LIF Philippines Success Stories

On behalf of:

The Royal Academy of Engineering and the Newton Agham Programme

April 2019

ROYAL ACADEMY OF ENGINEERING

Newton Agham

ASIAN INSTITUTE OF MANAGEMENT

Fellows (LIF1-4):

728

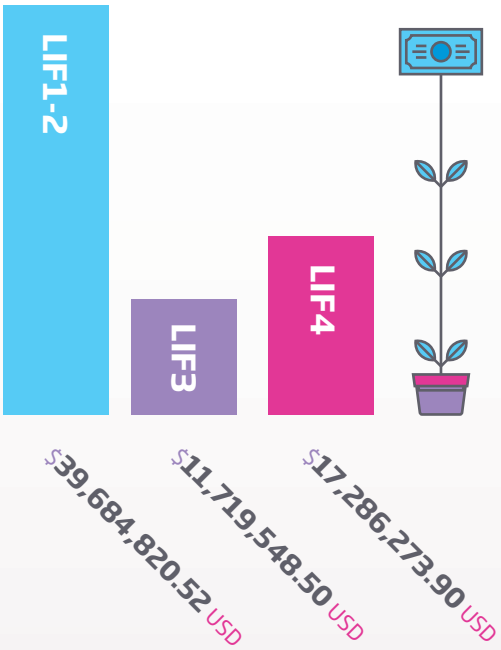
LIF countries:

16

LIF in-country partners:

35

Innovation funding raised since start of LIF:



93.5%

93.5% of LIF1-4 fellows say LIF has been important in helping them commercialise their innovation.

Products launched:

32 new LIF1-2 products launched

10 LIF3 new products launched

Licensing deals signed:

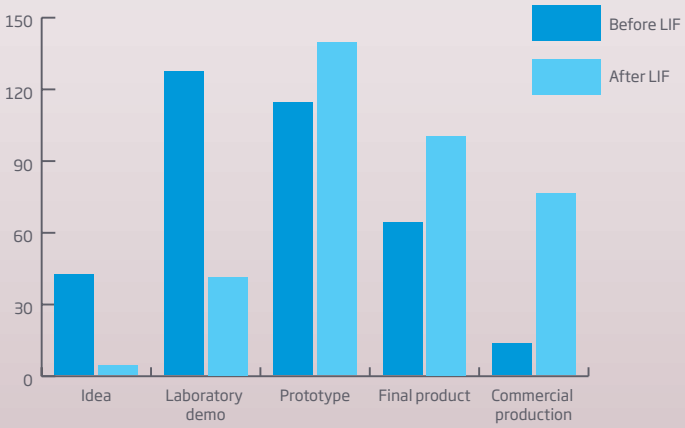
19 LIF1-2

10 LIF3

Jobs created by LIF1 and LIF2:

650

By the end of LIF3, fewer projects were in the idea and lab demo stages of development, and more were prototypes, final products or in commercial production.



*The figures presented here represent four years of LIF Programme achievements across all countries.

Introduction

The Leaders in Innovation Fellowships (LIF) programme was created and designed by the UK's Royal Academy of Engineering. The programme is financially supported by the UK's Newton Fund. Known in the Philippines as the Newton Agham Programme, it is part of the UK's official Overseas Development Assistance. The primary objective of the LIF programme is to support innovators to commercialise innovations aimed at addressing social and economic challenges in their country. A secondary objective is to promote improved understanding of and attitudes towards entrepreneurship within the research sector.

In the Philippines, the LIF programme has been running since conception in 2014. The matched funding is supplied by the Department of Science and Technology (DOST), the country's premier science and technology body.

During a two-week residential programme in the UK, LIF participants (LIF fellows) benefit from a focused period of interactive training in entrepreneurship, events, industry visits, and access to expert coaches and mentors. Upon return to the Philippines, the cohort of LIF fellows continues to benefit from ongoing training and support in taking their commercialisation plan forward. This is provided by the Asian Institute of Management's (AIM) follow-on programme (funded by DOST) and continued individual mentoring from the residential programme, which extends for up to a year should the LIF fellow require it.

To date, 75 LIF fellows have taken part in the Philippines LIF programme over five cohorts. In 2018, Oxentia was commissioned to perform an impact evaluation to understand what the Newton Fund is achieving through the LIF programme. As part of this work Oxentia held in-person interviews with 13 LIF fellows. The following case studies show the stories and experiences of eight Filipino LIF fellows.

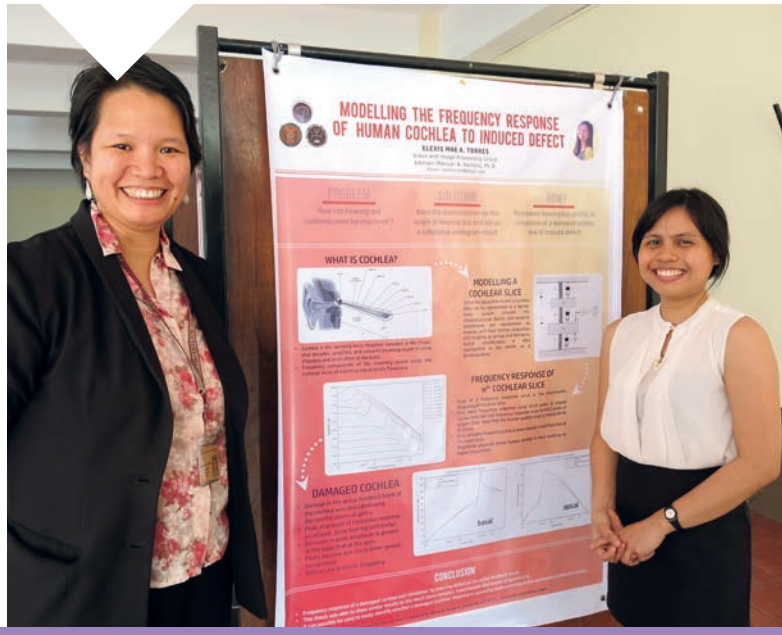
Mapping coral reefs and creating jobs for Filipino graduates

Mapping and monitoring the extent of coral reefs around the 36,000 kilometre coastline of the Philippines using conventional techniques can be slow, labour intensive, inaccurate and expensive. Local governments in the Philippines are mandated to carry out biannual surveys of their coast but are often prevented from doing so by the associated cost and technical difficulty.

Maricor's innovation, the Automated Rapid Reef Assessment System (ARRAS), provides a fast, inexpensive and accurate way for local governments to map and monitor reefs in their area. LIF showed Maricor that forming a spin-out could be a very good way of getting ARRAS adopted and of providing employment for Filipino graduates.

Prof Maricor Soriano, Ph.D. (LIF 1 2015)

Professor, National Institute of Physics,
University of the Philippines Diliman



"Before LIF it wasn't even in my mind to create a company to exploit my innovation"

Lessons and impact from LIF

Changing mindsets:

"LIF convinced me that a spin-out could be a way of getting local governments to use ARRAS, while at the same time generating money which could be used to provide good jobs for the best local graduates."

Developing business skills:

"I learnt about how I could make my technology into a business. Using the Business Model Canvas, we developed areas like revenue streams and partners."

Developing an innovation to help the Philippines stay healthy

Gia is an electronics engineer by training who joined the LIF programme in 2016, shortly after graduating from the University of the Philippines Diliman. Her original innovation, HeartSmart, was aimed at tackling the leading cause of death in the Philippines, heart disease. HeartSmart, a tele-health platform, connected healthcare experts and patients to bring doctor-prescribed and monitored cardiac rehabilitation to those with heart conditions.

LIF helped Gia develop her innovation and gain a place on a local incubator. Gia went on to further refine HeartSmart, leading to the creation and successful launch of Valea Health Coach, a virtual personalised holistic health and wellness service accessed via a subscriber's mobile phone.

Gia Santos
(LIF 2 2016)

CEO and Co-Founder, Valea Health

"My background is in electronic engineering, so the formal business education that LIF gave me has been really useful in helping me develop my new venture"

Lessons and impact from LIF

Building networks and community:

"Being connected to my batchmates and various industry experts gave me the confidence and support needed to move my research forward. Aside from the technical learning I got from LIF, it's really the community that's also had a huge impact on me."

Gaining a place on an incubator:

"LIF really helped give us the credibility we needed when applying to IdeaSpace."

Creating a successful new business tackling water pollution

Merlinda Palencia, Ph.D.

(LIF 1 2015)

Chief Operating Officer, Envigor Natural Products Manufacturing Inc.

Water pollution is a serious issue in many parts of the world, including in the Philippines where domestic and agricultural waste are major contributors to the problem. Merlinda's innovation, Vigormin, is a water treatment product that when added to septic tanks, can be used to treat domestic and agricultural wastewater.

LIF gave Merlinda the skills and knowledge to successfully commercialise Vigormin. Funding from DOST and Adamson University enabled the construction of a factory that currently produces two metric tonnes of Vigormin per day.

Lessons and impact from LIF

Developing the knowledge and skills for commercialisation:

"LIF gave me the practical and strategic knowledge to get moving and start to commercialise my innovation. The pitch training was great, understanding what information you should be providing has been very useful."

Funding for a factory:

"In 2016, DOST and Adamson University provided funding for a manufacturing facility for Vigormin, which produces two tonnes a day, but has the capacity to produce four. We are now selling to resorts, hotels, food processors and the agricultural sector throughout the Philippines."

A new E&I friendly policy:

"I negotiated with the university to create a policy which means academics can work full time on the spin-out, while still being employed by the university, providing the university holds equity in the spin-out."

"I hope LIF will continue, it really opens horizons for researchers"

Changing perceptions of commercialisation and developing a lifesaving technology

"For me LIF was life changing"

Dr Kristine Mae Magtubo

(LIF 1 2015)

Co-Founder and CEO, Veris Tech. Associate, Ignite Impact Fund

Kristine is a medical doctor who joined the LIF programme in 2015. Her innovation is the RxBox, a device developed to provide better access to life-saving healthcare services in isolated and disadvantaged communities. The RxBox has several different sensors, which can be used to monitor the vital signs of a patient in a remote location. Data from the patient is then transmitted by the RxBox to a physician for diagnosis.

LIF has helped Kristine develop the RxBox, which has now been used to help millions of Filipinos. LIF also changed the path of Kristine's career by showing her that the private sector and commercialisation could be a force for good in the Philippines.

Lessons and impact from LIF

Changing perceptions:

"Becoming an entrepreneur, founding my own company, getting involved in innovation – all these never even crossed my mind before LIF. When I joined LIF, I realised that entrepreneurship and innovation was what I really wanted to do, what I needed to do. LIF changed my career path and I am very grateful for that."

"For me LIF was life-changing. I remember coming back from London and saying I have to start spreading the word [about commercialisation]. In my university commercialisation is not strongly encouraged but seeing researchers who didn't lose their soul to capitalism was life-changing – really inspiring. In universities in the Philippines the mindset is against commercial gain."

"Academics need to understand that the government is not the only avenue to get technology to the people who need it, there is an alternative route through the private sector."

Becoming the director of a technology transfer office

Jon, a computer scientist, joined the LIF programme in 2016 and was looking to commercialise his traffic management software.

Jon's software could not be commercialised, but thanks to new skills developed on the LIF programme, Jon has been able to take on a new role as director of the Technology Management Office (TMO) at Ateneo de Manila University.

"Through LIF I feel confident that I can do the job of running a TMO"

Prof Proceso L Fernandez, Jr, (Jon), Ph.D.
(LIF 2 2016)

Director, Technology Management Office, and Professor, Department of Information Systems and Computer Science, Ateneo de Manila University

Lessons and impact from LIF

Understanding pain points and creating teams:

"At LIF I learned that it is crucial to understand the need or pain point that a technology is trying solve. I also saw that a spin-out is likely to have a much better chance of success if the team members have different complementary skills."

Gaining skills and confidence:

"I'm a computer scientist, had I not gone on the LIF programme I would probably feel overwhelmed by this job."

Developing IP policies to increase the opportunities for commercialisation:

"We are essentially adapting the School of Science and Engineering's IP policy and adding sections to cover issues related to copyright so that it's more applicable across the institution, not just within science and engineering. This should open up more opportunities for the university to commercialise its research and creative works."

Developing a new E&I course and changing university policies

Monitoring the structural health of buildings, particularly those in areas subject to earthquakes, can be difficult and costly. Francis' innovation, Universal Structural Health Evaluation and Recording System (USHER), is a building structural health monitoring system composed of a sensor and web portal.

USHER can be installed in all building types and enables building managers to monitor structural integrity, remotely and cost effectively. USHER has been extremely successful receiving almost $1 million in grants from DOST to trial and further commercialise the technology. The technology has also won a national and an international digital innovation award.

Francis' experiences on LIF and success with USHER have inspired him to make changes at Mapúa University to encourage others to take part in entrepreneurship and innovation. The knowledge Francis gained from LIF has also played an important role in the commercialisation of USHER.

"A lot of the activities I'm now involved in are because of LIF"

Francis Aldrine A Uy, Ph.D.

(LIF 4 2018)

Dean, School of Civil, Environmental and Geological Engineering, Mapúa University

Lessons and impact from LIF

Understanding the value of university research:

"LIF showed me the value of commercialising university research, that's what encouraged me to set up this policy allowing staff to shift some of their time from teaching to research."

"Senior directors of the company that owns Mapúa [a private university that is a member of the Yuchengco Group of Companies] are monitoring the progress of both my innovation, USHER, and commercialisation more broadly at Mapúa. If either generate revenue these directors will support more changes to help technopreneurship."

Creating a new E&I course:

"The new Total Leadership in Innovation course came about because of LIF. It really focuses on leading the development of new value propositions and solving customer needs."

Developing skills for a new career in technology transfer

Lessons and impact from LIF

Developing commercialisation skills:

"In terms of business development and commercialisation, before LIF I wasn't really sure what I was doing. LIF has given me these skills and shown me how a technology can actually be commercialised."

"The negotiation practise sessions we had in the UK were great, they've really helped me a lot in my role at the TTO. I have to talk to the inventors, and negotiate with potential clients, understanding the mindset of business people is very important in this process ... I also learned about pivoting to different products, which has been really helpful."

Successfully working at a TTO:

"I'm now managing 30 technologies for my office and taking the lead in a licence negotiation. LIF has really helped give me the skills and confidence I need to do my job. I'm also passing on skills to others: I gave a talk about LIF and commercialisation to a group of colleagues recently."

Patricia San Jose

(LIF 4 2018)

Technology Transfer Officer, University of the Philippines Manila

Patricia's innovation is a Philippine-specific, early-stage vaccination for Leptospirosis, a bacterial infection that can cause Weil's disease and meningitis. Initially the vaccine was to be developed for humans.

However, after LIF Patricia realised that the agricultural sector might be a better market to target as there are fewer barriers to entry, the vaccine is now being developed for domestic animals by a research team from the College of Public Health at University of the Philippines Manila, led by the technology's inventor, Dr Nina G Gloriani.

Patricia started a new role as a technology transfer officer shortly before joining the LIF programme. She had a technical background, but little commercial experience or training. LIF has helped to give Patricia the skills she needs to successfully perform her role as a technology transfer officer.

"I joined LIF to get business development and commercialisation skills – the programme has really helped me"

Using skills from LIF to launch a new institute

Prof Nilo T Bugatai, Ph.D.

(LIF 3 2017)

Full Professor of Manufacturing Engineering and Management;
Programme Head, Philippine Bioengineering Institute,
De La Salle University

Nilo's LIF innovation is a motor-actuated laparoscopic surgical instrument (laparoscopy is a form of minimally invasive abdominal surgery). His instrument will improve manoeuvrability and ease of use and help to reduce the incidence of metacarpal injuries suffered by surgeons.

LIF has given Nilo not only the skills to further develop his innovation, it has also enabled him to gain access to funding to start a new institute.

"Before LIF I was an engineer and a researcher, now I also consider myself an entrepreneur!"

Lessons and impact from LIF

Gaining customer feedback and validation:

"LIF opened my mind to a lot of things, one of the most important was understanding the customer need that the innovation is solving. As a result of LIF I talked to surgeons, doctors, patients and other stakeholders … they helped me understand how my innovation needed to change to be most successful."

Securing funding for a new institute:

"Without the market and pitching skills from LIF I could not have raised $1.9 million for my research projects … I was actually due to retire this year but now I will continue with work."

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Engineering matters. It underpins our daily lives, drives economic growth, plays a critical role in addressing major societal challenges and helps ensure our readiness for the future, from providing a sustainable supply of food, water and clean energy, to advancing healthcare, and keeping us safe and secure.

As the UK's national academy for engineering and technology, the Royal Academy of Engineering brings together the most talented and successful engineers – our Fellows – to advance and promote excellence in engineering for the benefit of society.

We harness their experience and expertise to provide independent advice to government, to deliver programmes that help exceptional engineering researchers and innovators realise their potential, to engage the public with engineering, and to provide leadership for the profession.

Drawn half from business and half from academia, and from all branches of engineering including areas of emerging technology, our 1,600 Fellows give their time and expertise voluntarily.

We have three strategic priorities:

- Make the UK the leading nation for engineering innovation and businesses
- Address the engineering skills and diversity challenge
- Position engineering at the heart of society

We bring together engineers, policymakers, entrepreneurs, business leaders, academics, educators and the public in pursuit of these goals

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