



Social entrepreneurship, defined as the process of pursuing innovative solutions to social problems, has gained momentum in our community. To nurture the growing interests in this area, NUS Enterprise has spearheaded various initiatives, including the DBS-NUS Social Venture Challenge Asia, to promote the movement amongst aspiring entrepreneurs across the region. This edition of ENTERPRISE SPARKS highlights the finale of the Challenge, tips on social entrepreneurship, as well as latest updates in our community. These include the participation of our incubate companies in exciting awards and competitions outside Singapore, the recently launched 'Kopi-Chat' and 'Friday Feeds' events for those in the start-up space, and our exciting partnerships with industry players. Enjoy your read!



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Grand Finale: DBS-NUS Social Venture Challenge Asia 2014

After a challenging and fulfilling eight-month journey, the inaugural DBS-NUS Social Venture Challenge Asia came to an end for the many passionate budding social entrepreneurs from Singapore and Asia.

The Awards Ceremony, held on 6th June 2014 and graced by His Excellency President of Singapore, Dr Tony Tan, was a milestone in NUS Enterprise's efforts to spearhead a social enterprise competition with a global impact. The competition received 418 business plan submissions from 19 countries and involved 140 judges in total.

Seven finalists emerged from the evaluation rounds to pitch their social ventures to a crowd of over 250 impact investors, resource providers, corporates, venture philanthropists, academia, aspiring social entrepreneurs and change-makers. Four teams were eventually named winners.

1st (S\$30,000): Zaya Learning Labs, which aims to improve

teaching quality at low-income schools in India.

2nd (S\$15,000): Maya Universe Academy, the first and only free private school in Nepal where parents "pay" in time rather than cash.

Joint 3rd (S\$10,000 each) Bodhi Health Education, which improves healthcare in India by providing medical education to community workers, and Local Alike, which promotes community-based tourism in Thailand with the objective of preserving local cultures and providing additional economic opportunities.

The keynote speaker at the award ceremony, social entrepreneur Sebastien Marot, Founder of Friends International, shared his entrepreneurial journey, and how he overcame the many challenges he encountered to pursue a cause he believed in. Read Sebastien's keynote address on page 5. ♦



The winning teams with His Excellency President of Singapore, Dr Tony Tan at the DBS – NUS Social Venture Challenge Asia Awards Ceremony on 6th June 2014.



The seven finalists addressing questions from the audience.

T.Ware acs the Asian Entrepreneurship Awards 2014

NUS Enterprise incubatee T.Ware beat 16 other companies from the region to be crowned the first prize winner of the 2014 Asian Entrepreneurship Award (AEA). T.Ware wowed the panel of judges with its therapy management smart garment, the T.Jacket, designed to help calm individuals suffering from autism and other sensory disorders. The prize includes 3 million Yen (about SGD 37,000), 2-year tenancy at the Kawashwanoha Open Innovation Lab (KOIL), 50,000 air-miles from Japan Airlines for two people and 3 Hewlett Packard laptops. The AEA 2014 was a 3-day award programme, held in mid July 2014 at Kashiwa-no-ha City in Japan.

"Participating in the AEA 2014 taught me many useful lessons. I now have a better understanding of the start-up environment in other Asian countries, as well as a good idea of the difficulties that entrepreneurs in different fields face. This will definitely help T.Ware in preparing for our expansion across the region in the future," explained Dr Teh, Co-founder and CEO of T.Ware.

Dr Teh was surprised at his win, as he found the other teams, which came from countries such as India, China and Hong Kong, to be really impressive in both their business models and experience. Dr Teh was joined in Japan by his co-founder and CTO, Lai Sep Rieng, as



well as Dr Gary Rubin from NUS Enterprise. In addition to nominating T.Ware for this award, NUS Enterprise supported T.Ware with coaching James in his presentation, content and delivery style, helping him to achieve a polished and flawless pitch.

Moving forward, T.Ware will be ramping up marketing efforts in Japan, including hiring local staff to provide support for its Japanese customers and distributor. As part of the AEA 2014 prize, T.Ware will use the KOIL Park co-working space and hopes to work together with other research organisations such as Keio University and the University of Electro-Communications. In addition to selling the T.Jacket in Japan, T.Ware's customers also come from across the United States, Europe and Asia.

"The most important thing is to have belief in your vision and confidence that you can be an agent of change. Regardless of the business or stage that you're in, all entrepreneurs go through difficult times. Your belief is what drives you forward," said Dr Teh. "This AEA 2014 win is great for us, as it recognises our efforts internationally, and will spur us to continue our work in bringing touch to life!" ♦



(L to R) Lai Sep Riang (T.Ware), Dr James Teh (T.Ware) and Dr Gary Rubin (NUS Enterprise) at the AEA 2014.

New with PUB: Hydropreneur Programme

NUS Enterprise and the Public Utility Board (PUB) co-organised the inaugural Hydropreneur Programme, culminating in the Hydro Pitch Day, held on 2nd June 2014 at the Singapore International Water Week (SIWW) at Marina Bay Sands Convention Centre.

The Hydropreneur Programme is a new initiative by PUB to encourage young entrepreneurs to develop ideas and commercialise technologies in the water industry. 17 teams comprising more than 60 members participated in this inaugural run. Water and environmental engineers formed the bulk of the participants complemented by others with electrical engineering backgrounds.

The teams went through a gruelling 10-week programme: a choice of either the Founders Institute or the Lean LaunchPad@Singapore by NUS Enterprise, to refine their ideas. Mentors from the

water industry were paired with each team to guide and advise them. All the teams were invited to exhibit their projects at SIWW.

Six teams were also selected to pitch to notable experts from the water industry like Dr Andrew Benedek, Executive Chairman and Chief Technology Officer of Anaergia Inc. Of those pitching, three were from NUS. These were GSense, a heavy metal detection device, Wateroam, a portable water filter with ceramic membrane, and Team Orca, an underwater modem.

At the close of the pitching session, prizes were given to the Most Disruptive Innovation, Most Investment Potential and Rising Hydropreneur Star. Team Orca clinched the award for Most Disruptive Innovation while Melvin Tang from Wateroam claimed the Rising Hydropreneur Star Award. ♦



The participants of the Hydropreneur Programme at Singapore International Water Week at Marina Bay Sands Convention Centre on 2nd June 2014.



Start-Up@Singapore: Ending on a high...



Winners of the 15th Start-Up@Singapore Competition held at NUS UTown on 31st May 2014.

The finale of Singapore's largest and foremost business plan competition, Start-Up@Singapore, was held on 31st May 2014 at University Town, NUS. The awards ceremony of the 9-month long competition was graced by Mr Lee Yi Shan, Senior Minister of State, Ministry of Trade and Industry and National Development.

The 15th run of Start-Up@Singapore achieved significant milestones, with a combined outreach to over 10,000 participants as well as more than \$1,000,000 in cash and prizes.

Novelsys clinched the Biz Venture Challenge prize while Collappe won the Infocomm Challenge.

Novelsys captivated the judges with their fluent delivery and revolutionary concept of Ampere, a wireless-charging-sleeve for mobile devices. The multidisciplinary team from NUS improved the current wired-charging technology with their universally compatible device, which they hope to make available to market via a crowdfunding campaign in September 2014.

Collappe is a collaborative instant messaging chat app that em-

powers students with the ability to manage and coordinate their group activities. The team's idea was conceived through a digital entrepreneurship module with the NUS School of Computing. They hope to launch the app later this year.

A new chapter is ahead for Start-Up@Singapore, as revealed by founder and Co-Chair of Start-Up@Singapore Steering Committee, Prof Wong Poh Kam, in his closing speech. He explained the impact of the internet on accessibility to information and resources and that the best-practice method to learning to startup businesses has changed considerably. Rather than writing a full business plan, an iterative process of rapid customer discovery and market validation has been found to be more effective.

In this landscape, Start-Up@Singapore will become a platform for helping Singapore-based start-ups go global. Start-Up@Singapore will become Global Start-Up@Singapore as this focus fits the need for Singapore's entrepreneurship development over the next decade, where the key challenge is not starting up, but going global. More excitement ahead for local entrepreneurs! ♦

...for New Global Beginnings

NUS Enterprise, together with NUS Business School, launched the first of the Global Start-Up@Singapore Seminars on 27th June 2014 at NUS Hon Sui Sen Auditorium. Ike Lee, CEO of Lee Technology Consulting (US) and a veteran venture capitalist and serial entrepreneur based in Seattle, shared useful tips and insights with more than 200 students, academics and entrepreneurs on the various aspects of how to create a successful start-up.

Mr Lee stressed that failure is not an option. Entrepreneurs especially those with global ambitions must have viable, long-term strategic business plans even if they are start-ups.

This seminar is part of the Global Start-Up@Singapore programme that aims to help local start-ups set foot overseas. Other workshops in the pipeline include crowdfunding and international regulatory compliance for biomedical devices, electrical and electronics. ♦



Korean-born American Mr Ike Lee, veteran venture capitalist and serial entrepreneur and NUS Entrepreneurship Centre's Director, Prof Wong Poh Kam fielding questions on start-up challenges at the inaugural Global Start-Up@Singapore Seminar Series on 27th June 2014.



Lessons from an accidental social entrepreneur



Sebastien Marot, Founder of Friends International was the keynote speaker at the DBS-NUS Social Venture Challenge Asia Awards Ceremony.

Sebastien Marot is your quintessential “accidental” social entrepreneur. Like many other entrepreneurs in the field of social impact, once he serendipitously stumbled upon his mission – saving lives and building futures of marginalised children and youths - there was no going back. Sebastien is the Founder of the internationally acclaimed Cambodia-based organisation, Friends International. Having impacted over 70,000 at risk youths and children last year alone, Friends International is a unique hybrid social enterprise that supports marginalised communities through the creation of education and employment opportunities. We were immensely fortunate to have Sebastien come down to Singapore as a judge and Keynote Speaker for the DBS-NUS Social Venture Challenge Asia finale on 6th June. Here are three lessons from Sebastien’s decade-long journey as a social entrepreneur:

1. Learn to adapt quickly

Sebastien began his talk with an anecdote - while travelling to Cambodia in the early 90’s, Sebastien, originally from France and then residing in Japan, was disheartened when he encountered children sleeping on the streets in Phnom Penh. Thinking he must help them in his own little way he bought them bread and cheese. Although a noble act, he quickly realised it wasn’t fruitful because there were already enough people handing out food to these children. In fact, these children received up to 8 meals a deal through handouts!

Still adamant to help, he then decided to provide them shelter. He purchased mattresses and pillows for the children, and once again, realised that the children didn’t want to sleep on mattresses in the sweltering Phnom Penn heat (they preferred the cool floor). Once again, his good intentions had failed.

Finally, after iterating and reiterating, talking to his beneficiaries, really immersing himself into the problem, understanding and listening, he figured that hand-outs will never work – whether it’s food or shelter. These children want something more, they want to earn a living and be in control of their own choices. That is when Sebastien set up a vocational school, providing education and economic opportunities to these vulnerable children.

Here Sebastien teaches us many important lessons on never giving up, taking risks and really understanding the problem. As he says, “you need to give the people what they want, accept what they want and quickly adapt”.

2. Leverage the power of the community

As a social entrepreneur seeking to solve some of society’s deep rooted problems, one needs to understand the full picture, and as Sebastien says, “If you cannot look at the full picture, work with others”. The key to Friends International’s success is the strong support it receives from its community, comprising governments, NGOs, the corporate sector and the public. With over 40 partners in nearly 20 countries the world over, Friends International grows to impact more and more vulnerable children every year. Sebastien emphasises the importance of being both holistic in approaching any social challenge and having a supportive community and strong network.

3. Have a clear mission and be true to it

Friends International’s mission is to save lives and build the futures of at risk youths and children. In order to fulfill its mission it has incorporated a hybrid social enterprise into its core activities. The vocational training provided to the youths is converted into real businesses that not only strengthen that training but also generate some revenue that is ploughed back into the businesses for more impact. Through this, Friends International is able to become more sustainable and create lasting change. Using this example, Sebastien stresses the point that even though models have to be changed and revised from time to time, one’s business must always be ‘at the service of your social mission’. ♦

After studying at the Institut d’Etudes Politiques de Paris, Sébastien Marot worked with the department of French Foreign Affairs and in marketing for l’Oreal, before being inspired to work with marginalised children. During his travels through Cambodia in 1994, he launched the award-winning Mith Samlanh project in Phnom Penh to address the many issues faced by marginalised children and youths. From Phnom Penh, he developed the internationally acclaimed social enterprise Friends-International, to provide protection, support and care for marginalised children and youth around the world, using a series of social business models. His awards include: the Order of Australia for Service to Humanity; the Skoll Award for Social Entrepreneurship; and, the Schwab Foundation Social Entrepreneur of the Year, Asia (2009). Friends-International was named a Top 100 Non-Governmental Organisation by The Global Journal in January 2012.



Seizing a moment with Ike Lee: Advice for aspiring entrepreneurs

In June 2014, as part of the Global Start-Up@Singapore seminar series, Ike Lee shared his experience in guiding start-ups on how to scale and reach global markets. Ike has over 25 years experience in advising companies, including tech start-ups, on joint ventures, mergers & acquisitions and strategic management. After the seminar, Mr Lee answered various questions from existing and aspiring entrepreneurs.

Q: You have seen many start-ups succeed and fail. Do you notice any patterns of success and failure?

Ike: Over the years, I have invested in, mentored and advised various companies. I've noticed that generally global leaders have these six important mindset elements:

1. Why ME? – Entrepreneurs need to understand what they know and more importantly what they do not know. This will allow them to concentrate on what they are good at, and outsource the rest to other experts. For instance, a CEO of a tech company who has an engineering background may wish to focus purely on product development and allow branding and marketing consultants to work on the product's image, identity, and marketing strategy.
2. Be part of it – First time entrepreneurs may find it daunting to jump into the deep end, but it's important to establish a strong track record by becoming an integral part of the industry you've chosen.
3. 26 hours/ 8 days – It's not a joke to say that being an entrepreneur is a full time job and because of this, it can become a little all-encompassing. In order not to get too overwhelmed, this leads to the next point, which is ...
4. Focus! Focus! Focus! – Most entrepreneurs try to do a bit of everything, which results in nothing getting completed. Instead, it is better to decide which critical task needs to be done in order for the company to achieve its next milestone. And then focus all energy on completing this task, in the best way possible.
5. Failure is not an option – Everyone in Silicon Valley talks about how failure looks great on one's resume, as it shows you have previous experience. However, for an entrepreneur who is looking to take on the world, they should only think of succeeding.
6. Back to the basics – At the end of the day, a start-up needs to create a product or service that the customer really wants.

Q: What about patterns of failure?

Ike: There are various reasons why start-ups with good potential fail. The first reason is that although the founder or founding team is passionate, they are not able to develop a realistic plan. And for those companies that have a great plan in place, they can stumble when it comes to executing this plan. Many other companies only look to achieving short-term success with no long-term plan for success. For example, I recently met a tech company whose idea of success was the

ability to achieve a profit margin of several million for two years in a row. However, a company that wants to go global needs to see strong exponential growth, as it demonstrates the ability to create real value for its customers. And lastly, I have also seen several companies that have everything – a good team, sound plan, great product, growing market – and yet still fail, just due to bad timing.

Q: How do you know which industry to get involved in? What tech areas are you exploring now?

Ike: My own personal style is to simply seize the moment. For example, when I first moved to the U.S. I had no connections, no track record and no fancy degree. I wasn't sure which industry to explore, so I simply asked some knowledgeable businessmen whom I met which was the most profitable sector to be in. They told me it was in the area of military defence. Although I had no experience in this area, I simply jumped into the industry, and began working with a defense electronics company, after knocking on the door of many companies and studying day and night for two years. In terms of what I'm looking for now, I believe that the next technology tsunami will involve the Internet of Things, as technology is making everything and everyone connected.

Q: Have you invested in or mentored any Singapore companies?

Ike: This is my third visit to Singapore, with my first visit being just 6 months earlier in January this year. So I'm still quite new to this country. Nevertheless, I have a strong feeling about this place, and I'm here to find the diamond in rough. There is no difference between Singapore and other places, such as Silicon Valley, in terms of the quality of deal flows. I have been very impressed with what I have seen so far, including the start-up support infrastructure available, government support and range of tech companies. Although I've not yet found one particular company to invest in, it's here. I can smell the money! ♦



Mr Ike Lee, CEO of Lee Technology Consulting (US) sharing his views on Singapore's entrepreneurship eco-system with Channel News Asia.

Kopi Chat & Friday Feeds: Special servings by NUS Enterprise @ Blk71

NUS Enterprise launched 'Kopi Chat' and 'Friday Feeds' in May for entrepreneurs and like-minded folks to gather and learn from one another. These are currently held at Blk71 in Ayer Rajah, one of the several incubators managed by NUS Enterprise.

Kopi Chat is a signature event where specially invited guests come to share tips with the entrepreneur community. At each session, a fresh brew of local kopi is served alongside the talks, and all present have the opportunity to interact with well-known entrepreneurs. Two Kopi Chat sessions are held monthly, one targeting entrepreneurs and the other for developers.

The inaugural Kopi Chat was kickstarted by Mr Eddy Lee of Fenox Venture Capital on 7th May 2014. He shared his views on "Tomorrow's Wearables". The speakers for the subsequent sessions included Mr Mark Chang of Jobstreet.com, Mr Royston Teh of Zopim, Mr Joe Wilson of Microsoft, Mr Ray Chan of 9GAG and Mr Amit Chopra and Mr Karthikeyan Rajasekharan of Google. 'Kopi Chat' sessions have been

well-received by the community.

The other signature event, 'Friday Feeds' is another way to engage the start-up community. More than a 'makan' session, participants feed on good local food and pick up the latest start-up news from casual, informal interactions with one another. This event takes place on the last Friday of each month, serving different local flavours and new networking opportunities each time. Friday Feeds provide co-sponsorship opportunities for start-ups or entrepreneurs to contribute back to the community.

The first run of 'Friday Feeds' on 30th May 2014 served Singaporean's favourite fruit – durian – to more than 100 attendees. It was a fun way to make new friends as attendees helped each other to pry open the durian shells and shared the fruits of their "labour" among themselves. Other sessions featured Satay (June) and Laksa (July).

Details of upcoming Kopi Chat and Friday Feeds are available on enterprise.nus.edu.sg ♦



Mr Ray Chan of 9GAG, speaking at the 4th Kopi Chat session.



Attendees having fun at Kopi Chat sessions.



Friday Feeds: Fresh local food. Good start-up company.





Lean LaunchPad@Singapore growing strong



Participants at the finals of the Lean LaunchPad@Singapore, held on 9th June 2014 at the Ngee Ann Kongsi Auditorium, University Town.

The second run of Lean LaunchPad@Singapore ended in June this year with participation from more than 70 inventors, principal investigators, researchers, post-doctoral and undergraduate students from various fields of study and research areas. They comprised 17 teams with diverse backgrounds such as life sciences, information and communications technology and engineering. Programme co-director, Senior Fellow and Founding Executive Director Emeritus, Lester Centre for Entrepreneurship, University of Berkeley, Prof Jerome Engels, along with Prof Wong Poh Kam and NUS teaching faculty formed a panel of five judges during the teams' final presentations on 9th June 2014 at Ngee Ann Kongsi Auditorium, University Town.

First brought to Asia by NUS Enterprise in June 2013, the second run of the programme saw increased participation from other institutions of higher learning, namely Nanyang Technological University (NTU) and the Singapore- MIT Alliance for Research and Technology (SMART). The Public Utilities Board (PUB) also arranged for five of the teams in its inaugural Hydropreneur Programme to attend the training.

The 10-week intensive course guided participants through mapping their assumptions (business models), testing these hypotheses with customers and partners outside in the field (customer development) and using an iterative and incremental development methodology (agile development) to build their product.

Two teams from the Lean LaunchPad@Singapore 2013 have since incorporated companies, Liver Solutions Pte and Ltd and Sense Genomics Pte Ltd. Liver Solutions is a medical device company that has received NRF's Proof of Concept grant and is in the early stage of developing its final prototype. Sense Genomics has developed a coronary artery disease risk assessment algorithm and is the midst of finalising a licensing agreement.

The next run of Lean LaunchPad@Singapore is likely to take place in January 2015. ♦

First launched in Singapore in 2013, LeanLaunchPad@Singapore is designed and conducted by NUS Enterprise specifically for researchers in universities and public research institutes who want to commercialize their technological inventions. It is an intensive, 10-week experiential learning programme that is modeled after the US National Science Foundation I-Corps programme for principal investigators who are recipients of NSF grants. LeanLaunchpad@Singapore is conducted by a faculty team at NUS led by Prof Wong Poh Kam in close collaboration with the I-Corps Programme faculty co-leads Prof Jerry Engel and Prof Steve Blank. Each participating team comprises the principal scientist, one or more entrepreneurial leads (who are typically Masters/PhD students or research fellows working with the scientist), and an experienced industry mentor.

Zimplistic Fantastic: Rotimatic sold out in US

In July 2014, the Rotimatic, an automatic roti-maker sold out its pre-orders in just one week, generating \$5M in sales. Created by Zimplistic, an NUS start-up and incubatee, the Rotimatic will be shipped to US consumers in early 2015. Plans to launch in other markets, including Singapore, are currently in progress.

"Zimplistic is changing the way people think about cooking by bringing them a smarter way to prepare food. Customers have been extremely receptive and excited about this concept. We are absolutely thrilled with the customer response to the Rotimatic after our first week of availability in the US market," said Rishi Israni, Zimplistic CEO and co-founder.

"We owe a lot of this success to the support we received from SPRING and NUS Enterprise. Disruptive hardware innovations are a true test of an entrepreneurship ecosystem, given the high need of capital upfront, the longer innovation curve and the diverse talent needed to bring an idea into a physical product," said Pranoti Nagarkar, Zimplistic CTO and co-founder.

The revolutionary kitchen technology uses robotic technology to make hot, fresh rotis — low-calorie, whole wheat unleavened flatbreads that originated in India and are consumed by millions of people around

the world daily. The user simply has to fill up the wheat flour and water in individually-designated compartments and Rotimatic, with its patented artificial intelligence system, measures and mixes the correct ratio of ingredients to deliver one hot and puffy roti a minute. ♦



Zimplistic founders, Mr Rishi Israni and Ms Pranoti Nagarkar with their revolutionary roti-maker, Rotimatic

TechConnect 2014: Taking NUS technologies to global markets

The NUS Industry Liaison Office participated in the TechConnect World Innovation Conference and Expo 2014, held from 16th–18th June in Washington, DC.

Eleven technologies were submitted for consideration by NUS to the TechConnect Innovation and Commercialisation Committee for poster exhibition. Of these, two technologies were conferred the TechConnect Innovation Award, in recognition of their placement in the top 20% of all technologies submitted to the conference.

These were Thin Film Composite Membranes on Ceramic for Pervaporation Dehydration of Organics and Hollow Fiber Membrane for Dehydration of Organic Solvents via Pervaporation, both from the Faculty

of Engineering's Department of Chemical and Biomolecular Engineering.

The conference was an excellent platform for showcasing and exhibiting NUS technologies. It drew tech scouts to NUS' booth and posters for technical and business discussions. ♦

TechConnect World is an international conference bringing together inventors, technology developers, funders and curated innovations to a marketplace for commercialization of technologies by corporates and investment partners. The conference focus sectors are Nanotech, Microtech, Biotec and Cleantech



Two NUS technologies received the "TechConnect Innovation Award"



NUS Industry Liaison Office Associate Director Mr Ma Mun Thoh introducing NUS technologies to conference delegate.

Expanding Industry Connections

The NUS Industry Liaison Office (ILO) has been actively reaching out to industry partners to introduce NUS research and development capabilities and engage them with our researchers and professors.

On 2nd June 2014 at the Singapore International Water Week, ILO was instrumental in formulating two Memorandum of Understandings (MOUs) with industry partners, Wong Fong Engineering Works and TechComm Global.

The collaboration agreement with Wong Fong centres on the design and development of a state-of-the-art three-stage anaerobic trash

digester that converts household waste into energy, producing useful by-products of fertilisers and nutrients that may be used in farming and horticultural activities. The digester will form part of an advanced modular waste disposal and collection system, engineered by Wong Fong, that will be utilised for the planning and designing of a sustainable township.

The agreement with TechComm Global will help to identify IP for productisation or application development in clean technology, water/wastewater treatment and/or energy-related solutions for the building & construction sector and facilities management. ♦



NUS Environmental Research Institute's Senior Associate Director Dr Peter Kew; Wong Fong representatives Head of Marketing Ms Larissa Tan and Executive Director Mr Eric Lew; Director of NUS Industry Liaison Office Ms Irene Cheong; Assoc Prof Tong and Prof Ong at the MOU signing ceremony for an agreement to develop innovative waste management solutions.



(2nd from right): Ms Irene Cheong, Director, NUS Industry Liaison Office signed another agreement on technologies related to waste management solutions with Mr William Puay, Director, Innovation and Marketing, TechComm Global (centre).



Sustainable Social Entrepreneurship



Co-founders of Sustainable Living Lab, Ibnu Rashad, Tan Huei Ming and Veerappan Swaminathan, in their lab.

We all have a tinkerer inside of us – an artist, an innovator, a maker. Looking at the pressing problems of today – social and environmental – it's apparent that conventional solutions may no longer be effective. What we need is sustainable, socially impactful, collaborative and technology-based innovations.

Sustainable Living Lab (or SL2, as it is popularly known) aims to create impact by bringing out the DIY in us. SL2 is Singapore's first and only prototyping laboratory, a makers' haven that nurtures talent for sustainable solutions for developing countries in Asia and beyond. From sustainable speakers made of bamboo to solar-powered drying machines for fruit and fish, it is a lab that facilitates collaboration, engineering and design.

The co-founders, Muhd Ibnu Rashad and Veerappan Swaminathan, both alumni from the NUS College in Silicon Valley and graduates of the faculty of engineering, saw the lack of community-based, human centered DIY meet-ups and entrepreneurship projects in Singapore. With different backgrounds in nanotechnology, engineering, rural solutions and humanitarianism they came together to set up SL2 in 2011. It not only has a makerspace but frequently holds workshops, Sustainability Camps, and make-athons in Singapore and in the region with the mission to imbibe the culture of innovation amongst youth.

While it's a for profit social enterprise, SL2 collaborates regularly with Ground-Up Initiative (GUI), which is a non-profit organisation. GUI is a volunteer-driven community that aims to restore the connection between our planet and its people through its initiative WOW Kampung – the education arm that nurtures purposeful sustainability-minded individuals and Kampung Play, a programme that promotes family and community life by bringing different generations of people together. ♦

A helping hand: Jacob Phang Memorial Scholarship

In 2013, the Jacob Phang Memorial Scholarship was set-up by NUS Enterprise in conjunction with the family and friends of the late Professor Jacob Phang, CEO of NUS Enterprise from 2002 to 2006.

The late Professor Phang leaves a legacy in the entrepreneurial landscape of NUS. His keen advocacy led to the creation of the NUS Overseas Colleges (NOC), which now operate in various entrepreneurial hubs around the world.

The endowed scholarship is open to all Faculty of Engineering students who have completed the NOC programme. The quantum of each scholarship is S\$3,500, which helps to cover tuition fees for the student's final semester. Up to two scholarships are disbursed each academic year.

To date, three scholarships have been awarded. This year's recipients, Mr Darren Chia (NUS College in Shanghai) and Mr Thor Vei Jye (NUS College in Bio Valley), shared that the scholarship has been an encouragement in their entrepreneurial pursuits.

Darren says, "I am extremely grateful and humbled to be a recipient of the Jacob Phang Scholarship. This award is a motivation and affirmation for me as an entrepreneur. I view this scholarship as a trust in my ability to excel in my ventures and I will most definitely pass the en-

trepreneur spirit on to young enterprising entrepreneurs in the future". Vei Jye said that having failed at the take-off stage of his first start-up, the award strengthens his belief that he has to equip himself with sufficient know-how before he embarks on his next entrepreneurial attempt.

The first recipient of the award, Mr Tan Kuan Yan (NUS College in Stockholm), is now a tech entrepreneur and CEO & Co-founder of Jublia.

Applications for the AY 2015/2016 scholarship will open in January 2015.



Mr Thor NOC Bio Valley alumnus.



Mr Darren Chia, NOC Shanghai alumnus.

Bulging full of experience in Philadelphia

By Chan Yi Wen

Inspired by Silicon Valley, NUS Enterprise coined the nickname 'Bio Valley' for the biotech-vibrant region in Philadelphia. Often overshadowed by other entrepreneurial hubs, Philadelphia has so much more going for it than biotech, cheesesteaks, and Rocky.

I joined the NOC programme in August 2012. For a year, I took Engineering Entrepreneurship classes at the University of Pennsylvania and interned at Shenandoah Studio, a game development company that specialises in bringing traditional turn-based board games to the iPad.

Officially, I was Shenandoah's Marketing Associate, but like in most startups, it was easy to get involved with every aspect of the company. In addition to managing fundraising campaigns, outreach, and social media, I acted as the company's customer service representative, video producer, and beta-tester.

When I joined Shenandoah, the company was working on what would be its flagship game, Battle of the Bulge, based on the major German offensive in 1944. I witnessed the game progress from idea to development, then from launch to post-launch. When Bulge was released in Dec 2012, I was halfway through my NOC journey.

Getting to that point required a tremendous amount of blood and sweat from the team, long hours, dozens of Scrum meetings, as well as a subsistence of coffee and stale doughnuts. After Bulge was launched on the App Store, the team stayed busy analyzing customer feedback, making numerous tutorial revisions and bug fixes, and starting work on a sequel.

Hard work was complemented by the workplace culture Eric, the

CEO, had created. He set up board game Fridays, celebrated employee birthdays with cake and thoughtfully wrapped gifts, and was generous on remuneration. He created a safe and inclusive environment at Shenandoah, one where you felt comfortable enough to take a day off for your sick kid, but when you were there, you put in 110%.

Eric had built the studio from scratch, with a strict philosophy for the team - to only develop games they themselves would want to play. Shenandoah knew that there were more ways than one to skin a cat, and that there were already too many clones trying to ride on the coattails of Angry Birds' commercial success. They weren't gunning for mass appeal, but were confident they would flourish within their niche categories. And they did.

Since then, Shenandoah has released its third game, Desert Fox: The Battle of El Alamein. By then, more than 1.2 million apps were published on the Apple App Store. Desert Fox, the sequel to Bulge, was ranked #8 on the App Store in the 'Strategy Game' category, ahead of 'Ticket to Ride', and #2 in the 'Board Game' category, right behind Life! ♦

Chan Yi Wen, an NOC (Bio Valley) alumnus and is currently a journalist with The Business Times, a newspaper under the Singapore Press Holdings group. She was on work assignment to Philadelphia in June 2014 and had the opportunity to visit Shenandoah. NOC Bio Valley was started in 2003. It will be ending in December 2014 after more than a decade. More excitement continues for NOC Colleges in the US with its new location in New York City and its pioneer location in Silicon Valley.



Chan Yi Wen sending off boxes of Battle of the Bulge T-shirts to Kickstarter backers!



Chan Yi Wen taking a video for Shenandoah Studio's Kickstarter campaign at Gettysburg, Philadelphia.



SOMETHING IS ALWAYS BREWING WHERE ENTREPRENEURS GATHER. CHECK OUT THESE EXCITING EVENTS AND HAPPENINGS.

WHEN	WHAT	WHERE
Jul	NOC Graduation and Company Appreciation Dinners	Various locations (USA, China, Sweden, India and Israel)
2 Jul	Kopi Chat by Royston Teh of Zopim	Blk 71 Ayer Rajah
12 – 25 Jul	iLEAD Batch 13 Overseas Study Mission	Philadelphia and New York, USA
25 Jul	Friday Feeds! Laksa	Blk 71 Ayer Rajah
16 Jul	Kopi Chat by Amit Chopra, Developer Relations Lead and Karthikeyan Rajasekharan, Technical Architect of Google	Blk 71 Ayer Rajah
30 Jul	Energy TechRoadMap 2014	Suntec City Convention & Exhibiton Centre
1 Aug	Global Start-Up@Singapore Seminar:Building Global Company - The Crowd Funding Approach	U Hall Auditorium, NUS
6 Aug	NUS iCreate Mobility Challenge 2014 Showcase & Award Ceremony	NUS
6 Aug	Kopi Chat by Wong Hoong An of HungryGoWhere	Blk 71 Ayer Rajah
18 – 29 Aug	NOC Recruitment Drive	NUS Faculties
27 Aug	NOC Fireside Chat with Stanford Professor Tom Kosnik	Theatrette 2, Central Library, NUS
29 Aug	Friday Feeds! Mooncakes	Blk 71 Ayer Rajah
29 – 31 Aug	NUS - SMRT Commuthon	Blk 71 Ayer Rajah
3 Sep	Kopi Chat by Joel Fu of SgCarMart.com	Blk 71 Ayer Rajah
23 – 24 Sep	TechInnovation	Marina Bay Sands Convention Centre
24 – 25 Sep	TechVenture	Marina Bay Sands Convention Centre
25 Sep	Go-to-Market @ Faculty of Science	LT 31, Faculty of Science Auditorium, NUS
26 Sep	Friday Feeds!	Blk 71 Ayer Rajah

SPARKS food-for-thought.

Useful Tinder



Raising capital as a social entrepreneur



Raya Papp, co-head of the impact investing firm LGT Venture Philanthropy shared wide-ranging social financing options at the NUS-DBS Social Venture Challenge bootcamp. LGT Venture Philanthropy has built a portfolio of over 36 firms and over 19 million USD in investments, helping to improve the lives of 4.5 million less advantaged people across the globe. Here are some of the tips she shared with the team.

TIP 1: BE REALISTIC AND KNOW YOUR PLAN B

As a social entrepreneur it's essential you know how much capital you need – overestimating capital needs is very common and should be avoided. Quantifying returns, projecting financial returns and estimating ROI are some ways to gauge capital requirements. Articulating potential exits are also a must as investors are always interested in the long-term success of the venture and its ability to adjust with changes in the market.

TIP 2: PITCH THE RIGHT STORY AND BE OPEN

Marketing to an investor is very different than marketing to a customer. In order to gain the trust of an investor, honesty is the best policy. First, it's important to share the right story – what is the company really about? Why are you doing this? As an entrepreneur, how much management time and commitment will you dedicate? Second, it's crucial to discuss any potential roadblocks and hurdles with the investor beforehand. The investor is there to help.

TIP 3: FOCUS ON THE EXECUTION

Execute the deal systematically. It is important to have a lead investor who will provide you with direction and serve as an anchor to introduce you to a network of other potential investors and mentors. As soon as the deal is sealed, hire a lawyer and a finance expert. Not having a trusted legal advisor can be one of the worst decisions for a business.

A spark is in many ways, a magical mysterious occurrence.

Often taken for granted, the spark gives life to a flame, which can lead to roaring fires. In much the same way, ENTERPRISE SPARKS the fires of entrepreneurship. The flames are held by NUS students through entrepreneurship internship programmes in Singapore and around the world. Fires are also stoked in scientific researchers through commercialisation of their discoveries. Finally, would-be entrepreneurs are given fuel with an environment and runway to achieve their business dreams. Our networking events, workshops and events constantly strive towards keeping the fires of entrepreneurship alive in the community.

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