



NANYANG  
TECHNOLOGICAL  
UNIVERSITY  
SINGAPORE

**30**  
1991-2021



**YEARS OF  
MOMENTUM**

ANNUAL REPORT 2021

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## VISION & MISSION

A great global university  
founded on science and  
technology, nurturing leaders  
and creating societal impact  
through interdisciplinary  
education and research

# AT A GLANCE

## GLOBAL


**561**

university partners in academia and research

**40**

corporate and joint labs set up with leading multinationals on campus

**350**

partner universities across over 40 countries offer student attachment programmes

**6 in 10**

undergraduates have an overseas opportunity during their studies

**20**

joint/dual PhD degree programmes with overseas universities

## HONOURS


**12<sup>th</sup>**

in QS World University Rankings 2021/22

**1<sup>st</sup>**

in QS ranking of the world's young universities since 2014

**1<sup>st</sup>**

in Times Higher Education Young University Rankings 2021

**2<sup>nd</sup>**

in Nature Index 2019 Young Universities Ranking

**1<sup>st</sup>**

globally for Materials Science, Nanoscience & Nanotechnology and Energy & Fuels

## PEOPLE


**24,600**

undergraduates

**8,400**

graduate students

**4,700**

faculty and researchers from 74 countries

**266,200**

university alumni representing 156 nationalities

**9 in 10**

of the Class of 2020 received a job offer within four months of graduation

## RESEARCH & INNOVATION


**S\$628m**

in competitive research grants won in FY2020/21

**148**

patents granted in FY2020/21

**4,024**

technology disclosures received since FY2007/08

**12**

spin-off companies in FY2020/21

**48**

start-ups by staff and students in FY2020/21

## CAMPUS


**Top 10**

most photogenic university in the world (QS)

**3**

Singapore campuses

**25**

halls of residence housing more than 14,000 students

**758**

units of faculty housing

**1**

alumni house (in one-north)

# CHAIR'S MESSAGE

## DRAWING ON MOMENTOUS STRENGTH

This is my first year as Chair of the NTU Board of Trustees and I am privileged and honoured to be involved in steering the next chapter of NTU's evolution and development. In 30 short years, NTU has achieved phenomenal progress and is recognised globally for advancing knowledge, nurturing generations of students and catalysing innovation.

Last year, I was part of the NTU 2025 task force that conceived ambitious plans for the next phase of NTU's development. By achieving the goals in this five-year strategic plan, NTU will further flourish and continue to attract talented students, faculty and collaborators.

We aim to give every student capable of benefitting from an NTU education the best possible experience – this is where they will enjoy the attributes of a young research university. In a university, without the pressure of corporate targets or of profit-making, students can fully explore and follow their curiosity to learn and develop.

I am particularly keen to see NTU alumni staying connected and continuing their lifelong relationship with their alma mater. It has been gratifying to see our alumni rallying support for NTU students in their professional and personal capacities during the pandemic. In the future world of work we expect that each alumnus will face the need to reinvent their career and will experience workplace transformations years after graduation. We want the University to be a place that they always look to for support.

That NTU is ranked the world's best young university by both QS and Times Higher Education speaks to its strengths across all dimensions and aspects of the University's mission. NTU is home to corporate and joint laboratories with partners such as Rolls-Royce, HP, Alibaba and GlobalFoundries, showing that global companies are turning to us to help them solve problems faced by the industry. The University's continued ability to convene researchers and practitioners, and marry expertise in academia and industry through new applications of technology and resources, bodes well for Singapore and is something we can be proud of.

NTU has unique strengths. It is an established leader in solving urbanisation and sustainability challenges, and is leading the way in nascent areas such as the science of learning, with the National Institute of Education and our new Institute for Pedagogical Innovation, Research and Excellence among the entities that are strengthening synergies in such research across the campus.

By consolidating the activities of the NTU Smart Campus – from driverless buses to trash-to-treasure and waste-to-energy programmes – and developing them to a near-market level of useability, we can both help to address some of the world's grand challenges and enhance the intellectual energy and physical vibrancy



*We aim to give every student capable of benefitting from an NTU education the best possible experience – this is where they will enjoy the attributes of a young research university. In a university, without the pressure of corporate targets or of profit-making, students can fully explore and follow their curiosity to learn and develop.*

of NTU, which is already recognised as one of the world's most sustainable and beautiful universities.

This year is NTU's 30<sup>th</sup> anniversary. I am confident that by NTU's 50<sup>th</sup> anniversary, NTU will have soared to a new position of prominence and will have created a new template for a high-tech university town and which will be the intellectual stamping ground for a new generation of curious lifelong learners.

We are on the path to becoming a research-intensive technological university like no other, with advances and inventions that tackle the challenges of the world, from ageing to the climate crisis. NTU will be differentiated from other educational institutions by its ability to creatively harness deep technology in its solutions and which lead to high-value enterprise.

For laying the foundations and giving us the confidence to make such statements, I express my deep gratitude to former NTU Chairman Mr Koh Boon Hwee. He has steered NTU on its incredible journey over 28 years. We also acknowledge the immense contributions of Ms Lee Suet Fern and Mr Inderjit Singh Dhaliwal, who stepped down from the NTU Board in 2021 after nearly 14 years of service each. We warmly welcome new NTU Board members Prof Dewi Fortuna Anwar, Mr David Su and Mr Lam Chung Nian.

At the heart of this institution is a community whose pioneering achievements over the years have laid a strong foundation for NTU's





*“ We are on the path to becoming a research-intensive technological university like no other, with advances and inventions that tackle the challenges of the world, from ageing to the climate crisis. NTU will be differentiated from other educational institutions by its ability to creatively harness deep technology in its solutions and which lead to high-value enterprise.*

future success. On behalf of the NTU Board of Trustees, I would like to thank our students, faculty, staff and stakeholders including the Singapore government, our benefactors and our collaborators from academia and industry, for their support and encouragement.

The recent years have shown that innovation and creativity thrive amidst the toughest circumstances, and that a diverse but cohesive community like NTU is able to lead the way in catalysing change and to make a positive impact when it is most needed. As OneNTU, we will continue to build momentum on what we have started.

**MS GOH SWEE CHEN**  
Chair, Board of Trustees

# IN CONVERSATION WITH THE NTU PRESIDENT

## A RESILIENT NTU FOR THE FUTURE

**At 30 years, NTU has impressed peers in academia with its growth trajectory. In what ways is this growth evident?**

NTU has achieved in a few decades what many universities typically achieve over centuries. Over the past 30 years, we have cultivated leaders, expanded faculty excellence, redefined the classroom, made pioneering research discoveries, changed lives through innovation, and grown our beautiful garden campus while reimagining the 21<sup>st</sup> century university.

Today, NTU is home to a critical mass of global talent and infrastructure in key disciplines shaping the 4<sup>th</sup> Industrial Revolution. For the past several years, research volume has reached new yearly highs, with peer-reviewed competitive funding secured by our faculty and staff surpassing an annual research volume of S\$600 million. Our innovative educational programmes are recognised as top-tier.

The University's growth momentum is evident in how NTU is now consistently rated among the world's best universities. While rankings are imperfect measures of institutional quality, for the first time, in 2021, three different independent metrics have placed NTU in the global top 50, with QS ranking us 12<sup>th</sup> in the world. Among young universities less than 50 years old, NTU is ranked first by both QS and Times Higher Education for the first time this year.

Three interdisciplinary academic subjects offered by NTU are now ranked the world's best – materials science, nanoscience and nanotechnology, and energy and fuels – by several independent international entities, and in one widely followed global assessment, eight of our subjects are in the global top 10.

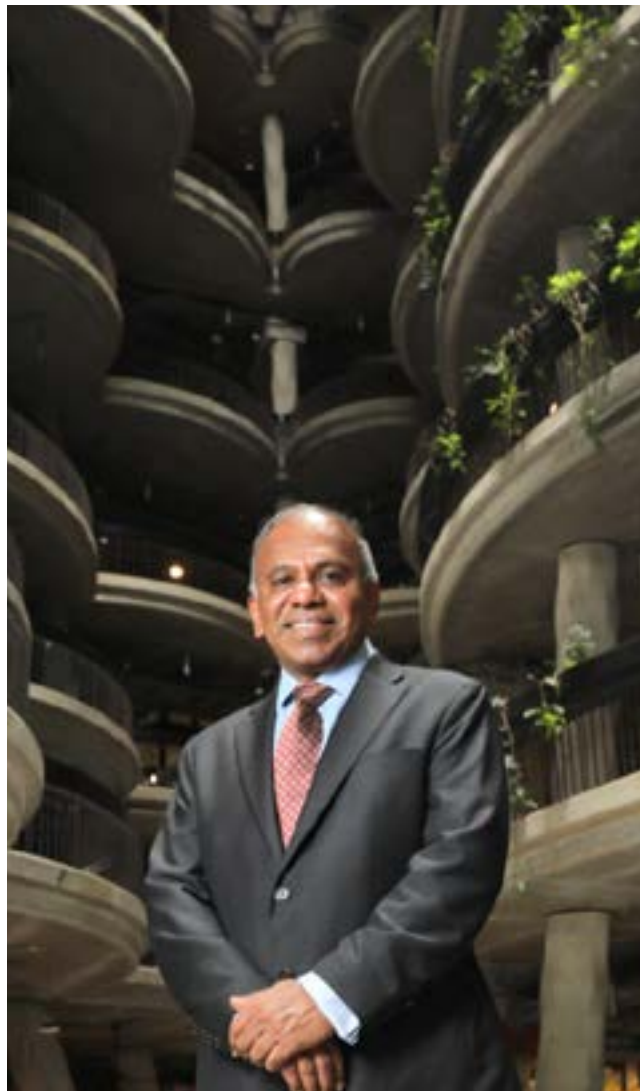
As a research university, we aspire to be a leader in diverse fields important to the fourth industrial revolution and to the future of humanity. Backed by a balanced budget and a robust financial plan, we launched our new five-year strategic plan, NTU 2025, earlier this year to achieve these goals.

**How was NTU 2025 conceived and what is it aiming to achieve?**

NTU 2025 was defined and shaped in 2020 with year-long involvement from key stakeholders across the university community, including faculty, staff, trustees, student leaders and alumni. The plan seeks to enhance excellence across NTU and in its interdisciplinary collaborations.

NTU has a platform and a responsibility to help all members of its community address societal challenges. NTU 2025 addresses four of humanity's grand challenges – mitigating our impact on the environment, harnessing the science, art and technology of learning, addressing technology's impact on humanity, and responding to the needs of healthy living and ageing. The plan also prioritises our commitment to environmental sustainability and using our beautiful Smart Campus as a living testbed to translate our intellectual strengths into impactful innovations for society.

The success of NTU 2025 hinges on all stakeholders being aligned with the NTU vision of an inclusive and cohesive OneNTU community upholding the University's core values.



**PROF SUBRA SURESH**  
President and Distinguished  
University Professor

**How has NTU dealt with the impact of the pandemic, particularly in terms of supporting students in these challenging times?**

I have to credit the extraordinary resilience and creativity that the NTU community has exhibited in navigating the unprecedented challenges posed by the pandemic.

From day one, our diligent crisis management team, together with hundreds of colleagues and students, worked hard to keep the campus community safe and healthy amid rapidly changing circumstances, in close partnership with various government agencies.

The newly restructured University Wellbeing Office, helmed by NTU's first Associate Vice President for Wellbeing, initiated programmes



to develop and strengthen a strong ecosystem of care for students, faculty and staff.

The pandemic created opportunities to be a positive force in a time of need. Our students demonstrated this in launching projects to help the most affected. For example, the students' union channelled S\$150,000 from their accumulated fund to bursaries for their peers. The Peer Helping Programme grew its membership of student volunteers by 200% in 2021.

The NTU COVID-19 Relief Package supported students facing financial hardship due to the pandemic, with the NTU Priorities Fund, created solely through philanthropic contributions, raising S\$47 million. In addition, 1,800 NTU employees raised more than S\$10 million by donating their unused vacation leave in aid of students. These are clear examples of the OneNTU spirit in action.

Extra career support measures were implemented for the AY2020 graduating cohort to help them cope with the uncertain conditions posed by the global pandemic. These included personalised career coaching and access to more than 20,000 job opportunities in AY2020.

The pandemic validated our journey begun in 2018 to modernise NTU's administrative capabilities and infrastructure harnessing digital technologies. It meant that we could pivot quickly to online learning, e-exams, virtual meetings and virtual events, and even virtual student exchanges and internships, which kept the NTU community safe yet connected through advanced digital tools for the entire enterprise.

By the end of AY2020, we delivered a total of 673 online courses spanning 14 schools and about 80% of NTU students surveyed cited a positive digital learning experience through e-courseware.



*Despite a challenging economic environment due to the COVID-19 pandemic, more than nine in 10 fresh graduates from the Class of 2020 were employed within six months of completing their final examinations.*

### **What have been some major milestones in university governance and administrative reforms?**

Mr Koh Boon Hwee stepped down as Chairman of NTU's Board of Trustees. His 28-year tenure as Board Chairman, and impact on the University, has been remarkable and we are profoundly grateful to him. Working closely with four successive presidents of the University since 1993, he steered NTU through major milestones such as its formation in the 1990s and its transition into an autonomous university in 2006. The effects of his far-reaching contributions will be felt for many years to come.

The new NTU Board Chair, Ms Goh Swee Chen, has been a Trustee since 2019. She brings global experience in the business and social sectors and we look forward to her leadership as NTU solidifies its status as a leading university shaping its own place in this dynamic landscape.

Transforming NTU into a world-class research university inevitably results in greater operating complexity and risk exposure. In administration, new strategies have been implemented to make operations more effective, sustainable, timely and fiscally prudent. This includes strengthening data governance and digitisation, and enhancing cybersecurity university-wide.

### **How has undergraduate education kept pace with the changing times?**

Careers are being transformed at a rapid pace, and the University has continued to reimagine and transform its pedagogies in both the curricular and co-curricular to better nurture essential life and work skills.

Our priority is to produce graduates who can lead change in a post-COVID-19 world, for the benefit of current and future generations. To prepare them for an increasingly interconnected, unpredictable and complex environment, we expanded the options for interdisciplinary study with 13 new degree offerings, including a new double degree in accountancy and data science and artificial intelligence.

There are also new double majors and second majors, including a second major in entrepreneurship emphasising technological innovation, a key skill for the future. To enhance students' practical workplace skills and employability, we launched work-study degree programmes to provide deep industry exposure.

Through a new interdisciplinary core curriculum and internship for all undergraduates starting in AY2021, our students will be offered more experiential and collaborative learning opportunities through on-campus, industrial and overseas experiences, including residential education, which allows over 14,000 hall residents to engage in learning activities at their doorstep.

The BSc (Data Science and Artificial Intelligence) degree programme launched in AY2018 was named among the world's 10 best AI and data science undergraduate programmes by Forbes. Our joint medical school with Imperial College London, which has produced doctors who

have risen to the challenge of combating COVID-19 and other medical challenges in Singapore, marked its 10<sup>th</sup> anniversary in October 2020.

In the next five years, we will embed new technologies such as artificial intelligence and augmented and virtual reality in learning spaces, and use big data and artificial intelligence to improve learning analytics.

**In graduate education, we see a greater push for interdisciplinarity. Can you tell us more about this?**

We recognise that integrating knowledge from diverse fields is necessary to improve our understanding of the world's problems. New Master's programmes cover topics in Industry 4.0 areas such as biomedical data science, precision scientific instrumentation and science of learning, each of which draw on multiple disciplines.

NTU's deeper focus on interdisciplinarity has led to bold new doctoral programmes such as the Neuroscience PhD Programme with a multidisciplinary focus involving 80 faculty from 10 different schools. The Interdisciplinary Graduate Programme recruited PhD students into two new programmes in AI and health technology, in addition to sustainability and ageing.

**How are NTU's lifelong education programmes supporting national priorities?**

As a publicly funded university, it is important for the nation that we develop our capacity to be a lifelong learning partner. We serve alumni and adult learners with multiple pathways to improve their skills and knowledge.

With the ongoing pandemic changing the face of entire industries, new skill sets are needed in many spheres. We are extensive supporters of the national SkillsFuture movement, providing 600 courses to adult learners who want to reskill or upskill for new careers. We have also offered paid traineeship positions in support of Singapore's SGUnited Traineeships Programme in conjunction with Workforce Singapore.

The university-wide stackable modular courses launched in 2020 build micro-credentials with course credits that can be counted towards the requirements for a full NTU Master's degree. Besides alumni credits to cover the costs of these courses, NTU also offered bonus credits to fresh graduates as part of COVID-19 relief measures.

**How successful has NTU been in clinching research partnerships and in winning major research grants?**

In FY2020, NTU secured record competitive research funding of S\$628 million. A notable development was the new S\$93.9 million Institute for Digital Molecular Analytics and Science, which will be the third Research Centre of Excellence hosted by NTU.

NTU's culture of collaboration and status as a Smart Campus and "living lab" has continued to draw partnerships to develop Industry 4.0 innovations and to undertake studies that inform policy.

With the German multinational, Continental, we launched a S\$50 million Corporate Laboratory to develop next-generation urban

mobility solutions. The new Centre for Advanced Robotics Technology Innovation, with S\$24.4 million in government funding, will create breakthroughs in intelligent autonomy, supported by industry partners such as Dyson, Nvidia and Alibaba. The Schaeffler Group has set up a new mechatronics lab for collaborative industrial robotics in NTU, while NTU is the first academic research partner of the Hyundai Motor Group Innovation Centre in Singapore, which will address smart manufacturing and future mobility.



*Launch of the Continental-NTU Corporate Laboratory, which will accelerate innovation in Singapore's automotive industry.*

The S\$20 million SP Group-NTU Joint Laboratory will enhance the resilience of Singapore's electricity network and nurture experts for the energy sector. With two government agencies, we co-founded the S\$13.7 million Future Ready Food Safety Hub to build local food safety science and R&D capabilities.

The Earth Observatory of Singapore won four of five national grants for research on sea-level rise in Singapore and the region, which will help the Republic better prepare for the impact of climate change.

Further afield, NTU's joint research institute in Guangzhou, China, received S\$61 million for research on emerging industries. NTU is also setting up the NTU China (West) Entrepreneurship and Innovation Base in the Yubei District of Chongqing to develop entrepreneurs.

With 15 Corporate and Joint Laboratories, and many other research entities, already nested inside our university, NTU has brought industry to the campus, creating hands-on research opportunities for students. The new Global Alliance of Industries @NTU (GAIN) will further catalyse research collaborations as a gateway for industry to connect with NTU's network of over 250 industry partners.

**What impact is NTU's research making globally?**

In established measures of normalised citation impact, NTU's scores are among the best in Asia. The number of publications by NTU faculty in top international refereed journals with impact factor  $\geq 20$  has risen more than threefold since 2015.

Thirty-eight NTU scientists made Clarivate Analytics' 2020 list of Highly Cited Researchers recognising the top 1% in their field by citations

each year. This is the highest number since the list's inception in 2014 and the highest for any Singapore university. Sixteen NTU researchers were recognised in more than one field of study and a significant number were recognised across materials science, chemistry and computer science.

Our researchers have been at the frontlines of COVID-19 research, including virus detection and surveillance, diagnosis and public health engagement. Two innovations in virus detection that have been part of Singapore's arsenal are a disposable breathalyser that can detect infection in less than two minutes and wastewater-based surveillance, which has also been implemented in NTU's halls of residence.

Global developments have reinforced the urgency of addressing climate and urbanisation issues. NTU is uniquely positioned to make key advances and also to show society how to prevent worse damage to come. We are committed to communicating our discoveries to generate powerful and positive real-world outcomes.

“*As NTU and the world emerges from the pandemic, I hope we will remain focused on building our momentum, seizing the opportunities and generating impact in all that we do.*”

#### **What have been some highlights in innovation and enterprise at NTU?**

The last academic year saw about 550 new technology disclosures, a 45% increase over the previous fiscal year, and almost 500 patent applications filed, a 27% increase. More than 100 technologies were licensed with total licensing revenue reaching a record high of almost S\$5 million. There were 12 spin-off companies created by NTU faculty.

Dr Shi Xu, Executive Chairman and founder of NTU spin-off Nanofilm Technologies International Ltd, Singapore, succeeded Mr Inderjit Singh Dhaliwal as the Board Chair of NTUitive, NTU's innovation and enterprise company. In 2020, Nanofilm Technologies became the first local deep technology unicorn to be listed on the Singapore Exchange. Nanofilm's filtered cathodic vacuum arc inline coating system technology, licensed from NTU, remains the gold standard in the vacuum coating industry.

Another NTU spin-off, CelePixel, founded in 2015, was acquired by the leading image sensor company Omnivision for nearly S\$100 million. CelePixel manufactures a high-speed motion detection image sensor licensed from NTU.

NTU is accelerating its efforts to foster innovation and enterprise. We organised about 120 innovation and entrepreneurship events,

both online and offline, attended by over 24,500 participants. The third Singapore-India Hackathon series, run by NTU, was expanded into an ASEAN-India Hackathon online to overcome travel restrictions.

#### **Can you share what NTU is doing to attract and retain talent?**

We are committed to scholarly excellence at NTU through various schemes that have enabled us to recruit high-calibre young researchers across all fields.

The NTU Presidential Postdoctoral Fellowship scheme, for instance, attracts the best young researchers from Singapore and globally. This has become the most competitive talent attraction scheme within three years of its inception.

NTU's commitment to recruiting and retaining top-quality faculty includes awarding President's and Provost's Chairs to outstanding senior and mid-career and junior faculty. As of 2021, we have awarded 76 chair professorships under this initiative begun in 2019.

Faculty and staff are cultivated through a leadership academy, mentoring and leadership training programmes such as LEAD@NTU, as well as Women@NTU, a new bottom-up initiative to encourage more women to pursue STEM studies and careers. Graduates of NTU's leadership academy programme currently comprise 41% of NTU's academic appointments.

#### **The NTU campus has scored a new milestone in sustainability, with all NTU complexes now Green Mark Platinum-certified. What else can the university community look forward to in terms of new infrastructure?**

The Campus Masterplan, unveiled in 2010, is almost complete. It embodies impact and vibrancy with sustainability and aesthetic principles. Exemplifying this, the new South Spine academic block will be Asia's largest wooden building when it is ready in 2022 with a Green Mark Platinum certification. It will house the Nanyang Business School and the University's Welcome Centre. Amenities being added to the campus include a new café at Yunnan Garden.

For the first time, three MRT stations will be built at a university campus in Singapore. Part of the new Jurong Region Line, these stations will be in service from 2029 and will greatly enhance NTU's accessibility to the rest of the island.

#### **What is your birthday wish for NTU?**

As NTU and the world emerges from the pandemic, I hope we will remain focused on building our momentum, seizing the opportunities and generating impact in all that we do.

NTU is endowed with a rich heritage from its predecessor institutions, Nanyang University and Nanyang Technological Institute. This heritage includes beautiful campus grounds, regularly named among the world's most beautiful. On the occasion of the University's 30<sup>th</sup> anniversary as NTU, I urge all students, staff, alumni and stakeholders to come together to build on this legacy. Let's creatively marshal our strengths and talents and continue to be pioneers at the new frontiers.

# BOARD OF TRUSTEES

As at 31 July 2021



**Ms GOH Swee Chen**  
(Board Chair)

Board Chair  
National Arts Council  
*Appointed as Board Chair  
on 1 April 2021  
Appointed as Board Member  
on 1 August 2019*



**Prof Gene D BLOCK**

Chancellor  
University of California,  
Los Angeles  
*Appointed on 1 January 2018*



**Prof Sir Leszek  
BORYSIEWICZ**

Chair  
Cancer Research UK  
*Appointed on 1 February 2018*



**Mr GOH Sin Teck**

Editor  
Lianhe Zaobao &  
Lianhe Wanbao  
*Appointed on 1 June 2012*



**Ms LAI Wei Lin**

Second Permanent Secretary  
(Education)  
Ministry of Education  
*Appointed on 1 April 2019*



**Dr LEE Shiang Long**

Group Chief Technology  
and Digital Officer  
ST Engineering  
*Appointed on 15 September 2017*



**Mr LIM Chow Kiat**

Chief Executive Officer  
GIC Pte Ltd  
*Appointed on 1 April 2015*



**Mr LIM Chuan Poh**

Chairman  
Singapore Food Agency  
*Appointed on 28 March 2006*



**Mr LO Kien Foh**

President & CEO  
Continental Automotive  
Singapore Pte Ltd  
*Appointed on 1 April 2019*



**Mr LOW Check Kian**

Director  
Cluny Park Capital Pte Ltd  
*Appointed on 1 April 2014*



**Mr Anthony MALLEK**

Consultant  
Singapore Press Holdings Ltd  
*Appointed on 1 April 2019*



**Mr TAN Chin Hwee**

Chief Executive Officer,  
Asia Pacific  
Trafigura Pte Ltd  
*Appointed on 1 April 2015*



**Mr WONG Yew Meng**

*Appointed on 1 August 2010*



**Mr ZAINUL ABIDIN Rasheed**

**Ambassador (Non-Resident)  
to Kuwait  
Ministry of Foreign Affairs**  
*Appointed on 1 April 2017*



**Prof Alexander JB ZEHNDER**

**Chairman  
Triple Z Ltd**  
*Appointed on 25 August 2009*



**Prof Subra SURESH**

**President  
Nanyang Technological  
University, Singapore**  
*Appointed on 1 January 2018*

*\*Retired from the Board on 31 March 2021*



**Mr KOH Boon Hwee  
(Board Chairman)\***

**Chairman & General Partner  
Altara Ventures Pte Ltd**  
*Appointed on 28 March 2006*



**Mrs LEE Suet Fern\***

**Director  
Morgan Lewis Stamford LLC  
International Leadership Team  
Partner, Morgan, Lewis  
& Bockius LLP**  
*Appointed on 15 July 2006*



**Mr Inderjit SINGH Dhaliwal\***

**Chief Executive Officer  
Solstar International Pte Ltd**  
*Appointed on 28 March 2006*



# UNIVERSITY LEADERSHIP

As at 31 July 2021

## PRESIDENT'S COUNCIL



**Prof Subra SURESH**  
President and Distinguished  
University Professor  
*Appointed on 1 January 2018*



**Prof LING San**  
Deputy President and Provost, and  
President's Chair in Mathematical  
Sciences  
*Appointed on 1 January 2020 and  
1 April 2019 respectively*

- Provost and Vice President (Academic)  
(1 January 2018 - 31 December 2019)
- Dean, College of Science  
(1 August 2011 - 31 December 2017)
- Chair, School of Physical &  
Mathematical Sciences  
(1 April 2008 - 31 December 2010)
- Head, Division of Mathematical  
Sciences, School of Physical &  
Mathematical Sciences  
(1 July 2005 - 31 March 2008)



**Prof LAM Khin Yong**  
Senior Vice President (Research) and  
President's Chair in Mechanical and  
Aerospace Engineering  
*Appointed on 1 January 2020 and  
1 April 2019 respectively*

- Vice President (Research)  
(1 May 2014 - 31 December 2019)
- Acting Provost  
(1 October - 31 December 2017 &  
27 October - 5 December 2014)
- Chief of Staff  
(1 July 2011 - 31 December 2017)
- Chief of Staff-Designate  
(1 April - 30 June 2011)
- Associate Provost (Graduate Education  
& Special Projects)  
(1 April 2008 - 30 June 2011)
- Chair, School of Mechanical  
& Aerospace Engineering  
(1 August 2006 - 30 April 2008)



**Prof Joseph SUNG**  
Senior Vice President (Health & Life  
Sciences), Dean, Lee Kong Chian  
School of Medicine, and Distinguished  
University Professor  
*Appointed on 1 April 2021*



**Ms TAN Aik Na**  
Senior Vice President (Administration)  
*Appointed on 1 January 2020*

- Vice President (Administration)  
(1 January 2018 - 31 December 2019)
- Chief Administration Officer  
(1 April - 31 December 2017)
- Chief Financial Officer  
(1 January - 31 December 2017)
- Chief Financial Officer-Designate  
(3 August - 31 December 2016)

## ACADEMIC APPOINTMENTS

### Prof Ralf EMMERS

Dean, S Rajaratnam School of International Studies, and President's Chair in International Relations

Appointed on 1 January 2019 and 1 April 2019 respectively

- Associate Dean, S Rajaratnam School of International Studies (1 July 2014 - 31 December 2018)
- Head, Centre for Multilateralism Studies, S Rajaratnam School of International Studies (29 May 2015 - 31 December 2018)
- Acting Head, Centre for Non-Traditional Security Studies, S Rajaratnam School of International Studies (7 February 2011 - 6 February 2012)
- Head, Graduate Studies, S Rajaratnam School of International Studies (1 October 2006 - 5 May 2009)

### Prof Christine GOH

Director, National Institute of Education, and President's Chair in Education (Linguistics & Language Education)

Appointed on 1 July 2018 and 1 April 2019 respectively

- Dean, Office of Graduate Studies & Professional Learning, National Institute of Education (1 July 2014 - 30 June 2018)
- Associate Dean, Office of Graduate Studies & Professional Learning, National Institute of Education (1 July 2010 - 30 June 2014)
- Associate Dean, Graduate Programmes & Research Office, National Institute of Education (1 January 2009 - 30 June 2010)
- Deputy Head, English Language & Literature Academic Group, National Institute of Education (1 January - 31 December 2008)

### Prof LEE Pooi See

Dean, Graduate College, and President's Chair in Materials Science and Engineering

Appointed on 1 January 2020 and 1 April 2021 respectively

- Associate Dean (Faculty Recruitment & Development), College of Engineering (1 July 2016 - 31 December 2019)

### Prof Joseph LIOW

Dean, College of Humanities, Arts, & Social Sciences, and Tan Kah Kee Chair in Comparative and International Politics

Appointed on 1 July 2018 and 1 April 2019 respectively

- Dean, S Rajaratnam School of International Studies (3 November 2014 - 31 December 2018)
- Associate Dean, S Rajaratnam School of International Studies (1 July 2008 - 2 November 2014)

### Prof Louis PHEE

Dean, College of Engineering, and Tan Chin Tuan Centennial Professor in Mechanical Engineering

Appointed on 1 June 2018 and 1 April 2019 respectively

- Interim Dean, College of Engineering (16 September 2017 - 31 May 2018)
- Chair, School of Mechanical & Aerospace Engineering (1 July 2014 - 15 September 2017)
- Head, Division of Mechatronics & Design, School of Mechanical & Aerospace Engineering (1 July 2013 - 30 June 2014)

### Prof Simon REDFERN

Dean, College of Science, and President's Chair in Earth Sciences

Appointed on 1 August 2019

### Prof Christina SOH

Dean, College of Business (Nanyang Business School), President's Chair in Information Systems and Goh Tjoei Kok Professor in Business

Appointed on 1 March 2020 and 1 April 2021 respectively

- Associate Provost (Faculty Affairs) (1 January 2018 - 29 February 2020)
- Deputy Associate Provost (Faculty Affairs) (1 November 2015 - 31 December 2017)
- Head, Division of Information Technology & Operations Management, Nanyang Business School (1 July 2014 - 22 January 2017)
- Associate Dean, Nanyang Business School (15 August 2009 - 30 June 2012)

### Prof Joseph SUNG

Senior Vice President (Health & Life Sciences), Dean, Lee Kong Chian School of Medicine, and Distinguished University Professor

Appointment details as above

## ADMINISTRATIVE APPOINTMENTS

### Mr Paul CHAIN

Chief Executive Officer, Office of Development & Facilities Management

Appointed on 1 December 2011

### Mr CHAN Wei Chuen

Registrar

Appointed on 1 January 2020

- Chief Operating Officer, Lee Kong Chian School of Medicine (1 September 2018 - 31 December 2019)
- Senior Director of Corporate Services, Lee Kong Chian School of Medicine (1 February 2014 - 31 August 2018)
- Director of Infrastructure, Lee Kong Chian School of Medicine (1 July 2012 - 31 January 2014)

### Mr Gregory CHEW

General Counsel & Chief Legal Officer, Legal & Secretarial Office

Appointed on 2 July 2018

### Dr Vivien CHIONG

Chief Communication Officer

Appointed on 1 July 2014

- Director, Corporate Communications Office (4 May 2010 - 30 June 2014)

### Dr GOH Chin Foo

Chief Health, Safety, Emergency & Security Officer

Appointed on 1 April 2019

- Chief Health, Safety & Emergency Officer (1 September 2016 - 31 March 2019)

### Ms LIEN Siaou-Sze

Vice President (University Advancement Office)

Appointed on 1 December 2020

- Vice President (Advancement) (1 January - 30 November 2020)

### Mr Alvin ONG

Chief Information Officer

Appointed on 23 October 2017

### Mr ONG Eng Hock

Chief Financial Officer

Appointed on 1 January 2018

- Head, NTU Shared Services (22 March - 31 December 2017)

### Ms Esther QUEK

Chief Human Resource Officer

Appointed on 1 August 2018

### Ms TAN Sin Mui

Chief Investment Officer

Appointed on 17 September 2018

### Mr David TOH

Interim Chief Executive Officer, NTUitive

Appointed on 1 July 2021

- Chief Technology Officer, NTUitive (1 April 2014 - 30 June 2021)
- Director, Nanyang Innovation & Enterprise Office (1 March 2013 - 31 March 2014)

## HEADS OF AUTONOMOUS INSTITUTES

### Prof Christine GOH

Director, National Institute of Education, and President's Chair in Education (Linguistics & Language Education)

Appointment details as above

### Prof Benjamin P HORTON

Director, Earth Observatory of Singapore, AXA-Nanyang Professor in Natural Hazards and President's Chair in Earth Sciences

Appointed on 1 July 2020 and 1 April 2019 respectively

- Acting Chair, Asian School of the Environment (1 July 2018 - 30 June 2020)
- Associate Chair (Faculty), Asian School of the Environment (1 January - 30 June 2018)

# UNIVERSITY LEADERSHIP

As at 31 July 2021

## Prof Staffan KJELLEBERG

Director, Singapore Centre for Environmental Life Sciences Engineering, and Distinguished University Professor

*Appointed on 1 January 2011 and 1 April 2019 respectively*

## Ambassador ONG Keng Yong

Executive Deputy Chairman, S Rajaratnam School of International Studies, and Director, Institute of Defence & Strategic Studies

*Appointed on 3 November 2014*

- Head, International Centre for Political Violence and Terrorism Research (1 January 2019 - 31 March 2020)

## Prof Joseph SUNG

Senior Vice President (Health & Life Sciences), Dean, Lee Kong Chian School of Medicine, and Distinguished University Professor

*Appointment details as above*

## Assoc Prof YOW Cheun Hoe

Head of Chinese, School of Humanities, Director, Centre for Chinese Language & Culture, and Director, Chinese Heritage Centre

*Appointed on 1 April 2017, 1 March 2017 and 1 November 2016 respectively*

- Head, Division of Chinese, School of Humanities & Social Sciences (1 July 2016 - 31 March 2017)
- Deputy Director, Centre for Chinese Language & Culture (1 March 2013 - 28 February 2017)

## OTHER SENIOR ACADEMIC APPOINTMENT HOLDERS

### Prof TAN Ooi Kiang

Deputy Provost (Education)

*Appointed on 1 August 2020*

- Deputy Provost-Designate (Education) (1 - 31 July 2020)
- Associate Provost (Undergraduate Education) (3 August 2016 - 30 June 2020)
- Deputy Associate Provost (Undergraduate Education) (1 November 2015 - 2 August 2016)
- Director, Undergraduate Education (Projects), President's Office (1 October 2014 - 31 October 2015)
- Director, Admissions & Financial Aid, Office of Admissions & Financial Aid (1 July 2012 - 30 September 2014)

## Prof GAN Chee Lip

Associate Provost (Undergraduate Education)

*Appointed on 1 August 2020*

- Associate Provost-Designate (Undergraduate Education) (1 - 31 July 2020)
- Deputy Associate Provost (Undergraduate Education) (1 September 2019 - 30 June 2020)
- Director, CSA-NTU Joint Centre (1 April 2020 - 31 March 2022)
- Executive Director, Office of Research & Technology in Defence & Security (1 April 2018 - 30 June 2023)
- Director, Renaissance Engineering Programme (4 January 2016 - 31 March 2018)
- Deputy Director, Renaissance Engineering Programme (1 May 2015 - 3 January 2016)
- Director, Temasek Laboratories (2 February 2012 - 31 December 2019)

## Prof THENG Yin Leng

Associate Provost (Faculty Affairs) and President's Chair in Information Studies

*Appointed on 1 March 2020 and 1 April 2021 respectively*

- Deputy Associate Provost (Faculty Affairs) (1 September 2019 - 29 February 2020)
- Executive Director, Ageing Research Institute for Society and Education (1 April 2020 - 31 March 2023)
- Acting Director, Ageing Research Institute for Society and Education (1 November 2015 - 31 March 2020)

## Prof TJIN Swee Chuan

Associate Provost (Graduate Education & Lifelong Learning), Co-Director, The Photonics Institute, and President's Chair in Photonics

*Appointed on 1 January 2019, 30 October 2014, and 1 April 2021 respectively*

- Associate Provost (Graduate Education) (1 January - 31 December 2018)
- Executive Director, Office of Research & Technology in Defence & Security (1 April 2015 - 31 March 2018)
- Associate Chair (Research), School of Electrical & Electronic Engineering (1 June 2014 - 31 May 2017)

## Assoc Prof Victor YEO

Associate Provost (Student Life)

*Appointed on 1 January 2021*

- Deputy Associate Provost (Student Life) (1 January 2018 - 31 December 2020)
- Associate Dean (Undergraduate Student Life), Nanyang Business School (1 October 2016 - 14 March 2018)
- Head, Division of Business Law, Nanyang Business School (1 July 2010 - 30 September 2016 & 1 January 2000 - 31 May 2005)

## Prof KWOK Kian Woon

Associate Vice President (Wellbeing)

*Appointed on 1 January 2021*

- Associate Provost (Student Life) (1 July 2011 - 31 December 2020)
- Associate Provost-Designate (Student Life) (1 April - 30 June 2011)
- Associate Chair (Academic), School of Humanities & Social Sciences (1 August 2006 - 30 June 2011)
- Head, Division of Sociology, School of Humanities & Social Sciences (1 June 2004 - 30 June 2013)

## Prof Subodh MHAISALKAR

Associate Vice President (Strategy & Partnerships), Executive Director, Energy Research Institute, and President's Chair in Energy

*Appointed on 1 March 2018, 1 April 2010 and 1 April 2019 respectively*

- Associate Chair (Academic), School of Materials Science & Engineering (1 June 2009 - 31 August 2010)

## Prof Peter PREISER

Associate Vice President (Biomedical & Life Sciences) and President's Chair in Biological Sciences

*Appointed on 1 January 2019 and 1 April 2019 respectively*

- Interim Dean, College of Science (11 March - 31 July 2019)
- Chair, School of Biological Sciences (1 November 2012 - 31 December 2018)
- Associate Provost (Graduate Education), President's Office (1 July 2011 - 30 June 2014)

## Prof Timothy John WHITE

Associate Vice President (Infrastructure & Programmes), Research Director (Engineering & Physical Sciences) and President's Chair in Materials Science and Engineering

*Appointed on 1 March 2018, 1 December 2013 and 1 April 2019 respectively*

- Associate Chair (Research), School of Materials Science & Engineering (1 March 2014 - 28 February 2018)

## Assoc Prof Valerie DU TOIT-LOW

Deputy Associate Provost (Residential Education)

*Appointed on 1 October 2016*

- Associate Dean (Undergraduate Student Life), Nanyang Business School (1 July 2014 - 30 September 2016)
- Associate Dean (Student Development & Outreach), Nanyang Business School (28 February 2011 - 30 June 2014)

## Assoc Prof Vivien HUAN

Deputy Associate Provost (Student Wellbeing)

*Appointed on 1 February 2020*

- Associate Dean, Office of Teacher Education, National Institute of Education (1 July 2014 - 31 January 2020)
- Sub-Dean, Office of Teacher Education, National Institute of Education (1 July 2010 - 31 December 2013)
- Sub-Dean, Foundation Programmes Office, National Institute of Education (1 July 2009 - 30 June 2010)

# DONORS

## GIFTS TO THE UNIVERSITY

Over the years, gifts to NTU have played a pivotal role in fuelling the growth of NTU's global position as a leader in education, research and innovation. In FY2020, we continued to draw unstinting philanthropic support from numerous donors and organisations.



### The gifts include:

**S\$7.5 million from the Lien Foundation** to develop the capacity and capabilities of educators in the University. This covers programmes targeted at leaders working in the special needs sector and the wider Special Education/Early Intervention ecosystem in Singapore; strengthening the undergraduate, postgraduate and professional learning experience; and the Lien Ying Chow Visiting Professorship and Lien Foundation Chair Professorship to support the development of university programmes and research in special and inclusive education.

**S\$5 million from Vingroup Joint Stock Company** to fund the Vingroup Graduate Scholarship. This scholarship supports students in education and research, and is awarded to outstanding Vietnamese students pursuing a PhD or MSc in science, technology or engineering. Any surplus funds may cover visits, research projects and faculty or student exchanges.

**S\$1.22 million from the Family of the Late Mr Wan Boo Sow** for the Annie Tan (Mrs Wan Boo Sow) 陳玉貞 (雲茂潮夫人) Professional Bursary and the Wan Boo Sow

“雲茂潮” Bahasa Prize. The bursary assists financially needy Singaporean Malay female students pursuing NTU undergraduate courses that can eventually lead to professional accreditation.

**S\$1 million from Dato' Sri Prof Dr Tahir** in support of bursaries for undergraduates who are financially needy. Priority will be given to Indonesian students, followed by Singaporean students. Any remaining funds will be awarded to international students.

**S\$1 million from Mr Teh Kiu Cheong** to fund the Teh Kiu Cheong and Tan Siew Hwa Bursary for Singaporean and Malaysian undergraduates in NTU.

**S\$1 million from Santarli Construction Pte Ltd** in support of the Professor Chen Charng Ning Bursary and Scholarship. The late Emeritus Professor Chen was the founding Dean of the School of Civil and Structural Engineering. The scholarship is awarded based on academic merit to Singaporeans and Permanent Residents pursuing an undergraduate degree at the College of Engineering. The bursary is awarded to those who require financial assistance.

**S\$1 million from Mr Steven Lim Cher Hong** to fund the RSTN Scholarship and Bursary for final-year students. The scholarship is awarded to students of any nationality with excellent academic and co-curricular records. The bursary helps financially disadvantaged Singaporean students.

**S\$500,000 from the Lee Foundation** in support of the NTU Priorities Fund (Term), which provides urgent assistance to students who need help with essential living expenses during the COVID-19 pandemic.

## LEAVE REDEMPTION AND DONATION EXERCISE

In 2020, more than 1,800 NTU faculty and staff donated their unconsumed annual leave as part of the University's first Leave Redemption and Donation Exercise, raising S\$10.25 million.

The spirit of OneNTU was evident with each staff donating an average of 11 days' worth of leave, with the biggest donor generously giving 15 days. This inaugural initiative allowed employees to opt in to redeem their unused annual leave value based on each person's salary rate.

Employees could donate to any of the University's Bursaries, General Endowment, Education and Student Life funds, or towards 18 other School or Centre Advancement funds.

# FINANCIAL REVIEW

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# CORPORATE GOVERNANCE

## INTRODUCTION

In April 2006 under the Nanyang Technological University (Corporatisation) Act (Cap. 192A) ("NTU Act"), NTU was corporatised from a statutory board to a not-for-profit company limited by guarantee (Reg. No. 200604393R) formed under the Companies Act (Cap. 50) of Singapore. The governance of the University takes place within the NTU Act and the University's Constitution.

NTU is committed to high standards of corporate governance, professionalism, integrity, transparency and commitment at all levels, underpinned by strong internal controls and risk management systems.

## GOVERNANCE EVALUATION CHECKLIST

In addition to the application of good governance practices as a company and registered charity (Reg. No 01955), we have, as an institution of public character ("IPC"), adopted best practices in key areas of governance that are closely aligned to the principles and guidelines in the Code of Governance for Charities and Institutions of a Public Character (the "Code"). In line with the disclosure requirement by the Charity Council that all IPCs are required to disclose the extent of their compliance with the Code, NTU's Governance Evaluation Checklist can be found at the Charity Portal website ([www.charities.gov.sg](http://www.charities.gov.sg)).

## BOARD OF TRUSTEES

The NTU Board of Trustees is the highest governing organ within the University's governance framework. The Board comprises 19 members appointed by the Minister for Education, chaired by Mr Koh Boon Hwee until his retirement from the Board on 31 March 2021, and chaired by Ms Goh Swee Chen from 1 April 2021. Our Board of Trustees includes eminent business leaders, academics, alumni, entrepreneurs and professionals from the public service and private sectors. Each member is appointed on the strength of his/her calibre, experience, stature and ability to contribute to NTU, and brings with him/her independent judgment on issues of strategy, performance, resource allocation, risk and compliance, as well as valuable relationships and networks that are essential for the growth of NTU.

The Board is responsible for ensuring that the University acts to further its objectives in education and research, and properly accounts for and safeguards the funds and assets of the University. The Board collaborates closely with Management and stakeholders of the University to shape the vision, chart the major direction, and develop programmes and initiatives to produce a strong and enduring impact for the University, for Singapore and beyond. The Board also approves, among other responsibilities, the annual budget, the use of the University's operating reserves and NTU's audited annual financial statements.

The Board embraces an effective board framework with systems and processes based on the following governance principles and practices:

1. The responsibility of recommending suitable Board candidates is under the Nominating Committee's oversight. The Nominating Committee inducts new Board members through interactive briefing sessions with the Board Chair and Management. A Board Manual is made available to all Trustees supporting their induction and engagement as part of the Board induction programme.
2. Board Committees are structured to enable the Board to fulfil its governance role, relying on each Trustee's competencies, skills and experience.
3. The Board works closely with Management to set NTU's vision, mission and strategy.
4. The Board has executive succession plans tailored to reflect NTU's current strategy and organisation.
5. The Board has an effective consultation and decision-making system with executive sessions and board meetings scheduled in advance, available professional expert advice, internal guidelines and procedures for conduct of board meetings and board approvals obtained through the Board's secure cloud-based platform.
6. The Board evaluates and reviews its own performance and appoints an independent third party to collate and analyse the returns of the Trustees.
7. The Board delineates roles and responsibilities between the Board and Management. All members of the Board, including the Board Chair, are non-executive with the exception of the President of NTU. This ensures Board independence from Management.
8. The Board has a rotation plan for continuous self-renewal, with staggering of Trustees' terms to ensure continuity. There are policies and procedures for nomination and retirement of Trustees to ensure formal board nomination and election.

# CORPORATE GOVERNANCE

## BOARD COMMITTEES

Seven Board Committees and one Advisory Committee have been established to support the Board.

The roles of the Board and Advisory Committees are briefly described below:

- The Academic Affairs Committee provides oversight and policy guidance for, and directly supports the academic concerns of, the University as well as the management of faculty and related matters.
- The Alumni and Development Committee provides oversight of the advancement of the University as a great university founded on science and technology and its relationship with its students, alumni and external communities.
- The Audit and Risk Committee oversees the University's internal controls, financial reporting and enterprise risk management.
- The Finance Committee provides oversight of the financial management of the University.
- The Investment Committee oversees the management and investment of the funds of the University.
- The Nominating Committee nominates suitable persons to serve on the Board and Committees, and other governance procedures that may apply to the Board.
- The Remuneration Committee provides oversight and policy guidance in employee compensation matters.
- The Campus Planning Advisory Committee provides oversight and advice on the implementation of the campus master plan.

The Committees operate based on the principle of delegated authority from the Board and observe their respective Terms of Reference as approved by the Board. The Terms of Reference of each of these Committees set out the role, powers and rules applying to these Committees. Non-Board members who have expertise in their respective fields may be co-opted to enhance the deliberation and decision-making process of these Committees.

## BOARD MEMBERS

As at the end of the financial year (31 March 2021), the Board of Trustees had the following 19 members.

No.	Member	Current Board Appointment(s)	Date of Appointment to the Board	Board Meetings	
				Held	Attended
1	Koh Boon Hwee	Board Chair Chair, Nominating Committee Chair, Remuneration Committee Member, Investment Committee	28 Mar 2006	4	4
2	Inderjit Singh Dhaliwal	Chair, Alumni and Development Committee	28 Mar 2006	4	4
3	Lim Chuan Poh	Member, Academic Affairs Committee Member, Investment Committee Member, Nominating Committee Member, Remuneration Committee	28 Mar 2006	4	4
4	Lee Suet Fern	Member, Nominating Committee Member, Remuneration Committee	15 Jul 2006	4	3
5	Alexander JB Zehnder	Chair, Academic Affairs Committee Member, Audit and Risk Committee Member, Finance Committee	25 Aug 2009	4	3
6	Wong Yew Meng	Member, Alumni and Development Committee	1 Aug 2010	4	4
7	Goh Sin Teck	Member, Alumni and Development Committee Member, Audit and Risk Committee	1 Jun 2012	4	4
8	Low Check Kian	Chair, Investment Committee	1 Apr 2014	4	4
9	Lim Chow Kiat	Member, Investment Committee	1 Apr 2015	4	4
10	Tan Chin Hwee	Chair, Audit and Risk Committee Member, Alumni and Development Committee Member, Investment Committee	1 Apr 2015	4	3
11	Zainul Abidin Rasheed	Member, Audit and Risk Committee	1 Apr 2017	4	4
12	Lee Shiang Long	Member, Finance Committee	15 Sep 2017	4	3
13	Subra Suresh	Member, Academic Affairs Committee Member, Finance Committee Member, Investment Committee	1 Jan 2018	4	4

# CORPORATE GOVERNANCE

No.	Member	Current Board Appointment(s)	Date of Appointment to the Board	Board Meetings	
				Held	Attended
14	Gene D. Block	Member, Academic Affairs Committee	1 Jan 2018	4	4
15	Leszek Borysiewicz	Member, Academic Affairs Committee	1 Feb 2018	4	3
16	Lo Kien Foh	Member, Alumni and Development Committee	1 Apr 2019	4	4
17	Lai Wei Lin	Member, Academic Affairs Committee Member, Nominating Committee Member, Remuneration Committee	1 Apr 2019	4	4
18	Anthony Mallek	Member, Audit and Risk Committee Member, Finance Committee	1 Apr 2019	4	4
19	Goh Swee Chen	Chair, Finance Committee Member, Nominating Committee Member, Remuneration Committee Board Chair (effective 1 April 2021)	1 Aug 2019	4	4

## Remarks:

- After 28 years of dedicated service, Mr Koh Boon Hwee retired from the Board on 31 March 2021.
- Mr Inderjit Singh Dhaliwal and Mrs Lee Suet Fern respectively retired from the Board on 31 March 2021.
- Ms Goh Swee Chen was appointed Board Chair from 1 April 2021.
- Given the duration of the student journey into and beyond NTU, including undergraduate and postgraduate education, the Board may comprise long standing members beyond ten years, eminent leaders in their respective fields who continue to contribute significantly to NTU's strategic direction. The Ministry of Education continues to endorse the appointment and renewal of any Trustee. The NTU Constitution, adopting the principles set out in the Code, was revised to reflect that appointment of any Trustee should typically be on an initial three-year term, on a renewable basis. In alignment with the Code, the Nominating Committee will principally not recommend the re-appointment of a Trustee who has already served an aggregate term of ten years, except in circumstances where the Board recognises the contribution of Trustees who have, over time, developed deep insight into NTU's ambitions, and are willing and able to continue to contribute to NTU.
- The Board of Trustees had, during the year, an aggregate meeting attendance of 93%.
- The Board Committees had, during the year, an aggregate meeting attendance of 95%.

## UNIVERSITY LEADERSHIP

The President is the University's Chief Executive Officer. He is accountable to the Board for NTU's strategic vision and mission. He has the authority to perform all acts that are necessary to give effect to the policies and statutes of the Board.

Forming NTU's core leadership team together with the President are the Provost and Deputy President and three Senior Vice Presidents, collectively the President's Council.

The Provost and Deputy President is the Chief Academic Officer and is responsible for the conduct, coordination and quality of all of NTU's academic programmes and for their future development. This includes graduate and undergraduate education, faculty development, student life and external academic liaison.

The Senior Vice President (Research) guides NTU's university-wide research agenda and its implementation. His responsibilities include research planning and policy development, research funding strategies and research infrastructure development.

The Senior Vice President (Administration) leads the administrative functions that enable the seamless delivery of NTU's academic and research priorities, including key initiatives around customer journeys that improve employee engagement, organisation capabilities and operational effectiveness.

The Senior Vice President (Health and Life Sciences) seamlessly integrates university-wide activities in health, medicine and life sciences, spanning the full spectrum of education, research, innovation and clinical practice, to forge multidisciplinary interactions among the Colleges and Schools within NTU, as well as to foster close collaborations with the medical and healthcare enterprise across Singapore and around the globe.

# CORPORATE GOVERNANCE

## POLICIES TO MANAGE CONFLICT OF INTEREST

Under the University Code of Conduct, members of the Board, faculty and staff are required in their respective capacities to act at all times in the best interest of the University. Clear policies and procedures are designed to prevent and address potential conflict-of-interest situations while promoting ethical business conduct of faculty and staff.

Trustees have a fiduciary duty to avoid a conflict between what they ought to do for NTU and what they might do for themselves. They are required to uphold a high standard of integrity and commitment in serving the University and if a conflict of interest arises, they shall recuse themselves from decisions where such conflict exists.

In addition, NTU's Constitution contains provisions for the management and avoidance of conflicts of interest by members of its Board. Such provisions include (a) permitting a Trustee to be interested in any transaction with NTU provided that the member has declared the nature of the interest to the Board and abstains from participating in the Board's decision in respect of the transaction concerned, (b) permitting a Trustee, 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 Trustee to be reimbursed for out-of-pocket expenses, travelling and other expenses properly incurred by the Trustee in attending and returning from meetings of the Board, any of its committees, or any general meeting of the University or otherwise in connection with the affairs of the University. NTU's Constitution expressly stipulates that Trustees shall not receive any remuneration for services rendered by them as members of the Board. The University has no paid staff who are close members of the family of the Trustee.

Faculty and staff must, as prescribed from time to time, also comply with policies on conflict of interest. The current policy requires faculty and staff to ensure that their private activities and interests do not conflict with their professional obligations to the University. They should take care to avoid conflict between their own personal interests and the interests of the University and should avoid or withdraw from situations where there may be a perception of such conflict. Where there is potential violation of the policy, the faculty or staff shall, as soon as possible, disclose the nature and extent of their interest to the University.

## WHISTLEBLOWING POLICIES

The University maintains a Whistleblower Protection Policy, enabling whistleblowers accessible means of reporting legitimate incidents and concerns of unethical behaviour, breach of integrity or non-compliance, all whilst maintaining the confidentiality and integrity of such reports. Reporting can be done online, through a telephone hotline or by registered post. The Ethics and Compliance Committee, comprising a spectrum of the University's leadership, oversees, addresses, reports and manages ethical and legal compliance matters throughout the University.

# TRUSTEES' STATEMENT

## TRUSTEES' STATEMENT

The Board of Trustees present their statement to the members together with the audited consolidated financial statements of Nanyang Technological University (the "University Company") and its subsidiaries (collectively the "Group") and statement of financial position and statement of changes in funds and reserves of the University Company for the financial year ended 31 March 2021.

In the opinion of the Trustees:

- (a) the consolidated financial statements of the Group and the statement of financial position and statement of changes in funds and reserves of the University Company as set out on pages 25 to 66 are drawn up so as to give a true and fair view of the financial position of the Group and of the University Company as at 31 March 2021, and the financial performance, changes in funds and reserves and cash flows of the Group and the changes in funds and reserves of the University Company for the financial year then ended;
- (b) the University Company has complied with Regulation 15 of the Charities (Institutions of a Public Character) Regulations;
- (c) the use of donation monies are in accordance with the objectives of the University Company as required under Regulation 11 of the Charities (Institutions of a Public Character) Regulations; and
- (d) at the date of this statement, there are reasonable grounds to believe that the University Company will be able to pay its debts when they fall due.

## TRUSTEES

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

Ms Goh Swee Chen	(Chair)	(Appointed as Chair on 1 April 2021)
Prof Alexander Jakob Boris Zehnder		
Mr Anthony Mallek		
Prof Gene David Block		
Mr Goh Sin Teck		
Ms Lai Wei Lin		
Dr Lee Shiang Long		
Prof Leszek Krzysztof Sir Leszek Borysiewicz		
Mr Lim Chow Kiat		
Mr Lim Chuan Poh		
Mr Lo Kien Foh		
Mr Low Check Kian		
Prof Subra Suresh		
Mr Tan Chin Hwee		
Mr Wong Yew Meng		
Mr Zainul Abidin Bin Mohamed Rasheed		

Mr Koh Boon Hwee, Mrs Lee Suet Fern and Mr Inderjit Singh Dhaliwal retired as Trustees of the University Company on 31 March 2021.



# TRUSTEES' STATEMENT

## ARRANGEMENTS TO ENABLE TRUSTEES TO ACQUIRE SHARES AND DEBENTURES

Neither at the end of the financial year nor at any time during the financial year did there subsist any arrangement whose object is to enable the Trustees of the University Company to acquire benefits by means of the acquisition of shares or debentures in the University Company or any other body corporate.

## TRUSTEES' INTERESTS IN SHARES AND DEBENTURES

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

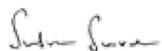
The Trustees of the University Company at the end of the financial year have no financial interest in the share capital (including any share options) and debentures of the University Company's related corporations as recorded in the register of the directors' shareholdings kept by the University Company's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

ON BEHALF OF THE BOARD OF TRUSTEES



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Ms Goh Swee Chen  
*Chair of the Board of Trustees*  
Trustee



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Prof Subra Suresh  
*President of Nanyang Technological University*  
Trustee

19 August 2021

# INDEPENDENT AUDITOR'S REPORT

TO THE BOARD OF TRUSTEES OF NANYANG TECHNOLOGICAL UNIVERSITY

## REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

### OPINION

We have audited the financial statements of Nanyang Technological University (the "University Company") and its subsidiaries ("the Group") which comprise the consolidated statement of financial position of the Group and the statement of financial position of the University Company as at 31 March 2021, and the consolidated statement of comprehensive income, statement of changes in funds and reserves and statement of cash flows of the Group and the statement of changes in funds and reserves of the University Company for the financial year then ended, and notes to the financial statements, including a summary of significant accounting policies and other explanatory information, as set out on pages 25 to 66.

In our opinion, the accompanying consolidated financial statements of the Group and the statement of financial position and statement of changes in funds and reserves of the University Company are properly drawn up in accordance with the provisions of the Companies Act, Chapter 50 (the "Act"), the Singapore Charities Act, Chapter 37 and other relevant regulations (the "Charities Act and Regulations") and Financial Reporting Standards in Singapore ("FRSs") so as to give a true and fair view of the consolidated financial position of the Group and the financial position of the University Company as at 31 March 2021 and of the consolidated financial performance, consolidated changes in funds and reserves and consolidated cash flows of the Group and of the changes in funds and reserves of the University Company for the year ended on that date.

### BASIS FOR OPINION

We conducted our audit in accordance with Singapore Standards on Auditing ("SSAs"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Group in accordance with the Accounting and Corporate Regulatory Authority ("ACRA") *Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities* ("ACRA Code") together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### INFORMATION OTHER THAN THE FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

Management is responsible for the other information. The other information obtained at the date of this auditor's report is the Trustees' Statement but does not include the financial statements and our auditor's report thereon. Our opinion on the 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 financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information obtained prior to the date of this auditor's report, 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.

### RESPONSIBILITIES OF MANAGEMENT AND TRUSTEES FOR THE FINANCIAL STATEMENTS

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with the provisions of the Act, the Charities Act and FRSs, and for devising and maintaining a system of internal accounting controls sufficient to provide a reasonable assurance that assets are safeguarded against loss from unauthorised use or disposition; and transactions are properly authorised and that they are recorded as necessary to permit the preparation of true and fair financial statements and to maintain accountability of assets.

In preparing the financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The trustees' responsibilities include overseeing the Group's financial reporting process.

### AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

# INDEPENDENT AUDITOR'S REPORT

TO THE BOARD OF TRUSTEES OF NANYANG TECHNOLOGICAL UNIVERSITY

## AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS (CONT'D)

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional skepticism throughout the audit. We also:

- (a) Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- (b) Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- (c) Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- (d) Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- (e) Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- (f) Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

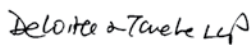
We communicate with the trustees regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

## REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

In our opinion, the accounting and other records required by the Act and the Charities Act and Regulations to be kept by the University Company and by those subsidiary corporations incorporated in Singapore of which we are the auditors have been properly kept in accordance with the provisions of the Act and the Charities Act and Regulations.

During the course of our audit, nothing has come to our attention that causes us to believe that during the year:

- (a) the University Company has not used the donation moneys in accordance with its objectives as required under Regulation 11 of the Charities (Institutions of a Public Character) Regulations; and
- (b) The University Company has not complied with the requirements of Regulation 15 of the Charities (Institutions of a Public Character) Regulations.



Public Accountants and  
Chartered Accountants  
Singapore

19 August 2021

# STATEMENTS OF FINANCIAL POSITION

31 March 2021

		Group		University Company	
	Note	2021	2020	2021	2020
		\$'000	\$'000	\$'000	\$'000
<b>ASSETS</b>					
<b>Non-current assets</b>					
Property, plant and equipment	3	1,835,329	1,962,798	1,828,385	1,957,214
Intangible assets	4	4,107	5,584	2,931	4,520
Subsidiaries	5	-	-	500	500
Associate and joint venture	6	15,022	14,671	14,846	14,407
Student loans	7	2,177	2,440	2,177	2,440
Total non-current assets		1,856,635	1,985,493	1,848,839	1,979,081
<b>Current assets</b>					
Student loans	7	1,784	1,669	1,784	1,669
Trade and other receivables	9	531,182	461,390	517,470	448,724
Financial assets at fair value through profit or loss	10	3,501,677	2,805,833	3,492,580	2,796,070
Cash and cash equivalents	11	1,107,883	997,719	1,069,629	952,610
Total current assets		5,142,526	4,266,611	5,081,463	4,199,073
<b>Total assets</b>		6,999,161	6,252,104	6,930,302	6,178,154
<b>LIABILITIES</b>					
<b>Non-current liabilities</b>					
Deferred capital grants	12	1,046,971	1,158,313	1,044,399	1,155,695
Other non-current liabilities		2,600	2,711	2,525	2,711
Sinking fund received in advance	13	307,687	313,442	307,687	313,442
Lease liabilities	18	2,794	2,091	1,148	1,337
Total non-current liabilities		1,360,052	1,476,557	1,355,759	1,473,185

# STATEMENTS OF FINANCIAL POSITION

31 March 2021

		Group		University Company	
	Note	2021	2020	2021	2020
		\$'000	\$'000	\$'000	\$'000
<b>Current liabilities</b>					
Derivative financial instruments	8	19,935	20,075	19,935	20,075
Other payables and accruals		243,689	210,134	229,194	193,588
Provisions	14	77,337	63,931	75,611	62,800
Grant received in advance					
- Operating grants	15	6,923	7,884	-	-
Grant received in advance					
- Development grants	13	42,967	41,472	42,967	41,472
Grant received in advance					
- Information technology and furniture and equipment ("IT and F&E")	13	49,094	43,559	48,632	42,997
Sinking fund received in advance	13	25,072	27,972	25,072	27,972
Short-term borrowings	16	120,800	126,500	120,800	126,500
Deferred tuition and other fees		117,211	96,830	115,934	95,383
Research grants received in advance	17	180,892	171,625	180,784	166,392
Lease liabilities	18	2,102	4,414	189	2,845
Deferred grant income	19	9,158	33,485	7,549	31,443
Income tax payable		1	256	-	-
Total current liabilities		895,181	848,137	866,667	811,467
<b>Total liabilities</b>		2,255,233	2,324,694	2,222,426	2,284,652
<b>Net assets</b>		4,743,928	3,927,410	4,707,876	3,893,502
<b>FUNDS AND RESERVES</b>					
Capital account	20	200,858	200,858	200,858	200,858
Endowment fund	21	2,573,707	2,113,128	2,574,210	2,113,631
Accumulated surplus – General fund					
- Designated	21	1,632,108	1,354,382	1,591,060	1,315,133
- Specific	21	337,255	259,042	341,748	263,880
<b>Funds and reserves</b>		4,743,928	3,927,410	4,707,876	3,893,502

See Note 22 for funds managed on behalf of the Government Ministry.

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



# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 March 2021

	Note	General fund						Endowment fund		Total	
		Designated		Specific		Total		2021	2020	2021	2020
		2021	2020	2021	2020	2021	2020				
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Group Income</b>											
Tuition and other fees		419,570	386,768	-	-	419,570	386,768	-	-	419,570	386,768
Scholarship, bursary and sponsorship expenses		(95,103)	(81,907)	-	-	(95,103)	(81,907)	-	-	(95,103)	(81,907)
Net tuition and other fees		324,467	304,861	-	-	324,467	304,861	-	-	324,467	304,861
Rental income		60,311	72,580	7	-	60,318	72,580	-	-	60,318	72,580
Research grants (non-ministry)	17	-	-	133,402	123,954	133,402	123,954	-	-	133,402	123,954
Interest income	23	3,287	6,427	481	1,990	3,768	8,417	-	-	3,768	8,417
Donations and sponsorships		13,810	15,272	21,063	25,857	34,873	41,129	-	-	34,873	41,129
Other grants		3,411	6,689	2,457	9	5,868	6,698	-	-	5,868	6,698
Sundry income		82,407	85,894	88	425	82,495	86,319	-	-	82,495	86,319
Deferred capital grants amortised (non-ministry)	12	12,566	18,547	18,968	17,799	31,534	36,346	-	-	31,534	36,346
Total income before profit on investments and share of associate and joint venture's results		500,259	510,270	176,466	170,034	676,725	680,304	-	-	676,725	680,304
Profit on investments	25	134,358	13,205	58,139	5,253	192,497	18,458	473,799	45,028	666,296	63,486
Share of associate and joint venture's results	6	(88)	(125)	-	-	(88)	(125)	439	1,344	351	1,219
Total income after profit on investments and share of associate and joint venture's results		634,529	523,350	234,605	175,287	869,134	698,637	474,238	46,372	1,343,372	745,009
<b>Expenditure</b>											
Expenditure on manpower		696,055	723,355	244,254	225,929	940,309	949,284	2,229	2,157	942,538	951,441
Teaching/research/administration		190,793	234,407	93,796	116,357	284,589	350,764	-	-	284,589	350,764
Scholarship, bursary and sponsorship expenses		12,876	21,638	86,152	73,614	99,028	95,252	-	-	99,028	95,252
Maintenance		97,452	109,537	8,060	6,115	105,512	115,652	3	-	105,515	115,652
Depreciation of property, plant and equipment	3	69,832	87,101	194,188	185,638	264,020	272,739	-	-	264,020	272,739
Amortisation of intangible assets	4	2,437	2,970	11	7	2,448	2,977	-	-	2,448	2,977
Capital expenditure not capitalised		10,531	9,249	4,687	6,113	15,218	15,362	-	-	15,218	15,362
Loss on disposal of property, plant and equipment		333	564	264	635	597	1,199	-	-	597	1,199
Other expenses		1,004	152	14	47	1,018	199	1,447	2,023	2,465	2,222
Total expenses		1,081,313	1,188,973	631,426	614,455	1,712,739	1,803,428	3,679	4,180	1,716,418	1,807,608
<b>(Deficit)/Surplus before grants from ministries</b>	26	(446,784)	(665,623)	(396,821)	(439,168)	(843,605)	(1,104,791)	470,559	42,192	(373,046)	(1,062,599)

# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 March 2021

	Note	General fund						Endowment fund		Total	
		Designated		Specific		Total		2021	2020	2021	2020
		2021	2020	2021	2020	2021	2020				
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Group (cont'd)</b>											
<b>Grants from ministries</b>											
Development grants	13	5,351	8,507	1,313	4,468	6,664	12,975	-	-	6,664	12,975
Operating grants	27	562,267	566,932	-	206	562,267	567,138	-	-	562,267	567,138
Research grants	17	-	-	220,782	246,928	220,782	246,928	-	-	220,782	246,928
Other grants		14,406	35,645	106,086	45,101	120,492	80,746	-	-	120,492	80,746
Government grant income	24	52,931	-	-	-	52,931	-	-	-	52,931	-
Deferred capital grants amortised	12	29,788	43,382	148,150	144,527	177,938	187,909	-	-	177,938	187,909
Total grants from ministries		664,743	654,466	476,331	441,230	1,141,074	1,095,696	-	-	1,141,074	1,095,696
<b>Surplus/(Deficit) after grants from ministries</b>											
		217,959	(11,157)	79,510	2,062	297,469	(9,095)	470,559	42,192	768,028	33,097
Taxation	28	(2)	(268)	-	-	(2)	(268)	-	-	(2)	(268)
<b>Surplus/(Deficit) for the year representing total comprehensive income/ (loss) for the year</b>											
		217,957	(11,425)	79,510	2,062	297,467	(9,363)	470,559	42,192	768,026	32,829

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

# STATEMENTS OF CHANGES IN FUNDS AND RESERVES

Year ended 31 March 2021

	Capital account	Endowment fund	Accumulated surplus		Total
			General fund		
			Designated	Specific	
	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Group</b>					
At 31 Mar 2019, as previously reported	200,858	2,038,964	973,365	599,759	3,812,946
Reclassification	-	-	336,872	(336,872)	-
At 1 April 2019, restated	200,858	2,038,964	1,310,237	262,887	3,812,946
<i>Total comprehensive income/(loss) for the year:</i>					
Surplus/(Deficit) for the year	-	42,192	(11,425)	2,062	32,829
<i>Transactions recognised directly in funds:</i>					
Donations	-	28,320	-	-	28,320
Government matching grants	-	53,315	-	-	53,315
Fund transfers	-	(49,663)	55,570	(5,907)	-
At 31 March 2020	200,858	2,113,128	1,354,382	259,042	3,927,410
<i>Total comprehensive income/(loss) for the year:</i>					
Surplus for the year	-	470,559	217,957	79,510	768,026
<i>Transactions recognised directly in funds:</i>					
Donations	-	9,825	-	-	9,825
Government matching grants	-	38,667	-	-	38,667
Fund transfers	-	(58,472)	59,769	(1,297)	-
At 31 March 2021	200,858	2,573,707	1,632,108	337,255	4,743,928
<b>University Company</b>					
At 31 Mar 2019, as previously reported	200,858	2,039,467	935,269	609,915	3,785,509
Reclassification	-	-	340,991	(340,991)	-
At 1 April 2019, restated	200,858	2,039,467	1,276,260	268,924	3,785,509
<i>Total comprehensive income/(loss) for the year:</i>					
Surplus/(Deficit) for the year	-	42,192	(16,697)	863	26,358
<i>Transactions recognised directly in funds:</i>					
Donations	-	28,320	-	-	28,320
Government matching grants	-	53,315	-	-	53,315
Fund transfers	-	(49,663)	55,570	(5,907)	-
At 31 March 2020	200,858	2,113,631	1,315,133	263,880	3,893,502
<i>Total comprehensive income/(loss) for the year:</i>					
Surplus for the year	-	470,559	216,158	79,165	765,882
<i>Transactions recognised directly in funds:</i>					
Donations	-	9,825	-	-	9,825
Government matching grants	-	38,667	-	-	38,667
Fund transfers	-	(58,472)	59,769	(1,297)	-
At 31 March 2021	200,858	2,574,210	1,591,060	341,748	4,707,876

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

# CONSOLIDATED STATEMENT OF CASH FLOWS

Year ended 31 March 2021

	Note	2021 \$'000	2020 \$'000
<b>Group</b>			
<b>Operating activities</b>			
Deficit before grants from ministries		(373,046)	(1,062,599)
Adjustments for:			
Research grant income		(133,402)	(123,954)
Depreciation of property, plant and equipment		264,020	272,739
Amortisation of intangible assets		2,448	2,977
Loss on disposal of property, plant and equipment		597	1,199
Profit on investments		(666,296)	(63,486)
Deferred capital grants amortised (non-ministry)		(31,534)	(36,346)
Interest income		(3,768)	(8,417)
Share of associate and joint venture's results		(351)	(1,219)
Interest expense on lease liabilities		138	162
		(941,194)	(1,018,944)
Changes in working capital:			
Other payables		(297)	21,382
Trade and other receivables		(33,847)	(84,874)
Deferred tuition and other fees		20,381	2,323
Loans repaid by students		148	224
Cash used in operations		(954,809)	(1,079,889)
Donations received for Endowment Fund		9,825	28,320
Income taxes paid		(257)	(262)
Interest paid		(138)	(162)
<b>Cash flows used in operating activities</b>		<b>(945,379)</b>	<b>(1,051,993)</b>
<b>Investing activities</b>			
Acquisition of property, plant and equipment		(134,081)	(166,119)
Acquisition of intangible assets		(923)	(527)
Purchase of financial assets		(847,044)	(1,562,045)
Proceeds from disposal of property, plant and equipment		423	423
Proceeds from sale of financial assets		787,484	1,700,734
Investment in associate/joint venture		-	(13,070)
Increase/(Decrease) in money market funds and cash held by custodian banks	11	29,872	(161,767)
Interest received		5,697	8,491
<b>Cash flows used in investing activities</b>		<b>(158,572)</b>	<b>(193,880)</b>

# CONSOLIDATED STATEMENT OF CASH FLOWS

Year ended 31 March 2021

	Note	2021 \$'000	2020 \$'000
<b>Financing activities</b>			
Sinking fund received		-	47,725
IT and F&E grant received		22,600	23,161
Research grants received		371,505	457,183
Operating grants received, net of payment of goods and service tax expense on tuition fees and tuition grants		550,217	503,133
Development grants and related income received		18,396	32,003
Government ministry grants received		159,159	202,227
Job Support Scheme grants received		103,085	-
Repayment of borrowings		(5,700)	(10,500)
Repayment of lease liabilities		(5,147)	(2,744)
<b>Cash flows from financing activities</b>		<b>1,214,115</b>	<b>1,252,188</b>
<b>Net increase in cash and cash equivalents</b>		<b>110,164</b>	<b>6,315</b>
Cash and cash equivalents at beginning of the year		997,719	991,404
<b>Cash and cash equivalents at end of the year</b>	11	<b>1,107,883</b>	<b>997,719</b>

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

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 1 GENERAL

Nanyang Technological University ("NTU" or the "University Company") is incorporated and domiciled in Singapore as a Company limited by guarantee under the Singapore Companies Act, Chapter 50. The University Company's registered office and place of business is located at 50 Nanyang Avenue Singapore 639798. The financial statements are expressed in Singapore dollars.

The University Company is principally engaged in the advancement and dissemination of knowledge, the promotion of research and scholarships and the conferring and awarding of degrees, diplomas and certificates.

The principal activities of the subsidiaries are set out in Note 5.

As the operations of the University Company is substantially funded by the Ministry of Education ("MOE" or the "Government Ministry") through government grants, with MOE having the power to appoint and remove members to the Board of Trustees of the University Company, MOE is regarded as the parent entity.

The consolidated financial statements relate to the University Company and its subsidiaries (referred to as the "Group"). The consolidated financial statements of the Group and statement of financial position and statement of changes in funds and reserves of the University Company for the year ended 31 March 2021 were authorised for issue by the Board of Trustees on 19 August 2021.

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### 2.1 Basis of preparation

#### (a) Basis of measurement

The financial statements have been prepared in accordance with the historical cost basis except otherwise disclosed below, and are drawn up in accordance with the provisions of the Singapore Companies Act, the Charities Act and Financial Reporting Standards in Singapore ("FRS").

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability which market participants would take into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for leasing transactions that are within the scope of FRS 116 *Leases*, and measurements that have some similarities to fair value but are not fair value, such as value in use in FRS 36 *Impairment of Assets*.

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- *Level 1:* quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- *Level 2:* inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices); and
- *Level 3:* inputs for the asset or liability that are not based on observable market data (unobservable inputs)

#### (b) Functional and presentation currency

The individual financial statements of each group entity are measured and presented in the currency of the primary economic environment in which the entity operates (its functional currency). The consolidated financial statements of the Group and the statement of financial position and equity of the University Company are presented in Singapore dollars, which is the functional currency of the University Company and the presentation currency for the consolidated financial statements.

For the purpose of presenting consolidated financial statements, the assets and liabilities of the Group's foreign operations are translated at exchange rates prevailing on the reporting date. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuate significantly during that period, in which case the exchange rates at the dates of the transactions are used. Exchange differences arising, if any, are recognised in other comprehensive income and accumulated in a foreign exchange translation reserve (attributed to non-controlling interests as appropriate).

All financial information presented in Singapore dollars has been rounded to the nearest thousand, unless otherwise stated.



# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.1 Basis of preparation (cont'd)

#### (c) Use of estimates and judgements

The preparation of financial statements in conformity with FRS requires management to make judgements (other than those involving estimations) that have a significant impact on the amounts recognised and to make estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Management is of the opinion that any instances of application of judgements are not expected to have a significant effect on the amounts recognised in the financial statements.

#### **Key sources of estimation uncertainty**

The key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that may have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities within the next financial year, are discussed below.

- Notes 2.9, 8 and 10 - valuation of financial instruments

#### *Fair value measurements and valuation processes*

In estimating the fair value of an asset or a liability, the Group obtains valuations from third party fund managers/fund administrators/custodian banks. The valuations are determined using market-observable data to the extent it is available. Where Level 1 inputs are not available, the fund managers/fund administrators/custodian banks establish the fair value of the investments using the net asset value at the end of the reporting period.

#### *Derivative financial instruments*

The fair value of derivatives (foreign currency forwards) is estimated by discounting the difference between the contractual forward price and the current forward price for the residual period to maturity of the contract.

#### *Financial assets at fair value through profit or loss*

The fair values of financial instruments traded in active markets are based on quoted market prices at the end of the reporting period. The Group and University Company also holds unquoted investments, of which the valuation methodologies are set out in Note 10.

#### (d) Adoption of new and revised standards

On 1 April 2020, the Group has adopted all the new and revised FRS pronouncements that are relevant to its operations. The adoption of these new/revised FRS pronouncements does not result in changes to the Group's and University Company's accounting policies and has no material effect on the disclosures or on the amounts reported for the current or prior years.

### 2.2 Consolidation

#### **Basis of consolidation**

The consolidated financial statements incorporate the financial statements of the University Company and entities controlled by the University Company and its subsidiaries. Control is achieved when the University Company:

- Has power over the investee;
- Is exposed, or has rights, to variable returns from its involvement with the investee; and
- Has the ability to use its power to affect its returns.

The University Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.2 Consolidation (cont'd)

#### ***Basis of consolidation (cont'd)***

When the University Company has less than a majority of the voting rights of an investee, it has power over the investee when the voting rights are sufficient to give it the practical ability to direct the relevant activities of the investee unilaterally. The University Company considers all relevant facts and circumstances in assessing whether or not the University Company's voting rights in an investee are sufficient to give it power, including:

- (i) The size of the University Company's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- (ii) Potential voting rights held by the University Company, other vote holders or other parties;
- (iii) Rights arising from other contractual arrangements; and
- (iv) Any additional facts and circumstances that indicate that the University Company has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders' meetings.

Consolidation of a subsidiary begins when the University Company obtains control over the subsidiary and ceases when the University Company loses control of the subsidiary. Specifically, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date the University Company gains control until the date when the University Company ceases to control the subsidiary.

The accounting policies of subsidiaries have been changed where necessary to align them with the policies adopted by the Group.

Intra-group balances and transactions, and any unrealised income or expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements.

Investments in subsidiaries are carried at cost less any impairment in net recoverable value that has been recognised in profit or loss.

#### ***Business combinations***

Business combinations are accounted for using the acquisition method as at the acquisition date, which is the date on which control is transferred to the Group. The consideration for each acquisition is measured at the aggregate of the acquisition date fair values of assets given, liabilities incurred by the Group to the former owners of the acquiree, and equity interests issued by the Group in exchange for control of the acquiree.

The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognised in profit or loss.

Costs related to the acquisition, other than those associated with the issue of debt or equity securities, that the Group incurs in connection with a business combination are expensed as incurred.

Any contingent consideration payable is recognised at fair value at the acquisition date. If the contingent consideration is classified as funds and reserves, it is not remeasured and settlement is accounted for within funds and reserves. Otherwise, subsequent changes to the fair value of the contingent consideration are recognised in the consolidated statement of comprehensive income.

#### ***Associate and Joint venture***

An associate is an entity over which the group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results and assets and liabilities of joint ventures and associate are incorporated in these consolidated financial statements using the equity method of accounting. Under the equity method, an investment in joint venture or an associate is initially recognised in the consolidated statement of financial position at cost and adjusted thereafter to recognise the Group's share of the profit or loss and other comprehensive income of the joint venture or associate. When the Group's share of losses of a joint venture or associate exceeds the Group's interest in that joint venture, the Group discontinues recognising its share of further losses. Additional losses are recognised only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the joint venture or associate.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.2 Consolidation (cont'd)

#### *Associate and Joint venture (cont'd)*

An investment in a joint venture or an associate is accounted for using the equity method from the date on which the investee becomes a joint venture or an associate. On acquisition of the investment in a joint venture or an associate, any excess of the cost of investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee is recognised as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of investment, after reassessment, is recognised immediately in profit or loss in the period in which the investment is acquired.

When a Group entity transacts with a joint venture or an associate of the Group, profits and losses resulting from the transactions with the joint venture or associate are recognised in the Group's consolidated financial statements only to the extent of interests in the joint venture or associate that are not related to the Group.

### 2.3 Foreign currencies

#### *Foreign currency transactions*

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at the exchange rate prevailing on the date of the transaction. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated to the functional currency at the rates prevailing at the end of the reporting period. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated to the functional currency at the rates prevailing on the date that the fair value is determined. Non-monetary items that are measured in terms of historical cost in foreign currency are not retranslated.

Foreign currency differences arising on retranslation are recognised in profit or loss.

#### *Foreign operations*

The assets and liabilities of foreign operations are translated to the functional currency of the University Company and the presentation currency for the consolidated financial statements at exchange rates prevailing at the reporting date. The income and expenses of foreign operations are translated to Singapore dollars at exchange rates ruling at the dates of the transactions.

Foreign currency differences are recognised in other comprehensive income and accumulated in a separate component of equity under the header of foreign currency translation reserve. When a foreign operation is disposed of, in part or in full, the relevant amount in the foreign exchange translation reserves is transferred to profit or loss as part of the gain or loss on disposal.

### 2.4 Funds

Assets and liabilities of all funds are pooled in the statements of financial position.

#### *General Fund*

Income and expenditure are generally accounted for under the "General Fund" in the consolidated statement of comprehensive income. General Fund comprise "Designated" and "Specific".

"Designated" includes funds set aside for the operational activities of the University.

"Specific" relates to funds that are subject to legal or grantor imposed conditions such as funds from externally funded research grants, development grants, sinking fund as well as externally funded scholarships, bursaries and sponsorships.

The use of these funds are governed by the terms and conditions set out by the respective funds.

#### *Endowment fund*

The Endowment Fund comprises donations, grants, gifts, testamentary disposition and proceeds from gifts of movable or immovable properties. The objectives of this fund comprise the provision of facilities for teaching, training and research, the advancement and dissemination of knowledge and the promotion of research.

Donations received and Government matching grants received/receivable during the year are taken directly to the statement of changes in funds and reserves. Income and expenditure arising from the management of the Endowment Fund are taken to the consolidated statement of comprehensive income of the Endowment Fund.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.5 Grants and sinking fund

Grants and sinking fund from the Government Ministry, other ministries and statutory boards and contributions received/receivable from other organisations for the purchase of depreciable assets or to finance research or capital projects are taken to the grants received in advance account in the first instance. They are taken to the deferred capital grants account upon the utilisation of the grants for purchase of assets, which are capitalised, or to profit or loss for purchase of assets which are written off in the year of purchase.

Deferred capital grants are recognised in the profit or loss over the periods necessary to match the depreciation, write off and/or impairment loss of the assets purchased with the related grants. Upon the disposal of property, plant and equipment, the balance of the related deferred capital grants is recognised in profit or loss to match the net book value of the property, plant and equipment being disposed off.

Development grant is recognised when there is reasonable assurance that the University Company will comply with the conditions attach to them and that the grants will be received.

Information Technology and Furniture and Equipment ("IT and F&E") grants received from the Government Ministry are for the purchase of information technology appliances and furniture and equipment to support teaching and administrative function of the University Company. These grants are taken to the grants received in advance account in the first instance. They are taken to deferred capital grants account upon the utilisation of the grants for purchase of assets, which are capitalised, or to the profit or loss for purchase of assets which are written off in the year of purchase.

Grants from the Government Ministry and other ministries to meet the current year's operating expenses are recognised as income in the same year these operating expenses were incurred.

All grants and contributions are accounted for on the accrual basis.

#### ***Wage Credit scheme and Special Employment Credit scheme***

Cash grants received from the government in relation to the Wage Credit scheme and Special Employment Credit scheme are recognised upon receipt. Such grants are provided to defray the wage costs incurred and are offset against manpower costs in the financial statements.

### 2.6 Property, plant and equipment

#### ***Recognition and measurement***

Property, plant and equipment are stated at cost less accumulated depreciation and impairment losses except for land alienated to the Group and University Company which are stated at values provided by the Government. Donated assets are stated at valuation at initial recognition.

The freehold land of the Group and the University Company were stated at valuation carried out in December 1987 based on values in a valuation report from the Commissioner of Lands. The revaluation was done on a one-off basis and accordingly, the transitional provision in FRS 16 - *Property, Plant and Equipment* was adopted to continue with its existing policy of stating the freehold land at deemed cost. This revaluation surplus was credited directly to the Capital Account. Upon disposal, any related revaluation surplus is transferred from the Capital Account to accumulated surplus and is not taken into account in arriving at the gain or loss on disposal.

Cost includes expenditures that are directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the asset to a working condition for its intended use, and the costs of dismantling and removing the items and restoring the site on which they are located. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Property, plant and equipment costing less than \$2,000 each, renovation costing \$100,000 and below and library books are generally charged to profit or loss in the year of purchase.

The gain or loss on disposal of an item of property, plant and equipment recognised in profit or loss is derived from the proceeds from disposal and the carrying amount of property, plant and equipment.

#### ***Subsequent cost***

The cost of replacing part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group and its cost can be measured reliably. The costs of the day-to-day servicing of property, plant and equipment are recognised in the profit or loss as incurred.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.6 Property, plant and equipment (cont'd)

#### Depreciation

Depreciation is based on the cost of an asset less its residual value. Significant components of individual assets are assessed and if a component has a useful life that is different from the remainder of that asset, that component is depreciated separately.

Depreciation is recognised in the profit or loss on a straight-line basis over the estimated useful lives of each component of an item of property, plant and equipment.

Except for freehold land and buildings under construction which are not depreciated, depreciation on other property, plant and equipment is recognised in the consolidated statement of comprehensive income on a straight-line basis over the estimated useful lives (or lease term, if shorter) of each part of an item of property, plant and equipment.

The estimated useful lives are as follows:

Buildings and infrastructure	3 to 30 years
Leasehold land	10 to 30 years
Improvement works	5 years
Machinery, laboratory and workshop equipment	6 years
Furniture and office equipment	3 to 5 years
Transportation equipment	8 years
Others	8 years

The estimated useful lives, residual values and depreciation method are reviewed at each year end, with the effect of any changes in estimate accounted for on a prospective basis.

Buildings under construction are stated at cost, less any recognised impairment loss, if any. Expenditure relating to the construction of projects are capitalised when incurred. No depreciation is charged on building under construction until the building under construction is completed and the related property, plant and equipment are transferred to the respective property, plant and equipment categories and depreciated accordingly.

### 2.7 Intangible assets

Intangible assets acquired separately are reported at cost less accumulated amortisation (where they have finite useful lives) and accumulated impairment losses. Intangible assets with finite useful lives are amortised on a straight-line basis over their estimated useful lives, on the following base:

Application Software	-	3 years
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The estimated useful life and amortisation method are reviewed at the end of each annual reporting period, with the effect of any changes in estimate being accounted for on a prospective basis. Intangible assets with indefinite useful lives are not amortised. Each period, the useful lives of such assets are reviewed to determine whether events and circumstances continue to support an indefinite useful life assessment for the asset. Such assets are tested for impairment annually and whenever there is an indication that the asset may be impaired.

### 2.8 Impairment - non-financial assets

The carrying amounts of the Group's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amounts are estimated. Where the asset does not generate cash flows that are independent from other assets, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

An impairment loss is recognised if the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. A cash-generating unit is the smallest identifiable asset group that generates cash flows that largely are independent from other assets and groups. Impairment losses are recognised in the consolidated statement of comprehensive income unless it reverses a previous revaluation, credited to equity, in which case it is charged to equity. Impairment losses recognised in respect of cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to the units and then to reduce the carrying amount of the other assets in the unit (group of units) on a pro rata basis.

The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or cash-generating unit. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or cash generating unit. An impairment loss is recognised immediately in profit or loss, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease and to the extent that the impairment loss is greater than the related revaluation surplus, the excess impairment loss is recognised in profit or loss.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.8 Impairment – non-financial assets (cont'd)

Impairment losses recognised in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. A reversal of an impairment loss is recognised immediately in profit or loss to the extent that it eliminates the impairment loss which has been recognised for the asset in prior years. Any increase in excess of this amount is treated as a revaluation increase.

### 2.9 Financial instruments – Financial assets and financial liabilities are recognised in the Group's statement of financial position when the Group becomes a party to the contractual provisions of the instruments.

Financial assets and financial liabilities are initially measured at fair value, except for trade receivables that do not have a significant financing component which are measured at transaction price. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognised immediately in profit or loss.

#### **Non-derivative financial assets**

All financial assets are recognised and derecognised on a trade date basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

All recognised financial assets are subsequently measured in their entirety at either amortised cost or fair value, depending on the classification of the financial assets.

#### Classification of financial assets

Debt instruments that meet the following conditions are subsequently measured at amortised cost:

- the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

#### (a) *Amortised cost and effective interest method*

The effective interest method is a method of calculating the amortised cost of a debt instrument and of allocating interest income over the relevant period.

For financial instruments other than purchased or originated credit-impaired financial assets (i.e. assets that are credit-impaired on initial recognition), the effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) excluding expected credit losses, through the expected life of the debt instrument, or, where appropriate, a shorter period, to the gross carrying amount of the debt instrument on initial recognition.

The amortised cost of a financial asset is the amount at which the financial asset is measured at initial recognition minus the principal repayments, plus the cumulative amortisation using the effective interest method of any difference between that initial amount and the maturity amount, adjusted for any loss allowance. On the other hand, the gross carrying amount of a financial asset is the amortised cost of a financial asset before adjusting for any loss allowance.

Interest income is recognised using the effective interest method for debt instruments measured subsequently at amortised cost, except for short-term balances when the effect of discounting is immaterial.

#### (b) *Financial assets at FVTPL*

Debt instruments that do not meet the amortised cost criteria or the FVTOCI criteria are classified as at FVTPL. In addition, debt instruments that meet either the amortised cost criteria or the FVTOCI criteria may be designated as at FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency that would arise from measuring assets or liabilities or recognising the gains and losses on them on different bases.

Financial assets at FVTPL are measured at fair value as at each reporting date, with any fair value gains or losses recognised in profit or loss to the extent they are not part of a designated hedging relationship. The net gain or loss recognised in profit or loss includes any dividend or interest earned on the financial asset. Fair value is determined in the manner described in Note 31.



# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.9 Financial instruments (cont'd)

#### *Non-derivative financial assets (cont'd)*

##### Impairment of financial assets

The Group recognises a loss allowance for expected credit losses ("ECL") on financial assets which are subject to impairment under FRS 109. The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument.

The Group recognises 12-month ECL for all financial assets as the credit risk on the financial asset has not increased significantly since initial recognition. If subsequently, there has been a significant increase in credit risk since initial recognition, the Group will recognise lifetime ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition instead of on evidence of a financial asset being credit-impaired at the reporting date or an actual default occurring since initial recognition.

The 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date. In contrast, lifetime ECL represents the ECL that will result from all possible default events over the expected life of the relevant instrument. The expected credit losses on these financial assets are estimated using the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date, including time value of money where appropriate.

##### *Significant increase in credit risk*

In assessing whether the credit risk on a financial instrument has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Group considers historical loss rates for each category of customers and adjusts to reflect current and forward-looking macroeconomic factors affecting the ability of the customers to settle the receivables.

The Group presumes that the credit risk on a financial asset has increased significantly since initial recognition when contractual payments are significantly past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

The Group assumes that the credit risk on a financial instrument has not increased significantly since initial recognition if the financial instrument is determined to have low credit risk at the reporting date. A financial instrument is determined to have low credit risk if i) the financial instrument has a low risk of default, ii) the borrower has a strong capacity to meet its contractual cash flow obligations in the near term and iii) adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil its contractual cash flow obligations.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

##### *Measurement and recognition of expected credit losses*

For financial assets, the expected credit loss is estimated as the difference between all contractual cash flows that are due to the Group in accordance with the contract and all the cash flows that the Group expects to receive, discounted at the original effective interest rate.

If the Group has measured the loss allowance for a financial instrument at an amount equal to lifetime ECL in the previous reporting period, but determines at the current reporting date that the conditions for lifetime ECL are no longer met, the Group measures the loss allowance at an amount equal to 12-month ECL at the current reporting date.

##### Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset measured at amortised cost, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognised in profit or loss.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.9 Financial instruments (cont'd)

#### *Non-derivative financial liabilities*

The Group recognises financial liabilities when the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial liability when its contractual obligations are discharged or cancelled or expired.

Financial assets and liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group has a legal right to offset the amounts and intends either to settle on a net basis or to realise the asset and settle the liability simultaneously.

The Group classifies non-derivative financial liabilities into the other financial liabilities category. Such financial liabilities are recognised initially at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, these financial liabilities are measured at amortised cost using the effective interest method.

Non-derivative financial liabilities comprise loans and borrowings and other payables and accruals.

#### *Derivative financial instruments and hedging instruments*

The Group holds derivative financial instruments, through its external fund managers, to hedge its foreign currency exposure. Further details of derivative financial instruments are disclosed in Note 8 to the financial statements.

Embedded derivatives are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely related, a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative, and the combined instrument is not measured at fair value through profit or loss.

Derivatives are recognised initially at fair value; any attributable transaction costs are recognised in the profit or loss when incurred. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein accounted for in the profit or loss.

### 2.10 Employee benefits

#### *Defined contribution plans*

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions to a separate entity and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution plans are recognised as an employee benefit expense in the profit or loss in the periods during which services are rendered by employees.

#### *Short-term employee benefits*

Short-term employee benefit obligations, including accumulated compensated absences, are measured on an undiscounted basis and are expensed as the related services are provided.

### 2.11 Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognised as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.12 Income tax

Income tax expense comprises current and deferred tax. Income tax expense is recognised in the profit or loss except to the extent that it relates to items recognised directly in equity or in other comprehensive income, in which case it is recognised in equity or in other comprehensive income.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable income and expenditure; temporary differences related to investments in subsidiaries and jointly controlled entities to the extent that it is probable that they will not reverse in the foreseeable future; and taxable temporary differences arising on the initial recognition of goodwill.

Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

### 2.13 Income recognition

#### *Student fees*

Income from tuition and other fees are recognised over time in the period in which the services are rendered.

Tuition fees are deferred as the billing for tuition fees cover the academic year, which does not coincide with the financial year of the Group. The aggregate amount of the tuition fees allocated to performance obligations that have yet been satisfied for services as at the end of the reporting period is \$117,211,000 (2020 : \$96,830,000). Management expects that full amount will be recognised as revenue during the next reporting period.

#### *Management fees*

Management fees are recognised at point in time upon services rendered.

#### *Donations and sponsorships*

Unconditional donations and sponsorships are recognised at point in time upon receipt.

#### *Licence fees*

Licence fees are recognised at point in time in accordance with terms of licensing agreement.

#### *Royalties*

Royalties are recognised at point in time on sale, by licensor, of products using the technology granted.

#### *Dividends*

Dividends are recognised in the financial year in which the right to receive payment is established.

#### *Rental income*

Rental income receivable under operating leases is recognised in the profit or loss on a straight-line basis over the term of the lease.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.14 Finance income and finance costs

Finance income comprises interest income generated from fixed deposits and bank deposits. Interest income is recognised as it accrues in the profit or loss, using the effective interest method.

Finance costs comprise interest expense on borrowings and lease liabilities. Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognised in the profit or loss using the effective interest method.

### 2.15 Leases

#### The Group as lessee

The Group assesses whether a contract is or contains a lease, at inception of the contract. The Group recognises a right-of-use asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low value assets. For these leases, the Group recognises the lease payments as an operating expense on a straight-line basis over the term of the lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased assets are consumed.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, the Group uses the incremental borrowing rate specific to the lessee.

Lease payments included in the measurement of the lease liability comprise:

- fixed lease payments (including in-substance fixed payments), less any lease incentives;
- variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;
- the amount expected to be payable by the lessee under residual value guarantees;
- the exercise price of purchase options, if the lessee is reasonably certain to exercise the options; and
- payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The lease liability is presented as a separate line in the statements of financial position.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect the lease payments made.

The Group remeasures the lease liability by discounting the revised lease payments using a revised discount rate (and makes a corresponding adjustment to the related right-of-use asset) whenever:

- the lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate;
- the lease payments change due to changes in an index or rate or a change in expected payment under a guaranteed residual value, in which cases the lease liability is remeasured by discounting the revised lease payments using the initial discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case a revised discount rate is used); or
- a lease contract is modified and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.

The Group did not make any such adjustments during the periods presented.

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day and any initial direct costs. They are subsequently measured at cost less accumulated depreciation and impairment losses.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

### 2.15 Leases (cont'd)

#### The Group as lessee (cont'd)

Whenever the Group incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognised and measured under FRS 37. The costs are included in the related right-of-use asset.

Right-of-use assets are depreciated over the shorter period of lease term and useful life of the underlying asset. The depreciation starts at the commencement date of the lease. The right-of-use assets are presented together with "Property, Plant and Equipment" in the statements of financial position.

The Group applies FRS 36 to determine whether a right-of-use asset is impaired and accounts for any identified impairment loss as described in "Impairment of Non-Financial Assets".

As a practical expedient, FRS 116 permits a lessee not to separate non-lease components, and instead account for any lease and associated non-lease components as a single arrangement. The group has used this practical expedient.

### 2.16 Key management personnel

Key management personnel of the Group are those persons having the authority and responsibility for planning, directing and controlling the activities of the entity. The Board of Trustees and senior management team are considered as key management personnel of the Group.

### 2.17 Government grants

Government grants are not recognised until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognised in profit or loss on a systematic basis over the periods in which the Group recognises as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets (including property, plant and equipment) are recognised as deferred income in the consolidated statement of financial position and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognised in profit or loss in the period in which they become receivable.

The benefit of a government loan at a below-market rate of interest is treated as a government grant, measured as the difference between proceeds received and the fair value of the loan based on prevailing market interest rates.

### 2.18 New standards and on interpretations not yet adopted

At the date of authorisation of these financial statements, the following FRS pronouncements relevant to the Group and the University Company was issued but not yet effective:

- Amendments to FRS 103 *Reference to the Conceptual Framework* <sup>(1)</sup>
- Amendments to FRS 116 *Property, Plant and Equipment - Proceeds before Intended Use* <sup>(1)</sup>
- Amendments to FRS 37 *Onerous Contracts - Cost of Fulfilling a Contract* <sup>(1)</sup>
- Annual Improvements to FRSs 2018-2020 <sup>(1)</sup>
- Amendments to FRS 1 *Classification of Liabilities as Current or Non-current* <sup>(2)</sup>

<sup>(1)</sup> Applies to annual periods beginning on or after January 1, 2022.

<sup>(2)</sup> Applies to annual periods beginning on or after January 1, 2023.

Management anticipates that the adoption of the above amendments to FRS in future periods will not have a material impact on the financial statements of the Group and the University Company in the period of their initial adoption.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 3 PROPERTY, PLANT AND EQUIPMENT

	Freehold land	Leasehold land <sup>^</sup>	Buildings and infrastructure	Buildings under construction	Improvement works	Machinery, laboratory and workshop equipment	Furniture and office equipment	Transportation equipment	Others <sup>^</sup>	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Group</b>										
<b>Cost or valuation</b>										
At 1 April 2019	200,858	-	2,626,198	70,987	292,904	1,493,409	307,688	12,229	9,419	5,013,692
Adoption of FRS 116	-	38,639	-	-	-	-	-	-	4,455	43,094
Additions	-	-	3,182	83,429	3,343	51,642	25,231	974	3,743	171,544
Disposals	-	-	(2,222)	-	(3,528)	(59,162)	(22,623)	(268)	(539)	(88,342)
Reclassifications	-	-	20,711	(94,448)	5,002	63,141	3,502	1,797	295	-
At 31 March 2020	200,858	38,639	2,647,869	59,968	297,721	1,549,030	313,798	14,732	17,373	5,139,988
Additions	-	-	1,212	51,281	1,694	66,615	12,885	223	3,709	137,619
Disposals/ Writeoff	-	-	(365)	-	(184,123)	(36,473)	(17,617)	(560)	(88)	(239,226)
Reclassifications	-	-	(169,046)	(18,462)	168,642	41,542	(23,399)	(5)	728	-
At 31 March 2021	200,858	38,639	2,479,670	92,787	283,934	1,620,714	285,667	14,390	21,722	5,038,381
<b>Comprising</b>										
31 March 2020										
At cost	-	38,639	2,647,869	59,968	297,721	1,549,030	313,798	14,732	17,373	4,939,130
At valuation	200,858	-	-	-	-	-	-	-	-	200,858
	200,858	38,639	2,647,869	59,968	297,721	1,549,030	313,798	14,732	17,373	5,139,988
31 March 2021										
At cost	-	38,639	2,479,670	92,787	283,934	1,620,714	285,667	14,390	21,722	4,837,523
At valuation	200,858	-	-	-	-	-	-	-	-	200,858
	200,858	38,639	2,479,670	92,787	283,934	1,620,714	285,667	14,390	21,722	5,038,381
<b>Accumulated depreciation</b>										
At 1 April 2019	-	-	1,498,952	-	224,410	1,022,523	235,062	6,260	3,889	2,991,096
Depreciation for the year	-	1,840	57,033	-	28,210	150,913	30,288	1,280	3,175	272,739
Disposals	-	-	(2,153)	-	(3,096)	(58,166)	(22,493)	(268)	(469)	(86,645)
At 31 March 2020	-	1,840	1,553,832	-	249,524	1,115,270	242,857	7,272	6,595	3,177,190
Depreciation for the year	-	1,840	58,561	-	22,015	150,411	24,441	1,322	5,430	264,020
Disposals/ Writeoff	-	-	(365)	-	(183,958)	(35,823)	(17,471)	(498)	(43)	(238,158)
Reclassifications	-	-	(171,053)	-	166,566	20,806	(17,642)	-	1,323	-
At 31 March 2021	-	3,680	1,440,975	-	254,147	1,250,664	232,185	8,096	13,305	3,203,052
<b>Carrying amount</b>										
At 31 March 2020	200,858	36,799	1,094,037	59,968	48,197	433,760	70,941	7,460	10,778	1,962,798
At 31 March 2021	200,858	34,959	1,038,695	92,787	29,787	370,050	53,482	6,294	8,417	1,835,329

<sup>^</sup> Right-of use assets include leasehold land and office premises which are classified as part of "Others".

The Group leases land and office premises for University's operations. As at 31 March 2021, the Group is committed to \$1,631,000 (2020 : \$839,000) for short-term and low value leases. The total cash outflow for leases for 2021 amounted to \$5,285,000 (2020 : \$2,906,000).



# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 3 PROPERTY, PLANT AND EQUIPMENT (CONT'D)

	Freehold land	Leasehold land <sup>^</sup>	Buildings and infrastructure	Buildings under construction	Improvement works	Machinery, laboratory and workshop equipment	Furniture and office equipment	Transportation equipment	Others <sup>^</sup>	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<b>University Company</b>										
<b>Cost or valuation</b>										
At 1 April 2019	200,858	-	2,626,198	70,987	289,662	1,491,416	305,313	12,229	9,419	5,006,082
Adoption of FRS 116	-	38,639	-	-	-	-	-	-	472	39,111
Additions	-	-	3,182	83,429	3,203	51,362	24,738	974	3,325	170,213
Disposals	-	-	(2,222)	-	(3,450)	(59,042)	(22,002)	(268)	(605)	(87,589)
Reclassifications	-	-	20,711	(94,448)	5,002	63,136	3,507	1,797	295	-
At 31 March 2020	200,858	38,639	2,647,869	59,968	294,417	1,546,872	311,556	14,732	12,906	5,127,817
Additions	-	-	1,212	51,281	1,235	65,727	12,738	223	171	132,587
Disposals/ Writeoff	-	-	(365)	-	(184,031)	(36,473)	(17,448)	(560)	(38)	(238,915)
Reclassifications	-	-	(169,046)	(18,462)	168,642	41,537	(23,394)	(5)	728	-
At 31 March 2021	200,858	38,639	2,479,670	92,787	280,263	1,617,663	283,452	14,390	13,767	5,021,489
<b>Comprising</b>										
31 March 2020										
At cost	-	38,639	2,647,869	59,968	294,417	1,546,872	311,556	14,732	12,906	4,926,959
At valuation	200,858	-	-	-	-	-	-	-	-	200,858
	200,858	38,639	2,647,869	59,968	294,417	1,546,872	311,556	14,732	12,906	5,127,817
31 March 2021										
At cost	-	38,639	2,479,670	92,787	280,263	1,617,663	283,452	14,390	13,767	4,820,631
At valuation	200,858	-	-	-	-	-	-	-	-	200,858
	200,858	38,639	2,479,670	92,787	280,263	1,617,663	283,452	14,390	13,767	5,021,489
<b>Accumulated depreciation</b>										
At 1 April 2019	-	-	1,498,952	-	222,588	1,021,718	233,646	6,260	3,889	2,987,053
Depreciation for the year	-	1,840	57,033	-	27,868	150,539	29,939	1,280	1,024	269,523
Disposals	-	-	(2,153)	-	(3,092)	(58,053)	(21,938)	(268)	(469)	(85,973)
At 31 March 2020	-	1,840	1,553,832	-	247,364	1,114,204	241,647	7,272	4,444	3,170,603
Depreciation for the year	-	1,840	58,561	-	21,602	149,925	24,020	1,322	3,173	260,443
Disposals/ Writeoff	-	-	(365)	-	(183,865)	(35,808)	(17,368)	(498)	(38)	(237,942)
Reclassifications	-	-	(171,053)	-	166,566	20,806	(17,642)	-	1,323	-
At 31 March 2021	-	3,680	1,440,975	-	251,667	1,249,127	230,657	8,096	8,902	3,193,104
<b>Carrying amount</b>										
At 31 March 2020	200,858	36,799	1,094,037	59,968	47,053	432,668	69,909	7,460	8,462	1,957,214
At 31 March 2021	200,858	34,959	1,038,695	92,787	28,596	368,536	52,795	6,294	4,865	1,828,385

<sup>^</sup> Right-of use assets include leasehold land and office premises which are classified as part of "Others".

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 3 PROPERTY, PLANT AND EQUIPMENT (CONT'D)

The freehold land of the Group and the University Company were stated at valuation carried out in December 1987 based on values in a valuation report from the Commissioner of Lands. The revaluation was recorded under "Capital Account" (Note 20) on a one-off basis and accordingly, the transitional provision in FRS 16 - *Property, Plant and Equipment* was adopted to continue with its existing policy of stating the freehold land at deemed cost.

The University Company leases land and office premises for University's operations. As at 31 March 2021, the University Company is committed to \$1,516,000 (2020 : \$766,000) for short-term and low value leases. The total cash outflow for leases for 2021 amounted to \$2,918,000 (2020 : \$732,000).

Amounts recognised in profit or loss

	Group		University Company	
	2021	2020	2021	2020
	\$'000	\$'000	\$'000	\$'000
Depreciation expense on right-of-use assets	6,808	4,521	4,551	2,370
Interest expense on lease liabilities	138	162	72	66
Expenses relating to short-term and low value leases	728	2,271	471	1,893

## 4 INTANGIBLE ASSETS

	Group		University Company	
	2021	2020	2021	2020
	\$'000	\$'000	\$'000	\$'000
<b>Cost</b>				
At 1 April	13,841	15,464	12,579	15,043
Additions	989	2,478	554	1,637
Disposals	(699)	(4,101)	(681)	(4,101)
At 31 March	14,131	13,841	12,452	12,579
<b>Accumulated amortisation</b>				
At 1 April	8,257	5,280	8,059	5,280
Amortisation charge for the year	2,448	2,977	2,143	2,779
Disposals	(681)	-	(681)	-
At 31 March	10,024	8,257	9,521	8,059
<b>Carrying amount</b>				
At 31 March	4,107	5,584	2,931	4,520

## 5 SUBSIDIARIES

	University Company	
	2021	2020
	\$'000	\$'000
Equity investments at cost	500	500
	500	500

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 5 SUBSIDIARIES (CONT'D)

Details of subsidiaries are as follows:

Name of subsidiary		Country of incorporation	Ownership interest		Principal activities
			2021	2020	
			%	%	
<b>Held by the University Company</b>					
@	Nanyang Technological University - NTUitive Pte Ltd	Singapore	100	100	Innovation and enterprise company of NTU.
@	NTU Holdings Pte Ltd	Singapore	100	100	Investment holding.
@	Singapore Centre for Chinese Language Limited	Singapore	100	100	Provision of training/professional development courses for Chinese language teachers and conduct of educational research and activities.
@	NIE International Private Limited	Singapore	100	100	Provision of training programs in teacher education and school leadership.
@	Interim Services Pte Ltd <sup>(i)</sup> (formerly known as Wealth Management Institute Pte Ltd)	Singapore	100	100	Provision of education and training services for professional and management development.
@	National Institute of Early Childhood Development	Singapore	100	100	Provision of pre-service and continuing education and training for professionals in early childhood development.
<b>Held by Nanyang Technological University - NTUitive Pte Ltd</b>					
@	Code Farm Pte Ltd <sup>(i)</sup>	Singapore	100	100	Research and development of other software and programming activities.
@	Systemed Pte Ltd <sup>(i)</sup>	Singapore	100	100	Development and commercialisation in medical technology.
<b>Held by NTU Holdings Pte Ltd</b>					
*	Nanyang Venture Consulting (Shanghai) Co., Ltd	China	100	100	Consultant for enterprise management, technology and education.
@	Confucius Institute, NTU Pte Ltd	Singapore	100	100	Promotion of Chinese language, culture and support of local Chinese teaching.
<b>Held by Nanyang Venture Consulting (Shanghai) Co., Ltd</b>					
*	Nanyang Venture Consulting (Beijing) Co., Ltd	China	100	100	Consultant for enterprise management, technology and education.
*	Audited by overseas practices of Deloitte Touche Tohmatsu Limited.				
@	Audited by Deloitte & Touche LLP, Singapore.				
(i)	These companies are in the process of liquidation as at 31 March 2021.				

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 6 ASSOCIATE AND JOINT VENTURE

	Group		University Company	
	2021	2020	2021	2020
	\$'000	\$'000	\$'000	\$'000
Cost of investment	13,458	13,458	13,063	13,063
Share of post-acquisition profit	1,564	1,213	1,783	1,344
	15,022	14,671	14,846	14,407

Details of the associates are as follows:

Name of associate	Country of incorporation	Group's proportion of ownership interest/ voting power held		Principal activities
		2021	2020	
		%	%	
Friends of NTU <sup>(i)</sup>	United States	-	40	Promote the advancement of NTU in United States.
GenomeAsia 100k Ltd <sup>(ii)</sup>	Singapore	33.3	33.3	Data Processing and related activities.

Details of the joint ventures are as follows:

Name of joint venturer	Country of incorporation	Group's proportion of ownership interest/ voting power held		Principal activities
		2021	2020	
		%	%	
Lushang (Nanyang) Pte Ltd <sup>(iii)</sup>	Singapore	30	30	Other information technology and computer service activities.
Secur3DP+ Pte Ltd <sup>(iv)</sup>	Singapore	47.5	47.5	To develop and monetise certain intellectual property assets relating to 3D printing in Singapore.
SRIF Amcorp Pte. Ltd. <sup>(v)</sup>	Singapore	25	25	Investment holding.

- (i) During the year, the representatives from the Group stepped down as Board members of the associate, leading to a loss of significant influence of the associate.
- (ii) Upon dissolution of the associate and settlement of all debts and liabilities, the remaining residual investment will be transferred to NTU as the preferred charitable organisation.
- (iii) The Group determined that it has joint control over Lushang (Nanyang) Pte Ltd by virtue that all significant matters requiring unanimous approval by all the directors and shareholders.
- (iv) The Group determined that it has joint control over Secur3DP+ Pte Ltd based on the joint venture agreement.
- (v) The Group determined that it has joint control over SRIF Amcorp Pte Ltd based on the joint venture agreement.

## 7 STUDENT LOANS

	Group and University Company	
	2021	2020
	\$'000	\$'000
Student loans	3,961	4,109
Represented by:		
- Amount repayable within 12 months	1,784	1,669
- Amount repayable after 12 months	2,177	2,440
	3,961	4,109

The student loans are unsecured, interest-free and repayable over a period of 2 to 5 years.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 8 DERIVATIVE FINANCIAL INSTRUMENTS

The table below sets out the notional principal amounts and the positive and negative fair values of the Group's and University Company's outstanding derivative financial instruments at the end of the reporting period (comprising foreign currency forwards denominated in United States dollar). Positive and negative fair values represent the mark-to-market values of the derivative contracts and are termed as derivative assets and derivative liabilities respectively. Notional principal amounts are the amount of principal underlying the contract at the end of reporting date.

	Contractual maturity		Fair value
	Within 1 year	Total	Derivative liabilities
	\$'000	\$'000	\$'000
<b>Group and University Company</b>			
<b>2021</b>			
Foreign currency forwards	712,639	712,639	19,935
<b>2020</b>			
Foreign currency forwards	589,140	589,140	20,075

Changes in the fair value of the foreign currency forwards are included as part of the fair value gain/(loss) on derivative financial instruments in Note 25.

## 9 TRADE AND OTHER RECEIVABLES

	Note	Group		University Company	
		2021	2020	2021	2020
		\$'000	\$'000	\$'000	\$'000
Trade receivables		47,332	39,775	45,498	36,571
Interest receivables		320	2,249	312	2,198
Operating grant receivables		21,202	4,825	19,000	3,492
Research grant receivables		245,962	206,514	241,585	206,514
Job Support Scheme (JSS) grant receivables	19	6,151	33,485	6,033	31,443
Grants receivables	13	138	172	138	172
Other receivables		205,320	160,226	199,806	153,745
Loss allowance for doubtful receivables		(13,088)	(11,070)	(12,377)	(10,434)
		192,232	149,156	187,429	143,311
Amounts due from subsidiaries (trade)		-	-	573	488
Loss allowance for doubtful receivables		-	-	(159)	(168)
		-	-	414	320
Amounts due from subsidiaries (non-trade)		-	-	1,015	1,015
Loss allowance for doubtful receivables		-	-	(1,015)	(1,015)
		-	-	-	-
Amounts due from joint venture and associates		29	-	29	-
Financial assets at amortised cost		513,366	436,176	500,438	424,021
Prepayments		17,816	25,214	17,032	24,703
		531,182	461,390	517,470	448,724

The amounts due from subsidiaries are unsecured, interest-free and repayable on demand.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 9 TRADE AND OTHER RECEIVABLES (CONT'D)

Credit risk relating to trade receivables is minimal as these receivables are from statutory boards, ministries and companies who provided funding for research activities. The Group's historical experience in the collection of accounts receivables falls within the recorded allowances.

Credit risk for other grant receivables is limited as these relate mainly to receivables from the Government Ministry.

Loss allowance for trade and other receivables has been measured at an amount equal to lifetime expected credit losses ("ECL"). The ECL on trade and other receivables are estimated by reference to past default experience of the debtor and an analysis of the debtor's current financial position, adjusted for factors that are specific to the debtors, general economic conditions of the industry in which the debtors operate.

## 10 FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS

	Group		University Company	
	2021	2020	2021	2020
	\$'000	\$'000	\$'000	\$'000
Quoted fixed income investments	237,205	427,014	236,951	426,757
Quoted equity investments	1,787,984	1,158,797	1,787,874	1,158,715
Unquoted investments	1,469,204	1,213,422	1,466,096	1,208,939
Other investments	7,284	6,600	1,659	1,659
	3,501,677	2,805,833	3,492,580	2,796,070

The Group's and University Company's investments are mainly managed by external fund managers. The fair values of the financial instruments traded in active markets are based on quoted market prices at the end of the reporting period.

Quoted fixed income investments include investments in fixed income instruments via segregated accounts and pooled vehicles. Quoted equity investments represent investments in quoted equities via segregated accounts and pooled vehicles. The unquoted investments represent investments in private equity funds, hedge funds and limited partnerships. The fair values of these unquoted investments are based on net asset values provided by fund managers, fund administrators and external valuations. Other investments include convertible notes of \$5,625,000 (2020 : \$4,941,000).

The Group's and University Company's investments comprise financial instruments (quoted fixed income, quoted equity, unquoted investments and other investments) managed by external fund managers and cash balances and bank deposits as follows:

		Group		University Company	
	Note	2021	2020	2021	2020
		\$'000	\$'000	\$'000	\$'000
Financial assets at fair value through profit or loss		3,501,677	2,805,833	3,492,580	2,796,070
Cash balances and bank deposits	11	120,797	127,831	120,797	127,831
		3,622,474	2,933,664	3,613,377	2,923,901

The cash balances and bank deposits are included as a component in the cash and cash equivalents in Note 11 for the purpose of disclosure.



# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 10 FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS (CONT'D)

The weighted average interest rates of quoted fixed income securities at the end of the reporting period and the periods in which they mature are as follows:

	Effective interest rate per annum	Fixed interest rate securities maturing			Total
		Less than 1 year	In 1 to 5 years	After 5 years	
	%	\$'000	\$'000	\$'000	\$'000
<b>Group</b>					
<b>2021</b>	0.4 to 3.3	-	94,509	142,418	236,927
<b>2020</b>	0.6 to 3.3	-	181,521	243,379	424,900
<b>University Company</b>					
<b>2021</b>	0.4 to 2.8	-	94,251	142,418	236,669
<b>2020</b>	0.6 to 2.9	-	181,263	243,379	424,642

## 11 CASH AND CASH EQUIVALENTS

	Note	Group		University Company	
		2021	2020	2021	2020
		\$'000	\$'000	\$'000	\$'000
<b>Operating</b>					
Cash at bank and in hand		416,673	457,449	386,288	419,499
Deposit with financial institutions		570,413	412,439	562,544	405,280
		987,086	869,888	948,832	824,779
<b>Investments</b>					
Cash at bank and in hand		40,348	77,254	40,348	77,254
Money market funds and cash held by custodian banks		80,449	50,577	80,449	50,577
	10	120,797	127,831	120,797	127,831
Cash and cash equivalents		1,107,883	997,719	1,069,629	952,610

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 12 DEFERRED CAPITAL GRANTS

	Government ministries		Statutory boards		Others		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Group</b>								
At 1 April	1,055,304	1,197,334	74,866	80,216	28,143	32,939	1,158,313	1,310,489
Add:								
Grants received for capital expenditure and development project transferred from								
- Operating grants (Note 27)	5,288	5,401	-	-	-	-	5,288	5,401
- Research grants (Note 17)	22,294	20,918	22,179	12,328	3,029	2,049	47,502	35,295
- Development grants (Note 13)	35,923	15,388	-	-	-	-	35,923	15,388
- Other grants	203	4,172	5,248	8,165	2,289	3,552	7,740	15,889
Assets donated by various organisations	-	-	-	-	1,677	106	1,677	106
	63,708	45,879	27,427	20,493	6,995	5,707	98,130	72,079
Less:								
Grants taken to profit or loss								
- Amortisation charge for the year	177,763	187,466	21,705	25,514	9,646	10,458	209,114	223,438
- On disposal of fixed assets	175	443	174	329	9	45	358	817
	177,938	187,909	21,879	25,843	9,655	10,503	209,472	224,255
At 31 March	941,074	1,055,304	80,414	74,866	25,483	28,143	1,046,971	1,158,313
<b>University Company</b>								
At 1 April	1,052,686	1,195,800	74,866	80,216	28,143	32,939	1,155,695	1,308,955
Add:								
Grants received for capital expenditure and development project transferred from								
- Operating grants	4,654	5,080	-	-	-	-	4,654	5,080
- Research grants (Note 17)	22,294	20,918	22,179	12,328	3,029	2,049	47,502	35,295
- Development grants (Note 13)	35,737	13,980	-	-	-	-	35,737	13,980
- Other grants	203	4,172	5,248	8,165	2,289	3,552	7,740	15,889
Assets donated by various organisations	-	-	-	-	1,677	106	1,677	106
	62,888	44,150	27,427	20,493	6,995	5,707	97,310	70,350
Less:								
Grants taken to profit or loss								
- Amortisation charge for the year	176,897	186,821	21,705	25,514	9,646	10,458	208,248	222,793
- On disposal of fixed assets	175	443	174	329	9	45	358	817
	177,072	187,264	21,879	25,843	9,655	10,503	208,606	223,610
At 31 March	938,502	1,052,686	80,414	74,866	25,483	28,143	1,044,399	1,155,695

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 13 GRANTS RECEIVABLE/IT AND F&E GRANTS/SINKING FUND RECEIVED IN ADVANCE

	Note	Group		University Company	
		2021	2020	2021	2020
		\$'000	\$'000	\$'000	\$'000
Grants receivable within 12 months:					
- Development grant	9	138	172	138	172
Grants received in advance:					
- Development grant		(42,967)	(41,472)	(42,967)	(41,472)
- IT and F&E	(a)	(49,094)	(43,559)	(48,632)	(42,997)
- Sinking fund	(b)	(332,759)	(341,414)	(332,759)	(341,414)
Subtotal		(424,820)	(426,445)	(424,358)	(425,883)
Total		(424,682)	(426,273)	(424,220)	(425,711)
Grants received in advance represented as:					
Current portion					
- Development grant		(42,967)	(41,472)	(42,967)	(41,472)
- IT and F&E		(49,094)	(43,559)	(48,632)	(42,997)
- Sinking fund		(25,072)	(27,972)	(25,072)	(27,972)
		(117,133)	(113,003)	(116,671)	(112,441)
Non-current portion					
- Sinking fund		(307,687)	(313,442)	(307,687)	(313,442)
		(424,820)	(426,445)	(424,358)	(425,883)

Movements in grants (received in advance)/receivable:

	Note	Group		University Company	
		2021	2020	2021	2020
		\$'000	\$'000	\$'000	\$'000
At 1 April		(426,273)	(351,747)	(425,711)	(350,144)
Grants received during the year		(40,996)	(102,889)	(40,823)	(102,336)
		(467,269)	(454,636)	(466,534)	(452,480)
Less:					
Amounts transferred to deferred capital grants	12	35,923	15,388	35,737	13,980
Amounts taken to profit or loss		6,664	12,975	6,577	12,789
At 31 March		(424,682)	(426,273)	(424,220)	(425,711)

These are grants from the Government Ministry and statutory boards for financing development projects.

- (a) This amount relates to grants received in advance for the purchase of IT and F&E items to support teaching and administrative functions.
- (b) This amount relates to sinking fund received in advance from the Government Ministry for the purpose of maintenance and replacement of property, plant and equipment.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 14 PROVISIONS

	Group		University Company	
	2021	2020	2021	2020
	\$'000	\$'000	\$'000	\$'000
Provision for unutilised compensated leave	77,337	63,931	75,611	62,800

The movement in the provision for unutilised compensated leave is as follows:

	Group		University Company	
	2021	2020	2021	2020
	\$'000	\$'000	\$'000	\$'000
At 1 April	63,931	61,792	62,800	60,747
Provision made during the year	13,406	2,139	12,811	2,053
At 31 March	77,337	63,931	75,611	62,800

## 15 GRANT RECEIVED IN ADVANCE - OPERATING GRANTS

	Group	
	2021	2020
	\$'000	\$'000
At 1 April	7,884	7,098
Grants received during the year	3,976	4,922
	11,860	12,020
Less:		
Amounts taken to profit or loss	(4,303)	(3,815)
Amounts transferred to deferred capital grants	(634)	(321)
At 31 March	6,923	7,884

This relates to grants received from the Government Ministry to finance the operations of subsidiaries. The balance in this account represents grant received but not utilised at the end of the financial year.

## 16 SHORT-TERM BORROWINGS

The borrowings are unsecured, bear interest at 0.58% (2020 : 1.51%) per annum and are repayable within the next twelve months from the financial year end.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 17 RESEARCH GRANTS RECEIVED IN ADVANCE

	Note	Group		University Company	
		2021	2020	2021	2020
		\$'000	\$'000	\$'000	\$'000
At 1 April		171,625	87,660	166,392	87,119
Grants received during the year		371,505	457,183	369,183	444,880
		543,130	544,843	535,575	531,999
Less:					
Amounts transferred to deferred capital grants	12	(47,502)	(35,295)	(47,502)	(35,295)
Amounts taken to profit or loss		(354,184)	(370,882)	(342,360)	(363,271)
Amounts transferred to grant receivables		39,448	32,959	35,071	32,959
At 31 March		180,892	171,625	180,784	166,392

These are grants received from the Government Ministry, other ministries, statutory boards and other sources for research activities. The balance in this account represents grants received but not utilised at the end of the financial year.

Research grants awarded to the Group from the Government Ministry, other ministries, statutory boards and other sources in 2021 amounted to \$610,982,000 (2020 : \$587,640,000).

Research grants awarded to the Group from the Government Ministry, other ministries, statutory boards and other sources but not yet disbursed as at end of the financial year amounted to \$1,375,854,000 (2020 : \$1,263,073,000).

## 18 LEASE LIABILITIES

	Group		University Company	
	2021	2020	2021	2020
	\$'000	\$'000	\$'000	\$'000
Maturity analysis:				
Year 1	2,188	4,530	231	2,917
Year 2	1,392	907	185	231
Year 3	637	272	185	185
Year 4	189	189	185	185
Year 5	185	187	185	185
Year 6 onwards	553	739	554	739
	5,144	6,824	1,525	4,442
Less: Unearned interest	(248)	(319)	(188)	(260)
	4,896	6,505	1,337	4,182
Analysed as:				
Current	2,102	4,414	189	2,845
Non-current	2,794	2,091	1,148	1,337
	4,896	6,505	1,337	4,182

The Group does not face a significant liquidity risk with regard to its lease liabilities. Lease liabilities are monitored within the Group.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 18 LEASE LIABILITIES (CONT'D)

### Reconciliation of lease liabilities arising from financing activities

The table below details changes in the Group's lease liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the Group's statement of cash flows as cash flows from financing activities.

	1 April 2020	Financing cash flows	Non-cash New lease liabilities	31 March 2021
	\$'000	\$'000	\$'000	\$'000
Lease liabilities	6,505	(5,147)	3,538	4,896

	1 April 2019	Financing cash flows	Non-cash New lease liabilities	31 March 2020
	\$'000	\$'000	\$'000	\$'000
Lease liabilities	6,017	(2,744)	3,232	6,505

## 19 DEFERRED GRANT INCOME

This relates to the deferred grant income under the Job Support Scheme (JSS) from the Government to support wages during the COVID-19 pandemic.

## 20 CAPITAL ACCOUNT

The capital account represents the revaluation of the freehold land alienated to Nanyang Technological University (details are set out in Note 3).

## 21 ENDOWMENT FUND AND GENERAL FUND

The Endowment Fund comprises donations, grants, gifts, testamentary disposition and proceeds from gifts of movable or immovable properties. The objectives of this fund comprise the provision of facilities for teaching, training and research, the advancement and dissemination of knowledge and the promotion of research.

Income and expenditure are generally accounted for under the "General Fund" in the consolidated statement of comprehensive income. General Fund is further presented as "Designated" and "Specific".

"Designated" includes funds set aside for the operational activities of the University.

"Specific" relates to funds that are subject to legal or grantor imposed conditions such as funds from externally funded research grants, development grants, sinking fund as well as externally funded scholarships, bursaries and sponsorships.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 22 FUNDS MANAGED ON BEHALF OF THE GOVERNMENT MINISTRY

Pursuant to the Tuition Fee Loan (TFL), Study Loan (SL) and Overseas Student Program Loan - 50% funded by MOE (OSP) schemes, the University Company acts as agent for these loans schemes and the Government Ministry as the financier providing the funds.

	<b>Group and University Company</b>	
	<b>2021</b>	<b>2020</b>
	<b>\$'000</b>	<b>\$'000</b>
Cash from the Government Ministry:		
At 1 April	203,690	204,222
Cash received	56,390	57,307
Interest income received on behalf of Government Ministry	814	3,351
Repayments	(19,579)	(59,232)
Bad debts (incurred)/recovered	(288)	1,393
Interest income transferred to Government Ministry	(814)	(3,351)
	<b>240,213</b>	<b>203,690</b>
Represented by:		
Cash and bank balances held on behalf	946	870
TFL, SL and OSP	239,267	202,820
Net assets	<b>240,213</b>	<b>203,690</b>

Cash and bank balances of \$946,000 (2020 : \$870,000) are held on behalf of Government Ministry for the purpose of extending study loans to students.

Students on TFL, SL and OSP are to commence repayment upon graduation. Students are given an option to repay by monthly instalments of minimum amount of \$100 over a period of up to 20 years (for TFL and SL) and 5 years (for OSP) after the borrowers' graduation. Interest is charged at the average prime rates of three local banks prevailing on the first day of each quarter, or such other rates as may be determined from time to time. Interest charged in 2021 is 4.75% (2020 : 4.75%) per annum.

The interest on the TFL, SL and OSP is remitted in full to the Government Ministry on a monthly basis.

## 23 INTEREST INCOME

	<b>Group</b>	
	<b>2021</b>	<b>2020</b>
	<b>\$'000</b>	<b>\$'000</b>
Interest received/receivable:		
- fixed deposits (placed with financial institutions)	3,237	8,134
- bank balances	531	283
	<b>3,768</b>	<b>8,417</b>



# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 24 GOVERNMENT GRANT INCOME

	Group	
	2021	2020
	\$'000	\$'000
Jobs Support Scheme	52,931	-
	<u>52,931</u>	<u>-</u>

In 2020, the Group received wage support for local employees under the JSS from the Singapore Government as part of the Government's measures to support businesses during the period of economic uncertainty impacted by COVID-19. The Group assessed that there is reasonable assurance that it will comply with the conditions attached to the grants and the grants will be received. Grant income is recognised in profit or loss on a systematic basis over the period of uncertainty in which the related salary costs for which the grant is intended to compensate is recognised as expenses. Management has determined the period of uncertainty to be 17 months commencing from April 2020. Government grant income of \$52,931,000 in relation to JSS was recognised during the year.

## 25 PROFIT ON INVESTMENTS

	Group	
	2021	2020
	\$'000	\$'000
Interest income	7,602	6,306
Dividend income	2,134	2,317
Fair value gain on financial assets at fair value through profit or loss	634,276	89,632
Fair value gain/(loss) on derivative financial instruments	22,284	(34,769)
	<u>666,296</u>	<u>63,486</u>

The fair value gains/(losses) on financial assets at fair value through profit or loss and on derivative financial instruments comprise net realised and unrealised gains/(losses).

## 26 DEFICIT BEFORE GRANTS FROM MINISTRIES

The following items have been included in arriving at deficit before grants from ministries:

	Group	
	2021	2020
	\$'000	\$'000
Loss allowance for doubtful receivables	2,018	7,723
Exchange loss	185	130
Operating lease expense	728	2,271
Contribution to defined contribution plans included in expenditure on manpower	75,436	77,531
Government grants - Special Employment Credit and Wage Credit offset against manpower costs	<u>(6,283)</u>	<u>(2,393)</u>

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 27 OPERATING GRANTS FROM GOVERNMENT MINISTRY

		Group	
	Note	2021	2020
		\$'000	\$'000
Operating grants received and receivable during the year		617,539	624,732
Payment for goods and services tax on tuition fees and tuition grants		(50,945)	(51,407)
Amounts transferred to:			
- deferred capital grants	12	(5,288)	(5,401)
- grant received in advance	15	961	(786)
Operating grants taken to profit or loss		562,267	567,138

## 28 TAXATION

The University Company is registered as a charitable institution by virtue of Section 13 of the Income Tax Act, Chapter 134.

The subsidiaries of the Group have unabsorbed tax losses of approximately \$6,419,000 (2020 : \$5,755,000) which are available for offset against future taxable income. Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profit will be available against which the subsidiaries can utilise the benefit.

The unabsorbed tax losses of the subsidiaries are subject to agreement by the tax authorities and compliance with the tax regulations in the respective countries in which certain subsidiaries operate. These temporary differences do not expire under current tax legislation.

	Group	
	2021	2020
	\$'000	\$'000
<b>Current tax expense</b>		
Current year	2	268
<b>Reconciliation of effective tax</b>		
Surplus before income tax	768,028	33,097
Income tax using Singapore tax rates of 17%	130,565	5,626
Income not subject to tax	(130,563)	(5,358)
	2	268

## 29 COMMITMENTS

### Capital commitments

	Group	
	2021	2020
	\$'000	\$'000
Contracted but not provided for	172,257	198,980
Authorised but not contracted for	294,618	312,792

The capital commitments are mainly funded from grants from Government Ministries, subject to satisfying certain terms and conditions.

	Group	
	2021	2020
	\$'000	\$'000
Uncalled capital commitments to unquoted investments		
- contracted but not provided for	503,052	378,513

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 29 COMMITMENTS (CONT'D)

### *Collaboration with Imperial College of Science, Technology and Medicine*

On 27 August 2010, NTU and Imperial College of Science, Technology and Medicine entered into an agreement in relation to a collaboration for the establishment and operation of a medical school in Singapore. As at 31 March 2021, NTU's outstanding commitment under the collaboration is estimated at £6.8 million (\$12.5 million) (2020 : £8.1 million (\$13.4 million)) till the expiry of the agreement on 31 July 2028.

## 30 SIGNIFICANT RELATED PARTY INFORMATION

### *Related party transactions*

The Government of Singapore has control over the Group as the operations of the University Company is substantially funded through Government grants, with MOE having the power to appoint and remove members to the Board of Trustees of the University Company. Consequently, the Group has invoked the exemption from disclosure requirements of FRS 24 in relation to related party transactions and outstanding balances (including commitments) with the Government of Singapore.

The Group has significant transactions with the Government of Singapore in the form of purchase of goods and services and rendering of services. Such purchases and sales are made to various Government agencies in Singapore and collectively approximate \$15.4 million (2020 : \$17.5 million) and \$20.4 million (2020 : \$18.8 million).

Other than disclosed elsewhere in the financial statements, the Group had the following significant transactions with related parties during the year on terms agreed between the parties as follows:

		Group	
		2021	2020
		\$'000	\$'000
<b>(a) Key management personnel compensation</b>			
Short-term employee benefits (includes the remuneration of an executive trustee)		6,518	7,698
<b>(b) Services rendered</b>			
Consultancy fees paid to Trustees		76	103

## 31 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT

### *Categories of financial instruments*

The following table sets out the financial instruments as at the end of the reporting period:

	Group		University Company	
	2021	2020	2021	2020
	\$'000	\$'000	\$'000	\$'000
<b>Financial Assets</b>				
Financial assets at amortised cost	1,625,210	1,438,004	1,574,028	1,380,740
Financial assets at FVTPL	3,501,677	2,805,833	3,492,580	2,796,070
	5,126,887	4,243,837	5,066,608	4,176,810
<b>Financial Liabilities</b>				
Financial liabilities at amortised cost	367,089	339,345	352,519	322,799
Derivative financial instruments	19,935	20,075	19,935	20,075
Lease liabilities	4,896	6,505	1,337	4,182
	391,920	365,925	373,791	347,056

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 31 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

### Overview

The Group has exposure to the following risks from its use of financial instruments:

- credit risk
- liquidity risk
- interest risk
- price risk
- foreign currency risk
- capital risk

This note presents information about the Group's exposure to each of the above risks, the Group's objectives, policies and processes for measuring and managing risk, and the Group's management of capital. Further quantitative disclosures are included throughout these financial statements.

### Credit risk management

#### Cash and investments in financial assets

Cash and deposits are placed with reputable financial institutions. Investment portfolios are managed by external fund managers.

The maximum exposure to credit risk in the event that the counterparties fail to perform their obligations in relation to each class of recognised financial asset is the carrying amount of those assets as stated in the statements of financial position.

The credit risk is diversified over a range of institutions.

#### Trade and other receivables

Credit risk is the potential loss resulting from the failure of a customer or a counterparty to settle its financial and contractual obligations to the Group, as and when they fall due.

The carrying amount of financial assets, grossed up for any provision, represents the maximum credit exposure. At the end of the reporting period, the credit risk is mainly due from customers in Singapore but there is no significant concentration of credit risk arising receivables due from any individual other than grant receivables from the Government Ministry.

The Group manages its credit risk with regular monitoring and following up actions for the debts outstanding from debtors. Additional information is set out in Note 9.

The aging of loans and receivables at the reporting date is:

	2021		2020	
	Gross	Loss allowance for doubtful receivables	Gross	Loss allowance for doubtful receivables
	\$'000	\$'000	\$'000	\$'000
<b>Group</b>				
Not past due	478,351	1,214	402,697	523
Past due 1 to 30 days	15,339	150	23,860	412
Past due 31 to 150 days	14,484	1,673	10,405	1,841
More than 151 days	18,280	10,051	10,284	8,294
	526,454	13,088	447,246	11,070
<b>University Company</b>				
Not past due	465,598	1,208	391,430	517
Past due 1 to 30 days	15,177	145	23,318	395
Past due 31 to 150 days	14,493	1,624	10,220	1,792
More than 151 days	18,721	10,574	10,670	8,913
	513,989	13,551	435,638	11,617

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 31 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

### *Credit risk management (cont'd)*

The movement in the loss allowance for doubtful receivables in respect of loans and receivables during the year is as follows:

	Group		University Company	
	2021	2020	2021	2020
	\$'000	\$'000	\$'000	\$'000
At 1 April	11,070	3,347	11,617	4,434
Loss allowance charged	2,018	7,723	1,934	7,183
At 31 March	13,088	11,070	13,551	11,617

### *Liquidity risk management*

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The contracted undiscounted cash outflows on financial liabilities approximate their carrying amounts and are generally settled within one year. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate to finance the Group's operations and to mitigate the effects of fluctuations in cash flow. Typically the Group ensures that it has sufficient cash on demand to meet expected operational expenses including the servicing of financial obligations; this excludes the potential impact of extreme circumstances that cannot be reasonably predicted.

In addition, the Group maintains the following lines of credit:

- \$11 million bankers' guarantee facility that is unsecured.
- \$540 million that can be drawn down to meet short-term financing needs.

### *Interest risk management*

Surplus funds from the Group's operations are invested in bank deposits and with fund managers. The Group has no material exposure to interest rate risk from fixed deposits and borrowings as the interest rates are on fixed rate basis. The Group's investments in fixed income securities that are managed by fund managers (classified as financial assets at fair value through profit or loss) are exposed to interest rate risk.

#### *Sensitivity analysis for interest risk*

If movements in interest rates result in a 3% (2020 : 3%) appreciation/depreciation in the value of the fixed income investments, all other variables being held constant, the Group's surplus would have been higher/lower by \$7,116,000 (2020 : \$12,810,000).

### *Market risk - Price risk management*

The Group is exposed to equity securities price risk from investments classified as financial assets at fair value through profit or loss. The market values of these investments are affected by, amongst others, changes in market prices as a result of changes in the global economic conditions, macro and micro economic factors affecting the country where the investments are quoted, and factors specific to the investee corporations.

To manage the price risk arising from investment in equity securities, the Group diversifies its portfolio across different markets and industries as appropriate.

#### *Sensitivity analysis for price risk*

If movements in financial markets result in a 5% (2020 : 5%) appreciation/depreciation in the value of the quoted equity and other investments, all other variables being held constant, the Group's surplus would have been higher/lower by \$89,763,000 (2020 : \$58,270,000).

If movements in financial markets result in a 5% (2020 : 5%) appreciation/depreciation in the value of the unquoted investments, all other variables being held constant, the Group's surplus would have been higher/lower by \$73,460,000 (2020 : \$60,671,000).

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 31 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

### Foreign currency risk management

The Group's investments which are managed by fund managers may be in instruments denominated in foreign currencies. Currency exposure arising from such investments is managed by fund managers. Additional information is set out in Note 8.

The main foreign currency exposure of investments (net of foreign currency forwards) based on information provided to management is as follows:

	US dollar	Euro	Japanese Yen	Pound Sterling	Others
	\$'000	\$'000	\$'000	\$'000	\$'000
<b>2021</b>	1,896,129	241,501	77,097	51,786	912,538
<b>2020</b>	1,536,983	206,321	39,513	50,918	499,205

### Sensitivity analysis for currency risk

If the relevant foreign currency changes against the Singapore dollar by 5% (2020 : 5%), all other variables being held constant, the effects will be as follows:

	Profit or Loss	
	2021	2020
	\$'000	\$'000
<b>Increase/(Decrease)</b>		
<i>US dollar against Singapore dollar</i>		
Strengthened	94,806	76,849
Weakened	(94,806)	(76,849)
<i>Euro against Singapore dollar</i>		
Strengthened	12,075	10,316
Weakened	(12,075)	(10,316)
<i>Japanese Yen against Singapore dollar</i>		
Strengthened	3,855	1,976
Weakened	(3,855)	(1,976)
<i>Pound Sterling against Singapore dollar</i>		
Strengthened	2,589	2,546
Weakened	(2,589)	(2,546)

### Estimating the fair values

#### Financial assets at fair value through profit or loss

The fair values of financial assets traded in active markets are based on quoted market prices at the end of the reporting period.

The fair values of unquoted investments are based on net asset values provided by fund managers, fund administrators and external valuations.

#### Non-derivative financial liabilities

Fair value, which is determined for disclosure purposes, is calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at reporting date.

#### Other financial assets and liabilities

The carrying amounts of financial assets and liabilities with a maturity of less than one year (including trade and other receivables, cash and cash equivalents, other payables and accruals, and short-term borrowings) are assumed to approximate their fair values. The fair values of other classes of financial assets and liabilities are disclosed in the respective notes to financial statements.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 31 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

### Fair value hierarchy

The table below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:

- *Level 1:* quoted prices (unadjusted) in active markets for identical assets or liabilities
- *Level 2:* inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices)
- *Level 3:* inputs for the asset or liability that are not based on observable market data (unobservable inputs)

	Level 1 \$'000	Level 2 \$'000	Level 3 \$'000	Total \$'000
<b>Group</b>				
<b>31 March 2021</b>				
Financial assets at fair value through profit or loss	1,374,831	1,187,092	939,754	3,501,677
Derivative financial liabilities	-	19,935	-	19,935
<b>31 March 2020</b>				
Financial assets at fair value through profit or loss	1,114,822	1,009,850	681,161	2,805,833
Derivative financial liabilities	-	20,075	-	20,075
<b>University Company</b>				
<b>31 March 2021</b>				
Financial assets at fair value through profit or loss	1,374,467	1,187,092	931,021	3,492,580
Derivative financial liabilities	-	19,935	-	19,935
<b>31 March 2020</b>				
Financial assets at fair value through profit or loss	1,114,482	1,009,851	671,737	2,796,070
Derivative financial liabilities	-	20,075	-	20,075

There were no transfers between Level 1, 2 and 3 of the fair value hierarchy in 2020 and 2021.

# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 31 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (CONT'D)

### *Fair value hierarchy (cont'd)*

Assets measured at fair value based on Level 3:

	Financial assets designated at fair value through profit or loss	
	Unquoted investments	
	2021	2020
	\$'000	\$'000
<b>Group</b>		
At 1 April	681,161	511,094
Gains in profit or loss	188,516	87,679
Subscriptions/Contributions	205,859	179,050
Redemptions/Distributions	(135,782)	(96,662)
At 31 March	939,754	681,161
<b>University Company</b>		
At 1 April	671,737	503,933
Gains in profit or loss	191,028	86,724
Subscriptions/Contributions	203,634	177,675
Redemptions/Distributions	(135,378)	(96,595)
At 31 March	931,021	671,737

### *Capital risk management policies and objectives*

The capital structure of the Group consists of funds and accumulated surplus. Risk management is integral to the activities of the Group. The Group has controls in place to create an acceptable balance between the cost of risks occurring and the cost of managing the risks. Management continually monitors its risk management processes to ensure that an appropriate balance between risk and control is achieved. Risk management processes are reviewed regularly to reflect changes in the Group's activities. The Group's overall strategy remains unchanged from 2020.

## 32 CHARITY ACT AND REGULATIONS

As required for disclosure under Section 17(1) of the Charities (Institutions of a Public Character) Regulations, the University Company has received total tax deductible donations of \$21,079,000 (2020 : \$23,905,000) in the current financial year.

## 33 COVID-19 IMPACT

The outbreak of COVID-19 in early 2020 has caused disruptions to many industries globally. Despite the challenges, governments and international organisations have implemented a series of measures to contain the pandemic.

The COVID-19 outbreak is an event that occurred during the Group's financial reporting period and the related impact of the COVID-19 outbreak on the Group's assets and liabilities have been assessed and recognised in the financial statements as at 31 March 2021. Specifically, the Group has accounted for the Jobs Support Scheme meant to provide wage support for local employees by recognising grant income receivable and a corresponding deferred grant income as at 31 March 2021. The Group has also recognised the impact resulting from the volatility of bonds and stock markets on the financial assets at FVTPL as at 31 March 2021.

As the schools are still providing educational services to the students, and there is no significant impact to the revenue stream of the Group, MOE and other funding agencies have also continued to disburse grants to the Group to support its operations.

Thus, the Group has determined that it will be able to maintain sufficient liquidity to enable it to continue as a going concern for at least the next 12 months from the authorisation date of the Group's financial statements.



# NOTES TO FINANCIAL STATEMENTS

31 March 2021

## 34 RECLASSIFICATIONS AND COMPARATIVE FIGURES

Certain reclassifications have been made to the prior year's financial statements to enhance comparability with the current year's financial statements.

As a result, certain line items have been amended in the consolidated statement of comprehensive income, statements of changes in funds and reserves and the related notes to the financial statements. Comparative figures have been adjusted to conform to the current year's presentation.

The items were reclassified as follows:

	As previously reported \$'000	After reclassification \$'000
<b>Consolidated statement of comprehensive income</b>		
<b>General fund - Designated</b>		
Income	529,583	523,350
Expenditure	1,446,509	1,188,973
Grants from ministries	949,329	654,466
<b>General fund - Specific</b>		
Income	169,054	175,287
Expenditure	356,919	614,455
Grants from ministries	146,367	441,230
<b>Statements of changes in funds and reserves</b>		
<b>Group</b>		
General fund – Designated	873,014	1,354,382
General fund - Specific	740,410	259,042
<b>University Company</b>		
General fund - Designated	829,075	1,315,133
General fund - Specific	749,938	263,880

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