

ENTERPRISE SPARKS

A QUARTERLY PUBLICATION OF NUS ENTERPRISE

JUL - SEP 2020

ISSUE 027



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Editor's note

As our society is emerging from the COVID-19 pandemic, new challenges are cropping up and demands on the cybersecurity front are increasing.

This instalment, themed "Cybersecurity Innovation," takes a deep dive into how the start-up community is playing a critical role in addressing these many issues. Included in this issue are a feature on the recent ICE71 Demo Day, showcasing cybersecurity start-ups and their solutions, and an article on women in cybersecurity, the important role they play and the opportunities that lie ahead of them. We also have a profile of Amaris.AI, an artificial intelligence (AI) system security start-up focusing on technology such as Face Mask Detection software to minimise COVID-19 spread. Scantist, an application software start-up, focuses on the maintenance of security for mobile apps, websites and software systems.

We also launched a new Venture Building Programme under Enterprise Singapore's Startup SG Founder initiative, aimed at helping aspiring entrepreneurs develop, launch and scale their solutions.

Our continual efforts to keep the entrepreneurial ecosystem vibrant and upbeat is uncompromised despite the current situation. To mention a few, BLOCK71 Indonesia organised a tech showcase featuring both Singapore and Indonesian start-ups; we also held the SIA App Challenge and Ocean of Opportunities (i.e. a maritime challenge) among many other activities.

The current times have not just created challenges but have also accelerated the pace of change in many other areas for start-ups to pivot and innovate. We hope you enjoy the read and we look forward to sharing news in the last quarter as we unveil exciting developments in our ecosystem.



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9 START-UPS SHOWCASE SOLUTIONS AT ICE71 DEMO DAY

Each year, ICE71's flagship Accelerate programme attracts participants from all over the world. This year was no different, with a cohort of nine teams from Singapore, Australia, the US, UK and Poland. The three-month accelerator programme aims to groom early-stage cybersecurity start-ups to find their product-market fit in the populated and challenging cybersecurity industry. Run by CyLon, the programme grants the participating team access to mentors, networking events and workshops, go-to-market channels, and enterprise-grade cybersecurity resources, such as a cyber-range, to test and showcase their solutions. This year, the programme made ICE71 Accelerate history by being conducted entirely online.

Over 13 vigorous weeks, this year's cohort worked tirelessly to perfect and execute their business plans to gear up for Demo Day – a platform for the teams to showcase their journey and their solution via three-minute pitches to investors and/or customers.



ICE71 Facts & Figures to date:



> 80 cybersecurity entrepreneurs trained through ICE71 Inspire



45 cybersecurity scale-ups in ICE71 Scale



> 30 cybersecurity start-ups accelerated through ICE71 Accelerate



SGD18million raised by ICE71 Accelerate alumni, inclusive of funding from ICE71's founding partners NUS Enterprise and Singtel Innov8



ICE71



ICE71 ACCELERATE 4 DEMO DAY

Founding Partners



Supporting Partners



Programme Partner



Corporate Partner



Meet the Teams from ICE71 ACCELERATE 4:

1 Chainkit (USA)
A first-mover start-up marketing a cyber stealth radar that can discover thousands of previously invisible tampers while meeting the stringent compliance requirements for tamper-detection.

2 Guardara (UK)
A tech start-up that has created Fuzz Labs, a software that effectively utilises Fuzz Testing, a process to locate vulnerabilities within the cybersecurity space such as WannaCry.

3 Kapalya (USA)
An encryption management platform to help endpoint data protection and Ransomware mitigation.

4 Olympus Sky Technologies (Poland)
An Autonomous Key Management (AKM) that enables enterprises to efficiently create and authenticate credentials for IoT applications.

5 Assimil8 (Australia)
The creator of Idris (Intuitive Data Relationship Inference System), a threat identification tool for the Small/Medium Enterprise (SME) sector.

6 Kinnami (USA)
A distributed data platform provider that fragments, disperses and encrypts data on a network for better resiliency and security.

7 neoEYED (USA)
A company that utilises behavioural AI to effectively detect fraud, especially regarding the theft of passwords or pin-codes.

8 GamaSec (Israel)
A company that integrates cybersecurity and cyber insurance. Its flagship initiative, GamaShield, detects and prevents web cyber-attacks, thereby reducing cyber insurance exposure.

9 Scantist (Singapore)
A Singapore-based cybersecurity start-up focused on application security.



TECH SHOWCASE IN INDONESIA HIGHLIGHTS SAFE WORKPLACE SOLUTIONS

To say that COVID-19 has disrupted global business activity is an understatement. Around this time of year, under 'normal' circumstances, the NUS Enterprise team in BLOCK71 Indonesia would set out to meet Indonesian corporates to collate problem statements for the Singapore tech start-ups to work on, as part of the 3rd edition of the Tech Showcase Day. However, as physical meetups of this nature are ill-advised given the pandemic, NUS Enterprise suggested the showcase be held entirely online with a call for interest to the Indonesian corporates on 16th of June 2020. This idea was well-received almost instantly, with 13 corporates signing-up within a week. Backed by the positive response, the three-hour long Zoom event officially commenced on the 16th of July 2020.

This edition of the Tech Showcase focused on innovative solutions aimed at helping companies establish a safe workplace by navigating the challenges brought forth by COVID-19. It saw 12 participating Singaporean tech start-ups showcase their solutions to representatives from 13 Indonesian corporations. The start-ups were carefully chosen for their solutions that could effectively strengthen the Indonesian corporations' response to the pandemic.

After each start-up had given their seven-minute pitches, the start-ups and corporates dispersed into breakout rooms arranged by NUS Enterprise to discuss the presented solution and its compatibility in more detail. These 1-on-1 meetings proved to be a success, with each Singapore start-up generating an average of three to four potential leads.

Through efforts by NUS Enterprise to keep the showcase's momentum going even after its close, 16 more meetings/connections were recorded to have taken place within a month of the event. One of the meetings was a request by a particular Indonesian corporate to be linked-up with tech start-up Invigilo Technologies. The two parties hit it off and even managed to close a deal - the Indonesian corporate is currently deploying Invigilo's solution to monitor face mask usage using their existing cameras.

➔ The participating Indonesian corporates hailed from a range of sectors which included property developer (Jababeka, Salim Group, Genesis Indojaya & Bekasi Fajar Industrial estate), education (Jakarta Nanyang

School), transport & logistics (Alpha Pacific), system integration (Gama Multi Usaha Mandiri), telecommunications (Prasetia Dwidharma), government agency (the Office of Communication and Information Special Region of Yogyakarta and MNC (Fujitsu Asia).

The solutions that these corporates presented focused on the areas of:

- Telecommuting and work-from-home solutions
- Split teams and remote workforce management
- Safe workplace environment solutions
- Proximity and location tracing
- Physical spacing
- Cleaning and sanitisation of workplaces

Participating Singapore Companies	Solution Category
EngageRocket	SaaS - HR
GTRIIP	AI, Biometric and Facial Recognition
Invigilo Technologies	AI, Computer Vision, Construction
Jublia	Virtual & Hybrid Event Management
Novade	Mobile Construction App, Construction Field Management
ProSpace	Workplace Analytics
Seventh Sense	AI, Computer Vision
Smarten Space	AI & IoT, Workplace Management
SMARTRX	Temperature Robots, Smart Telemedicine
StaffAny	Human Resource Automation
uHoo	IoT & Big Data, Sensors
V-Key	Mobile Payments, Mobile Authentication

Are you a Singapore ICT company looking to expand into Indonesia? Email us at Indonesia@block71.co and register your interest for the next Tech Showcase Day between Indonesia corporates and Singapore tech companies.



OCEAN OF OPPORTUNITIES CHALLENGE GRAND FINALE



Organising Partners



Corporate Partners



Challenge Supporters



Ecosystem Partner



The final wave of the Ocean of Opportunities (O3) Challenge 2020 ended on 26 August. Jointly organised by NUS Enterprise and Symphony Creative solutions, this year's challenge focused on digitalisation in the maritime sector.

The third run of O3 received over 100 applications from more than 30 countries. As many as 200 attendees were present at the virtual finale despite the COVID-19 pandemic.

In total, seven finalist start-up teams tackled eight challenge statements posed by O3 corporate partners in the shipping and logistics industry. The teams were evaluated based on innovation, technical competency, business value and user experience. Each start-up was given four minutes to pitch, followed by three minutes of Q&A with the judges.

“The shipping and logistics industry was considered as a very conventional and traditional industry but it is completely different now. One of the most important strategies for companies in the industry is to improve their business process and provide better services and customer experience by utilising digital technology.”

Mr Yu Kurimoto,
Managing Director, Corporate & Innovation Division
Ocean Network Express

Winning solutions from the start-ups:



First Place:
Mizzen (Australia)
Prize: SGD5000

Previously only employed by airline companies where plane seat prices are charged differently depending on type and time, Mizzen applies the age-old dynamic pricing solution into the maritime sector while bringing customers real-time delivery prices.



Second place:
Virtual Control (Hong Kong)
Prize: SGD3000

Through the use of unified data integration, AI and visualisation interface, Virtual Control aspires to simplify the user experience while managing roll trailers, which are platforms used to roll on and roll off large cargo from vessels.



Third place & Audience's Favourite:
Portcast (Singapore)
Prize: SGD2000 & SGD1000

Portcast's solution provides intelligent visibility for any vessel or container at any port in real-time, predictions for the estimated time of arrival and proactive email alerts regarding traffic and weather conditions.

To know more about the challenge next year, visit www.o3.sg.



KEEPING THE SPIRIT OF INNOVATION FLYING HIGH

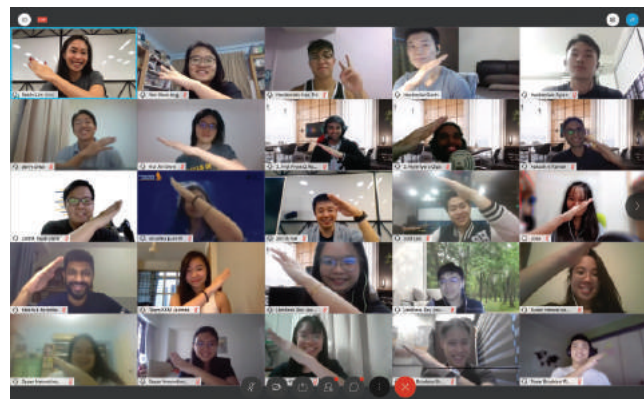
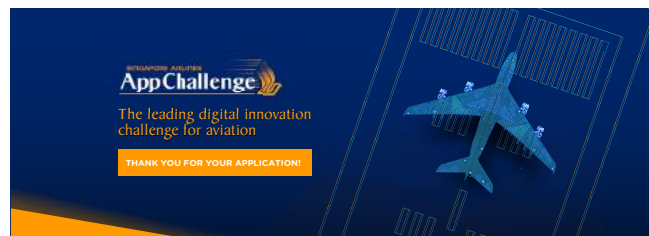
The SIA AppChallenge has been an annual highlight in NUS Enterprise's event calendar since 2015 when NUS Enterprise and Singapore Airlines (SIA) first organised the inaugural challenge. What began as a hackathon for local tertiary students has today grown into a global digital challenge that welcomes solutions from start-ups and students alike from across the world.

This year, while the start-up track remains in its current format, the organisers decided to bring back the hackathon format for the local student category. Due to COVID-19, however, the hackathon would be held virtually, rather than a physical event in earlier years. The pandemic did little to dampen the spirit of participants, with some 130 teams and 300 students registering for the SIA AppChallenge Student Hackathon, which took place from 21 to 23 August 2020.

The theme for this year's student hackathon revolved around providing a seamless ground experience for SIA's passengers, and students could tackle one of three challenge categories, which were Baggage Operations, Lounge Operations, and a Wildcard category.

Starting from the evening of 21 August, the participants went through a gruelling 60 hours of hacking, with guidance from mentors from SIA and NUS Enterprise, as well as support from the organising team. From the submitted solutions, 10 teams were shortlisted to proceed to the finale on 23 August, where they made their best pitch to the judging panel comprising SIA's senior management.

Congratulations to the winners of this challenge!



130 teams participated in the SIA App Challenge.



NUS ENTERPRISE PARTNERS ENTERPRISE SINGAPORE FOR NEW VENTURE BUILDING PROGRAMME

To provide more support to recent graduates and mid-career professionals during the COVID-19 pandemic, Enterprise Singapore (ESG) has added a new component to its Startup SG Founder initiative: The Venture Building (VB) programme. NUS Enterprise will serve as an Accredited Mentor Partner & Venture Builder to the initiative, helping aspiring entrepreneurs develop, launch and scale their solutions through a three-month structured programme.

The full-time experiential programme, designed by NUS Enterprise, will help candidates understand the process, challenges, risks, and rewards of starting a business, and equip them with basic skills and the ability to create and assess business ideas and solve problems. Additionally, participants will form and work in teams, learn to analyse market opportunities, develop business models, strategies and plans, and make professional pitches to improve chances of starting-up successfully.

Participants in the programme will receive a monthly stipend, mentorship and access to technology, as well as a fast track to the Startup SG Founder Grant. NUS Enterprise will continue to engage with participants after the programme to provide support, as well as technology access and mentorship to enhance success. Teams from the VB programme may also be eligible for other NUS entrepreneurship programmes and NUS seed venture funding.

The first cohort is scheduled to begin in October 2020. For more information about the programme, please visit enterprise.nus.edu.sg/venture-building/

Venture Building Programme Structure



Week 1 - 6

- ➔ Entrepreneurship process
- ➔ Innovation and value proposition
- ➔ Ideation and team formation
- ➔ Lean methodology



Week 7 - 10

- ➔ Market analysis and validation
- ➔ Finance, business modelling and plans
- ➔ IP and competitive strategy



Week 7 - 10

- ➔ Investments and fund raising
- ➔ Pitching



On 24 July, the NUS Development Office (DVO) and NUS Overseas Colleges (NOC) hosted “Dialogue with NUS Alumni: Social Entrepreneurship” as part of the ongoing NUS Giving Webinar Series. The event, moderated by Playmoolah co-founder and NOC alumna Audrey Tan (*10), brought together three entrepreneurs from the NUS Enterprise community to discuss how they seek to create positive social impact.



↑ NUS alumni gather to discuss creating social entrepreneurship. Clockwise from top left: Audrey Tan, co-founder of Playmoolah & Circles of Angels; Lim Chong Tee, co-founder of Wateroom; Lee Zhihan, co-founder of Bagosphere; and Ong Tian Chang, co-founder of Yonah.

Here are a few takeaways from the session:

1. Experience as inspiration

A pivotal moment can be the trigger for deciding to leap into social entrepreneurship. For Lim Chong Tee (*16), co-founder of Wateroom, it was seeing a child drink from an unclean well in Cambodia that set him on a mission to provide universal access to clean water. Fast forward a few years and Wateroom’s portable water filtration solutions have impacted over 100,000 individuals to date.

2. Redefining value

Lee Zhihan (*11), co-founder of Bagosphere and an NOC alumnus, emphasised his hope that Singapore and the region can produce companies not focused on billion-dollar valuations, but impacting a billion people. For Bagosphere, which provides job training to low-income and unemployed youth in the Philippines, the hope is to humanise the future of work and combat poverty through education.

3. Democratisation of technology

NOC alumnus Ong Tian Chang (*13) is the co-founder of Yonah, a start-up which designs and deploys cargo drone infrastructure systems for rural healthcare. Tian Chang spoke of Yonah’s hope to use technology to bring peace and comfort to others, but to also democratise technology in a meaningful way. He envisions a day where Yonah’s technology can be opened up, such that those in rural communities can be trained to both use and build upon it.



WOMEN IN CYBER-SECURITY

In the male-dominated field of cybersecurity, the underrepresentation of women is common.

This stems from a small percentage of women taking up technology-related degrees that translates into a significantly lower number of female founders and executives in cybersecurity companies. NUS Enterprise connected with Mitali Rakhit and Stephanie Robinson, exceptional female founders in the fourth cohort of ICE71 Accelerate, who shared their insights on women's roles in cybersecurity.

Mitali Rakhit is the founder and CEO of Guardara, which focuses on finding security loopholes in systems before adversaries do. Their product FuzzLabs is for developers looking to keep their product secure, and for enterprises securing networks and applications.

Stephanie Robinson is the founder and CEO of Assimil8, which created the solution IDRIS to automate the process of identifying connections within data without the need for specialised technical knowledge.

Importance of women in cybersecurity

According to Stephanie, low numbers of women in the technology sector results in less diversity of opinion. People with similar skills and backgrounds can lead to a lack of creativity around the table and may be detrimental to creating inclusive solutions which consider everyone.

In addition, it is important for people from all backgrounds to learn about cybersecurity as it is inextricably linked to business success. In particular, cyberattacks affect small and medium businesses, which are more likely to be owned by women, to a larger extent. Thus, women are an important part of this conversation as their businesses are disproportionately targeted.



↑ Mitali Rakshit (L) is the founder and CEO of Guardara, while Stephanie Robinson (R) is the founder and CEO of Assimil8.

Opportunities and the future for women in cybersecurity

With the current COVID-19 situation, increasingly more aspects of life will be undergoing digitalisation. Not only does this allow greater connectivity and more efficient usage of resources, but women also have greater accessibility into the technology sector as diverse talents and dynamic thought is needed now more than ever for success.

Thus, both Mitali and Stephanie are positive about the future for women in cybersecurity. With the focus shifted to a more proactive, driven approach to security, Stephanie notes a real need to have women on board the process of proactively monitoring the network for dormant threat actors and identifying anomalies pre-breach.



Advice for women in cybersecurity

Mitali recommends having a network of supporters who understand some of the setbacks female technology professionals are facing and suggests joining a women's professional organisation like WiCys (Women in Cybersecurity) which she is personally part of.

Key qualities women need to embody to succeed



Adaptability



Agility



Assertiveness



Creativity



Determination



Self confidence



Resilience



Quality strategic thinking



Willingness to mentor younger women

You can visit ice71.sg for more information on cybersecurity start-ups in the region.

PROTECTING AI FROM CYBERATTACK

Founded in January 2018, Amaris.AI is an artificial intelligence (AI) system security start-up which also focuses on technology such as Face Mask Detection software to minimise COVID-19 spread. Helmed by former Infocomm Development Authority of Singapore Assistant CEO James Kang (CEO), Data Science expert Dr Patrick Chan (CTO), and Professor Yu Chien Siang (CITO), Amaris.AI aspires to advance the age of humanity with cutting edge technology products.

The Journey So Far

Amaris.AI has faced challenges in areas such as consumer understanding of emerging technology, talent acquisition and navigating the local market. After attaining credibility in the AI services and consulting space, the team has decided to scale by developing products with the latest algorithms, working alongside Cyber Security Agency of Singapore (CSA) to develop their AI robustness test rig and scaling adoption to secure critical government infrastructure.

Consumer Understanding of Emerging Technology

The initial challenges the company faced were clients who did not understand the importance of data for training AI and cybersecurity models. To tackle this, Amaris.AI has a qualification framework for use-cases and educates clients as part of the onboarding process.

Talent Acquisition and Retention

Top talents with skillsets are highly contested and sought after by like-minded firms and FAANG* as part of talent acquisition pipelines. Amaris.AI stands out with factors such as senior management credibility, internship opportunities and local hiring initiatives.

**FAANG is an acronym referring to the stocks of the five most popular and best-performing American technology companies: Facebook, Amazon, Apple, Netflix and Google*



Navigating Local Markets

Surviving in the local market requires raising capital, being receptive to emerging technology and high talent costs. Amaris.AI managed to gain credibility after successful pilot use-cases and continuous wins of innovation grants with Cyber Security Agency of Singapore and TNB Ventures to mitigate costs while fulfilling the vision of providing applied innovative technology.

↑ Professor Yu Chien Siang (L), an Adjunct Associate Professor at NUS and Mr Kakhramon Shakirov (R), Ambassador - designate, Republic of Uzbekistan.

“

The ICE71 Scale programme has helped Amaris.AI to create marketing opportunities and speed up the research and development process for their software diode in confidential computing.”

Benjamin Kang,
Director, Business Development,
Amaris.AI

Cybersecurity is traditionally focused on networks, infrastructures and servers. However, digitalisation and remote working have led to greater reliance on and need for software security. Along with greater uncertainty and the proliferating, sophisticated nature of cyberattacks, Scantist, an application security company, focuses on the maintenance of security for any piece of software including mobile apps, websites and software systems. We spoke with Rohan Sood, Head of Operations at Scantist, about the unique challenges and opportunities in their entrepreneurial journey.

Challenges

The biggest challenge we face is educating our end users, who have preconceived notions of what cybersecurity is and what cybersecurity does. In particular, end users often believe they are secure as long as they secure their networks and restrict access. However, this is often not the case as seen in cases like Equifax, where the best controls still failed because of loopholes in the application, resulting in the loss of credit ratings of 147 million people. The other challenge is credibility and the need to make unique value propositions to stand out from established and well-known alternatives.

Opportunities

Awareness of the need for a solution, in the long run, is low, which allows us to address a wide market. Moreover, product quality is not affected by geography or community effects as our solutions can be adopted by businesses independently. Being part of the ICE71 Accelerate programme has also allowed us to gain a global perspective from start-ups worldwide and connect with leaders in frontier organisations of cybersecurity in Singapore.

Moving forward

Cybersecurity is a relatively new space. We are looking to expand our product offering and cover all aspects of application security at every point of the development life cycle. We are also looking to expand to new geographies beyond Singapore and China.



Scantist Co-founders Prof. Liu Yang and Prof. T. Srikanthan at CyberTech, Bangkok.



Scantist team celebrating its three-year journey.

“

We have good relationships and a lot of support from NUS. Our co-founder, Liu Yang, is an NUS PhD alumnus and Scantist has also taken part in the Lean Launchpad programme. A lot of what Scantist is built on is a result of the training we have at NUS.”

Rohan Sood
Head of Operations, Scantist

FORAY INTO CYBERSECURITY

REVOLUTIONISING ROBOTIC AUTOMATION

↑ Use of Augmentus mixed reality interface to program AI-robotic systems by drawing robot waypoints on an iPad.

Daryl Lim You Quan, a Year 3 NUS student majoring in economics and computing, is the co-founder of Augmentus, a code-free programming software that enables non-technical users to develop and deploy AI robotic solutions. This platform makes use of augmented reality, an enhanced version of the real physical world with digital elements, to provide a simplified user interface for robotic programming.

Marrying augmented reality and digitalisation for robotic automation

We spoke with Daryl, who is currently in the NUS Overseas Colleges (NOC) Singapore programme and working for his own company. He shared his entrepreneurial journey and how he and his team have benefitted through NUS Enterprise.

Describe your Augmentus journey.

We started in March 2019 as we wanted to help companies overcome one of the biggest barriers holding them back from automating, which is the high level of perceived difficulty for robotic automation. Since then, our journey has been amazing with the support from NUS and NOC, which propelled us in a way I have never imagined.

What were some of your challenges?

The biggest challenge was conveying our solution in a way that is relatable to the audience and investors. Coming from a technical background, we had to pitch our product in a way that was easier for others to understand. In addition, some of our projects are being delayed and postponed due to COVID-19.

How has NUS Enterprise played a role in supporting your company?

NUS Enterprise provides incubation, mentorship, legal support and a highly concentrated ecosystem of start-ups with several collaboration opportunities. For instance, we have partnered with and served Singrow, another NUS start-up, which applies agritech technology to grow fresh fruits.

What are your plans moving forward?

We are preparing for our product soft launch in January 2021 and we foresee it being the catalyst for robotics automation. Currently, the market is very fragmented and there is no scalable solution in place. By placing Augmentus in the App Store, we believe it will be the future of mass democratisation for robotic programming.



↑ Co-founder, Chong Voon Foo (L), Leong Yong Shin (Centre), and Daryl Lim You Quan (R), of home-grown robotic programming software start-up Augmentus.

NUS INNOVATES TO BATTLE COVID-19

On the 30th of July, NUS's Industry Liaison Office (ILO), in collaboration with Temasek Foundation (TF), organised a Regional Forum to present new medical technologies and devices that have been developed to aid the fight against the coronavirus pandemic.

More than 80 participants from 13 countries, including Italy, New Zealand, Kazakhstan and Indonesia, joined the event. The impressive line-up of guest speakers hailed from a variety of faculties, including the Department of Anesthetics, Biomedical Engineering, and the Division of Industrial Design. The forum featured the efforts of NUS, TF, National University Hospital (NUH), National Additive Manufacturing Innovation Cluster (NAMIC) and local manufacturers in creating sampling devices such as swabs, and protective equipment for patients and healthcare professionals.

Given the shortage of swabs, three new COVID-19 nasopharyngeal swab designs, namely IM2 (solid-centred), IM3 (hollow-centred) and Python, were presented, the former two being developed via an Injection Moulding (IM) process that can produce hundreds of swabs within a minute. Concerning protective equipment, an indigenously-designed and innovative system, called DART (Drop and Aerosol Reducing Tent), was presented that will protect doctors and nurses from exposure to the virus while treating a patient.

This was presented by Dr Deborah Khoo, Consultant to the Department of Anesthesia (National University of Singapore Hospital), who designed the system along with Professor Freddy Boey, NUS Deputy President (Innovation & Enterprise).

The forum was kick-started by **Professor Boey** who introduced a novel nasal swab design that aims to better address COVID-19. This design overcomes some of the shortfalls of currently available swab designs. He touched upon the immediate need for strategies to overcome supply chain disruptions and ways to increase the supply of nasal swabs, by offering manufacturing options that can be scaled up quickly to meet local and regional demand.

Alfred Chia, Senior Research Fellow of Biomedical Engineering (NUS), spoke on the challenges in creating the swabs, including performance attributes such as the appropriate breakpoint as well as manufacturing issues.

Dr Ho Chaw Sing, Managing Director of NAMIC, discussed 3D printing in healthcare, in terms of rapid product innovation with supply chain agility and resilience. Specifically, Dr Ho noted the significant benefits of 3D printing, including its customisable feature, substantial reductions of material waste (up to 50% or more) and the ability to accommodate complex geometrical designs. The 3D printed nasal swabs were

created via a collaboration with two local manufacturers, Eye2Eye and Structo, the latter being one of NUS Enterprise's former incubatees. Compared to foreign designs, the local one is more price-competitive, being around 5x cheaper.

Professor David Allen, Yong Loo Lin School of Medicine, Assoc VP (Heath Innovation & Translation, NUS) and Senior Consultant (NUH), also emphasised the importance of being self-reliant when it comes to nasal swabs and the benefits of the Python model. He presented the results of clinical studies.

The NUS Industry Liaison Office (ILO) helped to transfer the technology to local manufacturers, while Temasek Foundation is playing a key role in making these technologies available regionally and world-wide. The webinar was successful in attracting a wide audience from all over the world, and generated considerable interest, as evidenced by a vibrant Q&A session moderated by Professor Subramanian Venkatraman, Executive Director of ILO, and follow-up enquiries on licensing opportunities.





CREATING A HEALTHCARE INNOVATION SYSTEM



The Nikkei-NUS Enterprise Post COVID-19 Forum on “Creating a Healthcare Innovation Ecosystem: Creating and Building a Resilient Society and Sustainable Economy” took place on 27 August. The event garnered an impressive turnout of more than 250 participants from 15 countries who tuned in to hear from an impressive line-up of speakers. Deputy Director of NUS Enterprise Dr Mark Lim remarked that the collaboration between Nikkei and NUS Enterprise on a post-COVID-19 forum is strategic, given how Singapore and Japan have similar demographics and healthcare sectors.

The line-up of speakers included Professor Gerald Koh, Clinical Director (Future Primary Care) of the Ministry of Health Office for Healthcare Transformation, who addressed the benefits of telemedicine on cost and improved patient-outcomes; Professor Dean Ho, Provost’s Chair Professor of Biomedical Engineering and Pharmacology, NUS, who highlighted

the importance of accurate and precise dosing of drugs; and Mr Johnny Teo, Executive Director (Food, Healthcare & Biomedical) & Global Markets (North Asia & Oceania), Enterprise Singapore, who touched on the importance of overseas partnerships with countries like Japan, to better benefit from today’s new healthcare opportunities. Also elaborating on the topic of today’s healthcare advancements was Dr Stephanie Allen, Global Healthcare Leader, Deloitte.

In addition to the speakers above, the event saw two guest speakers from Japan including Mr Takuma Inamura, Director of Healthcare Industries Division, Ministry of Economy, Trade and Industry of Japan (METI),

who explained METI’s approach to healthcare and Mr Susumu Tsubaki, Managing Director/Representative Partner, Asia Africa Investment and Consulting (AAIC), who discussed AAIC’s efforts to improve healthcare in the Asia-Africa region.

Following the individual sharings of the speakers was a panel discussion about telehealth in a COVID-19-ridden world. It featured Mr Prasad Kompalli, Founder & CEO of Mfine; Mr Lim Wai Mun, Founder & CEO of Doctor Anywhere; and Dato’ Chevy Beh, Founder & CEO of BookDoc; with Dr Milind Sabnis, Director of Healthcare, Frost & Sullivan, as the Moderator.

Some topics discussed were:

Benefits of Telemedicine

- ③ The ever-presence of telemedicine that has been overlooked and under-utilised by both patients and medical professionals, and its value in providing preventive rather than curative care.

Challenges of Telemedicine

- ③ **Effective data storage**
The need to move away from traditional data handling methods to better ensure data privacy while accommodating the recent exponential growth in this sector.

- ③ **Need for education and awareness**
Ensuring proper use of telehealth platforms requires both the patients and the medics being educated on its proper use.
- ③ **Securing a high retention rate**
The challenge of determining the ‘stickiness’ of the user and ensuring that today’s high adoptions rates remain even after the pandemic settles.



CONNECTING RESEARCHERS TO RESEARCH PARTICIPANTS SEAMLESSLY



As NUS undergraduates, Dalson Tan (Computer Engineering, NOC Beijing Batch DBJ10) and Jocelyn Tan (Industrial Design, NOC Beijing Batch DBJ10) were always on the lookout for side gigs for extra income, which were flexible and could fit into their school schedules.

Participating in research studies was one such avenue, but the pair observed that the user journey for the participation in such research studies was often inadequate and in dire need of digitisation.

Dalson and Jocelyn, together with other co-founders Neo Kang Wei (Chemical Engineering, NOC Beijing Batch 19), Ng Hao Yuan (Material Science & Engineering, NOC Beijing Batch 19) and Pereira Yip (Information Systems, NOC Silicon Valley Batch 37), later went for the NUS Overseas Colleges programme, where they gained experience and insights to help further their idea into a start-up business.

The quintet went on to start ReSieve, a simple yet functional online CRM platform for researchers to find participants seamlessly and efficiently. ReSieve endeavours to streamline not only cumbersome administrative processes but also

automate onboarding and registration, empowering researchers to focus on their research. Furthermore, their platform also enables participants to view only the research projects that are relevant to them, reducing the extra time needed for participants to evaluate whether or not they qualify for the study.

ReSieve recently launched in July 2020 at <https://resieve.co>, and their researcher platform at <https://portal.resieve.co>. They plan to onboard more researchers onto their platform, while further diversifying their participant pool.



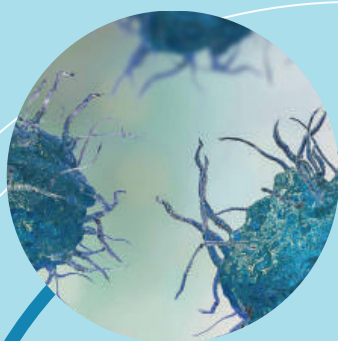
“

Our NOC Beijing journey and diverse internship experience exposed us to a fast-moving and innovative environment, where we were able to learn from the various start-ups in China such as Xiaomi, SmartAir and IQAir. The experience has allowed us to approach our business with a fresh perspective and a more refined business strategy.”

Ng Hao Yuan,
Bachelor of Engineering (Material Science & Engineering),
NOC Beijing

NEWSFEED

NUS spin-off **Nkarta** made its debut on the NASDAQ in July, raising close to USD290 million. This is the fourth IPO of an NUS spin-off company since 2018. 



In July, NUS spin-off and LLP graduate **Proteona** was named “one to watch” by the Spinoff Prize, established by Nature Research and the Merck Group. The Spinoff Prize is a global competition for all university spinoffs from diverse fields. Proteona was one of just three Asia-based companies  featured in the prestigious list.



In August, NOC alum start-up **ShopBack**  officially launched in Vietnam following months of strong growth in its beta phase. ShopBack now serves nine markets; including Singapore, Malaysia, the Philippines, Indonesia, Taiwan, Thailand, Australia, South Korea, and Vietnam.



 In August, former BLOCK71 San Francisco incubatee **Lucence Diagnostics** was one of seven Singaporean SMEs honoured with the Intellectual Property Office of Singapore Innovation for Humanity Award in recognition of their fight against COVID-19.



 In September, former Hangar incubatee **Biofourmis** announced it had raised USD100M in Series C financing. Earlier in July, it was revealed that Singapore has become the latest country to adopt the company's remote monitoring technology for COVID-19 patients.

FLASH BACK



NUS ENTERPRISE EVENTS & ACTIVITIES: JUL - SEP 2020

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

JUL

- 01** Kopi Chat Da Bao with Leanne Robers, She Loves Tech
- 02** Entrepreneur Link: From SEA to Saigon
- 02** PIER71 Smart Port Challenge 2020 Roadshow - PSA UnboXed & SSA
- 07** SG:D Techblazer Awards 2020 Nomination Briefing
- 08** NUS MSC in Venture Creation webinar
- 08** SIA AppChallenge 2020 Virtual Roadshow - Featuring RubiQ
- 09** PIER71 Smart Port Challenge 2020 Roadshow - Bernhard Schulte
- 13** Big Foodivate Challenge
- 15** RSA Conference 2020 APJ
- 15** Creating a tailwind for maritime innovation: Who are the investors?
- 16** PIER71 Smart Port Challenge 2020 Roadshow - Jurong Port & Yusen Logistics
- 21** PIER71 Smart Port Challenge 2020 Roadshow - Klaveness Digital
- 23** PIER71 Smart Port Challenge 2020 Roadshow - Alpha Ori Technologies/ EPS/ PSA Marine
- 24** SG:D Techblazer Awards 2020 Nomination Briefing
- 24** Dialogue with NUS Alumni: Social Entrepreneurship
- 30** SIA AppChallenge 2020 Student Track - Hacking a Virtual Hackathon
- 30-Jul** PIER71 Smart Port Challenge 2020 Roadshow - Ecolabs
- 30-Jul** CSA Cybersecurity Innovation Day 2020

AUG

- 04** SG:D Techblazer Awards 2020 Nomination Briefing
- 07** SIA AppChallenge 2020 Student Track - Stories from the Winners
- 14** SIA AppChallenge 2020 Student Track - Sneak Peek of Challenge Statements
- 14** Kopi Chat Deep Dive - AI in HealthTech: Trends, Evolution & Impact
- 18** ICE71 Expert Series: From Hollywood to Real Life - The Threat of Drones
- 19** SIA AppChallenge 2020 Student Track - Ask-Me-Anything with SIA KrisLab
- 20** SG:D Techblazer Awards 2020 Nomination Briefing
- 22** Supporting Entrepreneurs: Meet the VC feat. Hustle Fund
- 26** Ocean of Opportunities Challenge Grand Finale
- 27** Nikkei x NUS Enterprise: Creating a Healthcare Innovation Ecosystem
- 28** ICE71 x F5 |Getting a Grip on Security Beyond the Perimeter
- 27-28** NUS Enterprise Virtual Office Hours

SEP

- 03** NUS GRIP Panel Session - Opportunities Amid the Crisis
- 08** Meet the VC Featuring AngelCentral's Huang Shao Ning
- 09** NUS Venture Building Programme Sharing Session for NOC Students and Alumni
- 10** NUS Venture Building Programme Sharing Session
- 10** Marketing Series (1), A*SC X NUS Enterprise
- 15-17** Smart China Expo (BLOCK71 participating)
- 16** Cybersecurity: The Strongest Link
- 17** SG Cyber Women x ICE71: Start-up Women in Cybersecurity
- 17** GRIP Run 5 Info and Founder Session with Dravam
- 22** ICE71 X DIVO
- 23** Aichi Smart Sustainable City Co-creation Challenge: Info Session
- 23** Kopi Chat Deep Dive - Colliding AI with Marketing
- 24** Science Park: Marketing Deep Dive (2), A*SC X NUS Enterprise
- 25** Enhanced SSGF Programme Virtual Launch Event
- 26** VYBE Panel Discussion: Asking the Right Questions
- 29** Elevating Founders
- 29-30** PIER71 Accelerate Bootcamp
- 29-2 Oct** Black Hat Asia 2020

VOICE OF A FEMALE ENTREPRENEUR

On 1 July, serial entrepreneur Leanne Robers spoke at our most recent Kopi Chat Da Bao session. A woman who wears many hats, Leanne is a community builder, an angel investor, practising psychologist and the Co-Founder and Co-CEO of She Loves Tech, the world's largest start-up competition for women and technology.

Here are her five takeaways for female entrepreneurs:

1 Diversity matters

Involving women in decision-making and programming roles allows for variant perspectives to create technologies that promote inclusivity and equality. Leanne discussed how AI can be biased, noting that Amazon scrapped its AI recruiting tool after it was found to be biased against women as data fed into the machine selected for male applicants in the male-dominated tech industry.

2 It's never too late to start

People of all ages and ethnicities can contribute to the vibrant start-up scene; what is key is being passionate and driven about a cause. For example, an entrepreneur in her late 40s was inspired by her children to build an education platform in last year's She Loves Tech competition. Another participant dropped out of college in order to create her MedTech solution.



 Soh Hui Min (L) of NUS Enterprise with Leanne Robers (R), Co-Founder and Co-CEO of She Loves Tech

3 Networking is a must

In scouting for VCs and potential mentors, founders should hustle and attend as many networking events as possible. Leanne likens the process to finding a job. Rejection is common, so be courageous and open to any feedback or criticism. It is also important to note that connections go both ways and you are always able to offer a fresh perspective.

4 Investors look for strong leaders and teams

Building a strong and cohesive team can build confidence in the leader to pitch well and gain funding. Leanne pointed out that founders and even accomplished leaders have Imposter Syndrome, which includes feelings of being fraudulent and inadequate, ultimately preventing them from performing. Thus, having a strong mind and supportive team is vital.

5 Don't spend too much time getting your product out

Leanne emphasised the importance of releasing products and getting feedback early. In building Comish, an e-commerce platform for personalised art, music, food, and fashion, Leanne regrets spending more than a year before launching on refinement, resulting in a lack of relevance to the market.

She concluded, "Everyone is going to make mistakes and run into challenges. Successful entrepreneurs are those who fail quickly, learn quickly and use their learnings to drive growth."