

**Speech by NUS President Prof Tan Chorh Chuan
at the launch of NUS-GE Singapore Water Technology Centre
22 June 2009, 3 pm, T-Lab Building, Level 10**

Dr Tony Tan, Chairman, National Research Foundation

Mr Heiner Markhoff, CEO & President, GE Water & Process Technologies

Distinguished Guests

Ladies & Gentlemen

Good afternoon.

1. Welcome to the National University of Singapore and to the launch of the NUS-GE Singapore Water Technology Centre. I am pleased that we are able to hold this event in our new NUS T-Lab Building, which will be officially opened next year, after all the research units have fully moved in. As this building is new, permit me to introduce it to you. The T-Lab Building is a joint development project between the University and the Defence Science and Technology Agency (DSTA). It stands as a testimony to the close collaboration between NUS and DSTA and Ministry of Defence, and the long-term commitment of both parties towards this relationship. This building has 24,500m² of space and comprises two wings. One wing houses the Temasek Laboratories, a university-level research institute of NUS undertaking research on defence science and technology. The other wing will house other research programmes, including the NUS-GE Singapore Water Technology Centre which will be on Level 6 of this wing. As you can see, this building is designed to facilitate a vibrant environment

conducive to innovative R&D, that promotes interactions between researchers from different labs which we hope will spark many new ideas and collaborations.

2. The presence of the NUS-GE Singapore Water Technology Centre in this building provides many exciting opportunities for rich interactions between NUS faculty and students, and world-class researchers in the Centre. The R&D focus of the Centre is also a critical one – Water.

3. Most of us would be familiar with the famous line from Coleridge: “Water, water, everywhere, Nor any drop to drink”. While there are very few ancient mariners left today, the challenge of water sufficiency is unfortunately still with us and rapidly growing more severe.

4. The fundamental issue is that water consumption and demand are still rising quickly, even as water quality continues to deteriorate in many parts of the world. This problem is exacerbated by several factors. The rapid growth of large cities, particularly in Asia, will stress the systems that provide safe drinking water. Meanwhile, the challenges of providing potable water in rural areas remain. The presence of existing and new types of contaminants is of increasing concern as water reuse and recycling are expanded. As the ancient mariner observed, there is plenty of water around in the oceans, but the costs of desalination are high and require innovations in energy and membrane systems. Global climate change will have a varied but generally negative impact on water resources.

5. Against this somewhat gloomy backdrop, there are many bright spots of opportunity. The launch of the NUS-GE Singapore Water Technology Centre will enable us to pursue several of the most promising ones. I am particularly excited about the centre for 3 reasons.

6. First, NUS is pleased to forge the partnership with General Electric Company to establish a world-class R&D water centre on the NUS campus. GE is a leading provider of innovative water solutions for the world, through its GE Water and Process Technologies (GEWPT) business. This unique Industry-University Alliance will provide outstanding opportunities for NUS faculty and students to work closely with a global leader in water science and technology. It will help enhance and expand R&D capabilities in NUS, and the rest of Singapore.

7. Second, the problems that we are addressing are ones that are critical for humanity. If our R&D efforts are successful, we will contribute to improving the lives and health of countless people, while supporting sustainable industrial growth. In this spirit, we challenge this alliance and its research teams to provide innovative solutions to the most important water issues in Singapore, Asia and the rest of the world.

8. The NUS-GE Singapore Water Technology Centre will house GE scientists and engineers in “GE @ NUS” facilities and, with NUS colleagues, will develop innovations for low-energy seawater desalination systems, water reclamation systems, innovative analytical sensors and monitoring systems. We look to expanded capabilities and opportunities in the science and technology of membrane separations, pathogenic and persistent-organic compound threats in water systems, advanced sensor systems, ultrapure-water innovations and advanced water-reclamation processes. Through this collaboration, we hope to increase the critical mass of first-rate researchers who are leaders in their field, and who will serve as magnets, attracting the bright young minds. I also envisage that the Centre will provide an added impetus and platform for NUS faculty and students to develop novel applications from their fundamental research, to contribute to enhancements in water quality and water resources.

9. Third, I see this Centre as making a significant contribution to enhancing Singapore’s role as a water R&D hub. As a small island with limited water resources, Singapore has been very proactive in addressing the challenge of water scarcity. The lessons that we have learnt may be useful to others, particularly those countries which are urbanizing rapidly.

10. I would like to close by expressing our special thanks to our guest-of-honour, Dr Tony Tan, Chairman of the National Research Foundation. Under his visionary leadership, the National Research Foundation very early on, identified water as one of its major research priorities. Dr Tan was also among the first to identify the need to strengthen the nexus between knowledge institutions and industries as one of Singapore's long-term economic strategies. In line with this vision, this synergistic partnership between NUS and GE will strive to elevate the development of water and environment technology to a higher plane.

11. Finally, I would like to extend a very warm welcome to the leaders and colleagues from GE Energy Infrastructure and GE Water & Process Technologies. We welcome you as partners, collaborators, fellow researchers, intellectual sparring partners, and as part of the wider NUS and Singapore community. On this note, I want to thank Mr Markhoff and Dr Steven Kloos for their strong leadership and support for this partnership.

12. Welcome to the NUS-GE Singapore Water Technology Centre!

Thank you.