Knowledge Transfer Annual Report 2016/17

Submitted to
University Grants Committee

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

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1. ENHANCING KNOWLEDGE TRANSFER SUPPORTING INFRASTRUCTURE

FOSTERING THE CULTURE OF RESEARCH EXCELLENCE

HKUST has been continuing to strengthen its interdisciplinary and collaborative research culture over the years, with endeavor to collaborate across schools and disciplines to broaden and deepen our strengths on various research fronts. Funding awarded to HKUST researchers for collaborative research reached an all-time high in the year 2016-17. HKUST secured more than HK$239.8 million in 97 collaborative research projects, up 55% from the year before. In particular, funding for overseas collaborations surged over 100% to upwards of over HK$190 million. This jump in funding for international projects offers solid proof that our research is increasing globally recognized.

HKUST researchers successfully proposed a number of multimillion-dollar group projects to funding agencies here and abroad. A few of large funded projects are highlighted below.

Areas of Excellence Project: The project with a funding of HK$77.5 million, commenced on 1 June 2017 under the leadership of Prof. Nancy IP aims to delineate the cellular mechanisms underlying learning and memory and to reveal the key pathways and molecular players involved in cognitive dysfunction in neurodegenerative diseases such as Alzheimer's disease.

Theme-based Research Scheme Project: The project funded for HK$36 million, which began on 1 January 2017, aims to examine the pollution-related phenomena of eutrophication and hypoxia in and around Hong Kong waters and the consequences for the ecosystem. Collaboration features prominently in this project involving no less than nine institutions from local, overseas, and Mainland China.

Collaborative Research Fund Projects: Five Collaborative Research Fund projects were approved for HK$27.5 million in aggregate. The funding will allow HKUST to set up on its Clear Water Bay campus a deep reactive ion etching system for nano-system fabrication as well as a platform for measuring the physical properties of quantum materials. Our social scientists are also conducting a panel study of community and population aging in Hong Kong which will guide government policy making.

Applied Research Projects Supported by the Innovation and Technology Commission (ITC): 45 of our applied research projects began implementation during the reporting year with the total amount of HK$176.6 million from ITC. 8 industry-university-government collaboration projects were proposed by the HKUST-MIT Research Alliance Consortium following a rigorous project selection process. These projects fall under two themes, Internet-of-Things (IoT) for Intelligent Buildings and Transportation Cluster and the Data Science & E-Learning Research Cluster, which are aligned with China's emerging strategic industries. In total there are now 11 projects operating under the consortium and a further 13 projects are planned.

ESTABLISHMENT OF OFFICE OF KNOWLEDGE TRANSFER

In the last triennium, the HKUST has been endeavoring to enhance university-wide Knowledge Transfer (KT) leadership by appointing the Associate Vice-President for Knowledge Transfer (AVPKT). To further enhance the leadership structure, the Office of Knowledge Transfer (OKT) was established in August 2016 to supervise both the KT operations covered by the Technology Transfer Center (TTC), HKUST R and D Corporation (RDC) and Entrepreneurship Center (EC) in the Clear Water Bay campus, and Guangzhou HKUST Fok Ying Tung Research Institute (FYTRI) in Nansha (Guangzhou) and the HKUST Shenzhen Research Institute (SRI) in Shenzhen which make up the University's technology transfer, entrepreneurship and commercialization platforms in Mainland.

ESTABLISHMENT OF KNOWLEDGE TRANSFER ADVISORY GROUP

The Knowledge Transfer Advisory Group (KTAG) was formed in 2016 to offer advice to university management to advance its KT activities in Hong Kong, the Mainland, and worldwide. The first KTAG meeting was held in February 2017. Advisors learnt the recent status of HKUST's KT and provided valuable suggestions to its development. It is expected that KTAG will facilitate and support HKUST's engagement with industrial sectors, business enterprises and NGOs to elevate the University's KT impact in order to equip students and faculty members for the fast moving KT landscape.

1st KTAG Meeting on 23 February 2017

FORMATION OF KNOWLEDGE TRANSFER COMMITTEE

In early 2016, the University Council formed a Knowledge Transfer Committee (KTC) to support the University in maximizing its impact to society through KT while maintaining proper governance to ensure public accountability. In the reporting year, the Committee worked closely with the University management team and provided comments and advices to multiple KT related matters, including advising on HKUST Intellectual Property (IP) Policy, HKUST KT Mission and Vision Statements, and KT development plans in Hong Kong, Shenzhen and Nansha, Guangzhou.

Council Chair and KTC members visited FYTRI on 8 July 2016.

NEW BUDGET MODEL AND APPRAISAL SYSTEM THAT ENHANCE KNOWLEDGE TRANSFER PERFORMANCE

A new full-fledged budget model, which was developed after substantial discussion and planning, will be implemented in 2017/18. Various metrics were used to compute the school-level performance to guide the resource allocation. The objective is to develop sufficient clarity to support performance and productivity while concentrating on uncommitted resources to encourage new endeavors of higher self-expectation and risk, so that HKUST can confidently enter its new phase of development. The budget model is designed to count 50% of each School/Interdisciplinary Program Office's performance based on teaching-related metrics, and the other 50% on research & Knowledge Transfer metrics. The knowledge transfer performance is now a key factor within HKUST to assess each academic unit's performance. Meanwhile, "Excellence in Knowledge Transfer" has been incorporated into the criteria for substantiation and promotion since 2000, and the assessment of "knowledge transfer and service" is already part of the annual merit review to encourage faculty's knowledge transfer endeavor. In addition, HKUST encourages Intellectual Property (IP) be commercialized or utilized, and creators are motivated by sharing the revenue generated from commercialization of HKUST IP. The University also supports faculty's KT pursuits by allowing them to take professional leave from the University, or to conduct related practice on a 1-day-per-week basis.

REVISION OF INTELLECTUAL PROPERTY POLICY

An IP Policy Review Project was launched in 2015, led by TTC under supervision of OKT, to overhaul the previous HKUST IP Policies and its legal effectiveness, comprehensiveness and compliance with Hong Kong Laws, to address missing aspects and to seek their alignment with related University Policies. A revised HKUST IP Policy and its constituent Guidelines was prepared after consultation with external consultant and legal professionals, which was subsequently approved by the University Council on 4 May 2017, after recommendation of the University Senate, University Administrative Committee and Knowledge Transfer Committee. With the revised IP Policy and its constituent Guidelines in place, the IP management, commercialization and KT practices can be fortified and enhanced.

KNOWLEDGE DISSEMINATION CHANNELS

The Scholarly Publications Database (SPD) provides an interface for the public to learn of the expertise at HKUST by showcasing the research output of the University as well as the local, regional and international research collaboration. 1.78 million page views are recorded in 2016-17, constituting a 30% increase from previous year. Together with SPD, the DataSpace@HKUST launched last year, provides a platform for HKUST researchers to publish and manage their research data.

Scholarly Publications Database

The interface of KT Hub

To promote the campus-wide KT activities under One-HKUST spirit and facilitate one-stop information access, a Knowledge Transfer Hub (KT Hub) website is launched to link up all the KT units. Together, the KT Hub, SPD and DataSpace@HKUST facilitate knowledge dissemination and strengthen the research culture excellence of HKUST.

ENHANCING RESEARCH EFFICIENCY USING SUPERCOMPUTER

The Supercomputing Service Platform enables HKUST faculty members and researchers to access to National

The Information Session at HKUST

Supercomputer Center in Guangzhou which has one of the fastest computation speeds in the world. To expand the Service Platform's usage both within HKUST and amongst other universities in Hong Kong, two information sessions on "Enhancing Research Efficiency using Supercomputer" were hosted in June 2017 at HKUST and The Hong Kong Polytechnic University respectively. The two information sessions attracted over 110 attendees in total. As of June 2017, 22 research teams signed up as users.

2. UNDERTAKING TECHNOLOGY TRANSFER ENDEAVORS

The enhancement of the KT supporting infrastructure facilitates the efficiency and overall performance of technology transfer. With the globally engaging and locally contributing KT infrastructure for IP management, industrial collaboration, technology transfer and commercialization, and entrepreneurship, HKUST has been endeavoring to develop an innovation and entrepreneurship ecosystem to catalyze technology commercialization and start-up formation.

INVENTION DISCLOSURE AND IP PROTECTION

While HKUST continues the tradition of quality and cost-effective filing and prosecution strategies to assure a high standard of IP protection at HKUST, a new "Invention Triage System" for technology assessment has been developed to strengthen and speed up invention submission and review procedures. Taking into account of the reported innovations from both the Clear Water Bay and satellite campuses, 133 inventions were disclosed during the period under review and 205 new patent applications have been filed. With 134 newly granted patents, the actual number of active patents and patent applications contained within the University's current IP portfolio is 1100.

IP seminar: How New Developments of Patent Laws and Practices in China, U.S. & Europe Affect Your Patent Prosecution, Enforcement and Monetization Strategies?

Two campus-wide seminars were organized to equip researchers with more IP knowledge and skills. "Protecting and Monetizing Software Using IP" provided a practical guide to better extract values of software products. "How New Developments of Patent Laws and Practices in China, U.S. & Europe Affect Your Patent Prosecution, Enforcement and Monetization Strategies?" invited IP experts from China, U.S. and Europe to share the recent developments in the three most important markets of the world and discuss the critical role of IP in helping people to transform its innovation potential into market value and competitiveness. The two seminars drew around 100 faculty members, students and staff.

IP seminar: Protecting and Monetizing Software Using IP

CONTRACT RESEARCH, CONSULTANCY & TESTING SERVICES

To offer research and consultancy services to the private sector, RDC enters into partnership with the private sector in a wide spectrum of technological areas including biotechnology, traditional Chinese medicine, advanced materials, information technology, wireless communication, civil and geotechnical engineering, aero-space engineering, environmental science, etc. In 2016-17, RDC has served 168 contract research cases worth a combined funding amount of HK$61.3 million. In addition, there were 14 consultancy projects carried out by our researchers that counts HK$3.3 million. 461 equipment and facilities service agreements have been made with companies in Hong Kong and elsewhere by making use of the University's major equipment and facilities, bringing to a total cash receipt of HK$2.9 million. Similar to RDC of the Clear Water Bay campus, RDC (Shenzhen) also takes up 15 commercial projects, bringing in RMB 4.9 million of income, while FYTRI generated RMB 14 million of income through 41 commercial projects.

LICENSING AND RELEVANT ACTIVITY

HKUST has been exploring channels and opportunities for IP licensing in various jurisdictions including Hong Kong, Mainland China, Japan and USA. As of 30 June 2017, RDC is managing a total of 100 active patent and software licensing agreements. The total cash receipt generated through technology licensing by RDC in the reporting year was HK$2.7 million. HKUST is a leading pioneer in Massive Open Online Course (MOOC). 29 HKUST MOOC coursewares have been offered on Coursera and edX through licensing arrangements. Over 1,000,000 learners have registered for the MOOCs offered by HKUST. The response of HKUST MOOCs and specializations is overwhelming. Its MOOC on "Introduction to Java Programming - Part I" was recognized as one of the Top 10 Most Popular courses offered on edX in 2016. Its specialization on "Full Stack Web Development" was recognized as one of the Top 10 Computer Science specializations offered on Coursera in 2016. With all these, the copyright licensing for MOOC courseware has contributed a revenue of over HK$4.9 million. In total, the overall licensing income in 2016-17 is HK$7.6 million.

AUTM ASIA 2017

The Association of University Technology Managers (AUTM), which dedicates to supporting and advancing academic technology transfer globally through education, professional development, partnering and advocacy, held the AUTM Asia 2017 at the Hong Kong Science Park (HKSTP). The four-day event from April 23 to 26 features prominent speakers from academic research institutes, industries, entrepreneurs and technology transfer professionals to share their experiences and insights of the field. Being one of the organizing universities, HKUST hosted a panel session by inviting three speakers to share their insights on the topic of "Emerging Trend in Technology Management for

AUTM Asia 2017 – HKUST Session

Internet and Big Data". TTC also held a booth in the conference site to showcase HKUST technology transfer practice and share best practices with other universities.

3. BRIDGING THE DEVELOPMENT GAP AND STRENGTHENING THE KT VALUE-CHAIN

To foster an innovation and entrepreneurship ecosystem, HKUST has not only been putting efforts to enhance the culture of research excellence, but also designing and providing gap funding support to encourage technology commercialization and start-up formation.

EXPANDING THE PROOF-OF-CONCEPT FUND (PCF)

Implemented at HKUST since 2009-10, the PCF has been enabling the development of promising technologies aiming for commercialization. For 2016-17, 14 PCF applications were received, in which 9 projects were recommended by the PCF Vetting Committee comprised of industrial experts and VCs for a total funding of HK$1.55 million. Favorable outcomes have been resulted from the PCF Program. One of the PCF projects funded in 2015-16, "Improved Apparatus and Method of Audio Separation for Hearing Devices or Systems", has received various awards in different entrepreneurship competitions across Greater China. In addition, a start-up company was formed with the support of the Technology Start-up Support Scheme for Universities (TSSSU) funding for commercialization of the technology.

LAUNCHING THE HKUST U*STAR PROGRAM

U*STAR Program (previously known as Innovation Acceleration Fund) is established to serve as another channel of gap funding support to complement the current PCF with a focus gears more on the business side. In the reporting year, 14 applications were received with students from more than 10 different departments and programs. 8 teams got the award of HK$40,000 each. A pre-incubation training co-organized by HKSTP will be provided to the awarded teams for developing their ability to build business model and raise fund from investors. Evaluation meeting will be summoned for the teams to pitch their ideas after these trainings. The best team will be nominated to participate the final panel interview for the TSSSU program.

HKUST DREAM BUILDER FUNDS

Two entrepreneurship funds, namely Yeung Wing Yee Entrepreneurs Fund and HKUST Entrepreneurship Acceleration Fund were established by EC in September 2016 aiming to support HKUST full time students for their early stage innovative ideas and start-ups activities. In 2016-17, a total of HK$638000 has been committed to 24 innovative projects supported by HKUST Entrepreneurship Acceleration Fund and 8 HKUST start-ups supported by Yeung Wing Yee Entrepreneurs Fund (Refer to Appendices D and H).

4. NURTURING ENTREPRENEURIAL CULTURE

HKUST has stressed its entrepreneurship education to nurture an entrepreneurial spirit and kindle the passion of students to work on their dreams by self-driven endeavors. To equip them with necessary skills from conceptualization, prototyping, to deployment, the EC organized over 30 seminars, workshops and talks with total over 1,000 students attended. Participants are encouraged to fill in the on-line feedback form to comment on the quality of events and the average score of these events is 4.29 out of 5. Some of the activities are highlighted below:

Entrepreneurship Executives: Over 100 undergraduate and postgraduate students were given the opportunity to develop their entrepreneurial spirit through the community of Entrepreneurship Executives.

Startup Weekends and Alumni Luncheons: 2 Startup Weekends and 2 Alumni Luncheons were held to provide another opportunity for students to know more about entrepreneurship. Over 200 students joined these events.

The Startup Weekend

Entrepreneurship Week@HKUST (E-week): 10 workshops and talks were organized in E-week. Over 300 students attended talks & workshops, 622 participants in the hackathon@HKUST, and over 1000 students joined exhibition and fairs. The event has enriched students' skills, knowledge, understanding, hands-on experience on hardware, software and social innovation which are useful for students' entrepreneurial development.

B.E.S.T. Camp: As an effort to promote entrepreneurship within science students and mingle students from different departments, B.E.S.T. (Business, Engineering, and Science Together) Orientation Camp was held to explore environmental, bio and nano business opportunities. Out of 31 student participants, 9 were from the School of Science (SSCI) (29%) and 18 from the School of Engineering (SENG) (58%).

Students looking for opportunities during the E-Week

HKUST One Million Dollar Entrepreneurship Competition: As a forerunner to promote innovation and entrepreneurship, the HKUST One Million Dollar Entrepreneurship Competition has grown from a platform to nurture promising entrepreneurs at HKUST, into a regional contest that instills entrepreneurial culture and promotes exchange of ideas among young innovators across the border. In 2016, HKUST One Million Dollar Entrepreneurship Competition expanded its reach from Clear Water Bay Campus to Macau, Beijing, Shenzhen and Guangzhou. A total of 500 teams participated in the 5 regional competitions, and the regional winners were then congregated at Nansha, Guangzhou to compete for the Grand Final Awards on 6 August 2016. 26 winning teams subsequently registered their start-ups in Nansha to further develop their business. In 2017, 945 start-up teams participated in these five cities to compete.

President Chan presenting the President Award to the winning team: Maxustech

Grand Final of 2016 HKUST One Million Dollar Entrepreneurship in Nansha, Guangzhou on 6 August 2016

Hackathon@HKUST (hardUST & hackUST): Hackathon@HKUST is an event in which talents from different backgrounds mingle together, transform creative ideas to real software/hardware prototypes, develop sound business plans, and present ideas with a concrete prototype to a judging panel consisting of faculty members, entrepreneurs and industry experts. The Hackathon@HKUST 2017 composed of both hardware hackathon (hardUST) for the first time and software hackathon (hackUST). With

The 18 winning teams

availability of real data from Uber Hong Kong for all participants, the event is the largest student-driven hackathon in Asia with over 620 participants who came from various local and overseas universities.

Champion of the Elevator World Tour Pitching Event - ORii, a start-up by HKUST MBA students

The Elevator World Tour Hong Kong: 23 students joined the APAC Innovation Summit 2016 Series - The Elevator World Tour Hong Kong organized by HKSTP to witness 100 burgeoning start-ups competing for a US$100,000 investment in the elevator pitch event, build network and exchange ideas with over 500 entrepreneurs, accelerators, incubators from various industries. The start-up called "ORii" set up by HKUST MBA students won the championship in the pitching event and received HK$120,000 seed funding.

The winning team of IBPC2017 took photo with mentors

Entrepreneurship Activities by Dual Degree Program in Technology & Management (T&M-DDP): To highlight a few activities, T&M-DDP organized a course using Health Tech Start-up as a topic to coach students through the process of establishing a start-up. The course, sponsored by HARMAN, was a 1-week social media marketing campaign to validate the product in front of potential customers in the real world. The other two are competitions, namely "Smart Home Appliance" - Inter-Varsity Entrepreneurship Challenge 2017 that gathered 37 students from HKUST, Nanyang Technological University Singapore and ShanghaiTech University (SHTECH), and T&M-DDP International Business Plan Competition (IBPC) on "Health Tech for Seniors" hosted by HKUST, University of Illinois at Urbana-Champaign, University of Bayreuth, and University of Sao Paulo, where 48 students from 4 universities formed mixed teams to compete for the best business plan in health-tech services and products for seniors.

ICT Award 2017 presentation ceremony

"Best Student Invention Award" at Hong Kong ICT Award 2017: Chan Kai Ho, Hercules, a Risk Management and Business Intelligence student, and Harry Chan, a PhD student of Computer Science and Engineering Program, won the "Best Student Invention Award" at the Hong Kong ICT Award 2017 with a mental health app "VOID". This app has also received support from Cyberport Creative Micro Fund and the Yeung Wing Yee Entrepreneurs Fund.

HKUST Dream Builder Lighthouse Advising Service and Mentoring Program: The one-on-one face-to-face advising service provides advice, support and resources to individual students and teams who sought assistance in enriching their start-up ideas and reaching to different resources. Over 300 students and teams have received over 500 man-hours lighthouse advising service since July 2016.

Mentoring Program (DBMentor) brings together successful entrepreneurs in different fields as mentors to help start-up teams of HKUST to gain concrete and valuable knowledge and skills as well as network and resources in preparing their future development in entrepreneurship. 20 teams have been enrolled to the DBMentor since its launch in Spring 2017 and 18 of them had been successfully paired up.

Learning to shoot in the Base Bootcamp Workshop (Photography Skills)

The BASE: The BASE remains as a vibrant creative workspace for student entrepreneurship community. This infrastructure is managed to provide a safe and fertile "entrepreneurship playground" for students to mingle, mix and match. In addition to the BASE, a new BASE Bootcamp Workshop Series is also a new initiative that EC works with the student teams to deliver practical skillsets for our students to work on their start-up projects.

Topics of these workshops cover Photography, Swift Programming and UI/UX designs. In total, over 300 students participated in the workshop series.

Group photo of the Alumni Dinner

Alumni Dinner: A forum themed "TECHxSTARTUP Sharing" was hosted jointly by SENG and SRI in Shenzhen. Over 120 cross-disciplined alumni and faculty members attended this gathering to broaden their network, exchange knowledge and experience. To highlight the achievement of SENG entrepreneurs, sharing sessions were arranged to share their experience of starting business. The forum was followed by an alumni spring dinner for discussions about the role of HKUST and opportunities in the Hong Kong-Shenzhen collaboration on technology and entrepreneurship.

5. FROM RESEARCH TO MARKET: ENTREPRENEURIAL TECHNOLOGY TRANSFER

HKUST aims to foster a conducive environment that faculty members and students can experiment with the idea of bringing technology from research laboratories to the market. PCF provides "gap funding" support beyond traditional research funding for commercialization validation, while U*STAR provides the logical extension to build business plan around it and TSSSU provides critical funding support to the creation of new start-ups. By synergizing PCF, U*STAR, and TSSSU with other entrepreneurial efforts on the campuses, such as the HKUST Entrepreneurship Program (EP) and incubation programs in HKUST's Mainland campuses, HKUST has been strengthening the support throughout the KT value-chain to support innovation and entrepreneurship.

HKUST ENTREPRENEURSHIP PROGRAM

EP, which has been in operation since 1999 to assist faculty members, alumni and students in the establishment of technology-based start-up companies, has helped the formation of 60 technology start-up companies in the Clear Water Bay campus, of which 40 are currently economically active. Among the 40 active companies, 31 of the companies (Refer to Appendix F) have graduated and moved away from the campus incubation premises. The Program has also expanded the eligibility to the start-ups located in the HKUST's Mainland platforms in Nansha (Guangzhou) and Shenzhen. The Program for pre-incubation in the premises of SRI was launched in late 2016. SRI and FYTRI have already respectively hosted 27 and 6 start-up companies that are relevant to HKUST (Refer to Appendices I & J). Without double-counting those who have already been included in Appendices E & F, 27 more companies have been added to the list of total number of the HKUST affiliated economically active companies.

TECHNOLOGY START-UP SUPPORT SCHEME FOR UNIVERSITIES (TSSSU)

TSSSU 2017/18 Kick-off session

TSSSU Program launched in 2014 by the ITC provides an annual funding of up to HK$4 million to six local universities to support students and faculty members' technology start-ups. In HKUST's case, it offers in particular logical extensions of the gap funding like PCF and U*STAR Program to the next stage - building business start-ups around the works emerging from HKUST projects. In the reporting year, TSSSU program has successfully attracted 45 applications. That makes the total applications for TSSSU funding to 120 at HKUST in the past three years. The vetting committee consisted of industrial experts from different backgrounds recommended 9 fundable start-ups, which makes the total

number of HKUST affiliated TSSSU funded start-ups to 29 (Refer to Appendix G). Among the 29 TSSSU companies, 83% of start-ups utilize HKUST technology. 69% of them obtains external funding in addition to the funding from ITC (excluding shareholders' own investments). 38% of the start-ups have entered into incubation programs organized by HKSTP and Cyberport, and 79% of start-ups have product or prototype ready for commercialization.

Altogether, the total number of the HKUST affiliated economically active companies has reached 94 in 2016-17, including those located in the Clear Water Bay campus and Mainland campuses (FYTRI in Nansha and SRI in Shenzhen). Below are the highlights of a few technology start-ups with encouraging achievements:

INCUS COMPANY LTD - It revolutionizes the hearing aids industry with devices in better quality and lower price. Incus has won a number of prizes in the past year: Cross-Strait, HK and Macau Innovation and Entrepreneurship Competition, "New World Cup" First Qianhai Shenzhen-Hong Kong Youth Innovation and Entrepreneurship Competition in the start-up category, as well as HKIOA Meyer Poon Memorial Award. They have also won other awards such as Silver Award of 2016 BOCHK FITMI "Technology Start-Up" Award, 1st runner-up of HKUST MBA Business Plan Competition in December 2015 and HKIE Awards winning algorithms for Mass-Customized 3D Surround Sound.

Incus Company Ltd.

MAGNUM RESEARCH LTD. - With services covering all three aspects of finance, algorithm and information technology, AQUMON, Magnum's robo-advisory engine, aims to assist financial institutions and their clients in long term global asset allocation. Since its establishment in 2015, Magnum has raised millions of US dollar in capital through its seed investment round, pre-Series A round and the Series A round. The team has grown to 25 people, with businesses in Hong Kong, Shenzhen and Singapore, of which 80% graduated from HKUST.

SONIKURE TECHNOLOGY LTD. - Sonikure has developed a patented ultrasound technology to non-invasively deliver drug into the eye, called "Ultrasound enhanced delivery of drug into the eye via transscleral route", focusing on the delivery of different types of high molecular weight drugs. Sonikure has been awarded: 2nd place of the HKUST One Million Dollar Entrepreneurship competition 2014, Winner of the TiE Hong Kong and Regional Asia competition in 2015, Top 8 teams in the Rice business plan competition 2015, Kairos' Society K50 - 2015 Global Top 50 Start-ups, 2016 IET Innovation Award in the Healthcare category and International Exhibition of Inventions of Geneva 2017, and has secured Series A investment from local VC firms.

Plaque Unveiling Ceremony of Qianhai Shenzhen-Hong Kong International Blockchain Incubator, "IDG Incubator Qianhai Headquarters" and "HKUST R and D Corporation (Shenzhen) Limited Blue Bay Incubator"

I&E Center and Blue Bay Incubator in HKUST-SRI

The HKUST Shenzhen Research Institute (SRI) built the Entrepreneurship and Innovation Center (I&E Center) in HKUST Shenzhen Complex (IER2) in August 2015. In 2016-17, 7 new teams are admitted to the Center and 7 teams left due to expansion needs. The Center has served 27 HKUST start-ups in total. To provide full-range incubation services to the HKUST community, the Blue Bay Incubator was built at IER2 in late 2016. In June 2017, Blue Bay Incubator further expanded to Quanhai Shenzhen-Hong Kong Youth Innovation and Entrepreneur Hub (Qianhai E-hub). 10 start-ups was selected to station in Blue Bay Incubator.

The Start-up Zones in IT Expo and Electronics Fair in Hong Kong: The International ICT Expo, organized by The Hong Kong Trade Development Council, endeavors to sustain its position as a premier platform for the ICT providers to meet with the world's enterprises and Hong Kong SMEs for business exploration. 6 HKUST Start-ups participated in the International ICT Expo 2017 to showcase their technologies and products.

HKUST's booth at ICT Expo

The Startup Launchpad in Hong Kong: The Global Sources Electronics is the world's biggest electronics sourcing show. One of the highlights of the show is the Start-up Launchpad which consists of a conference track and trade-show pavilion, aiming to offer a chance for buyers to see the latest innovations and be first to market with shelf-ready products. 3 HKUST Start-ups participated in the exhibition to showcase their technologies and products. One of the start-ups pitched their products and ideas at the pitching event.

HKUST's booth at Startup Launchpad

Startups X Investors (SxI) : Organized by EC, SxI has helped connect HKUST start-ups and founders with the 45 venture investors and start-up pioneers for possible long term partnership. Over 390 participants were recorded to join the SxI. Roadshow, plenary session and one-on-one meetup with investors have provided invaluable opportunities for HKUST entrepreneurs to engage directly with venture capitalists, corporate VCs, and angel investors.

Over 200 visitors joined SxI plenary session

HKUST Technopreneur Outreach Day: To connect the HKUST technopreneurs to the investment community, professional network as well as potential business, OKT and TTC hosted the HKUST Technopreneur Outreach Day on 5 May 2017. 19 TSSSU companies from 6 technology areas participated in this event to showcase their business idea, products and services. The event attracted 100 participants including investors from various business sectors. To promote their feature technologies and business, each start-up company gave a 2-minute presentation at the pitching session and exchanged ideas with guests and investors at the mingling session.

HKUST Technopreneur Outreach Day

6. STRENGTHENING INDUSTRIAL ENGAGEMENT AND COLLABORATION

HKUST continues its endeavors to establish strategic industrial partnerships with major companies. Efforts have been focused on looking for more quality local and international collaborators to line up with HKUST technology clusters, such as robotics, Fintech, medical devices, data science and advanced materials.

WECHAT-HKUST JOINT LAB ON ARTIFICIAL INTELLIGENCE (WHAT LAB)
Since The WHAT Lab established in November 2015, collaboration across multiple areas of artificial intelligence have been undertaken. The collaboration has been renewed during the reporting year with

additional funding support and will be focusing on natural language processing, data mining, human-robot conversation, robotics navigation, etc.

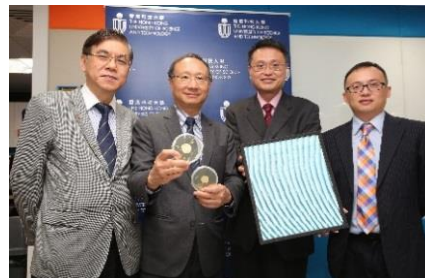## COLLABORATION WITH LEADING LIFE SCIENCE AND TECHNOLOGY COMPANY

Numerous aggregation-induced emission (AIE) materials developed by Prof. Benzhong TANG of the Department of Chemistry were applied in a wide range of areas such as high-performance OLEDs, cancer screening, environmental monitoring, bioelectronics and bioimaging. A leading life science and technology company has licensed a series of AIE materials and included them in its chemical catalogue for the market. In addition, a technology start-up company also obtained commercial rights to produce and supply different AIE-active luminogens for different applications.

COLLABORATION WITH CHINESE LOGISTIC COMPANY

In March 2017, HKUST established collaboration with a Chinese logistic company on various technology areas, including optimization of logistic system, risk management, big data analytics in social network, and so on. To further support the company's endeavors for innovation, training courses have been provided to the senior executives of the company regarding the topics of big data computing, machine learning and deep learning

NOVEL AIR PURIFICATION TECHNOLOGY

HKUST has developed an air purification system that removes up to 99.999% of airborne bacteria and viruses, which is done by a multi-level antimicrobial filter covered with microcapsule emulsion that contains biocide. While slow and continuous release of disinfectants into the air helps sterilize bacteria, the anti-adhesion coating on the filter reduces the chance of microorganism growth and biofilm formation. This is the result of long term cooperation among HKUST, industry and the government, with system put on trial in the Holistic Care Centre of

Dr Antony Leung, Prof Joseph Kwan, Prof Yeung King-lun, and Prof Yang Zifeng

Haven of Hope Christian Service for 18 months. The air purification technology has also been successfully incorporated in household purifier system by the local industrial partner and is available in the retail market since last year.

SETUP OF INTERNATIONAL SMART MANUFACTURING PLATFORM (ISMP)

The International Smart Manufacturing Platform (ISMP), set up under FYTRI in Nansha, Guangzhou, targets on integrating HKUST teams with external counterparts from Hong Kong, Taiwan, US, and other part of the world in developing advanced and innovative technologies for commercialization. It aims at providing support to enterprises to achieve "Made in China 2025" by accelerating transformation of science and technology into products that are highly competitive in the market. It puts greater emphasis on innovation, commercialization as well as entrepreneurship via an open innovation operational model so that new and effective industry clusters can be established in Nansha in coming years.

HKUST-HKSTP INCUBATOR SCHEME

HKUST and HKSTP established the HKUST-HKSTP Joint-Incubation Program in 2016-17, through which supports will be provided to HKUST technology start-ups in a concerted effort. Under the Program, technology start-ups involving students, faculty members, staff, alumni of HKUST, or start-up adopting HKUST technologies, will be able to enroll into the HKSTP's incubation program, upon approval by HKSTP's admission panel. It enables HKUST's start-up to enjoy the world class support at HKSTP, as well as funding and resources support, at the most critical beginning stage for a company. Currently there are 40 HKUST related start-up companies in the HKSTP incubation program, of which 9 are the HKUST start-ups receiving TSSSU funding.

COLLABORATION WITH THE CONSULATE GENERAL OF FRANCE

The Consulate General of France in Hong Kong & Macau and the HKUST jointly established the France-HKUST Innovation Hub on 24 March 2017, aiming to provide a one-stop platform to enhance partnerships and strengthen the linkage between French and Hong Kong innovation partners in education, science and technology. French companies are keen to recruit Asian talents and develop technological cooperation projects and they can make use of this platform to form alliance with

France-HKUST Innovation Hub

HKUST. As a valuable and important strategic partnership between France and HKUST, the Innovation Hub will provide opportunities for students to nurture their creativity and benefit from the experience of some of France's most successful innovative companies.

7.   ENHANCING COMMUNITY ENGAGEMENT

HKUST organized various events open to industries and the private sector as part of the KT endeavors. In the reporting year, there were 611 public lectures, workshops, and seminars organized. The number of performances and exhibitions of creative works has increased from 60 of last year to 116 of this year. To highlight two events as examples, one is the Scholarly Communications Seminars Series organized by the HKUST Library that has attracted over 400 attendees. The other is the seminar on "Climathon Conference: Extreme Heat, Extreme Density - Problems and Solutions" jointly held by Division of Environment & Sustainability (ENVR) and Climathon with more than 100 participants from the industry.

HKUST CONNECT

HKUST Connect organizes and promotes service opportunities of varied levels of engagement to students. In 2016-17, HKUST Connect facilitated 2,314 students (person-time) in 153 service projects collaborating with 65 NGOs and government bodies. Among them,

Kick-off ceremony of HKUST Service Learning Day

over 900 students, faculty members, staff and alumni joined the HKUST Service Learning Day to serve the local community through 52 projects, while 183 students participated in 16 service learning trips to support the communities outside Hong Kong.

FIRST BIG DATA AND AI DAY

The Big Data Institute organized its first Big Data and AI Day, playing host to a stellar assemblage of world top academics and industry celebrities in the realm of Big Data and Artificial Intelligence (AI). The event drew a learned audience of over 500 guests, including local and overseas academics, leaders in the Big Data and AI-related industries, as well as students from various tertiary institutions in Hong Kong and abroad. The overwhelming attendance attested to the key role of HKUST's research in these fields.

World-class academic and industry leaders in Big Data and AI fields, and HKUST faculty members

DISNEY DONATION TO SUPPORT "INVENTIONS FOR THE COMMUNITY"

Building on the success of the first "Disney-HKUST Grant for Technology and Well-Being" in 2016, Disney once again joins forces with HKUST SENG to encourage creative inventions designed to give back to the local community in Hong Kong. This year, the theme is to develop creative yet affordable solutions that can enhance daily life of physically challenged individuals and improve the health and well-being of the general public. Three distinguished projects were selected for their creativity to develop systems and invention for the betterment of the society.

Team of "Brain-Computer Interface for Wheelchair Control", one of the projects selected by the Program

ACADEMY FOR BRIGHT FUTURE YOUNG ENGINEERS

HKUST receives donation from Bright Future Charitable Foundation to establish academy on 5 November 2016. By giving opportunities to HKUST engineering school students to mentor and engage secondary school students, the academy seeks to develop secondary school students' innovation, spark their enthusiasm in engineering and build a positive public perception of engineering through these hands-on and interactive projects. Other programs in the pipeline include summer and winter camps, laboratory visits, seminars, robotic competitions, training, credit-bearing courses and workshops.

ENTREPRENEURSHIP CAMP FOR SECONDARY SCHOOL STUDENTS

The first Technology Leadership and Entrepreneurship Youth Camp was organized by SENG provides secondary school students an understanding of entrepreneurship and enables them to have a taste of entrepreneurship through a team project to formulate the business plan of a technology product. 15 secondary students jointed the camp and had the opportunity to shadow HKUST MPhil students for Technology Leadership and Entrepreneurship Program as well as visiting their start-ups at HKSTP. Laboratory tour and campus tour were arranged where students experienced the vibrant entrepreneurial culture on campus.

Participants of the Camp together with HKUST faculty members and staff

Winners of the Best Joint School Inclusion Award

HKUST UNDERWATER ROBOT COMPETITION

HKUST hosted its 3rd Underwater Robot Competition and 300 students from 42 different primary and secondary schools signed up for the four-day event. The Competition invited students from mainstream schools, students with special educational needs or physical disability, as well as ethnic minorities to take part and make their own inventions. This was also the first collaboration among HKUST, the Education University of Hong Kong and the Hong Kong Polytechnic University. 40 student mentors from different disciplines were giving guidance to school teams during the competition. Schools that demonstrated the best teamwork in this part would be awarded the Best Joint School Inclusion Award.

NURTURING HIGH SCHOOL STUDENTS TO BE ENTREPRENEURS FOR THE YOUNG INNOVATORS BAZAAR

Young Innovators Bazaar is a Business-in-Community initiative to empower secondary school students

Award presentation was held on the last day of the Bazaar.

disadvantaged in learning to pursue higher studies and future careers. First time to participate in this project, students from HKUST Business School Global Business (GBUS) designed a coaching kit to guide 150 high school students to understand business theories, business planning, design and products sourcing, sales and marketing. They also guided them to set up 30 booths at Plaza Hollywood for the Bazaar on the theme "Innovation and Passion". The students under their coaching won the "Best Theme Presentation" and "Most Favourite Booth" awards.

CYBATHLON

Cybathlon, the world's first "Bionic Olympics", allows disabled competitors to use bionic assistive

technologies such as robotic prostheses, brain computer interfaces and powered exoskeletons. It attracted 66 teams with over 70 disabled athletes from 25 countries, who competed in six different categories. HKUST team supervised by Prof. Robin Ma, Prof. Michael Wang and Prof. Chris Chao of the Department of Mechanical and Aerospace Engineering developed a wheelchair in eight months. The wheelchair finished the race and won Silver Award in the competition. The team is planning to refine and commercialize the product to make it Hong Kong's most affordable stair-climbing wheelchair.

Prof Robin Ma (back row, third left) and members of HKUSTwheels

TO SOLVE HEALTHCARE PROBLEMS IN INDONESIA AND CAMBODIA

The Student Innovation for Global Health Technology (SIGHT) enables undergraduates to work on their self-proposed healthcare projects in full time internship locally or overseas. To highlight, one team initiated a diabetic retinopathy screening program for Indonesia and the other team planned to further deploy a mobile app building on the foundation of the laptop-based electronic medical record system which set up by an earlier SIGHT team in 2015 for medical staffs in Cambodia. HKUST received a donation from Equal Opportunities Foundation for the establishment of Scholar Scheme for SIGHT program.

Group photo of HKUST Remotely Operated Vehicle (ROV) Team, champion of MATE International ROV Competition 2017

MATE INTERNATIONAL ROV COMPETITION 2017

Organized by the Marine Advanced Technology Education (MATE) Centre in the US, 2017 MATE International ROV Competition had the theme of "Port Cities of the Future: Commerce, Entertainment, Health, and Safety". It challenged students to think as entrepreneurs and the teams competed for robot missions as well as market display, presentation and technical report. The HKUST ROV Team consisting of 15 engineering undergraduates made history by winning the All-round Champion and Safety Conscious Award in this year's Competition. It is the first time for a Hong Kong team as well as an Asian team to receive the championship in this international competition over the past 16 years. Besides the competition, the HKUST ROV Team has cooperated with IET Hong Kong to develop an electronic grading system for the Ranger Class and hosted the IET Hong Kong Experience Class for 30 teams of Primary 6 to Secondary 2 from 24 schools students to build a ROV from scratch and run in water.

COMMUNITY ENGAGEMENT OF MAINLAND PLATFORM

In the reporting year, SRI and FYTRI has organized 13 workshops, seminars and programs for industrial partners and government officers to equip them with executive and management skills. Among these seminars, "Global Innovation Leadership", a Chief Information Officer (CIO) class organized jointly by SRI and Shenzhen CIO Association, was well particularly received. Wisdom Lecture series is one of the highlights of SRI activities, in which well-known professors and scholars are invited to share different perspectives of science, life and culture.

Wisdom Lecture series in Shenzhen

Mr. Yaron Samid, the founder and CEO of BillGuard, was the first speaker in 2017 to share his view on how to create popular products.

8. LOOKING FORWARD

As the first year of Triennium 2016-2019, 2016-17 is the best time to look forward. In the last triennium, HKUST has been keen on expanding and enhancing the culture of HKUST to embrace and support innovation and entrepreneurship for public benefit. In the new triennium, HKUST will further advance a globally engaging and locally contributing KT infrastructure for IP management, industrial collaboration, technology transfer and commercialization, and entrepreneurship at HKUST, and foster an inspiring, engaging and vibrant entrepreneurial environment through comprehensive education offerings and activities. With the vision to be a leading university with significant international impact and strong local commitment, HKUST is ready to advance to the next level of prestige and accomplishment. HKUST has set itself the goal of becoming a leading force in higher education, an agent of change, and a catalyst for significant progress in social and economic development in Hong Kong, Mainland China and beyond.

APPENDIX A – KEY PERFORMANCE INDICATORS

Performance Indicator	2016/17 (Projection)		2016/17 (Achieved)	
Inventions, Patents, Licenses, IP, Contracts, and Services				
Number of invention disclosures received and reviewed by TTC [Note 1 & Note 2]	100		133	
Number of patents filed in the year [Note 1 & Note 2]	150		205 [Note 3]	
Number of patents granted in the year [Note 1 & Note 2]	100		134 [Note 4]	
Number of total active licenses granted	65		100	
Income (on cash basis) generated from intellectual property rights [Note 5]	$5M		$7.6M	
Number of new licenses granted in the year	12		14	
Number of collaborative researches, and income thereby generated	80	$160M	97	$239.8M
Number of contract researches (other than those included in "collaborative researches" above), and income thereby generated	150	$70M	168	$61.3M [Note 6]
Number of consultancies, and income thereby generated	25	$7M	14	$3.3M [Note 7]
Number of equipment and facilities service agreements, and income thereby generated	480	$3M	461	$2.9M
Gap Funding				
Number of Proof-of-Concept Fund projects reviewed / funded [Note 8]	20	8	14	9
Number of U*Star Program projects reviewed / funded (*previously known as Innovation Acceleration Fund*) [Note 9]	15	6	14	8

[Note 1] Starting from 2013/14, the number reported also including invention disclosures, and patents filed and granted by satellite campus.

[Note 2] The numbers are counted based on the definition laid down by UGC under the Common Data Collection Format according to the (1) number of country of filings plus (2) the number of patent types which is defined in accordance with the international patent classification (i.e. technology area) of the patents.

[Note 3] CDCF Table 65: The number of patents filed is 205 and the number of inventions involved is 164 in the 2016/17 period.

[Note 4] CDCF Table 66: The number of patents granted is 134 and the number of inventions involved is 81 in the 2016/17 period.

[Note 5] It includes both licensing incomes from patent via RDC and copyright of courseware via the University.

[Note 6] The total number of new contract and contract value for contract researches agreements signed in the 2016/17 period is 115 and HK$65.3 million.

[Note 7] The total number of new contract and contract value for consultancy agreements signed in the 2016/17 period is 6 and HK$3.1 million.

[Note 8] The Proof-of-Concept Fund (PCF) is established to perform technology validation in the pre-commercialization stage.

[Note 9] U*Star Program (previously known as Innovation Acceleration Fund) is established to serve as another channel of gap funding support to complement the current Proof-of-Concept Fund (PCF) with a focus gears more on the business side. This is to support development of business idea by turning it into a practical business and implementation plan.

Performance Indicator	2016/17 (Projection)		2016/17 (Achieved)	
Entrepreneurial Education and Culture				
The BASE utilization: Number of visitor / dwell Time	12000	1hour	8000	0.6hour
Number of teams for One Million Dollar Entrepreneurship Competition at the Clear Water Bay campus Note 10	100		88	
Number of teams for HackUST: Total teams / HKUST teams Note 11	100	65	92	69
Accelerator: Number of teams / ompanies Note 12	40		49	
Percentage increase of participation of students from School of Science Note 13	20% increase		91% increase	
Number of advising hours for student entrepreneurs	200 hours		240 hours	
Quality of events through on-line feedback form	average >4.0 out of 5.0		average 4.29 out of 5.0	
Start-up and Spin-off Companies				
Number of economically active start-up and spin-off companies affiliated with HKUST Note 14	75		94	
Number of start-ups newly set up affiliated with HKUST Note 15	15		25	
Contributions to the Public				
Number of student contact hours in short courses or e-learning programmes specially tailored to meet business or CPD needs	24,080 hours		26,654 hours	
Income received from Continuing Professional Development (CPD) courses	$20.0M		$20.0M	
Number of public lectures / symposiums / exhibitions and speeches to a community audience	528		611	
Number of performances and exhibitions of creative works by staff or students	60		116	

Note 10 One Million Dollar Entrepreneurship Competition is one of Entrepreneurship Center (EC)'s annual flagship events. It is a platform for the students and alumni to realize their business ideas into a real business.

Note 11 HKUST HackUST is one of EC's annual flagship events. It has also become one of the largest hackathon organized in Asia. Students from HKUST as well as other universities in Hong Kong hack out prototype of hardware/software solutions over a weekend (non-stop) to solve real problems.

Note 12 Accelerator includes Funding Programs and Co-working Space Programs for HKUST start-up teams or companies.

Note 13 The ratio of the School of Science (SSCI) students joining EC's events and activities were relatively low, effort had been made to encourage more SSCI students to join entrepreneurship activities, e.g. Seminar, Start-up Weekend and Training Camp with science theme. This year's data shows the increase of SSCI students' participation in the One Million Dollar Entrepreneurship Competition. This data will also be extended to other major events such as HackUST and Accelerator, etc. in the future.

Note 14 The number of economically active spin-off and start-up companies has included the economically active spin-off and start-up companies under the HKUST Entrepreneurship Program (EP), including both located in the Clear Water Bay campus and satellite campuses (Guangzhou HKUST Fok Ying Tung Research Institute (FYTRI) in Nansha and HKUST Shenzhen Research Institute (SRI) in Shenzhen), those funded by Technology Start-up Support Scheme for University (TSSSU) Program and those funded by Yeung Wing Yee Entrepreneurs Fund. Company admitted to both the EP Program and TSSSU Program or having offices in more than one location only counts once. In addition to the number of new start-ups affiliated with HKUST, the number has also included the 5 general tenants of SRI and 4 companies hosted by FYTRI.

Note 15 The number of start-ups newly set up affiliated with HKUST shall include start-up companies admitted to the HKUST Entrepreneurship Program, those funded by the TSSSU program, those supported by Yeung Wing Yee Entrepreneurs Fund, and those admitted to the Blue Bay Incubator and the I&E Center of SRI and FYTRI. Company admitted to EP Program, TSSSU Program or having offices in more than one location only counts once.

APPENDIX B – APPROVED PROJECTS OF THE PROOF-OF-CONCEPT FUND IN 2016/17

Project Title
1. Technologies to Customize Generic HRTF with Reduced Complexity
2. Monocular Visual-Inertial State Estimation for Augmented Reality on Mobile Phones
3. A Crowd-Assisted Software Framework for Securing Bluetooth Low-Energy (BLE) Beacon Networks
4. Energy-Efficient Low-Cost Integrated High-Radix Non-Blocking Optical Switch
5. Tipoint: A Hand Gesture System for Smartglasses
6. High-Efficiency Low-Cost Compact Wireless Regulating Rectifier Technology for A4WP
7. Automated BIM-Based Steel Reinforcement Optimization and Clash Resolution Framework for RC Structures
8. Development of A Passive Thermal Diode/Switch for Use in A Novel Solar-Thermal Power System
9. Giant Electrorheological Fluid (GERF) Based Droplet Generation And Capacitive Detection for Multivolume Digital Polymerase Chain Reaction (MV Dpcr)

Project Title
1. 3DK Tech Builds
2. ULIT
3. Dr. Journey
4. Robotics Life Guard
5. P-Sense: Fingerprint Indoor Tracking Enabled Personalized Advertisement Platform
6. Nano Jarvis
7. HygiSpray: The Food-Grade Antimicrobial Coating for Food Sterilization and Preservation
8. Buttonless 3D Modeling Revolution

APPENDIX D – APPROVED PROJECTS OF THE HKUST ENTREPRENEURSHIP ACCELERATION FUND IN 2016/17

Project Title
1. Aromeo
2. Boulevard
3. Buffy
4. CheatSheet
5. Coral Garden
6. Dr Journey*
7. DriftCard
8. EZServd
9. Faiti Foods
10. Fixway
11. GiftHolo
12. Huan
13. Indonesian Student Network
14. Lebath Machine in Bathroom
15. Limitless
16. NameME
17. Personalized Air-conditioner
18. Product Launch Campaign for Feedi Baby
19. Social Innovation Study Trip to Seoul
20. StoreRush
21. Tourwill
22. UMix
23. Victouria
24. Web Summit

* Note: This project has also been included in the List of Appendix C.

APPENDIX E – ACTIVE START-UP COMPANIES OF THE HKUST ENTREPRENEURSHIP PROGRAM

Admitted Year	Company Name
2015-2016	1. Free Flow Technology Limited
	2. Guangzhou Mesh Info Technology Limited
	3. Hong Kong Innovative Display Technology Limited
	4. Magnum Research Limited
	5. Mannay Biotechnology (Hong Kong) Company Limited
	6. 廣州材智新材料科技有限公司
2014-2015	1. AuVi Entertainment Inc. Limited
	2. Everest Innovation Technology Limited
	3. iVo Technologies Limited

APPENDIX F – ACTIVE SPIN-OFF COMPANIES OF THE HKUST ENTREPRENEURSHIP PROGRAM

Graduation Year	Company Name
2016-2017	1. Sane Form Limited
2015-2016	2. CWB Tech Limited
	3. eTron Electronic Materials (Hong Kong) Co. Limited
	4. Guangdong Hiway Integrated Circuit Technology (HK) Limited
	5. Wah Kin Holdings Limited
2014-2015	1. BioRx Limited
	2. Congruence Technology Limited
	3. HKG Technologies Limited
	4. NEOID Limited
2012-2013	1. HiHex Limited (formerly name AURA Human Technology Limited)
	2. LEDoS Technology Limited
	3. SupBuyer.Com (HK) IT Company Limited
2010-2011	1. Fustec Company Limited
	2. Gene-vinate Limited
	3. R & C Biogenius Limited
2008-2009	1. Advanced Packaging Technology Limited (renamed as Advanced Photoelectronic Technology in Jan 2009)
	2. Googel Technology (Hong Kong) Limited
	3. Himax Display, Inc
	4. MicroWeb Limited
	5. PharmacoGenetics Limited
2007-2008	1. Blue Solve Limited
	2. LiteMagic (Hong Kong) Limited
2006-2007	1. Acron International Technology Limited
	2. Bike Elements Limited (formerly named Integra Antennas Limited)
	3. Bio-Click Technologies Limited
	4. MoFinity Limited
	5. TIM EDPlatform Limited
2005-2006	1. HongDa Financial Holding Limited (formerly named Perception Digital Limited)
2004-2005	1. Brilliant Concept Technologies Limited (renamed as Brilliant Concept International Group Limited in Mar 2013)
2001-2002	1. Radica Systems Limited
	2. SinoCDN Limited

APPENDIX G – TECHNOLOGY START-UP SUPPORT SCHEME FOR UNIVERSITIES (TSSSU) FUNDED COMPANIES BETWEEN 2014/15 – 2017/18

Year	Company Name
2017-2018	1. Bio-Trick Limited
	2. Blue Innowater Co Limited
	3. CoilEasy Technologies Limited
	4. Cytofluidics Biotechnology Limited
	5. Incus Company Limited
	6. Light Innovation Technology Limited
	7. Oxpecker Labs Limited
	8. Set Sail Venture Limited
	9. Sundial Technology Development Limited
2016-2017	1. AIEgen Biotech Co., Limited
	2. beNovelty Limited
	3. CoilEasy Technologies Limited
	4. Compathnion Technology Limited
	5. DelTron Intelligence Technology Limited
	6. Mindvivid Limited
	7. MultiMedia Big Data Analytics Limited
	8. NovaMatrix Limited
	9. Pear Limited
	10. SeaSafe Limited
2015-2016	1. Acoustic Metamaterials Company Limited
	2. eTron Electronic Materials (Hong Kong) Co. Limited*
	3. Everest Innovation Technology Limited*
	4. Free Flow Technology Limited*
	5. Hong Kong Innovative Display Technology Limited*
	6. Jetcomm Technologies Limited
	7. NanoBioImaging Limited
	8. Sonikure Technology Limited
	9. Yfisoft Limited
2014-2015	1. Acoustic Metamaterials Company Limited
	2. Ananflow Technology Limited
	3. Everest Innovation Technology Limited*
	4. Hong Kong Innovative Display Technology Limited*
	5. iVo Technologies Company Limited*
	6. NanoBioImaging Limited
	7. Yfisoft Limited

* Note: These companies have also been included in the List of Appendices E or F.

APPENDIX H – START-UP COMPANIES SUPPORTED BY YEUNG WING YEE ENTREPRENEURS FUND IN 2016/17

Company Name
1. Bio-Trick Limited*
2. Cheer Concept Limited (VOID)
3. FooPar (ShakeE Limited)
4. Incus Company Limited*
5. Mamahelpers
6. MultiMedia Big Data Analytics Limited*
7. Pear Limited*
8. Sundial Technology Development Limited*

* Note: These companies have also been included in the List of Appendix G.

APPENDIX I – ACTIVE START-UP COMPANIES HOSTED BY THE HKUST SHENZHEN RESEARCH INSTITUTE (SRI)

Department	Company Name
General	1. Aqumon*
	2. Atom Xquare*
	3. Beken
	4. DJI Innovation
	5. Gold Mofang
	6. Googel Technology*
	7. MUC Technology
	8. TANGREN MEDICAL
	9. Yunzhou-Technology
Blue Bay	1. AUVI Entertainment *
	2. Dreamover Studio
	3. Foresee Invisible
	4. Kaka Bio
	5. KN Biomaterials
	6. Prime Technologies
	7. Shi Di Technology
	8. Yun Ying Network
I&E Center	1. Boxy Tech
	2. First Cinema
	3. Flyinno
	4. Hanhow IP Consultancy & Services
	5. Mariocode
	6. Ming's Data
	7. Universal Star Education
	8. UVO Technology
	9. Win International Education & Investment
	10. Yao Innovation Investment management

 * Note: These companies have also been included in the List of Appendices E or F.

APPENDIX J – ACTIVE START-UP COMPANIES HOSTED BY THE GUANGZHOU HKUST FOK YING TUNG RESEARCH INSTITUTE

Company Name
1. 廣州市風力新能源科技有限公司*
2. 廣州阿南創意諮詢有限公司
3. 廣州未山資訊科技有限公司
4. 廣州碼石資訊科技有限公司
5. 廣州市麥瀾科技有限公司
6. 廣州材智新材料科技有限公司*

 * Note: These companies have also been included in the List of Appendices E or F.