



NANYANG
TECHNOLOGICAL
UNIVERSITY

RISING ELITE YOUNG

**A
REMARKABLE
ASCENT**

ANNUAL REPORT 2013

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At a Glance

100

nationalities on campus

400

university partners in academia and research

258

partner universities in 37 countries offer student attachment programmes

7_{IN} 10

undergraduates have an overseas opportunity during their studies

18

joint/dual PhD degree programmes with overseas universities

43

overseas alumni associations

54

first intake at joint medical school with Imperial College London



TOP 50

fastest-rising Asian university in global top 50 of QS World University Rankings 2013

2ND

globally and only Singapore university in 2013 QS ranking of young elite universities

14TH

in Engineering and Technology in QS World University Rankings 2013

76TH

in *Times Higher Education* World University Rankings 2013, jumping 93 places over 2011

5TH

most-cited university in Engineering by Essential Science Indicators of Thomson Reuters



179,800

ALUMNI ACROSS 127 COUNTRIES

23,500

UNDERGRADUATES

9,000

GRADUATE STUDENTS

4,000

FACULTY AND RESEARCHERS FROM 75 COUNTRIES

97%

OF THE CLASS OF 2012 RECEIVED A JOB OFFER WITHIN FOUR MONTHS OF GRADUATION

TOP 15

most beautiful university campus (*Travel + Leisure* magazine)

14

new physical developments over the next two years, including 2 large learning hubs

90

research institutes and centres

5,000

new hostel places by 2015



3

Singapore campuses

16

undergraduate halls spread over 200 hectares



S\$487.7 million in competitive research grants won in FY2012/13

1ST globally for industry income and innovation

938

technology disclosures received since 2007

S\$1.2 billion in funding for sustainability research since 2005

41 patents granted in FY2012/13

INNOVATE EDUCATE NURTURE

A Global University on the Rise

Shining like a beacon for young universities across the globe, NTU is ranked 2nd by Quacquarelli Symonds (QS) and 10th by *Times Higher Education* among the world's elite universities under 50 years old.

Leaping 33 places in three years, NTU is ranked 41st and is the fastest-rising Asian university – and one of only two top young, elite universities – in the Top 50 of QS' ranking of global varsities.

With its top-notch faculty and an innovative curriculum that includes a new undergraduate course in medicine, NTU saw a phenomenal 60 per cent jump in the number of top A-level students enrolling in 2013 when compared to 2011.

A close partner of global industry, NTU is also 1st in the world for industrial funding and collaboration, according to *Times Higher Education*.

That NTU, young and fast-growing, ranks among the very best in the region and the world is testament to the University's inexorable rise as a truly world-class institution.

Chairman's Message



“Despite being a relatively young university, NTU has been making a noticeable impact in education and research, which has in turn led to even more top students and academic heavyweights joining the University.”

ON HIGHER GROUND

It takes decades and centuries to build a university, especially one that is world-class. The last few years of exciting growth for NTU have shown that it is possible for a university to rise to prominence in a short time.

In education, NTU has taken several bold turns. It introduced paradigm-shifting programmes such as the joint medical programme with Imperial College London; the Renaissance Engineering Programme, an engineering-cum-liberal arts programme; and the University Scholars Programme, which has a multidisciplinary syllabus aimed at stretching students' intellectual abilities and interests.

These add value to NTU's well-rounded curriculum, which provides ample opportunities for students to grow and develop the entrepreneurial mindset they need to solve problems in an increasingly complex working world.

Singapore is a small country and can be greatly affected by reverberations in other parts of the world. It needs among its citizens responsible leaders and change agents who can easily cross cultural boundaries and make an impact in interrelated spheres. This goes back to NTU's mission of nurturing creative and entrepreneurial leaders through a broad education in diverse disciplines.

At NTU, we see our niche in educating students who are not risk-averse; who will experience and embrace the world and its challenges, who will strive, and who may fail, but who will not be daunted by it. They will pick themselves up and keep trying again, to reach the summit and uncover new peaks.

Despite being a relatively young university, NTU has been making a noticeable impact in education and research, which has in turn led to even more top students and academic heavyweights joining the University. I congratulate Prof Bertil Andersson and Prof Freddy Boey for leading the management team and the University well. NTU has been climbing rapidly up the ranks of the world's best global universities and international research league tables.

But while rankings are useful as indicators of progress, NTU will not merely be measured by them. Our goal is to develop our students not just academically but holistically as lifelong learners and to provide a stimulating environment for good research that benefits mankind, be it in sustainability, health, ageing and so on.

We have achieved much in the last year and many of these may not have been possible without strong support from the government, especially the education and health ministries; the university leadership; our many benefactors and collaborators; as well as the faculty, staff, students and alumni.

In addition, I would like to thank our hardworking Board members. In particular, I am grateful for the contributions of Mr Chia Ban Seng and Mr Goh Geok Ling, two long-serving Board members who have stepped down. Their efforts on behalf of NTU have been invaluable and we are in their debt.

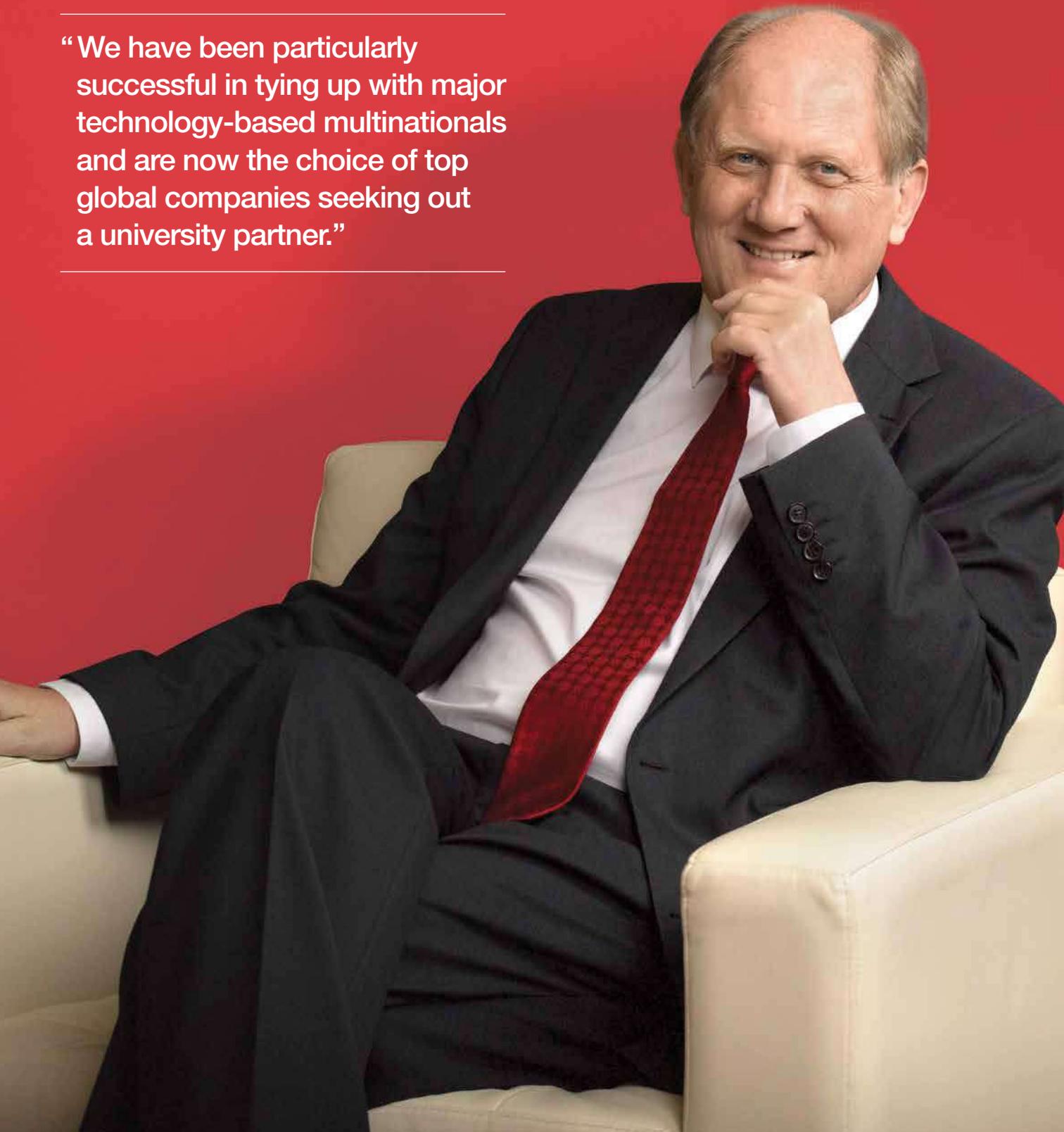
NTU may be a young university, but youth has its advantages too. As a young and nimble institution at the forefront of change, we can leverage the energy and ambition of youth to strengthen our excellent standing both at home and abroad today, and in the years to come.

Mr Koh Boon Hwee

Chairman, Board of Trustees
Nanyang Technological University

In Conversation with the NTU President

“We have been particularly successful in tying up with major technology-based multinationals and are now the choice of top global companies seeking out a university partner.”



REACHING NEW PEAKS

How would you sum up the last academic year and what were some highlights for you?

We had another hectic but exhilarating year, and achieved a number of things I am proud of.

A highlight was our continued rise up global varsity rankings. Among the world's young, elite universities, NTU is now ranked 2nd, up from 4th position the previous year. In the 2013 Quacquarelli Symonds World University Rankings, NTU leapt to 41st place from 47th in 2012. In another ranking of global universities by *Times Higher Education*, we shot up almost 100 places to 76th position in just three years.

For the 10th straight year, *The Economist* rated NTU's MBA programme as Singapore's best. The MBA programme is also ranked 4th in Asia. *The Economist* also named Prof Vijay Sethi of the Nanyang Business School the world's best business professor. Prof Tan Hun Tong, also of our business school, was named the world's top accounting researcher for three straight years based on an annual ranking by Brigham Young University.

With our growing international standing, NTU is becoming a place for high-profile academic events. The World Cultural Council, presided by Nobel laureate Prof Edmond H Fischer, picked NTU as the host of the prestigious World Cultural Council Award Ceremony. It was held in Singapore for the first time. Similarly, *Times Higher Education* selected NTU as the co-organiser of its first-ever World Academic Summit, which brought together leaders from industry, higher education and government to discuss how universities can commercialise their research and advance the economy.

All these, together with our success in securing large research grants and big collaborations with industry, show that we have made tremendous progress as a university, and that the world is taking notice.

Tell us what has driven the University's rapid success, such as its dramatic rise up varsity rankings in recent years.

Our secret is simple – we have amazing people. We have great professors doing world-class research and they are inspiring brilliant students. Also, top industry and academic partners recognise our strengths and want to work with us. We have also benefited from the strong backing of the Singapore government and, of course, the indefatigable leadership of NTU's Board of Trustees.

For the second straight year, the quality of the freshmen intake improved despite stiffer competition from both local and overseas universities. Tell us more.

There was a 60% increase in the number of top A-level students enrolling in 2013 compared to 2011. This is a further jump after the 43% spike in 2012. The Nanyang Business School garnered the lion's share of top young minds, even more than the Medicine and Law schools in Singapore. Amongst engineering programmes, NTU's Renaissance Engineering Programme was the first choice for these top A-level students.

I am pleased that prospective students and their parents see the relevance, impact and value of an NTU education.

What is it about NTU that attracts top students?

A survey of the top prospective students found that they were drawn to NTU's extensive range of scholarships, the Premier Scholars' Programmes, double-degree options, overseas attachments at top universities and campus accommodation.

Because of their training and the global perspectives that they acquire, NTU graduates are very employable. A graduate employment survey showed that 97% of the Class of 2012 received a job offer within four months of graduating. Our graduates easily transit into the working world.

What brings world-renowned professors to NTU? Who were the outstanding hires in the past year?

Top scientific minds appreciate NTU's conducive research environment. Here, these professors have opportunities to work with other leading scientists and the brightest students in a multidisciplinary setting to make pioneering discoveries. They also have access to fantastic facilities and large research grants to take their research to the next level.

In the last academic year, our talent pool was boosted with the hiring of world-class faculty like Prof Ravi Kumar, formerly with the University of Southern California Marshall School of Business. He was appointed Dean of the College of Business and brings with him a good blend of East-West experience.

Our medical school also brought on board a stellar line-up of scientists, including Prof Phil Ingham, a leader in cardiovascular development and cellular biology; Prof Annelies Wilder-Smith, a global authority on infectious diseases and travel and tropical medicine; Prof Bernhard Boehm, a top name in metabolic disease research and clinical and experimental diabetes immunology; and Prof David Becker, renowned for his work in tissue repair and regeneration.

Other senior faculty appointed over the last academic year include Prof Zhou Min, who joined NTU from the University of California, Los Angeles, and brings with her deep expertise in international migration, racial relations and ethnic entrepreneurship.

NTU's flagship Nanyang Assistant Professorship scheme, now regarded as one of the most rigorous high-level academic recruitment programmes in the world, drew much attention from outstanding early-stage researchers. In 2013, 11 top applicants from around the world were selected from about 350 qualified applications. These bright young scientists are now pursuing exciting research projects in their respective fields with start-up research grants of up to S\$1 million each.

When they graduate, NTU students will enter a fast-paced, international work setting. What will help them excel in this environment?

The revamped NTU curriculum is geared towards laying a solid foundation for our students to learn how to learn. After they graduate, they will need to continue learning to succeed in a world where new knowledge is growing exponentially every day.

We are now implementing across the University the flipped classroom. Here, knowledge transfer takes place in advance, typically through online lectures, so that the classroom becomes a place for more active and collaborative learning between students and professors.

Being part of global, cross-cultural teams, our students will need to handle issues that are borderless, so knowledge of world issues and the ability to think in an interdisciplinary manner are important. They will also need soft skills like leadership, communication ability and cultural sensitivity so that they can sell their ideas to anyone, anywhere.

How is NTU nurturing leaders of tomorrow?

Building on the new undergraduate curriculum in place since 2011, the NTU Education initiative aims to help students develop the right skills for the 21st century. Its two

key components are an enriching academic life with disciplinary breadth and depth, and an active student life in a vibrant campus.

Besides catering to new ways of learning in an innovation-driven environment, NTU Education draws on up-to-date teaching practices and the latest learning tools and facilities for interactive lessons and discussions.

Students get a headstart in the global world of work with early exposure to cutting-edge research and innovation activities and internships with leading industry players. Seven in 10 undergraduates will spend time overseas at least once during their studies, which will broaden their horizons and help them develop cross-cultural communication and leadership skills.

A major milestone during the year was the Lee Kong Chian School of Medicine admitting its first intake in August 2013. Tell us how NTU's medical school is shaping up.

Our medical school, which we set up with Imperial College London, has widened possibilities for top Singapore students who want to choose medicine as a career. We aim to transform the future of medicine and healthcare, training a new generation of technologically-savvy doctors who are not only knowledgeable but compassionate.

The prestigious five-year programme received an overwhelming response from top students and only the most outstanding candidates were offered a place. The 54 chosen medical students impressed in the Multiple Mini Interviews and aced the BioMedical Admissions Test, an admissions requirement also used by Imperial College London.

In April 2013, the medical school officially moved to its headquarters in the prime medical district of Novena.

It now has a dual campus, with facilities at NTU's main campus as well.

It completed the high-level recruitment of its core faculty and has unveiled a research strategy aimed at tackling Singapore's key health challenges. Its medical curriculum stands out for incorporating technology-supported lessons and simulated patients, and the school is also a pioneer in the use of virtual dissection and plastinated human specimens for medical education in Singapore.

How well-regarded is NTU's research?

NTU has continued to maintain its edge in winning large competitive research grants, not just from the Singapore government but also industry, to develop research with societal relevance.

In FY2012, we secured S\$487.7 million in external competitive grants, breaking the previous year's record of S\$440.6 million. In 2012, NTU bagged the largest grant disbursed by Singapore's education ministry worth about S\$25 million for a groundbreaking research study on how human cells prevent aging and become immortal. NTU is recognised as a scientific leader and pioneer in many fields, especially in its strength areas of sustainability, healthcare and new media.

We have been particularly successful in tying up with major technology-based multinationals. Rolls-Royce picked NTU as the first university partner of its corporate lab. With the BMW Group and Lockheed Martin, we have also set up joint research facilities at the NTU campus. These have no doubt contributed to NTU being ranked first in the world for industry income and innovation in 2013 by *Times Higher Education*.



NTU's two newest halls are test beds for innovative green technologies and also allow the University to pilot new pedagogical models that integrate learning both within and outside the formal curriculum for its residents.

On-campus facilities for companies not only allow us to work closely with our partners to address important problems, but also to quickly take these research outcomes to the innovation stage. The success of NTU's research – a mix of applied industrial programmes and “bottom-up” basic research – is also seen in the record increase in our research output in recent years. According to three international databases, namely Thomson Reuters, Elsevier and CWTS Leiden Ranking, we are now top in Asia for research impact. We have also greatly multiplied the number of active patents under our name.

What challenges will NTU face in the future and how is the University addressing them?

Universities are becoming more internationalised. They are seen as vital, open sources of discovery and innovation, and are expected to deliver economic and societal benefits that are not insular. NTU needs to be part of this by helping its students become truly effective global citizens and by working closely with world-leading partners to solve the grand challenges of our time. International collaboration is the name of the game.

It used to be that scientists worked in their own narrow fields. With new knowledge arising in the overlaps between disciplines, we need the “Berlin walls” between disciplines to come down. Initiatives like NTU Education, the Interdisciplinary Graduate School and the implementation of our five-year interdisciplinary research plan support this.

Enhancing cross-disciplinary collaboration will also have a positive impact on education, as our students need to gain mastery of an increasingly complex world. New academic disciplines could even be created to bring about fresh solutions to old problems.

Give us a peek at some of NTU's upcoming initiatives.

Our dream univer-city is taking shape with massive building projects campus-wide. We are developing exciting infrastructure for the medical school, student and faculty housing, and academic and learning facilities, including two large learning hubs that will be open round the clock.

Our second graduate hall was completed in early 2013. By 2016, we will have eight new eco-friendly

residential halls that can house an additional 5,000 undergraduates to meet the future demand for campus accommodation. Given the acute need for more laboratories and meeting rooms, a large academic complex will also be built at the North Spine.

In education, we will be going online in a big way. Apart from the use of flipped classrooms and iPad learning, we have partnered Coursera, a leading Massive Open Online Course platform, to engage a wider international audience. NTU's most popular courses will be offered on Coursera in the months ahead, so many more can have a taste of our world-class curriculum and teaching.

The University's administration is also being streamlined to keep pace with the expanding academic activities, as befitting NTU's status as a top global university. A shared services centre was formed to centralise much of the basic transactional procurement and human resources work of the University. In addition, 23 central administrative departments will be streamlined into seven strategic departments to achieve a more nimble organisational structure.

To remain a global leader in education and research, we need to plan ahead. NTU 2015, our five-year strategic blueprint, will be followed by the next five-year plan, NTU 2020. The leadership has already begun strategising for the next lap.

By continuing to invest in top talent, build on our strengths across disciplines and expand our network of global partnerships with industry and academia, NTU will be able to reach new peaks in education and research. I am excited about what the future holds.

Prof Bertil Andersson
President
Nanyang Technological University

Board of Trustees

As at 31 July 2013



**Mr Koh Boon Hwee
(Chairman)**
Chairman
Credence Partners
Pte Ltd
Appointed on
28 March 2006



**Mr Alwi Bin Abdul
Hafiz**
Sustainability Advisor
Golden Veroleum Liberia
Appointed on
28 March 2006



Sir Keith O'Nions
President and Rector
Imperial College London
Appointed on
17 March 2011



Prof Hareesh Shah
Professor Emeritus
Stanford University
Appointed on
28 March 2006



Ms Chan Lai Fung
Permanent Secretary
(Education)
Ministry of Education
Appointed on
1 April 2012



Ms Jennie Chua
Chairman
Alexandra Health Systems
Appointed on
28 March 2006



Mr Inderjit Singh
Chief Executive Officer
Solstar International
Pte Ltd
Appointed on
28 March 2006



BG (NS) Tan Meng Dui
Deputy Secretary
(Technology)
Ministry of Defence
Appointed on
1 July 2012



Mr Goh Sin Teck
Editor
Lianhe Zaobao
Consulting Editor,
MyPaper
Appointed on
1 June 2012



Mr Kwek Leng Joo
Managing Director
City Developments Ltd
Appointed on
28 March 2006



Mr Wong Yew Meng
Board Member
People's Association
Appointed on
1 August 2010



Mr Ernest Wong
Chairman
Fullerton Financial
Holdings Pte Ltd
Appointed on
28 March 2006



Mrs Lee Suet Fern
Chairman and
Managing Partner
Stamford Law
Corporation
Appointed on
15 July 2006



Ms Lien Siaou-Sze
Senior Executive Coach
Mobley Group Pacific
Appointed on
28 March 2006



**Prof Alexander
JB Zehnder**
Chairman
Triple Z Ltd
Appointed on
25 August 2009



Prof Bertil Andersson
President
Nanyang Technological
University
Appointed on
1 July 2011



Mr Lim Chee Onn
Senior International
Adviser
Singbridge Pte Ltd
Appointed on
25 August 2009



Mr Lim Chuan Poh
Chairman
Agency for Science,
Technology and Research
Appointed on
28 March 2006

University Leadership

As at 31 July 2013

Senior Management Team



Prof Bertil Andersson
President
Appointed on 1 July 2011

Prof Andersson first became Provost in 2007, where he helped to strengthen NTU's reputation as one of the fastest-growing research-intensive universities in the world. He was installed as NTU's third President on 1 July 2011.

He was formerly President of Linköping University, Sweden, from 1999 to 2003, and the Chief Executive of the European Science Foundation from 2004 to 2007. At the helm of the European Science Foundation in Strasbourg, France, his last post before joining NTU, he consolidated research efforts across 30 European countries.



Prof Freddy Boey
Deputy President and Provost
Appointed on 1 July 2011

Before assuming the role of Provost, Prof Boey served as the Chair of NTU's School of Materials Science & Engineering from 2005 to 2010, leading its transformation into one of the world's largest materials engineering institutions.

A dedicated educator and administrator, he also has a sterling track record of breakthrough commercial applications that have given the "made in Singapore" label pride of place on the global stage. He has won more than S\$42 million in competitive research funding, including a S\$10 million individual grant to develop fully biodegradable cardiovascular implants for hole-in-the-heart conditions.

A world-renowned plant biochemist with a longstanding association with the Nobel Foundation, where he had also chaired its Chemistry Committee, Prof Andersson has pioneered research on the artificial leaf, a promising area of sustainable energy research that uses sunlight to produce clean, low-cost sources of energy.

He is the winner of the Wilhelm Exner Medal, awarded since 1921 to top global scientists and visionaries, including Nobel laureates, for their life-changing research. Well-regarded for championing high-impact science and engineering, he has received five honorary doctorates since becoming NTU President in 2011.

Prof Boey has developed 30 original patents, the majority of which have been licensed. These patents have resulted in several spin-off companies, formed to license his various life-giving biomedical solutions. His inventions include the world's smallest heart pump that can be inserted into the body without open heart surgery and a customisable hernia mesh, the first such surgical mesh approved for sale by the US Food and Drug Administration.

NTU's role model for research, education and enterprise, Prof Boey actively champions the marriage of all three aspects on campus. For his distinguished contributions to Singapore's science and engineering landscape and his role in nurturing young research talent, he was awarded the 2013 President's Science and Technology Medal, a top national honour.

The other members of the senior management team are:

Prof Lam Khin Yong
Chief of Staff
Appointed on 1 July 2011

- 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 Er Meng Hwa
Vice President (International Affairs)
Appointed on 1 July 2011

- Vice President-Designate (International Affairs) (1 April – 30 June 2011)
- Senior Associate Provost (1 April 2008 – 30 June 2011)
- Associate Provost (1 April 2007 – 31 March 2008)

Prof Angela Goh
Associate Provost (Faculty Affairs)
Appointed on 1 July 2011

- Associate Provost-Designate (Faculty Affairs) (1 April – 30 June 2011)
- Acting Chair, School of Computer Engineering (15 October 2007 – 31 January 2010)
- Associate Chair (Academic), School of Computer Engineering (1 August 2006 – 30 November 2007)

Prof Yue Chee Yoon
Associate Provost
(Graduate Education)
Appointed on 2 January 2013

- Acting Dean, Interdisciplinary Graduate School (1 September 2011 – 1 January 2013)
- Director, Institute for Sports Research (15 July 2011 – 31 May 2012)

Assoc Prof Kwok Kian Woon
Associate Provost (Student Life)
Appointed on 1 July 2011

- 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 Kam Chan Hin
Associate Provost
(Undergraduate Education)
Appointed on 1 July 2011

- Associate Provost-Designate (Undergraduate Education) (1 April – 30 June 2011)
- Chair, School of Electrical & Electronic Engineering (1 August 2006 – 31 March 2011)

Deans of Colleges

Prof Ravi Kumar

Dean, Nanyang Business School
Appointed on 1 June 2013

Prof Ng Wun Jern

Acting Dean, College of Engineering
Appointed on 1 July 2013

- Executive Director, Nanyang Environment & Water Research Institute (18 June 2007 – 17 June 2016)

Prof Alan Chan

Dean, College of Humanities, Arts, & Social Sciences
Appointed on 1 October 2009

Prof Ling San

Dean, College of Science
Appointed on 1 August 2011

- 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)
- Head-Designate, Division of Mathematical Sciences, School of Physical & Mathematical Sciences (1 April – 30 June 2005)

Prof Dermot Kelleher

Dean, Lee Kong Chian School of Medicine
Appointed on 1 August 2012

Heads of Autonomous Institutes

Prof Lee Sing Kong

Director, National Institute of Education
Appointed on 1 November 2006

- Managing Director, National Institute of Education International (from 1 July 2009)
- Acting Director, National Institute of Education (16 January – 28 February 2006)
- Dean, External Programmes (Knowledge Horizon), National Institute of Education (1 October 2005 – 30 June 2009)

Ambassador Barry Desker

Dean, S Rajaratnam School of International Studies

Appointed on 1 January 2007

- Director, Institute of Defence & Strategic Studies (1 October 2000 – 2 October 2008)

Prof Kerry Sieh

Director, Earth Observatory of Singapore

Appointed on 1 July 2008

Prof Staffan Kjelleberg

Director, Singapore Centre on Environmental Life Sciences Engineering

Appointed on 1 January 2011

Highlights



NTU's vibrant campus includes futuristic learning spaces that support group-based projects and self-learning.

EDUCATION

60%
more top A-level students enrol at NTU in 2013 compared to 2011.

Nanyang Education Award

To acknowledge exceptional teaching, the Nanyang Awards for Excellence in Teaching are expanded into the multi-level **Nanyang Education Awards**. College and University-level winners of the Award are inducted into the newly-established Teaching Excellence Academy, which will raise the standard of teaching across the University.

Undergraduate

- The number of applicants to NTU who are from the **top 15% of A-level students** reaches a record high of 442, an increase of 12% from the previous year and 60% more than in 2011. More than 900 **top-tier polytechnic applicants** holding a Diploma with Merit accept NTU's offer of admission, an increase of 19% from 2012.

- The new **Bachelor of Medicine and Bachelor of Surgery (MBBS)** programme at the Lee Kong Chian School of Medicine attracts 222 top A-level applicants. The quality of the pioneer cohort is exceptional, with 89% of them coming from the top 15% of A-level students.
- The **University Scholars Programme** attracts 72 top students, which is 44% above the initial target of 50. The **CN Yang Scholars Programme** admits 73% more top A-level students than in 2012. The **Renaissance Engineering Programme** continues to be the most popular engineering programme in Singapore among top A-level students. The **Accountancy and Business** double degree programme retains its ranking as the second most popular programme among these top students.

- 17 top A-level students enrol in **Integrated Programmes** offered by the College of Engineering and College of Science. Under this double degree programme, they will graduate with Bachelor's and Master's degrees in four-and-a-half years.
- The School of Biological Sciences launches a Bachelor of Science in **Biological Sciences with a second major in Psychology**, which draws 22 top A-level students.
- The School of Humanities & Social Sciences launches a **Bachelor of Arts in Psychology with a second major in Biological Sciences**. The School also adds a new **Bachelor of Arts in Public Policy and Global Affairs**, and creates minors in **Global Asia** and **Philosophy**.
- The School of Art, Design & Media adds a **second major and minor**

in Art History. This programme is the first of its kind in Singapore and aims to address the industry shortage of art specialists.

- The Schools of Electrical & Electronic Engineering and Mechanical & Aerospace Engineering each pilot **blended learning** modules for part-time degree students, reducing the need for physical attendance at face-to-face lectures.
- To help NTU graduates transit into the working world, the Career & Attachment Office launches two new smartphone apps, **Career Scope** and **JobPASS**. Career Scope is a digital career coach, while JobPASS connects graduating students with potential employers.

Graduate

- **PhD enrolment** increases 4.5% over the year to 3,457.

- The **Interdisciplinary Graduate School** welcomes its first batch of PhD students pursuing studies in future healthcare. They join about 100 graduate students at the School specialising in sustainability and new media. More than 200 faculty members from various NTU colleges and schools and external research institutes are involved as main supervisors and co-supervisors.
- The **Nanyang President's Graduate Scholarship** scheme is enhanced during the year with more attractive perks. Discussions are underway to put in place schemes to attract more Singaporeans to pursue PhD education and thereafter a career in academia.
- Two **new joint PhD programmes** are set up with University of New South Wales (in environmental biotechnology, photovoltaics, renewable energy and thermoelectric materials) and University of Warwick (in neurosciences).
- New **opportunities for student exchanges** are established with the African Institute for Mathematical Sciences (Ghana), Ajou University (South Korea), Sabanci University (Turkey), University of Leeds (UK), University of Surrey (UK) and University of Macau.

More than
200

faculty members are involved in the activities of the **Interdisciplinary Graduate School.**



Students on the Renaissance Engineering Programme get a choice to study a full year at University of California, Berkeley, in the United States (above) or Imperial College London in the United Kingdom.

 **CAMPUS LIFE**

“Already listed as one of the world’s most beautiful universities, NTU is being transformed with trendy living spaces and modern learning enclaves that promote cross-campus interaction.”



The first phase of the Campus Master Plan is in progress, with the learning hub at the South Spine (below) and the Pioneer and Crescent Halls (top) slated for completion in 2014. The residential hall at Nanyang Crescent (above) should be ready by 2016.



- NTU's **second graduate hall** opens. Housing more than 800 students, it brings the number of graduate students living on campus to more than 1,300.
- The **first phase** of the **Campus Master Plan** is in progress. When completed, the campus will have two state-of-the-art learning hubs, an academic building, new faculty housing and eight new halls of residence to house an additional 5,000 students.

As part of the first phase, **two residential halls** and the **first learning hub** at the South Spine are expected to be ready in 2014, with the remaining buildings to be completed by 2016.

- The Staff Club is renovated and reopens as the **Campus Clubhouse**. The **tenant mix on campus** is improved to meet the needs of the NTU community. To foster a more vibrant campus life, **cafés at the NTU schools** are planned as spots for students to unwind and socialise.
- Results of the **Student Experience Survey 2012** indicate that around 80% of respondents are satisfied with their NTU experience and are proud to be NTU students.
- It is now policy that **student leaders are consulted** about changes to campus facilities. Student representatives are also full members of several university-level committees such as the Campus Life Committee and Undergraduate Orientation Coordinating Committee.
- Student services are centralised at **One Stop @ SAC**, an integrated student services helpdesk that provides a single touch point for all student needs.
- Adding to the stimulating campus environment, **"Celebrate NTU!"**, a day dedicated to celebrating all

things NTU, is held for the second year. It brings together more than 3,500 students, faculty and staff.

- NTU students enjoy an active sporting life on campus, competing in inter-hall sports competitions and other athletic activities. At the **Institute Varsity Polytechnic Games**, NTU is the **top performing institution** for the second consecutive year with seven Gold and five Silver medals.

80%

of NTU students who responded to a survey said they were satisfied with their university experience.



In his State of the University Address at Celebrate NTU!, NTU President Prof Bertil Andersson shares the highs of the past academic year and charts the way forward.



One Stop @ SAC, an integrated helpdesk for students, brings key front counter services from the Student Services Centre into one accessible location at the heart of the campus.



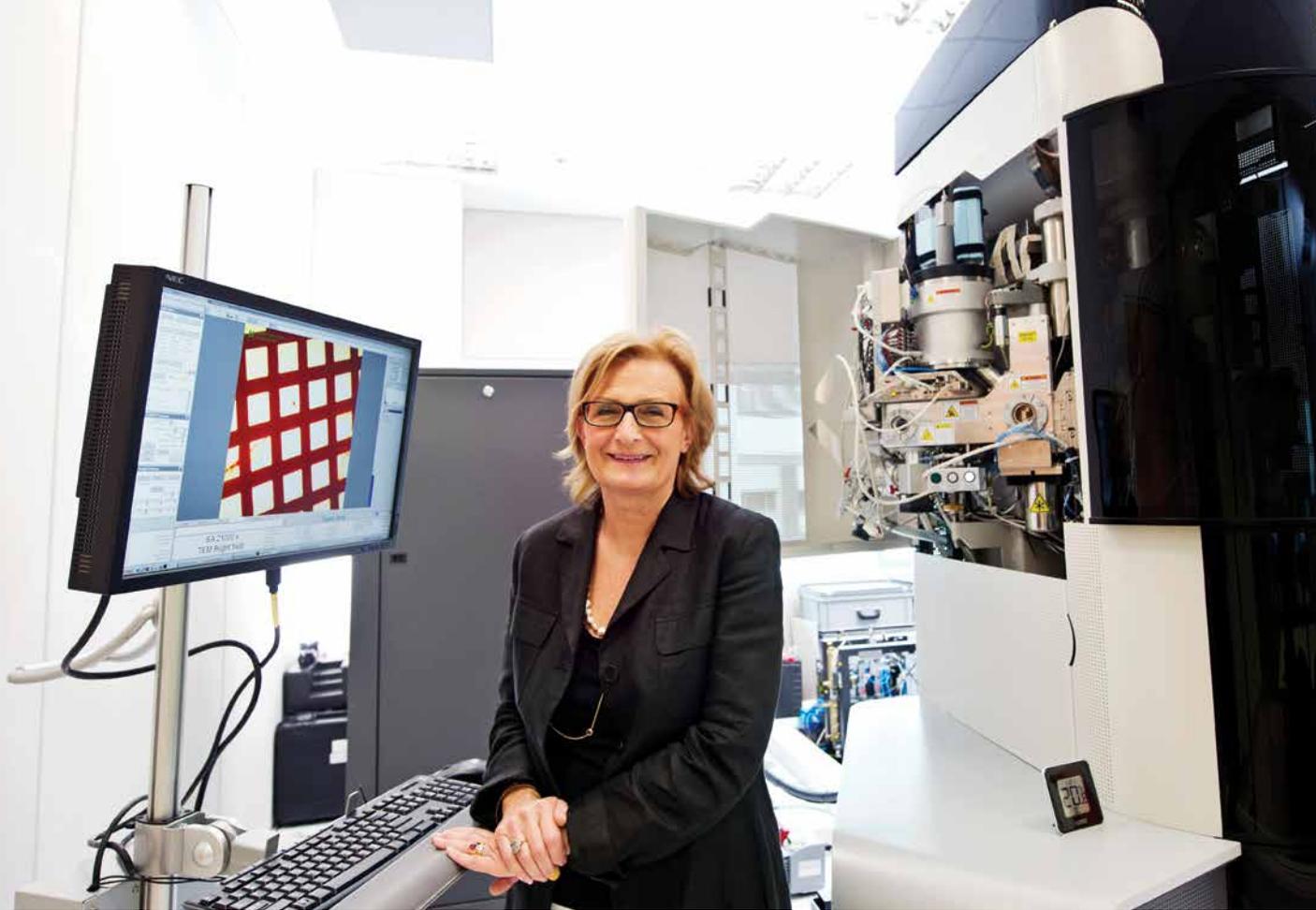
NTU's pool of top students has grown further with its medical school enrolling its first batch of undergraduates in August 2013.

LEE KONG CHIAN SCHOOL OF MEDICINE

- The School, set up jointly with Imperial College London in Singapore, welcomes its **first cohort of 54 students** on 5 August 2013. A total of 440 candidates were interviewed.
- The inaugural **White Coat Ceremony** is held on 15 August 2013 for the first cohort. The pioneer medical students are presented with their medical white coats by the School's Dean, Prof Dermot Kelleher. In attendance are the Presidents of NTU and Imperial College London, Singapore's Minister for Health, Mr Gan Kim Yong, as well as senior representatives from the Ministries of Health and Education and National Healthcare Group, the School's main clinical partner.

- The School recruits **20 top faculty**, including world-class scientists, and **29 clinical teachers** appointed as speciality leads.
- The School **advances its strategic research themes**, tapping on Imperial's strengths in biomedical, clinical science, translational and biotechnology research, as well as NTU's strengths in bioengineering, materials sciences and future healthcare.
- The School's **headquarters at Novena**, a retrofitted conservation building with first-rate facilities, opens. The newly constructed Toh Kian Chui Annex is named in honour of a S\$20 million donation from the Toh Kian Chui Foundation.
- The seven-storey **Experimental Medicine Building** at NTU's Jurong campus is on track to be completed by 2015. The 20-storey **Clinical Sciences Building** at the Novena campus is expected to open in 2016.
- The **Family Medicine Academy** at Bukit Batok Polyclinic officially opens. Jointly set up by the School and its national healthcare partners, it is equipped with a clinical skills laboratory and specially designed consultation rooms for the training of medical students and family doctors.
- The School signs a Memorandum of Understanding with the National Skin Centre and Institute of Medical Biology to jointly establish a world-class **Asian Skin Research Institute**.

54 outstanding students are welcomed as the first cohort at NTU's joint medical school with Imperial College London.



Renowned structural and molecular biologist Prof Daniela Rhodes at NTU's Cryo-Electron Microscopy Laboratory. She secured Singapore's largest academic research grant from the Ministry of Education.

RESEARCH

153

publications are co-authored by NTU faculty in high-impact tier 1 journals, a threefold increase over 2011.

- The number of publications co-authored by NTU faculty in **high-impact tier 1 journals** in 2012 jumps to 153, triple 2011's record of 55 publications.
- The number of **publications in Nature** increases fivefold to 25 from five in 2010. As of 2013, NTU is ranked 12th in the *Nature Publishing Index Asia-Pacific Top 200*, moving up 23 places from the previous year's position.
- NTU is in the top 100 global universities granted US utility patents in 2012. It is ranked 70th worldwide with **27 patents** to its name.
- NTU's annualised funding increases fivefold to S\$440 million in FY2012, up from S\$82 million in FY2005. The University also secures a record high of **S\$488 million in external competitive research grants** in FY2012, a 10% increase from S\$441 million in FY2011. Major funding awards include:
 - The **largest Ministry of Education (MOE) Academic Research Fund (AcRF) Tier 3 Grant** (S\$24 million), which went to Prof Daniela Rhodes from the School of Biological Sciences for her groundbreaking telomere biology research related to human aging and cancer.
 - The **highest number of MOE AcRF Tier 2 awards** given nationally between 2011 and 2013, and almost 50% of the national share for the February 2012, July 2012 and March 2013 grant calls.
 - Two research grants from the National Research Foundation's **Competitive Research Programme**. Since the programme started in 2007, NTU has won 40% of the national share of these awards.

- S\$14.46 million and S\$10.13 million from Singapore's **National Medical Research Council** in FY2011 to FY2012, double the S\$5.75 million received in FY2010.
- About S\$24 million for 21 **A*STAR** (Agency for Science, Technology & Research) awards in calls made by A*STAR's Biomedical Research Council and Science and Engineering Research Council in FY2012.
- S\$75 million from the **National Research Foundation** for NTU's corporate lab with Rolls-Royce.
- S\$50 million from the **Civil Aviation Authority of Singapore** for the Air Traffic Management Research Institute at NTU.
- S\$50 million (second tranche grant) from the **Economic Development Board (EDB)** for the continued development of the Nanyang Environment & Water Research Institute. EDB also granted NTU S\$20 million for the Centre for Contemporary Art and a tropical environmental monitoring satellite project.
- S\$90 million from the **Media Development Authority** to establish three research centres – the Multi-Platform Game Innovation Centre (MAGIC), the Research Centre of Excellence in Active Living for the ElderLY (LILY) and the Rapid-Rich Object Search (ROSE) Lab.
- S\$22 million from **key industry partners** such as Lockheed Martin, BMW, Rolls-Royce, Bosch, DHI, Microsoft, Dyesol, GSK, 3M and Sembcorp.
- There is **further engagement with top universities** – including Massachusetts Institute of Technology, University of Cambridge, California Institute

- of Technology, ETH Zurich and Technische Universität München – through the Global Alliance of Technological Universities and the National Research Foundation's Campus for Research Excellence and Technological Enterprise.
- **Partnerships supporting NTU's strategic research directions** are formed with University of Southampton (photonics), Wageningen University (food science and technology), Technion-Israel Institute of Technology (satellite and space research), RIKEN (human cognition) and University of Warwick (neuroscience).
- NTU establishes Singapore as an **Asian hub for complexity science research**. Top visiting professors recruited include Prof Brian Arthur, a pioneer of the science of complexity from Santa Fe Institute, and Prof Stephen Lansing, a respected anthropologist from University of Arizona.

- The new **Competitive Research Programme Panel** and the expanded **NTU Research Council** support the independent and open assessment of research proposals to ensure the best ones are submitted to funding agencies.
- The framework for research administration excellence is enhanced to include initiatives like the **Nanyang Online Research Administration** for better management of proposal submission, **My Research Alert**, a new smartphone app for personalised research administration, and the **Singapore Chapter of the Australasian Research Management Society**.
- A portal is started to facilitate the campus-wide **sharing of expensive core research facilities** and premium infrastructure.



NTU's rapid rise as a research-intensive university shows it is reaping the results of its focused efforts.

New Centres and Institutes

- **Rolls-Royce @ NTU Corporate Lab**, a joint investment by NTU, Rolls-Royce and the National Research Foundation to advance research in electrical power and control systems, manufacturing and repair technologies, and computational engineering.
- **Future Mobility Research Lab**, BMW's first joint lab with a university in Asia, to study and develop key areas relating to future transportation.
- **A joint research laboratory with Lockheed Martin** to explore nanotechnology, particularly nano-copper and related technologies for commercial use.
- **Nanyang Institute of Technology in Health & Medicine**, to drive interdisciplinary projects between NTU and major healthcare groups and hospitals, both locally and internationally.
- **Centre for Disruptive Photonic Technologies**, to pioneer disruptive photonic technologies in collaboration with global research partners.
- Singapore's first **Air Traffic Management Research Institute**, with the Civil Aviation Authority of Singapore, to enhance air traffic management in Singapore and the region.
- **Research Centre of Excellence in Active Living for the Elderly (LILY)**, with University of British Columbia, to establish Singapore as an age-friendly services and data hub and to address global ageing issues.
- **Multi-Platform Game Innovation Centre (MAGIC)**, to champion efforts in the development and commercialisation of digital games in Singapore.

Rolls-Royce @ NTU Corporate Lab, the first of its kind in the world and one of several high-profile research centres and institutes launched during the year. It triples the number of projects between NTU and Rolls-Royce.



- **Rapid-Rich Object Search (ROSE) Lab**, with Peking University and industry leaders, to spearhead next-generation visual and object search technologies.
- **Ocular Therapeutic Engineering Centre**, to develop new drug delivery systems for the eye and other innovations in ocular therapy.
- **Centre for Optical and Laser Engineering**, to help local and multinational companies sharpen their edge in optical and laser engineering with the aim of developing commercial applications.
- **A data centre prototype**, with Toshiba, that uses advanced cooling technology to cut its energy usage by one-third.

- **Centre for Contemporary Art** at Gillman Barracks, to bolster the arts landscape in Asia through its international artist residency, research and exhibition programmes.
- **Newsplex Asia** at NTU, "a newsroom of the future", with the World Association of Newspapers and News Publishers, to train journalists and editors to function effectively in a fast-changing media landscape.

Research Spotlight

A showcase of the University's diverse strengths in its strategic areas of focus:

Sustainable Earth

- Showing no visible signs of performance degradation, **X-SAT**, Singapore's first locally-built satellite, celebrates its second anniversary in space on 20 April 2013. Built by NTU and DSO National Laboratories, the 105kg microsatellite captures images and data for earth monitoring.
- The Singapore Centre on Environmental Life Sciences Engineering is using ultra-deep metagenomic and metatranscriptomic sequencing to unveil a whole new universe of **microbes essential to sustainable urban life**.

1st

joint lab by BMW with a university in Asia – the Future Mobility Research Lab.

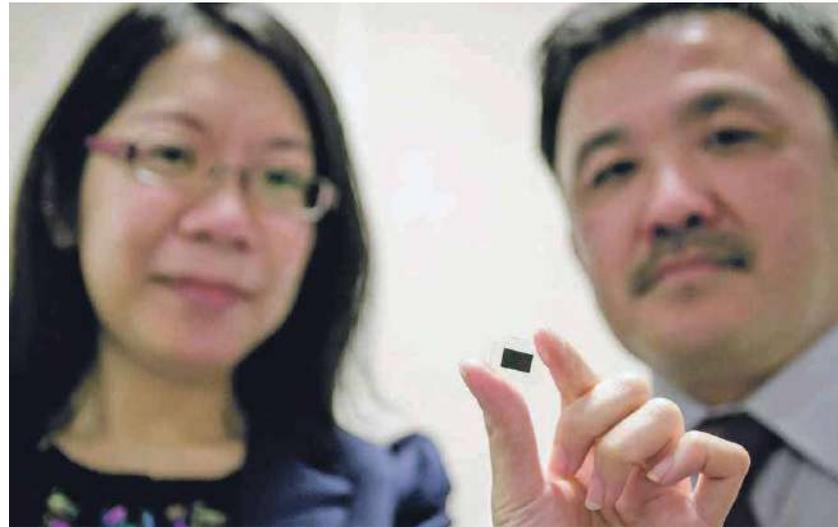


Formalising the NTU-Lockheed Martin Joint Laboratory at NTU, which will allow students and faculty to work directly with Lockheed Martin scientists to develop innovative nanotechnologies for high-tech applications.

- A revolutionary **multi-layered polymer capacitor**, jointly developed with Xenon Technologies, will place brighter camera flashes in slim mobile devices. Although much smaller than current electrolytic capacitors, it delivers the same electrical charge needed to produce high-intensity flash found in digital cameras.
- A study of the Minoan volcanic eruption by the Earth Observatory of Singapore creates **new models that relate signs of volcanic unrest with physical and chemical processes** occurring below the volcano. This is relevant to communities living near large volcanoes.
- **Multi-use Titanium Dioxide (TiO₂)**, a new wonder material, generates hydrogen, desalinates water and creates energy at a very low cost compared to existing technologies. With its ability to kill bacteria, it can also be used to develop a new type of antibacterial bandage.
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- Researchers find that **inhibiting a naturally-produced molecule in the body prevents muscle loss** due to aging or illness. Blocking the molecule also triggers the body to go into "fat-burning mode", which could help fight obesity and diabetes.
- A new stroke rehabilitation device, **Synergistic Physio-Neuro Platform (SynPhNe)**, greatly improves recovery in stroke patients. It works by giving real-time feedback to

Future Healthcare

- A new technique, the **Cellular Thermal Shift Assay**, lets scientists know for sure whether a drug has reached its target protein in the body, shortening the drug development process.
- Scientists from NTU and Lund University bioengineer a molecule, **HAMLET (Human Alpha-lactalbumin Made Lethal to Tumour cells)**, based on a natural protein present in human breast milk, that targets tumour cells, leaving healthy human cells intact.
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A multi-layered polymer capacitor, jointly developed with Xenon Technologies, will deliver smaller and more powerful flashes for mobile cameras to allow great shots even in the dark.



NTU's new stroke rehabilitation device greatly improves recovery in stroke patients, with some long-term stroke sufferers recovering up to 70 per cent of motor function within a month.

- An **intelligent traffic system** predicts traffic flow up to an hour in advance and offers drivers route recommendations.

Innovation Asia

- A new **graphene sensor** allows cameras fitted with it to take clear and sharp photos in dim conditions. It is believed to be the first to be able to detect broad-spectrum light and is 1,000 times more sensitive to light than current low-cost imaging sensors.
- The multi-purpose electric scooter, **VOI**, developed by NTU and Germany's Technische Universität München, is a two-wheeler intended for use in heavily populated cities. Its modular cabin offers the safety of a car and the manoeuvrability and affordability of a scooter.
- A breakthrough in **laser cooling technology** brings down the temperature of a semiconductor from 20 degrees Celsius to -20 degrees Celsius. This world first promises to deliver compact and cost-effective cooling systems for equipment such as MRI scanners and satellite cameras.

- Using a combination of water pressure and computer vision technology, a novel **underwater sensor** creates a 3D image of nearby objects to help submarines and undersea robots navigate underwater. It could replace expensive monitoring equipment in water vehicles.

New Media

- patients on what is happening in their minds and in their muscles.
- **Mo-Buzz**, developed at the Centre of Social Media Innovations for Communities, uses a social media and web system to predict dengue hotspots.

- A low-cost touch screen system, **STATINA (Speech Touch and Acoustic Tangible Interfaces for Next-generation Applications)**, transforms plain surfaces into touch-sensitive display screens. It works on the principles of vibration and imaging.

Up to **70%** of motor function is recovered within a month of using NTU's new stroke rehabilitation device.

“New knowledge is found in the interfaces between disciplines. We are at the forefront of knowledge creation through our cutting-edge work with leading individuals and industry partners.” – Prof Bertil Andersson, NTU President

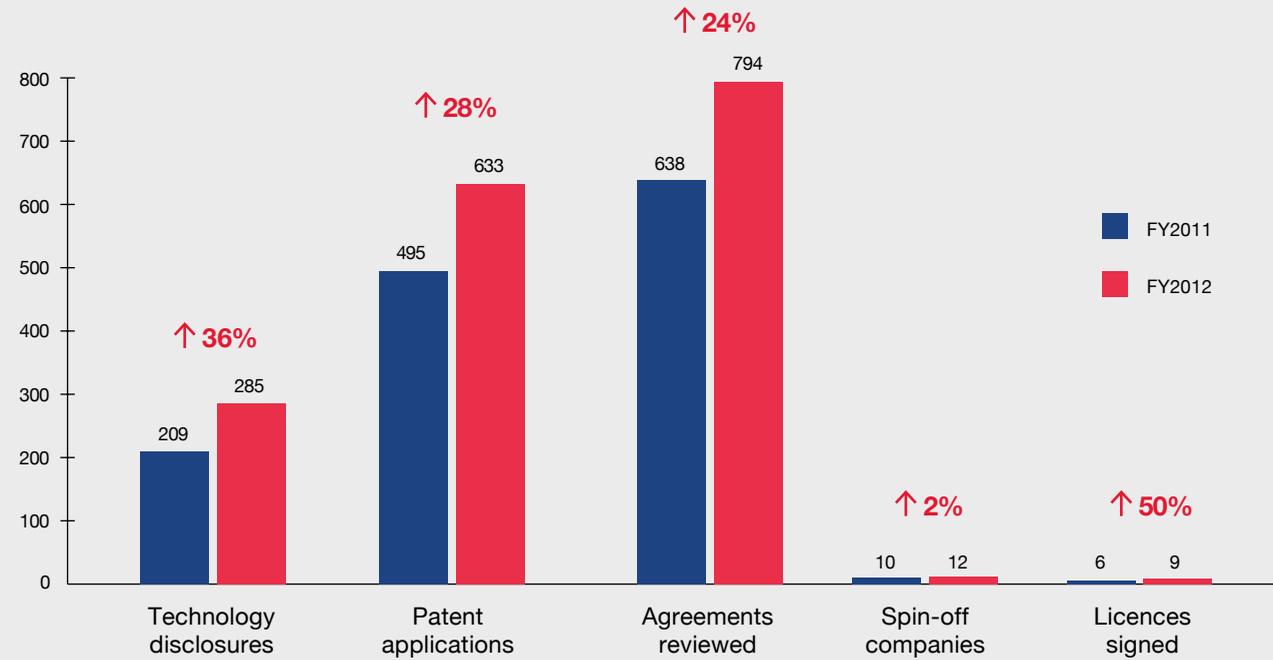


Imagine turning a whiteboard, glass window or even a wooden table top into a responsive, touch sensitive surface – that's what STATINA, a low-cost touch screen system, does.



Developed for megacities, VOI is designed to be as agile and affordable as a scooter and to offer car-like protection for its passenger.

INNOVATION AND ENTREPRENEURSHIP



More NTU faculty and students are engaging in innovation and entrepreneurship activities.

- The number of **technology disclosures filed increases 36%**, from 209 in FY2011 to 285 in FY2012. Patent applications rise 28% over the same period.
- **12 spin-off companies** are formed, 20% more than in FY2011.
- NTU faculty secure **six National Research Foundation Proof-of-Concept grants** worth more than S\$1.3 million in total. They have a year to turn their ideas into prototypes that can be commercialised.

- An **incubation and mentoring programme** is started to promote innovation and support entrepreneurship on campus, including helping budding entrepreneurs survive the challenging start-up period. In FY2012, 31 start-ups secure S\$2 million in start-up grants and S\$800,000 in follow-up funding through NTU's innovation and enterprise office.

36%
increase in the number of technology disclosures filed by NTU.

TOP FACULTY

- NTU is a melting pot of top academics and outstanding young talent. World-renowned research leaders at NTU in 2013 include: **Prof Dermot Kelleher**, Dean of the Lee Kong Chian School of Medicine, and **Prof Ravi Kumar**, Dean of the Nanyang Business School. Other top faculty hires at the Lee Kong Chian School of Medicine include **Prof Phil Ingham**, **Prof David Becker**, **Prof Annelies Wilder-Smith**, **Prof Bernhard Boehm** and **Prof George J Augustine**. Eminent faculty at the School of Humanities & Social Sciences include **Prof Ng Yew Kwang**, **Prof Zhou Min**, **Prof Kingsley Bolton** and **Prof He Baogang**.
- NTU attracts some of the world's best young researchers through the prestigious **National Research Foundation (NRF) Fellowship** and its own elite young faculty recruitment scheme, the **Nanyang Assistant Professorship**. Over 50% of NRF Fellows (seven out of 14) choose NTU as their host institution. During the year, NTU also awarded 11 Nanyang Assistant Professorships, out of an average of 350 applications from qualified candidates.



Immunology and infectious diseases pioneer Prof Dermot Kelleher.



Prof Ravi Kumar, known widely for his expertise on global operations.



Prof Phil Ingham, behind several of the most influential discoveries in developmental biology of the last century.



Prof Annelies Wilder-Smith, an expert in travel and tropical medicine.



Prof Ng Yew Kwang, renowned for his work in welfare economics.



International migration specialist Prof Zhou Min, who is also the Director of the Chinese Heritage Centre at NTU.

STRATEGIC ALLIANCES

- NTU ties up with **Wageningen University** to deepen research in food science and technology, a new research frontier that is expected to be an important engine of growth for Singapore. NTU aims to develop full-fledged programmes in food science and technology at the undergraduate and Master's levels.
- A collaboration with **Technion-Israel Institute of Technology** allows NTU to expand its satellite research programme with one of the world's top science and technology research universities. It comes at a time when both universities have embarked on separate plans to build nano-satellites over the next five years.
- NTU and Peking University sign a pact at an inaugural **technopreneurship forum** in Beijing to groom future technopreneurs. The two universities will organise an annual forum as well as jointly develop courses on topics such as managing family businesses.
- NTU President Prof Bertil Andersson is re-elected Chairman of the **Global Alliance of Technological Universities** for a two-year term from 2013 to 2015. Two new partners are welcomed into the alliance – Technische Universität München and the University of New South Wales, bringing the number of member universities to nine. The Alliance holds its inaugural Engineering Deans' Meeting in Pasadena, California, which concludes with a symposium on the impact of Massive Open Online Courses on higher education.



A partnership with the Netherlands' Wageningen University to ramp up research in food science and technology. NTU President Prof Bertil Andersson (right) with Wageningen University and Research Centre President Dr Aalt Dijkhuizen.

ADMINISTRATIVE AND IT ENHANCEMENTS

- Administrative services continue to be improved during the year to raise quality and efficiency. A **shared services model** is conceived to transform the way these services are delivered.
- To achieve strategic sourcing in procurement, the **first large-scale NTU period contract** is completed for lab supplies. This covers 672 items, with savings ranging from 20% to 30%.
- **Service excellence training programmes** are initiated for administrative and technical staff.
- The **IT network is enhanced** to support higher mobility and NTU's video-intensive learning environment.
- An **integrated IT solution** is implemented to support the operations of NTU's integrated student services helpdesk, **One Stop @ SAC**.
- As part of the NTU Education initiative, **new learning and media technologies** are introduced to support team-based and collaborative learning.
- NTU begins to implement **Massive Open Online Courses** on Coursera and pilot **part-time blended learning courses**.



NTU's mascot, Lyon, which debuted in 2013, has been inspiring students to give their best performance at inter-varsity and other competitions.

AWARDS AND ACCOLADES

15 medals go to NTU's student athletes at the 16th ASEAN University Games.

Administrative Departments

- **Corporate Communications Office**
- PRISM Award 2012 for Outstanding Overall Corporate Reputation Programme (Singapore), Merit
- 2012 QS-APPLE Creative Award for Best International Print Advertisement (Silver Award)
- 2012 QS-APPLE Creative Award for Best International Website Page (Silver Award)

Centre for IT Services and Computer Services Centre (National Institute of Education)

- 2013 CIO 100 Honouree

Undergraduates

- **Dong Fang Gao & Jun Duo Jia**
- Second place, Schneider Electric's Go Green in the City East Asia Regional Challenge 2013

Ryan Heng

- First prize, 2013 International Workshop on Environment and Resources poster competition

Poh Yueh Loong

- Second prize, 2013 International Workshop on Environment and Resources poster competition

Lee Lihui & Richard Lam

- Certificate of Outstanding Performance, 2013 International Workshop on Environment and Resources poster competition

Jayden Lee & Shermaine Lee

- Champions, Semi-finals of South East Asia Round, Henkel Innovation Challenge 6

Deepanshu Kalra & Vasundhara Bhandari

- Third place, Semi-finals of South East Asia Round, Henkel Innovation Challenge 6



Mechanical & Aerospace Engineering students with their top-flight aircraft at the Taiwan UAV Design Competition.



Physics student Mark Goh competed in track events and badminton at the 19th World Transplant Games in Durban, South Africa.

Mechanical & Aerospace Engineering students

- Overall Winner, Best Report, Best Artwork Design, Maximum Payload, Fundamental Design Level (Motor) category, 2013 Taiwan UAV Design Competition

Prukalpa Sankar, Varun Banka & Harjoben Singh

- Global ICT Prize, Global Social Entrepreneurship Competition

Minh Quoc Huy Cao, Quyen Tran Nguyen Tu & Hy Nguyen Quy

- Winner, Windows Phone Challenge, Microsoft Imagine Cup 2013

Mark Goh

- Competitor (liver transplant recipient), 19th World Transplant Games

Cultural Activities Club Choir

- First place (Folk, Popular and Gospel Music) and second place

(Mixed Choir), 4th International Krakow Choir Festival 2013

NTU athletes at 16th ASEAN University Games

- 15 medals, almost half of the 32 medals won by the Singapore Combined University Contingent in Laos

Graduate Students

Li Xiaosong

- Winner, 2013 Association for Computing Machinery SIGSIM PADS PhD Colloquium Award

Yu Hang

- Selected for Machine Learning Summer School 2013, Max Planck Institute for Intelligent Systems

Toh Kah Kah

- Selected for 63rd Lindau Nobel Laureate Meeting, Germany



An interdisciplinary team won the 11th Microsoft Imagine Cup Worldwide Finals in Russia, in the Windows Phone Challenge category.

ALUMNI

3,662
alumni ambassadors contribute back to NTU in various ways.

- NTU's pool of alumni grows to about **180,000**. These alumni reside in 128 countries and are supported by 31 local alumni associations and 42 overseas alumni chapters.
- The global alumni network expands with the setting up of a **Malaysian chapter** and the restructuring of the **India chapter** into three separate chapters in Central, Northern and Southern India.
- The **School of Humanities & Social Sciences** and **School of Art, Design & Media** form alumni associations.
- At the **Nanyang Alumni Awards 2012**, 26 alumni are honoured for their exemplary achievements.
- NTU's **3,662 alumni ambassadors** contribute in many ways, including organising class reunions and speaking at forums and freshmen orientation events.
- About **40 activities** are organised to engage alumni and encourage networking. They include a homecoming, sports fiesta and family day as well as alumni forums, movie screenings, overseas trips and workshops.

NTU President Prof Bertil Andersson launching the Welcome Class 2012 Alumni Party at Zouk.





Prof Albert Fert (Nobel Laureate in Physics, 2007) sharing his thoughts on the theme of the International Science Youth Forum @ Singapore, co-organised by NTU's Institute of Advanced Studies.

HONORARY DOCTORATE RECIPIENTS

- **Prof Wolfgang A Herrmann**
Doctor of Science
- **Mr Tan Gee Paw**
Doctor of Engineering
- **Dr Susilo Bambang Yudhoyono**
Doctor of Letters

University, Curtin University, Graz University of Technology, Hebrew University of Jerusalem, Loughborough University, Mahidol University, Nanjing University, Peking University, Queen Mary University of London, Shanghai Jiao Tong University, Strathclyde University, Technion-Israel Institute of Technology, University at Buffalo (The State University of New York), University of Chile, University of Illinois at Urbana-Champaign, University of Manchester and Wageningen University and Research Centre.

- Top international dignitaries and world-renowned scientists at NTU during the year:

Her Majesty Beatrix Wilhelmina Armgard
Queen of the Netherlands

Prof Dan Shechtman
Nobel Laureate in Chemistry (2011)

Prof Douglas Dean Osheroff
Nobel Laureate in Physics (1996)

Prof Vladimir Voevodsky
Fields Medallist (2002)

Prof Albert Fert
Nobel Laureate in Physics (2007)

Prof Murray Gell-Mann
Nobel Laureate in Physics (1969)

Prof Michael Grätzel
Millennium Technology Prize Laureate (2010)

Prof Rudolph Marcus
Nobel Laureate in Chemistry (1992)

Prof Yuan Tseh Lee
Nobel Laureate in Chemistry (1986)

Prof Lars Brink
Chalmers University of Technology (Chairman of Nobel Committee for Physics, 2013)

Prof Erling Norrby
The Royal Swedish Academy of Sciences (Member of the Board of the Nobel Foundation, 1997-2003)

EMINENT VISITORS

- NTU receives more than **200 overseas delegations** in FY2012. Among them are 25 state leaders and 44 academic leaders at the Provost or President level.

NTU hosts the chiefs of these universities: Ben-Gurion University of the Negev, Boston

GIFTS TO THE UNIVERSITY

- **Alumni Giving** hits a record participation rate of almost 15% in 2012, with contributions of more than S\$2 million.
- The **iGave Graduation Giving** campaign raises S\$117,703 from 82% of the Class of 2012 graduating cohort, a record for both participation and amount.
- The **Faculty and Staff Giving** campaign registers a record participation rate of 61.6% in 2012, an increase of 12.6% from 2011.
- The **Business and Community Partners** programme attracts more than 200 companies and community organisations in 2012.

Gifts of significant impact received in FY2012 (April 2012 to March 2013):

- S\$20 million from the **Toh Kian Chui Foundation** to the Lee Kong Chian School of Medicine to create the endowed Toh Kian Chui Memorial Fund. This will go towards funding a distinguished professorship, a gold medal student award, scholarships, research and education.
- S\$10 million from **Sembcorp Marine Ltd** to establish the Sembcorp Marine Lab, which will spearhead world-class marine research and enhance the growth of the offshore and marine industry.
- S\$2.5 million from **Cargill Asia Pacific Holdings Pte Ltd** to establish the endowed Cargill China Leadership Endowment Fund. This will

support, in perpetuity, NTU's China leadership programmes, which aim to enhance the knowledge and expertise of China's government officials in international development and public administration.

- S\$2 million from alumnus **Wang Hairong** to set up the endowed Hairong Education Fund for the College of Humanities, Arts, & Social Sciences. This will support

the College's multidisciplinary International Summer School in China programme.

- S\$500,000 from **Mapletree Investments Pte Ltd** to establish the Mapletree Bursary, which will provide annual awards of S\$8,000 each to students in need of financial assistance.



The new education wing of the Lee Kong Chian School of Medicine at the Novena campus was named the Toh Kian Chui Annex in recognition of the Toh Kian Chui Foundation's S\$20 million gift.



Sembcorp Marine Ltd's gift of S\$10 million will go towards the setting up of the Sembcorp Marine Lab @ NTU, which will develop solutions for the offshore and maritime industry.

HIGHLIGHTS

BENEFACTORS (APRIL 2012 TO MARCH 2013)

S\$5 Million and Above

- Sembcorp Marine Ltd
- Toh Kian Chui Foundation

S\$1 Million and Above

- Cargill Asia Pacific Holdings Pte Ltd
- Cheung Shing Tai John
- Chong Cheng School
- Kim Seng Holdings Pte Ltd
- Lee Foundation
- Temasek Foundation CLG Limited
- Wang Hairong

S\$500,000 and Above

- Chip Eng Seng Corporation Ltd
- DSO National Laboratories
- MacArthur Foundation
- Mapletree Investments Pte Ltd

S\$250,000 and Above

- Ascendas Funds Management (S) Ltd
- China Precision Technology Limited
- Continental Steel Pte Ltd
- Khoo Hock Tin
- Linda Oei Swan Chu
- Tan Jushin Kenneth
- The Lloyd's Register Educational Trust
- The Singapore Contractors Association Ltd
- The Trustee of the Harry Oppenheimer Family Continuity Trust
- United Way Worldwide

S\$100,000 and Above

- Bengawan Solo Pte Ltd
- Daniel and Joanna Chew
- Far East Organization
- Fenny Maynard
- Heng Ah Kin
- Hong Leong Foundation
- ICH Capital Pte Ltd
- Jean Ang Bee Leng
- Jiangsu Huailong Materials Company Limited
- Keppel Corporation Limited

- Khoo Whee Luan
- Kwan Im Thong Hood Cho Temple
- Loo Geok Eng Foundation Limited
- Micron Technology Foundation, Inc
- Ng Foundation Limited
- Resorts World at Sentosa Pte Ltd
- Serial System Ltd
- Shinnyo-en Singapore
- Singapore Technologies Engineering Ltd
- Swire Pacific Offshore Operations (Pte) Ltd
- Temasek Holdings (Private) Limited
- Wu Hsioh Kwang @ Ng Hok Kuong
- An anonymous donor

S\$50,000 and Above

- Abwin Pte Ltd
- Aw Sock Beng
- Dou Yee Technologies Pte Ltd
- Keppel Care Foundation Limited
- Koh Kok Ong
- Lian Ho Lee Construction Pte Ltd
- Lim Tiam Seng
- Low Tuck Kwong
- Network for Electronic Transfers (S) Pte Ltd
- Seiko Instruments Singapore Pte Ltd
- Whitford Pte Ltd
- Two anonymous donors

S\$25,000 and Above

- Chang Wenn Yuan
- DV Partners Pte Ltd
- FMC Technologies Singapore Pte Ltd
- Ho Ngiap Kum
- International Bunker Industry Association (Asia) Limited
- Koh Xiankai
- Li-Ho Holdings (Pte) Ltd
- Monconcept Investments Pte Ltd
- Motorola Mobility Foundation
- Muslim Missionary Society, Singapore (Jamiyah Singapore)
- Peh Chong Eng

- Prime Structures Engineering Pte Ltd
- Professional Engineers Board, Singapore
- Q.B. Food Trading Pte Ltd
- Q'Son Kitchen Equipment Pte Ltd
- Singapore Maritime Foundation
- The Tan Chin Tuan Foundation
- Wong Sing Lam
- An anonymous donor

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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 its key constitutive document, its Memorandum and Articles of Association.

NTU is committed to high standards of corporate governance, professionalism, integrity 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).

Board of Trustees

The NTU Board of Trustees is the highest governing organ within the University’s governance framework. The Board comprises 18 members appointed by the Minister for Education, and is chaired by Mr Koh Boon Hwee. 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 and risk and compliance, as well as valuable relationships and networks which are essential for the growth of NTU.

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

The NTU Board of Trustees has in place a framework with systems and processes for an effective Board based on the following governance principles and practices:

1. Effective recruitment and induction of Trustees. The Nominating Committee is delegated the responsibility of recommending suitable candidates and has in place an induction programme comprising interactive briefing sessions. In addition, a Board Manual is available.
2. Board Committees are structured to assist the Board to fulfil its governance role, tapping each Trustee’s competencies, skills and experience.
3. The Board works with Management to set the vision, mission and strategy of NTU.
4. The Board has an executive succession plan tailored to reflect NTU’s current strategy and organisation.
5. The Board has a system for effective consultation and decision-making with executive sessions and board meetings scheduled in advance, professional expertise advice available, internal guidelines and procedures for conduct of board meetings and obtaining board approvals via circulation, and a Trustees’ portal as a secured web-based resource centre for information relevant to the Board.
6. The Board evaluates and reviews its own performance and has appointed 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 Chairman, 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 a formal board nomination and election.

Board Committees

Eight Board Committees and one Advisory Committee have been established to support the Board. These are the Academic Affairs Committee, Alumni and Development Committee, Audit and Risk Committee, Enterprise Committee, Finance Committee, Investment Committee, Nominating Committee, Remuneration Committee and Campus Planning Advisory Committee.

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 issues relating to 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 Enterprise Committee provides oversight and policy guidance for, and directly supports, the University’s strategic directions and policies on innovation, technology transfer and entrepreneurship.
- 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.
- 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 are required to observe their respective Terms of Reference as set by the Board. The Terms of Reference of each of these Committees set out the role, powers and rules applicable to these Committees. Where necessary, non-Board members who have expertise in their respective fields are also co-opted to enhance the deliberations and decision-making process of some of the Board Committees.

University Leadership

The President is the University’s Chief Executive Officer as well as its academic and administrative head. He is accountable to the Board for the conduct, coordination and quality of all of NTU’s programmes and for their future development. He has the authority to perform all acts which are necessary to give effect to the policies and statutes of the Board.

The Provost is the Chief Academic and Budget Officer of the University appointed by the President with the approval of the Board of Trustees. The Provost is responsible for the University’s academic endeavours and development. This includes graduate and undergraduate education, research, faculty development, student life, external academic liaison and coordination of supporting administrative efforts. He deputises for the President in his absence.

Policies to Manage Conflict of Interest

Members of the Board of Trustees 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 not to allow themselves to get into a position where there is a conflict between what they ought to do for NTU and what they might do for themselves. The NTU Board of Trustees subscribes to a code of conduct to uphold a high standard of integrity and commitment in serving the University and in the event of a conflict of interest, members of the Board shall recuse themselves from decisions where such a conflict exists.

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

Under the University Code of Conduct, faculty and staff owe their primary professional allegiance to the University. To protect the University and its mission, all faculty and staff must comply with policies on conflict of interest as laid down from time to time. 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 fully and frankly disclose the nature and extent of their interest to the University as soon as possible.

TRUSTEES' REPORT AND CONSOLIDATED FINANCIAL STATEMENTS

Report of the Trustees

The Board of Trustees present their report 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 2013.

Trustees

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

Mr Koh Boon Hwee (Chairman)
 Mr Alwi Bin Abdul Hafiz
 Ms Jennie Chua
 Mr Kwek Leng Joo
 Mrs Lee Suet Fern
 Ms Lien Siaou-Sze
 Mr Lim Chuan Poh
 Prof Haresh Shah
 Mr Inderjit Singh
 Mr Ernest Wong
 Mr Lim Chee Onn
 Prof Alexander JB Zehnder
 Mr Wong Yew Meng
 Sir Keith O'Nions
 Prof Bertil Andersson
 Ms Chan Lai Fung
 Mr Goh Sin Teck
 BG (NS) Tan Meng Dui

Mr Chia Ban Seng and Mr Goh Geok Ling resigned as Trustees of the University Company on 31 March 2013.

Arrangements to Enable Trustees to Acquire Shares and Debentures

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

TRUSTEES' REPORT AND CONSOLIDATED FINANCIAL STATEMENTS (CONT'D)

Trustees' Interests in Shares And Debentures

The Trustees of the University Company at the end of the financial year have no 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.

As the University Company is limited by guarantee and not having a share capital, there are no matters to be disclosed under Section 201(6)(g), Section 201(6A)(h), Section 201(11) and Section 201(12) of the Singapore Companies Act, Chapter 50.

Trustee Contractual Benefits

Since the beginning of the financial year, no Trustee has received or become entitled to receive a benefit by reason of a contract made by the University Company or a related corporation with the Trustee or with a firm of which he is a member or with a company in which he has a substantial financial interest, except for remuneration paid to a trustee in respect of his employment with the University Company as well as consultancy fees paid to another trustee as disclosed in Note 28 to the financial statements.

Auditors

The auditors, Deloitte & Touche LLP, have expressed their willingness to accept re-appointment.

ON BEHALF OF THE BOARD OF TRUSTEES



Mr Koh Boon Hwee
 Chairman of the Board of Trustees
 Trustee



Prof Bertil Andersson
 President of Nanyang Technological University
 Trustee

15 August 2013

STATEMENT BY TRUSTEES

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 19 to 56 are drawn up so as to give a true and fair view of the state of affairs of the Group and of the University Company as at 31 March 2013, and of the results, changes in funds and reserves and cash flows of the Group and of the changes in funds and reserves of the University Company for the financial year from 1 April 2012 to 31 March 2013; and
- (b) 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.

ON BEHALF OF THE BOARD OF TRUSTEES



Mr Koh Boon Hwee
Chairman of the Board of Trustees
Trustee



Prof Bertil Andersson
President of Nanyang Technological University
Trustee

15 August 2013

INDEPENDENT AUDITORS' REPORT

TO THE BOARD OF TRUSTEES OF NANYANG TECHNOLOGICAL UNIVERSITY

Report on the Financial Statements

We have audited the accompanying financial statements of Nanyang Technological University (the "University Company") and its subsidiaries ("the Group") which comprise the statements of financial position of the Group and the University Company as at 31 March 2013, and the 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 a summary of significant accounting policies and other explanatory information, as set out on pages 19 to 56.

Management's Responsibility 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 Singapore Companies Act, Chapter 50 (the "Act"), the Singapore Charities Act, Chapter 37 (the "Charities Act") and Singapore Financial Reporting Standards 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 profit and loss accounts and balance sheets and to maintain accountability of assets.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Singapore Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of the financial statements that give a true and fair view 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 entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

INDEPENDENT AUDITORS' REPORT (CONT'D)

TO THE BOARD OF TRUSTEES OF NANYANG TECHNOLOGICAL UNIVERSITY

Opinion

In our opinion, 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 are properly drawn up in accordance with the provisions of the Act, the Charities Act and Singapore Financial Reporting Standards so as to give a true and fair view of the state of affairs of the Group and of the University Company as at 31 March 2013 and of the results, changes in funds and reserves and cash flows of the Group and changes in funds and reserves of the University Company for the year ended on that date.

Report on Other Legal and Regulatory Requirements

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

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

- (a) The use of donation moneys was not in accordance with the objectives of the University Company as required under regulation 16 of the Charities (Institutions of a Public Character) Regulations; and
- (b) The University Company has not complied with the requirements of regulation 15 (Fund-raising expenses) of the Charities (Institutions of a Public Character) Regulations.

Deloitte & Touche LLP.

Public Accountants and
Chartered Accountants
Singapore

15 August 2013

STATEMENTS OF FINANCIAL POSITION

31 March 2013

	Note	2013 \$'000	Group 2012 \$'000	University Company 2013 \$'000	2012 \$'000
ASSETS					
Non-current assets					
Property, plant and equipment	3	1,141,779	1,140,633	1,140,490	1,138,875
Prepaid lease	4	3,267	3,433	3,267	3,433
Subsidiaries	5	-	-	791	791
Student loans	6	4,018	4,268	4,018	4,268
Finance lease receivables	7	21,706	22,358	21,706	22,358
		<u>1,170,770</u>	<u>1,170,692</u>	<u>1,170,272</u>	<u>1,169,725</u>
Current assets					
Derivative financial instruments	8	1,011	4,065	1,011	4,065
Loan to a subsidiary	9	-	-	-	3,000
Student loans	6	2,721	3,028	2,721	3,028
Trade and other receivables	10	327,575	286,156	324,648	283,336
Financial assets at fair value through profit or loss	11	1,462,564	1,212,845	1,462,564	1,212,845
Finance lease receivables	7	652	636	652	636
Cash and cash equivalents	12	1,181,113	1,093,652	1,161,810	1,074,261
		<u>2,975,636</u>	<u>2,600,382</u>	<u>2,953,406</u>	<u>2,581,171</u>
Total assets		<u>4,146,406</u>	<u>3,771,074</u>	<u>4,123,678</u>	<u>3,750,896</u>
LIABILITIES					
Current liabilities					
Derivative financial instruments	8	2,578	12	2,578	12
Other payables and accruals		146,060	109,768	140,610	105,113
Provisions	13	97,856	75,070	97,695	74,933
Grant received in advance - Operating grants	14	1,210	499	-	-
Grant received in advance - Information technology and furniture and equipment ("IT and F&E")	15	39,234	35,035	39,234	35,035
Sinking fund received in advance	15	6,600	-	6,600	-
Short-term borrowings	16	81,600	90,900	81,600	90,900
Deferred tuition and other fees		69,995	64,467	69,995	64,467
Research grants received in advance	17	127,382	77,441	127,228	76,881
Income tax payable		366	475	-	-
		<u>572,881</u>	<u>453,667</u>	<u>565,540</u>	<u>447,341</u>
Non-current liabilities					
Deferred capital grants	18	812,549	821,503	811,622	820,162
Other non-current liabilities		3,431	3,324	3,431	3,324
Sinking fund received in advance	15	234,228	205,529	234,228	205,529
		<u>1,050,208</u>	<u>1,030,356</u>	<u>1,049,281</u>	<u>1,029,015</u>
Total liabilities		<u>1,623,089</u>	<u>1,484,023</u>	<u>1,614,821</u>	<u>1,476,356</u>
Net assets		<u>2,523,317</u>	<u>2,287,051</u>	<u>2,508,857</u>	<u>2,274,540</u>

STATEMENTS OF FINANCIAL POSITION (CONT'D)

31 March 2013

	Note	Group		University Company	
		2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
FUNDS AND RESERVES					
Capital account	19	200,858	200,858	200,858	200,858
Endowment fund	20	1,266,322	1,130,908	1,266,322	1,131,283
Accumulated surplus					
– General fund		561,930	497,394	545,840	484,040
– Other restricted fund		494,207	457,891	495,837	458,359
Funds and reserves		2,523,317	2,287,051	2,508,857	2,274,540
Funds managed on behalf of the Government Ministry	21	219,864	233,464	219,864	233,464
Represented by: Net assets managed on behalf of the Government Ministry	21	219,864	233,464	219,864	233,464

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 March 2013

	Note	General fund		Endowment fund		Other restricted fund		Total	
		2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
Group									
Income									
Tuition and other fees		244,439	226,910	-	-	28,785	29,303	273,224	256,213
Rental income		1,602	1,444	-	-	35,035	32,195	36,637	33,639
Research grants	17	231,068	206,506	-	-	-	-	231,068	206,506
Interest income	22	3,759	3,503	-	16	582	478	4,341	3,997
Donations		773	7	-	-	28,786	25,438	29,559	25,445
Other grants		2,956	3,592	-	-	15,032	7,076	17,988	10,668
Sundry income		56,886	37,916	-	-	21,314	31,775	78,200	69,691
Deferred capital grants amortised (non-ministry)	18	7,584	7,666	-	-	6,730	5,924	14,314	13,590
Total income before profit on investments		549,067	487,544	-	16	136,264	132,189	685,331	619,749
Profit on investments	23	18,113	4,451	75,715	8,024	139	9	93,967	12,484
Total income after profit on investments		567,180	491,995	75,715	8,040	136,403	132,198	779,298	632,233
Expenditure									
Expenditure on manpower		583,240	563,992	999	993	90,003	73,826	674,242	638,811
Teaching/research		118,519	110,137	-	-	52,256	48,274	170,775	158,411
Administration		66,794	65,715	-	-	44,466	42,088	111,260	107,803
Scholarship expenses		81,664	76,823	-	-	61,237	54,392	142,901	131,215
Maintenance		76,484	76,030	-	-	12,704	12,723	89,188	88,753
Library books and periodicals		4,644	5,247	-	-	-	-	4,644	5,247
Depreciation of property, plant and equipment	3	157,055	159,011	-	-	16,655	11,618	173,710	170,629
Amortisation of prepaid lease	4	166	166	-	-	-	-	166	166
Balance carried forward		1,088,566	1,057,121	999	993	277,321	242,921	1,366,886	1,301,035

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

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (CONT'D)

Year ended 31 March 2013

Note	General fund		Endowment fund		Other restricted fund		Total	
	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
Group								
Balance brought forward	1,088,566	1,057,121	999	993	277,321	242,921	1,366,886	1,301,035
Capital expenditure not capitalised	21,937	16,486	-	-	2,203	2,512	24,140	18,998
Loss on disposal of property, plant and equipment	720	145	-	-	60	431	780	576
Other expenses	41	-	2,074	2,190	23,523	21,816	25,638	24,006
Total expenses	1,111,264	1,073,752	3,073	3,183	303,107	267,680	1,417,444	1,344,615
(Deficit)/Surplus before grants from ministries	24 (544,084)	(581,757)	72,642	4,857	(166,704)	(135,482)	(638,146)	(712,382)
Grants from ministries								
Development grants	15 23,369	17,002	-	-	-	-	23,369	17,002
Operating grants	25 503,000	514,975	-	-	-	-	503,000	514,975
Other grants	3,215	2,867	-	-	107,655	102,234	110,870	105,101
Deferred capital grants amortised	18 144,984	146,619	-	-	5,032	3,376	150,016	149,995
Total grants from ministries	674,568	681,463	-	-	112,687	105,610	787,255	787,073
Surplus/(Deficit) after grants from ministries	130,484	99,706	72,642	4,857	(54,017)	(29,872)	149,109	74,691
Taxation	26 347	446	-	-	-	-	347	446
Surplus/(Deficit) for the year	130,137	99,260	72,642	4,857	(54,017)	(29,872)	148,762	74,245
Other comprehensive income, net of tax	-	-	-	-	-	-	-	-
Total comprehensive income/(loss) for the year	130,137	99,260	72,642	4,857	(54,017)	(29,872)	148,762	74,245

STATEMENTS OF CHANGES IN FUNDS AND RESERVES

Year ended 31 March 2013

Group	Capital account \$'000	Endowment fund \$'000	Accumulated surplus		Total \$'000
			General fund \$'000	Other restricted fund \$'000	
At 1 April 2011	200,858	893,523	471,703	391,883	1,957,967
Total comprehensive income/(loss) for the year	-	4,857	99,260	(29,872)	74,245
Donations	-	54,593	-	-	54,593
Grants from ministries – other grants	-	202,470	-	-	202,470
Transfer from endowment fund	-	(24,535)	11,856	12,679	-
Transfer to research grants received in advance	-	-	(1,962)	-	(1,962)
Transfer to deferred capital grants	-	-	(99)	-	(99)
Utilisation of other restricted fund/general fund	-	-	-	(275)	(275)
Transfer to other restricted fund	-	-	(88,417)	88,417	-
Transfer to general fund	-	-	5,025	(5,025)	-
Fair value adjustment	-	-	28	84	112
At 31 March 2012	200,858	1,130,908	497,394	457,891	2,287,051
Total comprehensive income/(loss) for the year	-	72,642	130,137	(54,017)	148,762
Donations	-	61,612	-	-	61,612
Grants from ministries – other grants	-	25,892	-	-	25,892
Transfer from endowment fund	-	(24,732)	13,653	11,079	-
Transfer to other restricted fund	-	-	(90,259)	90,259	-
Transfer to general fund	-	-	11,005	(11,005)	-
At 31 March 2013	200,858	1,266,322	561,930	494,207	2,523,317

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

STATEMENTS OF CHANGES IN FUNDS AND RESERVES (CONT'D)

Year ended 31 March 2013

	Capital account \$'000	Endowment fund \$'000	Accumulated surplus		Total \$'000
			General fund \$'000	Other restricted fund \$'000	
University Company					
At 1 April 2011	200,858	893,898	462,660	391,487	1,948,903
Total comprehensive income/ (loss) for the year	-	4,857	94,949	(29,008)	70,798
Donations	-	54,593	-	-	54,593
Grants from ministries – other grants	-	202,470	-	-	202,470
Transfer from endowment fund	-	(24,535)	11,856	12,679	-
Transfer to research grants received in advance	-	-	(1,962)	-	(1,962)
Transfer to deferred capital grants	-	-	(99)	-	(99)
Utilisation of other restricted fund/general fund	-	-	-	(275)	(275)
Transfer to other restricted fund	-	-	(88,417)	88,417	-
Transfer to general fund	-	-	5,025	(5,025)	-
Fair value adjustment	-	-	28	84	112
At 31 March 2012	200,858	1,131,283	484,040	458,359	2,274,540
Total comprehensive income/ (loss) for the year	-	72,642	127,026	(52,855)	146,813
Donations	-	61,612	-	-	61,612
Grants from ministries – other grants	-	25,892	-	-	25,892
Transfer from endowment fund	-	(25,107)	14,028	11,079	-
Transfer to other restricted fund	-	-	(90,259)	90,259	-
Transfer to general fund	-	-	11,005	(11,005)	-
At 31 March 2013	200,858	1,266,322	545,840	495,837	2,508,857

CONSOLIDATED STATEMENT OF CASH FLOWS

Year ended 31 March 2013

	Note	2013 \$'000	2012 \$'000
Operating activities			
Deficit before grants from ministries		(638,146)	(712,382)
Adjustments for:			
Research grant income		(231,068)	(206,506)
Depreciation of property, plant and equipment		173,710	170,629
Amortisation of prepaid lease		166	166
Loss on disposal of property, plant and equipment		780	576
Profit on investments		(93,967)	(12,484)
Deferred capital grants amortised (non-ministry)		(14,314)	(13,590)
Interest income		(4,341)	(3,997)
Provision made for undergraduate funding		(23,479)	(10,243)
		(830,659)	(787,831)
Changes in working capital:			
Other payables		52,965	13,761
Trade and other receivables		(36,784)	16,453
Deferred tuition and other fees		5,528	5,843
Loans extended to students		557	1,297
Cash generated from operating activities		(808,393)	(750,477)
Donations received for Endowment Fund		61,612	54,593
Income taxes paid		(441)	(306)
Cash flows used in operating activities		(747,222)	(696,190)
Investing activities			
Acquisition of property, plant and equipment		(175,636)	(121,037)
Purchase of other financial assets		(318,930)	(273,277)
Proceeds from sale of other financial assets		132,535	51,846
Increase/(Decrease) in cash held by fund managers	12	36,263	(17,390)
Interest received		5,492	4,070
Cash flows used in investing activities		(320,276)	(355,788)

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

CONSOLIDATED STATEMENT OF CASH FLOWS (CONT'D)

Year ended 31 March 2013

	Note	2013 \$'000	2012 \$'000
Financing activities			
Sinking fund received		29,888	40,991
IT and F&E grant received		36,268	47,195
Research grants received		313,118	227,743
Operating grants received, net of payment of goods and service tax expense on tuition fees and tuition grants		462,209	623,455
Development grants and related income received		59,435	75,240
Government ministry grants received		263,341	183,247
Utilisation of other restricted funds		-	(275)
Proceeds from borrowings		17,700	42,000
Repayments of borrowings		(27,000)	(80,100)
Cash flows from financing activities		1,154,959	1,159,496
Net increase in cash and cash equivalents			
Cash and cash equivalents at beginning of the year		1,093,652	986,134
Cash and cash equivalents at end of the year	12	1,181,113	1,093,652

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

NOTES TO FINANCIAL STATEMENTS

31 March 2013

1 GENERAL

Nanyang Technological University ("NTU" or the "University Company"), established under the Singapore Companies Act, Chapter 50, is domiciled in Singapore. 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 2013 were authorised for issue by the Board of Trustees on 15 August 2013.

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

2.1 Basis of preparation

(a) Statement of compliance

The financial statements have been prepared in accordance with the provisions of the Singapore Companies Act, the Charities Act and Singapore Financial Reporting Standards (FRS).

(b) Basis of measurement

The financial statements have been prepared in historical cost basis except otherwise disclosed below.

(c) Functional and presentation currency

The financial statements are presented in Singapore dollars which is the functional currency of the University Company and the presentation currency for the consolidated financial statements. All financial information presented in Singapore dollars has been rounded to the nearest thousand, unless otherwise stated.

(d) Use of estimates and judgements

The preparation of financial statements in conformity with FRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenditure. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected.

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.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.1 Basis of preparation (cont'd)

- (d) Use of estimates and judgements (cont'd)

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 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.

- Note 2.7 – impairment of property, plant and equipment

The Group performs periodic assessment of its property, plant and equipment to determine if any of these assets are impaired. The Group has evaluated the carrying amount of the property, plant and equipment included in the statement of financial position as at 31 March 2013 of \$1,141,779,000 (2012: \$1,140,633,000) for the Group and is of the opinion that no provision for impairment is required.

- Notes 2.8, 8 and 11 – valuation of financial instruments

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 also holds unquoted equity securities, of which the valuation methodologies are set out in Note 11.

- Note 2.10 – measurement of provisions

Provision for undergraduate funding

Provision for undergraduate funding relates to the adjustment to the undergraduate output funding from MOE in the event the University achieves fewer undergraduates than MOE's output target. The provision is based on the University's actual and projected number of undergraduates.

- (e) Adoption of new and revised standards

On 1 April 2012, the Group has adopted all the new and revised FRSs and Interpretations of FRS ("INT FRS") that are relevant to its operations. The adoption of these new/revised FRSs does not result in changes to the Group's and University Company's accounting policies and has no material effect on the amounts reported for the current or prior years.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.2 Consolidation

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. Control is the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities.

The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognised in the 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 statement of comprehensive income.

Subsidiaries

Subsidiaries are entities controlled by the Group. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

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

Transactions eliminated on consolidation

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

Accounting for subsidiaries

Investments in subsidiaries are stated in the University Company's statement of financial position at cost less accumulated impairment losses.

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 at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency at the exchange rate at the reporting date. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined.

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

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.3 Foreign currencies (cont'd)

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 the 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 the 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 and other restricted funds

Income and expenditure are generally accounted for under the "General Fund" in the statement of comprehensive income. The use of these reserves are subject to the approval of the Board of Trustees.

The income and expenditure relating to funds that are set up for specific purposes are accounted for under "Other Restricted Fund" in the statement of comprehensive income.

The following funds termed as "Other Restricted Fund" are set up and disclosed separately from the University Company's general fund:

- (i) funds created from donations from external bodies for special purposes;
- (ii) funds created from grants received for carrying out activities under special arrangements; and
- (iii) funds maintained separately to account for the self-financing activities carried out by the University Company.

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

The income and expenditure of General Fund and Other Restricted Fund are included in the consolidated statement of comprehensive income.

Endowment fund

Grants from ministries and statutory boards and donations from external sources are taken directly to the statement of funds and reserves in the year in which such grants and donations are received. Income and expenditure arising from the management of the Endowment Fund are taken to the statement of comprehensive income of the Endowment Fund.

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 the profit or loss for purchase of assets which are written off in the year of purchase.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.5 Grants and sinking fund (cont'd)

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 the profit or loss to match the net book value of the property, plant and equipment written off.

Development grant is recognised when there is reasonable assurance that the University Company will comply with the conditions attaching 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.

Special Employment Credit scheme

Cash grants received from the government in relation to the Special Employment Credit ("SEC") scheme are recognised upon receipt. The Special Employment Credit scheme was introduced as a 2011 Budget Initiative to support employers as well as to raise the employability of older low-wage Singaporeans. The SEC was significantly enhanced in 2012 to provide employers with continuing support to hire older Singaporean workers. The enhanced SEC will apply for five years from 1 January 2012.

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.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.6 Property, plant and equipment (cont'd)

Recognition and measurement (cont'd)

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 below \$100,000 and library books are generally charged to the profit or loss in the year of purchase.

The gain or loss on disposal of an item of property, plant and equipment recognised in the 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.

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 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	5 to 20 years
Renovation	5 years
Machinery, laboratory and workshop equipment	6 years
Furniture and office equipment	3 to 5 years
Transportation equipment	8 years
Others	8 years

Depreciation methods, useful lives and residual values are reviewed and adjusted as appropriate, at each reporting date.

Buildings under construction are stated at cost. 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.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

Depreciation (cont'd)

Assets held under finance leases are depreciated over their expected useful lives on the same basis as owned assets or, if there is no certainty that the lessee will obtain ownership by the end of the lease term, the assets shall be fully depreciated over the shorter of the lease term and their useful lives.

2.7 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.

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 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.

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. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

2.8 Financial instruments

Non-derivative financial assets

The Group initially recognises loans and receivables and deposits on the date that they originated. All other financial assets (including assets designated at fair value through profit or loss) are recognised initially on the trade date, which is the date that the Group becomes a party to the contractual provisions of the instrument.

The Group derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial assets are transferred. Any interest in transferred financial assets that is created or retained by the Group is recognised as a separate asset or liability.

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 assets into the following categories: financial assets at fair value through profit or loss and loans and receivables.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.8 Financial instruments (cont'd)

Financial assets at fair value through profit or loss

An instrument is classified at fair value through profit or loss if it is acquired principally for the purpose of selling in the short term or is designated as such upon initial recognition. Financial instruments are designated at fair value through profit or loss if the Group manages such investments and makes purchase and sale decisions based on their fair value in accordance with the Group's documented risk management and investment strategies. Upon initial recognition, attributable transaction costs are recognised in the profit or loss when incurred. Financial instruments at fair value through profit or loss are measured at fair value, and changes therein are recognised in the profit or loss.

Financial assets designated at fair value through profit or loss comprise fixed income, quoted equity, unquoted equity and other investments.

Loans and receivables

Loans and receivables are financial assets with fixed or determinable payments that are not quoted in an active market. Such assets are recognised initially at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, loans and receivables are measured at amortised cost using the effective interest method, less any impairment losses.

Loans and receivables comprise trade and other receivables, student loans, grant receivables and cash and cash equivalents.

Cash and cash equivalents comprise cash balances and bank deposits.

Impairment of financial assets

A financial asset is assessed at each reporting date to determine whether there is any objective evidence that it is impaired. A financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset.

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount, and the present value of the estimated future cash flows discounted at the original effective interest rate.

Individually significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics.

All impairment losses are recognised in the profit or loss.

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.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.8 Financial instruments (cont'd)

Non-derivative financial liabilities (cont'd)

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.

Bank overdrafts that are repayable on demand and form an integral part of the Group's cash management are included as a component of cash and cash equivalents for the purpose of the consolidated statement of cash flows.

Derivative financial instruments and hedging instruments

The Group holds derivative financial instruments, through its professional 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; 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.

2.9 Employee benefits

Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions into a separate entity and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution pension 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.

2.10 Provisions

A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.11 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.

2.12 Income recognition

Student fees

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

Management fees

Management fees are recognised upon services rendered.

Donations

Unconditional donations are recognised upon receipt.

Licence fees

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

Royalties

Royalties are recognised on sale, by licensor, of products using the technology granted.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.12 Income recognition (cont'd)

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.

2.13 Finance income and finance costs

Finance income comprises interest income generated from fixed deposits, bank deposits and finance leases. Interest income is recognised as it accrues in the profit or loss, using the effective interest method. Interest income on the finance lease is recognised in the profit or loss over the period of the lease so as to earn an approximately constant periodic rate of return on the remaining balance of the finance lease receivables for each reporting period.

Finance costs comprise interest expense on borrowings. 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.

2.14 Lease payments

Payments made under operating leases are recognised in the profit or loss on a straight-line basis over the term of the lease. Lease incentives received are recognised as an integral part of the total lease expense, over the term of the lease.

Determining whether an arrangement contains a lease

At inception of an arrangement, the Group determines whether such an arrangement is or contains a lease. A specific asset is the subject of a lease if fulfilment of the arrangement is dependent on the use of that specified asset. An arrangement conveys the right to use the asset if the arrangement conveys to the Group the right to control the use of the underlying asset.

At inception or upon reassessment of the arrangement, the Group separates payments and other consideration required by such an arrangement into those for the lease and those for other elements on the basis of their relative fair values. If the Group concludes for a finance lease that it is impracticable to separate the payments reliably, then an asset and a liability are recognised at an amount equal to the fair value of the underlying asset. Subsequently, the liability is reduced as payments are made and an imputed finance charge on the liability is recognised using the Group's incremental borrowing rate.

2.15 Prepaid lease

Prepaid lease is recognised in the statement of financial position and amortised to profit or loss on a straight-line basis over the term of the lease.

2.16 Finance lease receivables

Assets held under finance lease are recognised in the statement of financial position and presented as receivables net of unearned interest and after deduction of allowance for possible losses.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.17 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.

2.18 New standards and on interpretations not yet adopted

At the date of authorisation of these financial statements, the following FRSs and amendments to FRS that are relevant to the Group and the University Company were issued but not effective:

- Amendments to FRS 1 *Presentation of Financial Statements – Amendments relating to Presentation of Items of Other Comprehensive Income*
- Amendments to FRS 32 *Financial Instruments: Presentation* and FRS 107 *Financial Instruments: Disclosure – Offsetting Financial Assets and Financial Liabilities*
- FRS 110 *Consolidated Financial Statements*
- FRS 113 *Fair Value Measurement*

Management anticipates that the adoption of the above FRS and amendment to FRS in future periods will not have a material impact on the financial statements of the Group and of the University Company in the period of their adoption, except for the following:

Amendments to FRS 32 *Financial Instruments: Presentation* and FRS 107 *Financial Instruments: Disclosure – Offsetting Financial Assets and Financial Liabilities*

The amendments to FRS 32 clarify existing application issues relating to the offsetting requirements. Specifically, the amendments clarify the meaning of 'currently has a legal enforceable right of set-off' and 'simultaneous realisation and settlement'.

The amendments to FRS 107 require entities to disclose information about rights of set-off and related arrangements (such as collateral posting requirements) for financial instruments under an enforceable master netting agreement or similar arrangement.

The amendments to FRS 107 are required for annual periods beginning on or after 1 January 2013 and interim periods within those annual periods. The disclosures should be provided retrospectively for all comparative periods. However, the amendments to FRS 32 are effective for annual periods beginning on or after 1 January 2014, with retrospective application required.

Management is currently assessing the impact that FRS 32 and 107 will have on the financial position and disclosures.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT'D)

2.18 New standards and on interpretations not yet adopted (cont'd)

FRS 113 *Fair Value Measurement*

FRS 113 is a single new Standard that applies to both financial and non-financial items. It replaces the guidance on fair value measurement and related disclosures in other Standards, with the exception of measurement dealt with under FRS 102 *Share-based Payment*, FRS 17 *Leases*, net realisable value in FRS 2 *Inventories* and value-in-use in FRS 36 *Impairment of Assets*.

FRS 113 provides a common fair value definition and hierarchy applicable to the fair value measurement of assets, liabilities, and an entity's own equity instruments within its scope, but does not change the requirements in other Standards regarding which items should be measured or disclosed at fair value.

The disclosure requirements in FRS 113 are more extensive than those required in the current standards. For example, quantitative and qualitative disclosures based on the three-level fair value hierarchy currently required for financial instruments only under FRS 107 *Financial Instruments: Disclosures* will be extended by FRS 113 to cover all assets and liabilities within its scope.

FRS 113 will be effective prospectively from annual periods beginning on or after 1 January 2013. Comparative information is not required for period before initial application.

Management is currently assessing the impact that FRS 113 will have on the financial position and disclosures.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

3 PROPERTY, PLANT AND EQUIPMENT

	Freehold land \$'000	Buildings and infrastructure \$'000	Buildings under construction \$'000	Renovation \$'000	Machinery, laboratory and workshop equipment \$'000	Furniture and office equipment \$'000	Transportation equipment \$'000	Others \$'000	Total \$'000
Group									
Cost									
At 1 April 2011	200,858	1,786,279	11,258	91,710	697,083	262,838	6,704	4,334	3,061,064
Additions	-	4,278	35,768	10,146	57,178	13,390	152	125	121,037
Adjustments	-	-	-	-	50	8	-	-	58
Disposals	-	(4,461)	-	(56)	(15,260)	(21,943)	(304)	(41)	(42,065)
Reclassifications	-	(1)	(7,622)	5,525	1,834	264	-	-	-
At 31 March 2012	200,858	1,786,095	39,404	107,325	740,885	254,557	6,552	4,418	3,140,094
Additions	-	27,561	58,606	8,162	65,073	15,877	60	297	175,636
Disposals	-	(1,874)	-	(128)	(17,742)	(25,904)	-	(142)	(45,790)
Reclassifications	-	31,657	(51,211)	10,733	6,525	2,296	-	-	-
At 31 March 2013	200,858	1,843,439	46,799	126,092	794,741	246,826	6,612	4,573	3,269,940
Accumulated depreciation									
At 1 April 2011	-	1,109,844	-	42,809	503,834	208,420	2,883	2,531	1,870,321
Depreciation for the year	-	71,146	-	16,069	61,995	20,443	778	198	170,629
Disposals	-	(4,417)	-	(63)	(14,855)	(21,809)	(304)	(41)	(41,489)
Reclassifications	-	(1)	-	-	10	(9)	-	-	-
At 31 March 2012	-	1,176,572	-	58,815	550,984	207,045	3,357	2,688	1,999,461
Depreciation for the year	-	71,441	-	19,338	61,593	20,356	780	202	173,710
Disposals	-	(1,423)	-	(128)	(17,358)	(25,959)	-	(142)	(45,010)
At 31 March 2013	-	1,246,590	-	78,025	595,219	201,442	4,137	2,748	2,128,161
Carrying amount									
At 31 March 2012	200,858	609,523	39,404	48,510	189,901	47,512	3,195	1,730	1,140,633
At 31 March 2013	200,858	596,849	46,799	48,067	199,522	45,384	2,475	1,825	1,141,779

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

3 PROPERTY, PLANT AND EQUIPMENT (CONT'D)

	Freehold land \$'000	Buildings and infrastructure \$'000	Buildings under construction \$'000	Renovation \$'000	Machinery, laboratory and workshop equipment \$'000	Furniture and office equipment \$'000	Transportation equipment \$'000	Others \$'000	Total \$'000
University Company									
Cost									
At 1 April 2011	200,858	1,786,279	11,258	90,208	696,661	261,774	6,704	4,334	3,058,076
Additions	-	4,278	35,768	10,112	57,123	12,997	152	125	120,555
Adjustments	-	-	-	-	50	8	-	-	58
Disposals	-	(4,461)	-	-	(15,245)	(21,901)	(304)	(41)	(41,952)
Reclassifications	-	(1)	(7,622)	5,525	1,834	264	-	-	-
At 31 March 2012	200,858	1,786,095	39,404	105,845	740,423	253,142	6,552	4,418	3,136,737
Additions	-	27,561	58,606	8,140	65,039	15,725	60	297	175,428
Disposals	-	(1,874)	-	(128)	(17,737)	(25,862)	-	(142)	(45,743)
Reclassifications	-	31,657	(51,211)	10,733	6,525	2,296	-	-	-
At 31 March 2013	200,858	1,843,439	46,799	124,590	794,250	245,301	6,612	4,573	3,266,422
Accumulated depreciation									
At 1 April 2011	-	1,109,844	-	42,473	503,558	207,969	2,883	2,531	1,869,258
Depreciation for the year	-	71,146	-	15,785	61,956	20,120	778	198	169,983
Disposals	-	(4,417)	-	-	(14,840)	(21,777)	(304)	(41)	(41,379)
Reclassifications	-	(1)	-	-	10	(9)	-	-	-
At 31 March 2012	-	1,176,572	-	58,258	550,684	206,303	3,357	2,688	1,997,862
Depreciation for the year	-	71,441	-	19,056	61,548	20,011	780	202	173,038
Disposals	-	(1,423)	-	(128)	(17,354)	(25,921)	-	(142)	(44,968)
At 31 March 2013	-	1,246,590	-	77,186	594,878	200,393	4,137	2,748	2,125,932
Carrying amount									
At 31 March 2012	200,858	609,523	39,404	47,587	189,739	46,839	3,195	1,730	1,138,875
At 31 March 2013	200,858	596,849	46,799	47,404	199,372	44,908	2,475	1,825	1,140,490

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.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

4 PREPAID LEASE

	Group and University Company	
	2013 \$'000	2012 \$'000
Cost		
At 31 March	4,982	4,982
Accumulated amortisation		
At 1 April	1,549	1,383
Amortisation charge for the year	166	166
At 31 March	1,715	1,549
Carrying amount		
At 1 April	3,433	3,599
At 31 March	3,267	3,433

5 SUBSIDIARIES

	University Company	
	2013 \$'000	2012 \$'000
Equity investments at cost	500	500
Loans to subsidiaries	291	291
	791	791

The loans to subsidiaries are unsecured and interest-free. The settlement of the amounts are neither planned nor likely to occur in the foreseeable future. As the amounts are, in substance, a part of the University Company's net investment in the subsidiaries, they are stated at cost less impairment losses.

Details of subsidiaries are as follows:

Name of subsidiary	Country of incorporation	Ownership interest		Principal activities
		2013 %	2012 %	
Held by the University Company				
@ NTU Ventures Private Limited	Singapore	100	100	Promote innovation and entrepreneurship
@ 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

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

5 SUBSIDIARIES (CONT'D)

Name of subsidiary	Country of incorporation	Ownership interest		Principal activities
		2013 %	2012 %	
@ NIE International Private Limited	Singapore	100	100	Provision of training programs and consultancy in teacher education and school leadership
# Friends of NTU	United States	100	100	Promote the advancement of NTU in United States
Held by NTU Ventures Private Limited				
@ Confucius Institute, NTU Pte Ltd	Singapore	100	100	Promotion of Chinese language, culture and support of local Chinese teaching
@ TechBiz Xccelerator Pte Ltd	Singapore	100	100	Technology acceleration
@ Institute of Environmental Science and Engineering Pte Ltd	Singapore	100	100	Development and commercialisation in environmental science and engineering
@ Systemed Pte Ltd	Singapore	100	100	Development and commercialisation in medical technology
@ NTUV International Pte Ltd	Singapore	100	100	Investment holding
@ Interactive Digital Media Ltd	Singapore	100	100	Research and development in interactive digital media
Held by NTUV International Pte Ltd				
* Nanyang Venture Consulting (Shanghai) Co., Ltd	China	100	100	Consultant for enterprise management, technology and education

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

5 SUBSIDIARIES (CONT'D)

Name of subsidiary	Country of incorporation	Ownership interest		Principal activities
		2013	2012	
		%	%	
Held by Nanyang Venture Consulting (Shanghai) Co., Ltd				
* 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 for consolidation purposes.

@ Audited by Deloitte & Touche LLP, Singapore.

Not required to be audited in the country of incorporation.

6 STUDENT LOANS

	Group and University Company	
	2013 \$'000	2012 \$'000
Student loans	6,739	7,296
Represented by:		
Amount repayable within 12 months	2,721	3,028
Amount repayable after 12 months	4,018	4,268
	6,739	7,296

Included in student loans are personal computer loans of \$1,647,000 (2012: \$2,157,000), which are interest-free and are repayable by monthly instalments within a period of 3 years after the borrowers' graduation. The fair value at inception was determined based on expected future principal repayment cash flows, discounted at the average interest rate of 6.50% (2012: 6.50%) per annum. These loans are subsequently measured at amortised cost, using the effective interest method.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

7 FINANCE LEASE RECEIVABLES

	Minimum lease payments		Present value of minimum lease payments	
	2013	2012	2013	2012
	\$'000	\$'000	\$'000	\$'000
Group and University Company				
Amounts receivable under finance leases:				
Within one year	1,190	1,190	652	636
In the second to fifth year inclusive	5,510	5,259	3,550	3,218
After fifth year	21,659	23,099	18,156	19,140
	28,359	29,548	22,358	22,994
Less: Unearned finance income	(6,001)	(6,554)		
Present value of minimum lease payments receivable	22,358	22,994		
Allowance for uncollectible lease payments	-	-		
Present value of minimum lease payments receivable	22,358	22,994		

The net investment in finance lease receivables are analysed as follows:

	Group and University Company	
	2013 \$'000	2012 \$'000
Current finance lease receivables (recoverable within 12 months)	652	636
Non-current finance lease receivables (recoverable after 12 months)	21,706	22,358
	22,358	22,994

This relates to the lease of land and building to NTU Alumni Club over a lease period of 26 years.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

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. 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		Carrying amount	
	Within 1 year \$'000	Total \$'000	Derivative asset \$'000	Derivative liabilities \$'000
Group and University Company				
2013				
Foreign currency forwards	569,682	569,682	1,011	2,578
2012				
Foreign currency forwards	498,162	498,162	4,065	12

The fair value of forward exchange contracts is estimated by discounting the difference between the contractual forward price and the forward price at the end of the reporting period for the residual period to maturity of the contract.

9 LOAN TO A SUBSIDIARY

The loan to a subsidiary was unsecured, interest free and repayable on demand. The loan has been fully repaid during the year.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

10 TRADE AND OTHER RECEIVABLES

	Note	Group		University Company	
		2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
Trade receivables		23,085	21,551	21,890	19,601
Interest receivables		1,793	2,944	1,793	2,944
Operating grant receivables		90,372	-	90,372	-
Research grant receivables		38,808	45,028	38,808	45,028
Endowment matching grant receivables		25,892	152,471	25,892	152,471
Grants receivables	15	24,254	362	24,254	362
Other receivables		116,365	60,535	114,771	59,794
Allowance for doubtful receivables		(544)	(531)	(530)	(531)
		115,821	60,004	114,241	59,263
Amounts due from subsidiaries (trade)		-	-	168	168
Allowance for doubtful receivables		-	-	(147)	(147)
		-	-	21	21
Amounts due from subsidiaries (non-trade)		-	-	1,015	1,015
Allowance for doubtful receivables		-	-	(1,015)	(1,015)
		-	-	-	-
Loans and receivables		320,025	282,360	317,271	279,690
Prepayments		7,550	3,796	7,377	3,646
		327,575	286,156	324,648	283,336

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

Concentration of credit risk relating to trade receivables is limited due to the Group's varied customers. These customers are mainly 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. Due to these factors, management believes that no additional credit risk beyond amounts provided for collection losses is inherent in the Group's trade receivables.

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

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

11 FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS

	Group and University Company	
	2013 \$'000	2012 \$'000
Fixed income investments	211,181	173,121
Quoted equity investments	444,575	355,436
Unquoted equity investments	720,539	606,559
Other investments	86,269	77,729
	<u>1,462,564</u>	<u>1,212,845</u>

The Group's and University Company's investments are managed by professional 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. The investments in unquoted equities represent investments in private equity funds, hedge funds and limited partnerships. The fair values of these unquoted equity investments are based on net asset values provided by fund managers and external valuations.

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

	Note	Group and University Company	
		2013 \$'000	2012 \$'000
Financial assets at fair value through profit or loss		1,462,564	1,212,845
Cash balances and bank deposits	12	83,474	47,840
		<u>1,546,038</u>	<u>1,260,685</u>

The cash balances and bank deposits are included as a component in the cash and cash equivalents in Note 12 for the purpose of disclosure.

The weighted average interest rates of 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 maturing			Total \$'000
		Less than 1 year \$'000	In 1 to 5 years \$'000	After 5 years \$'000	
Group and University Company					
2013	0.2 to 3.6	-	87,973	122,127	210,100
2012	0.2 to 3.9	-	80,967	91,977	172,944

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

12 CASH AND CASH EQUIVALENTS

	Note	Group		University Company	
		2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
Investments					
Cash at bank and in hand		3,316	3,945	3,316	3,945
Cash held by fund managers		80,158	43,895	80,158	43,895
	11	<u>83,474</u>	<u>47,840</u>	<u>83,474</u>	<u>47,840</u>
Others					
Cash at bank and in hand		124,628	60,158	106,556	42,395
Deposit with financial institutions		973,011	985,654	971,780	984,026
		<u>1,097,639</u>	<u>1,045,812</u>	<u>1,078,336</u>	<u>1,026,421</u>
Cash and cash equivalents		<u>1,181,113</u>	<u>1,093,652</u>	<u>1,161,810</u>	<u>1,074,261</u>

The University Company manages 2 bank accounts on behalf of the NTU Students' Union. As at end of the reporting period, the bank balance of \$5,149,000 (2012: \$4,761,000) has not been included in the cash and cash equivalents of the University Company.

13 PROVISIONS

	Note	Group		University Company	
		2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
Provision for unutilised compensated leave	(a)	43,257	41,317	43,096	41,180
Provision for undergraduate funding	(b)	54,599	33,753	54,599	33,753
		<u>97,856</u>	<u>75,070</u>	<u>97,695</u>	<u>74,933</u>

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

	Group		University Company	
	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
At 1 April	41,317	37,271	41,180	37,148
Provision made during the year	1,940	4,046	1,916	4,032
At 31 March	<u>43,257</u>	<u>41,317</u>	<u>43,096</u>	<u>41,180</u>

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

13 PROVISIONS (CONT'D)

(b) The movement in the provision for undergraduate funding is as follows:

	Group		University Company	
	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
At 1 April	33,753	25,401	33,753	25,401
Provision made during the year	23,479	10,243	23,479	10,243
Provision utilised	(2,633)	(1,891)	(2,633)	(1,891)
At 31 March	54,599	33,753	54,599	33,753

Provision for undergraduate funding relates to the adjustment to the undergraduate output funding from MOE in the event the University Company achieves fewer undergraduates than MOE's output target. The provision is based on the University Company's actual and projected number of undergraduates.

14 GRANTS RECEIVED IN ADVANCE – OPERATING GRANTS

	Group	
	2013 \$'000	2012 \$'000
At 1 April	499	864
Grants received during the year	3,065	4,046
	3,564	4,910
Less:		
Amounts taken to profit or loss	2,283	4,258
Amounts transferred to deferred capital grants	71	153
At 31 March	1,210	499

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

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

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

	Note	Group and University Company	
		2013 \$'000	2012 \$'000
Grants receivable within 12 months			
- Development grant		13,051	362
- IT and F&E grant		5,792	-
- Sinking fund		5,411	-
	10	24,254	362
Grants received in advance			
- IT and F&E	(a)	(39,234)	(35,035)
- Sinking fund	(b)	(240,828)	(205,529)
		(255,808)	(240,202)
Grants received in advance represented as:			
Current portion			
- IT and F&E		(39,234)	(35,035)
- Sinking fund		(6,600)	-
		(45,834)	(35,035)
Non-current portion			
- Sinking fund		(234,228)	(205,529)
		(280,062)	(240,564)

Movements in grants (received in advance)/receivable:

	Note	Group and University Company	
		2013 \$'000	2012 \$'000
At 1 April		(240,202)	(175,857)
Grants received during the year		(125,591)	(163,426)
		(365,793)	(339,283)
Less:			
Amounts transferred to deferred capital grants	18	86,616	82,079
Amounts taken to profit or loss		23,369	17,002
At 31 March		(255,808)	(240,202)

These are grants from the Government Ministry 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 (CONT'D)

31 March 2013

16 SHORT-TERM BORROWINGS

The borrowings are unsecured, bear interest at 0.94% (2012: 0.88%) per annum and are repayable within the next twelve months from the financial year end.

17 RESEARCH GRANTS RECEIVED IN ADVANCE

	Note	Group		University Company	
		2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
At 1 April		77,441	67,411	76,881	66,584
Grants received during the year		313,118	227,743	312,815	227,227
		390,559	295,154	389,696	293,811
Less:					
Amounts transferred to deferred capital grants	18	25,889	19,633	25,889	19,633
Amounts taken to profit or loss		231,068	206,506	230,359	205,723
Amounts transferred from/(to) grant receivables		6,220	(8,426)	6,220	(8,426)
At 31 March		127,382	77,441	127,228	76,881

These are grants received from the Government Ministry, other ministries, statutory boards, Agency for Science, Technology & Research ("A*Star") and other sources for research activities. The balance in this account represents grants received but not utilised at the end of the financial year. These grants are repayable on demand.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

18 DEFERRED CAPITAL GRANTS

	Ministries		Statutory boards		Others		Total	
	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
Group								
At 1 April	765,958	782,008	45,776	50,218	9,769	7,121	821,503	839,347
Add:								
Grants received for capital expenditure and development project transferred from:								
- Operating grants (Note 25)	25,391	26,335	-	-	-	-	25,391	26,335
- Research grants (Note 17)	18,673	15,861	6,422	3,198	794	574	25,889	19,633
- Development grants (Note 15)	86,616	82,079	-	-	-	-	86,616	82,079
- Accumulated surplus	-	25	-	60	-	14	-	99
- Other grants	8,966	9,236	6,425	4,997	2,065	3,215	17,456	17,448
Assets donated by various organisations	-	-	-	-	24	89	24	89
Adjustments/Reclassifications	-	56	-	2	-	-	-	58
	139,646	133,592	12,847	8,257	2,883	3,892	155,376	145,741
Less:								
Grants taken to profit or loss								
Amortisation charge for the year	149,331	149,836	12,656	12,321	1,596	1,260	163,583	163,417
On disposal of fixed assets	685	159	59	6	3	3	747	168
	150,016	149,995	12,715	12,327	1,599	1,263	164,330	163,585
Adjustments/Reclassifications	(2)	(353)	51	372	(49)	(19)	-	-
At 31 March	755,590	765,958	45,857	45,776	11,102	9,769	812,549	821,503

Deferred capital grants amortised (non-ministry) refers to amortisation of grants received from statutory boards and other organisations.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

18 DEFERRED CAPITAL GRANTS (CONT'D)

	Ministries		Statutory boards		Others		Total	
	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
University Company								
At 1 April	764,770	780,480	45,623	50,218	9,769	7,121	820,162	837,819
Add:								
Grants received for capital expenditure and development project transferred from:								
- Operating grants	25,320	26,182	-	-	-	-	25,320	26,182
- Research grants (Note 17)	18,673	15,861	6,422	3,198	794	574	25,889	19,633
- Development grants (Note 15)	86,616	82,079	-	-	-	-	86,616	82,079
- Accumulated surplus	-	25	-	60	-	14	-	99
- Other grants	8,966	9,236	6,317	4,817	2,065	3,215	17,348	17,268
Assets donated by various organisations	-	-	-	-	24	89	24	89
Adjustments/Reclassifications	-	56	-	2	-	-	-	58
	139,575	133,439	12,739	8,077	2,883	3,892	155,197	145,408
Less:								
Grants taken to profit or loss								
Amortisation charge for the year	148,866	149,344	12,528	12,294	1,596	1,260	162,990	162,898
On disposal of fixed assets	685	158	59	6	3	3	747	167
	149,551	149,502	12,587	12,300	1,599	1,263	163,737	163,065
Adjustments/Reclassifications	(2)	(353)	51	372	(49)	(19)	-	-
At 31 March	754,796	764,770	45,724	45,623	11,102	9,769	811,622	820,162

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

19 CAPITAL ACCOUNT

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

20 ENDOWMENT FUND

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

The Government has undertaken to match all donations to the Nanyang Technological University Endowment Fund. Such government grants are accounted for on an accrual basis.

21 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 advances.

	Group and University Company	
	2013 \$'000	2012 \$'000
Advances from the Government Ministry:		
At 1 April	233,464	225,125
Advances received	55,245	9,569
Interest income	3,633	4,248
Advances repaid	(67,570)	-
Bad debts incurred	(1,275)	(1,230)
Interest expense	(3,633)	(4,248)
	219,864	233,464
Represented by:		
Cash and bank balances held on behalf	1,715	12,525
TFL, SL and OSP	218,149	220,939
Net assets	219,864	233,464

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

21 FUNDS MANAGED ON BEHALF OF THE GOVERNMENT MINISTRY (CONT'D)

Cash and bank balances of \$1,715,000 (2012: \$12,525,000) are held on behalf of the 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 2013 is 4.75% (2012: 4.75%) per annum.

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

22 INTEREST INCOME

	Group	
	2013 \$'000	2012 \$'000
Interest received/receivable:		
- fixed deposits (placed with financial institutions)	3,751	3,392
- bank balances	37	38
- finance leases	553	567
	4,341	3,997

23 PROFIT ON INVESTMENTS

	Group	
	2013 \$'000	2012 \$'000
Interest income	4,319	3,702
Dividend income	2,736	3,930
Fair value gain on financial assets through profit or loss	80,855	4,555
Fair value gain on derivative financial instruments	6,057	297
	93,967	12,484

24 DEFICIT BEFORE GRANTS FROM MINISTRIES

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

	Group	
	2013 \$'000	2012 \$'000
Allowance/(Reversal of) for doubtful receivables	13	(97)
Exchange gain	(709)	(255)
Operating lease expense	4,090	3,121
Contribution to defined contribution plans included in expenditure on manpower	46,066	42,226
Government grants – Special Employment Credit, offset against manpower costs	(478)	(13)

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

25 OPERATING GRANTS FROM GOVERNMENT MINISTRY

	Note	2013 \$'000	Group 2012 \$'000
Operating grants received and receivable during the year		603,117	602,323
Payment for goods and services tax on tuition fees and tuition grants		(50,536)	(51,135)
Amounts transferred (to)/from			
- deferred capital grants	18	(25,391)	(26,335)
- grant received in advance	14	(711)	365
Provision for undergraduate funding	13	(23,479)	(10,243)
Operating grants taken to profit or loss		503,000	514,975

26 TAXATION

The University Company is registered as a charitable institution by virtue of Section 13M(2)(b) of the Income Tax Act, Chapter 134.

The subsidiaries of the Group have unutilised capital allowances and unabsorbed tax losses of approximately \$27,000 (2012: \$182,000) and \$1,464,000 (2012: \$1,399,000) respectively 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 and unutilised capital allowances 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	
	2013 \$'000	2012 \$'000
Current tax expense		
Current year	347	446
Reconciliation of effective tax		
Surplus before income tax	149,109	74,691
Income tax using Singapore tax rates of 17%	25,349	12,697
Income not subject to tax	(25,002)	(12,251)
	347	446

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

27 COMMITMENTS

Operating lease commitments

The future lease payments contracted at the reporting date but not recognised as liabilities are analysed as follows:

	2013 \$'000	Group 2012 \$'000
Not later than one year	6,146	4,037
Later than one year but not later than five years	10,884	14,277

The Group and the University Company leases office properties, personal computer, printers and servers under operating leases. The leases typically run for a period of 1 to 5 years.

Capital commitments

	2013 \$'000	Group 2012 \$'000
Contracted but not provided for	174,654	65,170
Authorised but not contracted for	689,030	718,837

The capital commitments are funded from grants from the Government Ministry and other ministries, subject to satisfying certain terms and conditions.

	2013 \$'000	Group 2012 \$'000
Purchase of unquoted equity investments – contracted but not provided for	97,698	56,899

Agreements entered into with Massachusetts Institute of Technology (MIT) and the National University of Singapore (NUS)

NTU has entered into a Singapore-MIT Alliance (SMA) agreement with MIT and NUS to establish collaborative efforts in research and education in engineering, science and technology, including interface with business and industry. The agreement was effective from 17 September 2004 and as at 31 March 2013, NTU's outstanding commitment under SMA-2 is estimated at USD1.2 million (\$1.5 million) (2012: USD2.7 million (\$3.4 million)) till the expiry of the agreement on 30 June 2015.

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 2013, NTU's outstanding commitment under the collaboration is estimated at £35.0 million (\$67.3 million) (2012: £43.5 million (\$89.0 million)) till the expiry of the agreement on 31 July 2028.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

28 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 sale of services. Such purchases and sales are made to various Government agencies in Singapore and collectively approximate \$13.1 million (2012: \$8.9 million) and \$17.1 million (2012: \$18.4 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:

	2013 \$'000	Group 2012 \$'000
(a) Key management personnel compensation		
Short-term employee benefits (includes the remuneration of an executive trustee)	4,268	3,663
(b) Services rendered		
Consultancy fees paid to a Trustee	235	152

29 FINANCIAL INSTRUMENTS

Categories of financial instruments

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

	2013 \$'000	Group 2012 \$'000	University Company 2013 \$'000	University Company 2012 \$'000
Financial Assets				
Loans and receivables (including cash and cash equivalents)	1,530,235	1,406,302	1,508,178	1,387,241
Fair value through profit or loss	1,462,564	1,212,845	1,462,564	1,212,845
Derivative financial instruments	1,011	4,065	1,011	4,065
	2,993,810	2,623,212	2,971,753	2,604,151
Financial Liabilities				
Amortised cost	231,091	203,992	225,641	199,337
Derivative financial instruments	2,578	12	2,578	12
	233,669	204,004	228,219	199,349

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

29 FINANCIAL INSTRUMENTS (CONT'D)

Credit risk

The carrying amount of financial assets, grossed up for any provision, represents the maximum credit exposure. At the end of the reporting period, there is no significant concentration of credit risk other than grant receivables.

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

	2013		2012	
	Gross \$'000	Allowance for doubtful receivables \$'000	Gross \$'000	Allowance for doubtful receivables \$'000
Group				
Not past due	305,456	-	271,096	-
Past due 1 to 30 days	3,258	-	4,784	-
Past due 31 to 150 days	8,056	-	4,792	-
More than 151 days	3,799	544	2,219	531
	<u>320,569</u>	<u>544</u>	<u>282,891</u>	<u>531</u>
University Company				
Not past due	302,549	-	268,780	-
Past due 1 to 30 days	3,203	-	4,674	-
Past due 31 to 150 days	8,166	-	4,527	-
More than 151 days	5,045	1,692	3,402	1,693
	<u>318,963</u>	<u>1,692</u>	<u>281,383</u>	<u>1,693</u>

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

	Group		University Company	
	2013 \$'000	2012 \$'000	2013 \$'000	2012 \$'000
At 1 April	531	628	1,693	1,790
Allowance charged/(reversed)	13	(97)	(1)	(97)
At 31 March	<u>544</u>	<u>531</u>	<u>1,692</u>	<u>1,693</u>

Liquidity risk

The contracted undiscounted cash outflows on financial liabilities approximate their carrying amounts and are generally settled within one year.

Interest risk

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.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

29 FINANCIAL INSTRUMENTS (CONT'D)

Interest risk (cont'd)

Sensitivity analysis for interest risk

If movements in interest rates result in a 3% (2012: 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 \$6,335,000 (2012: \$5,194,000).

Price risk

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 whenever it is appropriate.

Sensitivity analysis for price risk

If movements in financial markets result in a 5% (2012: 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 \$26,542,000 (2012: \$21,658,000).

If movements in financial markets result in a 5% (2012: 5%) appreciation/depreciation in the value of the unquoted equity investments, all other variables being held constant, the Group's surplus would have been higher/lower by \$36,027,000 (2012: \$30,328,000).

Foreign currency risk

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 \$'000	Euro \$'000	Japanese Yen \$'000	Pound Sterling \$'000	Others \$'000
2013	<u>335,307</u>	<u>47,937</u>	<u>24,773</u>	<u>27,929</u>	<u>183,046</u>
2012	<u>257,737</u>	<u>31,737</u>	<u>23,168</u>	<u>17,683</u>	<u>160,211</u>

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

29 FINANCIAL INSTRUMENTS (CONT'D)

Foreign currency risk (cont'd)

Sensitivity analysis for currency risk

If the relevant foreign currency changes against the Singapore dollar by 5% (2012: 5%), all other variables being held constant, the effects will be as follows:

	Profit or Loss	
	2013 \$'000	2012 \$'000
Increase/(Decrease)		
<i>US Dollar against Singapore Dollar</i>		
Strengthened	16,765	12,887
Weakened	(16,765)	(12,887)
<i>Euro against Singapore Dollar</i>		
Strengthened	2,397	1,587
Weakened	(2,397)	(1,587)
<i>Japanese Yen against Singapore Dollar</i>		
Strengthened	1,239	1,158
Weakened	(1,239)	(1,158)
<i>Pound Sterling against Singapore Dollar</i>		
Strengthened	1,396	884
Weakened	(1,396)	(884)

Estimating the fair values

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 fair values of unquoted equity investments are based on net asset values provided by fund managers 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 loan to a subsidiary, 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 (CONT'D)

31 March 2013

29 FINANCIAL INSTRUMENTS (CONT'D)

Interest rates used in determining fair values

The Group uses the government yield curve as of 31 March 2013 plus an adequate constant credit spread to discount financial instruments. The interest rates used are as follows:

	2013 % p.a.	2012 % p.a.
Finance lease receivables	2.44	2.44
Receivables	6.50	6.50

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
Group and University Company				
31 March 2013				
Financial assets at fair value through profit or loss	742,025	386,853	333,686	1,462,564
Derivative financial assets	-	1,011	-	1,011
	742,025	387,864	333,686	1,463,575
Derivative financial liabilities	-	2,578	-	2,578
31 March 2012				
Financial assets at fair value through profit or loss	606,285	311,226	295,334	1,212,845
Derivative financial assets	-	4,065	-	4,065
	606,285	315,291	295,334	1,216,910
Derivative financial liabilities	-	12	-	12

There were no transfers between Level 1, 2 and 3 of the fair value hierarchy in 2012 and 2013.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

29 FINANCIAL INSTRUMENTS (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 equity investments
	\$'000
Group and University Company	
At 1 April 2012	295,334
Total gains or losses in profit or loss	22,058
Subscriptions/Contributions	27,546
Redemptions/Distributions	(11,252)
At 31 March 2013	<u>333,686</u>
Gains or losses included in profit or loss for the period (above) are presented as follows:	
Total gains or losses included in profit or loss for the period	<u>22,058</u>
Total gains or losses for the period included in profit or loss for assets held at the end of the reporting period	<u>22,058</u>

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

29 FINANCIAL INSTRUMENTS (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 equity investments
	\$'000
Group and University Company	
At 1 April 2011	282,460
Total gains or losses in profit or loss	11,403
Subscriptions/Contributions	10,839
Redemptions/Distributions	(9,368)
At 31 March 2012	<u>295,334</u>
Gains or losses included in profit or loss for the period (above) are presented as follows:	
Total gains or losses included in profit or loss for the period	<u>11,403</u>
Total gains or losses for the period included in profit or loss for assets held at the end of the reporting period	<u>11,403</u>

30 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT

Overview

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

- credit risk
- liquidity risk
- market 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.

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 2012.

NOTES TO FINANCIAL STATEMENTS (CONT'D)

31 March 2013

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

Credit risk management

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 Group manages its credit risk with regular monitoring and following up actions for the debts outstanding from debtors. Additional information is set out in Notes 10 and 29.

Investments

Cash and deposits are placed with reputable financial institutions. Investment portfolios are managed by professional 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.

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 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:

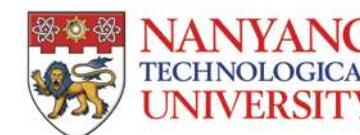
- \$10 million bankers' guarantee facility that is unsecured.
- \$220 million that can be drawn down to meet short-term financing needs.

Market risk – Price risk management

The Group is exposed to price risk arising from investments invested through funds managed by professional managers in the various asset classes. The Group manages its price risk through portfolio diversification across asset classes to manage exposure risk.

31 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 \$71,930,000 (2012: \$50,365,000) in the current financial year.



Reg No: 200604393R

50 Nanyang Avenue,
Singapore 639798
Tel: (65) 6791 1744
Fax: (65) 6791 1604
www.ntu.edu.sg