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NTU student team wins first prize in a global Shell innovation competition

Published on: 25-May-2015



NTU engineering students design innovative app to prevent food waste

Three students from Nanyang Technological University, Singapore (NTU Singapore) have emerged first in a global Royal Dutch Shell competition that received more than 1,000 ideas worldwide. Their prize – a trip to the Antarctica.

The trio came up with an idea for a mobile application named Food Basket which aims to reduce the 1.3 billion tonnes of food wasted globally each year. It was picked as the winner by a panel of experts at the finals of the international innovation competition, Shell Ideas360.

The team comprised Alex Chen, May Lim, and Nitya Anthony from NTU's top engineering programme, the Renaissance Engineering Programme (REP). REP is the most sought after engineering programme amongst top A-Level students in Singapore as this double-degree programme bridges engineering, business and the liberal arts. Students in this NTU flagship engineering programme graduate with both a bachelor and a master's degree in just four and a half years.

The Food Basket app allows consumers to track their groceries, including the expiry dates, and will suggest recipes for items before they expire. Users can also trade food items amongst themselves through an in-app market place. This reduces over-buying of groceries and in turn reduces food wastage.

Team Renaissance from NTU beat more than 1,000 entries from 55 countries to win the first prize in the Shell

Ideas360 competition. It calls on young people to submit inventive solutions to the planet's energy, water and food challenges.

Team member Alex Chen said that 1.3 billion tonnes of food goes to waste annually, costing the average household US\$1,500 a year. "We don't often realise the enormous impact of wasting food, so we hope our Food Basket app can create more awareness and help to reduce such wastage," said the 24 year-old, who is in his final year of study in REP. "It is amazing that an international panel of experts agree with us and have chosen our idea as the winner! Ideas 360 has really inspired us to develop creative ideas for a sustainable future."

His team mate, May Lim said the team came together from different engineering disciplines to tackle food wastage on a global scale. "The engineering, business and design knowledge gained through our REP curriculum has been instrumental in helping us build a sustainable and scalable idea," said the 23-year-old, who came in second in a hackathon in Silicon Valley previously while in UC Berkeley for the third year of her REP programme.

The third member, Nitya Anthony, 23, said, "We are also very thankful for the tremendous support and advice from our NTU professors and mentors, Shell Singapore staff, family and friends."

The competition's five finalists competed at Shell Eco-marathon in Rotterdam where they presented their ideas to a judging panel comprising experts from the business sector, non-governmental organisations and academic institutions.

The panel included: Wim Thomas, Shell Chief Energy Adviser; Annette Nij, Executive Director, Global Initiative of the China Europe International Business School; Alexander Moen, Vice President, Explorer Programmes National Geographic; and Dr Victor Scholten, Assistant Professor, Technology-based Entrepreneurship, Delft University of Technology.

After careful deliberations, the judges voted Team Renaissance's idea as the most innovative, collaborative and potentially the biggest game-changer of all.

The NTU team will now enjoy a unique prize: an all-expenses-paid National Geographic Adventure of their choice and they plan to choose the Antarctica.

Mr Hugh Mitchell, Human Resources Director for Shell, said: "Shell Ideas360 is all about inspiring and celebrating the amazing creativity of the world's young people. The fact that we received so many entries in 2015, almost double the number last year, shows just how much the next generation cares about the world they're inheriting. All the teams can be extremely proud of themselves but, of course, special congratulations go to Team Renaissance from NTU Singapore."

Professor Teoh Swee Hin, Director of NTU's Renaissance Engineering Programme, said the programme trains engineers to solve future problems with an entrepreneurial character.

"The combination of engineering and business with a one-year exposure at University of California, Berkeley, in the San Francisco Bay area, has exposed our students' minds to creative ideas," Prof Teoh said. "Combine this experiential learning with leadership mentoring by key opinion leaders at NTU and we can produce future leaders in engineering that are not matched elsewhere – such as our three outstanding students who won this year."

Shell Ideas360 is now in its second year having first begun in 2014. The five teams which competed in the 2015 grand final were:

- Team Renaissance, Nanyang Technological University, Singapore
Idea: create an app called Food Basket to reduce the 1.3 billion tonnes of food wasted every year. Watch their pitch video [here](#).
- Team Blu, Imperial College London, UK
Idea: use atmospheric water extraction to extract moisture from the air with the aim to provide 150 to 200 litres of clean water to remote communities in sub-Saharan countries. Watch their pitch video [here](#).
- The Cricketeers, Universiti Teknologi Petronas, Malaysia
Idea: introduce an alternative protein source to help feed the 24% of the global population who are currently

malnourished. Watch their pitch video [here](#).

- Passive House, Qatar University, Qatar
Idea: help to reduce energy usage by designing a sustainable 'passive house'. Watch their pitch video [here](#).
- Team Fluorisorb, University of Illinois at Urbana & Makerere University Kampala, USA
Idea: attempt to remove toxic levels of fluoride from drinking water using a novel, low cost and culturally sensitive absorbent material. Watch their pitch video [here](#).

For more information about Shell Ideas360 or any of the teams involved in the final, visit www.shellideas360.com/news/meet-the-finalists-season-two-20142015.

For more information about Shell Eco-marathon, visit www.shell.com/global/environment-society/ecomarathon/about.html.

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Media Contact:

Lester Kok
Senior Assistant Manager
Corporate Communications Office
Nanyang Technological University
Tel: 6790 6804; Mobile: 9741 5593
Email: lesterkok@ntu.edu.sg

About Nanyang Technological University, Singapore

A research-intensive public university, Nanyang Technological University, Singapore (NTU Singapore) has 33,000 undergraduate and postgraduate students in the colleges of Engineering, Business, Science, Humanities, Arts, & Social Sciences, and its Interdisciplinary Graduate School. It has a new medical school, the Lee Kong Chian School of Medicine, set up jointly with Imperial College London.

NTU is also home to world-class autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies, Earth Observatory of Singapore, and Singapore Centre on Environmental Life Sciences Engineering – and various leading research centres such as the Nanyang Environment & Water Research Institute (NEWRI), Energy Research Institute @ NTU ([ERI@N](#)) and the Institute on Asian Consumer Insight (ACI).

A fast-growing university with an international outlook, NTU is putting its global stamp on Five Peaks of Excellence: Sustainable Earth, Future Healthcare, New Media, New Silk Road, and Innovation Asia.

The University's main Yunnan Garden campus has been named one of the Top 15 Most Beautiful in the World. NTU also has a campus in Novena, Singapore's medical district.

For more information, visit www.ntu.edu.sg

About Shell Ideas360

Shell Ideas360 is a global competition, encouraging university students to conceive, share and collaboratively develop game-changing ideas to help tackle Energy, Water and Food challenges around the world. The competition is in its second year and provides university students with an exciting opportunity to develop their ideas into a 'potentially investment-worthy' business case with the support of mentors and subject matter experts. University students will be able to demonstrate their potential, develop their skills and collaborate globally with like-minded innovators, gaining insights into the current and future challenges in the fields of Energy, Water and Food and how they are related.

To register for the 2015/2016 Shell Ideas360 competition, visit www.shellideas360.com.

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