

NATIONAL RESEARCH FOUNDATION

PRESS RELEASE

28 July 2009

NRF ANNOUNCES REAPPOINTMENT OF DR TONY TAN AS CHAIRMAN, APPOINTMENT OF DPM TEO AS DEPUTY CHAIRMAN FOR ITS NEW BOARD AND LAUNCHES THE CONSTRUCTION PHASE OF CREATE

- *Dr Tony Tan reappointed Chairman of NRF Board; DPM Teo Chee Hean appointed Deputy Chairman*
- *The construction of the Campus for Research Excellence And Technological Enterprise (CREATE) facility underscores the strong commitment of the Government to establish Singapore as a vibrant global hub for R&D*
- *CREATE will house the Singapore-MIT Alliance for Research and Technology (SMART) Centre, research labs of Israeli universities and other top institutions*
- *CREATE has been designed to maximize the use of environmental sustainability technologies in the tropics*

1. The National Research Foundation (NRF) announced today the reappointment of Dr Tony Tan and the appointment of Deputy Prime Minister and Minister for Defence Teo Chee Hean as the Chairman and Deputy Chairman of the NRF Board, respectively (See **Annex A** for a list of NRF Board members). At the first meeting of the new Board, the NRF also launched the commencement of the construction phase of the Campus for Research Excellence And Technological Enterprise (CREATE).

2. The concept of CREATE was approved by the Research, Innovation and Enterprise Council (RIEC) chaired by the Prime Minister in its inaugural meeting in July 2006. Prime Minister Lee Hsien Loong subsequently announced that S\$360 million had been set aside for the design and construction of the CREATE campus, at the third RIEC meeting in March 2008.

3. Located at the southern end of the National University of Singapore's (NUS) new University Town at the former Warren golf course, this research facility, to be completed in 2011, will be home to research centres from some of the best research universities in the world. Scientists from these foreign universities will collaborate with local researchers in these centres to undertake multi-disciplinary cutting-edge research in areas that are aligned to Singapore's

strategic interests. The establishment of CREATE underscores the Government's strong commitment to invest in research infrastructure and capabilities that will catalyse the transformation of Singapore's economy into one that is based on knowledge and innovation.

4. With a gross floor area of over 60,000 m², CREATE is expected to house 1,000 researchers at steady state, with additional research talent coming through Singapore to work with the best minds from all over the world. The concentration of top scientists doing cutting edge research in CREATE will excite local research talent and attract more foreign researchers to Singapore, making Singapore a global R&D hub that assembles the best research minds from diverse cultures and backgrounds worldwide.

5. The Massachusetts Institute of Technology (MIT) became the first university to establish a CREATE centre in July 2007. The Singapore-MIT Alliance for Research and Technology (SMART) Centre now has three interdisciplinary research groups housed in temporary premises at NUS. These three groups in total involve 37 Principal Investigators from MIT working alongside 66 researchers from Singapore's research community, together with about 60 post-doctoral fellows and a similar number of research students. The Technion-Israel Institute of Technology, recently signed an agreement to be part of CREATE and would set up a laboratory in Singapore in partnership with NUS and NTU. These research centres would be relocated to the CREATE facility when it is expected to be completed in July 2011. Other top universities are in discussion with NRF on their intentions to set up similar centres.

6. NRF Chairman Dr Tony Tan said: "We are on the right track to build up Singapore's capabilities for cutting-edge R&D, and to establish Singapore in the premier league of global research. Today's event underscores the importance the Government places on the need for continuing investments in R&D, to develop capabilities that will keep our economy competitive in the long term. I look forward to seeing research breakthroughs and disruptive innovations come out of CREATE that will have great economic and societal impact."

7. MIT President Susan Hockfield said: "As Singapore pursues its bold vision to become a hub for global research excellence, MIT is honoured to have been the first to establish a research centre at CREATE. Outside of Massachusetts, the SMART Centre is MIT's largest research endeavour, involving a very significant cross-section of our faculty. Given our long and productive working relationship with Singapore, I am confident that SMART will emerge as a world-class interdisciplinary research centre, integrating research, graduate training and innovation."

8. Planning for the CREATE campus was carried out by the CREATE Master Planning and Development Committee chaired by NRF Advisor Prof Lui Pao Chuen. The Committee tapped on the expertise of multiple agencies such as

Jurong Town Corporation (JTC), A*STAR, Economic Development Board (EDB) and Building & Construction Authority (BCA) (see **Annex B** for the list of committee members). The CREATE campus is designed to maximize interaction and collaboration among the multi-cultural and multi-disciplinary research community it serves. Laboratories are designed to be easily set up and re-configured for maximum flexibility. Researchers from different organizations working in the same research areas are grouped together according to research themes to enable free exchange of ideas and promote greater collaboration. Environmentally-friendly design concepts to introduce maximum daylight and reduce the need for artificial lighting have been incorporated into its design. The use of photovoltaic panels on the building would reduce energy consumption as well as provide testbeds for solar technology research. More details are provided in **Annex C**.

The National Research Foundation (NRF)

The National Research Foundation (NRF), set up on 1 January 2006, is a department within the Prime Minister's Office.

The NRF sets the national direction for research and development (R&D) by developing policies, plans and strategies for research, innovation and enterprise, funds strategic initiatives, builds up R&D capabilities and capacities through nurturing our own and attracting foreign talent, and coordinates the research agenda of different agencies to transform Singapore into a knowledge-intensive, innovative and entrepreneurial economy. It provides secretariat support to the Research, Innovation and Enterprise Council (RIEC), chaired by the Prime Minister. A five-year budget of S\$5 billion has been allocated to the NRF in 2006 to achieve this mission.

The NRF aims to:

- Transform Singapore into a vibrant R&D hub that contributes towards a knowledge-intensive, innovative and entrepreneurial economy; and
- Make Singapore a talent magnet for scientific and innovation excellence.

For more information, please visit www.nrf.gov.sg.

For media queries, please contact:

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Composition of the NRF Board

Term of office: 1 July 2009 – 30 June 2011

Chairman:

Dr Tony Tan

Deputy Chairman:

Mr Teo Chee Hean Deputy Prime Minister and Minister (Defence)

Members:

Mr Lim Hng Kiang Minister (Trade & Industry)

Mr Tharman Shanmugaratnam Minister (Finance)

Dr Ng Eng Hen Minister (Education) and 2nd Minister (Defence)

RAdm (NS) Lui Tuck Yew Acting Minister (Information, Communications and the Arts)

Mr S Iswaran Senior Minister of State (Trade & Industry, and Education)

Mr Teo Ming Kian Permanent Secretary (National Research and Development, and Finance)

Dr Tan Kim Siew Permanent Secretary (Defence Development)

Ms Yong Ying-I Permanent Secretary (Health)

Mrs Tan Ching Yee Permanent Secretary (Education)

Mr Ravi Menon 2nd Permanent Secretary (Trade & Industry)

Mr Peter Ong Permanent Secretary (Trade & Industry) and 2nd Permanent Secretary (Finance)

Mr Leo Yip Chairman, Economic Development Board

Mr Lim Chuan Poh Chairman, Agency for Science, Technology And Research

Prof Tan Chorh Chuan President, National University of Singapore

Prof Su Guaning President, Nanyang Technological University

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| Prof Howard Hunter | President, Singapore Management University |
| Prof Robert Brown | Chairman, Academic Research Council, Ministry of Education (also President, Boston University) |
| Prof Satkunanantham | Director of Medical Services, Ministry of Health |
| Dr Andrew Ouderkirk | 3M Corporate Scientist |
| Mr Ong Peng Tsin | Chairman, InfoComm Investment Pte Ltd |
| Mr Frederic Vasnier | Senior Vice President Telecom, Gemalto |

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Annex B

CREATE Master Planning and Development Committee

Chairman:

Prof Lui Pao Chuen Advisor to NRF

Deputy Chairman:

Prof Yong Kwet Yew Vice President (Campus Infrastructure), NUS

Members:

Ms Bernadette Foong Deputy Executive Director, Science & Engineering Research Council (SERC), A*STAR

Prof Bertil Andersson Provost, Nanyang Technological University

Prof Gerhard Schmitt Vice President (Planning and Logistics), ETH Zurich

Mr Heng Chye Kiang Professor (Architecture), NUS

Mr Joseph Mullinix Deputy President (Administration), NUS

Ms Lina Lim Director, Transport Planning, Land Transport Authority

Mr Manohar Khiatani Deputy Managing Director, EDB

Dr Michael Khor Director (Projects), NRF

Mr Ong See Ho Deputy CEO (Building Control), BCA

BG (NS) Philip Su Assistant CEO, JTC

Prof Rohan Abeyaratne Director, SMART

Mr Simon Ong Deputy Chief Executive (Land Operations Group), Singapore Land Authority

Mr Wong Toon Suan Assistant Executive Director, Environment & Water Industry Development Council, Ministry of the Environment and Water Resources

Update of CREATE

Aim

1. The Campus for Research Excellence And Technological Enterprise (CREATE) aims to be a world-class research facility in a tropical garden setting. Co-located with NUS' University Town at the former Warren golf course, CREATE will host research centres which will undertake cutting-edge research in areas that are aligned to Singapore's strategic interest and those of the research institutions.

Design of CREATE

2. The CREATE building complex is designed with the following considerations:

(a) Maximizing environmental sustainability technologies in the tropics

CREATE will maximize the use of environmental sustainability and energy efficient technologies in buildings in the tropics. The laboratory core spaces and corridors will be located at the perimeter to introduce maximum daylight and reduce the need for artificial lighting significantly. The dependence on municipal water will be reduced by the collection, storage, and treatment and re-use of rainwater and grey water from showers and lavatories. The use of photovoltaic panels on the building is also being explored and provides an opportunity for the test bedding of the latest solar technologies.

(b) Strong interaction & collaboration

The campus will house a multi-cultural and multi-disciplinary research community. CREATE will be designed to maximize the interaction among these diverse individuals.

(c) Flexible Configuration

CREATE laboratories would be built with flexibility to cater to the different needs of researchers. Laboratories would be reconfigured quickly in response to the dynamic requirements and varied needs of the research groups.

(d) *Magnet for global research talent*

Through the presence of world class research universities and research facilities, and the proximity of the National University of Singapore, the Science Parks and the One-North developments of Biopolis and Fusionopolis, CREATE will be a magnet for attracting scientific talent from all over the world.

SINGAPORE–MIT ALLIANCE FOR RESEARCH AND TECHNOLOGY (SMART) CENTER

3. The SMART Center is the first CREATE entity as well as MIT's first such research centre outside its home campus in Cambridge, Massachusetts. It also holds the distinction of being MIT's largest international research endeavor ever.
4. The SMART Center will serve as an intellectual hub for interactions between MIT and global researchers in Singapore at exciting frontier areas of science and technology. The SMART Center will house a continuous cohort of MIT professors, post-doctoral fellows and PhD students working side by side with researchers from other institutions in the SMART Center. At steady state, the Center plans to house five interdisciplinary research groups. There are currently three such research groups, namely the Infectious Disease Inter-disciplinary Research Group (IRG), The Center for Environmental Sensing and Modeling (CENSAM) IRG and The BioSystems and Micromechanics (BioSyM) IRG.

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Annex C



Figure 1: Aerial View of CREATE



Figure 2: View South from University Town Green



Figure 3: View North from Bus Stop



Figure 4: View under CREATE Canopy