

ENTERPRISE SPARKS

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{ Women in Entrepreneurship }

03 > BLOCK71 YOGYAKARTA
HOSTS SINGAPORE'S
PRESIDENT

06 > THE CANADIAN START-UP
KALEIDOSCOPE

09 > A REVOLUTION IN THE
STRAWBERRY FIELD

MCIP074/04/2020

FEATURES



SPARKS interest with the latest in the start-up and entrepreneur scene within our community

- 03 **BLOCK71 YOGYAKARTA HOSTS SINGAPORE'S PRESIDENT**
- 04 **A PEEK INTO NUS E-OPEN HOUSE**
- 05 **"WHAT'S NEXT" IN INNOVATION**



SPARKS passion with exciting entrepreneurial internships

- 06 **THE CANADIAN START-UP KALEIDOSCOPE**



SPARKS action with fireside chats and tips from experienced entrepreneurs

- 08 **LOTUS-NUS FUND NAMES FIVE NEW RECIPIENTS**
- 09 **A REVOLUTION IN THE STRAWBERRY FIELD**



SPARKS partnerships with industry and market leaders

- 10 **ICE71 INSPIRE WELCOMES COHORT 4**



SPARKS ideas with different thoughts and perspectives

- 11 **A GLIMPSE OF WOMEN ENTREPRENEURS IN OUR ECOSYSTEM**
- 12 **WOMEN IN TECH ENTREPRENEURSHIP**



SPARKS interest in past events and activities

- 14 **NEWSFEED**
- 15 **FLASHBACK**



SPARKS food-for-thought

- 16 **FINANCIAL SECURITY FOR THE ELDERLY**

Editor's note

Moving into 2020 has been both exciting and challenging. New initiatives and programmes are in the pipeline to be rolled out to propel our entrepreneurial ecosystem to new frontiers in technological innovations. While challenges abound with the COVID-19 epidemic, our start-ups and inventors are not resting on their laurels in pursuit of their entrepreneurial aspirations.

In honour of International Women's day in March, we have themed this edition "Women in Entrepreneurship," sharing research insights on how Singapore's female tech entrepreneurs have made great strides in their entrepreneurial pursuits.

In this edition of ENTERPRISE SPARKS, we also capture the spirit of our community through the various events, activities and programmes that have occurred:

- BLOCK71 Yogyakarta had the honour of hosting Singapore President Halimah Yacob during her state visit to Indonesia in February. Our start-ups showcased innovative ideas, such as the production of healthier instant powdered drinks, technology-based R & D on environmental rehabilitation, a social enterprise empowering women to create job opportunities through technology, and many more.
- Amidst the COVID-19 frenzy, NUS Overseas Colleges (NOC) galvanised students' efforts from across the globe to promote and share their start-up internship stints at NUS' e-open house.
- At the Singapore Airshow 2020, Lumitics, one of our incubating start-ups, topped the 'Digital Solutions' category in the "What's Next" pitching event.
- NUS GRIP start-up Singrow, which focuses on highly-efficient indoor strawberry cultivation, reached a new milestone, surpassing SGD110,000 in revenue.
- NUS Overseas Colleges Toronto students shed light on their experiences interning at Canadian start-ups.
- Through one of our signature events, Kopi Chat Da Bao, we gathered insight on financial preparedness for seniors from AN, a social enterprise that help senior citizens live meaningfully in their golden years.

For more thrills and spills in our ecosystem, stay tuned!



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BLOCK71 YOGYAKARTA HOSTS SINGAPORE'S PRESIDENT

Singapore President Halimah Yacob speaking to one of the start-up entrepreneurs incubated at BLOCK71 Yogyakarta. (Photo: Lianhe Zaobao © Singapore Press Holdings Limited).

On the 4th of February, Singapore President Halimah Yacob visited Indonesia to strengthen bilateral ties between Singapore and Indonesia.

During the visit, she dropped by BLOCK71 Yogyakarta, an incubation community created by NUS Enterprise in partnership with Indonesia's Salim Group. Hosted by Ms Dawn Ng, Director of Ecosystem Development (Incubation) at NUS Enterprise, and Mr Axton Salim, Executive Director at Salim Group, Madam Halimah toured the incubation space and spoke to a few of the start-up founders stationed there, including:

- ➡ Mr Fairoz Ahmad of Chapter W, a social enterprise focused on empowering women through technology and creating better job opportunities in Indonesia
- ➡ Ms Lintang Wuriantari of Matchmamu, a fast-emerging FMCG business in Indonesia which manufactures healthier instant powdered drinks.
- ➡ Mr Aryo Wiryawan of Indmira, a technology-based company carrying out research and development on agrocomplex (agriculture, forestry, animal husbandry and fisheries) and environmental rehabilitation.

BLOCK71 Yogyakarta has housed nearly 30 start-ups from Indonesia, Malaysia, Singapore and Hong Kong to date. Since its launch in 2018, it has become a hub for local and regional ecosystem players and has helped in boosting Yogyakarta's start-up scene. It forms part of a global network of innovation and entrepreneurial gateways to and from NUS, through providing programmes as a technology ecosystem builder and business connector to catalyse, aggregate and develop competencies of the start-up community.



Madam Halimah taking a selfie with tech start-up founders and programme managers from BLOCK71 Yogyakarta.

BLOCK71 Yogyakarta's success and value are testaments of the goodwill between Singapore and Indonesia and the opportunities it has created. We are glad to have had President Halimah visit and are excited to see what BLOCK71 Yogyakarta has in store for the new decade.



A PEEK INTO NUS' E-OPEN HOUSE

📺 Behind-the-scenes of the filming of Professor Chee Yeow Meng, Associate Vice President (Innovation & Enterprise) and NOC students Shaik and Cordillia for a video on what the NOC programme has to offer.

Every year, the National University of Singapore's Open Day is an event that most prospective students and parents look forward to. This year, for the first time in its history, NUS' Open Day went virtual! Despite the novelty of the concept and the short runway of preparation, it was a huge success, attracting more than three million participants. Much like physical open-days, there were conferences, campus tours, talks by alumni, staff and professors from faculties and CCA-groups. The e-event lasted from 26 February to 5 March and covered a wide range of activities and discussion topics, with each day featuring selected faculties and schools.

What was seen as a challenge, 'going virtual' soon became a blessing in disguise as NUS was able to do things that would not have been possible otherwise. For instance, NUS Overseas Colleges (NOC) ran their info session on Zoom, a web-based video conference tool. Through this, prospective students were able to directly see and hear from current NOC students based in different countries. NOC Toronto students Jun Hui and Shaik joined their NOC Silicon Valley peers, as they imparted their wisdom to their potential juniors who listened in from Singapore and overseas.

Participants also had the chance to go on live Facebook tours of the NUS Arts and Social Science facilities and watch broadcasts of sample simulated training sessions hosted by NUS Medicine. Adding flavour to typical

online info-sessions, Year 4 undergraduates from the Faculty of Science interacted with their audience through a 'Mukbang' style-production, where they chatted about their experiences while tucking into tasty dishes from the Frontier Science canteen. While these videocasts accommodated a wide audience, others, like that of the University Scholars Programme (USP), preferred more intimacy, having around two USP Ambassadors to three students.

The convenience and accessibility afforded by the e-Open House, on top of the fact that the event ran for more than a week, allowed current full-time national servicemen to tune in from camp and enabled international students to explore NUS despite not being physically present. Additionally, the question-and-answer webinars and live-streams of different faculties not only permitted students to air their concerns but also benefit from one another's queries and responses.

Given the great reception, NUS' first-ever e-Open House was indeed a hit! However, this would not have been possible without the support and effort of staff, students and all others involved.

📺 A few members of the NOC staff who were involved in facilitating e-Open Day's NOC segment, which took place on the 4th of March 2020.



📺 Students from the current NOC Toronto batch tuning in from Canada to talk to their potential juniors about the NOC programme.



“WHAT’S NEXT” IN INNOVATION

📍 NUS Enterprise and SIA sharing our joint initiatives at the Singapore Airshow.

NUS Enterprise recently hosted the “What’s Next” pitching event at the Singapore Airshow. Taking place over 12-13 February 2020, the event showcased budding start-ups and the latest technologies shaking up the aviation landscape.

The event was divided into five domain clusters – Digital Solutions, AI & Cybersecurity, Automation & Smart Transport, Smart Manufacturing & Marketplace, as well as Sustainability & Energy – and saw close to 40 start-ups making their best pitch at the event. Participants received Amazon Web Services credits, and the winners of each category also walked away with three months of technology incubation at BLOCK71 Singapore.

Included among the start-ups participating in the pitching event were:

- ⊕ NUS GRIP spin-off KleenSoil Environmental Technologies, which commits to provide sustainable and customised solid waste remediation solutions for construction, mining, environmental and waste management industries in the global market.



📍 Lumitics Co-founder and CEO Rayner Loi pitching at the “What’s Next” pitching event.

- ⊕ NUS Enterprise start-up Lumitics, which provides a food waste tracking solution that can be deployed across industries such as hospitality, F&B, airlines and cruise ships, and more. Lumitics was also the winner of the Digital Solutions category*.

**The joint runners-up of the category received the incubation package at BLOCK71 Singapore instead.*



📍 Winners of each category received three months of technology incubation at BLOCK71 Singapore.

In addition to the “What’s Next” pitching event, NUS Enterprise also participated in the exhibition with our partner Singapore Airlines to share about the Singapore Airlines Accelerator Programme and the SIA AppChallenge, among other digital transformation and co-innovation activities.

Winners of each category:

- Digital Solutions:** *Lumitics*, which provides a food waste tracking solution
- AI & Cybersecurity:** *MicroSec*, which provides enterprise-grade security for IoT and sensor networks
- Automation & Smart Transport:** *Sensegiz*, which provides enterprise and industrial IoT products
- Smart Manufacturing & Marketplace:** *CargoAI*, which is an airfreight booking AI-enabled platform that connects every airline and freight forwarder
- Sustainability & Energy:** *Transkinect*, which aims to provide power-saving solutions across sectors



FIRE
STARTER

THE CANADIAN START-UP KALEIDOSCOPE

In this issue, we hear from Chua Xin Lin, Andrea Thniah, Tim Chan Tian Min and Chan Yan Kei as they share about their experiences and lessons learned on NUS Overseas Colleges (NOC) Toronto!

Chua Xin Lin

NUS Business School | 3rd Year



↑ Xin Lin (bottom row, 3rd from the right) at the In' Crypto Networking Event with Mavenet.

The NOC experience

I worked in Mavenet Systems Inc., a versatile start-up that sits on the intersection of consulting and technical expertise to develop transformational blockchain-based solutions for enterprises and industries. While my official title was "Strategy and Operations", I was simultaneously juggling a couple of different hats, including Project Manager and HR Manager.

How did the NOC programme value-add to your life?

The reason why the NOC programme is so much more precious than an independent decision to work abroad would be the support system that comes along with it. From the very beginning, the country manager straps you in on the rollercoaster ride and ensures that all the seatbelts are tightened. And when you end, you have an entire ecosystem of potential entrepreneurs ready to be co-founders with you. I will never cease to be thankful for the members in my cohort for their constant encouragement throughout the ups and downs.

Andrea Thniah

School of Computing | 3rd Year



↑ Andrea (first row, 3rd from the left) participating in the Elevate Design Exchange workshop of the Elevate Tech Jam Hackathon.

The NOC experience

I interned as a security developer in ecobee, an IoT company specialising in cost-saving smart thermostats that reduces the carbon footprint. As part of the internal security team, I primarily worked on building tools to automate security workflow within the organisation.

How has the NOC experience equipped you in your entrepreneurial pursuit?

As a computing student, my first instinct towards new entrepreneurship ideas has always been to dive straight into the technical bit. With NOC however, I've learnt to focus on the problem instead of the solution. Instead of asking myself "How do I build this? What techstack do I need?" I have started to ask "Is this a problem that needs to be solved? Who are the target audiences? What is the market size?". With the experience accumulated from classes and pitching in hackathons, I've learned a lot about the common pitfalls faced by emerging start-ups, how to avoid them and most importantly, how to come up with a product under a mere 24 hours and market it to executives.

Tim Chan Tian Min

NUS Business School | 3rd Year



Tim (L), Andrea (R) and their team of two other NOC batchmates at a University of Toronto hackathon where their group emerged Champion.

The NOC experience

I worked at Wattpad, the largest global social storytelling platform in the world, as a Data Analyst, where I helped make sense of data to empower insight-driven business decisions.

What has been memorable about your NOC experience?

From exploring the city, taking part in hackathons and travelling to new places, my most memorable moment would be when the 16 of us went on a road trip to a national park. We stayed in a hut that was super rudimentary - there was no electricity or running water. The guys' NS skills were put to good use during our weekend stay there.

What were some challenges you faced and how did you overcome them?

I am a business student, so the lack of formal data analytics training was a challenge. This meant I had to spend a better part of my time on the weekends to catch up so that I can value-add to the company. One phrase I truly believe in is "only when you are uncomfortable, are you actually learning and growing." This really sums up how I approached the NOC Toronto programme.

Chan Yan Kei

NUS Business School | 3rd Year



Yan Kei (second row, 3rd from the left) and her NOC Toronto batchmates at Algonquin, Canada.

The NOC experience

I interned at Boast.AI, which builds the future of tax credit recovery with artificial intelligence. As a Marketing Coordinator, I built and managed content on our website and social media platforms. I also planned offline events to deepen relationships with customers and attract local prospects.

How did the NOC experience value-add to your life?

The NOC experience equipped me with an overseas internship experience that allowed me to understand the entrepreneurship scene from a more global perspective. It also provided me with more opportunities to interact with members of the start-up community and these precious interactions have inspired me to want to play a bigger role in the start-up ecosystem.

What are your plans moving forward?

I am currently working on a start-up idea in the fitness industry with two other NOC Toronto batchmates. We are progressively improving the idea and hopefully one day you will hear about us as a successful business!





TRAIL
BLAZERS

LOTUS-NUS FUND NAMES FIVE NEW RECIPIENTS

Established as a collaboration between Lotus Life Foundation and NUS Enterprise, the Lotus-NUS Fund awards SGD25,000 to promising NUS-affiliated social impact start-ups, helping accelerate their growth and aiding them in becoming sustainable and scalable businesses.

After reviewing more than 80 applications in our last round, we are excited to share with you the five social impact champions of 2019:



GUILD Aglantis

Founding team:

- M. Ibnur Rashad (NUS Engineering Science, University Scholars Programme '11 and NOC Silicon Valley 2009),
- Eugene Goh Mugen
- Amizzudin bin Md Amin

GUILD Aglantis is Southeast Asia's first water restoration enterprise focused on advancing unmanned surface cleaning robotics to restore rivers, lakes, estuaries and oceans to grow thriving communities and cities in Asia. The start-up designs riverbots known as 'hydrones' to help municipal agencies and communities clean floating plastic trash more effectively.



Glyph

Founding team:

- Ang Weili (NUS Biomedical Engineering '17)
- Lim Si Hui (NUS Comms and New Media '17)
- Shaun Wang

Glyph combats inequality in Asia by offering youth from lower-income households or challenging family environments access to premier holistic education. Its businesses provide highly subsidised, quality goods and services to its members, inclusive of activities, workshops and programmes which are designed to foster critical thinking and creativity.



Insectta

Founding team:

- Alwin Fong
- Chua Kai-Ning (NUS English Linguistics '18)
- Phau Jun Wei (NUS Life Sciences '17)

Insectta is a biotech company specialising in the production of high-value biomaterials from black soldier fly larvae. By farming the insect, Insectta is able to take food waste and return it to the economy in the form of chitosan, animal feed, organic semiconductors, and more - leading to a more sustainable way of living.



VERE360

Founding team:

- Isabel Ngo (Yale-NUS '19)
- Adila Sayyed (Yale-NUS '19)

VERE360 develops research-based educational tools using Virtual Reality (VR) and other immersive technologies to combat apathy towards social issues and develop empathy. The start-up works with socially-driven organisations, schools and governmental institutions to incorporate VR and immersive technology into their educational programmes & awareness campaigns.



Yonah

Founding team:

- Ong Tian Cheng (NUS Engineering '13, NOC Beijing alumnus)
- Sim Zhimin (NUS Engineering '16)

Yonah aims to solve cargo logistics problems in rural and remote areas where the terrain is challenging and infrastructure lacking. By understanding these communities & using creative design and technology, the company is building a medical cargo drone infrastructure to empower these isolated communities and improve their access to basic healthcare.

A **REVOLUTION** IN THE **Strawberry** **Field**



Most people would not usually associate 'strawberries' with 'Singapore'. Our tropical climate lacks the ideal conditions for the fruits to grow, leaving expensive, imported strawberries our only option. This is being changed by SINGROW, a local agritech start-up offering a total solution for high-efficient indoor strawberry cultivation here in Singapore.

Founded by NUS postgraduates Bao Shengjie and Xu Tao during the NUS Graduate Research Innovation Programme (GRIP) in 2019, SINGROW has since clinched the top position in the LEVEL 3 Pitch Off competition, placed in top 10 in the 2019 Chong Qing Talent Cup Grand Finals and was among the top 100 worldwide finalists of Slingshot 2019.

They reached a new milestone in February, surpassing SGD110,000 in revenue, which is notable given they were inceptioned in 2019. We spoke to co-founder Shengjie about their journey and plans.

The ignition of SINGROW

Strawberries sold in Singapore are often either tasteless or sour. I always believed that strawberries should be juicy and sweet as they are in my hometown in China. Thus, I started to breed strawberries in 2016 as a hobby, which eventually became one of the side projects in my PhD programme. Xu Tao joined me a year later to develop a hydroponic setup for the strawberries in my research lab. We tested several different setups and cultivation protocols before finalising our current solution. In early 2019, we joined GRIP which helped us to identify our target market, core business and marketing strategies. We also connected with many of our current investors and partners with the help of our GRIP mentor, David Sher.

What sets SINGROW apart?

While most existing indoor farmers are growing leafy greens or microgreens, SINGROW focuses on fruits and fruity vegetables. This stems from our expertise in fruits on a genetics and molecular biology level. We are able to engineer the growth of our crops to achieve a faster & more energy-efficient turnaround.

SINGROW's latest innovations

Our innovation includes proprietary strawberry varieties, know-how of expedited indoor farming, and a patented design of a vertical strawberry cultivation rack. To develop our strawberry variety, we collaborate with Prof. Yu Hao, Head of Department of Biological Sciences at NUS, on the project of genome editing and cross-breeding for indoor farming.

SINGROW is also developing AI-based smart farming technologies with our partners, supported by the NUS ToughLove Grant. We are still in talks with A*STAR A*ccelerate to co-develop hybrid-lighting and smart thermal isolation technologies for high-efficient greenhouse strawberry farming. With these innovations, we want to grow premium fruit and fruity vegetables at a comparable or lower cost than those from traditional farming.



Xu Tao, CTO & Co-Founder Technology Development (L) and Shengjie, CEO & Co-Founder Technology Development (R) with their indoor vertical cultivation prototypes supported by GRIP.

SINGROW's goals for 2020

- 1 > Hold a successful showcase
- 2 > Hit SGD400,000 in revenue
- 3 > Develop partners and clients beyond Singapore
- 4 > Generate at least two new IPs
- 5 > Start looking for pre-Series A funding





ICE71 INSPIRE WELCOMES COHORT 4

📍 A moment to celebrate.

ICE71 (Innovation Cybersecurity Ecosystem at BLOCK71) has completed the fourth instalment of its Inspire programme. The intensive one-week bootcamp brought together a variety of aspiring entrepreneurs-- from students to working professionals-- to test their cybersecurity theories and ideas, qualify feasibility and commercial viability, and develop their business skills.

Programme modules were curated and run by our programme partner CyLon, a leading global cybersecurity accelerator and active investor in early-stage cybersecurity start-ups. As with previous cohorts, the workshops focused on different areas of entrepreneurship, including technical development, business fundamentals and team building.

Participants were able to learn about the lean methodology for start-ups, product positioning, and hiring talent. There were also networking and mentorship opportunities, including an up-close and personal session with Huang Shaofei, the Land Transport Authority (LTA)'s Chief Information Security Officer.

ICE71 Inspire 4 concluded with a Lo Hei to usher in the Year of the Rat, plus happy smiles!

Bootcamp participants will continue to receive guidance and mentoring over three months to keep the momentum of their business ideas going.

“ I really liked [the] session on hiring. I'm a start-up founder so that was really relevant for me. I felt the greatest benefit I've gotten from ICE71 Inspire is actually connecting with my peers, my classmates. It's such a diverse class. There're students, industry professionals, researchers, and marketers from whom I've learnt a lot from, which is the biggest value for me. ”

Mitali, ICE71 Inspire 4 participant and founder of Guardara

“ One of the greatest learnings from ICE71 Inspire is how to do business and marketing. I also learned about cybersecurity industry demands and challenges, and more about what people in the industry are doing. ”

Hong Ying, ICE71 Inspire 4 participant

“ It's a great crash course on entrepreneurship. ”

Jamie, ICE71 Inspire 4 participant

A FOCUS ON **WOMEN** ENTREPRENEURS IN OUR ECOSYSTEM

Now is the time for women to venture into the entrepreneurial world. Women-owned businesses are increasing and hidden entrepreneurial potential has gradually emerged with the growing sensitivity to their role and economic status in society. As we honour and celebrate International Women's Day, we at NUS Enterprise pride ourselves in grooming female entrepreneurs to keep their entrepreneurial flame alive and bright.



Guan Dian
Co-Founder, Patsnap
BLOCK71 Suzhou
NUS Overseas Colleges



Annisa Wibi
CFO, Mycotech
BLOCK71 Bandung



Grace Chia
Co-founder, BeeX
Autonomous Systems
NUS Overseas Colleges
and GRIP*



Magda Chelly
Managing Director &
Chief Information Security
Officer on Demand,
Responsible Cyber
ICE71**



Shaily Shah
Founder & CEO,
Blue Phish
ICE71**



Dr Jennifer Dodgson
CEO, Vox Dei Pte Ltd
Lean LaunchPad
Singapore



Dr You Fang
CEO & Co-founder,
SinGENE Biotech
Lean LaunchPad
Singapore



Dr Gao Jing
Co-founder, AuroraFood
Lean LaunchPad
Singapore and GRIP*



Goh Yiping
Partner, Quest Ventures
NUS Overseas
Colleges



Peck Ying
Co-founder,
Pslve Pte. Ltd
NUS Overseas Colleges
& BLOCK71 Singapore



Jane Wang
CEO & Co-Founder,
Rocoso Technologies
NUS Enterprise@
Singapore Science
Park



Dr Ng Cailin
CEO & Co-Founder,
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PIER71 ***



Nidhi Gupta
CEO & Co-founder,
Portcast
PIER71***



Emily Low
CEO & Co-founder,
Pillpresso
The Hangar
by NUS Enterprise



Zoey Wang
Founder,
MetroHealth
BLOCK71 Suzhou



Rajoshi Ghosh
Co-Founder,
Hasura
BLOCK71 San Francisco



Verleen Goh
Chief Food Fighter,
Alchemy Foodtech Pte Ltd
NUS Enterprise @
Singapore Science Park



Yasaman Nematbakhsh
CEO & Co-founder,
42LABS
The Hangar
by NUS Enterprise

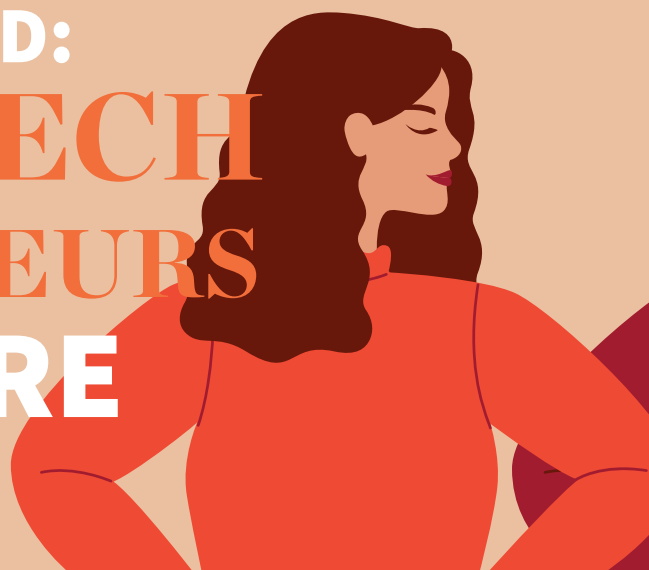


Dr Priti Bhole
Founder & COO,
Lumiere 32
NUS Enterprise @
Singapore Science
Park

* GRIP: Graduate Research Innovation Programme
** ICE71: Innovation Cybersecurity Ecosystem at BLOCK71
*** PIER71: Port Innovation Ecosystem Reimagined at BLOCK71



THE TIES THAT BIND: WOMEN TECH ENTREPRENEURS IN SINGAPORE



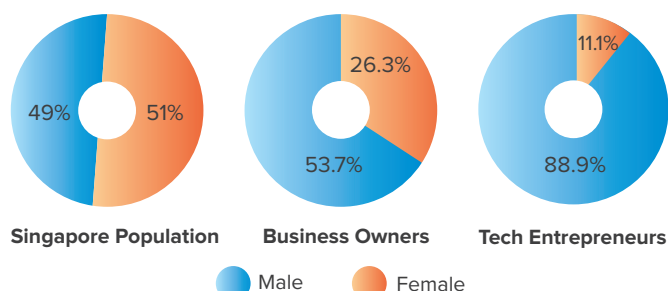
Despite claims of prioritising meritocracy, the playing field is not level in tech entrepreneurship. Research from North America suggests that women entrepreneurs face a gender gap that is every bit as discriminatory as the “glass ceiling” of the corporate world. Women constitute only 7% of entrepreneurs who received high-value venture capital funding in the United States. Away from the tech world, women own 36% of small businesses, but secured a miserly 4.4% of loans awarded to small businesses. All in all, women entrepreneurs are a disadvantaged lot in America.

Do women entrepreneurs fare better in Singapore?

Arguments have been made about how the patriarchal roots of Asian culture discourage women from taking on positions of authority. The gendered values of Confucianism, which exhort obedience “to the father, the husband and the son”, are still entrenched in the majority Chinese segment of Singapore society. On the other hand, the Singapore of today is a cosmopolitan hub and has long been exposed to Western notions of gender equality.

What do the numbers say?

Women are 51% of Singapore’s resident population. Sadly, female representation in entrepreneurship is much less than 51%. Data from the Global Entrepreneurship Monitor (GEM) for a period spanning 2002 to 2014 shows that



↑ Women are under-represented in Singapore’s tech entrepreneurs community

“

The trend over the last 10 years is one of increasing female representation. Small steps taken over a decade, but an improvement nonetheless.

the number of male entrepreneurs in Singapore was consistently double the number of women entrepreneurs. Latest occupational data from the Ministry of Manpower (MOM) reveal that among business owners in Singapore, only one quarter are women.

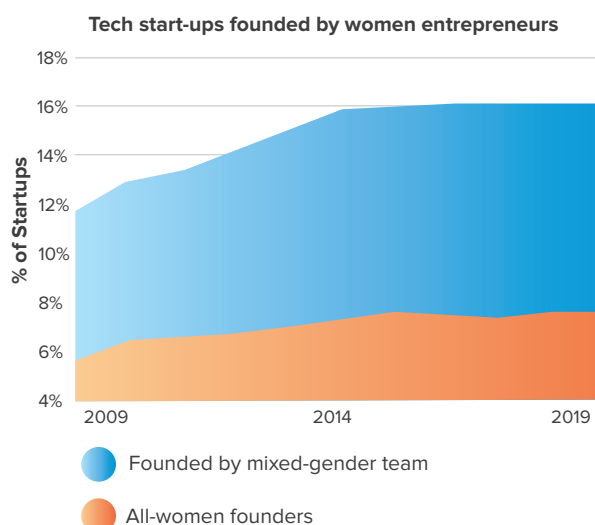
While useful as general indicators, the GEM and MOM figures pertain to entrepreneurship in all sectors. If we narrow our focus to tech start-ups, we expect the disparity between men and women to be even more pronounced. Anecdotal evidence is easily found. One only needs to give a cursory glance at media coverage or pay a visit to a typical tech incubator. Do the hard numbers back this up? To answer this question, the NUS Entrepreneurship Centre (NEC) has analysed several in-house proprietary datasets of Singapore’s tech start-up ecosystem. Information has been collated on close to 4,000 start-ups with founders identified, and close to 5,000 individual tech entrepreneurs.

The hard numbers reveal the stark truth of female participation in tech entrepreneurship. Only 11% of Singapore’s tech entrepreneurs are women. To further underline the gender gap, the overwhelming majority (84%) of tech start-ups were founded by all-male founding teams. If the ideal is equal gender representation, these numbers are objectively bad. However, the trend over the last ten years is one of increasing female representation. In 2009, only 11.8% of tech start-ups had at least one woman co-founder, of which around half (5.7%) were start-ups with all-women founding teams. By 2019, the shares have increased to 16% and 7.6% respectively. Small steps taken over a decade, but an improvement nonetheless.



Beyond low participation rates, women tech entrepreneurs are disadvantaged in their attempts to form networks and access resources such as financing and mentorship. This has real consequences for start-up performance. Our analysis shows that start-ups with all-female co-founders are 50% less likely to receive venture financing. We further found that early stage growth is slower among start-ups by women entrepreneurs.

The key to start-up success is entrepreneurial networks; the ties that entrepreneurs form with each other and with the rest of the start-up ecosystem. Women tech entrepreneurs typically begin with weaker network positions for various reasons. Researchers refer to the legitimacy problem, where women face issues with gaining legitimacy in the male-dominated environment of tech entrepreneurship. This is exacerbated by resource-owners being mostly male – as an example, we estimate that over 75% of angel investors in Singapore are men.



↑ Share of tech start-ups with women as co-founders has increased in the last 10 years.

HOW CAN **WOMEN** **TECH ENTREPRENEURS** **STRENGTHEN** THEIR NETWORK POSITIONS?

By connecting with fellow women entrepreneurs and forming relationships that are not merely transactional, but also provide social and emotional support. There is a “sisterhood” for women in tech. This finding comes from analysing a unique dataset developed by NEC to map the networks of Singapore-based tech start-up founders. Entrepreneurial network ties may be broadly categorised as either transactional ties (eg. investment, supplier-customer) or role-model ties (eg. mentorship, advisory, guidance).

Women entrepreneurs in Singapore have a similar number of relationships as men. However, 40% of relationships formed by the average woman entrepreneur are role-model ties. Role-model ties are only 31% of a male entrepreneur’s network. Most importantly, women entrepreneurs form role-model ties with each other at significantly higher rates than men. This creates a virtuous cycle with women entrepreneurs drawing on other women for inspiration and advice, and in turn serving as role models themselves.

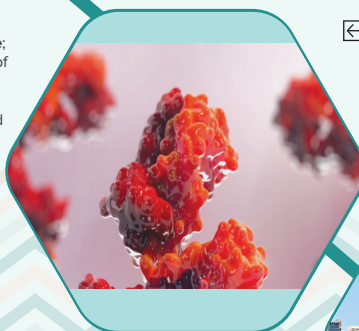
While the “tech bros” may currently rule the roost, aspiring women tech entrepreneurs in Singapore can draw strength and inspiration from those who have walked the path before them.

Contribution from: NUS Entrepreneurship Centre, a division of NUS Enterprise

NEWSFEED



Several entrepreneurs from our ecosystem (Quek Siu Rui of **Carousell**; Tan Peck Ying of **PSLove**; Jarrod Ong of **SWAT**; Henry Chan of **Shopback**; and Alvin Ea of **Haulio**) had the privilege of dining with Prime Minister Lee Hsien Loong and discussing the Singapore start-up scene on 10 January.



In January, **Enleofen Bio** secured the largest reported deal of any biotech company in Singapore to date through its new tie-up with Boehringer Ingelheim—valued upwards of USD1 billion!



Delta Airlines exclusively launched **Carepod's** pet travel carrier in eight US markets in January.



Carro, **Funding Societies** and **2359 Media** were reported as among the contenders for the Monetary Authority of Singapore's new digital bank licenses. Successful applications are set to be announced this June.



In February, **Phaos Technology** launched its first disruptive microscope-assisted microscopy technology, **OptoNano200**, together with SIGMAKOKI Co., Ltd.



New funding announcements:

- **Lumitrics:** SGD750,000, seed round
- **Zinier:** USD90 million, Series C
- **GTRIIP:** Undisclosed, Series B
- **Circles.Life:** Undisclosed, equity round
- **CYFIRMA:** Undisclosed, Series A
- **SEACRUX:** Acquired

FLASH BACK



NUS ENTERPRISE EVENTS & ACTIVITIES: JAN - MAR 2020

Stay updated on our upcoming events at: enterprise.nus.edu.sg/events

JAN

- 08** Kopi Chat Da Bao with Yau Png, CEO of Hoov Foods
- 09** Founders' Breakfast
- 10** GRIP Run 4 (Info Session 1)
- 11** Career Advancement for Industry 4.0 Workshop
- 13** Info Session: ESG x Lvns-Enter to Japan Market Program
- 13-17** 4th Instalment of ICE71 Inspire
- 14** MSc in Venture Creation Info Session
- 15** Ask NOC and Spotlight on Asia
LLP Educators' Workshop
- 16** NOC Talkshop@E-Cube, [SPC Alumni] PIER71 2nd Birthday Bash
- 20** NOC Talkshop@The Hangar
- 21** Ageing Asia 2020 Sharing Session
- 30** Industry Roundtable Series: Workplace 4.0-Hacking Productivity
- 30-31** NUS Enterprise Open Office Hours

FEB

- 05** Kopi Chat Da Bao with Jonathan Teoh, CEO of AN
- 06** Launch of Oceans of Opportunity (O3) Challenge
- 07** GRIP Run 4 (Info Session 2)
- 11-14** Singapore Airlines Accelerator Programme
- 12** UX and Bagels 9: Don't Forget Your Users!
- 25** GRIP Run 4 (Info Session 3)
- 26 - 5 Mar** NUS e-Open House
- 28** PIER71 SPC 2020 Innovation Workshop Start of Executive Deep Tech Programme Run 1 (Antler)

MAR

- 04** Kopi Chat Da Bao with Dr Yasaman Nemet, CEO of 42Lab
- 05** ICE71 Mentor Series - [LIVE WEBCAST] How to reinvent your marketing strategy for growth amid COVID-19
- 11** NOC Alumni X NUS GRIP
- 17** GRIP Run 4 (Info Session 4)
- 26** PIER71 Explore: Panel Discussion on Graphene

SUPPORTING
ENTREPRENEURIAL
JOURNEYS ▶

FINANCIAL SECURITY FOR THE ELDERLY

📍 BLOCK71 Community Manager Alvina Fu (left) with CEO of AN, Jonathan Teoh (right)

With the government setting aside more than SGD8 billion for the Merdeka Generation Package, as announced in Budget 2019, it is clear that retirement adequacy is a high priority in Singapore. On 5 Feb, we hosted Jonathan Teoh, CEO of AN, for a Kopi Chat Da Bao session to discuss how the social enterprise is helping senior citizens live meaningfully in their golden years with inclusive platforms centred on financial preparedness.

In a first-of-its-kind approach, AN provides a means for retired, private homeowners to monetise their properties without having to relocate by purchasing a portion of their property. We summed up five reasons why Jonathan believes such a strategy is necessary:

> Existing Limitations

Existing property monetisation methods all pose problems for seniors: renting entails safety and privacy issues; downsizing requires occupants to move away from their communities while reverse-mortgages can be unstable and vulnerable to market fluctuations.

> Risk-Free Solution

Elderly homeowners tend to be more risk averse without an active income. They require an approach that will ensure a steady flow of cash without the potential loss of existing assets.

> Prioritise Community Bonds

Ageing homeowners may be reluctant to move away from communities they have resided in for decades. Most solutions do not consider this aspect of the problem, making it less attractive for the older demographic.

> Align to Big Goals

Jonathan believes that start-ups should align their purpose with societal needs. With populations ageing around the world, corporations should explore potential implications and problems that may arise from the trend.

> Encourage Positive Ageing

A retiree must have sufficient financial resources to not only get by but to live meaningfully. Therefore, on top of a retiree's monthly CPF payout, supplementary cash flow will provide seniors with the means to fulfil their wishes, such as travelling or getting a pet.

