

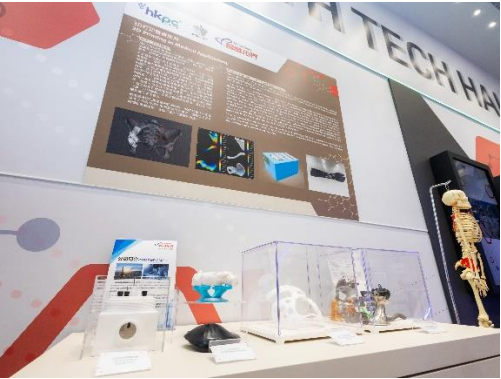



Appendix - “Life & Health Tech Hall” Key Exhibition Highlights


(The below items are selected from five key areas: Smart Manufacturing, AI Medical Imaging Technology, 3D Printing, Diagnostic Technology and Advanced Treatment Technology)


Exhibitors	Exhibits	Descriptions
Hong Kong Productivity Council, Absolute Pure EnviroSci Limited	<p>Controlled Porous Structure of Silica Smart Production Line</p> 	<p>New Industrialisation</p> <p>Product Introduction Porous-structure silica capsule technology is a world-first cutting-edge scientific achievement developed by the Hong Kong University of Science and Technology. The technology is environmentally friendly, reusable, and can release pharmaceutical or antimicrobial agents, adjusting the release rate automatically.</p> <p>Technological Breakthrough This technology is capable of inhibiting more than 95% of harmful microorganisms and drug-resistant bacteria, such as Legionnaires' disease and influenza A.</p> <p>Application Advantage The technology has been applied to hospital's air-conditioning and water supply systems, significantly improving air and water quality. It can save 500 tons of bottles and reduce carbon emissions by 1 million tons per year, demonstrating its strong environmental benefits.</p> <p>Services provided by the Hong Kong Productivity Council HKPC has customised a smart controlled porous structure silicon microcapsule production line for APEL. The team used innovative technology to successfully overcome the challenges of temperature changes in the production process to ensure product quality and effectiveness. The production line incorporates the concept of Microfactory to optimise the production process, maximise production efficiency in a limited space, and successfully mass production, with an estimated maximum daily production capacity of 6 tons.</p>

<p>Hong Kong Productivity Council, CEMG Medical Technology Company Limited</p>	<p>Artificial Intelligence Model Development for Eczema Image Classification</p> 	<p>AI Medical Imaging Technology</p> <p>Production Introduction This technology is an artificial intelligence model for eczema image recognition developed specifically for traditional Chinese medicine.</p> <p>Technological Breakthrough Artificial intelligence models are used to classify eczema images and clinical data into six categories, helping medical professionals accurately identify eczema types, formulate targeted treatment plans, and improve patient treatment outcomes. Dual-modal processing technology intelligently combines patient images and clinical data.</p> <p>Application Advantage This technology can help TCM to provide more comprehensive and easy-to-understand diagnostic insights, further improving the accuracy of diagnosis and the pertinence of treatment.</p> <p>Services provided by the Hong Kong Productivity Council HKPC led the entire R&D team, including the client's TCM team and researchers from two local universities, to successfully integrate traditional TCM wisdom and modern AI technology through a combination of TCM clinical experience and data-driven AI model training, leading the entire AI model development process. HKPC is responsible for data pre-processing, feature extraction, model selection and customized development, optimizing model performance through continuous training, testing and fine-tuning, and finally successfully integrating the model into the customer's platform, significantly improving the diagnostic accuracy and high recognition of the customer, helping the customer to improve the quality of medical services.</p>
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<p>Hong Kong Productivity Council, Hong Kong Metavictory MedTech Limited, Koln 3D Technology (Medical) Limited</p>	<p>3D Printing in Medical Applications</p> 	<p>3D Printing Technology</p> <p>Production Introduction Hong Kong has strong R&D and implementation capabilities in 3D printing technology, and three successful R&D projects are showcased in the Hall. These projects demonstrate the application of 3D printing technology in the manufacture of customised medical devices, including breast prostheses, metal implants, and more.</p> <p>Technological Breakthrough These research projects demonstrate the breakthrough of 3D printing technology in terms of high precision, personalisation and rapid design. High-precision 3D printing equipment can manufacture medical devices that meet individual needs and use big data and artificial intelligence technology to greatly reduce design time, improve product performance and antimicrobial properties.</p> <p>Application Advantage</p> <ul style="list-style-type: none"> • HKPC collaborates with Comfort Me Health Wear Company Limited to develop and manufacture customised 3D printed breast prostheses. With the use of 3D scanning technology to create 3D printed customized breast prostheses, combined with HKPC's high-precision 3D printing technology and post-processing process, it can restore the original appearance of recovered patients to the greatest extent, and promote the physical, mental and spiritual recovery. • Koln 3D Technology (Medical) Limited has developed customised metal implants with the advantages of high-precision matching, biocompatible materials, shortened operation time and accelerated patient recovery. • Hong Kong Metavictory MedTech Limited uses big data and artificial intelligence to shorten the implant design time by 90%. Innovative 3D printing and metal polishing technologies are introduced to improve performance and antimicrobial properties, reducing the risk of inflammation and implant loosening for patients.
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<p>CLAIRE Clinical AI Research Limited</p>	<p>AI-driven Knee Osteoarthritis (KOA) Management System</p> 	<p>AI Medical Imaging Technology</p> <p>Product Introduction This is an AI-driven solution developed by The Hong Kong Polytechnic University to predict the severity of knee arthritis and serve as a screening tool in the community.</p> <p>Technological Breakthrough CLAIRE collected data from more than 20,000 subjects and developed an artificial intelligence to identify the potential risk of knee osteoarthritis. By taking pictures through a sit-to-stand test, the AI system assesses the risk. This diagnostic tool, which uses artificial intelligence, enhances the screening process, making it more efficient and accurate. Its portability ensures accessibility in a variety of settings, including community health centres, physical therapy clinics, and patients' homes.</p> <p>Application Advantage Through the app, the tool allows patients to assess the risk of knee osteoarthritis and screen high-risk patients at the community level, facilitating early intervention, slowing joint degeneration, avoiding surgery, and reducing the pressure on the public healthcare system. Physiotherapists and occupational therapists are able to initiate treatment early and provide highly interpretable assessment results to help therapists and patients make informed decisions. Ultimately, this solution benefits society by slowing the progression of the disease and improving the quality of life.</p>
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<p>E-Sense innovation & technology Ltd.</p>	<p>Portable Medical Grade EIT System for Multi-organ Health Assessment in Communities</p> 	<p>Diagnostic Technology</p> <p>Product Introduction Portable Electrical Impedance Tomography (EIT) is a self-developed system that uses advanced microelectronics and artificial intelligence processing channels to screen and monitor the function of vital organs (heart, lungs, liver, and kidneys) to provide clinical standard readings for organ health management.</p> <p>Technological Breakthrough This technology solves the costly, time-consuming, and invasive nature of traditional detection methods, and fills the gap in early disease detection equipment, thereby avoiding delays in intervention for vital organ diseases.</p> <p>Application Advantage Disrupting primary care by providing unique disease detection and surveillance solutions in the community, clinic, home setting, and telehealth. The technology has been clinically validated in more than 300 patients at Queen Mary Hospital and will be available for more than 250 people in the community by 2024.</p> <p>Services provided by Hong Kong Productivity Council HKPC assists enterprises in setting up medical device quality management systems and providing overseas product registration advisory services.</p>
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<p>Agilis Robotics Limited</p>	<p>The Next Generation of Minimally Invasive Surgery</p> 	<p>Advanced Treatment Technology</p> <p>Product Introduction The world's first fully flexible endoscope robot is a new generation of micro-traumatic robot, which has a compact, fully flexible, and highly maneuverable surgical arm to change the current operational dilemmas of endoscopic surgery.</p> <p>Technological Breakthrough The technology of the fully flexible endoscopic surgical robot breaks through the size limitation of traditional surgical robots and can perform delicate and complex robotic double-arm surgery in a limited anatomical space, enabling doctors to smoothly remove tumors deep in the bladder and colon. This greatly improves the success rate and precision of the surgery.</p> <p>Application Advantage This technology is compatible with the existing endoscopic equipment in hospitals, providing doctors with more flexible and accurate endoscopic surgeries and greatly reducing training time.</p> <p>Clinical achievement In terms of clinical achievements, the world's first robotic-assisted transurethral resection of bladder tumour (ERBT) was successfully completed in Hong Kong in 2024, which not only marks a breakthrough application of robotic technology in the treatment of bladder tumours but also brings new treatment options to patients around the world.</p>
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