



Celebrating the Past and Re-envisioning the Future



by Prof Shih Choon Fong,
former NUS President

By 2000, NUS had fulfilled the first stage of Singapore's nation building objective – to train graduates to serve the domestic economy. NUS was swimming as the #1 in the pond, not yet in the ocean. In the new millennium, the Singapore leadership realised NUS needed to break out into the global scene, and among several initiatives that took place in that time period, was NOC. It was an experimental, daring, learning educational internship to give our students an opportunity of a lifetime to experiment and explore in the ocean and not just the pond.

At that time, the very best of the young in Singapore were being nurtured in programmes at the Ivy League and Oxbridge. But what was now needed was to nurture a different group of young people, like those at NUS, who had gumption, enthusiasm, and daring-do, who would plop themselves to where the action in 2000 was – Silicon Valley. Our young needed an opportunity to feel and smell the place, to take the measure of their fellow peers, to have that be returned in kind. They needed to be immersed in the excitement of entrepreneurship, and in the discipline of performance. Above all, they needed to know that they would be the inferior of nobody. But first they would have to realise there was an ocean out there and they needed to go there.

While others may remember my contribution as President and as originator of NOC in many ways, my own recollection of what I feel most satisfied with, was to meet our NOC interns in California and to bring them deep sea fishing in the Pacific Ocean. It may seem odd that an engineer like myself would engage



in something so frivolous, but my point was pedagogical. We literally caught tens of large wild salmon, and my point was metaphorical: salmon don't grow in ponds, but in the ocean. I also realised for NOC to succeed, it would need to be led by academic leaders who knew how to give the young the opportunity to fish in the ocean, so that they would develop in themselves an enterprising curiosity, a resilience towards failure, and above all, nurture in themselves a sense of adventure. The person who, above all, stood out for me who could build the infrastructure to do this, was the late Jacob Phang [CEO of NUS Enterprise from 2002 - 2006].

Jacob was a Cambridge-trained engineer, and founder of SEMICAPS, and to many eyes was simply another academic. But when we met, I understood he was different: he wanted the students to experience the crucible of entrepreneurship which could not be taught in the classroom. The students' intellect and character would have to be shaped by real-life encounters. This deep understanding of what it takes to make such a cultural shift at NUS was the gift that Jacob brought. Jacob put his fortitude and resolve into this. Jacob also had humility and together we recruited a stellar group of academics and staff to support NOC: Teo Chee Leong,

Wong Poh Kam, Chua Yuling, Sharon Low, Estella Ng and others. Lily Chan took the helm [of NUS Enterprise] in 2006 and provided a steady and astute leadership to build up NOC to what it is today.

Twenty years on, the world is a different place, and NOC will need to evolve beyond its initial phase of being an immersive experience. There are now new entrepreneurial centres in the world, and not just North America. Profit is no longer the only objective, but also social inclusion and sustainability. Twenty years ago, Singapore was a follower, which we are not any longer. Nevertheless, we are not yet among the declared leaders. NOC needs to be renewed once again. It will need new leaders, new vision, new ideas, but above all, it needs to re-envision the challenges and opportunities posed by a different world.

One final word and speaking as someone who grew up in humble flats at Queen's Crescent: Two principles stand out to me for success - openness and gratitude. I have recruited open-minded people, and have been nurtured by open-minded mentors. I am deeply grateful to my friends and collaborators, for bringing to me joy and freshness. Without gratitude, nothing is worthwhile.

JUNE 29, 2002 A DAY SO FRESH IN MY MEMORY BANK



Wild salmon caught in the Pacific Ocean off Northern California on a fishing trip with NOC Silicon Valley interns, June 2002. Photo of me with fishing boat crew. Serene Tan is in the background. We caught 40 salmon weighing between 10 to 20 kg.



On a visit to the Bay Area in late June 2002, I seized the opportunity to take NOC interns fishing in the Pacific Ocean - their first deep sea fishing experience.

The day started at 6 am. The weather was wet and very chilly. En route to the fishing ground, we encountered rough weather and choppy seas. Several interns got seasick and wanted to turn back. As the skipper, I said, "The boat has sailed, the course is set. We won't be turning back." I advised those who felt seasick that they would feel better if they kept their sights on the horizon. Hoping to overcome their nausea, some went below into the cabin. Others braved it out, stayed on deck and occasionally leaned overboard to relieve their seasickness.

Getting to the rich fishing waters took us several hours. Once there, the more resilient ones had their share of fun. You could see the excitement on their faces as they learned to haul in 10-20 kilogram salmon. Despite having evaded predators in the ocean and growing to their huge size, the big salmon did not manage to escape our novice fishermen. For the next several days, we had salmon sashimi for lunch, dinner and even breakfast.



red hot

Celebrating 20 years of grooming Singapore's biggest start-up founders

From Singapore to the world - A bright future belongs to those who dream and dare

2001

- NUS Overseas Colleges (NOC) was launched by then NUS President Professor Shih Choon Fong. The NOC programme aims to nurture entrepreneurial talents and give students the opportunity to live, work and learn at leading entrepreneurial hubs around the globe.



FUN FACT Silicon Valley, a hub for technology companies, has attracted a great deal of venture capital. It is the epitome of extraordinary innovation and entrepreneurship and big-name companies like Apple, eBay, Yahoo, PayPal, Google were founded in the area.

2002

- NOC was launched in Silicon Valley, USA



FUN FACT The University of Pennsylvania is a highly entrepreneurial university and its alumni have founded a variety of companies, such as Fortune 500 companies CVS, Comcast, Sysco, Cisco Systems, Inc., and Morgan Stanley.



2003

- NOC was launched in Philadelphia (NOC Bio Valley*), USA.
- The NUS Enterprise Centre in Silicon Valley was launched, the first overseas business support centre established by a Singaporean university



FUN FACT Since the 2000s, entrepreneurship in China has grown at an exponential rate. The success of internet entrepreneurs, such as Alibaba, Tencent and Baidu, later led to entrepreneurs growing exponentially in various other industries. The next generation of young people were exposed to entrepreneurial aspirations and no matter the outcome, it adds to their experience and opens up even more opportunities in the future.



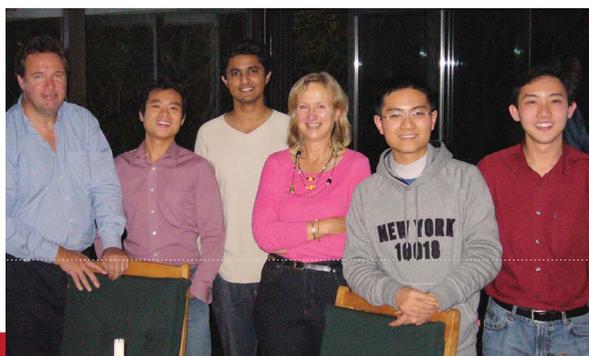
2004

- NOC was launched in Shanghai, China



2005

- NOC was launched in Stockholm, Sweden



FUN FACT Sweden's home computer drive and concurrent early investment in internet connectivity are some of the reasons why its capital Stockholm has become a rich soil for start-ups, leading to the birth of unicorns like Spotify, Skype and Klarna. Spotify was also an NOC intern company before they attained unicorn status.





NOC TEAMS AND ALUMNI WINNING ACCOLADES AND AWARDS



Start-Up@Singapore
business plan

4 first prize winners
(2003, 2004, 2006,
2007)

2 second prize
winners (2006, 2007)

- Lee Kuan Yew Global Business Plan Competition
2nd run (2004) – 1st and 2nd prize | 4th run (2008) – 1st prize
- Santa Clara Engineering Business Alliance Business Plan (2006) – 1st prize
- Intel-Berkeley Technology Entrepreneurship Challenge (2008) – 1st prize
- 12 Forbes 30 Under 30 Asia honourees
- Over 30 Generation T list honourees
- 18 NUS Alumni Award winners (individuals & teams)

2008

- With the rise of entrepreneurship in Singapore, the innovative Local Enterprise Achiever Development (iLEAD) programme was launched to offer NUS students the opportunity to intern at local start-up companies and be exposed to the entrepreneurial challenges in Singapore and beyond. They went for their first Overseas Study Mission (OSM) trip to Silicon Valley.
- NOC was launched in Bangalore (Bengaluru), India*
- Former NUS President Professor Shih Choon Fong gifted the NOC programme with seed funding of S\$200,000 to set up the NOC Odyssey Fund.



FUN FACT With new computer and software policies in the 1980s, large IT organisations setup camp in Bangalore (now known as Bengaluru) and hired Indian programmers. Indian software companies benefitted from American companies offering advanced systems, while American companies capitalised on the large talent pool and low operational costs, further contributing to the making of an IT hub and innovation centre. In the early 2000s, Bangalore (Bengaluru) was then known as the “Start-Up Capital” of India.



2009



- A total of 139 donors joined Professor Shih Choon Fong to make gifts and pledges worth S\$65,350 to the NOC Odyssey Fund. 127 of them are NOC alumni
- NOC was launched in Beijing, China
- The first NOC Alumni D&D was held at The Legends, Fort Canning Park
- The iLEAD OSM trip was expanded to China (Beijing and Shanghai)

2010

- McAfee, then the world’s largest dedicated security technology company, announced that it had reached an agreement to acquire tenCube, founded by two NOC alumni and their two NUS peers
- The iLEAD programme expanded the OSM trip to Germany (Munich and Stuttgart) and Israel
- NUS appointed an International Advisory Panel to review the NOC programme



“NOC is a flagship program which NUS has every reason to be proud of...The quality and caliber of NOC graduates makes them excellent ambassadors of NUS, both abroad and domestically.”

- International Advisory Panel (IAP)



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2011

- NOC alumni start-ups 2359 Media and Stream Media received significant investments from SingTel Innov8 and NUS
- APAC leading media intelligence firm, Media Monitors Group acquired a majority stake in NOC alumni start-up Brandtology
- NOC was launched in Israel
- The pioneer batch of students shifted into entrepreneurship-themed residence N-House at Blk 15 Prince George's Park Residences, a place where entrepreneurial minds meet and live next to one another
- Blk71, an old industrial building, was repurposed by NUS Enterprise, SingTel Innov8 and the Media Development Authority of Singapore and transformed into an entrepreneurial enclave for start-ups, incubators and venture capitalists. Plug-In@Blk71 (now known as BLOCK71 Singapore) was established at the heart of this community to nurture start-ups in Singapore, and NOC students had the opportunity to intern at incubatee companies.



FUN FACT Israel is nicknamed as the Start-Up Nation as it has one of the highest density of start-ups in the world. Despite being a small nation, it does not hinder new companies, but leads them to be international and think global since day one. The business-friendly country has highly-developed government programmes for funding technological advancements, and has strong support from the private and public sectors for innovation.



2014

- Zopim was acquired by US-based Zendesk. Four of the five co-founders attended the NOC programme
- NOC was launched in New York, USA and Beijing, China
- NOC concluded the final runs in Philadelphia (Bio Valley*) and India*



FUN FACT As Silicon Valley boomed, New York followed suit in second place and was often dubbed as "Silicon Alley". As Google and Facebook boomed in the second half of the 2000s, media and advertising began to move online, old business models were destroyed and new ones were birthed. New Yorkers took notice and from it rose a variety of online start-ups such as Shutterstock, Etsy, BuzzFeed, Outbrain, Tumblr, and FourSquare. Silicon Valley giants also took notice, setting up their offices outside of Silicon Valley - in New York.



2015



- The iLEAD programme was renamed to NOC Singapore

"Industry experts say the single most important development to boost the start-up movement [in Singapore] is the National University of Singapore Overseas Colleges programme (NOC)."

– The Straits Times¹

¹Chng, G. (2015, Feb 24). "Growing band of tech start-up millionaires." **The Straits Times**.

2016 - 2017

- NOC was set up in Munich and Lausanne,* cities with strong deep-tech culture – targeted for post-graduate students with deeper technical knowledge to provide them opportunities to intern at deep-tech start-ups (based on true technological innovation or scientific discovery)



FUN FACT Munich has a strong start-up ecosystem – one that educates students in entrepreneurship each year, provides start-up consultation, incubation and business centres, all of which is supported by the Technical University of Munich (TUM), similar to how NUS supports entrepreneurs through NUS Enterprise. Through the NUS and TUM collaboration, students from both universities benefit from entrepreneurial exchange programmes – travelling to the respective country to take internships at a start-up company and courses at the university, experiencing the dynamic entrepreneurial environments in Singapore or Munich, Germany.



*NOC Philadelphia (Bio Valley), NOC India and NOC Lausanne have ceased operations



2018

- NOC was launched in Southeast Asia (SE Asia) and Toronto, Canada
- Launch of NUS Graduate Research Innovation Programme (GRIP) – Additional opportunities for NUS students to work in teams to transform their knowledge and ideas into investible, scalable deep-tech start-ups

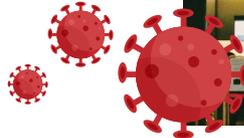
2019

- NOC was launched in Shenzhen, China
- NOC Nagoya, a 6-month programme tailored to NUS PhD students, was announced to introduce students to Japanese corporate innovation and expose them to the deep-tech start-up ecosystem in the region.



2020

- 242 NOC students were recalled in batches between January to March 2020 amid the Covid-19 pandemic



2021

- Overseas student programmes resumed in select locations in October 2021 for students fully vaccinated against Covid-19. NUS' budding entrepreneurs were among the first students to head overseas for internships.
- NOC and BLOCK71-affiliated start-ups, Carousell and PatSnap achieved unicorn status



2022 and beyond

- New locations in Europe and North America
- Expansion of the NOC Southeast Asia programme to Bangkok
- Further expansions in China due to NUSRI presence
- Further expansion of NOC to the PhD level



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FUN FACT Toronto earns its place as a phenomenal start-up city for entrepreneurs of all kinds; it is ranked one of the best cities in the world for women entrepreneurs, as well as one of the best places to launch a tech start-up.



FUN FACT Shenzhen is known as the start-up city of China. It was once dubbed as the manufacturing hub of the world.

Nagoya is a manufacturing powerhouse and is home to many of the world's largest Japanese companies in the fields of automotive, aviation and robotics. World-renowned brands include Toyota, Denso, Mitsubishi, Subaru and Brother Industries.



STATS AT A GLANCE

15+ locations

>3500 alumni

>950 alumni start-ups

>US \$1.5B raised by alum start-ups to date

>20 alum start-ups acquired

2 unicorns