained technicians, while maintaining superior sensitivity and specificity. The system was invented by a local research team led by Professor Terence Lok-ting LAU, Interim Chief Innovation Officer of HKBU, with the support of Professor YUEN Kwok-yung, Head of the Department of Microbiology at Hong Kong University and Managing Director of the Centre for Virology, Vaccinology and Therapeutics, as well as a private company. With ISO 13485 accreditation for its production sites in Hong Kong and mainland China, the system is now being supplied to hospitals and clinics.

Another HKBU project to receive RAISe+ funding in 2024 is a new Chinese herbal medicine for treating functional constipation in the elderly, developed by Professor BIAN Zhaoxiang, Associate Vice-President (Clinical Chinese Medicine) and Director of the Centre for Chinese Herbal Medicine Drug Development (CDD). This project involves the development of a drug candidate called CDD-2101 – A Novel Botanical Formulation for Constipation-related Indications, which combines a traditional Chinese herbal formulation with advanced technologies, following research and manufacturing conducted in compliance with international standards.

The Investigational New Drug Application for CDD-2101 has been successfully submitted to the US Food and Drug Administration in 2023, and approval has been granted to conduct a phase I clinical trial of the new drug in the US. The RAISe+ funding will further support the clinical trial development to make the drug available to all patients in need.

These two innovations exemplify the diverse streams of research and development being carried out at HKBU that seek to make a genuine difference in people's lives. Whether revolutionising diagnosis or harnessing traditional remedies to treat ailments in new ways, the University's teams are continually pushing frontiers and bringing the benefits of their work to fruition through community outreach and business partnerships.

HKBU and AAHK representatives open the 'Fly Me There' exhibition at Hong Kong International Airport Terminal 1.

Mr Steven YIU, Executive Director, Airport Operations of AAHK, delivers a speech.

The 'Fly Me There' exhibition.

Visitors immerse themselves in a world of breathtaking cultural heritage.

9.2 Asia's First 360° Immersive Cinema Unveiled at HK Airport

The **Fly Me There** exhibition, installed at Hong Kong International Airport from December 2024 to February 2025 took visitors on a virtual cultural tour, allowing them to experience more than 40 breathtaking cultural heritage sites in eight Asian countries: China, Cambodia, India, Indonesia, Myanmar, Sri Lanka, Thailand, and Turkey.

The first-of-its-kind immersive 360-degree LED cinema featured in the exhibition showcased how digital film, video games, virtual, and augmented reality technologies can be fused to create an interactive mode of artistic expression. Upon entering this immersive large-scale installation and putting on 3D glasses, visitors experienced the sensation of taking off from Hong Kong International Airport, soaring into the clouds, and exploring more than 40 cultural heritage sites, including temples, pagodas, and grottoes across Asia. These striking sites included the Lingyin Temple and Yong Dong Tianhou Temple in China; Ajanta caves in Aurangabad and Chetiyagiri Vihara in Sanchi in India; and the Istanbul Chora Church and hot air ballooning in Cappadocia, Turkey. The cinema showcased the exterior and interior of these stunning sites, allowing visitors to experience them as if they were really there.

A collaboration between HKBU and the Airport Authority Hong Kong (AAHK), the exhibition is one of the deliverables of the **'Future Cinema Systems: Next-Generation Art Technologies'** project, which was awarded HK$35.4 million in funding by the Innovation and Technology Commission of the HKSAR Government. This was the first initiative by the project to take place in a large public venue in Hong Kong.

The exhibition was jointly curated and designed by Professor Jeffrey SHAW, Chair Professor of the Academy of Visual Arts and Director of the Visualization Research Centre at HKBU, and Professor Sarah KENDERDINE from the École Polytechnique Fédérale de Lausanne in Switzerland and Visiting Professor of the Department of Computer Science at HKBU. The project was carried out in partnership with Professor Richard ALLEN, Chair Professor of Film and Media Art of the School of Creative Media at City University of Hong Kong.

By bridging art and technology and commercialising innovative solutions, 'Fly Me There' helped support Hong Kong's creative industries while also meeting the growing demand for interactive and immersive cultural, entertainment, and educational experiences – reinforcing the city's position as a leader in art tech innovation and international cultural exchange.

HKBU leaders, government, and Jockey Club officials launch the 'Jockey Club Traditional Chinese Medicine-driven Mental Wellness Project.'

9.3 Chinese Medicine Initiatives Make a Difference in the Community

Besides the University's ongoing infrastructure projects and research initiatives expanding the role of traditional Chinese medicine, 2024-2025 also saw HKBU staff take Chinese medicine into the community through a number of outreach programmes designed to both improve the lives of ordinary people and raise community awareness. Two programmes in particular exemplify the University's outreach efforts.

Stroke Prevention and Rehabilitation Success

Between 2020 and 2024, the **BOC-HKBU Chinese Medicine Community Stroke Prevention and Rehabilitation Scheme**, organised by HKBU and the Hong Kong Sheng Kung Hui Welfare Council (the Welfare Council), provided more than 31,000 Chinese medicine treatment service sessions to elderly stroke patients and people with a medium-to-high risk of stroke. Participants received free sessions of acupuncture, massage therapy, and Chinese medicine treatment sessions, followed by comprehensive social worker support. These efforts significantly improved their self-care abilities, cognitive abilities, and neurological functions, and resulted in an enhanced quality of life. As well as the treatment sessions, the scheme also involved community education activities, including talks, a website, and various training sessions, reaching a total of nearly 95,000 people.

95,000
Reached People

28,000
Free Sessions

470
Patients

HKBU's Clinical Division delivers medications to Community Living Rooms for staff to distribute.

The programme offers free Chinese medicine consultations and prescriptions to Sham Shui Po and Hung Hom communities.

Sino Group hosted HKBU Chinese medicine team for free frontline employee health checks and talks.

Advancing Mental Wellness

In December 2024, HKBU received a generous donation of HK$70.95 million from The Hong Kong Jockey Club Charities Trust for the three-year **Jockey Club Traditional Chinese Medicine-driven Mental Wellness Project**, which provides free Chinese medicine treatment and counselling to 5,000 participants suffering from common mental health issues, such as insomnia, anxiety, and depression. Training will also be provided to Chinese medicine practitioners, students, social workers, and community ambassadors in how to support individuals with common mental disorders.

The project aims to address the worrying prevalence of mental health issues in Hong Kong, as well as enhance public awareness and improve mental wellness through education and evidence-based Chinese medicine services.

Toward a Healthier Community

HKBU remains dedicated to promoting health and well-being through Chinese medicine, including community engagement, evidence-based services, and cross-sector partnerships. The School of Chinese Medicine and other departments seek to translate the University's Chinese medicine expertise into practical assistance and increased public awareness, thereby making a tangible difference in Hong Kong society.

HKBU showcased sports science innovations at 'Journey to Excellence' event in Paris, July 2024.

Mr Joël BOUZOU, President of the World Olympians Association (top), and Ms YANG Yang, Vice-President of WADA (below) joined a 2-day panel on Olympians' lives and sports technology advances.

9.4 University Showcases R&I Achievements during Paris Olympics

Amid the start of the 2024 Summer Olympics, HKBU organised the **Journey to Excellence: HKBU in Paris** symposium at OLY House in Paris, which showcased the University's achievements in the field of sports and athletics.

Focused on two themes, **'Enhancing Life Outside Sport for Olympians and Elite Athletes'** and **'Science, Technology, AI, and Sport'**, the Paris symposium brought together experts and scholars from around the world, such as Mr Joël BOUZOU, President of the World Olympians Association, and Ms YANG Yang, Vice-President of the World Anti-Doping Agency, for in-depth discussions. Speakers at the event engaged in extensive and rigorous discussions on issues related to the latest developments in the sports world, including protecting the health and well-being of athletes, supporting the all-round development of athletes, the development and application of sports science and technology, and the global promotion of sports events. The event was broadcast online, attracting over 15 million views and expanding its reach to audiences interested in sports equity and athlete health.

HKBU's research excellence was also on display. A team of HKBU researchers and students led by renowned expert Professor Yannis PITSILADIS from the Department of Sport, Physical Education and Health, at the Academy of Wellness and Human Development, showcased their anti-doping research and signed a partnership with the life science tech firm MGI Tech Co., Ltd. ('MGI'). The partners will leverage their joint expertise and capabilities to detect and stamp out doping in sport. Doping is currently used by an estimated 6% of top athletes, and its eradication will level the playing field for competitors while also improving the health of athletes.

As well as demonstrating its use of research and technology to improve health and performance in sport, the University also shared details of its ongoing support for past and present athletes from Hong Kong and mainland China, including scholarships, flexible study arrangements, and career development advice.

15M+
Online Viewers

Notes:

Some of the KT performance indicator data previously reported in the HKBU KT Annual Report will now be found under Domain 3 of the University Accountability Agreement (UAA) as sector-wide performance measures (PMs) and institution-specfic key performance indicators (KPIs) data.

N1 Companies that have been established by staff, graduates, or students and are now operationally independent of the university. This includes but is not limited to all spin-off companies that were funded by the HKBU Technology Start-up Support Scheme for Universities (TSSSU).

N2 The student contact hours are defined as the number of enrolments multiplied by the number of contact/course hours.

N3 Data are collected from all units at HKBU. The data includes both in-person and online activities.

	Performance Indicators	2023-24	2024-25
1	Number of patents filed	43	43
2	Number of economically spun-off companies [N1]	66	84
3	Number of collaborative researches	12	15
4	Number of contract researches (other than those included in 'collaborative researches' above)	115	150
5	Number of consultancies	58	79
6	Number of student contact hours in short courses or e-learning programmes specially tailored to meet business or CPD needs [N2]	814,087	481,556
7	Number of equipment and facilities service agreements	164	157
8	Number of public lectures / symposiums / exhibitions and speeches to a community audience	612	512
9	Number of performances and exhibitions of creative works by staff or students	60	65
10	Number of staff engaged as members of external advisory bodies, including professional, industry, government, statutory, or non-statutory bodies	157	178
11	Number of performances and exhibitions of creative works, public lectures, symposia, exhibitions, and speeches per hundred academic staff	180	183
12	Number of entrepreneurship activities [N3]	247	388
13	Number of student participations in entrepreneurship activities [N3]	12,288	13,378

Knowledge
Transfer Office
知識轉移處