

PRESS RELEASE

09 September 2009

CONSTRUCTION TENDER TO BUILD NRF'S R&D CAMPUS AT UNIVERSITY TOWN AWARDED

- *Obayashi Corporation awarded the main construction tender to build NRF's Campus for Research Excellence And Technological Enterprise (CREATE) facility*
- *Scheduled to complete in 2011, CREATE will feature advanced environmental sustainable technologies and house the Singapore-MIT Alliance on Research and Technology (SMART) Centre, and several internationally renowned research universities from USA, Europe and Israel*

1. The National Research Foundation (NRF) announced today the award of the main construction tender of the Campus for Research Excellence And Technological Enterprise (CREATE) building project to leading global construction firm Obayashi Corporation.

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

3. 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. When completed in 2011, CREATE will be home to research centres from some of the best research universities in the world. Scientists from these renowned universities will collaborate with local researchers in these centres to conduct multi-disciplinary cutting-edge research in areas that are aligned to Singapore's strategic interests.

5. Located at the southern end of the new National University of Singapore (NUS) University Town (former site of the Warren Golf Course), CREATE will have a gross floor area of over 60,000 m² 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 researchers 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.

6. The Massachusetts Institute of Technology (MIT) became the first university to establish a CREATE centre in July 2007. The Singapore-MIT Alliance for Research & Technology (SMART) Centre now has 3 inter-disciplinary research groups housed in temporary premises at NUS. The 3 groups in total involved 36 principal investigators from MIT working alongside 67 researchers from Singapore's research community, together with about 69 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 that is completed in 2011. Other top research universities are in discussion with NRF on their intentions to set up similar centres.

7. Chairman of the CREATE Master Planning and Development Committee (MPDC) and NRF Advisor Prof Lui Pao Chuen said: "The award to Obayashi is a major milestone for the creation of CREATE. NRF is confident that Obayashi will be able to convert the dreams and aspirations of the CREATE Master Planning and Development Committee into reality."

8. Mr Nakamura, General Manager of Obayashi Corporation, Singapore Office said: "We are deeply honoured to be awarded this important project, which will be a landmark building for Singapore's R&D drive. We look forward to applying our innovative building technologies to deliver a world-class building befitting the aspiration of NRF to make CREATE a truly global research campus"

9. 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.

10. 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. The water features of

this campus will reflect the water conservation and water recycling elements that formed an integral part of Singapore's drive in clean water technology. More details are provided in **ANNEX A**.

11. Obayashi Corporation is known for its innovative technologies in building structures, bridges and tunnels. It has several notable projects in Singapore such as the MRT North-East Line Dhoby Ghaut Station, SIA Building and the Esplanade Bridge (see **ANNEX B** for more details).

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.

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Update on 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) Pioneering environmental sustainability technologies in the tropics

CREATE will pioneer 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 ON 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.

ANNEX A



Figure 1: Aerial View of CREATE



Figure 2: View from East



Figure 3: View from North



Figure 4: View of Town Centre

BRIEF INFORMATION ON OBAYASHI CORPORATION

Obayashi Corporation is one of Japan's leading construction groups, and is also a leading player on the global construction market, known for its innovative technologies for building structures.

Its notable works in Singapore include the MRT North-East Line Dhoby Ghaut Station and other landmark projects such as SIA Building and the Esplanade Bridge. The reclamation project at Changi East Phase 1A and the Changi International Airport Air Traffic Control Tower were among the first few prominent projects that Obayashi Corporation completed in Singapore.

The company's Technical Research Institute in Tokyo has the most advanced experimental facilities and the company is the leading developer of its own range of building and civil engineering innovative technologies, such as tunneling and anti-seismic technologies. The company also continued its tradition of developing innovative building technologies, such as a new base isolation system offering shock resistance for buildings, a wide range of proven environmental technologies and energy-saving building technologies.