

Keynote Speech By

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*Time: 15 minutes*

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Mr S.S. Teo, Chairman of the SMI Board and Governing Council,

Distinguished guests from the maritime & offshore industry,

Fellow professors, lecturers and researchers,

Ladies and Gentlemen,

Good morning!

I am pleased that NTU has the privilege to jointly host the leaders of the maritime and offshore industry together with our distinguished guests at today's Singapore Maritime Institute Forum 2012.

## **Enhancing maritime education to anticipate future needs**

The maritime sector is one of Singapore's key industries, as we are the world's busiest port when it comes to shipping tonnage and container output. We are also the leader in building off-shore oil rigs, having 70 per cent of the world's market share. With the maritime and offshore industry contributing about 7 per cent to Singapore's GDP and employing over 150,000 people, it is imperative that we support growing industry and reinforce Singapore's position as a maritime hub through continued higher education.

## **A history of maritime education in NTU**

Given the importance of Singapore's maritime sector, let us now take a look at NTU's own efforts in maritime education. In 2003, NTU was endowed with S\$4 million by the Maritime and Port Authority of Singapore to establish the MPA Professorship in Shipping Management. This was further supported by a seed funding of about S\$3.5 million by MPA to launch the Bachelor and Master of Science in Maritime Studies in NTU. Jointly conducted with the BI Norwegian Business School, the programme aims to build up the pool of professionals in shipping and

related business, to help boost Singapore's position as a centre of excellence for shipping business, research & development.

I am heartened by the success of this programme. It continues to attract high quality applicants each year. As a result of strong demand, the intake of the Bachelor of Science in Maritime Studies will increase from 60 to 75 students next year. The industry's support of this programme and the high employment of our graduates is a testament to its quality. Riding on its success, the Master of Science in Maritime Studies secured additional funding in 2009. This allowed the programme to offer more tuition subsidies and to host prominent visiting professors from international universities. Today, more than 600 students have graduated with a Bachelor or Master of Science in Maritime Studies and are part of a vibrant workforce in this sector.

NTU is also systematically enhancing our capabilities in naval architecture and marine engineering. This is underpinned by a S\$6.25 million grant from Singapore's Economic Development Board (EDB) to NTU to drive research and education in these areas. The recently launched Master of Science in Mechanical Engineering, with specialisation in Naval Architecture and Marine Engineering, is well received by the industry. Leveraging on NTU's extensive global network,

we also launched a joint NTU-University of Southampton PhD scholarship for maritime-related research earlier this year.

We continue to see strong interest in the maritime & offshore programmes offered by NTU. The development and refinement of both our undergraduate and master specialisations under the key engineering tracks in civil, electrical and mechanical will continue to provide the necessary manpower skills needed by the industry.

As Singapore and the industry moves towards a more knowledge-intensive, knowledge-driven economy, it is critical that the maritime education curriculum is constantly reviewed and revised to meet the changing needs of the industry. For example, with rising energy costs and the use of more advanced electrical systems and equipment, there is a looming need for cryogenic expertise to handle LNG and power engineering expertise to handle sophisticated electrical or hybrid vessels.

### **NTU's Five Peaks of Excellence**

The needs of the industry and challenges faced by today's society are complex and multi-disciplinary. Education should likewise expose students to concepts and knowledge that are multi-disciplinary and should provide good opportunities for students to learn beyond their core curriculum and work with their counterparts in other fields of specialisation to solve real-world issues.

NTU's Five Peaks of Excellence, areas of research expertise where the university seeks to make its global mark, aims to address such multi-disciplinary needs of industry. For example, to tackle and meet energy and emission standards as well as water challenges in the industry, NTU's deep expertise in sustainability allows our scientists to play an active role to educate and train manpower to develop industrial solutions led by our research institutes such as the Energy Research Institute @ NTU (ERI@N) and the Nanyang Environment & Water Research Institute (NEWRI).

### **Tapping education & training resources in Singapore**

Beyond NTU, there are other key educational institutions supporting the maritime & offshore industry such as National University of Singapore, Singapore Polytechnic and Ngee Ann Polytechnic. Together, we create

a vibrant maritime & offshore education landscape covering a wide spectrum of expertise. This ranges from engineering to finance, economics and business to law, at various levels such as diploma, degree and post-graduate.

In 2009, the Third MPA R&D Advisory Panel proposed the creation of a global maritime knowledge hub as one of the strategies for Singapore to retain and extend our competitive edge. The provision and availability of relevant education and training programmes forms an important component and foundation of such a knowledge hub.

All of the above efforts will not bear fruit if they are not deployed correctly or exploited fully. It is important that the industry continues to tap on and make use of these resources by employing our graduates who are equipped with specialised knowledge and also by regularly sending their staff to upgrade their skills.

Towards this end, MPA has set up a Maritime Cluster Fund (MCF) in 2002, which helps to facilitate the growth of the maritime cluster in Singapore. To encourage maritime companies to invest in the development of expertise through industrial attachment, the MCF will provide a monthly top-up allowance to undergraduates who take up an

internship in maritime entities. By creating awareness of what a maritime career can offer to undergraduates, this will help ensure a consistent supply of manpower to the industry.

For executives currently in the industry, MCF provides co-funding support for them to take up approved certifiable programmes such as the MSc in Maritime Studies. By upgrading their skill sets to improve competency and productivity, it serves as an important second component towards building a knowledge hub.

Through such schemes, it would be ideal if the industry could subsequently allow these graduates to contribute back through academia-industry exchange platforms such as teaching, guest lecturing or joint research work. This forms the final component of the knowledge hub and creates a sustainable virtuous knowledge exchange cycle.

Beyond our shores, we can also observe and learn from other similar international maritime and offshore knowledge hubs such as those in Oslo, London, Houston and even Brazil. We should compare and benchmark ourselves against as well as learn from them.

## **Conclusion**

I believe that Singapore will benefit from a coordinated effort to strengthen our maritime education programmes. But for us to succeed, it will be important for all stakeholders to participate pro-actively so that we can jointly make the leap forward. The results may not be immediate or visible in the short-term, so it falls on the industry to share your experience with us and continue to have the foresight to invest in your people.

One of the roles of the SMI is to look into maritime education and training, which primarily caters for R&D projects. Such efforts will also help Singapore meet the manpower needs of a knowledge-intensive industry. As the Provost of NTU and a member of the SMI Governing Council, I look forward to working closely with the industry to develop and deliver a complete global maritime & offshore knowledge hub in Singapore.

Thank you.