He rejected Google job and now builds floating gardens

Founder of innovation lab for social and environmental good receives NUS alumni award

Ang Qing

Mr Muhammad Ibnur Rashad Zainal Abidin started an innovation lab for social and environmental good with just $7,000 in seed funds, despite getting a job offer from Google in 2011.

Ten years on, the 35-year-old Singaporean has since invented an electricity-free bamboo speaker and a floating garden system inspired by the Aztecs.

The founder and chief innovation officer of Ground-Up Innovation Labs for Development (Guild) was among 17 people to receive the National University of Singapore's Outstanding Young Alumni Award last Friday.

Mr Ibnur's love for inventing began in primary school, he says, through tinkering with Lego, poring over books on inventors and watching almost every episode of a television show, A Stroke Of Genius, which featured creative solutions to everyday problems.

When he was 16, he co-created a novel laser interferometer, a machine which uses lasers to make very precise measurements, with other students and an NUS engineering professor. The work was published in a scientific journal.

Yet, the prospect of making his passion a career took root only in 2009 during a work-study NUS Overseas Colleges programme in Silicon Valley. "That gave me a bit of confidence that I could actually chart this path. If people have done it in the United States, why not in Singapore?" said the engineering science graduate.

The final push to create an invention studio for the community came from the late founder of non-profit Ground-Up Initiative (GUI) Tay Lai Hock, who convinced Mr Ibnur that he should explore while he was young. Mr Tay started GUI in 2008 with the goal of creating a "21st century kampung culture". In 2018, he died suddenly when he was 54.

So, the fresh graduate co-founded the Sustainable Living Lab in 2011 with two friends from the NUS University Scholars Programme under a university grant.

The trio, who met in an engineering course during their second year, previously won the Mondialogo Engineering Awards twice.

The now defunct competition by Unesco and automotive manufacturer Daimler brought together engineering students from around the world to engineer solutions to eradicate poverty and promote sustainable development.

One of the team's ideas – a low-cost solar pond fruit dryer – continues to help fruit farmers in India cut post-harvest losses, said Mr Ibnur. "To see inventions go into the world and impact people is something that keeps me going," he added.

In 2016, he started Guild as an invention studio to create solutions and training programmes involving nature, technology and the community. The consultancy now has spaces in GUI's Kampung Kampus in Yishun and Tai Seng.

Next, Mr Ibnur hopes to roll out his award-winning floating gardens, dubbed Floating Chinampas, to help boost food security here. Kangkong, laksa leaf and basil are some of the edible plants grown on the floating agricultural module that has taken almost 10 years of refining to withstand heavy rain, among other issues.

While the invention bagged a gold award at the Taipei International Invention Show & Technomart in 2017, trialling the project has hit a regulatory wall since then, said Mr Ibnur. Currently, the prototype is piloted at GUI's Kampung Kampus and Science Centre, and the team is desperate to find more private water bodies because it does not have permission to trial the prototype in public waters.

"My only request is a private water body (to trial the garden in)," he added. "That will be really awesome for us because we need to demonstrate a pilot and water sampling to show that this (technology) is safe for Singapore to adopt."

aqing@sph.com.sg

Mr Muhammad Ibnur Rashad Zainal Abidin has invented an electricity-free bamboo speaker and a floating garden system inspired by the Aztecs.
ST PHOTO: DESMOND FOO