

NUS_{IN} 2018

Professor Tan Eng Chye
President
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“For NUS to shape the future, we must aspire to be a vital community of academics, researchers, staff, students and alumni that works together in a spirit of innovation and enterprise, to create a better world.”

— Professor Tan Eng Chye

It has been an eventful and exhilarating year for NUS, with a new leadership team taking the helm. Following a smooth and successful leadership transition, an able and dynamic leadership team was formed to lead NUS on the journey to become a truly great university. I am pleased that Professor Chen Tsuhan, Mr John Wilton, Professor Freddy Boey, Mr Tan Kian Woo and Ms Tan Yee Deng have come onboard. Each of them brings substantial talent, expertise and experience, adding to the bench strength of the NUS leadership.

My senior management team is ready to lead NUS forward. The new Vision, Mission and Values launched in August 2018 articulates our future aspirations and sets out the organisational directions. They signal a new era in quality education, influential and impactful research, and visionary enterprise.



VISION
a leading global university
shaping the future

MISSION
to educate, inspire
and transform

VALUES
innovation, resilience
excellence, respect, integrity

In 2018, NUS made bold, transformative moves to shape the future of education, research and enterprise. To develop future-ready graduates, we are working to integrate lifelong education into our university education model. In the area of research, we strive to deepen our leadership globally, and ensure that our research will bring about positive impact to society with a greater emphasis on translation. We are also building a thriving innovation and ecosystem in Southeast Asia with Singapore as a key node.

Let me share some key highlights and achievements.

Pioneering new pathways in education

A total of 10,867 graduates from the Class of 2018 received their degrees over 23 ceremonies during NUS Commencement 2018 from 12 to 19 July – with 6,785 and 4,082 receiving Bachelor's degrees and graduate degrees respectively. Presiding over NUS Commencement for the first time, NUS Chancellor Mdm Halimah Yacob conferred on The Honourable Justice Chao Hick Tin, Senior Judge of the Supreme Court of Singapore, an Honorary Doctor of Laws.

NUS has embarked on lifelong learning in a trailblazing way, with a bold commitment made to our students and alumni. We initiated a Lifelong Learners' programme, which is the first in any university around the world, where all NUS graduates enjoy automatic enrolment into all of our continuing education programmes for 20 years, from the point of admission. We moved swiftly to curate an NUS CET500 course catalogue, comprising cutting-edge courses to help learners stay competitive in this digital age. By 2020, we aim to offer 20,000 continuing education places annually – a move that will benefit our nearly 300,000 alumni. The range of courses and modules will be comprehensive, but there will be an emphasis on offering skills-based industry-relevant programmes. We have also rolled out a distinctive '*All You Can Learn*' scheme for corporate partners, who will send nearly 10,000 employees for continuing education at NUS.



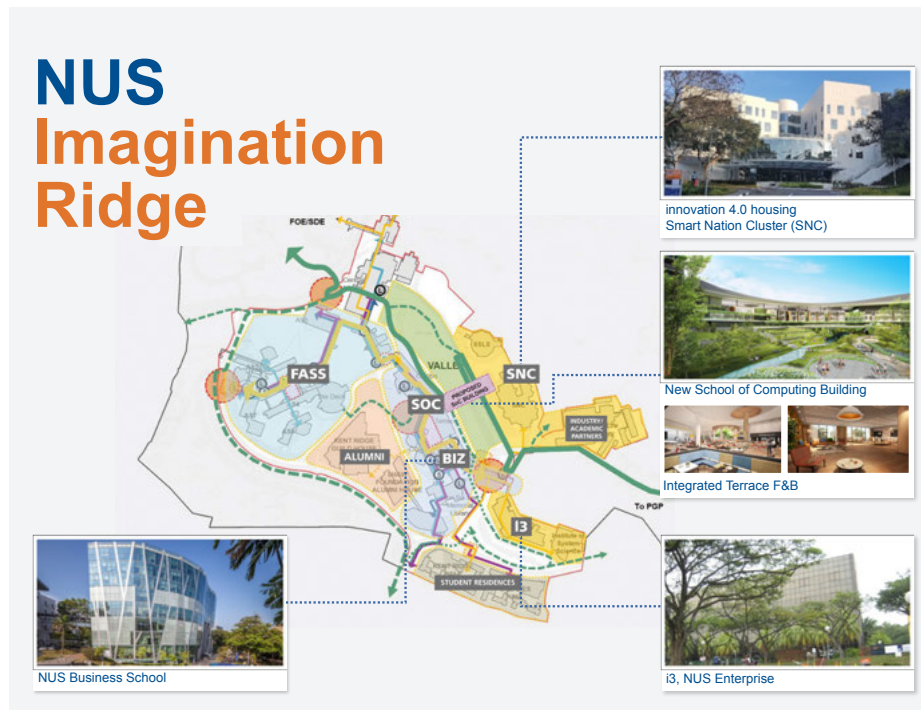
Alongside efforts to provide a transformative and holistic education that prepares students for the future, NUS has also been supporting students to pursue their passion in learning. This year, NUS made a novel move to award 1.25 bonus admission points to an applicant's first choice course, paving the way for nearly 1,000 more applicants to gain admission into their first choice courses. NUS has seen an undergraduate matriculation of more than 7,800 in Academic Year 2018/2019, an increase of about 10 per cent over the previous year, largely contributed by an increase in the Computing, Computer Engineering and Data Science & Analytics intake. NUS has also expanded the range of major and minor combinations available to our students. By giving students opportunities to hone competencies in different disciplines, they are empowered to pursue their academic interests and to build up their career versatility at the same time. They will also be better equipped to engage in lifelong learning across a wide range of areas wherever their careers take them, in the future.

Building deeper levels of research excellence

In research, NUS has been recognised for its substantial research achievements across many disciplines. NUS is the only Asian university to gain a position in the Quacquarelli Symonds (QS) list of the 10 best universities worldwide, with 11 subjects attaining a top-10 ranking in the QS World University Rankings by Subject 2018. The University is also ranked in the top 50 for 34 subjects out of the 48 disciplines analysed by QS. In November 2018, Clarivate Analytics listed a total of 30 researchers at NUS as among the highly cited academics globally in their respective fields. We have introduced the homerun indicator i.e. publications which garnered 20 times more citations than the average in a particular discipline, as a measure of deep academic impact. The number of homeruns at NUS has more than tripled over the last decade, from 125 homeruns from 1998 to 2007, to 455 from 2008 to 2017.

We will continue to build on our talent pool, through initiatives such as the new NUS Presidential Young Professorship scheme (an enhancement of our existing President's Assistant Professorship), which is open to Singaporeans and international talent. As the country's flagship university, we must continue to promote important and impactful multidisciplinary work that cuts across fields and domains of knowledge to help answer important questions about Singapore and the world.

NUS continues to deepen collaboration with industry, to strengthen translational research and research impact on society. We inked significant partnerships with industry players from a wide range of sectors, a testament to our deep and comprehensive research capabilities. We established two new corporate laboratories on campus, in partnership with Wilmar International, Asia's largest agribusiness group, and with Applied Materials, a world leader in materials solutions, semiconductors and display equipment. Other notable research partnerships include the Grab-NUS AI Laboratory and the Centre of Excellence in Modelling and Simulation for Next Generation Ports. For Financial Year 2017, NUS received research funding of \$742 million, of which \$38 million is from industry. We collaborated with industry in more than 100 research projects.



NUS Imagination Ridge

This year, we commissioned a retrofitted, state-of-the-art building innovation4.0 (i4.0), where researchers, innovators, entrepreneurs and industry partners working on Smart Nation research are brought under one roof. This is just the seed for our entire cluster of Smart Nation expertise. We will be constructing a new building for the School of Computing, whose enrolment had increased three fold in five years. Together, this precinct, called the NUS Imagination Ridge, comprising School of Computing, NUS Business School, I³ (housing NUS Enterprise) and Institute of Systems Science – will provide platforms to synergise education, research and enterprise. Through such synergies, NUS aims to develop a brain trust of talented and future-oriented academics, staff and students who will continually innovate and discover, in order to create a positive impact on the economy and society in Singapore, and the world.

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Entrenching our enterprise presence

NUS is growing our entrepreneurial and innovation network, with a particular focus on Southeast Asia. The NUS Overseas Colleges programme, our flagship entrepreneurship programme, has expanded to include three new destinations:

- Jakarta, Indonesia
- Toronto, Canada
- Shenzhen, China (2019)

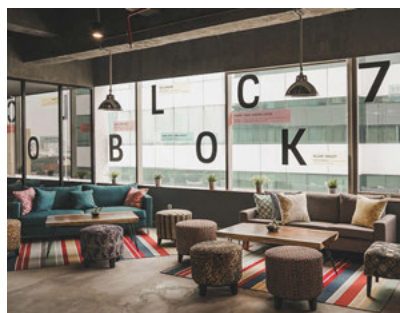
BLOCK71, our distinctive incubator concept, launchpad and network, has new locations, one in Suzhou and two in Indonesia (Yogyakarta and Bandung), established in partnership with NUS (Suzhou) Research Institute and the Salim Group respectively. NUS also plans to bring in more entrepreneurial students from Southeast Asia to our innovation and enterprise ecosystem, through various educational programmes and tie-ups with regional universities.



BLOCK71 Singapore



BLOCK71 San Francisco



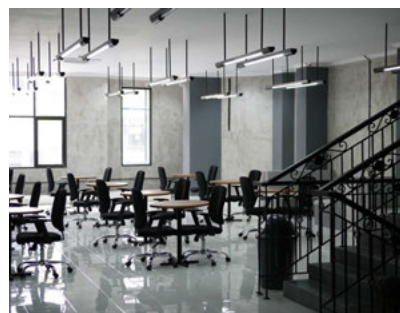
BLOCK71 Jakarta



BLOCK71 Suzhou



BLOCK71 Bandung



BLOCK71 Yogyakarta

The University also introduced the Graduate Research Innovation Programme to tap the University's talented pool of graduate students, post-doctoral fellows and research staff to develop high potential start-ups based on deep technologies. Under this programme, NUS will commit \$25 million to co-create up to 250 companies over the next five years.

In December 2018, one of our NUS start-ups Biolidics (formerly known as Clearbridge Biomedics), founded by Professor Lim Chwee Teck, received an IPO listing under Catalist. This is an achievement for NUS – the evolution of a prototype conceived in our lab to an approved cell enrichment biochip system for cancer diagnosis which is now being used in countries such as the United States, United Kingdom, Australia, China, Japan and Korea, and soon in Europe and other parts of the world. Earlier in the year, an NUS spin-off Unum Therapeutics, founded by Professor Dario Campana, also received an IPO listing on NASDAQ, raising over US\$69 million for the company. Unum Therapeutics is a clinical-stage biopharmaceutical company focused on the development of novel immunotherapy products designed to harness the power of a patient's immune system to cure cancer.

Bringing the world to NUS

At the international stage, NUS has successfully hosted two signature events:

- Asia-Pacific Association for International Education 2018 Conference and Exhibition (APAIE), and
- Times Higher Education World Academic Summit 2018 (THE WAS)



Times Higher Education World Academic Summit 2018

Some 2,200 delegates from 57 countries including 230 senior academic leaders from 178 institutions attended APAIE in March. The THE WAS at NUS in September saw the largest THE WAS attendance ever – 521 delegates from 217 institutions globally. Higher education leaders who attended included the Vice-Chancellors, Presidents and senior leaders of University of Cambridge, University of Southampton, University of Glasgow, King's College London, Australian National University, University of Sydney, University of Melbourne, ETH Zürich, Peking University and University of Tokyo.

Several senior colleagues and I had the opportunity to chair and lead in APAIE and THE WAS panel discussions. The highly positive publicity generated has raised NUS' mindshare and profile as a leading global university.

Enhancing our campus landscape

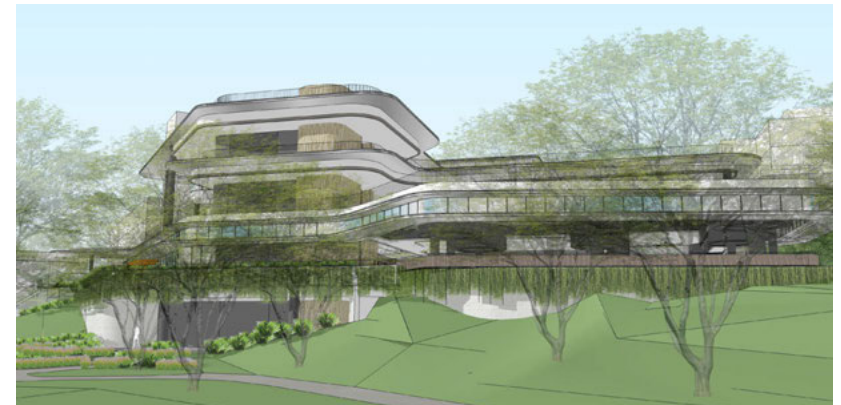
The physical look and feel of our campus is being enhanced with new and upgraded spaces that are smarter, greener and more conducive for work and play. The new Frontier canteen and student spaces at Faculty of Science were completed this year.

Other ongoing campus developments include:

- Central Library
- TechnoEdge Dining (Faculty of Engineering/School of Design & Environment)
- Terrace Dining (School of Computing/NUS Business School)



Artist's impression of Central Library



Artist's impression of TechnoEdge canteen (top) and COM3 and Terrace canteen (bottom)

I had earlier mentioned the i4.0 building for Smart Nation research. The Centre for Oral Health (COH) and the Net-Zero Energy Building SDE 4 have been recently completed, and these are exciting spaces that provide a vibrant, innovative and experimental learning environment for faculty and students. The COH, slated to open in 2019, houses the Faculty of Dentistry and a second national dental centre, which will complement the services provided by the National Dental Centre Singapore. It will expand its scope from private patients to include subsidised patients, treating 500 patients a day. It will also facilitate research in a number of key areas, such as finding new ways to repair and regenerate soft tissue and bone. SDE 4 has already garnered significant attention and several awards for its impressive design and sustainability features.



Centre for Oral Health



Net-Zero Energy Building SDE4

Our campus is nestled in the Kent Ridge rainforest with an estimated 60,000 trees, and there are 6,500 trees on campus. It is interesting to note that Singapore's heritage tree the endangered *Margaritaria indica* – the only one in Singapore – can be found at our Yale-NUS College!

*Margaritaria indica* tree at Yale-NUS College

In November, we launched the "Planting 10,000 Trees" initiative, signifying our commitment as an environmentally responsible campus to preserve Singapore's rich biodiversity and fight climate change. The planting of more trees over the next three years is expected to cool down the surrounding temperature by about one degree Celsius, as well as contribute to the sequestration of 220 tonnes of carbon dioxide and the production of nearly 1,200 tonnes of oxygen annually. As such, the NUS community can look forward to a lush (and hopefully cooler) Kent Ridge Campus that is conducive for work and play.

We are also aggressively integrating smart and sustainable campus initiatives into various aspects of our campus life and operations, such as mobile payments, 3D virtual NUS, green procurement, consolidation of chillers and lightings, and so on. A research team led by Professor Andrew Lim has successfully developed a "Virtual NUS" platform, reproducing the entire campus in 3D through point clouds offering high-resolution detail of between 1.5 cm to 5 cm. We can look forward to wide applications in terms of teaching and other practical uses; more details will be shared with the NUS community in due course.

Giving back to the community

The NUS Day of Service (DOS) is a day of significance for the University with the entire NUS community coming together to give back to society. The DOS 2018 has gone from strength to strength over the years, with a record 2,050 NUS staff, students and alumni organising and participating in a total of 57 community service activities reaching 6,130 beneficiaries.



Day of Service at SWAMI Home



Mangrove clean-up



Willing Hearts Soup Kitchen



Breakfast distribution to construction workers

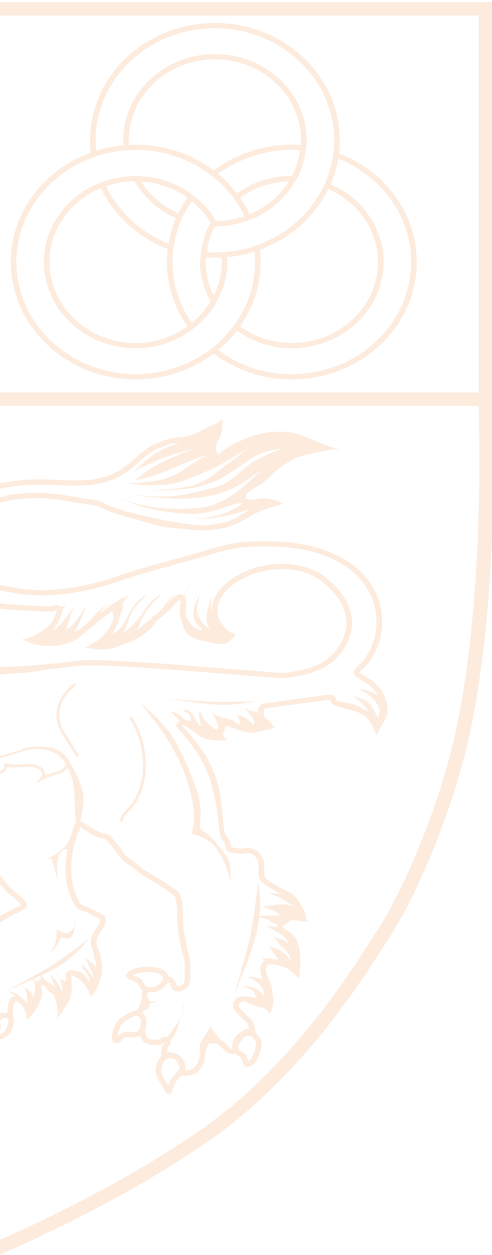
Embracing change and continual improvement

In the spirit of continual improvement, we embarked on an Organisational Excellence (OE) journey, to professionalise our administration and improve operational efficiency. Earlier this year, staff were invited to participate in a contest to identify the silliest or unproductive policy or process. A total of 250 entries were received, with 16 colleagues sharing the prize money of \$6,000, which I was pleased to personally sponsor. We have paid careful attention to suggestions and are working hard to resolve major administrative issues. An OE Transformation Unit was set up under the Office of the President, and the team has been working with consultants and stakeholders to develop and implement the target operating model for 15 key processes. We can look forward to new, simplified and improved processes in the areas of Travel Requests and Claims, procurement, recruitment, appointment and performance management for staff, and more.

The OE exercise will inculcate a culture of timeliness and speed, and provide opportunities for staff to learn new work processes as well as for their career advancement. While we expect to encounter some initial hiccups in the process, the enhanced efficiencies of OE will ultimately benefit everyone.

Finally, a Futures Office was also established under the Office of the President to inform and strengthen our long-term strategic planning capabilities, and to help us all be mindful and ready for the future.

NUS has made remarkable progress in 2018, and we will continue to shape the future. I thank the NUS community for your many contributions to this institution that we are all deeply proud to be part of. I look forward with great enthusiasm to working with you in what will surely be a fruitful and fulfilling 2019. Let us work together to keep the NUS flag flying high!



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