Dr Tan Teik Khong, graduate of AEU's Industrial Doctorate programme, is a technopreneur and educator. His passion for big data science from engineering disciplines to financial market analysis won him an award in 2014 and several nominations. Most recently, he was conferred the title of senior corporate fellow from AEU for his many achievements. Here, he shares his views on technopreneurism and innovation:

"I represented Asia e University (AEU) and was the only Malaysian participant competing globally against many others at the London Hedge Fund Competition in 2014. This competition was my first attempt to apply quantitative skills combined with the Bayesian analysis for big data in the finance industry. I managed to build the portfolio of companies that led to the top selection in the final rounds. It was an eye-opening experience for me because I developed a methodology of portfolio selection that enabled an investor to maintain its high net return in both bullish and bearish market in which share prices are expected to rise, encouraging buying hope and bullish market in which share prices are falling, encouraging selling markets.

Since then, I have further refined the technique for robustness and risk mitigation for optimum capital allocation. Part of this work was presented last year and this year at the recent IEEE conference (organized by the Institute of Electrical and Electronic Engineers, the world's largest professional association for the advancement of technology).

After winning the top three hedge fund competition in London, I was psyched up and encouraged to apply high-probability Bayesian techniques to stock selection, thus driving my passion for finance.

Being a technopreneur at heart, I founded several startups and experienced product development life cycles multiple times in networking equipment and semiconductor industry.

Entrepreneurship was part of my business philosophy from young. I believe the key to successful entrepreneurship rests in the characteristics of the individual, including the ability to spot opportunities. The second trait is confidence, substantiated by passion, desire and preparation. Innovation focuses on creating new ideas and is often used by business as a tool to increase productivity or create a new product to gain competitive advantage.

Entrepreneurship and innovation work simultaneously in furthering the success of the entrepreneur. Throughout my 36 years of being in private and public organisations, declaring myself as an entrepreneur has been easy but it is not as easy to convince investors, your team and customers that you are someone special to fund and follow. If you do not consistently display the mindset and traits of an entrepreneur, people will not follow you and you are in danger of not succeeding in your business venture.

Running a business involves a combination of successes and failures although I believe failing as a result of calculated risk-taking should be embraced positively. An example was the initial public offering (IPO) process for a semiconductor firm I was involved in for four years. Even though I had planned and prepared well, the circumstances did not allow the IPO process to happen.

However, prior to that, I had successfully helped several companies in their funding series, one of which resulted in the sale of their mobile broadband assets to Qualcomm.

Being trained in electrical and software engineering and being the founder of several startups, I have developed a strong intuition on how to start and run a technology business and there are many opportunities available. Everything from mobility to wireless communications to consumers' relationships with technology is being disrupted.

Predictive analytics, cloud computing, big data sciences and next-generation wireless communications will be key enablers for the next generation of entrepreneurs to capitalise on."

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