



The Philippines: Alvin Chua



What is the innovation?

Alvin Chua and his team at X-LIPAD have developed a modular, unmanned aerial vehicle (UAV), which is designed to be used as an educational tool for students to learn practical engineering skills.

Alvin's **DREAM** (Drones Reimagined for Educational Application and Modification) drone starter kits were developed with the 'Learn through play' concept in mind – their modular design makes them easy to assemble and they include hardware, software, and web-based training, designed to help students learn the principles of basic programming and engineering as they construct and configure them.

Alvin and his innovation are creating impact through championing vital industry 4.0 engineering education and innovation skills.

Alvin is among the 6th cohort of the Newton Agham Leaders in Innovation Fellowship (LIF) programme who received training and mentorship from British and Filipino experts in innovation commercialisation



Photo: X-LIPAD's DREAM Drone Starter Kit

Achievements since LIF:

Technology Improvement: Alvin re-designed The DREAM System to adapt to the needs of online learning, brought about by the Covid-19 pandemic. Learning materials were re-developed, and simulations and practical demonstrations have been made available to educators.

New prototype(s) created: Alvin's team is currently in the process of developing DSK 2.0, a more compact and safer drone suitable for the younger students.

New discussions with potential customers: Alvin's team is undertaking a significant marketing push, and is in discussions with a number of potential clients and partners. The team is also in negotiation with private schools and State Universities and Colleges (SUCs) for deployment.

Awards/Recognition received: The X-LIPAD was featured as Lightning Speaker in Tech Planter Philippines last July 2020. X-LIPAD was featured in The Manila Times, one of the leading national broadsheets in the Philippines.

Company development: X-LIPAD has established an international advisory board to help with the businesses strategic direction.

What's next?

Alvin also plans to focus on building sales and marketing strategies fit for the post-pandemic world as well as continuing to refine their current market strategy. The team are seeking a partner that can help them to commercialise, connect to potential customers, and scale-up the delivery of the X-LIPAD products and on-line services strategically in domestic and international markets.

In the future, Alvin aims to expand the 'Learn through play' concept to other industries, deconstructing complex technologies into modular designs that can be constructed, coded and configured as part of a practical learning experience. They are working on developing the prototype for the next potential product that would be suitable in an indoor setting.

Impact of LIF:

New tools and approaches: *"The LIF programme made me realise the importance of the different business tools that are available to manage your innovation better. I also learned a variety of important topics in business and innovation that will help us in our journey."*

Inspiration: *"The LIF programme has given me a new perspective in developing technologies as a researcher not to just publish but to look at ways for commercialisation to help make a better world. By choosing an innovation journey, more people can be touched by the developments that a researcher creates."*

Network: *"The network of the LIF programme provided avenues that accelerated the development of our business. It created opportunities and ideas that wouldn't be possible without the programme."*

Contact us: alvin.chua@dlsu.edu.ph