

# PASSION FORWARD

Annual Report 2019



*National University of Singapore*

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**VISION**  
a leading global university  
shaping the future

**MISSION**  
to educate, inspire  
and transform

**VALUES**  
innovation, resilience  
excellence, respect, integrity

The National University of Singapore aspires to be a vital community of academics, researchers, staff, students and alumni working together in a spirit of innovation and enterprise for a better world.

Our singular focus on talent will be the cornerstone of a truly great university that is dedicated to quality education, influential research and visionary enterprise, in service of country and society.

## Chairman's Statement



**“Our students remain at the very heart of our transformative process and we continue to create opportunities for them to stretch their potential.”**

This Academic Year 2018/19, the University saw a record number of 11,400 graduates being conferred degrees at NUS Commencement in July 2019. NUS continues to contribute a significant percentage of graduates to the country and ensure that they are relevant to the needs of our society.

Our students remain at the very heart of our transformative process and we continue to create opportunities for them to stretch their potential. We have made further enhancements to our teaching pedagogy, empower our students to design their future pathways, as well as provide more opportunities for them to widen their exposure through our international exchange programmes and enterprise network. We are committed to enhancing the sustained employability

of our graduates through a 20-year continuing education and training programme, as well as providing lifelong learning for the public. Our lifelong learning initiative had more than 15,000 adult learners registered in the past year, and we expect this group to grow rapidly in the coming years.

This year, we received over \$781.6 million in research funding – twice the amount compared to a decade ago – enabling the University to build our research capabilities. Our graduate student population, which accounts for nearly 40% of our student community, has also been growing steadily. They form a pool of specialised talent that deepen our research expertise. NUS’ research aspirations were further enhanced as we welcomed a number of highly talented young scientists and leading academics, including the first Nobel Laureate, to join us.

To enhance research impact on the economy, NUS established the Graduate Research Innovation Programme (GRIP). By providing seed funding and access to experienced business mentors, GRIP aims to accelerate the translation of research by graduate students and faculty into promising start-ups.

The NUS campus hosts over 50,000 people and their general wellbeing and welfare are of concern to us. The year presented us with a major incident that raised the issue of student conduct, safety and support. Arising from this, we established a Review Committee on sexual misconduct comprising members from our Board of Trustees and student representatives to strengthen our disciplinary and support framework. Our students, faculty, staff

and alumni also rallied together and resolved the challenge with determination and perseverance. These strong efforts underpin our NUS values of respect and integrity that must define each member of the University community.

I welcome Ms Tan Hooi Ling as a new member of our Board and look forward to her support. I would also like to convey my appreciation to our former Trustees Mr Goh Yew Lin, Mr Phillip Tan, Dr Noeleen Heyzer and Dr Leslie Teo who have retired from the Board, for their astute guidance and outstanding contributions.

Lastly, I thank all members of the NUS community for their dedication and partnership as we continue this journey of transformation with vigour and passion.

**Mr Hsieh Fu Hua**  
NUS Chairman

# President's Message



Academic Year 2018/19 represents the beginning of a new era for NUS, in advancing quality education, impactful research and visionary enterprise. A new Vision, Mission and Values was launched in August 2018, which articulates NUS' aspiration to become a leading global university, shaping the future.

NUS forged ahead with our mission to educate, inspire and transform.

NUS takes pride in delivering a solid and transformative education for all our students. Three new engineering specialisations and a new concurrent degree programme between Yale-NUS College and NUS School of Computing have been introduced, adding to the University's rich and comprehensive suite of educational offerings.

To provide more opportunities for students to pursue their passion, the novel move to award bonus admission points to an applicant's first choice course for A-level applicants, has been expanded to include polytechnic, NUS High School of Mathematics and Science and International Baccalaureate applicants. In addition, we launched Design-Your-Own-Module, where students are empowered to customise their learning experience. A new NUS career+ app, developed in-house, provides students with personalised guidance on building up a portfolio of requisite skills towards their career aspirations.

It is heartening to know that global employers regard NUS graduates as among the world's top 10 in employability. This is testament to the quality, rigour and impact of an NUS education.

As a champion of lifelong learning, NUS is the first university to make student enrolment valid for 20 years from the point of first admission. We have also successfully launched a CET500 course catalogue, comprising cutting-edge courses to help learners stay competitive. To date, we have signed 10 Memoranda-of-Understanding with corporate partners under the 'All-You-Can-Learn' initiative to provide training for their employees.

NUS continues to make its global mark in research. NUS researchers won \$781.6 million in grants in 2018, and count more than 10,000 research publications to their names.

We also seek to deepen collaboration with industry, strengthening translational research and research impact on society. A fifth corporate lab has been established in partnership with Applied Materials, the world's top semiconductor and display equipment company, to conduct R&D in advanced materials engineering. Other notable research partnerships include the Grab-NUS AI Laboratory, and the Centre of Excellence in Modelling and Simulation for Next Generation Ports. NUS is also extending our research network internationally, with the establishment of the NUS (Chongqing) Research Institute, and the Tianjin University-NUS Joint Institute in Fuzhou.

To encourage more commercialisation from research outcomes, NUS launched the Graduate Research Innovation Programme to support and translate innovative ventures by PhD students and researchers from laboratory to marketplace. We have committed \$25 million to co-create and co-invest in 250 start-ups based on research and deep technologies.

On the enterprise front, we are growing our entrepreneurial and innovation network. The Southeast Asia programme of NUS Overseas Colleges has expanded to include two new cities – Bandung, Indonesia and Ho Chi Minh City, Vietnam.

BLOCK71, NUS' distinctive incubator concept, launchpad and network has two new locations – Yogyakarta and Bandung. Together with San Francisco, Suzhou, Jakarta and Singapore, they form part of a vibrant BLOCK71 network that facilitates greater information exchange, promotes growth between the start-up and innovation ecosystems, and brings opportunities for Singapore start-ups to access international markets.

At our Kent Ridge Campus, we welcomed new and exciting spaces such as innovation4.0, the National University Centre for Oral Health and SDE4, Singapore's first new-build net-zero energy building located at the School of Design and Environment. Committed to preserving Singapore's rich biodiversity and fighting climate change, we will be planting 10,000 more trees on campus over the next three years. Our physical campus also serves as a testbed for pioneering new innovations such as driverless shuttle buses.

In the year ahead, NUS will continue steadily on our journey of excellence to become a truly great university, shaping the future.

**Professor Tan Eng Chye**  
NUS President



## Profile of Students and Staff

### STUDENTS

Academic Year 2018/19  
(as at February 2019)

**28,555**  
Undergraduate

**8,089**  
Higher Degree

**403**  
Graduate Diploma

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**37,047**

*Note: Figures are Full Time Equivalent*

### STAFF

(as at June 2019)

**2,546**  
Faculty\*

**4,072**  
Research Staff

**3,544**  
Executive & Professional

**2,014**  
General Staff

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**12,176**

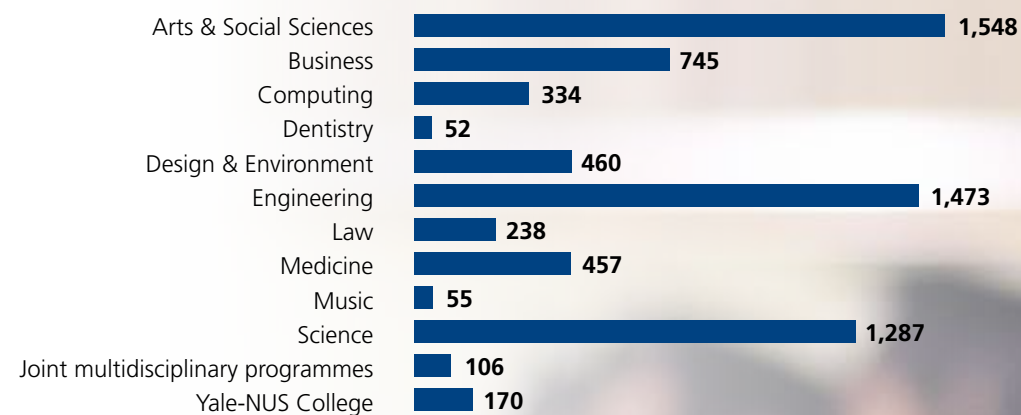
*Note: Figures are Full Time Equivalent and exclude staff on honorary appointments*

*\* Faculty include tenurable faculty and other teaching staff*



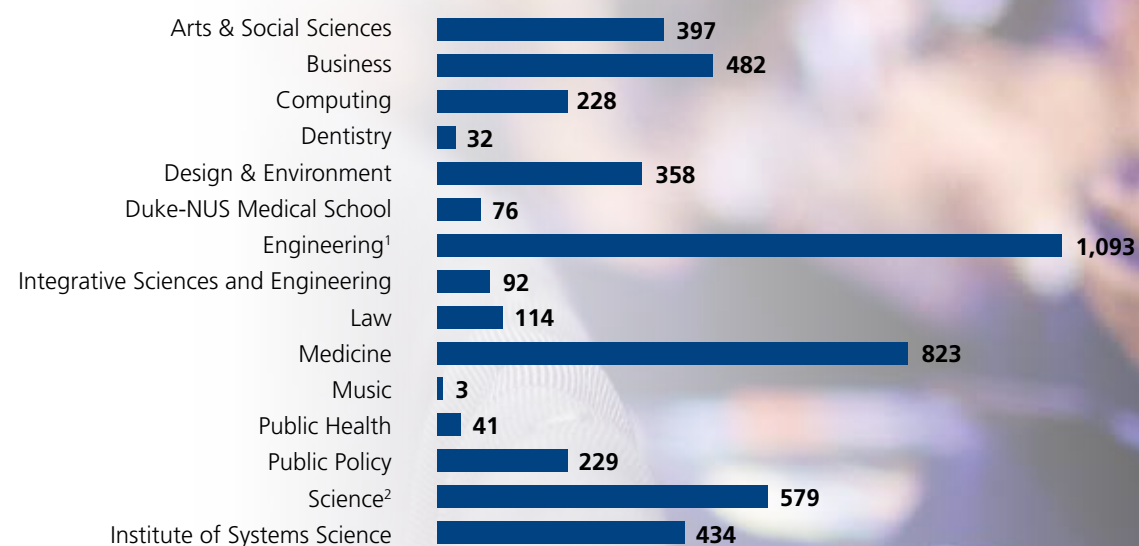
## Profile of Class of 2019

### FIRST DEGREE GRADUATES\*



**6,925**

### HIGHER DEGREE & GRADUATE DIPLOMA GRADUATES\*\*



**4,981**

\* Headcount figures correct as at 12 July 2019 and are based on degrees conferred between 1 July 2018 and 30 June 2019. Double degree graduates are counted towards both their home and second faculties.

\*\* Headcount figures correct as at 12 July 2019 and are based on degrees and graduate diplomas conferred between 1 July 2018 and 30 June 2019.

1. Includes Temasek Defence Systems Institute figures

2. Includes Risk Management Institute figures



# Year In Review



NUS Chairman Mr Hsieh Fu Hua and NUS President Prof Tan Eng Chye, together with staff and students, launched the University's new vision, mission and values on 15 August 2018 at the University Cultural Centre. More than 20 innovative projects from various Faculties and Schools and research institutes were presented at the launch event, which was attended by some 400 members of the NUS community.



More than 500 senior leaders from over 200 institutions in 53 countries converged at NUS from 25 to 27 September 2018 for the largest ever Times Higher Education World Academic Summit 2018, co-hosted by the University. Distinguished speakers in academia, government and industry spoke on issues aligned with the Summit's theme of "The transformative power of research: advancing knowledge, driving economies, building nations".



Prime Minister of Malaysia Yang Amat Berhormat Tun Dr Mahathir Mohamad was conferred an Honorary Doctor of Laws by Singapore President and NUS Chancellor Madam Halimah Yacob on 13 November 2018, in recognition of his outstanding leadership and his contributions to longstanding bilateral relations between Singapore and Malaysia. His spouse Yang Amat Berbahagia Tun Dr Siti Hasmah Haji Mohd Ali was conferred the NUS Distinguished Alumni Service Award during the special conferment ceremony for being an inspiring role model for women doctors in Malaysia, as well as for her excellent and sustained service in public health in Malaysia and beyond.



Her Excellency Mrs Akie Abe, spouse of Japan's Prime Minister Shinzo Abe, paid a visit to the NUS Department of Japanese Studies on 14 November 2018, hosted by the Department together with the NUS Centre for Language Studies. Students from the NUS Sado Club conducted a tea ceremony while the NUS Koto Ensemble entertained the Japanese delegation with traditional musical performances.



The Prime Minister of Canada The Right Honourable Justin Trudeau visited NUS on 15 November 2018, where he held a special dialogue session with about 400 members of the university community. Titled "Canada and Asia in a Changing World", the dialogue focused on building connections and Mr Trudeau shared about the many trade agreements that Canada has made with Europe, the United States and Southeast Asia.



NUS is now home to Singapore's first new-build net-zero energy building, located at NUS School of Design and Environment (SDE). Officially launched by Minister of Finance Mr Heng Swee Keat on 30 January 2019, SDE4 is designed to be climate responsive, energy efficient and environmentally friendly. It features a host of sustainable building designs such as solar roof installations, a hybrid cooling system, innovative ventilation systems, as well as architectural structures that provide much-needed shade in Singapore's tropical climate.



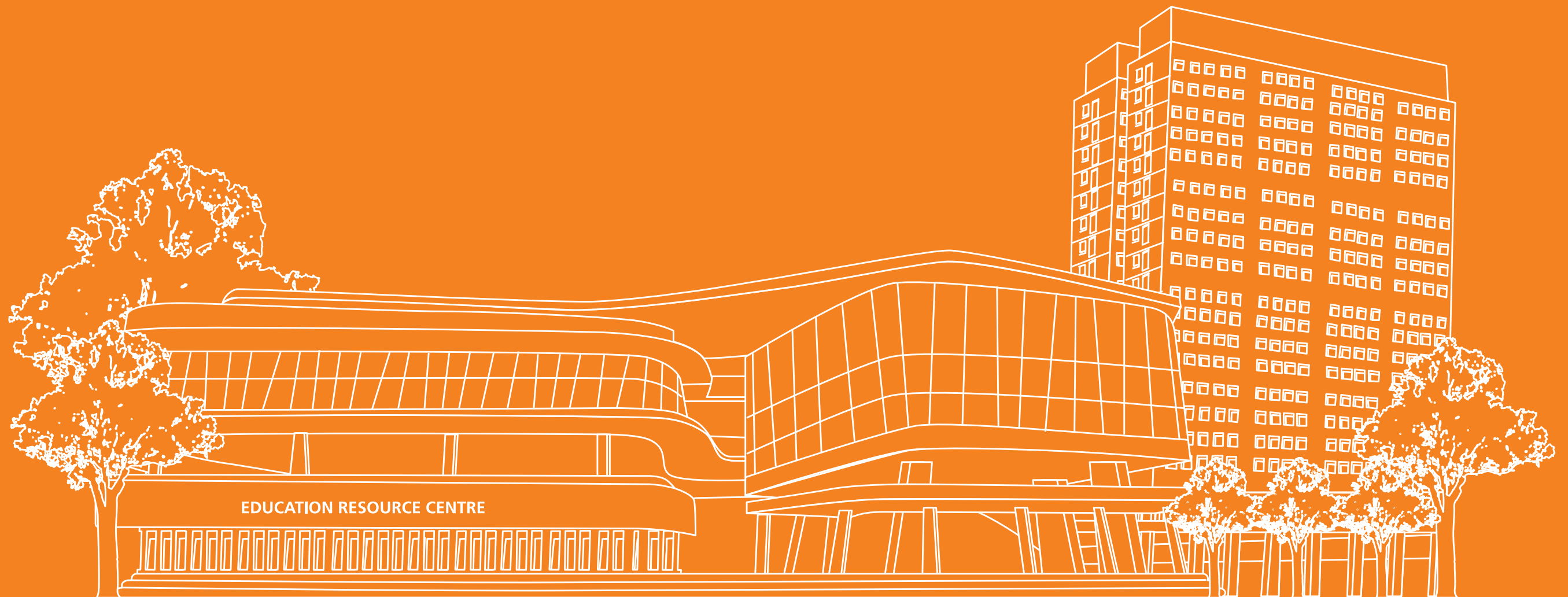
The National University Centre for Oral Health, Singapore (NUCOHS) was officially opened by Minister for Health Mr Gan Kim Yong on 5 July 2019. NUCOHS consolidates the National University Hospital University Dental Cluster, NUS Faculty of Dentistry and research facilities in a single location, allowing dental specialists, professionals, students, faculty and researchers to draw on each other's strengths to bring about better clinical care, high impact research and education.



Mr Chua Thian Poh, Founder of Ho Bee Group, was conferred Honorary Doctor of Letters by Singapore President and NUS Chancellor Madam Halimah Yacob at the main NUS Commencement ceremony on 11 July 2019. A philanthropist, prominent businessman and active community leader, Mr Chua was recognised for his outstanding contributions to the community and his advancement of learning and knowledge, which have greatly benefitted Singapore and the wider society.

## EXCITING OPPORTUNITIES FOR **LEARNING**

At NUS, we develop many innovative and challenging programmes to help our students fulfil their passion and become future-ready graduates.





# Enhancing Undergraduate Education



## DESIGN-YOUR-OWN-MODULE

This exciting initiative, to be introduced in the Academic Year (AY) 2019/20, will allow students to choose what they want to learn, how they learn and who they learn from, for part of their curriculum. It will give them the chance to pursue personal interests by studying a range of areas not covered by current NUS courses, selecting teachers from industry leaders or accessing online courses from top universities.

## TECHNOLOGY ENHANCED LEARNING (TEL) IMAGINARIUM

Launched in October 2018, the TEL Imaginarium at the Central Library provides a space for experiential learning, offering technology enhanced tools such as a mixed reality room, hololens, leap motion and

projection mapping. Students can try on virtual reality equipment, manipulate virtual objects through augmented reality tools and learn about drones, robotics, 3D printing technology and more. They are encouraged to think about how these devices can be applied to deep learning.

## BOND-FREE SCHOLARSHIPS WITH A START-UP SEED FUNDING OPTION

Funded by a generous gift from Dr Stephen Riady, these new "Stephen Riady Young Entrepreneur Scholarships" will support outstanding students who express a keen interest in developing their entrepreneurial skills. When they graduate, scholarship recipients who are keen to start a new business venture can apply for seed funding of up to \$50,000.

## ADMISSION OF ENTREPRENEURIAL POLYTECHNIC GRADUATES

NUS welcomes talented polytechnic graduates who have demonstrated strong entrepreneurial qualities and abilities during their polytechnic education. Students admitted under this new scheme will be able to benefit from our active industry partnerships and experiential entrepreneurial education, which includes the highly popular NUS Overseas Colleges programme and the NUS Enterprise Summer Programme.

## Developing Career-ready Undergraduates

### GLOBAL MENTORSHIP PROGRAMME

This programme, managed by the NUS Centre for Future-ready Graduates, aims to help students who are interested in a global career to develop key employability skills. Students will be matched with, and mentored by, specially selected global professionals who bring a wealth of experience from diverse sectors, including consulting, technology, finance, non-profit organisations, engineering and education.

### NEW APP FOR CAREER PLANNING

NUS career+, a unique mobile application that guides students on education planning and career selection, has been developed in collaboration with JobTech, a leading AI and big data analytics technology company. It informs students about possible career domains for the academic degrees they are pursuing, recommends modules to ensure they acquire the appropriate skills needed in their chosen careers, and recommends job opportunities based on their acquired skills.

## EXPANSION OF THE BONUS POINTS SCHEME

To encourage more students to pursue subjects they are passionate about, NUS has extended the policy of awarding bonus admission points for first choice courses to include students with polytechnic, NUS High School of Mathematics and Science, and International Baccalaureate qualifications. More applicants are expected to be offered their first choice courses for admission in AY 2019/20 as a result of this policy.

## Celebrating 15 years of music partnership



The Yong Siew Toh Conservatory of Music (YST) at NUS opened the AY 2018/19 on a very special note. It celebrated its 15th anniversary and partnership with the Peabody Institute (Peabody) of the Johns Hopkins University with a gala concert "Celebrating 15 Years" on 21 August 2018, which featured performances by students, faculty and alumni of Peabody and YST. The event kick started "Voyage", a week-long music festival that saw more than 70 YST graduates curating and presenting concerts and panel discussions.

# Commitment to Continuing Education

## FLEXIBLE FRAMEWORK FOR CONTINUING EDUCATION AND TRAINING (CET)

NUS has introduced a flexible CET framework where certificate programmes and individual graduate modules can be taken without the need to proceed to a full degree, or in some cases can be stacked for a degree qualification. This opens NUS' portfolio of master's coursework programmes to all CET learners, which is especially valuable to those who do not satisfy entry requirements for master's degree programmes, but would like to receive further training.

## ALL-YOU-CAN-LEARN (AYCL)

The AYCL model developed by the School of Continuing and Lifelong Education is a training programme for businesses to upskill and reskill their

workforces. Both standalone modules and degree-level programmes are offered, curated from NUS' extensive range of academic curricula and executive programmes, and customised for clients' specific needs. The areas of study include business analytics, data analytics, cybersecurity, the Internet of Things and artificial intelligence.

## NEW PHD STUDENT EXCHANGE PROGRAMME

For the first time, PhD students from NUS and Nanyang Technological University will be able to enrol in courses at both universities and study at both campuses. The new programme will offer a much broader range of PhD courses, which will benefit students at both institutions.

# Gaining a Global Perspective

## STUDENT EXCHANGE PROGRAMME (SEP)

The SEP saw a record 2,345 NUS students travelling overseas and the University welcoming 2,364 incoming exchange students. This was made possible by NUS having 341 partner universities in 41 countries. Four new exchange agreements have been established, with the University of Bologna (Italy), University College Cork (Ireland), Nagoya University (Japan) and Georgetown University (United States).

## STUDY TRIPS FOR ENGAGEMENT AND ENRICHMENT PROGRAMME (STEER)

About 200 students participated in the STEER programme, which allows them to experience dynamic societal and developmental changes in destinations in Southeast Asia, South Asia, East Asia, the Middle East, North America and the Balkans. There were two new STEER programmes introduced in the year – to Mexico and Cuba, and to Israel and Jordan.

## SUMMER LEARNING AND RESEARCH ATTACHMENT

In the year of review, about 1,800 students took part in more than 70 international summer programmes, research attachments and network programmes.

## GLOBAL CLASSROOM MODEL

This initiative will encourage faculty members to incorporate short-term overseas experiential learning components into modules. Quality 1-2 week study/field trips will integrate academic and immersive learning, where both intellectual framing and reflection are designed within the intended learning outcomes. A Global Classroom grant will be provided to students taking up such modules from AY 2019/20.

# Academic Year 2018/19



2,345 OUTGOING EXCHANGE STUDENTS

2,364 INCOMING EXCHANGE STUDENTS

1,800 STUDENTS

participated in  
>70 international summer programmes  
research attachments  
network programmes

341 PARTNER UNIVERSITIES  
in 41 COUNTRIES

200 STUDENTS  
participated in  
12 STEER PROGRAMMES





# Key Developments at Faculties and Schools

## NEW ENGINEERING SUBJECTS FOR FUTURE JOB SKILLS

Undergraduates entering the Faculty of Engineering from AY 2019/20 can look forward to new core modules on subjects like machine learning, modelling and simulation, systems thinking, and design and prototyping. New engineering specialisations on robotics and Internet of Things are also available to students in their third and fourth years. These subjects will help equip students with versatile skills and a systems mindset for holistic problem solving to prepare them to cope with the wave of digitalisation that is sweeping all industries.

## RECORD INTAKE FOR NURSING STUDIES

The Alice Lee Centre for Nursing Studies (NUS Nursing) saw its highest-ever intake of 313 students. An increase of 33% over the previous year, the cohort included 34 professionals seeking a career switch. NUS Nursing's inaugural two-year Bachelor of Science (Nursing) programme also saw tremendous interest from mid-career applicants, with 230 applications received for 20 places.

## ASIA'S FIRST FINANCIAL CAPABILITY AND ASSET BUILDING TRAINING PROGRAMME FOR SOCIAL WORKERS (SG FCAB)

Offered by the Continuing Professional Education arm of the NUS Department of Social Work, the SG FCAB training programme, which aims to equip social workers with relevant knowledge and skills to guide financially vulnerable families and individuals, will benefit around 1,400 registered social work practitioners in Singapore. The first such programme in Asia, it was developed by the Next Age Institute at the Faculty of Arts and Social Sciences and Citi Foundation.

## PREPARING FOR MASS CASUALTY INCIDENTS

The new Virtual Interactive Simulation Environment system at the Centre for Healthcare Simulation in the Yong Loo Lin School of Medicine allows medical students to put their knowledge and skills in triage and situational patient management to the test during a mass casualty incident in a virtually simulated environment. Students use virtual reality headsets and hand-held controllers to interact with each other in real-time as members of a medical emergency response team managing multiple casualties, and their actions are tracked for evaluation.

## FIRST INTAKE FOR LIBERAL ARTS AND MEDICINE PATHWAY

The Yale-NUS & Duke-NUS Liberal Arts and Medicine Pathway, which aims to groom future clinicians who are strong communicators, enrolled its first batch of students in August 2018. Six students who were selected for this pathway will go through four years of undergraduate education at Yale-NUS College, followed by postgraduate studies at Duke-NUS Medical School.

## New programmes in Academic Year 2018/19

### JOINT AND CONCURRENT DEGREE PROGRAMMES WITH OVERSEAS UNIVERSITIES

#### Joint Degree Programmes

- Doctor of Philosophy in Civil Engineering, Environmental Engineering or Mechanical Engineering (NUS-Shanghai Jiaotong Joint Doctor of Philosophy Programme)
- Bachelor of Science (Honours) in Life Sciences (NUS-University of Dundee Joint Degree Programme)

#### Concurrent Degree Programme

- Bachelor of Science in Life Sciences (NUS) and Doctor of Veterinary Medicine (University of Melbourne)

### NEW DEGREE PROGRAMMES AT NUS

#### Bachelor's Degree Programme

- Bachelor of Science (Nursing) Programme [Professional Conversion Programme for Registered Nurses (Degree)]

#### Master's Degree Programmes

- Master of Technology in Intelligent Systems (Institute of Systems Science)
- Master of Science in Finance (NUS Business School)

#### Doctoral Degree Programmes

- Doctor of Philosophy in Operations Research and Analytics (Institute of Operations Research and Analytics)
- Doctor of Philosophy in Clinical Sciences (Duke-NUS Medical School)

## Cementing good relations

NUS signed a Memorandum of Understanding (MOU) with the University of California (UC) on 17 February 2019 to facilitate an exchange of ideas and to promote cooperation in academic fields of mutual interest. These fields include air and water quality, climate change, energy and sustainability, global food challenges, health and infectious diseases and their treatment, as well as sustainable transportation innovations. The MOU extends the multifaceted relationship between the two universities that began more than two decades ago.

In another tie-up, NUS and Duke University inked an MOU on 23 May 2019 to promote joint research and development activities between the two universities. Both universities aim to advance collaboration in the areas of global health, political science, Southeast Asian studies, business, public policy, and innovation and entrepreneurship, as well as facilitate more faculty and graduate student exchange opportunities.



UC President Janet Napolitano (left) sealing the agreement with NUS President Professor Tan Eng Chye



NUS President Professor Tan Eng Chye and Duke University Provost Dr Sally Kornbluth (left) signing the MOU, witnessed by Professor Andrew Wee, Vice-President (University and Global Relations) and Dr Jennifer Francis, Executive Vice Provost of Duke University

RESEARCH

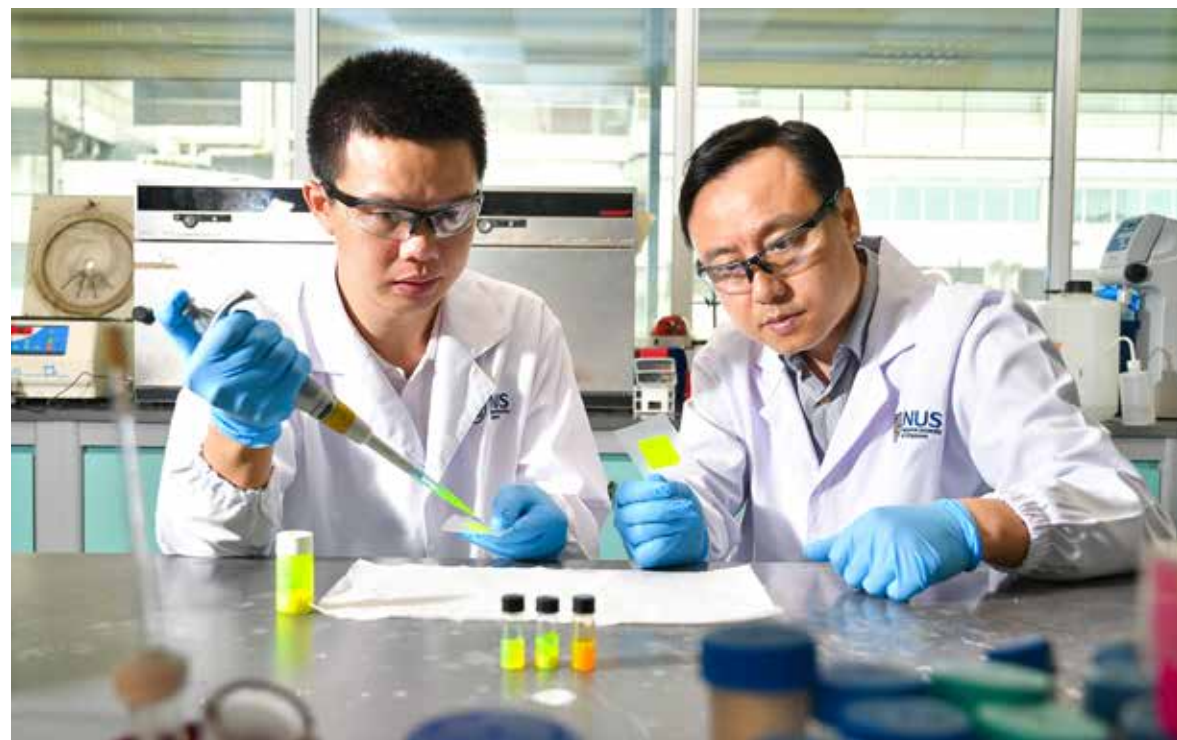


INNOVATIVE  
**RESEARCH**  
IMPACTING THE WORLD

Our focus on multidisciplinary research brings forth innovative ideas and exciting discoveries which translate into important benefits for the world.



# Exciting Breakthroughs



## PEROVSKITE NANOCRYSTAL SCINTILLATORS FOR X-RAY IMAGING

A new X-ray detector able to sense X-rays using about 400 times less radiation than the typical dose used in medical diagnostics has been designed by a team led by Professor Liu Xiaogang from the Department of Chemistry. The team developed novel lead halide perovskite nanocrystals which are highly sensitive to X-ray irradiation and also cheaper to produce than the expensive inorganic ones conventionally used. This discovery can potentially lower medical expenses and reduce the radiation risk to patients.

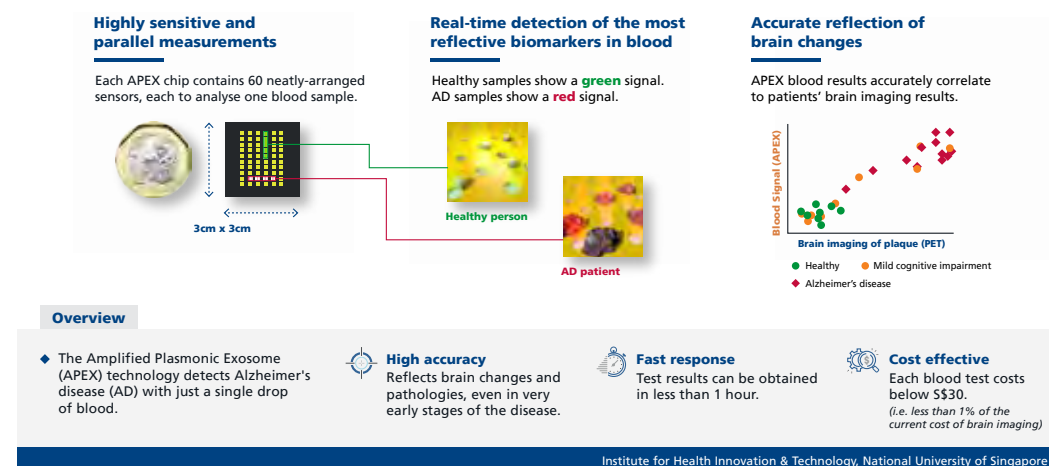
Published in *Nature*

## QUANTUM KEY DISTRIBUTION FOR STRONGER CYBERSECURITY

A team from NUS-Singtel Cyber Security Research & Development Laboratory and the Centre for Quantum Technologies, has developed an innovative response to the urgent need for stronger cybersecurity. The technique, called quantum key distribution, uses signals sent over fibre networks in particles of light known as photons. Detection of individual photons creates encryption keys. Data encrypted with such keys is resistant to any computational hack.

Published in *Applied Physics Letters*

## Blood test for faster, cheaper and accurate detection of Alzheimer's disease New APEX technology invented by NUS researchers



## NEW TEST TO DIAGNOSE ALZHEIMER'S DISEASE

A new method of testing for Alzheimer's disease, the Amplified Plasmonic Exosome (APEX) system, has been developed by researchers from the NUS Institute of Health Innovation and Technology and the Department of Biomedical Engineering, led by Assistant Professor Shao Huilin. APEX is highly sensitive and accurate in diagnosing Alzheimer's disease by measuring aggregates of amyloid beta (A $\beta$ ) protein, an early-stage molecular marker of the disease, using a simple blood test.

Published in *Nature Communications*

## ADVANCING THE FIELD OF NUMBER THEORY

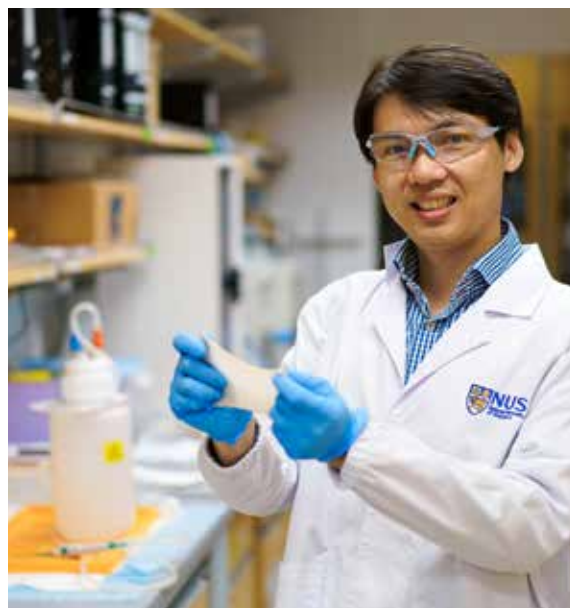
Automorphic forms, which play an important role in present day number theory and the Langlands programme, live on domains (reductive groups) and can be broken down into their basic constituents (irreducible automorphic forms). However, the classification of these forms is very challenging. In 2012, those living on the linear classical groups were classified. This classification has now been extended to automorphic forms living on certain nonlinear domains, by 2017 President's Science Award recipient Distinguished Professor Gan Wee Teck from Department of Mathematics and Professor Atsushi Ichino from Kyoto University.

Published in *Annals of Mathematics*

## New home for Smart Nation research



innovation4.0 (i4.0), the University's latest contribution to Singapore's Smart Nation initiative, is home to the NUS Smart Nation Research Cluster. Officially launched on 4 September 2018 by Guest-of-Honour Minister for Finance and Chairman of the National Research Foundation Mr Heng Swee Keat, it houses more than a dozen interdisciplinary research entities responsible for building the University's strategic capabilities in artificial intelligence, data science, analytics, modelling, simulation and optimisation, as well as cybersecurity.



#### WATER-RESISTANT, SELF-HEALING ELECTRONIC SKIN

Inspired by jellyfish, a team led by Assistant Professor Benjamin Tee from the Department of Materials Science and Engineering, in collaboration with researchers from Tsinghua University and the University of California Riverside, has created an electronic skin that is transparent, stretchable, touch-sensitive and self-healing in aquatic environments. The electronic skin, whose electrical properties change when it is touched, is created by 3D-printing the material into electronic circuits. Its self-healing properties will enable the design of amphibious robots and water-resistant electronics such as water-resistant touchscreens.

Published in **Nature Electronics**

## New Research Initiatives and Important Collaborations



#### NATIONAL SATELLITE OF EXCELLENCE IN TRUSTWORTHY SOFTWARE SYSTEMS (NSOE-TSS)

One of three National Satellites of Excellence established by the National Research Foundation, the NSOE-TSS was launched in January 2019 at NUS. It will receive \$12 million (US\$8.8 million) in funding over four years with the aim of developing tools and workflows to certify the security and operating environment behaviours of embedded software systems. NSOE-TSS will be led by Professor Abhik Roychoudhury from NUS School of Computing and Associate Professor Liu Yang from Nanyang Technological University's School of Computer Science and Engineering.

**10,300**  
RESEARCH PUBLICATIONS  
in CY2018<sup>1</sup>

**1,021** NEW PROJECTS  
launched in the year<sup>2</sup>

**865** PROJECTS  
completed in the year<sup>2</sup>

1. Data extracted from the SCOPUS online database and updated as at 12 June 2019. Figure represents all publications including articles, conference papers, and reviews.

2. Figures reflect the number of new projects that commenced and completed in FY2018. Figures derived from SAP PS as at 11 June 2019.

3. Figures updated as at 22 April 2019.

**117\*** NEW RESEARCH COLLABORATIONS  
took off in FY2018<sup>3</sup>

**11** Academic organisations and foreign governments

**12** Local research institutions\*\*

**59** Others - government agencies, statutory boards, etc\*\*\*

**57** Industry

\* As a single collaboration may involve more than one partner, the individual categories do not add up to the total number of agreements signed

\*\* Includes A\*STAR research institutes and centres

\*\*\* Includes local public/restructured hospitals and charities

#### APPLIED MATERIALS-NUS ADVANCED MATERIALS CORPORATE LAB

Applied Materials, the world's top semiconductor and display equipment company, and NUS launched a \$70 million (US\$51.4 million) collaboration, the Applied Materials-NUS Advanced Materials Corporate Lab, in October 2018, with support from the National Research Foundation. The partnership aims to accelerate the discovery and commercialisation of innovative materials for next-generation semiconductors. Applied Materials is also sponsoring \$1.5 million (US\$1.1 million) in scholarships for doctoral students at the lab to nurture skilled talent for Singapore's growing semiconductor industry.

#### SINGHEALTH DUKE-NUS GLOBAL HEALTH INSTITUTE (SDGHI)

SDGHI, a joint institute of SingHealth and Duke-NUS Medical School, was established in September 2018 to address current and emerging health challenges across Asia. Working in collaboration with partners, the Institute will promote research that tackles prevalent health issues, provide a platform for interdisciplinary global health education and training, work to strengthen health systems across the region and enhance the capacity of regional institutions to improve health.

## Grooming talent in data science



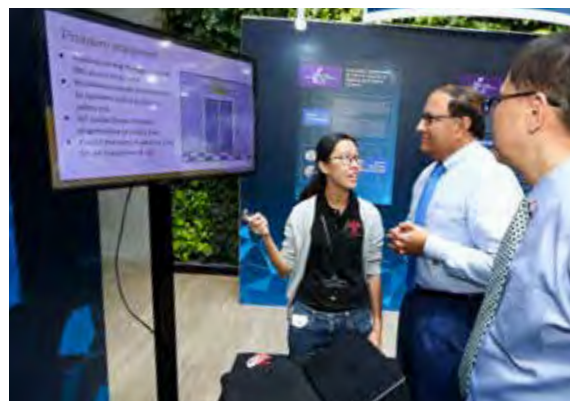
NUS and Alibaba Cloud, the cloud computing arm of the Alibaba Group, have partnered to launch an innovation incubator programme to nurture Singapore's data science talent in line with the country's Smart Nation initiative. Both parties signed an MOU on 15 August 2018, witnessed by Dr Vivian Balakrishnan, Minister for Foreign Affairs and Minister-in-Charge of the Smart Nation initiative.





### TJU-NUS JOINT INSTITUTE

The TJU-NUS Joint Institute was established in December 2018, supported by Tianjin University (TJU), the People's Government of Fuzhou City, the Education Department of Fujian Province and NUS. By 2023, about 210 researchers and up to 240 doctoral students will be located in three distinct research centres at the TJU (Fuzhou) International Campus, with 30 research groups focusing on optoelectronics, flexible electronics, advanced manufacturing, energy materials and advanced catalysis. The Institute will host up to 60 new NUS PhD students participating in research projects each year.



### AI IN HEALTH GRAND CHALLENGE

Launched by AI Singapore, this Challenge aims to use AI to stop or slow disease progression and complications in patients with the "3 Highs" – Hyperglycaemia, Hypertension and Hyperlipidaemia by 20% in five years. NUS will take part in two projects, one called JARVISDHL, an AI system for gathering healthcare data to create AI algorithms and models to support evidence-based personalised care and shared-decision making by primary care physicians. The second project focuses on developing advanced AI in prototype devices for testing and use in a community setting.

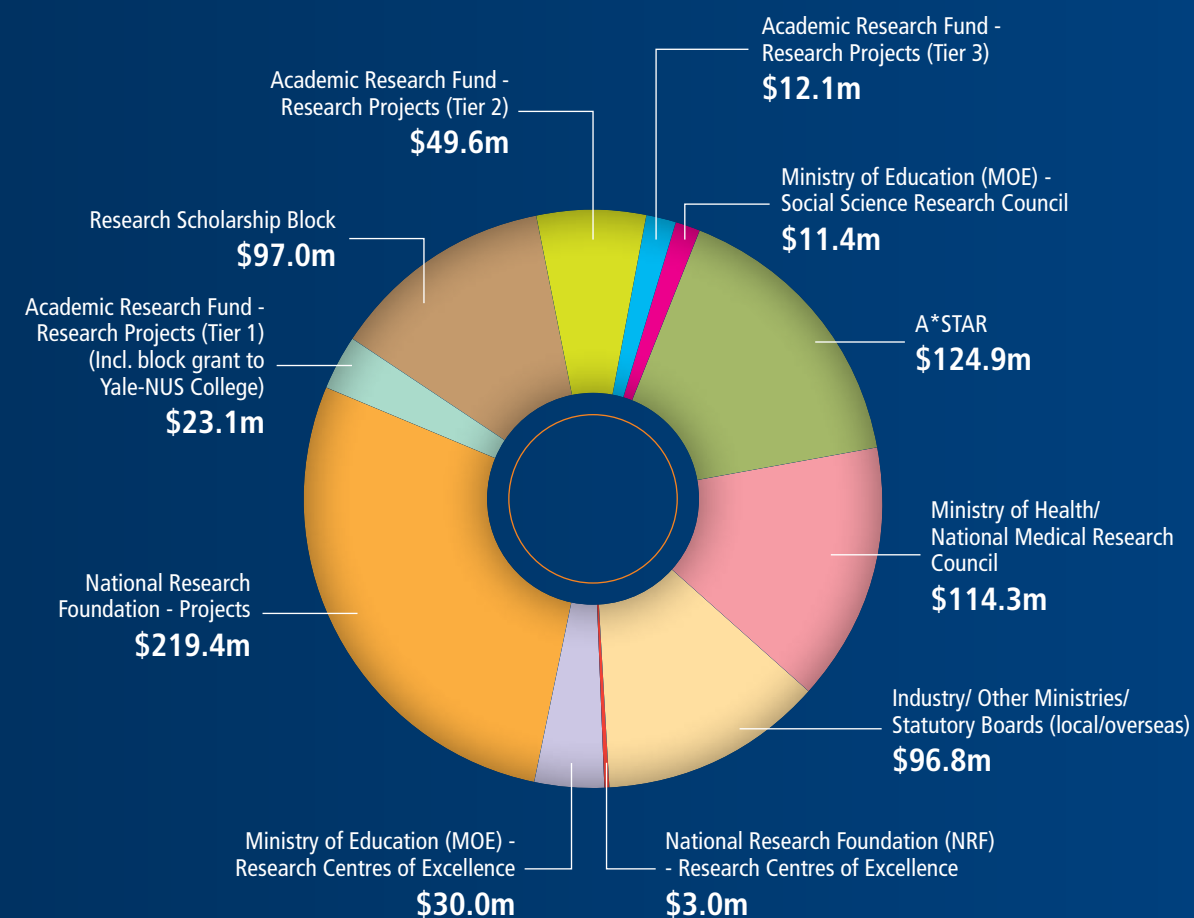
## NUS-Cisco partnership



NUS and global technology leader Cisco signed an MOU on 25 June 2019 with the aim to boost Singapore's knowledge-based innovation-driven digital economy. The two organisations will collaborate on innovation and research in key emerging technologies such as data analytics, Internet of Things, automation, cybersecurity, artificial intelligence, machine learning and software defined networking. The partnership will also facilitate the exchange of scientific, academic and technical knowledge between NUS and Cisco, and drive joint research projects focusing on key areas such as healthcare, manufacturing, customer experience and Smart Nation.

## Total Project Value Awarded by External Sources

**\$781.6 million**  
TOTAL PROJECT VALUE



Figures updated as at 11 June 2019.

## FULFILLING **ENTREPRENEURIAL** DREAMS

Budding entrepreneurs with innovative ideas  
are guided and supported at every stage by the  
University's vibrant enterprise ecosystem.





# Nurturing Entrepreneurial Potential



## NUS OVERSEAS COLLEGES (NOC) PROGRAMME

In Academic Year (AY) 2018/19, 302 new students embarked on the NOC programme, which has nurtured the entrepreneurial aspirations of more than 2,800 students and led to more than 600 NOC-alumni start-ups. With the addition of two new locations in Toronto and Shenzhen, NOC now has 12 overseas locations.

## NUS ENTERPRISE SUMMER PROGRAMME ON ENTREPRENEURSHIP

This two-week residential programme brings together high-calibre international and local entrepreneurially minded students for a unique immersive introduction to the innovation and entrepreneurship scene in Singapore and Southeast Asia. In 2019, programme intake almost doubled over the previous year, with 180 students attending the programme.

## LEAN LAUNCHPAD SINGAPORE (LLP) PROGRAMME

There were six runs of the newly expanded national-level entrepreneurial education programme, two at NUS and four hosted by other local universities. The programme, which helps participants identify commercialisation pathways for their inventive technologies, has led to 32 new companies being established, while 38 teams have also licensed their technologies and/or received further funding.

## GRADUATE RESEARCH INNOVATION PROGRAMME (GRIP)

In September 2018, NUS pledged \$25 million (US\$18.4 million) to this programme, which aims to seed, incubate and launch 250 tech-based start-ups by NUS graduate students and researchers over the next five years. More than 40 teams have completed the initial venture development phase of the programme to date. Examples of emerging companies include BeeX Pte Ltd, which built an autonomous underwater vehicle for the marine industry, and NUSPACE Pte Ltd, creators of an Internet of Things platform with global coverage using a constellation of nano-satellites.

## TOUGH LOVE PROGRAMME

The Tough Love programme, offered by NUS Industry Liaison Office's Minimum Viable Product (MVP) Studio, with the support of Enterprise Singapore, helps deep-tech hardware teams get to market faster, with reduced hardware development risks. Projects are supported with prototype funding of up to \$20,000 (US\$14,700) and developers have access to in-house master engineers and external industry experts. Five projects were supported in AY 2018/19.

## NUS CENTRE FOR ADDITIVE MANUFACTURING (AM.NUS) CONSTRUCTION 3D PRINTING PROGRAMME

Launched in July 2018, this programme is the latest addition to AM.NUS' offerings to support industry in additive manufacturing. This new programme aims to develop sustainable materials and 3D printing designs to facilitate rapid mass production of building structures. AM.NUS is a multidisciplinary centre, with existing broad programmes in biomedical and aeronautical applications. As a whole, it has secured 53 industry projects to date, with total external project funding of \$14.4 million (US\$10.6 million).

## JOINT UNIVERSITY MEDTECH PROGRAMME (JUMPSTART)

JUMPstart is a joint NUS-NTU biomedical technologies accelerator programme driving innovative research to impactful new ventures through an integrated product and business development approach. Since its launch in 2016, JUMPstart has supported 14 start-ups/projects, the first two of which are expected to enter the market in 2019.



In FY2018/19, the Industry Liaison Office issued

**74**  
TECHNOLOGY LICENCES

**36**  
OPTION AND EVALUATION  
LICENCES

**25**  
NEW SPIN-OFFS

Amongst these,

**5** SPIN-OFFS

**9** LICENCES

are supported by the  
Technology Acceleration Programme

**\$3.74 million**  
TOTAL INCOME  
of which  
**\$2.54 million**  
IS LICENCING INCOME

## Innovfest Unbound



Innovfest Unbound, the anchor event of Smart Nations Innovation Week, was held on 27 and 28 June 2019. Now in its fifth year, the annual festival attracted more than 13,500 entrepreneurs, investors, corporates and technology start-ups and delegates from over 100 countries. Organised by NUS Enterprise and Unbound in partnership with the Infocomm Development Authority of Singapore, the event offers a platform for participants to explore Asian business opportunities and collaborations, as well as a showcase for groundbreaking developments that are making headway in the digital economy.

## Keeping up the Entrepreneurial Pace



### BLOCK71

Three new BLOCK71 locations have been established, including a second location in Suzhou, as well as new sites in Yogyakarta and Bandung. The programme now operates in seven locations across four countries, serving as an ecosystem builder and global connector for the start-up community in those countries.

### IN-MARKET LAUNCHPAD INDONESIA

Launched by NUS Enterprise through BLOCK71 Jakarta, in partnership with the Infocomm Media Development Authority and Enterprise Singapore, this first In-Market LaunchPad aims to help Singapore-based infocomm media firms enter the Indonesian market and benefit the Indonesian ecosystem by providing a better understanding of opportunities in Singapore.

### INNOVATION CYBERSECURITY ECOSYSTEM AT BLOCK71 (ICE71)

ICE71 is a partnership with Singtel Innov8 to launch the country's first integrated regional cybersecurity hub, which will support early stage and growing start-ups, entrepreneurs and academics from around the world. Sixteen start-ups were accelerated from over 100 global applicants for two runs of the ICE71 Accelerate programme in AY 2018/19, while 16 companies have taken up residency in the ICE71 Scale programme.

### CHALLENGING THE INNOVATORS

NUS Enterprise organised or partnered with numerous challenges, hackathons and accelerator programmes, which attracted over 2,000 teams from around the world. Some of these were the:

- SIA AppChallenge,
- Smart Port Challenge, with the Maritime and Port Authority of Singapore,
- Alipay-NUS Enterprise Social Innovation Challenge,
- DBS-NUS Social Venture Challenge,
- DSTA Hackerfest,
- Ericsson Innovation Challenge,
- L'Oreal Start-Up Runway,
- Maybank Kim Eng HackFest,
- Modern Aging accelerator, and
- Oceans of Opportunity Challenge, with Symphony Creative Solutions.

**>300** COMPANIES/PROJECTS  
INCUBATED

**795** EVENTS HELD

across NUS Enterprise's global network of  
entrepreneurial communities



## NUS-affiliated Start-ups Making their Mark

### ALCHEMY FOODTECH

Opened a foodtech lab, CookLab@Alchemy at Singapore Science Park, and raised

**\$2.5 million** (US\$1.8 million)

### BIOFOURMIS

The healthtech start-up received US Food and Drug Administration approval for the use of its RhythmAnalytics software in detecting cardiac arrhythmia. The start-up also announced it had raised

**\$47.4 million** (US\$35 million)  
in Series B funding

### BIOLIDICS

A medical technology company (formerly Clearbridge Biomedics) was listed on the **Singapore Stock Exchange** in December 2018

### CAROUSELL

A mobile classifieds platform, raised

**\$76 million** (US\$56 million)  
at a valuation of \$750 million (US\$550 million)

### CIRCLES.LIFE

A digital telco raised Series C funding and would be expanding into five additional markets, investing

**\$50 million** (US\$37 million)  
in each market

### NANOLUMI

An advanced materials company, launched its flagship product, Chameleon™ Film. The company also raised seed funding of

**\$1.35 million** (US\$1 million)

### SHOPBACK

A cashback start-up, raised

**\$61 million** (US\$45 million)  
in an oversubscribed equity financing round

### SPEQTRLAL

A space-tech start-up spun off from the Centre for Quantum Technologies, raised

**\$2.6 million** (US\$1.9 million)  
in seed funding

### SPIN

The US-based scooter sharing start-up, founded by three Singaporeans and previously incubated at BLOCK71 San Francisco, was acquired by Ford for a reported

**\$136 million** (US\$100 million)  
in November 2018

### VISENZE

A visual search company, raised

**\$27 million** (US\$20 million)  
in a Series C round

## NUS Spin-offs Making an Impact

### EYRIS PTE LTD

Professor Wynne Hsu and Professor Lee Mong Li, School of Computing and Professor Wong Tien Yin, Singapore Eye Research Institute

Developed an AI deep learning system used for early detection of diseases such as diabetes retinopathy, glaucoma and age-related macular degeneration.



E2S2 Systems

### E2S2 SYSTEMS PTE LTD

Associate Professor Tong Yen Wah and his team, Department of Chemical and Biomolecular Engineering

Developed a highly efficient and compact anaerobic digestion system which enables food waste to be broken down into biogas that is subsequently converted into heat and electrical energy.



NUSCool

### NUSCOOL PTE LTD

Associate Professor Ernest Chua and his team, Department of Mechanical Engineering

Invented a water-based air conditioner that harnesses water to cool the surrounding air without requiring a compressor. The company has signed an MOU with STT Global Data Centres and Vertiv to develop cooling units for data centres, and will partner with Ecoline Solar Pte Ltd for outdoor cooling applications.

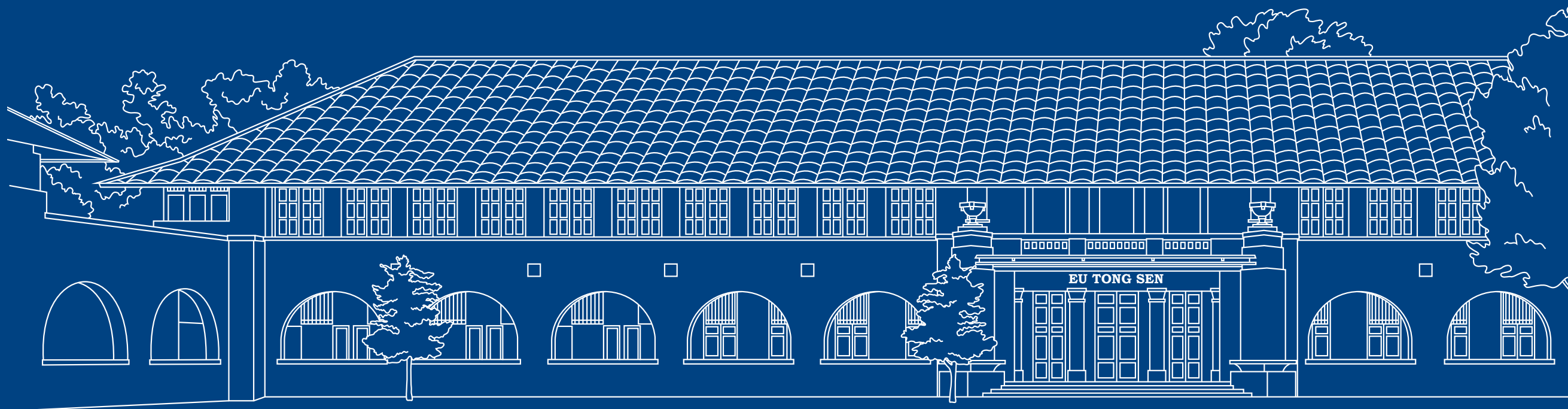
### PROTEONA PTE LTD

Professor Gene Yeo and Associate Professor Jonathan Scolnick, Department of Physiology

Developed the Enhanced Single Cell Analysis with Protein Expression (ESCAPE™) platform, RNA sequencing technology which uses DNA-barcoded antibodies to capture proteomic and gene expression data simultaneously in a single cell.

## CARING FOR THOSE AROUND US

The NUS community always looks beyond the campus to find opportunities to make things better for those less fortunate and for our environment.





# Record-breaking Donations



## NUS RAG AND FLAG 2018

The annual Rag and Flag, where freshmen and seniors bond in a spirit of giving back to the community, raised a record amount of more than \$581,000. Flag Day saw thousands of NUS students collecting donations from members of the public island-wide. This activity culminated in Rag Day, with students enthralled spectators at University Town with dazzling performances and impressive floats built from recycled materials after weeks of tireless preparations. The funds collected will go towards 21 charity programmes supported by the Community Chest.



## BIZAD CHARITY RUN

In January 2019, NUS Business School held its annual charity run. About 1,500 students, alumni and members of the public participated in either a competitive 10km run or a 5km fun run through Kent Ridge Campus, raising a record \$250,000. From this amount, \$210,000 went towards student bursaries and scholarships and \$40,000 to the Cerebral Palsy Alliance Singapore.



# Serving the Community



## NUS DAY OF SERVICE 2018

NUS Day of Service 2018 saw some 2,050 NUS staff, students and alumni organising and participating in 57 activities for 6,130 beneficiaries. Activities were varied and included preparing food for the elderly, needy and migrant workers, working at an animal rescue centre, spring-cleaning homes for vulnerable seniors, delivering groceries to needy families, cleaning up coastal waters and beaches, and giving musical performances at the Singapore General Hospital and National University Hospital.



## NEIGHBOURHOOD HEALTH SERVICE 2018

Focusing on residents-in-need, especially the elderly and lower-income households at Kampong Glam and Queenstown, a team of about 700 student volunteers from the Yong Loo Lin School of Medicine, Department of Social Work and Duke-NUS Medical School conducted health screenings for about 860 residents in September and October 2018. The objectives were to pick up undiagnosed conditions and improve the health-seeking behaviours of the residents as well as empower them to feel motivated to take charge of their own health.

# Spreading the spirit of volunteerism



NUS won the 2018 President's Volunteerism & Philanthropy Award under the Educational Institution category for excellence in encouraging the spirit of giving in NUS and Singapore. This is the first time the University has received the prestigious honour conferred by the National Volunteer & Philanthropy Centre. NUS Dean of Students Associate Professor Peter Pang received the award from Singapore President and NUS Chancellor Madam Halimah Yacob at a special awards ceremony on 24 October 2018.



# Service beyond Singapore



## BRUNEI AND MIRI MUSIC PROJECT

In September 2018, eight students from the Yong Siew Toh Conservatory of Music (YST) took part in a seven-day programme of musical sharing in Bandar Seri Begawan, Brunei and Miri, East Malaysia. The project aimed to engage students in the two cities with professional music instruction, contribute to teaching practices in the community and hone the pedagogical skills of YST students.

Residential College 4 (RC4) students conducted Project Orca 2018, an annual Overseas Community Involvement Project since 2016, working with school children in Vietnam. In December 2018, 16 RC4 students and two staff members conducted a series of lively workshops in Thanh Loc Secondary School in Cai Lay District of Tien Giang Province to build up the school children's confidence in using English.

## ENHANCING LANGUAGE SKILLS

In December 2018 and January 2019, a team of 10 students from tEnPower at Tembusu College worked with teachers and students in the Youth Development Centre, Shwegyin, Myanmar to improve their competency in English. Weekly conversation sessions on a range of topics were conducted via video calls with the teachers and students to build their confidence in using the language. The team also worked with the teachers to develop enhanced classroom activities and materials.



# Caring for the Environment



## BUILDING A GREENER CAMPUS

Emphasising NUS' commitment to preserving Singapore's rich biodiversity, fighting climate change and being an environmentally responsible campus, NUS President Professor Tan Eng Chye launched the "Planting 10,000 Trees" initiative in November 2018, in line with National Tree Planting month. About 500 mature trees will be planted throughout the campuses and 9,500 saplings nurtured in the NUS nursery. The trees include both common and endangered species and their habitats will be safeguarded by a strict tree protection policy.

The strategic planting of the trees is expected to cool the surrounding temperature by about 1° 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. It will help to create a lush and cooler environment conducive for work and play.



## Grooming climate change ambassadors

NUS held a six-week Climate Change Negotiations Training Workshop for a group of 35 youths under the age of 35, in collaboration with the National Youth Council Singapore, from August to September 2018. This is the first such workshop conducted for youths in Singapore.

The workshop aims to help youths gain a better understanding of the complex climate change

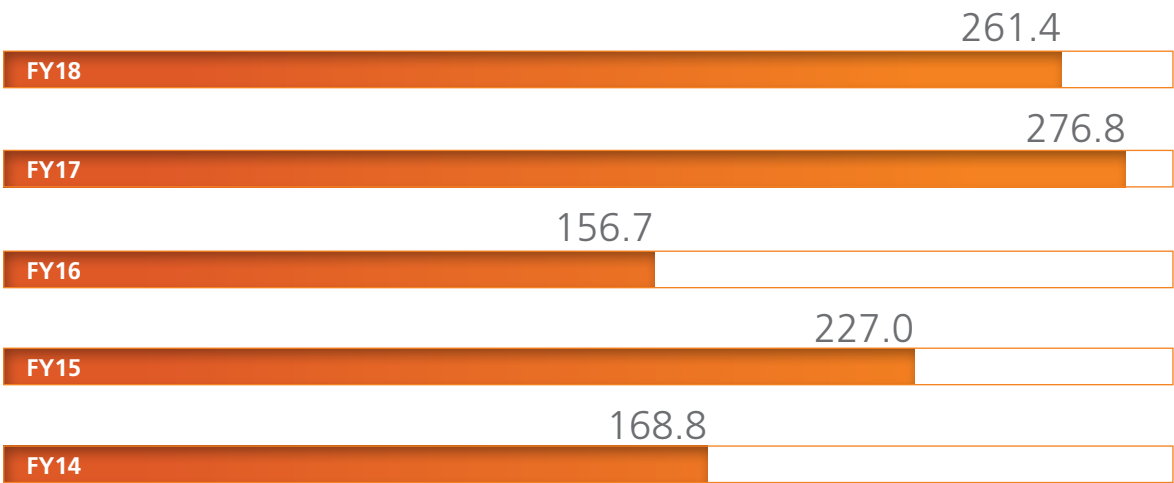
negotiations under the United Nations Framework Convention on Climate Change as well as empower them to act on climate change and promote awareness among their peers. It also prepares them to take on the role of climate change ambassadors in Singapore, and build their capability for climate change negotiations at the global stage.



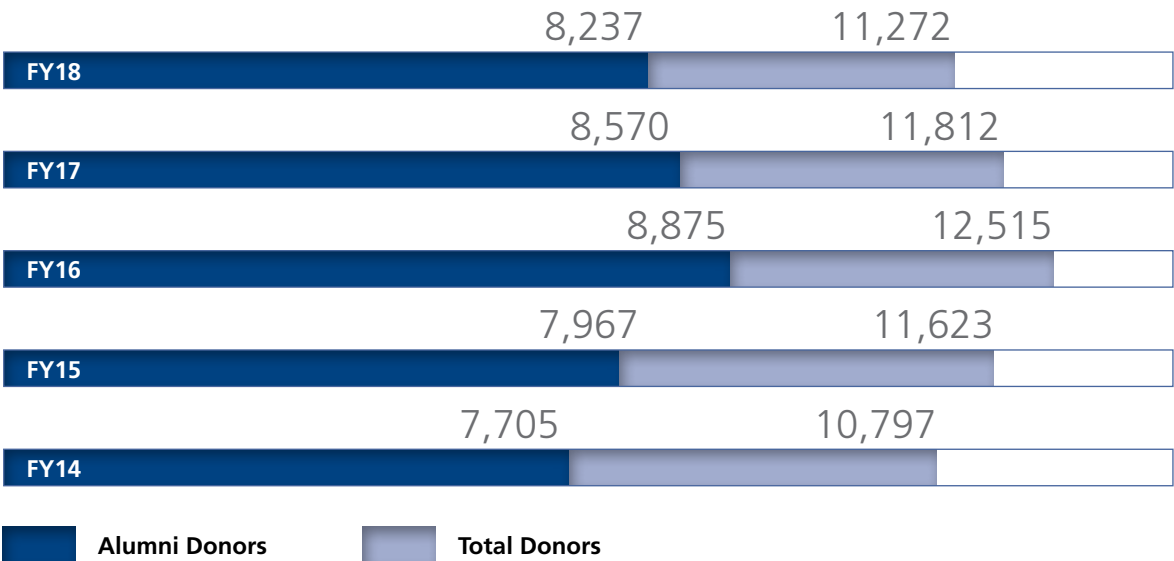
# Benefactions

The University is grateful to our donors for their generous gifts of \$261,361,446 in Financial Year 2018 (1 April 2018 to 31 March 2019).

GIFT RECEIPTS  
(S\$ MILLION)

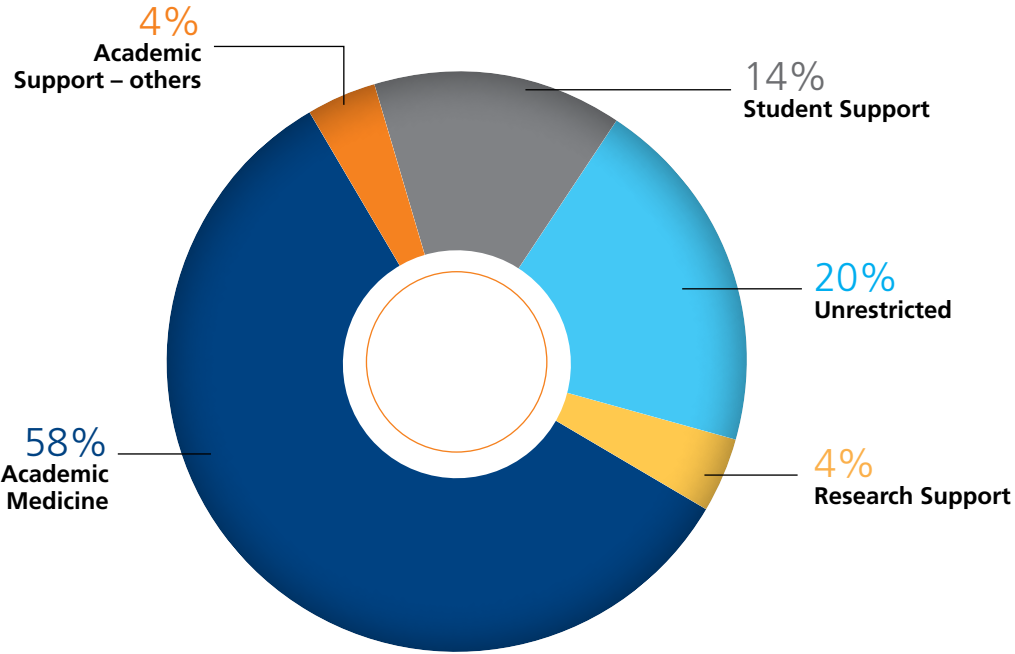


NUMBER OF DONORS



At the time of publication, gift receipts for FY18 are unaudited and exclude Singapore government matching grants.

GIFTS BY PURPOSE  
(BASED ON GIFT RECEIPTS)



In Academic Year 2018,  
**4,496** UNDERGRADUATES  
received financial support:

**2,855** BURSARIES      **1,641** SCHOLARSHIPS

In Financial Year 2018, we established  
**3** NEW NAMED PROFESSORSHIPS

NUS has benefitted from  
**116** NAMED PROFESSORSHIPS  
made possible by benefactors

# Corporate Governance

## INTRODUCTION

NUS is committed to a high standard of corporate governance and has always recognised the importance of good governance as being critical to the effective performance and operation of the University. Good governance is also crucial in realising its vision of being a leading global university, shaping the future, excelling in teaching, research, enterprise, thought-leadership and public service. The University has accordingly put in place a corporate governance structure with comprehensive and clear lines of reporting, responsibility and accountability.

## GOVERNANCE EVALUATION CHECKLIST

As both a corporate entity and an institution of public character ("IPC"), NUS adopts best practices that are closely aligned to the principles enunciated in the Code of Corporate Governance, as well as the Code of Governance for Charities and IPCs. In line with the disclosure requirement by the Charity Council that all IPCs are to disclose the extent of their compliance with the Code of Governance for Charities and IPCs, NUS' Governance Evaluation Checklist can be found at the Charity Portal website [www.charities.gov.sg](http://www.charities.gov.sg).

## OUR BOARD OF TRUSTEES

The NUS Board of Trustees comprises 18 members (including 2 executive members, NUS President and NUS Provost) appointed by the Minister for Education, and is chaired by Mr Hsieh Fu Hua. Our Board of Trustees includes respected business/industry leaders, academics, entrepreneurs, and professionals from the public and private sectors. Members are appointed on the strength of their calibre, experience, stature, ability to contribute to the oversight and development of the University, as well as strategic networking relationships they bring which are of strategic importance to the University. Profiles of the Board members are found on pages 50 to 57 of the Annual Report.

The Board of Trustees is responsible for ensuring that the University acts in the furtherance of its objectives in education and research, and properly accounts and safeguards the funds and assets of the University. The Board of Trustees works closely with the management and stakeholders of the University to shape the vision, chart the major directions, and develop programmes and initiatives to produce a strong and enduring impact for the University, and for Singapore and beyond.

## BOARD DELEGATION

To support the Board of Trustees in discharging its functions, Board committees have been formed as dictated by corporate, operational and business needs pursuant to the Constitution of the University. There are seven Board committees, namely, the Executive Committee ("ExCo"), Audit Committee ("AC"), Nominating Committee ("NC"), Remuneration Committee ("RC"), Campus Planning and Development Committee ("CPDC"), Innovation & Enterprise Committee ("IEC") and Investment Committee ("IVC").

These Board committees assist the Board of Trustees to provide oversight of the University and to facilitate decision making. Membership of the Board committees is carefully selected to ensure an equitable distribution of responsibility among Board members and promote the effectiveness of each committee's focus and contribution. Where necessary, non-Board members who have expertise in their respective fields are also co-opted to enhance the deliberations and decision making process of some of the Board committees. Each Board committee has written terms of reference which are approved by the Board. Board committees provide reports of their decisions to the Board regularly. The responsibilities and authority of the Board committees are set out in their respective terms of reference (see Appendix of this Corporate Governance statement on page 49 for more details).

## BOARD COMMITTEES

The NC reviews the composition of each Board committee annually to optimise the collective expertise of Board members and make recommendations to the Board for any change. The present composition of the Board committees is as follows:

### Executive Committee

Mr Hsieh Fu Hua (Chairman)  
Prof Tan Eng Chye  
Prof Ho Teck Hua  
Dr Cheong Koon Hean  
Mr Peter Ho Hak Ean  
Ms Kay Kuok Oon Kwong  
Mr Michael Lien Jown Leam  
Mr Loh Chin Hua  
Mr Chaly Mah Chee Kheong

### Audit Committee

Mr Chaly Mah Chee Kheong (Chairman)  
Mr Andrew Lim Ming-Hui  
Mr Abdullah Tarmugi  
Mr Eddie Chau (Co-opted)  
Mr Phillip Tan Eng Seong (Co-opted)

### Campus Planning and Development Committee

Mr Peter Ho Hak Ean (Chairman)  
Prof Tan Eng Chye  
(Alternate: Prof Ho Teck Hua)  
Dr Cheong Koon Hean  
Mr Lee Ming San  
Mr Raymond Woo (Co-opted)  
Mr Siew Man Kok (Co-opted)  
Mr Wong Fong Fui (Co-opted)

### Innovation & Enterprise Committee

Mr Goh Choon Phong (Chairman)  
Prof Tan Eng Chye  
Prof Ho Teck Hua  
Mr Andrew Lim  
Mr Chhor Eang Heang (Co-opted)  
Ms Chong Chuan Neo (Co-opted)  
Mr Russell Tham Min Yew (Co-opted)  
Mr Phillip Tan Eng Seong (Co-opted)

### Nominating Committee

Ms Kay Kuok Oon Kwong (Chairperson)  
Mr Hsieh Fu Hua  
Dr Cheong Koon Hean  
Mr Peter Ho Hak Ean  
Mr Lai Chung Han  
Mr Michael Lien Jown Leam  
Mr Loh Chin Hua  
Mr Chaly Mah Chee Kheong

### Remuneration Committee

Mr Hsieh Fu Hua (Chairman)  
Mr Peter Ho Hak Ean  
Mr Lai Chung Han  
Mr Ng Wai King  
Mr Abdullah Tarmugi  
Ms Elaine Yew Wen Suen

### Investment Committee

Mr Lee Ming San (Chairman)  
Prof Ho Teck Hua  
(Alternate: Prof Tan Eng Chye)  
Mr Michael Lien Jown Leam  
Mr Ng Wai King  
Dr Leslie Teo Eng Sipp (Co-opted)  
Mr George Raymond Zage III (Co-opted)  
Mr Lam Nguyen-Phuong (Co-opted)



## BOARD ATTENDANCE

Meetings of the Board of Trustees and the Board committees are held regularly. The attendance of the Board members at these meetings, as well as the frequency of such meetings in FY 2018 are shown in the Table below. As a general rule, Board papers are sent to Board or Board committee members about one week before each meeting to allow them to prepare

for the meetings and enable effective discussions. The Board has unfettered access to Management for any information that it may require at all times.

Apart from serving on the Board and Board committees, several Board members also served on the advisory boards and governing boards of the various Faculties and Schools of the University.

Number of meetings attended in FY 2018								
Name of Board Member	Board	ExCo	AC	NC	RC	CPDC	IEC <sup>1</sup>	IVC
Mr HSIEH Fu Hua	4/4	4/4	-	5/5	5/5	-	-	-
Amb CHAN Heng Chee	3/4	-	-	-	-	-	-	-
Dr CHEONG Koon Hean	2/4	1/4	-	2/5	-	3/3	-	-
Mr GOH Choon Phong	3/4	-	-	-	-	-	1/1	-
Mr GOH Yew Lin <sup>2</sup>	2/4	-	-	-	-	-	-	3/4
Dr Noeleen HEYZER <sup>2</sup>	3/4	-	-	-	-	-	-	-
Mr Peter HO Hak Ean	4/4	4/4	-	4/5	4/5	3/3	-	-
Prof HO Teck Hua	3/4	4/4	-	-	-	-	0/1	4/4 <sup>3</sup>
Mdm Kay KUOK Oon Kwong	3/4	3/4	-	3/5	-	-	-	-
Mr LAI Chung Han <sup>4</sup>	3/4	-	-	2/3	3/5	-	-	-
Mr LEE Ming San <sup>5</sup>	3/4	-	-	-	-	3/3	-	4/4
Mr Michael LIEN Jown Leam	3/4	-	-	-	-	-	-	4/4
Mr Andrew LIM Ming-Hui	4/4	4/4	-	4/5	-	-	1/1	3/4
Mr LOH Chin Hua	2/4	4/4	-	5/5	-	-	-	-
Mr Chaly MAH Chee Kheong	3/4	-	2/3	-	4/5	-	-	-
Mr NG Wai King	4/4	-	3/3	-	4/5	-	-	-
Prof TAN Eng Chye	4/4	4/4	-	5/5	-	3/3	1/1	-
Mr Phillip TAN Eng Seong <sup>2</sup>	3/4	4/4	3/3	5/5	-	-	0/1	-
Mr Abdullah TARMUGI	1/4	-	2/3	-	2/5	-	-	-
Dr Leslie TEO Eng Sipp <sup>6</sup>	3/4	-	-	-	-	-	-	3/4
Ms Elaine YEW Wen Suen	2/4	-	-	-	4/5	-	-	-
<b>No. of meetings held in FY2018</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>4</b>

Notes:

1. The IEC was established on 25 October 2018.
2. Mr Goh Yew Lin, Dr Noeleen Heyzer and Mr Phillip Tan Eng Seong stepped down as a Board member on 31 March 2019.
3. Prof Tan Eng Chye attended the IVC Meeting held on 21 November 2018 as alternate to Prof Ho Teck Hua.
4. Appointed as NC member on 25 October 2018.
5. Appointed as CPDC member on 24 April 2018.
6. Dr Leslie Teo stepped down as a Board member on 30 Jun 2019, after the financial year-end.
7. Ms Tan Hooi Ling was appointed a Board member on 1 June 2019, after the financial year-end.

## PROCESS FOR APPOINTMENT AND RE-APPOINTMENT OF BOARD MEMBERS

As part of the Board succession planning and renewal process, Board members are appointed for a term of up to three years and shall be eligible for re-appointment. The NC has oversight of the appointment and re-appointment of Board members. It has in place a formal process for the renewal of the Board and the selection of new members.

Board renewal takes into account the present and future needs of the University. The NC conducts an annual review of the Board's composition. Board members are invited to submit names of candidates suitable for appointment to the Board of Trustees. The NC evaluates the nominations based on the needs of the University and the skills gaps of the Board. It also considers the need for diversity in terms of gender, expertise and experience. NC members will meet with the shortlisted candidate(s) to assess their suitability and make recommendations to the Board for endorsement.

In making recommendations to the Board on re-appointment of Board members, the NC reviews, among other factors, the members' expertise, length of service and their continued ability to commit time to the affairs of the University. All Board appointments and re-appointments are approved by the Minister for Education.

## TRAINING FOR BOARD MEMBERS

Newly appointed Board members undergo an induction programme. Members are briefed on the University's objectives, long-term goals, strategies, operations and governance practices. Management gives quarterly briefings at BOT meetings to update the Board on the performance of key focus areas and new strategic initiatives. Faculty visits, lunchtime talks and briefings are regularly held to broaden the Board members' insights of education and how the University operates. In addition, relevant courses conducted by NUS' School of Continuing and Lifelong Education (SCALE) are made available to board members for continuing education.

## INDEPENDENCE OF BOARD MEMBERS

The Board adopts the practice of requiring every Board member to annually review their independence by disclosing to the NC, based on a checklist, whether there are any relationships or circumstances that might affect the member's independence in the decision-making of the Board.

As of 31 March 2019, two out of the 16 non-executive members have served on the Board for 10 years or more. They are Mdm Kay Kuok and Mr Michael Lien, who were appointed on 1 April 2008 and 1 April 2009 respectively. They were retained for their specialised expertise, broad experience and active engagement. Both members have demonstrated independence of mind in the exercise of their judgement on board matters and acted in the best interests of the University.

In accordance with the disclosure requirement of the Code of Governance for Charities and IPCs, the University confirms that there were no NUS employees receiving remuneration more than \$50,000 during the year who were family members of any Board member (including NUS President). "Family members" refers to a family member who may be expected to influence the Board member, or be influenced by the Board member, in the dealings with the University. In most cases, they would include the Board member's spouse, child, stepchild and dependant of the Board member or the Board member's spouse.

## OUR SENIOR MANAGEMENT

Management functions and day-to-day operations of the University are led by the Senior Management of the University, headed by the President Professor Tan Eng Chye with effect from 1 January 2018. The President is the University's Chief Executive Officer. Details of the management team can be found at its website [www.nus.edu.sg](http://www.nus.edu.sg).

## OUR POLICIES AND PROCEDURES TO MANAGE CONFLICTS OF INTEREST

Board members and staff are required in their respective capacities to act at all times in the best interest of the University. Policies and procedures are designed to prevent and address potential conflict-of-interest situations while promoting ethical business conduct of officers and staff in line with the strong focus of the University on integrity.

NUS' Constitution contains provisions for the management and avoidance of conflicts of interest by members of its Board of Trustees. Such provisions include (a) permitting a Board member to be interested in any transaction with NUS provided that the member has declared the nature of the interest to the Board of Trustees and abstains from participating in the Board's decision in respect of the transaction concerned, (b) permitting a Board member, or a firm associated with the member, to act in any professional capacity for the University and to be remunerated for professional services as if the Board member was not a Trustee, and (c) permitting a Board member to be reimbursed for out-of-pocket expenses, travelling and other expenses properly incurred by the Board member in attending and returning from meetings of the Board of Trustees, any of its committees, or any general meeting of the University or otherwise in connection with the affairs of the University. NUS Constitution expressly stipulates that Board members shall not receive any remuneration for services rendered by them as members of the Board of Trustees.

The University's terms of business and code of conduct for staff include a Conflict of Interest Policy which all staff members must observe and comply with. In accordance with the current Policy, staff must ensure that their private activities and interests do not conflict with their professional obligations to the University. Where there is potential violation of a prohibition, the staff member shall make a full disclosure and may request for an exception. Approval for an exception will be at the discretion of the University. In addition, in compliance with the University's prevailing policy on conflict of interest and other related policies, staff are reminded annually to declare any potential conflict for resolution.

OUR WHISTLE-BLOWING POLICY

Being an institution of higher learning, the University has the added responsibility of ensuring that all University staff uphold a high standard of integrity to maintain the trust and confidence our students and their parents have in our ability to deliver the best programmes to them. Thus, the University is committed to steward our resources responsibly by maintaining an ethical culture, one of integrity and compliance with laws, regulations and standards. The Whistle-blowing Policy is intended to provide a channel for the reporting of actual or suspected wrongdoings committed by any University staff and contractors for investigation and corrective action, as well as assurance that the whistle-blower will be protected from reprisals for whistle-blowing in good faith.

Appendix  
BOARD COMMITTEES – KEY TERMS OF REFERENCE

<p><b>1. EXECUTIVE COMMITTEE</b></p> <p>1.1 Assist the Board in the stewardship and oversight of the University and exercise such powers and/or functions on behalf of the BOT as delegated.</p> <p>1.2 Review and submit for the Board's approval the University's annual operating budgets and debt financing requirements.</p> <p>1.3 Approve supplemental budgets above \$10 million.</p> <p>1.4 Monitor the University's overall financial position and performance.</p> <p>1.5 Review and approve policies relating to financial and management accounting and reporting, with inputs from the Audit Committee or other Board Committees as appropriate.</p> <p>1.6 Review and approve policies relating to procurement of goods and services and acquisition and disposal of physical assets.</p> <p>1.7 Review and approve the Policy for Approving and Signing Authority for contracts and agreements and delegation of authority on financial matters, save in respect of treasury functions which shall be submitted for the approval of the Board.</p> <p>1.8 Approve and act on behalf of the Board on matters and policies relating to gifts and donations to the University and any fund raising activities, as may be delegated by the BOT from time to time;</p> <p>1.9 Review and approve the University's risk management framework, as well as the adequacy and effectiveness of the risk management, including risk appetite and tolerance.</p> <p><b>2. AUDIT COMMITTEE</b></p> <p>2.1 Assist the Board to fulfil its oversight responsibilities in the areas of:</p> <p>(i) systems of internal controls including financial, operational and compliance controls and financial risk management policies and systems, established by Management;</p> <p>(ii) financial reporting process;</p> <p>(iii) internal and external audit process;</p> <p>(iv) whistleblowing matters.</p> <p>2.2 Make recommendations to the Board on the appointment, re-appointment or removal of the external auditors for statutory and non-statutory audits, including certification audits, and to assess the independence, terms of engagement and fees charged.</p> <p>2.3 Assume any other oversight responsibilities as delegated by the Board.</p>	<p><b>3. REMUNERATION COMMITTEE</b></p> <p>3.1 Assist the Board in the review and approval of the remuneration framework and policies, and talent management framework for the University.</p> <p>3.2 Offer an independent perspective in assisting the Board in fulfilling its responsibility over executive remuneration.</p> <p>3.3 Approve appointments, re-appointments and, accordingly, the termination of appointment where necessary, of designated senior management positions and Deans.</p> <p><b>4. NOMINATING COMMITTEE</b></p> <p>4.1 Recommends to the Board all board appointments and re-appointments (including appointments and re-appointments of executives as Board members), subject to the approval of the Minister for Education.</p> <p>4.2 Responsible for assessing the effectiveness of the Board as a whole and the contributions and performance of each trustee to the effective functioning of the Board.</p> <p>4.3 Undertake a periodic review of the independence of each individual trustee to ensure that the decision making of the Board will not be compromised by the lack of independence of any of the trustees.</p> <p>4.4 Review the training and professional development programmes for the Board.</p> <p>4.5 Endorse the names under consideration for the appointment of chairmen of advisory boards and rectors for the final decision by NUS President.</p> <p>4.6 Recommend the appointment of NUS Pro-Chancellors and members of the University.</p> <p>4.7 Assist and advise the Board on the appointment, re-appointment, and, accordingly, the termination of appointment where necessary, of the President.</p> <p>4.8 Approve the appointments, re-appointments, and accordingly, the termination of appointment where necessary, of top management (Senior Vice President/Senior Vice Provost and above) and Vice President or designated Heads of the corporate functions.</p> <p><b>5. INVESTMENT COMMITTEE</b></p> <p>5.1 Assist the Board to oversee the activities of the Investment Office (IVO) in managing the University Endowment Fund and such other funds belonging to the University that are being managed by IVO (collectively, the "Invested Funds").</p> <p>5.2 Establish the Long Term Asset Allocation targets for the Invested Funds in such a way as to ensure that there is broad diversification of the Invested Funds across asset classes, sectors and geographies.</p>	<p>5.3 Have oversight of the overall risk-return profile for the Investment Funds, with the aim of generating an acceptable rate of return over the long term in accordance with the investment objectives set by the Board, at a level of risk that is commensurate with the requirements of the University as a public institution of higher learning. In doing so, the IVC will also have oversight of IVO's tactical strategies, manager selection process and currency hedging policies.</p> <p>5.4 Review the processes undertaken by IVO to ensure financial integrity, prudent investment actions and proper stewardship of the Invested Funds.</p> <p><b>6. CAMPUS PLANNING AND DEVELOPMENT COMMITTEE</b></p> <p>6.1 Assist the Board in providing oversight of the strategic planning and development of the University's land and buildings.</p> <p>6.2 Advise the Board on policies relating to the planning and development of the physical infrastructure of the University, including resources required for development and maintenance.</p> <p>6.3 Review and make recommendations on the long-term and annual capital budget and advise on priorities with respect to capital expenditure for the development of the University's properties.</p> <p>6.4 Review and approve, or recommend for Board's approval, implementation of the University's building and infrastructure projects in accordance with approval limits and procedures that may be prescribed from time to time by Board or its ExCo.</p> <p>6.5 Appoint and work with sub-committees of the CPDC on various building and infrastructure projects under the purview of the CPDC.</p> <p><b>7. INNOVATION &amp; ENTERPRISE COMMITTEE</b></p> <p>7.1 Act as an oversight committee to assist the Board in guiding the University's efforts in fostering innovation, entrepreneurship, industry collaborations, and research translations at the University.</p> <p>7.2 Provide strategic guidance and oversight on the University's Innovation &amp; Enterprise (I&amp;E) cluster of activities including: (1) entrepreneurship; (2) research translation; and (3) industry collaboration.</p> <p>7.3 Review and provide recommendations on key impact outcomes and indicators for the I&amp;E Cluster.</p> <p>7.4 Review and provide recommendations on key programmes in the I&amp;E Cluster.</p>
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# Board of Trustees



**Mr HsIEH Fu Hua**  
**Chairman**

Board of Trustees

*Appointed on: 1 January 2017*

Mr Hsieh serves on the boards of a number of non-profit organisations. He chairs the National University Health System, the National Gallery Singapore and the Stewardship Asia Centre, and is a board member of MOH Holdings Pte Ltd. In business, he is the Chairman of ACR Capital Holdings Pte Ltd and adviser to the Prime Partners Group, which he co-founded. He is a board director of GIC and Grab Holdings. Previously, Mr Hsieh served as Group Managing Director of BNP Prime Peregrine Group Hong Kong, CEO of Singapore Exchange, President of Temasek Holdings and Chairman of United Overseas Bank. Mr Hsieh was appointed to the NUS Council in 2003, and later NUS Board, for nine years. He is an alumnus of the NUS Business School.



**Ambassador CHAN Heng Chee**  
**Ambassador-at-Large**

Ministry of Foreign Affairs

*Appointed on: 1 April 2012*

Ambassador Chan is Chairman of the Lee Kuan Yew Centre for Innovative Cities in the Singapore University of Technology and Design. She also serves as Member of the Presidential Council for Minority Rights, Member of the Constitutional Commission 2016, Deputy Chairman of the Social Science Research Council, Member of the Executive Board of the China Cultural Centre, Member of the Science of Cities Committee, Member of the Yale-NUS Governing Board and Member of the Advisory Council on the Ethical use of Artificial Intelligence ("AI") and Data. She is also Global Co-Chair of the Asia Society. Ambassador Chan was Singapore's Ambassador to the United States, Singapore's Permanent Representative to the United Nations, High Commissioner to Canada and Ambassador to Mexico. She holds a PhD in Political Science from the National University of Singapore. She has received honorary degrees from Britain and Australia.



**Dr CHEONG Koon Hean**  
**Chief Executive Officer**

Housing & Development Board (HDB)

*Appointed on: 1 April 2013*

Dr Cheong is a board member of the HDB, a Council member of the International Federation for Housing and Planning, and a Member of the Singapore Sustainability Academy Advisory Board, NUS School of Design and Environment Advisory Committee and the NUS Engineering Advisory Board. She was also formerly Chief Executive Officer of the Urban Redevelopment Authority and Deputy Secretary of the Ministry of National Development. Dr Cheong serves on several international expert panels. She was a Global Trustee of the Urban Land Institute, Chairman of the President's Design Award jury panel and is now the Chairman of the Nominating Committee of the Lee Kuan Yew World City Prize. A Colombo Plan scholar, she holds a First Class Honours degree and University Gold Medal in Architecture and a Doctor of Architecture honoris causa from the University of Newcastle, and a Master's degree in Urban Development Planning from University College London. She is also a Tan Swan Beng Endowed Professor in Nanyang Technological University, the 5th S R Nathan Fellow, Fellow (Life) of the Singapore Institute of Architects and Honorary Fellow of the Singapore Institute of Planners.



**Mr GOH Choon Phong**  
**Chief Executive Officer**

Singapore Airlines

*Appointed on: 1 April 2015*

Mr Goh has been CEO of Singapore Airlines since 1 January 2011. He is a board director of SIA Engineering Company and is Chairman of Budget Aviation Holdings Pte Ltd, which owns and manages the SIA Group's low-cost unit Scoot. Mr Goh sits on the Board of Governors of the International Air Transport Association, which he chaired between June 2017 and June 2018, and on the executive committee of the Association of Asia Pacific Airlines. Mr Goh is also a member of the Massachusetts Institute of Technology Presidential CEO Advisory Board and an independent director of Mastercard Incorporated. He holds a Master of Science degree in Electrical Engineering and Computer Science, and three Bachelor of Science degrees, in Computer Science & Engineering, Management Science and Cognitive Science, from the Massachusetts Institute of Technology.

# Board of Trustees



**Mr Peter HO Hak Ean**  
**Senior Advisor**

Centre for Strategic Futures

**Senior Fellow**

Civil Service College

*Appointed on: 1 April 2011*

Mr Ho is Chairman of the Urban Redevelopment Authority of Singapore, the Social Science Research Council, the Singapore Centre on Environmental Life Sciences Engineering, and the Campus for Research Excellence and Technological Enterprise Governing Council. He is a Member of the Board of the National Research Foundation, the S Rajaratnam School of International Studies Board of Governors, and the Lee Kuan Yew School of Public Policy Governing Board. Mr Ho was Head of Civil Service, Permanent Secretary (Foreign Affairs), Permanent Secretary (Defence) and the inaugural Chairman of the Maritime and Port Authority of Singapore. He holds a Bachelor of Arts (Honours) in the Engineering Tripos and a Master of Arts from the University of Cambridge.



**Professor HO Teck Hua**  
**Senior Deputy President and Provost**  
**Tan Chin Tuan Centennial Professor**

National University of Singapore

*Appointed on: 1 January 2018*

Prof Ho is a board member of the National University Health System, a member of the board of directors of the National Environment Agency, a board member of the Defence Science and Technology Agency and a fellow at the Civil Service College. He is also the Executive Chairman of AI Singapore, a national research and development programme, and Chairman of the Singapore Data Science Consortium. Prof Ho holds a bachelor's degree in electrical engineering with first class honours, a master's degree in computer and information sciences from NUS, and a master's degree and PhD in decision sciences from the Wharton School of the University of Pennsylvania.



**Mdm Kay KUOK Oon Kwong**  
**Director**

Shangri-La Hotel Limited

*Appointed on: 1 April 2008*

Mdm Kuok is Managing Director of Shangri-La Hotels (M) Berhad, Chairman of Allgreen Properties Limited, and Director of Kuok (Singapore) Limited. She is the Chairman of the Board of National Healthcare Group, TTSH Community Fund and Yale-NUS College Governing Board. She is also Director of the Wildlife Reserves Singapore Conservation Fund and Director of The Courage Fund Ltd. Mdm Kuok has served on several community service and statutory boards. She is a Barrister-at-Law from Gray's Inn London.



**Mr LAI Chung Han**  
**Permanent Secretary (Education)**

Ministry of Education

*Appointed on: 19 June 2017*

Mr Lai is Permanent Secretary at the Ministry of Education. Prior to this, he held the concurrent appointments of Second Permanent Secretary (Education) and Second Permanent Secretary at the Ministry of Home Affairs. Mr Lai was formerly Chief of the Republic of Singapore Navy (RSN) from Aug 2014 to Jun 2017. His various appointments in the RSN included Commanding Officer of the missile corvette RSS Valiant and Fleet Commander. Before his appointment as Chief of Navy, Mr Lai was also Director (Policy) and Deputy Secretary (Policy) in the Ministry of Defence (MINDEF). Mr Lai holds a Bachelor of Arts (First Class Honours) in Economics from University of Cambridge and a Master of Public Administration from Harvard University.



## Board of Trustees



**Mr LEE Ming San**  
**Founder and Managing Director**

One North Capital Pte Ltd  
*Appointed on: 1 April 2018*

Mr Lee is Managing Director of One North Capital. He is a Member of the Governing Board of Duke-NUS Medical School, where he also chairs its Finance & Investment Committee and its Development Committee, as well as a Member of the Investment Committee of the National Council of Social Service. He is also a Director of Seatown Holdings Pte Ltd. Mr Lee holds a Master of Arts in Economics from Cambridge University and is an Associate of the Institute of Chartered Accountants in England and Wales.



**Mr Michael LIEN Jown Leam**  
**Executive Chairman**

Wah Hin and Company  
*Appointed on: 1 April 2009*

Mr Lien is Executive Chairman of Wah Hin, the Lien Family Office, and a Director of United Overseas Bank Limited. He was a Board Director of Temasek Holdings from 2010 to 2018. He was a Managing Director of Morgan Stanley and headed its Singapore corporate finance business up to 2002. He previously served at Singapore's Ministry of Trade and Industry. Mr Lien is also the founder of Leap Philanthropy. Mr Lien was a Colombo Plan Scholar and holds a Bachelor of Economics (First Class Honours) degree, with majors in Finance and Econometrics from Monash University, Australia.



**Mr Andrew LIM Ming-Hui**  
**Partner**

Allen & Gledhill LLP  
*Appointed on: 1 April 2012*

Mr Lim is a senior partner in, and Co-Head of Corporate Mergers & Acquisitions at Allen & Gledhill. He is currently a Director of Singapore Press Holdings Limited, Jurong Engineering Limited, Singex Pte Ltd and Sentosa Development Corporation. He also serves as a member of the NUS Law Advisory Council. Mr Lim graduated from the National University of Singapore with a Bachelor of Laws degree and a Master of Laws degree. He is a Fellow of Singapore Institute of Directors.



**Mr LOH Chin Hua**  
**Chief Executive Officer and Executive Director**

Keppel Corporation Limited  
*Appointed on: 1 April 2016*

Mr Loh is the Chairman of several companies within the Keppel Group including Keppel Land Ltd, Keppel Offshore & Marine Ltd, Keppel Infrastructure Holdings Pte Ltd, Keppel Telecommunications & Transportation Ltd and Keppel Capital Holdings Pte Ltd. He is a Board member of the Singapore Economic Development Board and a Council Member of the Singapore Business Federation. A Colombo Plan Scholar with a Bachelor in Property Administration from the Auckland University and a Presidential Key Executive Master of Business Administration from Pepperdine University, Mr Loh is also a CFA charterholder.



**Mr Chaly MAH Chee Kheong**  
**Former Chief Executive Officer**

Deloitte Asia Pacific  
*Appointed on: 1 April 2015*

Mr Mah retired as Chief Executive Officer of Deloitte Asia Pacific and Chairman of Deloitte Singapore. He is the Chairman of the Singapore Tourism Board, Singapore Accountancy Commission, Accounting Advisory Board of NUS Business School and Netlink NBN Management Pte Ltd. He also serves on the Boards of the Singapore Economic Development Board, the Monetary Authority of Singapore, CapitalLand Limited and Flipkart Private Limited. He graduated with a Bachelor of Commerce degree from the University of Melbourne. He is an associate member of the Institute of Chartered Accountants in Australia, a fellow member of CPA Australia as well as the Institute of Singapore Chartered Accountants.



**Mr NG Wai King**  
**Managing Partner**

WongPartnership LLP  
*Appointed on: 1 April 2015*

Mr Ng is Managing Partner of WongPartnership, and maintains an active mergers and acquisitions, and private equity practice. He is a Director of Singapore Exchange Limited, CapitalLand Commercial Trust Management Limited, Wah Hin and Company Private Limited and Singapore Institute of Directors. He graduated from the National University of Singapore with a Bachelor of Laws honours degree where he was awarded the AV Winslow Prize. He subsequently obtained a Master of Laws degree from Columbia University School of Law where he graduated as a Harlan Fiske Stone Scholar.

## Board of Trustees



### **Professor TAN Eng Chye**

#### **President**

National University of Singapore

*Appointed on: 1 January 2018*

Prof Tan is a board member of the Agency for Science, Technology and Research (A\*STAR), National Research Foundation, and NUS High School of Mathematics and Science. He also sits on Singapore's Future Economy Council, the International Advisory Council of the Southern University of Science and Technology (SUSTech) in China, the International Advisory Board of King Abdulaziz University in Saudi Arabia, the Global Advisory Council of Keio University in Japan, and Council for the Asian Bureau of Finance and Economic Research (ABFER). Prof Tan holds a First Class Honours degree in Mathematics from the National University of Singapore and PhD from Yale University.



### **Ms TAN Hooi Ling**

#### **Co-founder**

Grab Holdings Inc.

*Appointed on: 1 June 2019*

Ms Tan is Co-Founder of Grab, Southeast Asia's leading super app that offers the region's 650 million users the widest range of on-demand transport, food and package delivery services, as well as payments and financial services. Prior to joining Grab full-time in 2015, Ms Tan led strategic projects at Salesforce.com, working at the company's San Francisco headquarters. Before joining Salesforce.com, Ms Tan was a consultant at McKinsey & Company, advising global corporations in Southeast Asia, North America, Latin America and Australia on corporate strategy and operations. Ms Tan holds a Bachelor of Engineering (Mechanical) from the University of Bath, and a Master of Business Administration from Harvard Business School.



### **Mr Abdullah TARMUGI**

**Permanent Member of the Presidential Council for Minority Rights and**

**Former Speaker of Parliament**

*Appointed on: 1 April 2012*

Mr Tarmugi is a permanent member of the Presidential Council for Minority Rights, former Speaker of Parliament, Singapore, and former Minister of Community Development and Sports. He is also an Independent Director of GuocoLand Limited, Goodhope Asia Holdings Ltd, The Islamic Bank of Asia Limited, Summit Power International Ltd and iShine Cloud Limited. He holds an Honours degree in Social Science from the University of Singapore and a postgraduate Diploma (Merit) in Urban Studies from the University of London under the Commonwealth Scholarship.



### **Ms Elaine YEOW Wen Suen**

#### **Senior Partner**

Egon Zehnder

*Appointed on: 1 April 2014*

Ms Yew is a Senior Partner in Egon Zehnder and is also the Firm's Global Co-Head of our Leadership Advisory Practice. She works with clients on senior level search and leadership development, specifically in succession planning for C-level and board roles. She chairs the Industry Advisory Board for the NUS Centre for Future-Ready Graduates. She also serves on the Board of Workforce Singapore, the Lifelong Learning Council, and the Board of Governors of the Convent of the Holy Infant Jesus group of schools, amongst various other board and advisory board roles in Singapore and overseas. She has a Bachelor of Arts Honours degree in English and Drama from the University of Kent, UK and Master's degree in Business Administration from INSEAD, France.



# Senior Management



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1. **Prof Tan Eng Chye**  
**President**
2. **Prof Ho Teck Hua**  
**Senior Deputy President and Provost**  
Tan Chin Tuan Centennial Professor
3. **Prof Chen Tsuhan**  
**Deputy President**  
*Research and Technology*  
Distinguished Professor
4. **Prof Freddy Boey**  
**Deputy President**  
*Innovation & Enterprise*
5. **Mr John Wilton**  
**Deputy President**  
*Administration and Finance*
6. **Prof Bernard C Y Tan**  
**Senior Vice Provost**  
*Undergraduate Education*  
Shaw Professor in Information Systems and Analytics
7. **Prof John Eu-Li Wong**  
**Senior Vice President**  
*Health Affairs*  
Isabel Chan Professor in Medical Sciences
8. **Prof Yong Kwet Yew**  
**Senior Vice President**  
*Campus Infrastructure*
9. **Mr Tommy Hor**  
**Chief Information Technology Officer**
10. **Mr Nicholas Kong**  
**Chief Investment Officer**

11. **Ms Jenny Lee**  
**Vice President**  
*Endowment and Institutional Development*
12. **Prof Liu Bin**  
**Vice President**  
*Research and Technology*  
Provost's Chair
13. **Prof Susanna Leong**  
**Vice Provost**  
*Masters Programme & Lifelong Education*
14. **Prof Florence Ling**  
**Vice Provost**  
*Student Life*
15. **Prof Phoon Kok Kwang**  
**Vice Provost**  
*Academic Personnel*
16. **Mr Tan Kian Woo**  
**Vice President**  
*Finance*
17. **Ms Tan Yee Deng**  
**Vice President**  
*Human Resources*
18. **Prof Andrew Wee**  
**Vice President**  
*University and Global Relations*
19. **Ms Ovidia Lim-Rajaram**  
**Chief Communications Officer**
20. **Ms Diane C Fletcher**  
**Chief Legal Officer and General Counsel**

IMPORTANT NOTE

The Summary Financial Statements as set out on pages 66 to 76 contain only a summary of the information in the full financial statements. The Summary Financial Statements do not contain sufficient information to allow for a full understanding of the results and the state of affairs of the Group and the Company.

For further information, the full financial statements and the Auditor’s Report on those statements should be consulted. Readers who require a copy of the full financial statements can contact the Company’s Office of Finance, University Hall, Tan Chin Tuan Wing #03-02, 21 Lower Kent Ridge Road, Singapore 119077, Tel: 6516 1981. The full financial report can also be viewed at the Company’s website: <http://www.nus.edu.sg/annualreport/>.

NATIONAL UNIVERSITY OF SINGAPORE  
AND ITS SUBSIDIARIES

(INCORPORATED IN SINGAPORE. REGISTRATION NUMBER: 200604346E)

SUMMARY FINANCIAL STATEMENTS  
PREPARED FROM THE AUDITED FINANCIAL STATEMENTS  
FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

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# TRUSTEES' STATEMENT

The Trustees are pleased to present their statement to the members together with the summary financial statements of the National University of Singapore ("the Company") and its subsidiaries (collectively, "the Group"), which comprise the statements of financial position of the Group and the Company as at 31 March 2019 and the statements of comprehensive income of the Group and the Company, and related notes. These are derived from the audited financial statements of the Company and its subsidiaries for the year then ended.

### OPINION OF THE TRUSTEES

In the opinion of the Trustees,

- a) the summary financial statements has been derived and presented consistently, in all material respects with the audited financial statements of the Group and of the Company for the year ended 31 March 2019; and
- b) at the date of this statement there are reasonable grounds to believe that the Company will be able to pay its debts when they fall due.

### TRUSTEES

The Trustees of the Company in office at the date of this report are:

Mr Hsieh Fu Hua – Chairman	Mr Lee Ming San
Professor Tan Eng Chye	Mr Michael Lien Jown Leam
Ambassador Chan Heng Chee	Mr Andrew Lim Ming-Hui
Dr Cheong Koon Hean	Mr Loh Chin Hua
Mr Goh Choon Phong	Mr Chaly Mah Chee Kheong
Mr Peter Ho Hak Ean	Mr Ng Wai King
Professor Ho Teck Hua	Mr Abdullah Tarmugi
Mdm Kay Kuok Oon Kwong	Ms Elaine Yew Wen Suen
Mr Lai Chung Han	Ms Tan Hooi Ling <i>(Appointed on 1 June 2019)</i>

### ARRANGEMENTS TO ENABLE TRUSTEES TO ACQUIRE SHARES AND DEBENTURES

Neither at the end of nor at any time during the financial year was the Company a party to any arrangement whose objects are, or one of whose object is, to enable the Trustees of the Company to acquire benefits by means of the acquisition of shares or debentures of the Company or any other body corporate.

# TRUSTEES' STATEMENT

### TRUSTEES' INTERESTS IN SHARES OR DEBENTURES

The Company is a public company limited by guarantee and does not have a share capital.

At the end of the financial year, the Trustees of the Company have no interest in the share capital (including any share options) and debentures of the Company's related corporations as recorded in the register of the directors' shareholdings kept by the Company's related corporations under Section 164 of the Singapore Companies Act.

On behalf of the Trustees



**MR HSIEH FU HUA**  
Trustee



**PROFESSOR TAN ENG CHYE**  
Trustee

19 September 2019

# INDEPENDENT AUDITOR'S REPORT TO THE TRUSTEES OF NATIONAL UNIVERSITY OF SINGAPORE

### OPINION

The summary financial statements of National University of Singapore (the "Company") and its subsidiaries (the "Group"), which comprise the statements of financial position of the Group and the Company as at 31 March 2019 and the statements of comprehensive income of the Group and the Company, and related notes, are derived from the audited financial statements of the Company and its subsidiaries for the year then ended. We expressed an unmodified audit opinion on those financial statements in our report dated 31 July 2019.

In our opinion, the accompanying summary financial statements are consistent, in all material respects, with the audited financial statements and the Trustee's Statement of the Company and its subsidiaries for the year ended 31 March 2019 from which they are derived and comply with the requirements of Section 203A of the Companies Act, Chapter 50 (the Act) and the regulations made thereunder applicable to the summary financial statements.

### SUMMARY FINANCIAL STATEMENTS

The summary financial statements do not contain all the disclosures required by the Financial Reporting Standards in Singapore. Reading the summary financial statements and the auditor's report thereon, therefore, is not a substitute for reading the audited financial statements and the auditor's report thereon. The summary financial statements and the audited financial statements do not reflect the effects of events that occurred subsequent to the date of our report on the audited financial statements.

### OTHER INFORMATION

Management is responsible for other information. The other information comprises the information included in the annual report but does not include the summary financial statements and our auditor's report thereon.

Our opinion on the summary financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the summary financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the summary financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

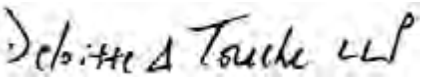
# INDEPENDENT AUDITOR'S REPORT TO THE TRUSTEES OF NATIONAL UNIVERSITY OF SINGAPORE

### MANAGEMENT'S RESPONSIBILITY FOR THE SUMMARY FINANCIAL STATEMENTS

Management is responsible for the preparation of the summary financial statements in accordance with Section 203A of the Act. In preparing the summary financial statements, Section 203A of the Act requires that the summary financial statements be derived from the annual financial statements and Trustees' Statement of the Company and its subsidiaries for the year ended 31 March 2019, and be in such form and contain such information so as to be consistent with the audited financial statements.

### AUDITOR'S RESPONSIBILITY

Our responsibility is to express an opinion on whether the summary financial statements are consistent, in all material respects, with the audited financial statements based on our procedures, which were conducted in accordance with Singapore Standard on Auditing (SSA) 810 (Revised), *Engagements to Report on Summary Financial Statements*.



**Deloitte & Touche LLP**

Public Accountants and  
Chartered Accountants

Singapore  
19 September 2019



STATEMENTS OF FINANCIAL POSITION  
AS AT 31 MARCH 2019

	GROUP		COMPANY	
	31 March 2019	31 March 2018	31 March 2019	31 March 2018
	S\$'000	S\$'000 (Restated)	S\$'000	S\$'000 (Restated)
<b>NON-CURRENT ASSETS</b>				
Subsidiary companies	–	–	128	128
Associated companies	139,763	131,822	66,118	77,330
Fixed assets	3,453,261	3,477,796	3,451,062	3,475,741
Investment properties	44,869	41,463	44,869	41,463
Intangible assets	10,652	10,645	10,652	10,644
Investments at fair value through other comprehensive income (FVTOCI)	5,303	–	2,673	–
Available-for-sale investments	–	5,903	–	3,881
Student loans	3,854	5,087	3,854	5,087
Long-term loan to subsidiary company	–	–	–	250
Prepayments	1,136	1,776	1,136	1,776
<b>Total Non-Current Assets</b>	<b>3,658,838</b>	<b>3,674,492</b>	<b>3,580,492</b>	<b>3,616,300</b>
<b>CURRENT ASSETS</b>				
Student loans	2,078	2,401	2,078	2,401
Debtors	611,221	676,660	606,037	674,718
Consumable stores	535	605	287	347
Deposits and prepayments	96,256	50,237	95,769	49,758
Amounts owing from subsidiary companies	–	–	880	883
Investments at fair value through income or expenditure (FVTIE)	9,647,005	8,804,856	9,647,005	8,804,856
Derivative financial instruments	3,137	81,863	3,137	81,863
Cash and cash equivalents	160,579	128,286	136,361	105,420
<b>Total Current Assets</b>	<b>10,520,811</b>	<b>9,744,908</b>	<b>10,491,554</b>	<b>9,720,246</b>
<b>TOTAL ASSETS</b>	<b>14,179,649</b>	<b>13,419,400</b>	<b>14,072,046</b>	<b>13,336,546</b>

The accompanying notes form an integral part of these financial statements.

STATEMENTS OF FINANCIAL POSITION  
AS AT 31 MARCH 2019

	GROUP		COMPANY	
	31 March 2019	31 March 2018	31 March 2019	31 March 2018
	S\$'000	S\$'000 (Restated)	S\$'000	S\$'000 (Restated)
<b>CURRENT LIABILITIES</b>				
Creditors and accrued expenses	284,210	300,919	281,729	298,556
Provisions for employee leave liability	107,832	105,522	105,287	102,975
Grants received in advance	310,383	359,260	308,765	355,407
Sinking fund	45,023	45,343	45,023	45,343
Deferred tuition and other fees	91,448	87,518	91,394	87,464
Derivative financial instruments	11,710	5,602	11,710	5,602
Amounts owing to subsidiary companies	–	–	28,031	26,904
Borrowings	270,000	250,000	270,000	250,000
<b>Total Current Liabilities</b>	<b>1,120,606</b>	<b>1,154,164</b>	<b>1,141,939</b>	<b>1,172,251</b>
<b>NON-CURRENT LIABILITIES</b>				
Borrowings	750,000	750,000	750,000	750,000
Deferred capital grants	1,778,151	1,886,417	1,776,011	1,884,466
Sinking fund	54,271	43,404	54,271	43,404
<b>Total Non-Current Liabilities</b>	<b>2,582,422</b>	<b>2,679,821</b>	<b>2,580,282</b>	<b>2,677,870</b>
<b>TOTAL LIABILITIES</b>	<b>3,703,028</b>	<b>3,833,985</b>	<b>3,722,221</b>	<b>3,850,121</b>
<b>NET ASSETS</b>	<b>10,476,621</b>	<b>9,585,415</b>	<b>10,349,825</b>	<b>9,486,425</b>
<b>FUNDS AND RESERVES</b>				
<b>ACCUMULATED SURPLUS</b>				
– Designated General Funds	3,105,324	2,833,978	3,000,876	2,751,730
– Other Restricted Funds	954,981	792,594	954,981	792,594
	4,060,305	3,626,572	3,955,857	3,544,324
<b>ENDOWMENT FUNDS</b>	6,375,282	5,917,074	6,353,450	5,900,375
<b>FAIR VALUE RESERVE</b>	(476)	273	(945)	263
<b>REVALUATION RESERVE</b>	41,463	41,463	41,463	41,463
<b>TRANSLATION RESERVE</b>	47	33	–	–
<b>TOTAL FUNDS AND RESERVES</b>	<b>10,476,621</b>	<b>9,585,415</b>	<b>10,349,825</b>	<b>9,486,425</b>
<b>Funds managed on behalf of the Government Ministry</b>	305,669	305,456	305,669	305,456
<b>Represented by:</b>				
<b>Net assets managed on behalf of the Government Ministry</b>	307,522	305,371	307,522	305,371
<b>Amount (receivable from) payable to Government Ministry</b>	(1,853)	85	(1,853)	85
	<b>305,669</b>	<b>305,456</b>	<b>305,669</b>	<b>305,456</b>

The accompanying notes form an integral part of these financial statements.

STATEMENTS OF COMPREHENSIVE INCOME  
FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

GROUP	DESIGNATED GENERAL FUNDS		ENDOWMENT FUNDS		OTHER RESTRICTED FUNDS		TOTAL	
	2019	2018	2019	2018	2019	2018	2019	2018
	S\$'000	S\$'000	S\$'000	S\$'000	S\$'000	S\$'000	S\$'000	S\$'000
			(Restated)		(Restated)		(Restated)	
<b>OPERATING INCOME</b>								
Tuition and other fees	524,082	483,521	–	–	–	–	524,082	483,521
Less: Scholarship expenses	(9,381)	(10,154)	(25,920)	(22,053)	(67,313)	(73,554)	(102,614)	(105,761)
Net tuition and other fees	514,701	473,367	(25,920)	(22,053)	(67,313)	(73,554)	421,468	377,760
Other income	239,812	235,889	31	4	216,898	230,560	456,741	466,453
	754,513	709,256	(25,889)	(22,049)	149,585	157,006	878,209	844,213
<b>OPERATING EXPENDITURE</b>								
Expenditure on manpower	966,796	941,674	67,301	63,931	344,167	336,121	1,378,264	1,341,726
Depreciation and amortisation expenditure	78,169	78,332	4,564	3,960	269,305	276,592	352,038	358,884
Other operating expenditure	517,794	461,169	65,911	47,302	325,346	398,250	909,051	906,721
	1,562,759	1,481,175	137,776	115,193	938,818	1,010,963	2,639,353	2,607,331
Operating deficit	(808,246)	(771,919)	(163,665)	(137,242)	(789,233)	(853,957)	(1,761,144)	(1,763,118)
Net operating investment income	77,344	122,836	213,117	193,751	22,790	16,905	313,251	333,492
Share of results (net of tax) of associated companies	2,608	7,575	5,133	(3,434)	–	–	7,741	4,141
Deficit before Grants	(728,294)	(641,508)	54,585	53,075	(766,443)	(837,052)	(1,440,152)	(1,425,485)
<b>GRANTS</b>								
Operating Grants:								
Government	856,150	717,391	–	–	556,876	572,267	1,413,026	1,289,658
Others	19,778	6,223	–	–	199,173	250,677	218,951	256,900
Deferred capital grants amortised	25,742	28,559	–	–	264,930	271,960	290,672	300,519
	901,670	752,173	–	–	1,020,979	1,094,904	1,922,649	1,847,077
<b>SURPLUS FOR THE YEAR BEFORE NON-OPERATING INVESTMENT INCOME AND INCOME TAX</b>								
	173,376	110,665	54,585	53,075	254,536	257,852	482,497	421,592
Non-operating investment income	–	–	88,043	286,657	–	–	88,043	286,657
Income tax	(6)	(6)	–	–	–	–	(6)	(6)
<b>SURPLUS FOR THE YEAR</b>	<b>173,370</b>	<b>110,659</b>	<b>142,628</b>	<b>339,732</b>	<b>254,536</b>	<b>257,852</b>	<b>570,534</b>	<b>708,243</b>
<b>OTHER COMPREHENSIVE INCOME:</b>								
Items that will not be reclassified subsequently to income or expenditure:								
Change in fair value of equity instruments designated as FVTOCI	–	–	(749)	–	–	–	(749)	–
Items that may be reclassified subsequently to income or expenditure:								
Exchange differences on translating foreign operations	14	(3)	–	–	–	–	14	(3)
Change in fair value of available-for-sale investments	–	–	–	(637)	–	–	–	(637)
Surplus on the revaluation of buildings transferred to investment properties	–	41,463	–	–	–	–	–	41,463
<b>OTHER COMPREHENSIVE INCOME FOR THE YEAR, NET OF TAX</b>	<b>14</b>	<b>41,460</b>	<b>(749)</b>	<b>(637)</b>	<b>–</b>	<b>–</b>	<b>(735)</b>	<b>40,823</b>
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR</b>	<b>173,384</b>	<b>152,119</b>	<b>141,879</b>	<b>339,095</b>	<b>254,536</b>	<b>257,852</b>	<b>569,799</b>	<b>749,066</b>

The accompanying notes form an integral part of these financial statements.

STATEMENTS OF COMPREHENSIVE INCOME  
FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

COMPANY	DESIGNATED GENERAL FUNDS		ENDOWMENT FUNDS		OTHER RESTRICTED FUNDS		TOTAL	
	2019	2018	2019	2018	2019	2018	2019	2018
	S\$'000	S\$'000	S\$'000	S\$'000	S\$'000	S\$'000	S\$'000	S\$'000
			(Restated)	(Restated)	(Restated)	(Restated)	(Restated)	(Restated)
<b>OPERATING INCOME</b>								
Tuition and other fees	518,519	478,726	–	–	–	–	518,519	478,726
Less: Scholarship expenses	(7,486)	(8,341)	(25,920)	(22,053)	(67,313)	(73,554)	(100,719)	(103,948)
Net tuition and other fees	511,033	470,385	(25,920)	(22,053)	(67,313)	(73,554)	417,800	374,778
Other income	236,112	232,224	31	4	216,898	230,560	453,041	462,788
	747,145	702,609	(25,889)	(22,049)	149,585	157,006	870,841	837,566
<b>OPERATING EXPENDITURE</b>								
Expenditure on manpower	943,144	917,953	67,301	63,931	344,167	336,121	1,354,612	1,318,005
Depreciation and amortisation expenditure	77,564	77,707	4,564	3,960	269,305	276,592	351,433	358,259
Other operating expenditure	522,928	454,882	65,911	47,302	325,346	398,250	914,185	900,434
	1,543,636	1,450,542	137,776	115,193	938,818	1,010,963	2,620,230	2,576,698
Operating deficit	(796,491)	(747,933)	(163,665)	(137,242)	(789,233)	(853,957)	(1,749,389)	(1,739,132)
Net operating investment income	75,788	122,244	213,117	193,751	22,790	16,905	311,695	332,900
Deficit before Grants	(720,703)	(625,689)	49,452	56,509	(766,443)	(837,052)	(1,437,694)	(1,406,232)
<b>GRANTS</b>								
Operating Grants:								
Government	831,482	694,713	–	–	556,876	572,267	1,388,358	1,266,980
Others	18,602	4,716	–	–	199,173	250,677	217,775	255,393
Deferred capital grants amortised	25,186	28,003	–	–	264,930	271,960	290,116	299,963
	875,270	727,432	–	–	1,020,979	1,094,904	1,896,249	1,822,336
<b>SURPLUS FOR THE YEAR BEFORE NON-OPERATING INVESTMENT INCOME AND INCOME TAX</b>								
	154,567	101,743	49,452	56,509	254,536	257,852	458,555	416,104
Non-operating investment income	–	–	88,043	286,657	–	–	88,043	286,657
Income tax	–	–	–	–	–	–	–	–
<b>SURPLUS FOR THE YEAR</b>	<b>154,567</b>	<b>101,743</b>	<b>137,495</b>	<b>343,166</b>	<b>254,536</b>	<b>257,852</b>	<b>546,598</b>	<b>702,761</b>
<b>OTHER COMPREHENSIVE INCOME:</b>								
Items that will not be reclassified subsequently to income or expenditure:								
Change in fair value of equity instruments designated as FVTOCI	–	–	(1,208)	–	–	–	(1,208)	–
Items that may be reclassified subsequently to income or expenditure:								
Change in fair value of available-for-sale investments	–	–	–	(637)	–	–	–	(637)
Surplus on the revaluation of buildings transferred to investment properties	–	41,463	–	–	–	–	–	41,463
<b>OTHER COMPREHENSIVE INCOME FOR THE YEAR, NET OF TAX</b>	<b>–</b>	<b>41,463</b>	<b>(1,208)</b>	<b>(637)</b>	<b>–</b>	<b>–</b>	<b>(1,208)</b>	<b>40,826</b>
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR</b>	<b>154,567</b>	<b>143,206</b>	<b>136,287</b>	<b>342,529</b>	<b>254,536</b>	<b>257,852</b>	<b>545,390</b>	<b>743,587</b>

The accompanying notes form an integral part of these financial statements.



# NOTES TO THE FINANCIAL STATEMENTS

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

## 1 GENERAL

The Company (Registration Number 200604346E) is incorporated in Singapore as a public company limited by guarantee and its registered office and place of business is located at 21 Lower Kent Ridge Road Singapore 119077.

The Company is principally engaged in the advancement and dissemination of knowledge, and the promotion of research and scholarship.

The consolidated financial statements of the Group and the statement of financial position, statement of comprehensive income and statement of changes in funds and reserves of the Company as of and for the year ended 31 March 2019 were authorised for issue in accordance with a resolution of the Trustees on 31 July 2019.

## 2 SIGNIFICANT ACCOUNTING POLICIES

**ADOPTION OF NEW AND REVISED STANDARDS** - In the current financial year, the Group has adopted all the new and revised FRSs and Interpretations of FRS ("INT FRS") that are relevant to its operations and effective for annual periods beginning on or after 1 April 2018. The adoption of these new/revised FRSs and INT FRSs does not result in changes to the Group's and Company's accounting policies and has no material effect on the financial statements for the current or prior years.

### FRS 109 Financial Instruments

FRS 109 introduces new requirements for 1) the classification and measurement of financial assets and financial liabilities; 2) impairment of financial assets; and 3) general hedge accounting. Details of these new requirements as well as their impact on the financial statements are described below.

The Group applied FRS 109 with an initial application date of 1 April 2018. The Group has not restated the comparative information, which continues to be reported under FRS 39.

### **a) Classification and measurement of financial assets and financial liabilities**

The Group has applied the requirements of FRS 109 to instruments that have not been derecognised as at 1 April 2018 and has not applied the requirements to instruments that have already been derecognised as at 1 April 2018. The classification of financial assets is based on two criteria: the Group's business model for managing the assets and whether the instruments' contractual cash flows represent 'solely payments of principal and interest' on the principal amount outstanding. There are no changes in classification and measurement of the Group's financial assets and financial liabilities upon the adoption of FRS 109 during the year.

# NOTES TO THE FINANCIAL STATEMENTS

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

## 2 SIGNIFICANT ACCOUNTING POLICIES (cont'd)

### **b) Impairment of financial assets**

FRS 109 requires an expected credit loss model as opposed to an incurred credit loss model under FRS 39. The expected credit loss model requires the Group to account for expected credit losses and changes in those expected credit losses at each reporting date to reflect changes in credit risk since initial recognition of the financial assets. It is no longer necessary for a credit event to have occurred before credit losses are recognised.

Specifically, FRS 109 requires the Group to recognise a loss allowance for expected credit losses on i) debt investments subsequently measured at amortised cost or at fair value through other comprehensive income; ii) lease receivables; iii) contract assets; and iv) loan commitments and financial guarantee contracts to which the impairment requirements of FRS 109 apply.

### FRS 115 Revenue from Contracts with Customers

FRS 115 supersedes FRS 11 *Construction Contracts*, FRS 18 *Revenue* and the related interpretations. FRS 115 introduces a 5-step approach to revenue recognition. Far more prescriptive guidance has been added in FRS 115 to deal with specific scenarios. Details of these new requirements as well as their impact on the financial statements are described below.

The Group has applied FRS 115 using the modified retrospective method with cumulative effect of initially applying this standard recognised at the date of initial application (1 April 2018).

FRS 115 uses the terms 'contract asset' and 'contract liability' to describe what might more commonly be known as 'accrued revenue' and 'deferred revenue', however the standard does not prohibit an entity from using alternative descriptions in the statement of financial position. The Group continues to use the terms 'accrued revenue' and 'deferred revenue' to describe such balances.

The effects of adopting FRS 109 and FRS 115 under the modified retrospective approach are presented and explained below:

### A) Impact on the Statement of Financial Position as at 1 April 2018 (date of initial application) and 31 March 2019 (current reporting period)

There are no material impact on the Statement of Financial Position as at 1 April 2018 and 31 March 2019.

### B) Impact on the Statement of Comprehensive Income for the financial year ended 31 March 2019 (current reporting period)

The adoption of FRS 109 did not have a material impact on the Statement of Comprehensive Income.

# NOTES TO THE FINANCIAL STATEMENTS

## FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

### 2 SIGNIFICANT ACCOUNTING POLICIES (cont'd)

#### B) Impact on the Statement of Comprehensive Income for the financial year ended 31 March 2019 (current reporting period) (cont'd)

The impact of FRS 115 on the Statement of Comprehensive Income are as follows:

GROUP	Under previous FRS S\$'000	Adoption of FRS 115 S\$'000	Under new FRS S\$'000
<b>OPERATING INCOME</b>			
Tuition and other fees	524,082	–	524,082
Less: Scholarship expenses	–	(102,614)	(102,614)
Net tuition and other fees	524,082	(102,614)	421,468
Other income	456,741	–	456,741
	980,823	(102,614)	878,209
<b>OPERATING EXPENDITURE</b>			
Expenditure on manpower	1,378,264	–	1,378,264
Depreciation and amortisation expenditure	352,038	–	352,038
Other operating expenditure	1,011,665	(102,614)	909,051
	2,741,967	(102,614)	2,639,353
Operating deficit	(1,761,144)	–	(1,761,144)
Net operating investment income	313,251	–	313,251
Share of results (net of tax) of associated companies	7,741	–	7,741
Deficit before Grants	(1,440,152)	–	(1,440,152)
<b>GRANTS</b>			
Operating Grants:			
Government	1,413,026	–	1,413,026
Others	218,951	–	218,951
Deferred capital grants amortised	290,672	–	290,672
	1,922,649	–	1,922,649
<b>SURPLUS FOR THE YEAR BEFORE NON-OPERATING INVESTMENT INCOME AND INCOME TAX</b>	482,497	–	482,497
Non-operating investment income	88,043	–	88,043
Income tax	(6)	–	(6)
<b>SURPLUS FOR THE YEAR</b>	<b>570,534</b>	<b>–</b>	<b>570,534</b>

# NOTES TO THE FINANCIAL STATEMENTS

## FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

### 2 SIGNIFICANT ACCOUNTING POLICIES (cont'd)

#### B) Impact on the Statement of Comprehensive Income for the financial year ended 31 March 2019 (current reporting period) (cont'd)

COMPANY	Under previous FRS S\$'000	Adoption of FRS 115 S\$'000	Under new FRS S\$'000
<b>OPERATING INCOME</b>			
Tuition and other fees	518,519	–	518,519
Less: Scholarship expenses	–	(100,719)	(100,719)
Net tuition and other fees	518,519	(100,719)	417,800
Other income	453,041	–	453,041
	971,560	(100,719)	870,841
<b>OPERATING EXPENDITURE</b>			
Expenditure on manpower	1,354,612	–	1,354,612
Depreciation and amortisation expenditure	351,433	–	351,433
Other operating expenditure	1,014,904	(100,719)	914,185
	2,720,949	(100,719)	2,620,230
Operating deficit	(1,749,389)	–	(1,749,389)
Net operating investment income	311,695	–	311,695
Deficit before Grants	(1,437,694)	–	(1,437,694)
<b>GRANTS</b>			
Operating Grants:			
Government	1,388,358	–	1,388,358
Others	217,775	–	217,775
Deferred capital grants amortised	290,116	–	290,116
	1,896,249	–	1,896,249
<b>SURPLUS FOR THE YEAR BEFORE NON-OPERATING INVESTMENT INCOME AND INCOME TAX</b>	458,555	–	458,555
Non-operating investment income	88,043	–	88,043
Income tax	–	–	–
<b>SURPLUS FOR THE YEAR</b>	<b>546,598</b>	<b>–</b>	<b>546,598</b>

Comparative figures have been reclassified to conform with current year's presentation.

#### C) Impact on the Statement of Cash Flows for the financial year ended 31 March 2019 (current reporting period)

There are no material impact on the Group's operating, investing and financing cash flows.



NOTES TO THE FINANCIAL STATEMENTS  
FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

2 SIGNIFICANT ACCOUNTING POLICIES (cont'd)

STANDARDS ISSUED BUT NOT EFFECTIVE - The Group has not adopted the following standards that have been issued but are not yet effective:

Description	Effective for annual periods beginning on or after
FRS 116 Leases	1 January 2019
Amendments to FRS 109: <i>Prepayment Features with Negative Compensation</i>	1 January 2019
Amendments to FRS 28: <i>Investments in Associates and Joint Ventures: Long-term Interests in Associates and Joint Ventures</i>	1 January 2019
Improvements to FRSs (March 2018)	1 January 2019
Amendments to FRS 1 and FRS 8: <i>Definition of Material</i>	1 January 2020

At the date of authorisation of these financial statements, management anticipates that the adoption of the FRSs, INT FRSs and amendments to FRS in future periods will not have a material impact on the financial statements of the Group and the Company in the period of their initial adoption except for the following:

FRS 116 Leases

FRS 116 was issued in June 2016 and will supersede FRS 17 *Leases* and its associated interpretative guidance.

The standard provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessees and lessors. The identification of leases, distinguishing between leases and service contracts, are determined on the basis of whether there is an identified asset controlled by the customer.

Significant changes to lessee accounting are introduced, with the distinction between operating and finance leases removed and assets and liabilities recognised in respect of all leases (subject to limited exceptions for short-term leases and leases of low value assets). The standard maintains substantially the lessor accounting approach under the predecessor FRS 17.

Management plans to adopt the standard when it becomes effective and applicable to the Group from 1 April 2019. Management anticipates that on initial adoption of FRS 116, the Group and the Company will recognise the present value of total committed payments for non-cancellable leases which fall within the scope stated above and recognise a corresponding right-of-use asset.

3 RELATED PARTIES TRANSACTIONS

Parties are considered to be related if one party has the ability to control the other party or exercise significant influence over the other party in making financial and operating decisions.

The Group receives grants from the Ministry of Education (MOE) to fund its operations and is subject to certain controls set by MOE.

NOTES TO THE FINANCIAL STATEMENTS  
FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

3 RELATED PARTIES TRANSACTIONS (cont'd)

Hence, other government-controlled enterprises are considered related parties of the Group. Many of the Group's transactions and arrangements are with related parties and the effect of these on the basis determined between the parties is reflected in these financial statements. For related parties debtors and creditors balances, the terms of these balances are disclosed in the respective notes to the financial statements.

There were transactions with corporations in which certain trustees have the ability to control or exercise significant influence.

Details of significant balances and transactions between the related parties are described below:

	GROUP		COMPANY	
	2019	2018	2019	2018
	S\$'000	S\$'000	S\$'000	S\$'000
<b>Government-controlled enterprises and companies within the Group</b>				
<b>Balances</b>				
Debtors	540,327	578,060	537,724	577,633
Amount owing by subsidiary companies	–	–	880	883
Long-term loan to subsidiary company	–	–	–	250
Creditors and accrued expenses	1,277	2,017	1,277	2,017
Amount owing to subsidiary company	–	–	28,031	26,904
Deferred capital grants	1,456,044	1,547,795	1,454,700	1,546,922
Grants received in advance	374,049	415,056	368,978	408,931
<b>Transactions</b>				
Endowed donations	512	5,313	512	5,313
Non-endowed donations	141,385	13,262	141,385	13,262
Other income	23,131	28,162	23,131	28,162
Other operating expenditure	90,905	129,988	90,905	129,988
Operating/capital grants received	2,094,985	2,013,327	2,070,617	1,990,459
<b>Corporations in which trustees have the ability to control or exercise significant influence (including donations received from trustees)</b>				
<b>Balances</b>				
Debtors	195	107	195	107
Creditors and accrued expenses	77	27	77	27
<b>Transactions</b>				
Endowed donations	9,587	1,776	9,587	1,776
Non-endowed donations	34,428	44,253	34,428	44,253
Other income	3,460	1,506	3,460	1,506
Other operating expenditure	1,070	1,213	1,070	1,213
Operating/capital grants received	134	206	134	206

# NOTES TO THE FINANCIAL STATEMENTS

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2019

4 KEY MANAGEMENT PERSONNEL COMPENSATION

The compensation for twenty-two (2018: twenty-two) key management personnel (includes the remuneration of two executive trustees) are as follows:

	GROUP AND COMPANY	
	2019	2018
	S\$'000	S\$'000
Short-term benefits	17,228	13,004
Post-employment benefits	267	222
	17,495	13,226







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