

NATIONAL UNIVERSITY OF SINGAPORE
Annual Report 2014



VISION

A leading global university centred in Asia,
influencing the future

MISSION

To transform the way people think and do things
through education, research and service

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CHAIRMAN'S STATEMENT

The increasing demand for quality higher education in NUS and a continued rise in global rankings are strong indicators that the University's focus on attracting the best and brightest talents from Singapore and beyond is on track.

This year, we see universities including NUS embracing online education to enhance the distinctive student learning experience. Our research continues to make a meaningful difference to Singapore and the communities around us. When the Sumatran forest fires shrouded Singapore and the region in haze, NUS was able to provide a multidisciplinary response involving many of our units including the Lee Kuan Yew School of Public Policy, NUS Engineering and the Department of Biological Sciences. This year's Annual Report will also showcase many examples of how NUS is providing imaginative and innovative solutions to help tackle some of society's challenges. In addition, NUS Biomedical Engineering has invented a real-time diagnostic tool for pre-cancerous tissues for endoscopic examinations. I would also like to specially mention the meaningful work done to support and facilitate ageing research by the NUS Virtual Institute for the Study of Ageing, which include novel studies on delaying the onset of dementia, as well as developing a continuous monitoring and remote diagnostic system for the at-risk elderly in our community.

Nelson Mandela said, "Education is the most powerful weapon which you can use to change the world". In line with NUS' mission statement *to transform the way people think and do things through education, research and service*, we are committed to nurturing and preparing the next generation of leaders and thinkers who will lead and be part of an ever more complex world. Our research is closely intertwined with education, a dynamic that constantly inspires learning and discovery, and promotes enterprise and innovation among our young graduates. NUS has continued to broaden and customise differentiated educational programmes.

With the launch of University Town and the Yale-NUS College, NUS is now best positioned to provide a transformative educational experience at both the undergraduate and graduate levels.

There is an unmistakable, increasing sense of pride from our faculty, staff, students and alumni as our University becomes even more nimble, flexible and dynamic. NUS has strong leadership that is inspiring our University community to work towards organisational goals. I take this opportunity to thank members of the NUS Board of Trustees for their guidance and enriching perspectives, and the NUS Senior Management for their dedication and passion. I also wish to record my sincere appreciation to Mr Edward D'Silva – one of our longest serving board members – who stepped down this year after a decade of dedicated service and contributions.

The Board and I warmly welcome our newest member, Ms Elaine Yew who is a member of Egon Zehnder's Global Executive Committee. Her appointment brings on board relevant expertise with regard to nurturing leadership and other future-ready skills in our graduates. We will continue to emphasise nurturing soft skills such as excellent communication skills, critical thinking, as well as multidisciplinary and interdisciplinary learning, in addition to providing a rigorous education so that our students will be prepared for the future.

It has truly been my privilege to be a part of NUS as our University continues to strengthen and contribute even more meaningfully to our society. As the NUS community continues working together to translate ideas into meaningful impact, it is my hope that we will stay resolute in reaching for higher peaks of excellence in education, research and enterprise.



WONG NGIT LIONG
Chairman, Board of Trustees



- 1 Yale-NUS College Inauguration Ceremony
- 2 Launch of Keppel-NUS Corporate Laboratory
- 3 Official Opening of University Town
- 4 Commencement Dinner 2014
- 5 University Awards 2014





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Photo credit: World Economic Forum

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- 1 Open Day 2014
- 2 World Economic Forum, Davos
- 3 International Alliance of Research Universities Presidents' Meeting
- 4 Commencement 2014
- 5 Receiving the 2014 Abdullah Bin Hamad Al-Attiah International Energy Award



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Photo credit: The Gulf Intelligence

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PRESIDENT'S MESSAGE

Our vision is to be a "leading global university, centred in Asia". This year, the Quacquarelli Symonds World University Rankings ranked NUS as Asia's top university and we achieved top 10 global rankings for key subject areas in engineering and technology, arts and humanities, natural sciences, and social sciences and management. NUS' steady progress and strong standing are the result of our community's hard work and unwavering commitment to excellence. Moving forward, we must continue to innovate and to intensify our efforts to create a further upward inflexion in the trajectory of our development.

NUS today is a vibrant, thriving, intellectual community where excellence in education and research as well as service to society is at the heart of what we do. Our undergraduate education is known for its rigour and robustness, and highly regarded for its distinctive global orientation.

In the past year, NUS gave even greater priority to helping our students develop as well-rounded individuals, possessing *i*-NUS qualities of: *in*quisitiveness, *in*itiative, *in*ner resilience, *in*agination, *in*clusiveness and *in*tegrity. Many of our new and existing programmes already support this endeavour, such as our residential learning programmes, critical thinking and writing programmes, as well as a vibrant student life, arts, sports and community engagement on campus. We have also committed to expand our residential college learning programme and to further increase bursary support to enable needy Singaporean students to access more of these opportunities.

In Academic Year 2014, NUS will be launching a gradeless first semester, more *i*BLOCs (*in*ternal Blended Learning Online Courses) as well as career preparation courses which are introduced early in undergraduate learning. Understanding global trends and taking into account employer feedback, NUS realises the critical task of preparing future-ready graduates in this rapidly changing global environment.

NUS' research and enterprise efforts have continued to do well and are on a strong forward trajectory. The quality and impact of our research garnered high international recognition in several

published external rankings, including, for example, the Nature Publishing Index which rated NUS as among the world's best 50 research institutions. NUS has also actively grown several significant industry partnerships. Particularly noteworthy was the S\$76 million Keppel-NUS Corporate Laboratory which was established with the support of the National Research Foundation, in an area of research and development highly strategic for Singapore. We have also further enhanced our NUS Overseas Colleges (NOC) programme, and opened our eighth NOC in New York.

Next year, Singapore will celebrate its 50th anniversary. NUS will also mark the 110th year of our founding. Since its inception, our University has had a distinguished history of leadership and contribution in service of country and society. We are proud to continue our rich tradition of nurturing leaders in government, the professions, the arts, as well as business and industry. On the ground, our students have very substantially expanded the scope and impact of their engagement with our community, giving back through fund-raising for the needy, most notably through Rag & Flag, and through community volunteerism locally as well as overseas service learning projects.

I would like to thank the talented members of the NUS community for an excellent past year of work, and to express my deep gratitude to our alumni, benefactors, partners and friends who have been such an important part of our University's continuing success. Looking ahead, we will face many complex new challenges but will also find many new opportunities for growth and contribution. Building on our strong base of excellence and tremendous momentum of development, I am confident that our University community is well poised to take NUS to even greater heights.

TAN CHORH CHUAN
President

BOARD OF TRUSTEES



WONG Ngit Liong

Chairman, Board of Trustees
Chairman & Chief Executive Officer, Venture Corporation Limited
Appointed on 28 March 2006

Mr Wong is a member of the Singapore Research, Innovation and Enterprise Council under the Prime Minister's Office. He is currently the Chairman and Chief Executive Officer of Venture Corporation Limited, a leading global provider of technology services, products and solutions. He holds a First Class (Honours) degree in Electrical Engineering from the University of Malaya and a Master's degree in Electronics Engineering from the University of California at Berkeley where he was a Fulbright Scholar. He also holds a Master of Business Administration degree with distinction from McGill University under the Canadian Commonwealth Fellowship.



Mr Hans-Dieter BOTT

Former Managing Director, Siemens Pte Ltd
Former President, Singaporean-German Chamber of Industry and Commerce
Appointed on 1 April 2009

Mr Bott is a Board Member of the German Child Protection League of the Bavarian State Association. He has served on the boards of the Singapore Symphonia Company Limited, SMa Services Pte Ltd, Intellectual Property Office of Singapore and Exploit Technologies Pte Ltd. He holds a Diploma in Business Administration from the Chamber of Commerce Nuremberg, Germany.



Ms CHAN Chia Lin

Director, Holywell Private Limited
Appointed on 1 April 2013

Ms Chan is Director of Holywell Private Limited and Chairman of Urbanspace Sdn Bhd. She was formerly the Chief Investment Officer of Fullerton Fund Management Company. She is Board Member of the National Council of Social Services and chairs its investment committee. Ms Chan holds an Honours degree in Philosophy, Politics and Economics from Oxford University and a Master's degree in Public Administration from Harvard University.

Ambassador CHAN Heng Chee

Ambassador-at-Large, Ministry of Foreign Affairs
Appointed on 1 April 2012

Ambassador Chan is Singapore's Representative to the ASEAN Intergovernmental Commission on Human Rights. She is Chairman of the Lee Kuan Yew Centre for Innovative Cities in the Singapore University of Technology and Design, Chairman of the National Arts Council, Member of the Presidential Council for Minority Rights, and a Founding Director on the Board of the S Rajaratnam Endowment CLG Limited. She was Singapore's Ambassador to the United States, Singapore's Permanent Representative to the United Nations, High Commissioner to Canada and Ambassador to Mexico. She holds a Bachelor of Arts (First Class Honours) in Political Science from the University of Singapore, a Master of Arts in Political Science from Cornell University and a PhD in Political Science from the University of Singapore.



Dr CHEONG Koon Hean

Chief Executive Officer, Housing & Development Board (HDB)
Deputy Secretary (Special Duties), Ministry of National Development
Appointed on 1 April 2013

Dr Cheong is on the boards of the HDB, Jurong Port Pte Ltd, the International Federation for Housing and Planning and Civil Service College. She was formerly CEO of the Urban Redevelopment Authority. She serves on several international expert panels and is a nominating committee member of the Lee Kuan Yew World City Prize. A Colombo Plan scholar, she holds a First Class Honours degree and University Gold Medal in Architecture and a Doctor of Architecture *honoris causa* from the University of Newcastle; as well as a Master's degree in Urban Development Planning from University College London. She is also the Tan Swan Beng Endowed Professor in Nanyang Technological University.



Ms CHONG Siak Ching

Chief Executive Officer, National Gallery Singapore
Appointed on 1 April 2011

Ms Chong sits on the boards of Singapore Press Holdings and Jurong Health Services. She is Board Member of the Singapore Art Museum and the National Arts Council and Governing Board Member of Yale-NUS College. Ms Chong holds an Honours degree in Estate Management and a Master's degree in Business Administration from the National University of Singapore.



BOARD OF TRUSTEES



Mr Lucas CHOW Wing Keung

Group Chief Executive Officer & Managing Director, Far East Orchard Limited
Executive Director, Far East Organization
Appointed on 1 April 2006

Mr Chow is the Group Chief Executive Officer and Managing Director of Far East Orchard Limited, a listed company under Far East Organization. Concurrently, he is the Executive Director of Far East Organization. Mr Chow chairs the Singapore Health Promotion Board and sits on the Board of Novena Healthcare Pte Ltd. Mr Chow graduated with a Bachelor of Science (Honours) from the University of Aston, United Kingdom.



Mr GOH Yew Lin

Managing Director, G.K. Goh Holdings Ltd
Appointed on 1 April 2008

Mr Goh is the Managing Director of Singapore-listed G.K. Goh Holdings Ltd, an investment company with operations in aged care, and in financial and business services. He is Chairman of Seatown Holdings Pte Ltd, Yong Siew Toh Conservatory of Music and Singapore Symphonia Company Limited, and is Deputy Chairman of the National Arts Council. He also serves on the boards of Temasek Holdings (Private) Limited and Trailblazer Foundation Ltd. Mr Goh holds a Bachelor of Science (Economics) degree from the University of Pennsylvania.



Mr HAN Fook Kwang

Editor-at-Large, The Straits Times, Singapore Press Holdings Ltd
Appointed on 1 April 2008

Mr Han is a Board Member of the National Environment Agency and Building and Construction Authority. He is Chairman of The Straits Times School Pocket Money Fund which provides financial assistance to needy students. Mr Han graduated from the University of Leeds in Mechanical Engineering and holds a Master's degree in Public Administration from Harvard University.

Dr Noeleen HEYZER

Under-Secretary-General of the United Nations and Special Adviser of the United Nations Secretary-General for Timor-Leste and former Executive Secretary of United Nations ESCAP and former Executive Director of UNIFEM
Appointed on 1 August 2013

Dr Heyzer was appointed by United Nations Secretary-General Ban Ki-Moon as Under-Secretary-General of the United Nations, as well as the first woman Executive Secretary of the Economic and Social Commission for Asia and the Pacific (ESCAP) since its founding in 1947, and most recently also as his Special Adviser for Timor-Leste. She was previously the head of the United Nations Development Fund for Women (UNIFEM). She holds a Bachelor of Arts and a Master of Science from the University of Singapore, as well as a Doctorate in Social Sciences from Cambridge University.



Mr Peter HO Hak Ean

Senior Advisor, Centre for Strategic Futures
Senior Fellow, Civil Service College
Appointed on 1 April 2011

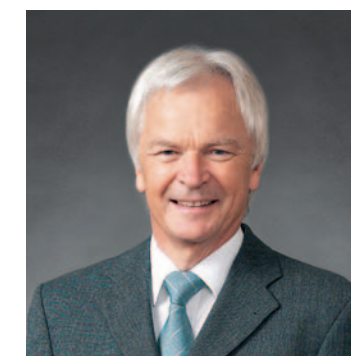
Mr Ho is the Senior Advisor to the Centre for Strategic Futures and a Senior Fellow in the Civil Service College. He is also Chairman of the Urban Redevelopment Authority of Singapore, Chairman of the Singapore Centre on Environmental Life Sciences Engineering and Director of Lee Kuan Yew Exchange Fellowship. He was Head of Civil Service, Permanent Secretary (Foreign Affairs), and Permanent Secretary (Defence). He was the founding Chairman of the Maritime and Port Authority of Singapore. Mr Ho holds a Bachelor of Arts (Honours) in the Engineering Tripos and a Master of Arts from the University of Cambridge. He is a Fellow of the Academy of Engineering Singapore.



Professor Olaf KÜBLER

President Emeritus, ETH Zurich
Appointed on 1 April 2006

Professor Kübler is a member of the German Council of Science and Humanities (Wissenschaftsrat). He serves on the President's International Advisory Council of King Abdullah University of Science and Technology (KAUST) and on the Board of the Institute of Science and Technology Austria (IST Austria). He is a partner of Robert Bosch Industrietreuhand KG and also serves on its Supervisory Council. Professor Kübler holds undergraduate and graduate degrees in Theoretical Physics from TU Karlsruhe and ETH Zurich respectively, and obtained his doctorate from the University of Heidelberg.



BOARD OF TRUSTEES



Mdm Kay KUOK Oon Kwong
Executive Chairman, Shangri-La Hotel Limited
Appointed on 1 April 2008

Mdm Kuok is the Managing Director of Shangri-La Hotels (M) Berhad and Director of Allgreen Properties Limited and Kuok (Singapore) Limited. She is the Chairman of the Board of National Healthcare Group, Yale-NUS College Governing Board and TTSH Community Fund. She is also President of the Singapore Hotels Association, Director of the Wildlife Reserves Singapore Conservation Fund, Director of The Courage Fund Ltd and sits on the National Youth Achievement Award Council. She is a Barrister-at-Law from Gray's Inn London.



Mr Michael LIEN Jown Leam
Executive Chairman, Wah Hin and Company
Appointed on 1 April 2009

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



Mr Andrew LIM Ming-Hui
Partner, Allen & Gledhill LLP
Appointed on 1 April 2012

Mr Lim is Co-Head of Corporate Mergers & Acquisitions at Allen & Gledhill. He is currently a Director of Jurong Engineering Limited and serves on the Board of the Council for Private Education of Singapore and Community Chest Committee. Mr Lim graduated from the National University of Singapore with a Bachelor of Laws (Honours) degree and a Master of Laws degree.

Mr Paul MA Kah Woh
Chairman, Mapletree Logistics Trust Management Ltd
Appointed on 1 April 2006

Mr Ma holds directorships in Mapletree Investments Pte Ltd, CapitaLand China Development Fund Pte Ltd, CapitaLand China Development Fund II Ltd, Nucleus Connect Pte Ltd, Keppel Infrastructure Fund Management Pte Ltd, National Heritage Board, NRF Holdings Pte Ltd and PACC Offshore Services Holdings Pte Ltd. He is a Fellow of the Institute of Chartered Accountants in England and Wales and a Member of the Institute of Singapore Chartered Accountants.



Mr NEO Kian Hong
Permanent Secretary (Education Development), Ministry of Education
Appointed on 1 August 2013

Mr Neo is the Permanent Secretary (Education Development) in the Ministry of Education. He was formerly the Chief of Defence Force in the Singapore Armed Forces. He has served on the boards of Jurong Town Corporation and Singapore Technologies Engineering Ltd. Mr Neo holds a Bachelor of Engineering (Electrical & Electronics) from the University of London, UK, as well as a Master of Science (Management of Technology) from the Massachusetts Institute of Technology, USA.



Professor SAW Swee Hock
Professorial Fellow, Institute of Southeast Asian Studies
Appointed on 1 April 2006

Professor Saw is Professorial Fellow at the Institute of Southeast Asian Studies and NUS President's Honorary Professor of Statistics. He is an Honorary Professor of Statistics in the University of Hong Kong, Honorary Professor in Xiamen University, and Honorary Fellow of the London School of Economics. He is the benefactor of the NUS Saw Swee Hock School of Public Health, the LSE Saw Swee Hock Southeast Asia Centre and the LSE Saw Swee Hock Student Centre. He holds a Master of Arts degree from the then University of Malaya in Singapore and a Doctorate in Statistics from the London School of Economics.



BOARD OF TRUSTEES



Mr Davinder SINGH

Senior Counsel and Chief Executive Officer, Drew & Napier LLC
Appointed on 1 April 2012

Mr Singh is the Chief Executive Officer of Drew & Napier LLC. He is a Director of Petra Foods Limited, PSA International Pte Ltd, Singapore Technologies Engineering Ltd and Singapore Exchange Limited. He graduated from the National University of Singapore with a Bachelor of Laws Honours degree and is a Senior Counsel.



Professor TAN Chorh Chuan

President, National University of Singapore
Appointed on 1 April 2006

Professor Tan is the Chairman of National University Health System, Deputy Chairman of Singapore's Agency for Science, Technology and Research and Director of Monetary Authority of Singapore. He is Board Member of the National University Hospital (S) Pte Ltd and Chair of the World Economic Forum's Global University Leaders Forum. He obtained his MBBS, Master of Medicine (Internal Medicine) and PhD from the National University of Singapore and MRCP (UK) from the Royal College of Physicians.



Mr Phillip TAN Eng Seong

Director, EQ Insurance Company Ltd
Appointed on 1 April 2008

Mr Tan is a Director of EQ Insurance Company Ltd and is currently serving on the boards and the audit, finance and investment committees of a number of statutory and charitable bodies. He is a Fellow of the Institute of Chartered Accountants in England and Wales and a Fellow of the Institute of Certified Public Accountants of Singapore.

Mr Abdullah TARMUGI

Member of the Presidential Council for Minority Rights and
Former Speaker of Parliament
Appointed on 1 April 2012

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



Dr TEH Kok Peng

Chairman, Ascendas Pte Ltd
Appointed on 1 April 2011

Dr Teh is Chairman of Ascendas Pte Ltd and a Board Member of Overseas Chinese Banking Corporation, Sembcorp Industries Ltd, China International Capital Corporation, and a member of the Trilateral Commission. Dr Teh obtained First Class Honours in Economics at La Trobe University, Melbourne, and his Doctorate in Economics at Nuffield College, Oxford University.



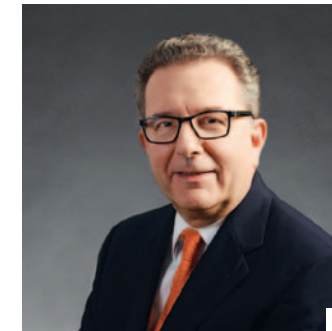
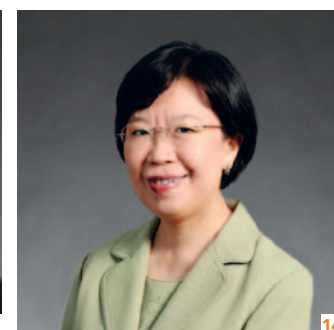
Ms Elaine YEW Wen Suen

Member of Global Executive Committee
Managing Partner, Singapore, Egon Zehnder
Appointed on 1 April 2014

Ms Yew is a member of Egon Zehnder's Global Executive Committee, and concurrently the Managing Partner of the Singapore office. Before joining the firm, Ms Yew was an Executive Director with Goldman Sachs and previously a consultant with Monitor Company, both in London, where she lived for 15 years. She serves on the Board of Governors of the Convent of the Holy Infant Jesus group of schools in Singapore. She has a Bachelor of Arts Honours degree in English and Drama from the University of Kent and Master's degree in Business Administration from INSEAD, France.



SENIOR MANAGEMENT



1 Professor TAN Chorh Chuan
President

2 Professor TAN Eng Chye
Deputy President (Academic Affairs) and Provost

3 Professor Barry HALLIWELL
Deputy President (Research and Technology) and Tan Chin Tuan Centennial Professor

4 Mr Joseph P MULLINIX
Deputy President (Administration)

5 Dr Lily CHAN
Chief Executive Officer, NUS Enterprise

6 Professor John WONG Eu Li
Senior Vice President (Health Affairs) and Isabel Chan Professor in Medical Sciences

7 Professor YONG Kwet Yew
Vice President (Campus Infrastructure)

8 Professor HO Teck Hua
Vice President (Research Strategy) and Tan Chin Tuan Centennial Professor

9 Ms Aileen TAN
Vice President (Human Resources)

10 Ms Jenny LEE
Vice President (Endowment and Institutional Development)

11 Professor Andrew WEE
Vice President (University and Global Relations)

12 Professor TAN Tai Yong
Vice Provost (Student Life)

13 Professor Bernard C Y TAN
Vice Provost (Undergraduate Education)

14 Professor Lily KONG (Provost's Chair)
Vice Provost (Academic Personnel)

15 Professor Mohan KANKANHALLI
Vice Provost (Graduate Education)

16 Professor CHAN Eng Soon
Vice Provost (Special Duties)

CALENDAR OF EVENTS

1 AUG 2013 – 31 JUL 2014

AUG 2013

1 The NUS Students' Union (NUSSU) Rag Day 2013, held at University Town for the first time, and graced by Singapore Minister for Education Mr Heng Swee Keat, transformed the verdant Town Green into a fantasy theme park. Rag Day raised more than S\$400,000 for 19 beneficiaries under Singapore's Community Chest.

2 Singapore Minister for Education Mr Heng Swee Keat shared his insights with over 300 students at the 2013 Kent Ridge Ministerial Forum on the need to be alive to ideas, people, values and purpose. This, he said, would prepare them to be ready for jobs in the future which could move across locations, and are ever-changing due to greater demands.

3 Deputy Prime Minister and Minister for Finance Mr Tharman Shanmugaratnam held a lively discussion on active citizenry, the resilience of Singaporeans and other topical issues at the inaugural NUS Alumni Breakfast Dialogue. The event was attended by some 180 alumni.

4 The inauguration of Yale-NUS College, Singapore's first liberal arts college, was officiated by Singapore President and NUS Chancellor Dr Tony Tan Keng Yam. To commemorate the event, NUS and Yale University each presented a set of 50 books to the College.

SEP 2013

5 The first ever Global Law Deans' Forum hosted by the Faculty of Law together with the International Association of Law Schools, saw the participation of more than 80 Deans and Chairs of law faculties from 31 countries. Some of the themes discussed were Law School Leadership in the 21st Century, The Judiciary and Legal Education, and Global Principles for a Legal Education – Standards and Outcomes.

6 Singapore Prime Minister Mr Lee Hsien Loong hosted a donor appreciation dinner at the Istana to thank donors who had contributed generously to NUS and the Singapore University of Technology and Design for educational initiatives, in conjunction with Singapore's founding Prime Minister Mr Lee Kuan Yew's 90th birthday.



CALENDAR OF EVENTS



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Photo credit: World Economic Forum

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7 The Xiamen Alumni Chapter was officially inaugurated, making it the fifth NUS Overseas Alumni Chapter in China. The event was graced by NUS President Professor Tan Chorh Chuan together with Mr Loh Tuck Keat, Singapore Consul-General in Xiamen; Professor Zhu Chongshi, President of Xiamen University, Chinese officials of Xiamen City and more than 80 NUS Xiamen alumni.

FEB 2014

10 His Majesty King Abdullah II Ibn Al-Hussein, King of the Hashemite Kingdom of Jordan, was hosted to a roundtable discussion on Jordanian issues by NUS' Middle East Institute, during his visit to Singapore. Singapore Minister for Communications and Information Dr Yaacob Ibrahim, senior NUS faculty members and officials from various government ministries were also present at the event.

OCT 2013

8 NUS University Town was officially opened by Singapore Prime Minister Mr Lee Hsien Loong at a celebratory ceremony involving over 1,000 students, staff and alumni. Besides touring the College of Alice and Peter Tan, Mr Lee also viewed exhibits on community and overseas learning experiences showcased by students.

JAN 2014

9 NUS President Professor Tan Chorh Chuan was appointed the Chair of the Global University Leaders Forum (GULF) by the World Economic Forum (WEF) with effect from 2014. As Chair of the GULF, Prof Tan will help contribute fresh insights, ideas and proposals to the WEF's agenda and work to address strategic issues of interest and concern around the world.

MAR 2014

12 Former Prime Minister of Australia, Mr Kevin Rudd, currently Senior Fellow with John F Kennedy School of Government at Harvard University, gave a public lecture "Imagining China in 2023 – China's Domestic and Foreign Posture under Xi Jinping" at the Lee Kuan Yew School of Public Policy where he presented his outlook on China in the next 10 years.

CALENDAR OF EVENTS

13 The Faculties of Arts and Social Sciences, Dentistry, and Science celebrated their 85th anniversary with the Resilience Run 2014. Some 800 students, staff and alumni participated in the event and raised over S\$15,000 to support the activities of NUS Enablers, a student volunteer group which helps special needs students integrate into campus life.

APR 2014

14 NUS President Professor Tan Chorh Chuan received the 2014 Abdullah Bin Hamad Al-Attiyah International Energy Award in Doha, Qatar, presented by His Excellency Abdullah Bin Hamad Al-Attiyah, President of the Qatar Administrative Control and Transparency Authority. A first for a Singaporean, Prof Tan was bestowed the award for his lifetime achievement in the advancement of educating future energy leaders.

15 A sapling descendant from a camphor tree at the hypocentre of the Hiroshima atomic bomb was planted at Tembusu College on Earth Day to mark the College's commitment to peace, friendship and the environment. Present at the event were Tembusu College Rector and Ambassador-at-Large Professor Tommy Koh, who had initially received the Hiroshima camphor seeds from the Green Legacy Hiroshima (GLH) Initiative, and Professor Shi-ichi Uye from Hiroshima University who represented GLH.

16 The Yong Siew Toh Conservatory of Music celebrated its 10th anniversary with a year-long programme line-up comprising a visit to the Conservatory by Singapore President and NUS Chancellor Dr Tony Tan Keng Yam, a public performance at the Esplanade Concert Hall, and culminating in a closing concert with Singapore Prime Minister Mr Lee Hsien Loong as the Guest of Honour.

MAY 2014

17 The World Policy Institute conferred an Honoree award on Professor Kishore Mahbubani, Dean of Lee Kuan Yew School of Public Policy for his achievements as a scholar and diplomat. The Kishore Mahbubani Emerging Leader Fellowship was also launched to support a promising young Asian leader with a one-year residency at the Institute where he or she will undertake a significant research project aimed at furthering his or her professional interests in addressing major global issues.

18 The NUS Students' Union (NUSSU) celebrated its 65th year anniversary with a rare reunion of three generations of students' union leaders and volunteers. Singapore Minister for the Environment and Water Resources, Dr Vivian Balakrishnan who was President of the 2nd and 3rd NUSSU Council and Chairman of the 4th NUSSU Council, was the Guest of Honour at the event.



Photo credit: The Gulf Intelligence



Photo credit: Marguerite Ward, World Policy Journal



EDUCATION

To explore and realise
your potential



EDUCATION

1 AUG 2013 – 31 JUL 2014

As Singapore's most established and comprehensive university, NUS delivers transformative global education that empowers our students to explore and realise their full potential. Because our goal is to ensure that our students will flourish and thrive, we have created an extensive range of programmes that enable them to discover their strengths and talents. Our interdisciplinary programmes cut across traditional academic boundaries so that our students' learning experiences transcend the established confines of their particular fields.

Beyond transformative and rigorous education, we provide a nurturing environment and create opportunities for our students to grow, enabling them to reach their full potential and preparing them for a lifetime of careers.

Rising Up Global Ranks

In Academic Year (AY) 2013/2014, NUS maintained its standing as a world-class university and continued to be rated highly in prestigious international rankings of universities.

In the latest 2014 Quacquarelli Symonds (QS) University Rankings: Asia released in May, NUS emerged as Asia's top university. Since the rankings were first compiled in 2009, the University has rapidly progressed up its charts. Our ranking has risen from a 10th placing to second in 2013 and an unprecedented first in 2014.

We chalked up strong performances across most indicators including employer reputation and academic reputation. Across all the disciplines measured, we also emerged among Asia's top three universities.

Separately, in the QS World University Rankings 2014, NUS was among the world's 10 best universities for 11 subjects. These subjects include engineering and technology, arts and humanities, natural sciences, social sciences and management.

NUS also moved one spot up to the 21st position in the World Reputation Rankings 2014 published by *Times Higher Education* (THE). In the THE Asia University Rankings 2014, we were ranked second, retaining our position as one of Asia's top two universities.

Our postgraduate programmes remained at the forefront of global rankings too. The NUS Business School's Master of Business Administration (NUS MBA) programme scaled four rungs to the 32nd spot in the *Financial Times'* annual Global MBA Rankings 2014. This makes it the top MBA programme by a Singaporean business school. In terms of international mobility, which measures the international demand of its graduates, the NUS MBA programme was ranked 10th.

Enhancing Education through Technology

Given the rich pedagogical potential of technology, we have built up our technology-enhanced learning capabilities.

The *internal* Blended Learning Online Courses or iBLOCs initiative is the latest in NUS' effort to optimise teaching and learning through blended learning platforms, manifested in both Massive Open Online Course (MOOC)-style teaching and higher intensity face-to-face interactive sessions. Launched in the second semester of AY2013/2014, online courses were integrated with redesigned face-to-face learning in a flipped classroom format. Eight iBLOCs comprising foundation and bridging modules were offered to Returning Full-time National Servicemen (NSmen), who had earlier gained admission to the University, to earn academic credits before matriculation as undergraduate students.

Students had a minimum of three months to work independently at their own time, with peers and with tutors in a range of online activities, and devoted the second three-month period to more intense classroom interaction and some amount of online activities. This structure aims to accommodate the schedule of NSmen and at the same time, allows students to take their time to build a solid foundation by learning at a more leisurely pace. Students are able to complete the course in six months rather than within the normal 15-week school semester, thus easing their transition into university education. In addition, two iBLOCs for General Education modules were designed for current NUS students and launched in January 2014.

Following NUS' partnership with Coursera in 2013 to provide an avenue for the innovative development of MOOCs in the first quarter of 2014, we launched three MOOCs for the global audience. The three courses were *Unpredictable? Randomness, Chance and Free Will* by the Department of Physics, *Write Like Mozart: An Introduction to Classical Music Composition* by Yong Siew Toh Conservatory of Music and *Reason and Persuasion: Thinking through Three Dialogues by Plato* by the Department of Philosophy. The MOOCs which ran from six to eight weeks were well received, each garnering more than 35,000 registrants initially. Since then, they have achieved a retention rate of 10–20 per cent, consistent with the experiences of partner Coursera institutions. The Centre for English Language Communication also successfully launched a non-credit MOOC on English writing for the NUS community.

The University seeks to encourage and equip more faculty members to explore different dimensions of technology-enabled learning. In line with this goal, we established the Learning Innovation Fund–Technology in 2012. This fund supports an annual call for proposals from all faculties and schools as well as targeted programme redesign of courses with large class sizes, and NUS start-ups with novel educational products. As of 31 July 2014, 24 projects in the areas of 2D visualisation, 3D virtual environment mobile computing, gesture computing and web computing have received funding approval.

EDUCATION

Extending Industry Exposure and Engagement

NUS has embarked on a multi-year, multi-pronged initiative to deliver to our students an industry-relevant education that evolves in tandem with economic and societal needs. In AY2013/2014, we complemented our ongoing efforts in facilitating career preparation and development by extending industry exposure to more undergraduates while creating more meaningful opportunities for industry engagement.

Two major programmes, the inaugural Innovation Generation (iGen) Programme and Industry Partnership Programme (IPP) were launched in February 2014.

The iGen Programme, in line with the University's goal to instil our graduates with an innovative frame of mind, equips them with cutting-edge skills and experience required in an ever-changing knowledge economy. Under the Programme, more than 20 internships were offered in collaboration with Accenture, MasterCard, Citibank, and other major companies. Students were selected from various disciplines and assigned to work on innovation projects that spanned across different business functions. They first had to undergo a series of assessment workshops to determine their affinity for innovation-related group work. Before embarking on their respective assignments, the iGen interns then took part in a series of preparatory workshops which laid the foundation in innovation concepts such as design thinking for business innovation, creative visualisation, systems thinking and pitching skills.

Through the IPP, the NUS Career Centre works with industry partners to co-create industry-related content and industry-specific learning opportunities or jobs. This initiative is an expansion of existing collaborations such as the School of Computing's

IT101 series. During the workshops, Computing students worked in groups to formulate solutions to real-life work challenges, which were then presented to industry experts for advice and critique. This helped students gain an in-depth understanding of the fast-changing IT industry and the demands of IT job roles. The IPP will extend such cooperation to other faculties and industries.

Enriching Campus Living Experience

The University regards a rich and memorable residential experience as an integral part of a student's campus life. We recognise that students living on campus benefit from immersing themselves in the campus community. It also enhances character development, encourages self-awareness and enriches their educational experience.

As part of our long-term plan to expand and enhance the residential learning opportunities particularly for freshmen, NUS continually reviews the student housing landscape to reinforce the existing supportive environment where meaningful living-learning communities can flourish.

Positive student feedback on the success of residential college learning at University Town has prompted plans for its expansion. In March 2014, Ridge View Residential College (RVRC) was launched to replace the existing Ridge View Residences. RVRC is targeted at freshmen from the Arts and Social Sciences, Engineering and Science faculties, as well as the Computing, and Design and Environment schools. The programme emphasises close engagement with industry, an interdisciplinary curricular approach and the development of a value-centric community through experiential learning.

Following a Visioning Exercise with the six Halls of Residence in November 2012, some Halls began offering credit-bearing modules and other structured learning programmes. In Semester 2 of AY2013/2014, Eusoff Hall piloted a module integrated with a community component. In addition to classroom learning, participating students also embarked on a service-learning trip to Cambodia. Meanwhile, Sheares Hall launched an internship programme as well as a mentorship programme that pave the way for personal and professional development.

A similar Visioning Exercise was conducted a year later in November 2013 to reconceptualise the living-learning framework at Prince George's Park Residences, Kuok Foundation House, and University Town Residence.

Realising Significant Milestones and Achievements

The NUS family of faculties and schools continued to soar to new heights in the year of review.

The Faculty of Engineering inked two groundbreaking agreements in November 2013. One was between NUS and the National Research Foundation (NRF), and the other between NUS and Keppel Corporation. With the signing of the agreements, the Keppel-NUS Corporate Laboratory comes under the NRF's Corporate Lab @ University scheme. The initiative will enhance academia-industry synergy as well as cultivate and nurture future engineer leaders for the marine and offshore industry. Based at the Faculty, the S\$75 million laboratory will focus on Future Systems, Future Yards and Future Resources and will groom engineering students, giving them hands-on experience and exposure to the offshore industry. Some 30 PhD and Masters students will be trained at the laboratory within five years.

In February 2014, the School of Computing signed a Memorandum of Understanding with Microsoft Singapore to launch the Microsoft College Startup Accelerator. A first of its kind, the two-year collaboration aims to encourage aspiring student technopreneurs to develop innovative start-ups for the local software economy, and accelerate the process through start-up ideation and enablement programmes from Microsoft. The half-yearly Accelerator programme features three phases: ideation, business case and product development, and final pitch. By exposing students to the real-world start-up experience, the tie-up reflects the School's commitment to entrepreneurship as a core activity that complements teaching and research, nurturing future entrepreneurs and leaders.

In March 2014, the Faculty of Law launched "Start Now Law", a first of its kind online portal for pro bono projects. An initiative of the Faculty's Pro Bono Office, it will be a springboard for the upcoming Mandatory Pro Bono Scheme, where law students will need to fulfil 20 mandatory hours of pro bono work prior to graduation. Voluntary Welfare Organisations and other pro bono host institutions will also be able to leverage the 'Start Now Law' portal to provide pro bono opportunities for our law students. Such a platform inculcates the spirit of volunteerism among students by contributing their learning back to the community.

Exploring Global Frontiers

NUS serves up an extensive menu of international programmes for our students, with the Student Exchange Programme (SEP) continuing to be our largest overseas programme. Through SEP, our students benefit from the invaluable experience of spending one or two semesters at an overseas partner university while earning credits towards their NUS degree.

EDUCATION

In the period of review, there were 174 University-wide SEP partner universities and 155 faculty-level SEP partner universities in 47 countries. A total of 1,966 NUS students went on exchange programmes in AY2013/2014, while the University hosted 1,849 international students.

We are also creating additional stimulating and diverse overseas opportunities through our wide-ranging spectrum of international summer programmes, internships, research attachments and network programmes. Innovative programmes such as Study Trips for Engagement and EnRichment (STEER) take students to less traditional destinations, such as Latin America, the Middle East and Myanmar for enrichment and exposure. Some 100 students participated in the STEER programme in the academic year.

More than 950 NUS students participated in 125 international summer programmes, research attachments and internships in 36 countries. New partnerships have been forged with

renowned universities such as Boston University, King's College London, National University of Mongolia, University of Airlangga, University of Chile and Waseda University to expand the range of summer programmes for students. Additionally, close collaborations with partners, such as the American Chemical Society and its member universities, Chinese University of Hong Kong, King's College London and University of Oxford, have created new and exciting research attachment options for our students.

Nearly 100 students embarked on international internships in more than 22 countries in AY2013/2014. NUS students now have the opportunity to gain valuable work experience and international exposure in emerging markets with partners such as Anglo Singapore International School (Thailand), Dexa Medica (Indonesia), HSL Constructor (Malaysia, Indonesia), Lippo Group (Indonesia), Prima Group and World Vision (Sri Lanka), and RMA Group (Cambodia), among many others.

New Programmes for the Academic Year 2013/2014

JOINT, DOUBLE AND CONCURRENT DEGREE PROGRAMMES WITH OVERSEAS UNIVERSITIES
<p>Joint Degree Programme</p> <ul style="list-style-type: none">• Doctor of Philosophy, NUS-Hebrew University Joint Degree Programme <p>Double Degree Programmes</p> <ul style="list-style-type: none">• Bachelor of Business Administration (Honours), NUS and Bachelor of Mathematics Actuarial Science (Honours), University of Waterloo• Master of Science in Financial Engineering, NUS and Master of Economics/Management, Peking University• Master of Science by research in Chemistry (Water Eco-Efficiency), NUS and Master in Environmental Engineering, Peking University• Master of Business Administration, NUS and Master of Advanced Management, Yale University <p>Concurrent Degree Programme</p> <ul style="list-style-type: none">• Bachelor of Science (Honours) in Chemistry/Life Sciences, NUS and Master of Science in Forensic Science/Analytical Toxicology, King's College London
NEW DEGREE PROGRAMMES IN NUS
<p>Bachelor's Degree Programmes</p> <ul style="list-style-type: none">• Bachelor of Science (Business Analytics) (School of Computing)• Bachelor of Arts (Honours) (Yale-NUS College)• Bachelor of Science (Honours) (Yale-NUS College) <p>Master's Degree Programmes</p> <ul style="list-style-type: none">• Master of Science (Business Analytics) (NUS Business School and School of Computing)• Master of Technology (Enterprise Business Analytics) (Institute of Systems Science and Faculty of Engineering)• Master of Science (Audiology) (Yong Loo Lin School of Medicine) <p>Doctoral Degree Programme</p> <ul style="list-style-type: none">• Doctor of Philosophy in Comparative Asia Studies (Faculty of Arts and Social Sciences) <p>Double Degree Programme</p> <ul style="list-style-type: none">• Bachelor of Arts (Honours)/Bachelor of Laws (Yale-NUS College/Faculty of Law) <p>Concurrent Degree Programme</p> <ul style="list-style-type: none">• Bachelor of Science (Real Estate)/Bachelor of Arts (Architecture) and Master of Urban Planning (School of Design and Environment)

RESEARCH

**A multitude of
technologies that
will better mankind**



RESEARCH

1 AUG 2013 – 31 JUL 2014

Being among the top universities in both Asia and the world, NUS has gained international recognition and respect for the sterling calibre of our research. Our cutting-edge research work covers an all-encompassing range of disciplinary and cross-disciplinary areas and our studies delve deeply into the fields of science, technology and the humanities and, increasingly, at the interfaces between these areas.

At the heart of our unflagging pursuit of research excellence is the betterment of mankind. Our research has been and will continue to be focused on creating new knowledge that will make a positive and lasting impact on people and the world we live in.

Maximising Impact in Scientific World

NUS continued to make headway in the Nature Publishing Index (NPI) Global Top 100 list. In 2012, we became the first institution in Singapore to make the list. Since then, we have climbed 28 spots to reach the 46th position among its Global Top 100 list of research institutions. The rankings, published together with the 27 March 2014 issue of *Nature*, are based on the 2013 output of research articles in *Nature* and its sister journals. These journals are internationally recognised as the pre-eminent platform for the publication of the very best international research.

According to the *Highly Cited Researchers 2014* report, the work of eight NUS scientists and engineers has placed Singapore on the world scientific map in Agricultural Sciences, Engineering, Environment/Ecology, Materials Science and Psychiatry/Psychology. The report is part of Thomson Reuters' *The World's Most Influential Scientific Minds 2014* report, which assessed papers indexed between 2002 and 2012 in 21 fields of study. The report also cites NUS as having the greatest number of highly cited researchers among research institutions in Singapore. Our researchers have earned this distinction by publishing a large number of scientific papers, which have been ranked among the top one per cent most cited for their subject field and year of publication.

In the year of review, NUS' research output continued to grow from strength to strength. In 2013, our researchers published a total of 8,066¹ papers in international journals. In Financial Year (FY) 2013, some 1,100² new projects were launched and 970² completed. Over the same period, the University signed 292 research collaborative agreements. Of these, 37 were with other universities, 94 with industry, 89 with research institutions, and 72 with government agencies, statutory boards and other entities.

Our research output has been able to maintain this impressive growth because of NUS' continued commitment to nurture and sustain a strong research culture. We ensure that our researchers are sufficiently competitive to obtain the funding needed to continue their quest for research excellence. In FY2013, NUS researchers received almost S\$589 million³ in research funds from the Ministry of Education, National Research Foundation (NRF), the Agency for Science, Technology and Research (A*STAR) and other agencies.

Unlocking the Secrets of the Human Body

Researchers from the Yong Loo Lin School of Medicine (YLLSoM), Duke-NUS Graduate Medical School Singapore (Duke-NUS), and the Faculty of Science (FoS) have created the first highly sensitive two-photon, small-molecule fluorogenic probe to evaluate the potential risk for Parkinson's disease and monitor its progression. Their study found that patients with Parkinson's disease have elevated levels of the Monoamine Oxidase B (MAO-B) enzyme in human B-lymphocytes (a type of white blood cell) but not in fibroblasts (cells typically found in connective tissues). The probe designed and synthesised by the NUS team is highly sensitive and can detect MAO-B with great precision. As it has no apparent toxicity in most mammalian cells, it can be used to monitor *in vivo* MAO-B activities during various stages of the disease, thus providing a better understanding of the progression of the disease and for drug development. These findings were published in *Nature Communications* on 13 February 2014.

A team of scientists from Duke-NUS and YLLSoM has unveiled the mystery of how the brain absorbs docosahexaenoic acid (DHA), a fatty acid widely believed to be crucial to its function. The team's

findings, published online in *Nature* on 14 May 2014, marks the first time a genetic model for brain DHA deficiency and its functions in the brain has been made available. Understanding how the brain absorbs DHA will guide the development of technologies to more effectively incorporate DHA into food and maximise the potential for improved nutrients to enhance brain growth and function.

Scientists from the Cancer Science Institute of Singapore (CSI Singapore) at NUS, National University Cancer Institute Singapore and National University Hospital Singapore conducted the first successful comprehensive genomic study of nasopharyngeal carcinoma. The study results, which pave the way for new therapies for this deadly disease, were first published online in *Nature Genetics* on 23 June 2014. The scientists discovered that this form of cancer is associated with a distinct mutational signature and nine significantly mutated genes, thus providing them with an enhanced road map for the study of the molecular basis of the disease. Many potential therapeutic drugs have surfaced from their analysis, some of which are already being used to treat other types of tumours.

Another team of scientists from CSI Singapore discovered that the IL23A protein is part of our stomach's defence against bacterial infection, which could lead to gastric cancer. This finding, published online in *Cell Reports* on 4 July 2014, may hold the key to combating this deadly disease. A major trigger for the development of gastric cancer is infection by the bacterium, *Helicobacter pylori*. A drawn-out battle against this bacterium often causes persistent stomach inflammation, which is a dangerous cancer-causing condition. Understanding and strengthening the natural defence mounted by the stomach cells is a logical and crucial step in preventing gastric cancer –

¹ Calendar Year 2013. Data extracted from SCOPUS online database on 14 August 2014 and represents document types Article, Conference Paper and Review.

² Figures reflect number of new projects that commenced in FY2013 and those completed in FY2013, respectively. Figures derived from SAP PS as at 12 June 2014.

³ Figures updated as at May 2014.

RESEARCH

the fourth leading cause of cancer deaths among men and fifth among women in Singapore from 2008 to 2012.

A group of researchers led by Associate Professor Gerald Koh from NUS' Saw Swee Hock School of Public Health has started clinical trials to test the effectiveness of a tele-rehabilitation system for stroke patients. Tele-rehabilitation is an innovative, home-based and potentially cost-effective solution that may boost these patients' recovery chances. The trials, launched in November 2013, have recruited 15 patients. The target is to have 50 patients for the clinical trials by June 2016. This project is funded by a three-year S\$750,000 research grant from the Singapore Millennium Foundation.

Groundbreaking Discoveries with Practical Applications

A team of researchers from FoS has successfully developed an innovative one-step method to grow and transfer high-quality graphene on silicon and other stiff substrates. This breakthrough opens up opportunities for graphene to be used in high-value applications that are currently not technologically feasible. It is the first published technique that accomplishes both the growth and transfer steps of graphene on a silicon wafer, which enables the technological application of graphene in photonics and electronics. The innovation was first published online in *Nature* on 11 December 2013.

An innovative approach that holds the promise of cheaper and more effective thermal control systems is the brainchild of a team of researchers from the Faculty of Engineering (FoE). The team's "cool" design can potentially achieve up to 50 per cent more effectiveness in terms of stability and reliability versus the conventional two-phase microchannel cooling

systems. If the new system is implemented in extensive installations such as nuclear plants, it will be able to transfer the huge quantity of generated heat into reusable energy. In February 2013, the researchers received a S\$235,250 Proof-of-Concept grant from NRF and have produced a prototype which will be field tested on a train in August – September 2014.

NUS scientists from FoS have developed the world's first fluorescent sensor to identify the presence of gamma-hydroxybutyric acid (GHB), known commonly as the date rape drug. When the sensor is mixed with a sample of a beverage containing GHB, the mixture changes colour in less than 30 seconds, making detection of the drug fast and easy. This simple mix-and-see discovery is a novel scientific breakthrough that contributes towards the prevention of drug-facilitated sexual assaults. The findings were first published in the journal *Chemical Communications* on 22 January 2014.

Published in the *Proceedings of the National Academy of Sciences of the United States of America* in June 2014, Professor Richard Ebstein and Professor Chew Soo Hong from the Faculty of Arts and Social Sciences (FASS) used a competitive game to study how people varied in their decision-making processes and related these differences in the set of genes that carry out biological functions required for dopaminergic functioning. They found that genes differentially expressed in separate brain regions influenced distinct components of the decision-making processes. A surprising degree of consistency exists with what is known at the brain level about how people make decisions in social interactions. Their findings support the notion that genetic variation, organised along specific pathways, forms an important source of variation in complex phenotypes such as strategic behaviour.

FoE researchers have developed a cost-effective solution for the control of indoor air pollution, especially from the haze. The development of this system is timely as the World Health Organization (WHO) recently highlighted the health risks of inhaling particulate matter measuring less than 2.5 microns (PM2.5). The system is also able to reduce levels of volatile organic compounds that are typically associated with the odour from haze pollution. Designed for use with a domestic ventilation fan to remove PM2.5 from indoor air, the filtration system is easy to use and ideal for a range of indoor environments. The technology has been licensed exclusively to AiRazor Technologies for commercialisation.

Enhancing Capabilities through New Initiatives

In late July 2013, the FoE and the Singapore Institute of Manufacturing Technology inked an agreement to launch two joint research labs in precision motion systems and industrial robotics. The Joint Labs were launched in conjunction with the A*STAR Industrial Robotics Research programme. The precision motion systems laboratory aims to develop advanced mechatronics technologies to achieve high-speed and high-precision motion, while the industrial robotics laboratory targets the development of advanced robotics technologies to tackle difficult-to-automate manufacturing processes. This collaboration brings together the local research community to build capabilities and develop technologies to boost productivity and gear up for high-value manufacturing in the medtech, aerospace, marine and offshore, and precision engineering clusters.

The Singapore Lipidomics Incubator at NUS spearheaded the establishment of the Lipidomic Natural Variation consortium in March 2014. The new consortium will develop the world's first lipid database for healthy persons of different racial and ethnic groups. Through this database, researchers will gain insight into the lipid information of these groups, paving the way for medical professionals to leverage key information such as diagnostic markers. The lipid information will be integrated with glycomic and proteomic studies to provide a better understanding of the natural variation within glycans and proteins as well.

In April 2014, WHO appointed the Centre for Biomedical Ethics at YLLSoM as Asia's first collaborating centre for bioethics. The Centre will support WHO in developing work in the field of ethics and health in areas such as organ transplantation, universal health coverage, managing non-communicable diseases and advancing mental health. A major area of focus is the ethics of public health surveillance.

A national resource hosted at NUS, the Singapore Nuclear Research and Safety Initiative (SNRSI) focuses on research and developing capabilities in nuclear safety, science and engineering by tapping into the local research institutions and building up new capabilities. It will be led by Professor Lim Hock from the NUS Department of Physics and Director of Research Governance and Enablement at the University's Office of the Deputy President (Research and Technology). SNRSI is part of the Nuclear Safety Research and Education Programme under the NRF with S\$63 million funding to be spread over five years. The Programme also includes a Nuclear Education and Training Fund which supports education and training in the same areas.

RESEARCH

In June 2014, the FASS received S\$420,000 from the Lee Foundation to fund research projects under Next Age Institute, a partnership between NUS and Washington University in St Louis (WUSTL) to study, design and test social innovations. In the start-up phase over the next two years, FASS and WUSTL researchers will work on research projects addressing the changing global context and trends that present challenges and opportunities for families, communities and societies. These issues include ageing populations, globalisation of markets, rising inequality and the shift to information age technologies.

Two new research facilities were established in July 2014. The Solar Energy Research Institute of Singapore (SERIS) at NUS officially opened its S\$6 million comprehensive solar module development and testing laboratories at CleanTech Park. Specialising in tropical climates, the first-of-its-kind facility in Southeast Asia is able to provide the full range of testing and certification services required by the global

solar industry. The 1,700-square-metre space houses SERIS' Photovoltaic (PV) Module cluster that focuses on the development and testing of PV modules, commonly known as solar panels. SERIS is looking to commercialise its Singapore Module, which is as efficient as market-leading modules but lasts longer in the tropics than the commercially available ones.

Building on the success of the Graphene Research Centre, the University established the Centre for Advanced 2D Materials to study and develop applications for materials that are atomically thin with a S\$50 million grant from the NRF. The work of the new Centre will have direct impact in several high-tech industrial sectors that are fundamental to Singapore's economy, including energy, water, sensors, electronics and data storage. Its defining feature is the interdisciplinary collaboration between scientists and engineers to produce translational research. The 100-strong team will work towards accelerating a material's development into a useful product.

RESEARCH STATISTICS

NUMBER OF PAPERS
PUBLISHED IN INTERNATIONAL
JOURNALS IN CY2013¹



NUMBER OF NEW PROJECTS
THAT WERE LAUNCHED
IN THE YEAR²

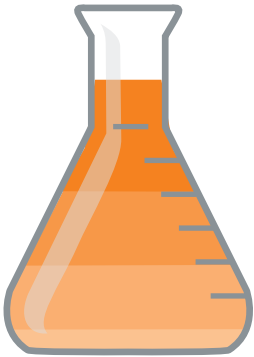


NUMBER OF NEW PROJECTS
THAT WERE COMPLETED
IN THE YEAR²



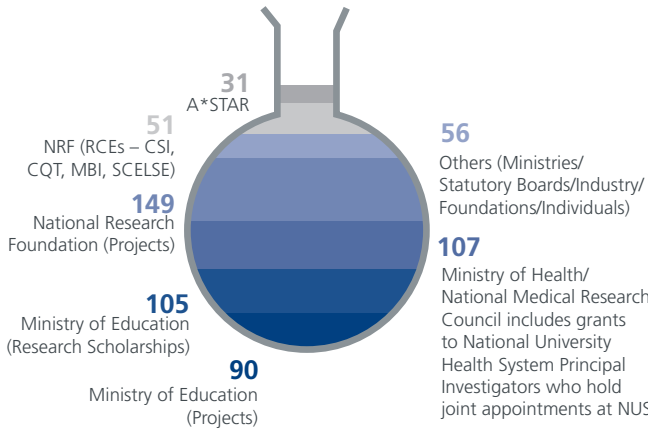
NEW RESEARCH COLLABORATIVE
AGREEMENTS THAT TOOK OFF IN FY2013³

TOTAL 292



TOTAL PROJECT VALUE AWARDED
BY EXTERNAL SOURCES (S\$MILLION)³

TOTAL 589



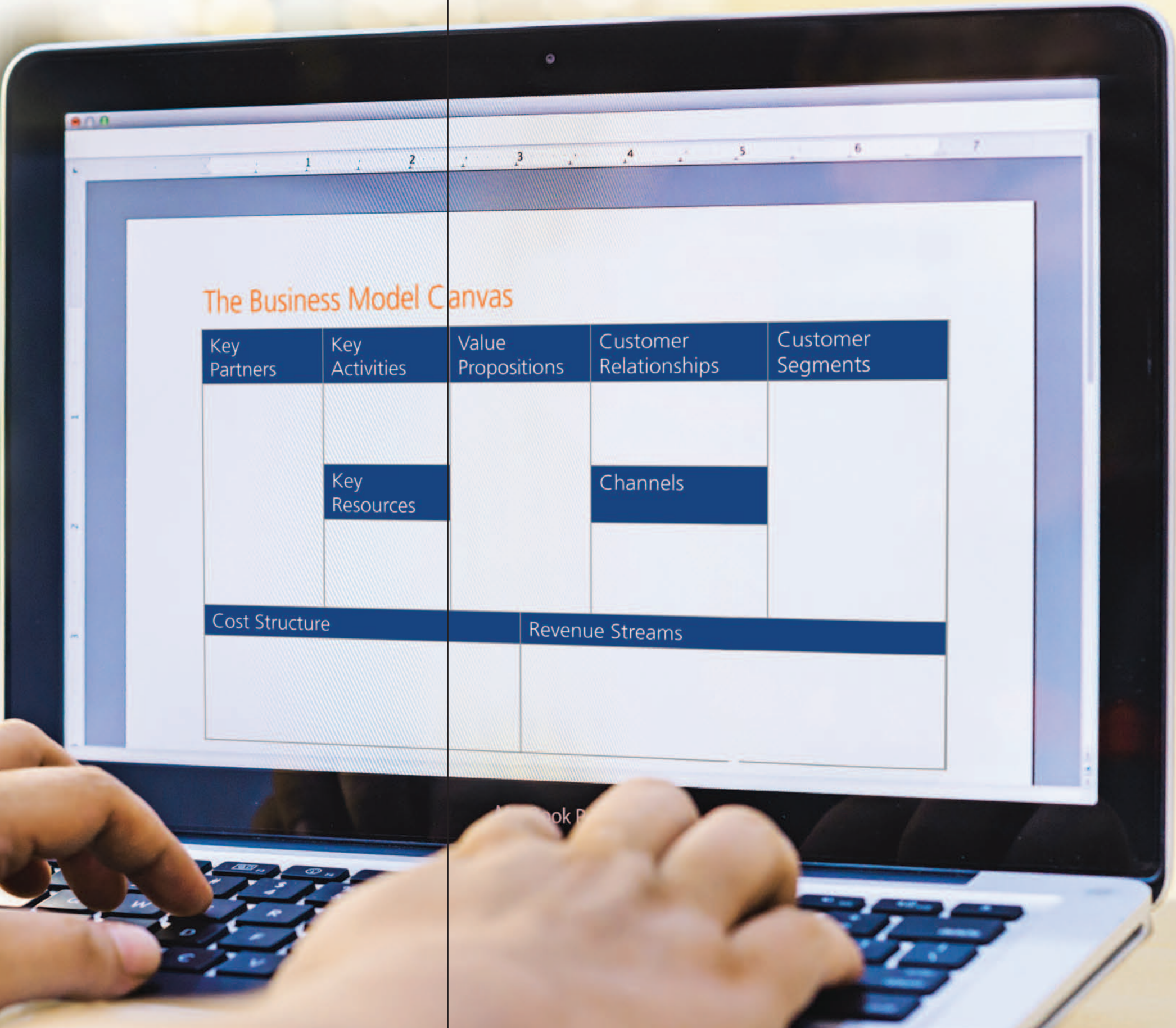
* Includes local public/restructured hospitals
** Includes A*STAR research institutes and centres

The figures for FY2013 also includes funding for Research Centres of Excellence (RCE), Centre for Quantum Technologies (CQT) of S\$15.8 million (based on a total award of S\$158 million over 10 years), Cancer Science Institute of Singapore (CSI Singapore) of S\$17.2 million (based on total award of S\$172 million over 10 years), Mechanobiology Institute, Singapore(MBI) of S\$15 million (based on total award of S\$150 million over 10 years) and funding for the Singapore Centre on Environmental Life Sciences Engineering (SCELSE) of S\$3 million (based on 25% per unit funding of total award of S\$120m over 10 years).

¹ Calendar Year 2013. Data extracted from SCOPUS online database on 14 Aug 2014 and represents document types Article, Conference Paper and Review.
² Figures reflect number of new projects that commenced in FY2013 and those completed in FY2013. Figures derived from SAP PS as at 12 Jun 2014.
³ FY2013 figures updated as at 31 Mar 2014.

ENTREPRENEURSHIP

To turn
bold ideas
into reality



ENTREPRENEURSHIP

1 AUG 2013 – 31 JUL 2014

In building and continuing to fortify one of Asia's most robust university-based enterprise ecosystems, NUS is playing a pivotal role in promoting Singapore's drive towards sustained knowledge- and innovation-powered economic development.

Through NUS Enterprise, the University strives to ignite the entrepreneurial spirit in its students, faculty and staff, fostering a strong entrepreneurial culture among them.

We provide experiential education, which hones our students' entrepreneurial edge. To stay ahead of the evolving global entrepreneurial landscape, we actively pursue industry engagement and partnerships to facilitate technology transfer and the commercialisation of our intellectual assets and expertise. We also support our community's entrepreneurial pursuits through a host of activities while promoting entrepreneurship/innovation research and thought leadership.

All these initiatives are focused on growing the strong spirit of innovation and enterprise within our community – creating tomorrow's business leaders today.

InnovFest Creates Buzz

Our annual flagship InnovFest conference enjoyed another successful run. In April 2014, over 1,000 participants and more than 45 exhibitors gathered to network in a unique event that is dedicated to the promotion of innovation and entrepreneurship.

The 2014 theme, Asian Innovations Going Global, addressed issues related to Urbanisation & Future Cities, Ageing & the Silver Industry, Next Generation Learning and Bottom-of-the-Pyramid Technologies. Other highlights included special forums dedicated to graphene and membrane technologies, pitching sessions, and exhibitions that showcased NUS technologies and regional innovations. Additionally, the event provided a business partnering platform and numerous other networking opportunities for participants to connect and build meaningful relationships with potential investors and partners from around the globe.

Increasing Experiential Education Opportunities

At NUS, students are given a host of educational avenues to develop their entrepreneurial talent. We sharpen their innate skills through various international internship programmes, from which they reap the benefits of studying and working in renowned entrepreneurial and academic hubs at home and abroad.

The highly popular NUS Overseas Colleges (NOC) programme started in 2002 and has been offering internship opportunities at leading universities in the United States, Sweden, China and other countries. In January 2014, the programme received a boost with the launch of its latest set-up in New York. Over 1,600 students have taken part in the programme, with a total of 160 participants in Academic Year (AY) 2013/2014.

Students also gain first-hand entrepreneurship experience in Singapore through the *innovative* Local Enterprise Achiever Development (iLEAD) programme. At the end of the 7-month internship with a local start-up, iLEAD participants embark on a two-week Overseas Study Mission. In AY2013/2014, 53 students were enrolled in the iLEAD programme.

In the year of review, the one-year Philip Yeo Innovation Fellows Programme was launched. The scholarship will support individuals embarking on self-designed projects that make a positive contribution to our society. They will receive funding, mentorship, access to business incubation services, and opportunities to attend networking events and other activities.

An endowed scholarship honouring the late Professor Jacob Phang, founding Chief Executive Officer of NUS Enterprise, was also set up. The Jacob Phang Memorial Scholarship will help cover the tuition fees for the final semester for Faculty of Engineering students returning from an NOC programme. Up to two S\$3,500 scholarships will be granted in each academic year.

We also organised LeanLaunchPad@Singapore for the second year running. During the 10-week programme in April 2014, approximately 80 participants networked with potential customers, partners and competitors on commercialising and creating new ventures. In addition, we had another successful run of our Summer Enterprise Development Programme. Held in July 2014, the event attracted 67 participants from 16 countries.

In Support of Start-ups

In the year of review, more than 100 companies received pre-incubation and incubation support through NUS Enterprise's various programmes and facilities.

The NUS Start-Up Runway, for example, is a 360-degree network of incubation spaces, facilities, services, activities, community and funding to nurture entrepreneurial growth and enable our start-ups to take flight.

To help budding entrepreneurs develop their business plans further, we created the Start-Up Validation Programme in 2013 to guide start-ups through the process of ideation and validation. This one-month long programme consists of five sessions where participating teams put their ideas and assumptions to the test and modify them based on the feedback they garner. To date, more than 100 participants have undergone the programme and more than 60 projects have been validated.

In AY2013/2014, several companies in the NUS Enterprise ecosystem received external funding.

- In November 2013, Carousell successfully raised S\$1 million in seed funding, led by Rakuten Ventures, with follow-on investments by Golden Gate Ventures, 500 Startups and other angel investors. Carousell is a C2C mobile marketplace application where sellers can list and sell their items easily. The funding will support product development and expansion in Southeast Asia.
- In February 2014, ViSenze, which licenses NUS technologies for image recognition, announced it had closed a US\$3.5 million (S\$4.4 million) Series A round of funding, headed by Rakuten Ventures along with Walden and UOB Venture Management.

ENTREPRENEURSHIP

- In March 2014, Nitrous.IO received another round of funding to support its programming solution. The US\$6.65 million (S\$8.4 million) Series A funding was led by venture capital firm, Bessemer Venture Partners, along with other investors such as 500 Startups and Facebook co-founder Eduardo Saverin.

Other successful NUS start-ups have been acquired by major companies. Zopim, popular for its live customer support chat widget, was acquired by San Francisco's Zendesk for US\$30 million (S\$37.3 million) in April 2014. Founded in 2008 by four NOC Silicon Valley alumni, Zopim's lead product is now among the world's most used support chat widgets. Some 40,000 businesses have signed up on the platform and 120,000 websites have utilised the widget.

Techsailor, a digital marketing company founded by NOC alumni in Silicon Valley and Bio Valley, was acquired by India's leading digital services network, TO THE NEW. Similarly, online publisher SGEntrepreneurs.com, founded by an NOC Silicon Valley alumnus, was bought by digital media company Tech in Asia.

The University has created a vibrant community for entrepreneurs to meet, interact with and learn from each other through various activities and collaborations.

The annual Google for Entrepreneurs Week was held for the first time in Singapore in October 2013 at Blk 71, in partnership with NUS Enterprise. The event, which celebrates innovators and entrepreneurs around the world, featured community meet-ups, mentorship sessions and product training workshops.

Other events include Kopi Chat, a series of talks for the start-up community served alongside a fresh brew of local coffee; and Friday Feeds, a monthly networking event which aims to promote bonding

within the start-up community over good local food.

NUS' entrepreneurship development and outreach initiatives continued to be well received. The DBS-NUS Social Venture Challenge, launched in September 2013, aims to identify and support new social ventures with the potential to generate scalable and sustainable social impact. The inaugural Challenge saw encouraging participation from a total of 418 teams from more than 20 countries.

Since its inception in 1999, the long-standing Start-Up@Singapore business plan competition has attracted some 3,600 teams and 11,000 individuals who have contributed significantly to the start-up ecosystem in Singapore and the region. To date, Start-Up@Singapore has resulted in more than 100 start-up companies. However, after 15 successful runs, the competition has transformed into Global Start-Up@Singapore, a networking platform from which Singapore-based start-ups can bring their products and solutions to the global marketplace. Global Start-Up@Singapore's array of activities includes a seminar series that features globally renowned entrepreneurial leaders, the first of which was held in June 2014.

We also work with our partners on three major entrepreneurship-related research projects:

- The Global University Entrepreneurial Spirit Students' Survey (GUESSS) 2013, an international comparative research project that assesses the entrepreneurial behaviour of tertiary students. Over 100,000 students from 32 countries took part in GUESSS 2013. Of these, 6,555 were from Singapore's three public universities and five polytechnics.
- A two-year collaborative project with the Asian Competitiveness Institute at the Lee Kuan Yew School of Public Policy on the study of intellectual property (IP) creation in five Asian economies.

The final report benchmarked IP performance in the focal economies, identifying areas of relative strength and weakness in Singapore and recommended several policy measures to enhance Singapore's innovation capabilities.

- A study on technology commercialisation at NUS which involves an ongoing collaboration with the Centre for Science & Technology Study (CWTS), University of Leiden, on the use of publication's data to measure university-industry collaborations in Asia. The collaboration with CWTS has expanded into a regional initiative, involving universities from Japan, Taiwan, Hong Kong, Malaysia and Korea.

Industry Engagement and Partnerships

NUS Enterprise also actively engages in industry collaboration, technology transfer and the commercialisation of university intellectual assets and expertise. We translate new discoveries and inventions by NUS researchers and students into beneficial products and services; and spin off NUS technologies and research into new start-up companies while facilitating industry-sponsored research and joint R & D projects.

In the year of review, we handled an extensive scope of invention disclosures, patents, as well as industry and research collaborations as follows:

Invention disclosures received	367
Regular patents filed	515
Patents granted	56
Industry and research collaborations	283

As at 1 Aug 2014

Significant collaborations forged in AY2013/2014 included a deal with global MNC Life Technologies, which received an exclusive option to license seven bio-imaging probes developed by Professor Chang Young-Tae from the Department of Chemistry, Faculty of Science. Life Technologies also signed a research collaboration agreement with NUS and the Agency for Science, Technology and Research for up to five projects with the same investigator to develop imaging dyes for various biological research applications. This is the first time that Life Technologies has signed up with a Singapore entity.

Subnero Pte Ltd, an NUS spin-off, licensed a water assessment robotic network technology to develop scalable, minimally propelled autonomous platforms that can carry *in-situ* water quality probes and operate with minimal manual support.

To encourage translational partnerships with fellow institutes of higher learning, a Joint Working Committee was set up in 2013 to identify partnership opportunities and encourage exchanges among researchers of partnering institutes. This has resulted in more than 20 discussions on the translation of NUS intellectual properties and two projects aimed at further development of NUS' research.

COMMUNITY

To **lend** a hand
to **worthy** causes



COMMUNITY

1 AUG 2013 – 31 JUL 2014

NUS is committed to cultivating and nurturing our students through our holistic approach to education. On top of a rigorous formal curriculum, we ensure that their learning goes far beyond the classroom.

They are exposed to the real world so that they can better understand the issues facing the wider community. We not only help them acquire the knowledge to address issues but also develop a heart of compassion and a desire to do good. Through a host of community activities and programmes, often initiated and driven by the students themselves, they extend a helping hand to the needy and underprivileged in Singapore and beyond.

We are also mindful that our students are the leaders of the future, and actively groom and hone their innate leadership qualities.

Growing Our Volunteerism Handprint

The NUS community remains steadfast and firm in our commitment to serving society in Singapore and beyond. In Academic Year (AY) 2013/2014, we continued to proactively reach out to and engage with a multitude of communities through a gamut of fund-raising and volunteer projects.

Once again, our students threw themselves enthusiastically into our iconic annual Rag & Flag event. Organised by NUS Students' Union, the charity event involved the united efforts of some 6,000 students who raised over S\$400,000 for 19 beneficiaries under Community Chest.

Another event that has grown from strength to strength is the Waves of Hope Swimathon, organised by NUS Rotaract Club to increase awareness of autism. Held on 7 September 2013, it attracted over 470 participants. More than S\$25,000 was raised and donated to Pathlight School's Poor and Needy Fund, which helps financially strapped students with school-related expenses.

On 29 March 2014, the Arts and Social Sciences, Dentistry, and Science faculties celebrated their 85th anniversary with the Resilience Run. Some 800 staff, students and alumni took part in the event and raised more than S\$15,000. The funds will support the activities of NUS Enablers, a student volunteer group, which helps special-needs students integrate into campus life.

In addition to fund-raising, the campus community organises an extensive range of activities that aims to make a difference to the lives of fellow Singaporeans.

One signature event is NUS Students' Community Service Club's Grant A Wish (GAW) project. At GAW XI, students once again played Santa to help grant the wishes of the disabled and needy beneficiaries. In all, three parties were held during the reporting period and nearly 600 wishes were answered.

Students residing at University Town (UTown) continued to reach out to various local communities, including those near their campus home. Students from the University Scholars Programme (USP) focused on children, holding workshops on writing and critical thinking for New Town Secondary School students. USP students also provide tuition services to children living in the interim rental housing flats in Dover. On 15 February 2014, they organised a Family Day at UTown for the children and their families.

At the College of Alice & Peter Tan (CAPT), students conducted three dance sessions for children from Beyond Social Services. They sought to nurture among the children a passion for dance as well as life skills and values. Other CAPT initiatives included spring cleaning at St Hilda's Community Services and Pathlight School, having breakfast with domestic helpers from Humanitarian Organisation for Migration Economics, and a trek to Endau Rompin National Park for students from Assumption Pathway School. CAPT also held its inaugural Community Engagement Festival on 14 March 2014.

Tembusu College too seeks to create a community service culture among its residents. Its community

projects include tMentors, a one-to-one mentoring programme for students from New Town Secondary School who have difficulties in their studies.

NUS students, while committed to help the needy at home, also lend a helping hand to worthy causes beyond Singapore's shores.

In partnership with several hospitals, student-run charity Children of Cambodia opened Cambodia's first dedicated neonatal ward at Angkor Hospital for Children in September 2013. The group has been working on the project over the past 10 years, developing various aspects of healthcare in the Indochinese nation.

Pioneered in 2011, Project Inspiring India continues to uplift the lives of underprivileged children at Living Hope Children's Home in Bangalore through education and skill development. In December 2013, a team of 17 students visited the Home and set up a Resource Centre equipped with laptops, books and teaching materials as well as conducted IT and English classes.

Initiated and led by USP students, Step-Up Project – Cambodia seeks to create a positive impact on slum communities in Phnom Penh. In December 2013, a group of 25 students visited the communities. The team joined hands with Singapore-based non-governmental organisation (NGO) Solutions to End Poverty and Cambodia-based NGO *Pour un Sourire d'Enfant* to help resettle slum dwellers and improve their standard of living.

COMMUNITY

Skilled for the Greater Good

More NUS students are leveraging their skills and talents to help the needy and give back to society.

A longstanding medical initiative of the Yong Loo Lin School of Medicine (YLLSoM) is the Neighbourhood Health Screening programme which made its debut in 2006. Since then, the number of volunteers providing free health checks for the needy has more than doubled to nearly 500. In September 2013, the students covered Taman Jurong, MacPherson and Bukit Merah. Some 450 students from the YLLSoM and Alice Lee Centre for Nursing Studies provided free health screenings at void decks or homes for 510 residents. The health checks were carried out over two weekends – the first in Jurong in August 2013, the second in Eunos in September 2013.

Our medical students have also initiated a community service programme called the Local-Overseas Community Involvement Programme to assist foreign workers in Singapore. Through this programme, they provide low-cost medical care to migrant workers at two community clinics in Little India and Jurong.

In 2013, student-led NUS Criminal Justice Club launched the Innocence Project to help individuals who believe they have been wrongly convicted and have exhausted their avenues of appeal in court. The project, the first of its kind in Singapore, aims to contribute to public confidence in Singapore's criminal justice system. So far, the students have reviewed six applications.

Computing for Voluntary Welfare Organisations is a platform that matches the computer programming skills of students to the needs of VWOs. In 2013, the students partnered Lions Befrienders Service Association to enhance its management system.

Cultivating Compassionate Community Leaders

Through diverse programmes and initiatives, NUS is actively growing community builders with a heart.

Now in its third year, the Chua Thian Poh Community Leadership Programme (CTPCLP) continues to nurture the next generation of community leaders and change makers. In AY2013/2014, eight new projects were initiated.

In January 2014, 33 new fellows were recruited, bringing the total to 110. The fellows now spend at least 100 hours, instead of the original 40 hours, with a social service organisation for their attachment or project. This allows each fellow to delve deeper into the challenges faced by the organisation or beneficiary.

In the year of review, CTPCLP held a public conference, film screenings coupled with a panel discussion, and an exhibition, which addressed the issues of human trafficking, modern day slavery and violence against women. The events drew strong participation from NUS students, staff and the public. CAPT too prepares its students for leadership roles through the Capstone Experience. Under the module, the students work hand in hand with community partners to address pertinent issues impacting the beneficiaries. They invest time in getting to know a community so that they may get up close and personal with the people in their daily lives. In AY2013/2014, 23 students carried out four projects involving the elderly and youths to help enhance their health and well-being, education and personal development.

Offered by NUS Career Centre, NUSLEAD programme continues to work with students on developing and honing their inherent leadership skills while instilling a sense of contributing to their community. One such project is Project ChopeForHope. Under the guidance of an industry mentor, a team of five students joined hands with hypermarket chain Giant to set up an online channel which allows the public to donate food items to Food Bank Singapore. Food Bank Singapore will, in turn, redistribute the donated items to the needy.

Getting the Green Thumbs Up

The University continually explores ways to enhance the environmental sustainability of our campus. Two new buildings, AS8 at the Faculty of Arts and Social Sciences and MD7 at the YLLSoM, attained the Building Construction Authority's Green Mark Platinum and Gold ratings respectively. The Terrace canteen at the NUS Business School became the third NUS canteen to receive the Eco-Food Court certification from the Singapore Environmental Council in August 2013.

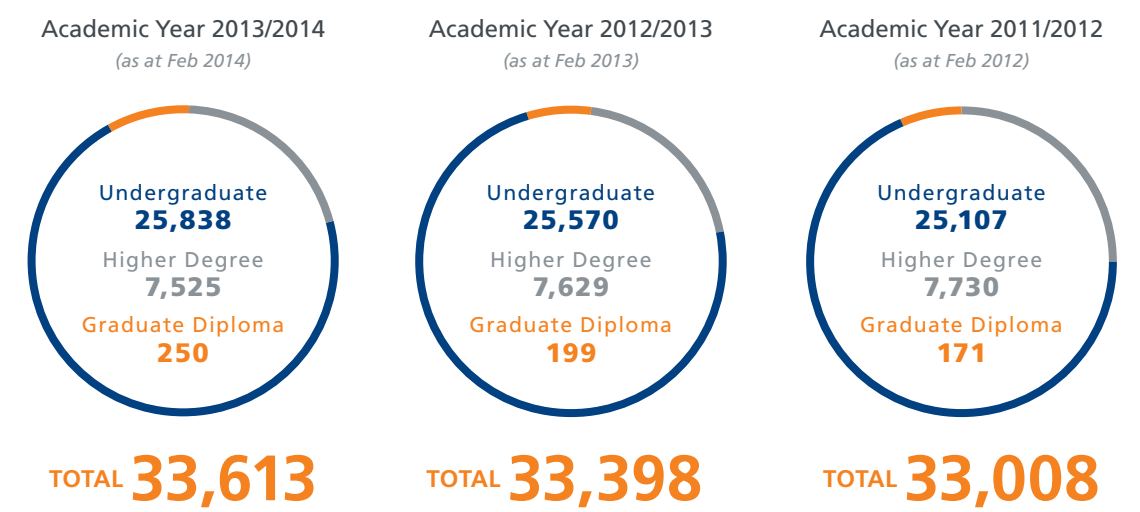
Our students are ardent green advocates. The Students Against Violation of the Earth (SAVE) actively promotes environmental awareness and action on campus. Its annual Climate Action Day seeks to drive home the message that environmental sustainability is every individual's responsibility.

Themed Every Big Change Starts with Me, Climate Action Day 2013 encouraged the NUS community to make eco-friendly changes in different ways. SAVE launched an innovative environmental cum social clothes recycling campaign called Green Wardrobes, where proceeds from the campaign went to beneficiaries in the South West Community Development Council. Another feature of Climate Action Day was the SHOP@SAVE exhibition, which not only raised awareness of the harmful effects of consumption, but also introduced various eco-friendly products that serve as an alternative form of consumerism. SAVE took its eco-message beyond the University and conducted a national Plastic Waste Symposium to educate secondary and tertiary students about plastic waste issues and how they can implement their own disposable-reduction schemes.

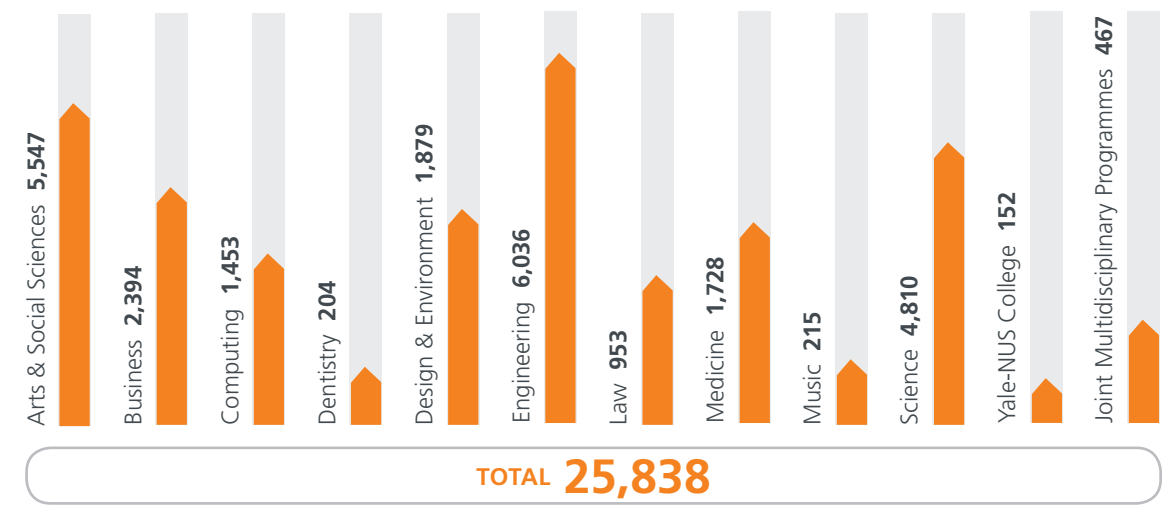
The student-led NUS Sustainability Fund – raised from the proceeds of NUS' Plastic Bag Tax, the only scheme of its kind in Singapore – provides funding and mentorship for environmental projects within the University. Two projects on community gardening and composting, both mooted by our students, were awarded funding last year.

ACADEMIC YEAR IN REVIEW

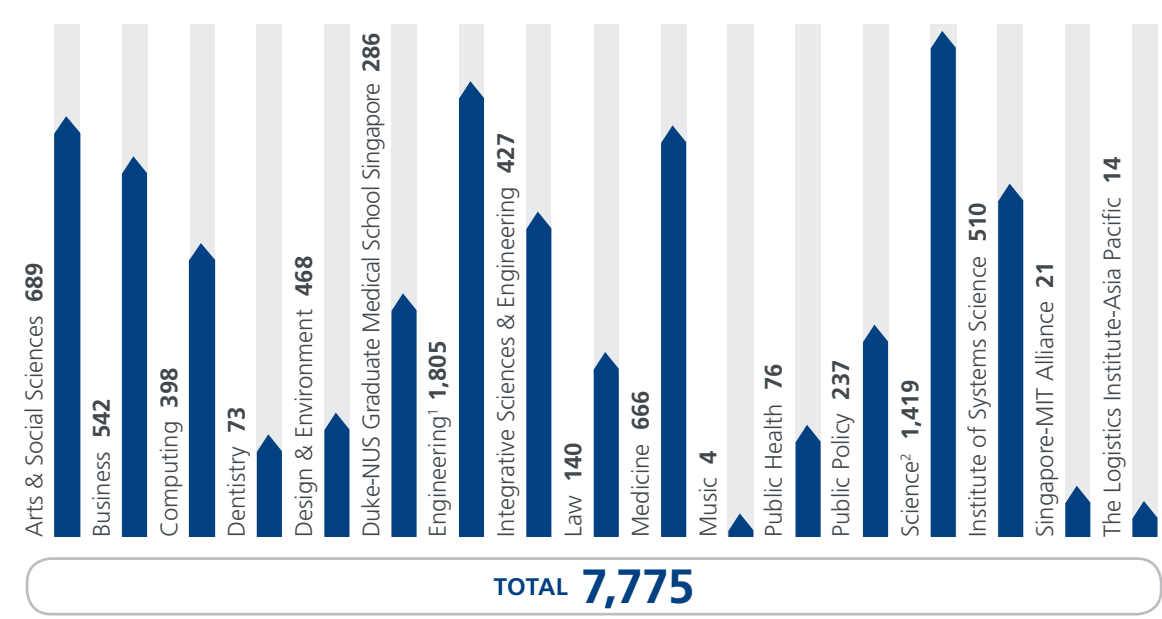
PROFILE OF STUDENTS



UNDERGRADUATE ENROLMENT 2013/2014 (as at February 2014)

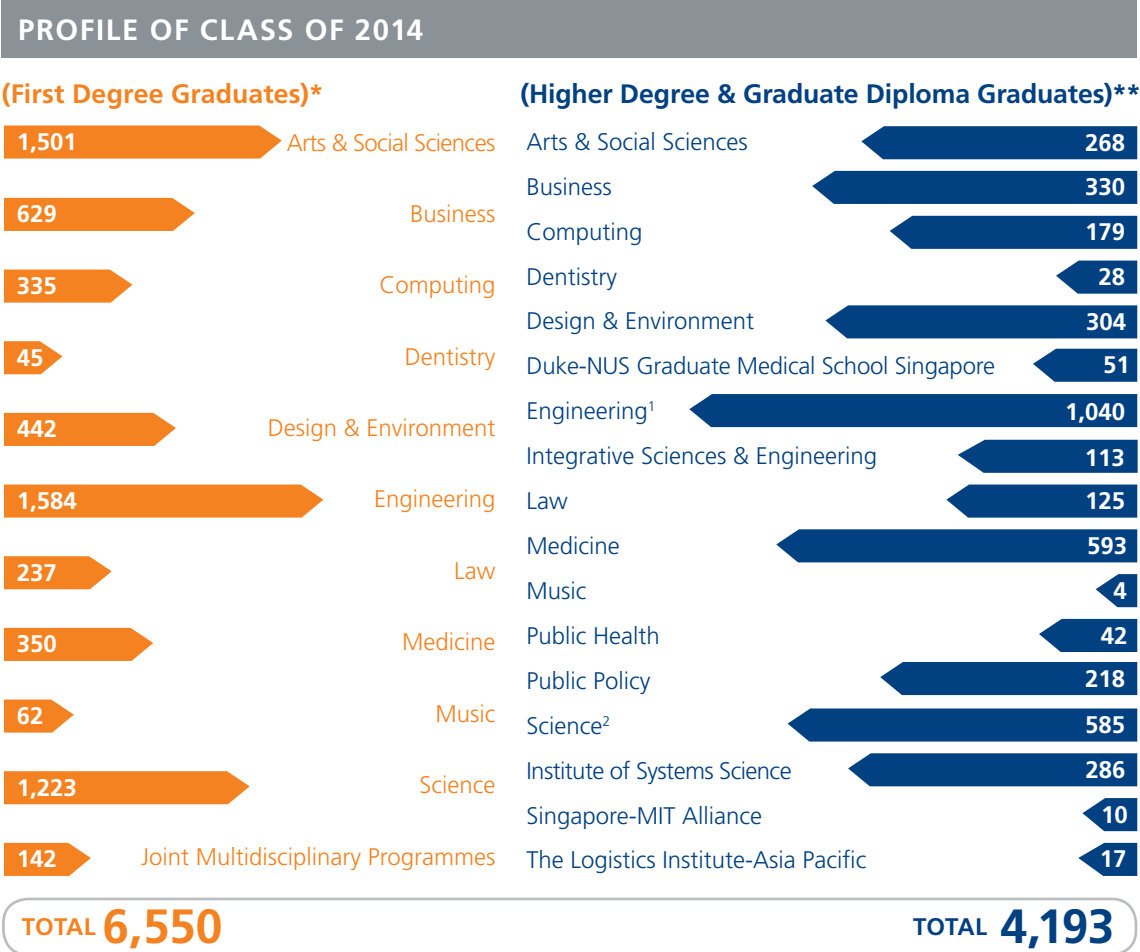


GRADUATE STUDENT ENROLMENT 2013/2014 (as at February 2014)



¹ Includes Temasek Defence Systems Institute figures
² Includes Risk Management Institute figures

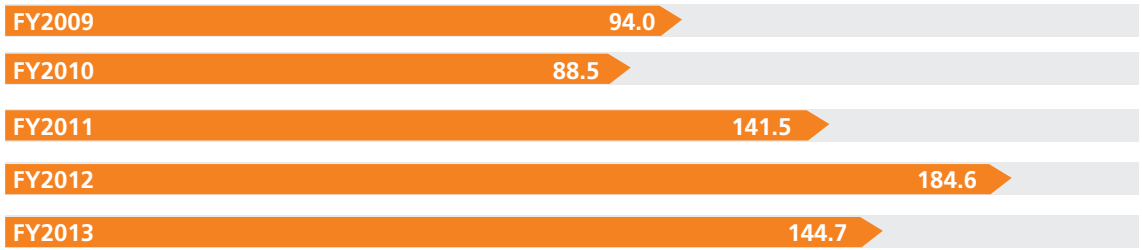
ACADEMIC YEAR IN REVIEW



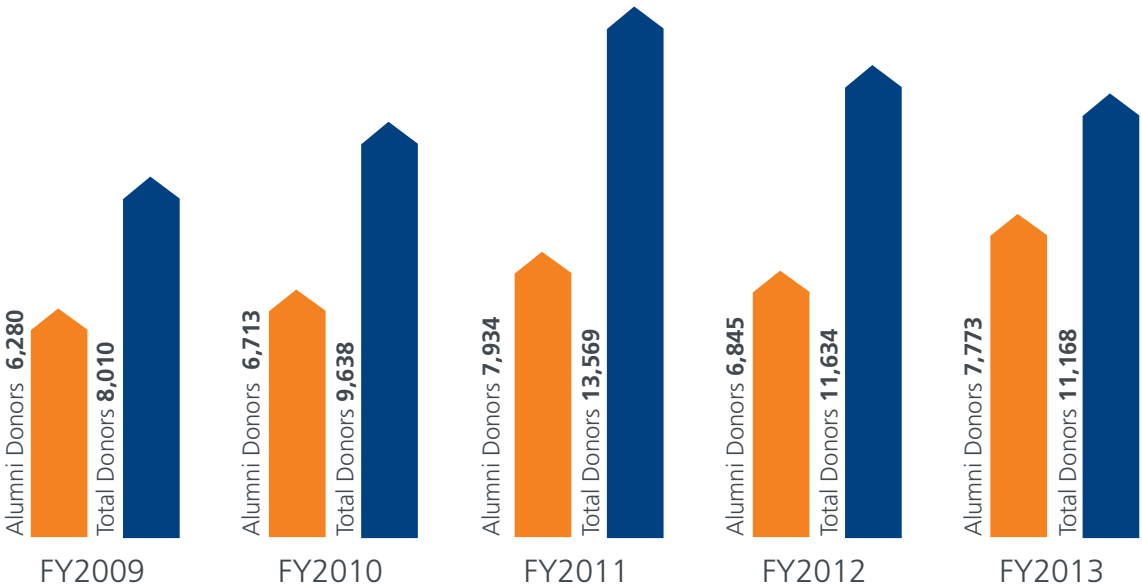
BENEFACCTIONS

The University is grateful to our 11,168 donors for their philanthropic support of S\$144,660,734 in gifts to NUS in FY2013 (1 April 2013 to 31 March 2014).

GIFT RECEIPTS (S\$ MILLION)



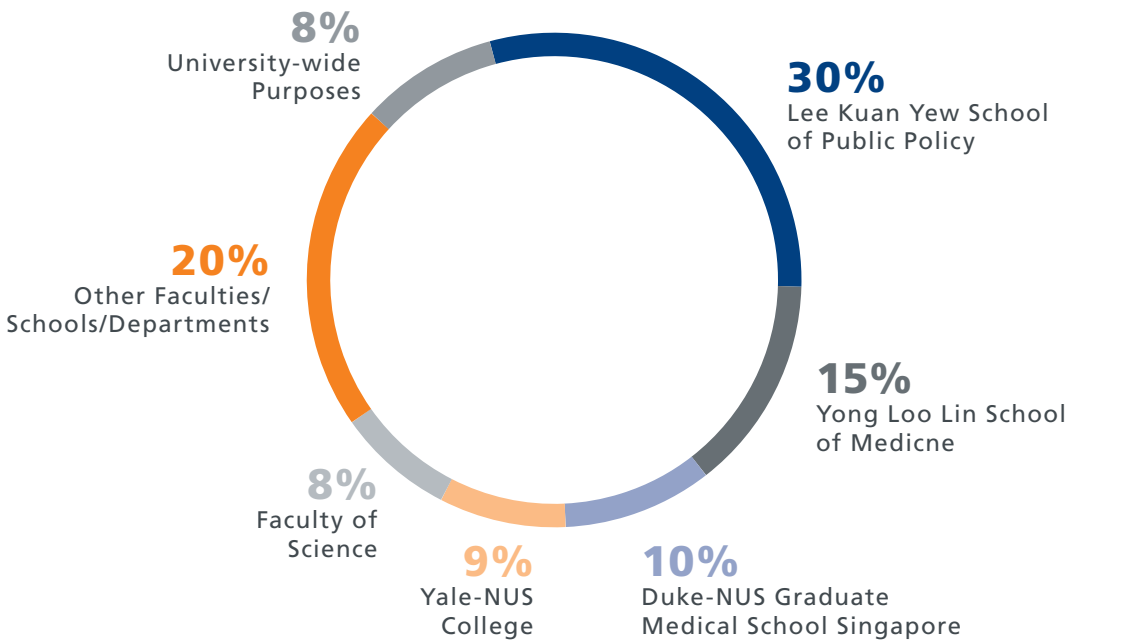
NUMBER OF DONORS



Comparative figures for alumni donors have been adjusted to conform with the presentation adopted for FY2013.

Reported figures are exclusive of unfulfilled pledges and Singapore government research grants and matching grants. At the time of publication, the figures included in the Report are unaudited numbers.

GIVING BY DESIGNATION (IN VALUE)



In Academic Year 2013,
4,566 Undergraduates
received financial support*
in the form of
2,919 Bursaries and **1,647** Scholarships

13 new named Professorships
were established in FY2013,
bringing the total number
of named Professorships to **80**

* Bursaries and scholarships funded by Annual Giving funds, gifts designated to financial aid and unrestricted endowment funds.

CORPORATE GOVERNANCE

Introduction

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

Our Governance Evaluation Checklist

In addition to the application of good governance practices as a corporate entity, we have as an institution of public character (“IPC”), adopted best practices in key areas of governance that are closely aligned to the principles enunciated 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, NUS’ Governance Evaluation Checklist can be found at the Charity Portal website www.charities.gov.sg.

Our Board of Trustees

The NUS Board of Trustees comprises 24 members appointed by the Minister for Education, and is chaired by Mr Wong Ngit Liong. Our Board of Trustees includes respected business/industry leaders, academics, entrepreneurs and professionals from the public and private sectors. Members are appointed on

the strength of their calibre, experience, stature, ability to contribute to the oversight and development of the University, as well as strategic networking relationships they bring which are of strategic importance to the University. Profiles of the Board members are found on pages 6 to 13 of the Annual Report.

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

To support the Board of Trustees in discharging its functions, Board committees have been formed as dictated by corporate, operational and business needs pursuant to the Articles of Association of the University. There are eight Board committees, namely, the Executive Committee, Audit Committee, Campus Planning and Development Committee, Entrepreneurship Committee, Investment Committee, Nominating Committee, Remuneration Committee, and Development Committee. These Board committees assist the Board of Trustees to provide oversight of the University and to facilitate decision making. Membership of the Board Committees is carefully selected to ensure an equitable distribution of responsibility among Board members and promote the effectiveness of each committee’s focus and contribution. Where necessary, non-Board members who have expertise in their respective fields are also co-opted to enhance the deliberations and decision making process of some of the Board Committees.

The present composition of the Board Committees is as follows:

Executive Committee

- Mr Wong Ngit Liong (Chairman)
- Prof Tan Chorh Chuan
- Mr Lucas Chow Wing Keung
- Mr Peter Ho Hak Ean
- Ms Kay Kuok Oon Kwong
- Mr Andrew Lim Ming-Hui
- Mr Paul Ma Kah Woh
- Mr Phillip Tan Eng Seong
- Dr Teh Kok Peng

Remuneration Committee

- Mr Wong Ngit Liong (Chairman)
- Amb Chan Heng Chee
- Mr Han Fook Kwang
- Mr Peter Ho Hak Ean
- Prof Olaf Kubler
- Mr Davinder Singh
- Mr Neo Kian Hong
- Ms Elaine Yew Wen Suen

Nominating Committee

- Mr Wong Ngit Liong (Chairman)
- Mr Michael Lien Jown Leam
- Mr Andrew Lim Ming-Hui
- Prof Saw Swee Hock
- Mr Abdullah Tarmugi
- Mr Phillip Tan Eng Seong

Development Committee

- Mr Wong Ngit Liong (Chairman)
- Prof Tan Chorh Chuan
- Mr Goh Yew Lin
- Prof Saw Swee Hock
- Mr Abdullah Tarmugi
- Dr Noeleen Heyzer
- Ms Elaine Yew
- Mr Johnny Tan (Co-opted)
- Mr Edward Lee (Co-opted)

Audit Committee

- Mr Paul Ma Kah Woh (Chairman)
- Ms Chan Chia Lin
- Dr Cheong Koon Hean
- Mr Han Fook Kwang
- Mr Davinder Singh
- Mr Phillip Tan Eng Seong
- Mr Neo Kian Hong

Entrepreneurship Committee

- Mr Lucas Chow Wing Keung (Chairman)
- Prof Tan Chorh Chuan
- Mr Hans-Dieter Bott
- Mr Han Fook Kwang
- Mr Gay Chee Cheong (Co-opted)
- Ms Yvonne Kwek (Co-opted)
- Ms Harjit Gill (Co-opted)

Investment Committee

- Mr Goh Yew Lin (Chairman)
- Prof Tan Chorh Chuan
- Ms Chan Chia Lin
- Mr Michael Lien Jown Leam
- Mr Andrew Lim Ming-Hui
- Dr Teh Kok Peng
- Mr Lee Ming San (Co-opted)
- Dr Leslie Teo (Co-opted)
- Mr George Raymond Zage III (Co-opted)

Campus Planning and Development Committee

- Mr Peter Ho Hak Ean (Chairman)
- Prof Tan Chorh Chuan
- Dr Cheong Koon Hean
- Ms Chong Siak Ching
- Prof Olaf Kubler
- Mr Raymond Woo (Co-opted)
- Mr Frven Lim (Co-opted)

Our Senior Management

Management functions and day-to-day operations of the University are led by the Senior Management of the University, headed by the President Professor Tan Chorh Chuan. The President is the University's Chief Executive Officer. Details of the management team can be found at its website nus.edu.sg.

Our Policies and Procedures to manage Conflicts of Interest

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

NUS' 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 NUS provided that the member has declared the nature of the interest to the Board of Trustees and abstains from participating in the Board's decision in respect of the transaction concerned, (b) permitting a Board member, or a firm associated with the member, to act in any professional capacity for the University and to be remunerated for professional services as if the

Board member was not a Trustee, and (c) permitting a Board member to be reimbursed for out-of-pocket expenses, travelling and other expenses properly incurred by the Board member in attending and returning from meetings of the Board of Trustees, any of its committees, or any general meeting of the University or otherwise in connection with the affairs of the University. NUS Articles' expressly stipulate that Board members shall not receive any remuneration for services rendered by them as members of the Board of Trustees.

In addition, the Board of Trustees has adopted the practice of requiring every Board member to annually review and refresh their independence by disclosing to the Nominating Committee whether there are any factors that will affect the member's independence in the decision-making process of the Board.

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

SUMMARY FINANCIAL STATEMENTS
PREPARED FROM THE
AUDITED FINANCIAL STATEMENTS

FOR THE FINANCIAL YEAR ENDED 31 MARCH 2014

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Statements of Financial Position	64	Statements of Comprehensive Income	66		
Notes to the Summary Financial Statements	67				

IMPORTANT NOTE

The Summary Financial Statements as set out on pages 64 to 70 contain only a summary of the information in the full financial statements. The Summary Financial Statements do not contain sufficient information to allow for a full understanding of the results and the state of affairs of the Group and the Company.

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

REPORT OF THE TRUSTEES

The Board of Trustees are pleased to present their report to the members together with the summary financial statements of the National University of Singapore (“the Company”) and its subsidiaries (collectively, “the Group”) which comprise statements of financial position and statements of comprehensive income of the Group and Company as of and for the financial year ended 31 March 2014.

TRUSTEES

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

Mr Wong Ngit Liong - Chairman	Mr Goh Yew Lin	Mr Paul Ma Kah Woh
Professor Tan Chorh Chuan	Mr Han Fook Kwang	Mr Neo Kian Hong
Mr Hans-Dieter Bott	Dr Noeleen Heyzer	Professor Saw Swee Hock
Ms Chan Chia Lin	Mr Peter Ho Hak Ean	Mr Davinder Singh
Ambassador Chan Heng Chee	Professor Olaf Kubler	Mr Phillip Tan Eng Seong
Dr Cheong Koon Hean	Mdm Kay Kuok Oon Kwong	Mr Abdullah Tarmugi
Ms Chong Siak Ching	Mr Michael Lien Jown Leam	Dr Teh Kok Peng
Mr Lucas Chow Wing Keung	Mr Andrew Lim Ming-Hui	Ms Elaine Yew Wen Suen <i>(Appointed 1 April 2014)</i>

ARRANGEMENTS TO ENABLE TRUSTEES TO ACQUIRE SHARES AND DEBENTURES

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

REPORT OF THE TRUSTEES

TRUSTEES’ INTERESTS IN SHARES OR DEBENTURES

As the Company is a public company 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, Cap 50.

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

TRUSTEES CONTRACTUAL BENEFITS

Since the beginning of the financial year, no Trustee has received or become entitled to receive a benefit which is required to be disclosed under Section 201(8) of the Singapore Companies Act, by reason of a contract made by the Company or a related corporation with the Trustee or with a firm of which he/she is a member or with a company in which he/she has a substantial financial interest except for salaries, bonuses and other benefits and transactions with corporations in which certain trustees have an interest as disclosed in the financial statements.

On behalf of the Trustees



MR WONG NGIT LIONG
Trustee



PROFESSOR TAN CHORH CHUAN
Trustee

18 July 2014

INDEPENDENT AUDITOR’S REPORT TO THE BOARD OF TRUSTEES OF NATIONAL UNIVERSITY OF SINGAPORE

The accompanying summary financial statements of National University of Singapore (the “Company”) and its subsidiaries (the “Group”), which comprise the statements of financial position of the Group and the Company as at 31 March 2014 and the statements of comprehensive income of the Group and the Company, and related notes, are derived from the audited financial statements of the Company and its subsidiaries for the year then ended. We expressed an unmodified audit opinion on those financial statements in our report dated 18 July 2014.

The summary financial statements do not contain all the disclosures required by the Singapore Financial Reporting Standards. Reading the summary financial statements, therefore, is not a substitute for reading the audited financial statements of the Company and its subsidiaries.

MANAGEMENT’S RESPONSIBILITY FOR THE SUMMARY FINANCIAL STATEMENTS

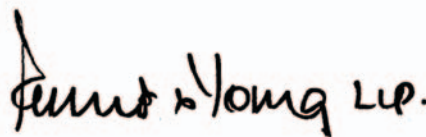
Management is responsible for the preparation of a summary of the audited financial statements derived from the annual financial statements of the Company and its subsidiaries for the year ended 31 March 2014, and be in such form and contain such information so as to be consistent with the audited financial statements.

AUDITOR’S RESPONSIBILITY

Our responsibility is to express an opinion on the summary financial statements based on our procedures, which were conducted in accordance with Singapore Standard on Auditing 810, “Engagements to Report on Summary Financial Statements”.

OPINION

In our opinion, the summary financial statements are consistent, in all material respects, with the audited financial statements and the Director’s report of the Company and its subsidiaries for the year ended 31 March 2014 from which they are derived.



Public Accountants and
Chartered Accountants

Singapore
18 July 2014

..... NATIONAL UNIVERSITY OF SINGAPORE
AND ITS SUBSIDIARIES

STATEMENTS OF FINANCIAL POSITION
AS AT 31 MARCH 2014

	GROUP		COMPANY	
	31 March	31 March	31 March	31 March
	2014	2013	2014	2013
	S\$'000	S\$'000	S\$'000	S\$'000
ACCUMULATED SURPLUS	3,333,794	3,016,455	3,259,780	2,955,813
ENDOWMENT FUNDS	2,843,069	2,577,359	2,842,657	2,576,961
FAIR VALUE RESERVE	54,566	27,955	54,556	27,945
TRANSLATION RESERVE	(38)	(43)	-	-
TOTAL EQUITY	6,231,391	5,621,726	6,156,993	5,560,719
NON-CURRENT ASSETS				
Subsidiary companies	-	-	328	226
Associated companies	33,715	24,668	500	500
Fixed assets	3,332,009	3,218,443	3,329,519	3,215,896
Intangible assets	13,174	16,874	13,136	16,736
Available-for-sale investments	87,269	58,222	82,955	53,489
Student loans (repayable after 12 months)	226,198	223,413	226,198	223,413
Long-term loan to subsidiary companies	-	-	356	356
Amounts owing by an investee company	-	53,351	-	53,351
Prepayments (to be utilised after 12 months)	599	3,853	599	3,853
Total Non-Current Assets	3,692,964	3,598,824	3,653,591	3,567,820
CURRENT ASSETS				
Student loans (repayable within 12 months)	70,622	73,618	70,622	73,618
Debtors	413,508	498,586	412,126	498,057
Consumable stores	631	632	270	244
Deposits and prepayments (to be utilised within 12 months)	111,964	81,776	111,174	81,508
Amounts owing by subsidiary companies	-	-	979	1,048
Investments at fair value through income or expenditure	5,446,205	4,531,682	5,446,214	4,531,681
Derivative financial instruments	13,845	578	13,845	578
Cash and cash equivalents	692,639	685,560	671,393	644,348
	6,749,414	5,872,432	6,726,623	5,831,082
Assets held for sale	12,500	-	12,500	-
Total Current Assets	6,761,914	5,872,432	6,739,123	5,831,082
TOTAL ASSETS	10,454,878	9,471,256	10,392,714	9,398,902

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

..... NATIONAL UNIVERSITY OF SINGAPORE
AND ITS SUBSIDIARIES

STATEMENTS OF FINANCIAL POSITION
AS AT 31 MARCH 2014

	GROUP		COMPANY	
	31 March	31 March	31 March	31 March
	2014	2013	2014	2013
	S\$'000	S\$'000	S\$'000	S\$'000
CURRENT LIABILITIES				
Creditors and accrued expenses	256,061	200,523	251,557	196,129
Provisions	72,521	68,633	71,781	68,036
Grants received in advance	373,296	313,365	367,955	307,892
Deferred tuition and other fees	61,250	59,773	61,185	59,615
Derivative financial instruments	3,995	14,171	3,995	14,171
Amounts owing to subsidiary companies	-	-	25,352	1,902
Advances from Government for student loans (due within 12 months)	69,148	70,618	69,148	70,618
Fixed rate note (due within 12 months)	250,000	-	250,000	-
Total Current Liabilities	1,086,271	727,083	1,100,973	718,363
NON-CURRENT LIABILITIES				
Advances from Government for student loans (due after 12 months)	216,949	214,153	216,949	214,153
Fixed rate note and term loan (due after 12 months)	850,000	850,000	850,000	850,000
Deferred capital grants	2,070,267	2,058,294	2,067,799	2,055,667
Total Non-Current Liabilities	3,137,216	3,122,447	3,134,748	3,119,820
TOTAL LIABILITIES	4,223,487	3,849,530	4,235,721	3,838,183
NET ASSETS	6,231,391	5,621,726	6,156,993	5,560,719

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

..... NATIONAL UNIVERSITY OF SINGAPORE
AND ITS SUBSIDIARIES

STATEMENTS OF COMPREHENSIVE INCOME
FOR THE FINANCIAL YEAR ENDED 31 MARCH 2014

	GROUP		COMPANY	
	2014	2013	2014	2013
	S\$'000	S\$'000	S\$'000	S\$'000
OPERATING INCOME				
Tuition and other related fees	388,131	344,141	383,036	339,115
Other income	254,775	257,206	250,524	253,175
	642,906	601,347	633,560	592,290
OPERATING EXPENDITURE				
Expenditure on manpower	1,100,478	1,048,505	1,078,810	1,028,638
Depreciation and amortisation expenditure	315,186	302,946	314,398	302,106
Other operating expenditure	833,568	804,515	823,988	793,896
	2,249,232	2,155,966	2,217,196	2,124,640
Operating deficit	(1,606,326)	(1,554,619)	(1,583,636)	(1,532,350)
Net investment income	274,821	235,616	271,213	235,652
Share of results (net of tax) of associated companies	9,047	3,028	-	-
Deficit before Grants	(1,322,458)	(1,315,975)	(1,312,423)	(1,296,698)
GRANTS				
Operating Grants :				
Government	1,181,790	1,172,389	1,159,941	1,148,725
Agency for Science, Technology & Research	35,592	40,750	35,592	40,750
Others	155,789	123,658	155,016	122,941
Deferred capital grants amortised	270,263	281,334	269,478	280,513
	1,643,434	1,618,131	1,620,027	1,592,929
SURPLUS FOR THE YEAR BEFORE TAX	320,976	302,156	307,604	296,231
Income tax	-	-	-	-
SURPLUS FOR THE YEAR	320,976	302,156	307,604	296,231
OTHER COMPREHENSIVE INCOME:				
Exchange differences on translating foreign operations	5	38	-	-
Change in fair value of available-for-sale investments	26,611	12,883	26,611	12,883
OTHER COMPREHENSIVE INCOME FOR THE YEAR,				
NET OF TAX	26,616	12,921	26,611	12,883
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	347,592	315,077	334,215	309,114

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

..... NATIONAL UNIVERSITY OF SINGAPORE
AND ITS SUBSIDIARIES

NOTES TO THE SUMMARY FINANCIAL STATEMENTS
FOR THE FINANCIAL YEAR ENDED 31 MARCH 2014

1. GENERAL

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

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

The consolidated financial statements of the Group and the statement of financial position, statement of comprehensive income and statement of changes in funds and reserves of the Company as of and for the year ended 31 March 2014 were authorised for issue in accordance with a resolution of the Board of Trustees on 18 July 2014.

2. SIGNIFICANT ACCOUNTING POLICIES

ADOPTION OF NEW AND REVISED STANDARDS - In the current financial year, the Group has adopted all the new and revised FRSs and Interpretations of FRS ("INT FRS") that are relevant to its operations and effective for annual periods beginning on or after 1 April 2013. The adoption of these new/revised FRSs and INT FRSs does not result in changes to the Group's and Company's accounting policies and has no material effect on the financial statements for the current or prior years.

The Group has not adopted the following standards that have been issued but are not yet effective:

Description	Effective for annual periods beginning on or after
Revised FRS 27 Separate Financial Statements	1 January 2014
Revised FRS 28 Investments in Associates and Joint Ventures	1 January 2014
FRS 110 Consolidated Financial Statements	1 January 2014
FRS 111 Joint Arrangements	1 January 2014
FRS 112 Disclosure of Interests in Other Entities	1 January 2014
Amendments to FRS 32 – Offsetting of Financial Assets and Financial Liabilities	1 January 2014
Amendments to the transition guidance of FRS 110 Consolidated Financial Statements, FRS 111 Joint Arrangements and FRS 112 Disclosure of Interests in Other Entities	1 January 2014
Amendments to FRS 110, FRS 112 and FRS 27: Investment Entities	1 January 2014
Amendments to FRS 36 Recoverable Amount Disclosures for Non-financial Assets	1 January 2014
Amendments to FRS 39 Novation of Derivatives and Continuation of Hedge Accounting	1 January 2014
Amendments to FRS 19: Defined Benefit Plans: Employee Contributions	1 July 2014
Improvements to FRSs (January 2014)	1 July 2014
Improvements to FRSs (February 2014)	1 July 2014
INT FRS 121 Levies	1 January 2014

NOTES TO THE SUMMARY FINANCIAL STATEMENTS
FOR THE FINANCIAL YEAR ENDED 31 MARCH 2014

2. SIGNIFICANT ACCOUNTING POLICIES (cont'd)

At the date of authorisation of these financial statements, the management has considered and anticipated that the adoption of the FRSs, INT FRSs and amendments to FRS that were issued but not effective until future periods will have no material impact on the financial statements of the Group and the Company in the year of their initial adoption except for:

FRS 110 Consolidated Financial Statements

FRS 110 replaces the portion of FRS 27 Consolidated and Separate Financial Statements that addresses the accounting for consolidated financial statements. It also replaces INT FRS12 Consolidation — Special Purpose Entities. FRS 110 establishes a single control model that applies to all entities including ‘special purpose entities’. The changes introduced by FRS 110 will require management to exercise significant judgement to determine which entities are controlled, and therefore required to be consolidated by a parent, compared with the requirements that were in FRS 27. This standard becomes effective for annual periods beginning on or after 1 January 2014. Management does not expect this amendment to have any significant impact on the Group’s financial position or performance.

FRS 112 Disclosure of Interests in Other Entities

FRS 112 is effective for financial periods beginning on or after 1 January 2014.

FRS 112 is a new and comprehensive standard on disclosure requirements for all forms of interests in other entities, including joint arrangements, associates, special purpose vehicles and other off balance sheet vehicles. FRS 112 requires an entity to disclose information that helps users of its financial statements to evaluate the nature and risks associated with its interests in other entities and the effects of those interests on its financial statements. The Group is currently determining the impact of the disclosure requirements. As this is a disclosure standard, it will have no impact to the financial position and financial performance of the Group when implemented in 2014.

NOTES TO THE SUMMARY FINANCIAL STATEMENTS
FOR THE FINANCIAL YEAR ENDED 31 MARCH 2014

3. RELATED PARTY TRANSACTIONS

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

The Group receives grants from the Ministry of Education (MOE) to fund its operations and is subject to certain controls set by MOE. Hence, other government-controlled enterprises are considered related parties of the Group. Many of the Group’s transactions and arrangements are with related parties and the effect of these on the basis determined between the parties is reflected in these financial statements. For related parties debtors and creditors balances, the terms of these balances are disclosed in the respective notes to the financial statements.

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

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

	GROUP		COMPANY	
	2014	2013	2014	2013
	S\$'000	S\$'000	S\$'000	S\$'000
Government-controlled enterprises and companies within the Group				
<u>Balances</u>				
Debtors	344,295	431,724	344,760	431,930
Amount owing by subsidiary companies	-	-	979	1,048
Long-term loan to subsidiary companies	-	-	356	356
Creditors and accrued expenses	960	490	960	490
Amount owing to subsidiary company	-	-	25,352	1,902
Deferred Capital Grants	2,069,776	2,073,339	2,067,799	2,070,722
Grants received in advance	373,157	312,068	367,955	307,892
<u>Transactions</u>				
Endowed donations	1,000	3,045	1,000	3,045
Non-endowed donations	8,781	22,349	8,781	22,349
Other income	22,153	20,783	23,111	22,072
Other operating expenditure	53,296	48,937	57,234	51,930
Operating/capital grants received	1,704,361	1,624,697	1,681,114	1,601,009

NOTES TO THE SUMMARY FINANCIAL STATEMENTS
FOR THE FINANCIAL YEAR ENDED 31 MARCH 2014

3. RELATED PARTIES TRANSACTIONS (cont'd)

	GROUP		COMPANY	
	2014	2013	2014	2013
	S\$'000	S\$'000	S\$'000	S\$'000
Corporations in which trustees have the ability to control or exercise significant influence (including donations received from trustees)				
<u>Balances</u>				
Debtors	27	43	27	43
Creditors and accrued expenses	1	1	1	1
<u>Transactions</u>				
Endowed donations	2,383	4,471	2,383	4,471
Non-endowed donations	2,767	104	2,767	104
Other income	219	246	219	246
Other operating expenditure	1,223	877	1,223	877
Operating/capital grants received	16	-	16	-

4. KEY MANAGEMENT PERSONNEL COMPENSATION

The compensation for nineteen (2013: twenty) key management personnel (includes the remuneration of an executive trustee) are as follows:

	GROUP AND COMPANY	
	2014	2013
	WS\$'000	S\$'000
Short-term benefits	14,642	12,183
Post-employment benefits	299	273
	14,941	12,456



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