



# REGIONAL HIGHER EDUCATION POLICY FORUM ON UNIVERSITY LINKS FOR INDUSTRY ENGAGEMENT

Manila, Philippines | 7-8 March 2019

# The Forum

**T**his Regional Higher Education Policy Forum on University Links for Industry Engagement forms part of the British Council's *UK-East Asia Higher Education Partnerships Programme* which aims to foster university level collaboration between the UK and East Asian (EA) countries and strengthen the UK's position as a significant partner supporting higher education reform in East Asian countries.

The forum is part of a series of interconnected activities which, through focussed discussions and showcasing of the UK and East Asian countries' strengths, will support higher education internationalisation.

On 7 March 2019, the University-Industry (U-I) Engagement forum was held at Conrad Hotel in Manila, Philippines. It brought together university engagement managers, researchers, policymakers and innovation and entrepreneurship managers across East Asia to share and discuss concepts on university-industry interaction, partnership models, strategies and platforms for the UK and EA higher education institutions (HEIs) to deepen collaboration with industry and business enterprise. Similarly, local business leaders were in attendance to share their experiences in cooperating with universities.

Specifically, the forum aimed to:

1. Share government industrial and Higher Education strategies, policies and funding support to promote university collaboration with industry and business enterprise

2. Share case studies on university-business enterprise or knowledge exchange models in the UK and in East Asia
3. Identify workable UK-East Asia collaborative models to deepen engagement with industry and business enterprise through recommendations from Higher Education policymakers and influencers

## Expected Outcomes

- Greater understanding of the UK and East Asia opportunities/challenges for university partnerships for industry engagement enabling better identification of what areas and which types of partnerships work best

## Participants

- Policymakers/representatives from the Ministries of Higher Education in East Asia
- UK and East Asia institutional representatives, university engagement managers, innovation and entrepreneurship managers
- East Asia and the UK think tanks
- Regional education bodies
- Selected representatives from industry and business enterprise

Gail Frances Galang of Miriam College, a valued institution partner of the British Council, served as the master of ceremony.



# Welcome Remarks



## Alison Barrett

Regional Director Education and Society  
East Asia, British Council

*“Working with the industry is a critical part of East Asia’s ambition to enhance innovation, to transition to large economy and to support young people to participate in that economy...”*

Alison Barrett expressed how doubly pleased she was in being with the group on her first visit to the Philippines and in her role as Regional Director Education and Society, East Asia, British Council. Meeting Dr. J Prospero de Vera of the Commission on Higher Education in the forum, whom she met in London a couple of weeks ago, demonstrates the strength of a partnership and how closely they are working together to support this area of collaboration between the two countries. Noting that 11 of the 14 countries in the East Asia region were represented in the gathering, she welcomed everyone and hoped they had a pleasant journey and that they would experience the hospitality the Philippines has to offer.

The British Council is the UK’s cultural organisation whose mission is to support and help projects and connections to flourish between nations, people and institutions. The Council’s connections are quite strong and collaborations are supported by a host of different organisations and institutions, according to Barrett. Through its

programmes, the British Council aims to strengthen transnationalisation in higher education. The Council has 18 TNE programs in the Philippines and is strengthening its links with researches, and now with the industry.

She highlighted that working with the industry is a critical part of East Asia’s ambition to enhance innovation, to transition to large economy and to support young people to participate in that economy, starting not necessarily at the bottom but being given access to opportunities in the industry and contribute to social change and social innovation in the communities and places where they work. Moreover, relationship building is an important initiative for the UK with the British Council as the 3rd largest producer of research and having huge collaborations with research organisations in East Asia. On a final note, Barrett said she’s excited to kick start the conversations and looked forward to opportunities for everyone to build partnerships in the next three days.



# Keynote Speech

“*Let us look at the bigger picture—not only as individual universities and firms but as macro-regional value chains with challenges that university-industry linkages can respond to.*”



**Dr. J Prospero De Vera III**

Chairman  
Commission on Higher Education (CHED), Philippines

The Regional Forum is synergistic in multiple ways as it talks about synergy between university and industry, and other partners like governments and local communities. Further demonstrating the presence of synergy when the whole is more than the sum of its parts, CHED chairman Dr. J Prospero de Vera III said that when these sectors work together, they contribute and produce more than when they work separately and in silos.

He also cited the synergy of cultures where the UK meets with Asian countries to talk about university-industry linkages. The countries present in the forum will benefit not only from the exchange of ideas but ultimately in inter- and intra-continental partnerships that have been forged, strengthened and continuing. The CHED chairman went on to say that the quotations from British philosopher Francis Bacon, “Knowledge itself is power” and from Drew Gilpin Faust, a former president of Harvard, “Knowledge is the most currency of the 21st century,” aptly describe the reason for everyone’s presence in the forum and the desire to explore linkages with each other.

Saying that university-industry linkages have become more critical today given the changes in the educational environment, he talked about the shift from the educational system’s K-10 to K-12. This was geared toward being up to standard with other countries and to prepare students to be both university- and employment-ready. Dr. de Vera described the shift as challenging as the Philippines started late compared with other countries in the region. However, it did offer a very good opportunity to look into how courses can be downloaded to senior high school and even explore opportunities for university-industry linkages. It also opens opportunities by moving a significant number of courses from the university level to senior high school. Moreover, the HE level is able to realign all degree programmes in the context of internationalisation, in the context of the 4th industrial revolution, and the need to link with industry.

Efforts to increase access and equity in HE were mentioned:

- Congress, in June 2017, realigned some

# Keynote Speech

PhP8 billion in the proposed 2017 budget so that close to 900,000 young Filipinos enrolled in 112 state colleges and universities will no longer pay tuition fees.

- RA 10931 signed on 3 August 2018 by Pres. Duterte providing free tuition and miscellaneous fees to students in public colleges and universities. Moreover, those enrolled in private HEIs in cities and municipalities where there are no public universities get tertiary education subsidy for their education needs.

These developments require the education sector to focus on improving quality to produce a globally competitive workforce at the soonest possible time.

One of the foundations that facilitates university and industry linkages in the Philippines and in other countries is the presence of faculty and staff who are highly competent and deeply engaged in research and innovation. The Philippines, like most developing countries, has been trying its best to produce an education workforce that can compete with the best in the world. Today only 60 per cent of full-time faculty or 85,000 in AY 2017–2018 have graduate degrees. Among the 51,000 with graduate degrees, only 20 per cent or 10,000 are engaged in research, at least, on a part-time basis because of the huge HE system in the Philippines—close to 2,000 public and private universities. The Philippine HE system is unique,

though, because unlike in other countries, majority of HEIs are private universities. But in terms of enrollment, the big number has slowly shifted to public universities, thus, the constraint on resources and challenges for the government are quite significant.

Dr. de Vera drew attention on the need to balance certain policy considerations in implementing university-industry linkage policies as follows:

1. *Finding a balance between expectations of the academe and industry.* Industry often asserts that graduates do not have the skills and competencies in the workplace and call for more contact time for students with the industry. But the skills needed in the 4th Industrial Revolution like critical thinking, complex problem solving are actually best developed not through contact hours but in the general education program of universities that happen early on, even in senior high school. It is imperative to situate academe-industry linkages in the proper context, particularly by mapping out successful academe-industry linkages in every industry and area, both geographically across regions, and across and within countries.
2. *Balance which focuses on commercial and academic side.* Questions such as, “When universities partner with industry, do we end



# Keynote Speech

up commercialising the academe? Who will benefit from the partnership? Or will industry enrich itself from the labors of academia?" need to be addressed. These issues are usually raised in the country by groups against "commercialisation of HE."

3. *Metrics of success.* Are revenues generated or is it the societal impact of the partnerships? Linkages can be profitable but often times linkages are not about making profit but ensuring that knowledge in the academe gets to be scaled up for the benefit of society and that learning from the industry leads the academe to improve and reach more people. Success should be measured in terms of societal impact, the number of small businesses that increase their productivity and the number of people who benefitted from innovative practices.

In his previous role as vice president of the University of the Philippines working with ASEAN university network on social responsibility and sustainability, he had seen that this kind of collaboration across universities and policy makers across countries can lead to a lot of mutually beneficial learning. There is potential for doing the same for university-industry linkages to cross borders and even nationalities. There is also great potential across governments and universities to work on documenting and assessing the contribution of university-industry linkages and even universities in general to the economy of each country. Only when the societal impact of activities of HE is emphasised that

skeptics—either academicians or policymakers—can be convinced that the work is transformative and supportive of the broader goals of the national and local government.

Dr. De Vera thinks that countries in the UK and East Asia can work together to come up with a comparable system to make this happen. Drawing from the notion of societal contribution, universities can also benefit from looking at regional value chains working in industries in the region. There are technological and technical challenges that can be addressed by universities and this could be specific skills that are in shortage or processes that can be further enhanced or made efficient. He encouraged everyone to look at the bigger picture—not only as individual universities and firms but as macro-regional value chains with challenges that university-industry linkages can respond to.

The UK and East Asian countries can also benefit from fostering more mobility not only in terms of students but professors and researchers can learn from each other's best practice. Let academicians and industry leaders reach out across the region to learn from each other.

There is a need to develop collaboration and comparative studies to ensure building up a community of practice that prides itself in openness and subscribes to good global citizenship. Summing up, Dr. de Vera said that universities, industries and their partners flourish in a world of connections, not borders; collaboration, not individualistic competition.

## Context Setting and Objectives of the Regional Forum



“*There is much to be gained from East Asia and UK HEIs collaborating in this area drawing on each others’ expertise and maximising knowledge exchange with industry and supporting innovation.*”

### Sue Milner

Director Education, East Asia, British Council

Sue Milner asked the group to reflect on the driver behind the higher education and industry collaboration. It is important to recognise that the said collaboration between academia and industry can play a critical role in harnessing the capacity of HE innovation, economic growth and employability as well as social development. There is a need to step back and think about the purposes of engaging in this connectivity and knowledge exchange.

In developed economies, universities play a key role in harnessing opportunities for research, innovation and entrepreneurship through some university-industry engagement. She cited the long practice and experience of the UK where HEIs have excellent track record of quality research and innovation and have strong linkages with industry partners having enterprise engagement.

The UK has one of the most innovative economies globally. More integrated government, industry and university links can enable developing countries to harness opportunities available to the arising of the 4th Industrial Revolution. There is much to be gained from East Asia and the UK HEIs collaborating in this area drawing on each others’ expertise and maximising knowledge exchange with industry and supporting innovation.

Milner noted that the activity was a gathering of university engagement managers, researchers, policy makers and innovation and community managers from across EA to take time to connect, network, and get to know each other. And with this, she acknowledged the wealth of knowledge and expertise present in the forum. She also said that conversations would be devoted to sharing and discussion of concepts



## Context Setting and Objectives of the Regional Forum

around university-industry interaction, partnership models, strategies and platforms in the UK HEIs to deepen collaboration with industry and business enterprise. Business leaders were invited to talk about their experiences in collaborating with universities and international students studying in Manila would also share their perspectives.

Milner presented the aims of the forum as follows:

1. Share government industrial and Higher Education strategies, policies and funding
2. Share case studies on university-business enterprise or knowledge exchange models in the UK and across East Asia
3. Identify workable UK-East Asia collaborative models to deepen engagement with industry and business enterprise through recommendations from Higher Education policymakers and influencers.





## Overview of University-Industry Links in EA and UK and Potential Collaborative Models (Initial Findings from the University Links for Industry Engagement)



**Adrian Day**

Independent Expert  
KE Metrics

“U-I has positive impacts for HEIs in terms of new contracts or new insights into their research as well as improved reputation and attraction of new research grants including PhDs.”

**A**drian Day presented the Scoping Study on University-Industry (U-I) Links between the UK and East Asia for Industry Engagement which covers EA countries of China, Indonesia, Hong Kong, Japan, Korea, Malaysia, Myanmar, Philippines, Taiwan, Thailand, Singapore and Vietnam along with data and context from the UK.

Key objectives include providing an overview of U-I links in East Asia and the UK, identifying internationalisation partnership opportunities and collaborative models for UK-EA governments and HEIs to deepen connections with industry and business enterprise, and providing recommendations on how the British Council can best facilitate the deepening of UK-EA HEIs linkages with industry and business enterprise.

U-I is important for the UK government to address huge challenges in the Industrial Strategy and Innovation aspirations, and underpin and leverage investment in all HE, with research, problem solving, and talent, among others, as demands from the industry. On the other hand, U-I has positive impacts for HEIs in terms of new contracts or new insights into their research as well as improved reputation and attraction of new research grants including PhDs.

Initial findings from the survey reveal the respondents' difficulty in identifying the right industry or academic partner—neither side knows capability of the other, the need to hasten project commencement, the challenges posed by commercialisation of research outcomes and IP issues as a concern.

# Session 1

## Perspectives from the Ministries of Higher Education What collaborative university-industry models could work in EA?



The aim of the session was to share selected East Asian government industrial, innovation and Higher Education reform strategies, policies planned and implemented, and targeted funding support/initiatives to promote university collaboration with industry and business enterprise. Sue Milner (extreme right) served as the session moderator.

The session was delivered in two parts as follows:

### Part 1. Speaker presentation coverage

- Key policies on the internationalisation of Higher Education in their country with respect to supporting industry engagement including: the advancement of research commercialisation and technology transfer and Knowledge Exchange between universities and industry to foster innovation in teaching and development of industry-ready graduates, collaborative research, and innovation hubs
- Funding initiatives and support for Higher Education Institutions to engage with the industry and business enterprise

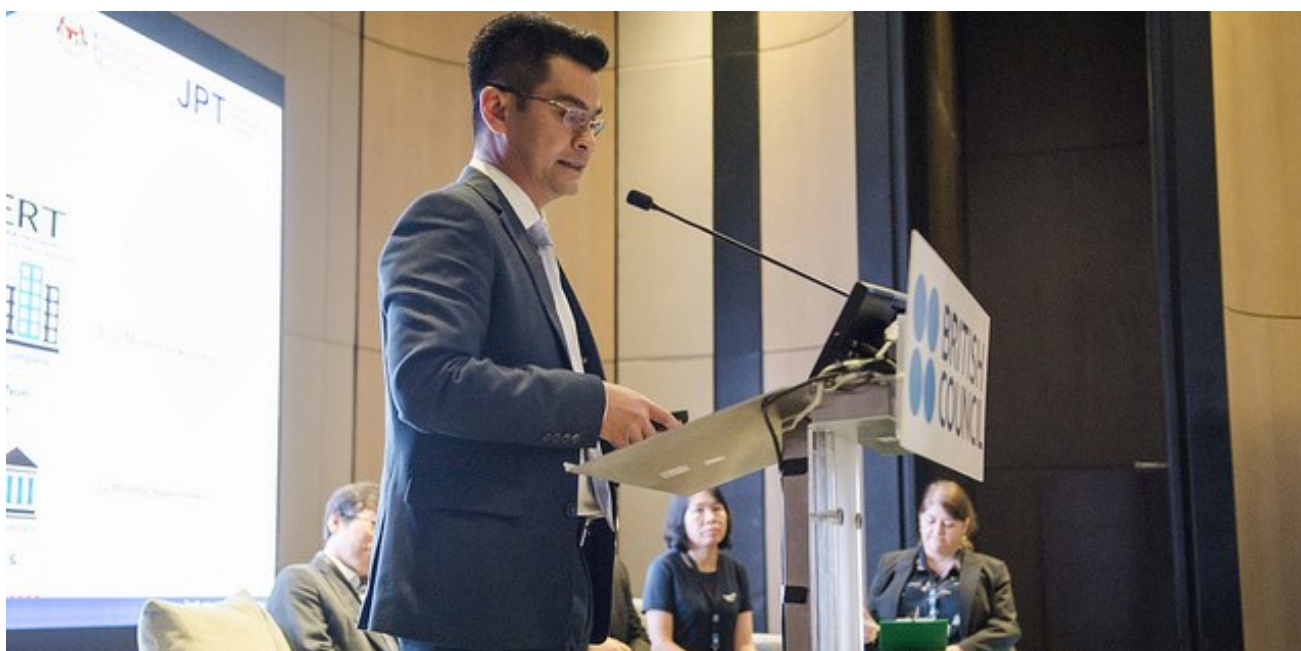
- One programme/project example of a university-industry partnership that was supported by the Ministry, if available.

### Part 2. Fireside chat on collaborative models on university partnerships for industry engagement

The moderator asked the speakers the following questions:

- What are your thoughts on the collaborative models presented earlier?
- Which collaborative models do you consider can work best in your country's context? What should be taken into consideration?

## Fortifying Industry-Academia Collaboration: Malaysia Experience



**Professor Arham Abdullah**

Director of Industry Relations Division, Ministry of Education, Malaysia

Prof. Arham Abdullah talked about interesting innovative platforms the Ministry of Malaysia has put in place to support university-industry collaboration. Malaysia aspires to make innovation a major driver of national economic growth. As one of the leaders in the national innovation landscape, the Ministry of Higher Education (MOHE) plays a major role in facilitating the development of innovation ecosystems. Successful innovation ecosystems require close collaborative partnership of the Quadruple Helix Model (Academia-Industry-Government-Community Framework). The government typically plays a particularly critical role, both as a major funding body and as a policymaker, facilitating collaboration among stakeholders. The Ministry thus aims to facilitate the development of innovation ecosystems by tightening its focus on a few national priority research areas critical to

Malaysia's growth, stimulating investment from private sector as well as creating a supportive environment to facilitate the commercialisation of ideas.

One particular platform for U-I engagement is the CEO @ Faculty Programme introduced by the MOHE. It started in 2015 with 24 CEOs, and by 2016, there were 63 CEOs, including senior officials from the Malaysian civil service, joining the programme. Another is the Industry @ University as part of the Financial Sustainability Strategy at the university where the most important strategy is to develop the trust between university and industry. Menu of engagement includes graduate employability, research and development (where academia-industry collaboration is focussed), commercialisation, innovation and consultancy.



## Higher Education Reform Programmes to Enhance University-Industry Collaboration in Korea



**Professor Euy Soo Lee**

Korean Society for Industry and Economic Collaboration, Dongguk University, South Korea

Prof. Euy Soo Lee briefly narrated the development of technology and university-industry (U-I) cooperation through the years, from 1950 to 2010, with the University as the hub of U-I cooperation in the 2000s.

Korea has moved forward as a highly technology-oriented country with great innovation, particularly in digitisation. He shared the challenges encountered by the academia which include decrease in college-eligible population, lack of science subjects being offered, and research-emphasised faculty evaluation system regardless of the college research infrastructure and capability, among others.

On the other hand, the challenges in education by the Industry are mismatch of supply and

demand in engineering disciplines and levels of skills, insufficient up-to-date industrial examples in engineering curriculum, and the length of time in training a new engineer to be self-sufficient (average of three years).

Prof. Lee cited the Leaders in Industry-University Cooperation (LINC) project by the Ministry of Education as a comprehensive approach to tackling different aspects of industry engagement focused on four major components:

- Reorganisation of university system to U-I cooperation friendly system
- Operation of U-I cooperation friendly curriculum (Internship, Capstone Design)
- Reinforcement of enterprise network
- Construction of local community ecosystem

## Vietnamese Ministry of Education and Training



**Thi Thanh Mai Cao**

Principal Official, Ministry of Education and Training, Vietnam

Thi Thanh Mai Cao said that the Vietnamese Ministry of Education and Training has great intention to conduct collaboration between university and industry. This is mandated in legal documents such as the law on HE, charter of universities, framework for accrediting HEIs.

Yet, there are no sufficient policies to support collaboration between university and industry.

Universities have linked with the industry but are mainly dependent on resources they have. Collaboration includes sending students to industry for practice. The

industry is also involved in developing the curriculum and in giving lectures. At the moment, they are implementing a research with the hope to set up a model suitable for Vietnamese context. She said the forum will be very helpful to her.



## CHED Programmes for U-I Linkages



**Nelson Cainghog**

Director IV, Office of Planning, Research and Knowledge Management, CHED, Philippines

Dir. Nelson Cainghog named three CHED policies on U-I linkages. These are:

1. Industry representation in the crafting of policies, standards, and guidelines. Industry members sit in the technical panels that create the curricula for different courses. As part of the outcomes-based education, CHED is pushing for the industry to also help determine what outcomes the students will get to master after getting the degrees.
2. Technology adoption as a criteria in levelling state universities and colleges (SUCs). CHED is also involved in the management of SUCs where commissioners sit as chairpersons. Every three years, CHED conducts an assessment of the HEIs to determine their levels and this also determines the salary levels of the president and vice president. One indicator required is identification of technology adoption, e.g., how many

technologies were adopted and the number of beneficiaries recorded. There is also a performance-based bonus wherein CHED sends targets every year such as, the number of publications, patents, engagements with industry.

3. Provision of grants to encourage and capacitate individual faculty and institutions to engage with industry

He described the sectoral engagement as a grant similar to the academic exchange program of Malaysia. This was conceptualised during the K to 12 transition programme to assist HEI faculty members who were displaced when the country shifted from K to 10 to K to 12. This aims to provide opportunities for displaced faculty to get engaged with government and society and the private sector as well. The programme has helped 47 business partners which are small and medium-sized enterprises across the Philippines.



## CHED Programs for U-I Linkages / Fireside Chat

Other grants include those given to institutions to start building innovation centers, research grants which can include industry partners, and scholarship for graduate studies which is now approaching a total of 9,000 beneficiaries. Another grant is for the Philippine-California Advanced Research Institute, a multi-year and multi-billion programme, i.e, village base station (in partnership with Globe) which targeted small and unserved communities. The system is more cost-effective compared to traditional cellular deployment and is able to come up with low-cost technology to serve low areas in the country.

A *Fireside Chat* ensued after the speakers' presentations. Asked what collaborative models they can adopt in their respective countries, the speakers gave the following responses:

### *Malaysia*

Each country has different industry status or level. In Malaysia, there are few models that can be adopted and these are mostly industries from the SMEs. It is difficult to engage in R&D. For each of the model, we need to adapt and refine to suit our country's need. Malaysia adopted the Helix model. CSR programs are also integrated where industries see some funding using R&D.

### *Korea*

U-I engagement is quite complicated because it depends on the status of the country. There's also the tricky stakeholders—government, university, and industry. What they will get from each partner is the key point. In Korea, the government point of view is highly important.

University and industry have differing viewpoints. The former's point of view is not comfortable. Both have to work together, so government's support for the industry to enhance their engagement with the universities is also important. The university also emphasises linkage with industry to support research initiatives. The university system has to change; they need to consult corporations for research. Meanwhile, the industry looks into how they can get alternative studies from the university. University and industry have the same voice, but they look at different sides.

How can they agree? Best way is for the university professor to go to the industry and industry workers to have access to university education programmes.

### *Philippines*

These are very relevant models. I'm interested in the industry-based training programme which is quite common in the UK with a doctoral training. The industry is already there at the start, future academics would be comfortable with a certain level of trust in the industry and I hope it can actually be expanded to doctoral training.

Talking about PhD, we hope we can institutionalise dual training on some sort of experience in the industry which can be credited as a form of accreditation towards earning some credits for MA degrees. We have this in the Philippines with the ETEEAP or Expanded Tertiary Education Equivalency and Accreditation Program where informal experience on learning can be credited and

## Fireside Chat

translated to a master's degree. But this is only limited to HEIs with higher levels of accreditation.

Knowledge transfer partnership for those who will not undergo doctoral training with the industry. This is one way to establish trust and it supports the drive of government towards inclusivity.

Need for support for infrastructure. The Philippines does not have enough academics with master's degree qualifications, that's why we have appointments with justification.

To maximise brain or processing power, there is a need to support infrastructure for research managers. For instance, in the UK, there is a strategic research office which does all administrative support work

giving academicians more time to focus on and engage with industry to talk about technicalities of the research engagement.

Finally, to support infrastructure or in getting money from government, there is a need to get better data.

In this work, we need data on how many benefitted, how much growth there is in terms of job and opportunities created in the communities.

### *Vietnam*

Not much experience in the model of university-industry collaboration.

Vietnam is still in the process of building a model, and research has started last month which the speaker is not confident to share with the group yet.



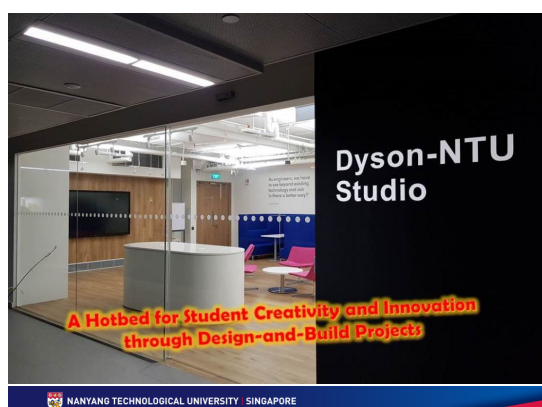
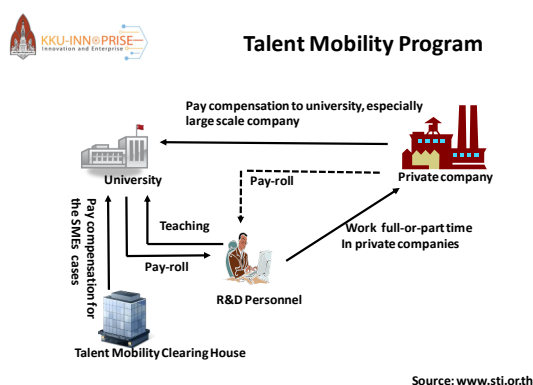
# Session 2

## Higher Education Institutions

### Case Studies: University-Industry Partnerships in East Asia



The aim of the session was to showcase successful, replicable models on university-industry collaboration through case study presentations. Speakers presented their case study on U-I partnership through a storytelling format highlighting themes like challenges and key outcomes, and lessons learned. Alison Barrett was the session's moderator.





## University-Industry Collaboration Programmes in Thailand



**Prof. Supachai Pathumnakul**

Vice President for Research and Technology Transfer, Khon Kaen University, Thailand

Prof. Supachai Pathumnakul remarked that the Thai government works hard to encourage researchers to work with the industry and sets up projects to encourage the link. Some projects are the following:

- University Business Incubator (UBI)
- Technology Licensing Office (TLO)
- Collaborative Research Fund
- Innovation & Technology Assistance Program (iTAP)
- Research & Researchers for Industries (RRI)
- University Science Parks
- Talent Mobility Program (TM)

In particular, the Talent Mobility Program is implemented to address a problem of R&D personnel shortage in industries. This is

implemented through mobilising research and development personnel from academic and research institutions to work full- or part-time in private companies. Currently in the TM network are 21 universities and seven organizations. The program matches research and industry. Research will benefit the university. If R&D personnel go to work with the industry, private companies pay compensation to the university, especially large scale companies. Not only professors are considered; there are also scholarships for students who will work with the company.

The programme began six years ago, with 120 projects under the TM. It started with 22 staff in 2013 reaching 224 in 2017. The number of projects under the TM is increasing every year. It is very difficult, though, to encourage researchers to work in the industry.

## Regional Policy Forum: UK-EA Higher Education Partnerships for Industry Engagement: National Formosa University Experience

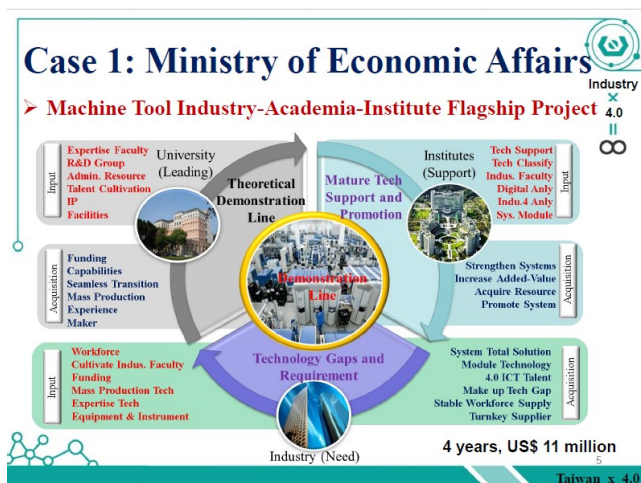


**Dr. Hu, Chih-Hsiung**

Secretary General and Associate Professor Department of Industrial Management  
National Formosa University, Taiwan

Dr. Hu, Chih-Hsiung cited two cases of university-industry partnerships. Case 1 is about the Ministry of Economic Affairs for the Machine Tool Industry-Academia-Institute Flagship Project. This is a four-year project with US\$11 million funding with the industry paying as well.

A total of 100 companies have joined this project. Incentives for joining include money, promotion for professors, and benefits for students in two ways: role as research assistants and getting paid for the job and through the industry PhD program where the industry funds the school, thus students benefit from this scheme, too.



Case 2 is about the Ministry of Science and Technology's Global Research and Industry Alliance where the Ministry of Education sends exchange students to fine universities. Currently, students are being sent to the UK.

**Case 2: Ministry of Science and Technology**

**Global Research & Industry Alliance**

**The Alliance of Advanced Manufacturing for the Aerospace Processing Supply Chain**

Department of Aeronautical Engineering  
Smart Machine & Intelligent Manufacturing Research Center  
Aviation Maintenance Training Center  
**Aerospace Industry**

## Human Augmentation: Experiences from UTokyo x Sony Collaboration



**Prof. Takashi Miyaki**

Project Associate Professor, The University of Tokyo, Japan

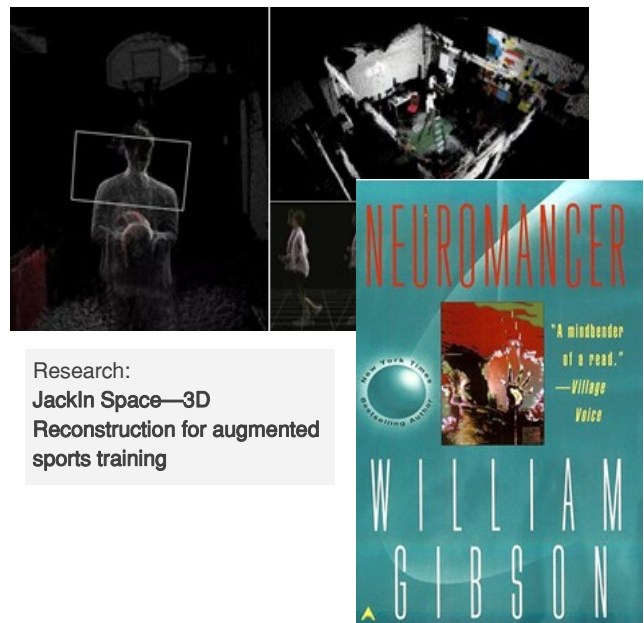
Human augmentation is integrating human beings with networks and information technology. It comes in the following forms:

- Artificial intelligence
- Robotics
- Human interface
- AR/VR

Prof. Miyaki presented the *JackIn Space* research done in collaboration with Sony. The concept seamlessly integrates first person view with third person view for effective telepresence collaborations. *JackIn Space* is a 3D reconstruction for augmented sports training.

Education partnership in the university also comes in the form of academic seminars, summer school, and open symposium. Prof. Miyaki remarked that in the partnership, the

University of Tokyo and Sony adhere to the new framework for accelerating Startups and to real-world deployment of collaborative ideas.



Research:  
**JackIn Space—3D**  
Reconstruction for augmented  
sports training



## Industry Engagement at Nanyang Technological University (NTU) Singapore



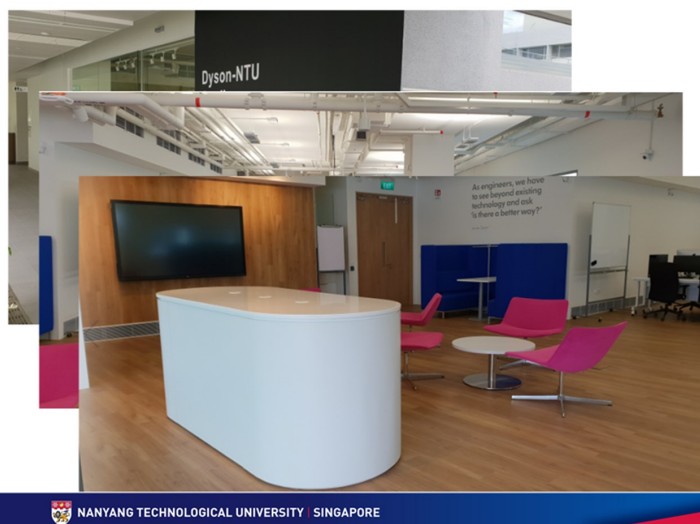
**Prof. Lee Yong Tsui**

Nanyang Technological University, Singapore

NTU Singapore was established in 1991 with focus on Engineering and Business Faculties, and over the years new disciplines have been added. It has several colleges and schools but the College of Engineering is the largest.

University-industry engagement is done in three levels: collaborative research, consultancy, and student projects. He

proceeded to share about its partnership with Dyson for the Dyson-NTU Studio, a hotbed for student creativity and innovation through design-and-build projects. It is also designed to infuse entrepreneurial spirit in students.



NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

Aside from being used for research and teaching, the studio is also utilised for student activities and projects where students are encouraged to take initiatives in solving real-life problems. Highly iconic products have been produced, majority in manufacturing.

In the partnership, Dyson, through its engineers, provides mentorship to the students and help turn students' ideas into viable solutions. The collaboration supports local and overseas internships for students, graduate recruitment, and the manner engineering curriculum is taught at NTU.

# Session 3

## Collaboration with Universities: Viewpoints from the Industry and Enterprise



The aim of the session was to share industry and enterprise perspectives on engaging and collaborating with universities, sharing viewpoints on what makes for a successful partnership, and what are the benefits and common hurdles encountered. The session was moderated by Prabha Sundram, Senior Programme Manager Education, British Council Malaysia.

The session adopted the *Lightning Talks* format where speakers were required to be concise and succinct in their presentations, directing their points to the following questions and focusing only on critical information:

- What his/her industry or business enterprise does?
- Kind and nature of partnership with the university and how does the partnership work?
- What makes the university partnership a success? What are the opportunities that arise from it?
- What will make the same partnership model work in other EA universities or industry/business enterprises?



## Experience the Unexpected: Become an ICAEW Chartered Accountant



**Wai San Siew**

Regional Head of Education, Institute of Chartered Accountants in England and Wales

Wai San Siew briefly introduced her organisation and how they work with universities. There are 5,000 employers and 260 universities worldwide working with ICAEW. Its four pillars are practical work experience, accounting, finance and business modules, professional development (which they do together with the employers) and ethics and professional skepticism. ICAEW is very strong on the ethics element. They work with universities through the following:

- Credit for prior learning
- ICAEW CFAB qualification
- Learning materials
- ICAEW student recruitment

She also pointed out the seven skills that employers are looking for which the students are coached on through the HEIs' syllabus. These are people skills, team working, and professionalism, among others. Once the university works with them, the most important

thing they provide are the learning materials. ICAEW also brings them to the employers, provides online resources, conferences, and builds them up in terms of knowledge and trends of what's happening in the market. Qualified students who come from various backgrounds are assured of placements with employers.

Together with the university, ICAEW makes them employable through the seven levels of competencies that they need to address. And when students are qualified, they retain their membership with ICAEW because they have to continue with their professional development. Strategic partnerships are done through employer affiliated programmes, integrated learning programmes, ACA strategic credits, and academic opportunities for ACAs. These partnerships are a combination of work and study. ICAEW provides a learning education community where collaborative partnerships take place.





Partnerships with universities take place through INKA's innovation and research projects such as the implementation of Industri 4.0 in collaboration with the Institute Technology of Bandung. Combining system, IT and concept, collaboration has made them more productive and more efficient. Collaboration provides a good opportunity for industries, especially for INKA, to address relevant problems.

The chart illustrates the product evolution of PT KAI from 1981 to 2030. The y-axis represents the product categories, and the x-axis represents the timeline. The product line starts at the bottom left and moves upwards and to the right, indicating a progression from basic components to full EPC products.

**Product Categories (Y-axis):**

- EPC Product (Orange)
- MSA, Service dan Retail (Blue)
- Product Diversification (Red)
- Main Product for Domestic Market (Light Blue)
- Main Product for Export Market (Dark Blue)
- Component (Purple)

**Timeline and Key Milestones (X-axis):**

- 1981:** RAPIKORPANG
- 1984:** KERETA API
- 1992:** KERETA API
- 1995:** KERETA API
- 1998:** KERETA API
- 2001:** KERETA API
- 2004:** KERETA API
- 2007:** KERETA API
- 2010:** KERETA API
- 2013:** KERETA API
- 2016:** KERETA API
- 2019:** KERETA API
- 2022:** KERETA API
- 2025:** KERETA API
- 2028:** KERETA API
- 2030:** KERETA API

**Key Milestones and Products:**

- 1981:** RAPIKORPANG
- 1984:** KERETA API
- 1992:** KERETA API
- 1995:** KERETA API
- 1998:** KERETA API
- 2001:** KERETA API
- 2004:** KERETA API
- 2007:** KERETA API
- 2010:** KERETA API
- 2013:** KERETA API
- 2016:** KERETA API
- 2019:** KERETA API
- 2022:** KERETA API
- 2025:** KERETA API
- 2028:** KERETA API
- 2030:** KERETA API

**Key Milestones and Products:**

- 1981:** RAPIKORPANG
- 1984:** KERETA API
- 1992:** KERETA API
- 1995:** KERETA API
- 1998:** KERETA API
- 2001:** KERETA API
- 2004:** KERETA API
- 2007:** KERETA API
- 2010:** KERETA API
- 2013:** KERETA API
- 2016:** KERETA API
- 2019:** KERETA API
- 2022:** KERETA API
- 2025:** KERETA API
- 2028:** KERETA API
- 2030:** KERETA API

## Catalysing Academe-Industry Collaboration



**Dr. Rowena Cristina Guevara**

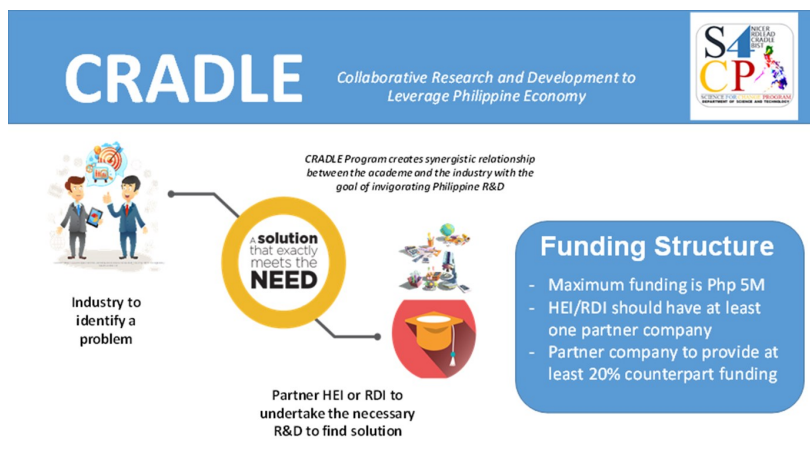
Undersecretary for Research and Development, Department of Science and Technology (DOST), Philippines

USec. Rowena Cristina Guevara underscored the huge amount of mutual benefit between industry and academe collaboration. For DOST, it was a journey forming that relationship, building trust, and taking them through some challenges in the academe. To address the gap in how industry and academe work, balancing the needs of both sectors is a must. And collaboration provides the answer.

She said that in the past when researchers were done with the research, DOST would give it to the industry. Now, they have changed the game: they ask the industry what they want to sell and let the academe solve it for them. The government would give money to the academic institutions to solve the problem for the industry. DOST requires only two things from the industry: (1) 20 per cent in cash or

in kind contribution, and (2) the promise to adopt the technology after the research development.

USec. Guevarra cited the *Collaborative Research and Development to Leverage Philippine Economy* (CRADLE) Programme which creates synergistic relationship between the academe and the industry with the goal of invigorating the Philippine R&D. The CRADLE





# Catalysing Academe-Industry Collaboration

Programme aims to improve the innovation system in the country by creating the structure that facilitates the smooth transition of new knowledge and technologies from the academe to the industry for practical use and application.

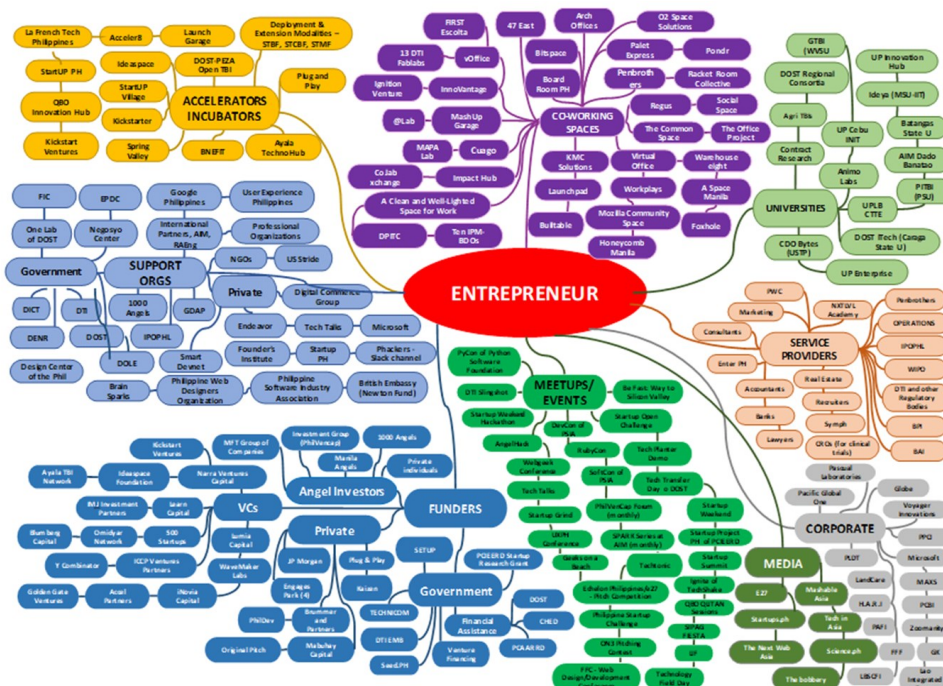
Under the Programme, the private sector industry will identify the problem and the HEIs or RDIs will undertake the research and development. Together, the academe as producer of knowledge and manpower, and the industry as the entity that translates technologies to real world applications will generate new opportunities for Filipinos in the form of new industries, enterprises, jobs and solutions to pressing community and national problems. Furthermore, collaboration will ensure timeliness and relevance of R&D endeavours, with reference to practical and pressing national needs. CRADLE funding will only be given to the HEI or RDI. Usec. Guevarra also pointed out that it is not enough that DOST gives money to the university. It also needs to give incentives to the industry to partner with university.

On incentives for the industry to work with the academe, DOST keeps up with technology and provides support in terms of training, knowledge development, collaboration with stakeholders, tutors support online, and very good faculty.

She also talked about the Philippine Innovation Ecosystem where five government agencies are working on a project using the whole-of-government approach and completing the government ecosystem for the country. The ecosystem is also mapped out for entrepreneurs to figure out how to make the connections between the various players.



## The Philippine Innovation Ecosystem





## Session 4

### Students' Voice:

Do university-industry partnerships matter?



This session gave voice to two students and a graduate's perspectives on the value and impact of university collaboration with industry in terms of the following: teaching and learning experience, curriculum, employment/work readiness, research collaboration, work experience/internships and the impact of industry presence on campus. Jules Guiang, a news anchor from the People's Television Network, served as the session moderator.

Patterned after BBC Radio Programme, *Any Questions?*, the session was a venue to ask questions to a panel of student and graduate speakers on their views on U-I linkages. The sharing dealt on value and impact of university collaboration with industry such as employability and the role that university and industry collaboration plays in ensuring curriculum relevance, research opportunities, fostering cutting edge technology and innovation and in developing graduate employability skills and career success.

The moderator posed the following questions to the panel:

- Does university-industry engagement have value to you? In what ways are you benefitting or have benefitted in your university's partnership with industry?
- Does it really matter that universities engage with the industry or not? To what extent do you think a student's choice of university is influenced by the university's track record in industry engagement?
- What are university-industry partners getting right or wrong as far as students and graduates are concerned?
- Will university's engagement with industry matter in the future?

The audience likewise asked questions to the panel.

## Students' Voice: Do university-industry partnerships matter?



**Hideki Osugi**

Graduate of MA Political Science in  
Global Politics (dual degree)  
Ateneo de Manila University



**Le Bao Ngan**

Graduate Student of Master of Manage-  
ment in Agribusiness Management and  
Entrepreneurship,  
University of the Philippines Los Baños



**Pei-yu Hsiao**

Exchange Student, AB English  
Language Studies  
University of Santo Tomas

All three confirmed the value of university-industry partnerships citing having connections in the industry, including alumni; having access to data in the field; and being exposed to the practices of the business. For Hideki, it was the university that coordinated with and found him a counterpart in the Philippines for his project. For Le Bao (Kay), it also gave her the assurance that she will land on a good job after graduation, and for Pei-yu (Betty), U-I partnership was all a very good experience.

Similarly, they were in agreement that a student's choice of university is influenced by the university's track record in industry engagement. Hideki said finding a pragmatic research can be a deciding factor. Kay reiterated connections in preparation for a better job after graduation but emphasised that she expected the university to give them more than

knowledge but practical work. She added that she got to know about UPLB through her friends and from Google. Betty remarked she wanted to learn English in the Philippines and it was her former school in Vietnam that chose UST. She also googled UST and saw it has a very beautiful campus and is a famous school. Kay, however, pointed out that the processing of papers in her school takes some time. Information is not disseminated properly. Perhaps this can be addressed by a policy to make engagement more effective. Betty, on the other hand, expressed hope that her school will also provide them the opportunity to explore the Philippines. When they graduate, Kay would like to find a good and interesting job, and Betty, as a teacher teaching English to foreigners. Kay said she can contribute by bringing the university to the industry which is a win-win situation. Hideki, for his part, is already working with three universities in Japan to bring awareness to students about sustainable consumption.

Kay raised the need to acquire knowledge relevant to the field and remarked that curriculum should be updated. Subjects are theoretical. They need practical points and hands-on experience. One from the audience commented, however, that practical skills are only for specific jobs. Curriculum has to be a very general foundation to give more choices to students.



# Session 5

## UK Knowledge Exchange Models



The aim of the session was to provide East Asian delegates with a better understanding of the UK Research and Innovation sector and the role it plays in delivering the UK's Industrial Strategy. The speakers from the UK bodies and universities showcased higher education institutional strategies on Knowledge Exchange with industry and enterprise and successful university-industry engagement models. The session was moderated by Susannah Morley, Director Programmes and Partnerships, British Council Hongkong.

The speakers' presentations focussed on the following:

- introduction of their organisation or university
- university's research, innovation and Knowledge Exchange with industry strategy and initiatives
- a specific case study example of industry engagement, preferably of a programme / research collaboration that involves partnership with one or more East Asian countries
- enablers and drivers – what made the partnerships work and what learnings to take into new partnerships with universities or/and industry in East Asia



# UK-East Asia Higher Education Partnerships for Industry Engagement

**David Sweeney**

UK Research and Innovation Council

David Sweeney delivered his presentation remotely via video teleconferencing. He spoke about the UK Research and Innovation (UKRI) whose vision is to be an outstanding research and innovation agency with focus on knowledge and understanding, economy, and society. Seven agencies comprise the UKRI board and corporate functions which represent a wider scientific community: universities, business, institutes, centres, charities, strategic/

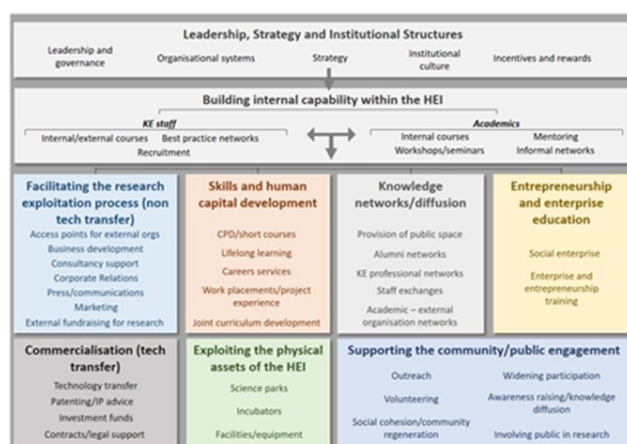
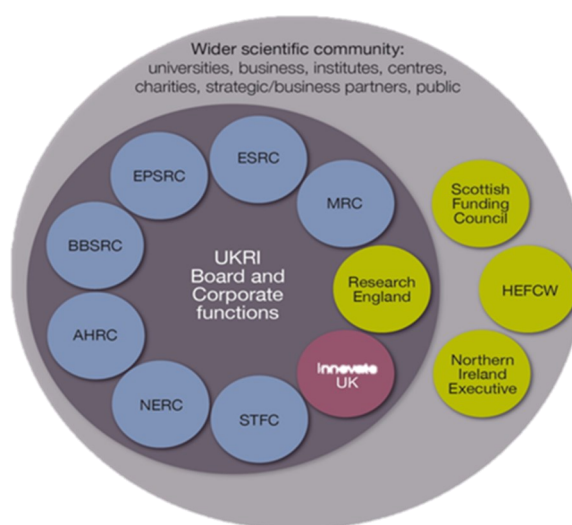
business partners and the public. Industrial strategy is anchored on the five foundations of productivity which are ideas, people, infrastructure, business environment, and places with corresponding impacts. The target is to spend 50 per cent more in investing in research for the next eight years.

Knowledge exchange is UKRI's engagement with business which covers facilitating the research exploitation process, skills and human capital development,

knowledge networks/diffusion, and entrepreneurship and enterprise education, among others. He also identified seven ways of doing the work, such as working with the public and third sector, working with business, and research partnerships, to name some.

Sweeney also cited the Higher Education Innovation Fund (HEIF) which is about engaging with business and where they spend the money on to make a difference. HEIF focusses on university capacity building, provides a strong return on investment and give allocations which are performance-based and underpinned by institutional strategies for knowledge exchange.

The Collaborative Knowledge Exchange — Connecting Capability Fund is dedicated to raising university venture funds, “eco-systems” development, enterprise capability of academics, helping SMEs scale up, to mention a few.



## University of Nottingham



### Professor Deborah Hall

Vice-Provost (Research and Knowledge Exchange)  
University of Nottingham Malaysia

The University of Nottingham Malaysia continues to be one of the leading research and teaching institutions in the world. Its ambition is to be recognised as an institution that delivers excellent research. Research provides answers to how the world is shaped. The university addresses a number of targeted questions of global significance representing a critical mass of academic expertise within the university.

Commitment to providing a research ecosystem that will support industry collaboration and broader transdisciplinary research is done through policy engagement and enhancing critical mass.

Prof. Hall likewise shared that the university has made

investments in making collaboration work such as pushing forward agri-tech research. She also mentioned the tripartite China innovation platform, which is a partnership between the government, HEIs, and industry in three main regions across China. The university works with the Department of Trade and Investment on how to take its research vision forward.



## UK Knowledge Exchange Models



**Prof. Hisham Elkadi**

Dean, Architecture and Built Environment, University of Salford Manchester

Prof. Hisham Elkadi shared about the UIC Vietnam-UK research which addresses several questions on collaboration between university and industry such as motivation factors and barriers. He described the research as something that makes a difference, that influences and leads, and is PGR-aligned. It involves national and international partners from academia, industry and the third sector, and aims to transform the quality of life for society whilst ensuring the well-being of future generations, through the provision of better and more sustainable futures.

Citing key challenges in Vietnam, he mentioned the following: need for better cross cultural U-I understanding, curriculum not aligned to industry needs, difficulties of competition with international players, among others.

In conclusion, Prof. Elkadi stated the following:

- UIC should be part of a triple helix National Innovation System
- UIC should be driven by contextual factors
  - Activities
  - Resources
  - Culture
- UIC is driven by motivational (possibly blurred) factors
  - Institutions
  - Industry
  - Individuals
- UIC should aim to maximise Impact



## UK Knowledge Exchange Models



**Dr. Brian More**

IP Commercialisation Director, Coventry University

Coventry University has undergone a radical transformation in ten years. The university invests heavily in facilities making it the fastest growing university in the UK. It employs people who are professional in knowledge exchange and train them with the right skills.

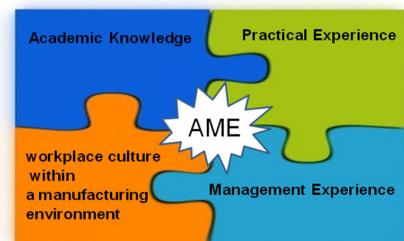
Dr. More also said that they do what fits into their strategy and work in these areas because that is where the money is and then deliver with impact. Sticking where one is good at and concentrating on where one will have an impact with the industry are important points to consider in the university-industry collaboration.



Drivers and Enablers for a successful collaboration

New product and services Innovation

Growth in a competitive global market



Supported by

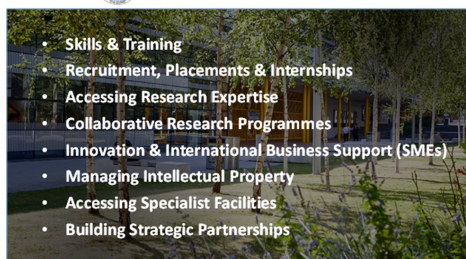
www.britishcouncil.ph

He described their R&D journey which has moved them from being a supplier to strategic development partner. On the drivers and enablers for a successful collaboration, he mentioned four: academic knowledge, practical experience, workplace culture within a manufacturing environment, and management experience.

Dr. More also shared their Knowledge Exchange Framework which comprises seven elements, among them, IP and commercialisation, partnerships with business, collaborative research, and partnerships with public and third sectors.



PRINCIPAL PARTNER



44th  
THE SUNDAY TIMES

Supported by

www.britishcouncil.ph

# Workshops

## Workshop 1:

Priority areas, enablers and drivers: Making university-industry partnerships work

## Workshop 2:

Platforms for UK-EA HE Collaboration for Industry Engagement (regional, bilateral)

Adrian Day facilitated the two workshops which yielded the following outputs:

### Successful U-I policies or models of partnerships implemented

- UK's Knowledge Transfer Program (KTP) which links university to industry, includes humanity, and where everyone is eligible to apply
- Individual efforts through academic collaboration (EA)
- Shift towards downstreaming of research results and commercialisation of research outputs
- UK published strategy every three years in consultation with HE similar to the PH. University needs to know the priority and direction of funds
- Ministries' involvement in developing collaborative ecosystem
- Emphasis on patenting of inventions
- Development of practical solutions and network dialogues

### Barriers

- Budget and funding
- Funding goes to national universities
- IP (only for developing countries)
- Research-focussed rather than partnership-focussed behavior of researchers

- Researchers' lack of entrepreneurial skills
- Inability of academic to make informed contact with industry and to do anything outside of their duties

### Enablers

- Behavior change of researchers toward public engagement
- Technology transfer to the university
- Industry to match technology centres
- Development of internship programs for students
- Presence of trust which facilitates working together and sharing of resources
- Dialogues for industry and academe to speak the same language

### Needs

- Funding
- Policies to facilitate collaboration
- Evaluation tools for the university and industry to evaluate each other for mutual benefits
- Regional mediator to raise the global sense of wider regional partnership
- Technological investment like online/virtual study course that can be expanded to other regions to address very limited physical movement
- Standard implementation framework that links U-I together

# Workshops

## Workshop 1:

Priority areas, enablers and drivers: Making university-industry partnerships work

## Workshop 2:

Platforms for UK-EA HE Collaboration for Industry Engagement (regional, bilateral)





# Wrap Up and Closing



**Sue Milner**

Director Education, East Asia, British Council

“It is a challenge to wrap up when the discussion is so content-rich,” was how Sue Milner described the whole day sessions. The group worked through a huge range of issues and concepts in moving forward. The sessions covered in some depth information around government, industry and HEI strategies, policies, funding support and best practice examples of university collaboration with industry and business. She thanked everyone for their active participation and for sharing their thoughts and insights.

Summing up the critical factors discussed that would enable university-industry collaboration, Milner presented the following:

1. Need for a national innovation system and funding support. A need for HEI to align with national industry strategy or development plan particularly identifying the research priorities of the national system with which to engender research funding support and give HEI a focus to prioritise research endeavours.
2. Need to consider efficacy of using the UK's Knowledge Exchange Framework to help deepen the ecosystem for close collaboration between academia and industry. A recognition that the relationship between industry and HEI is very much based on trust and talent development. Research and industry placements, industry innovation hubs on campus, all these industry innovations help build trust. People and talent development element is a critical fabric of underpinning U-I collaboration.
3. Need to ensure that research collaborations are the foundation of U-I collaboration. Research outcomes must have a significant impact on society and economy, and only in that way will it address long-term challenges and real world problems.
4. Funding structures and investments are strong incentives for collaboration but funding support needs to consider some internal structure and support, i.e., infra development within the HEI. An example is educating business development staff in higher education institutions which can take forward and deepen the value of collaboration and have time and space to build consortium approach as well.
5. On the 4<sup>th</sup> Industrial Revolution, the discussion was about the exponential pace of change and how this is changing the educational institutions and its responsiveness to employability, how to recognise a sense of urgency about innovation so that industry and HEIs need to collaborate to remain relevant in their respective fields.

# Next Steps

Concluding the one-day forum, master of ceremony Gail Frances Galang informed the group of the following Next Steps of the British Council:

1. Inputs from the different panel of speakers and outputs from the workshop sessions will be incorporated in the final research report of the Scoping Study on University-Industry Links between the UK and East Asia for Industry Engagement. The research report will be launched at the *Going Global 2019* which will take place in Berlin, Germany, on 13-15 May 2019.
2. British Council will continue to engage with key higher education players in the EA region to shape programmes on university links for industry engagement.
3. Dissemination of the Forum Report

