





MEDIA RELEASE

TECHNICAL UNIVERSITY OF MUNICH, TECHNICAL UNIVERSITY OF MUNICH ASIA, SINGAPORE POLYTECHNIC AND ST KINETICS EXTEND COMPOSITE RESEARCH PARTNERSHIP TO THE INDUSTRY

9 other local and international companies sign memorandum of understanding to promote composite technology

Singapore, 27th March 2013 – Technical University of Munich (TUM), German Institute of Science and Technology – TUM Asia (TUM Asia), Singapore Polytechnic and ST Kinetics signed a Memorandum of Understanding with 9 other local and international companies to promote composite technology through the following avenues:

- a) Technology development and demonstration
- b) Education and training
- c) Services for industrial projects
- d) Entrepreneurship

The need for high performance and efficient composite materials are evident in the increasing use of fiberglass and carbon fiber in various industries. In key economic sectors such as construction and manufacturing which contributed 4 % and 21% respectively to Singapore's GDP in 2012, light weight components and material systems that combine a high specific performance and corrosion resistance are essential to improve productivity and efficiency.

Therefore, the collaboration aims to build a sustainable composite technology resource model that will support local small and medium enterprises as well as startup companies with the necessary resources to develop and build composite materials in accordance to their individual industry needs.

The four founding members, TUM, TUM Asia, Singapore Polytechnic and ST Kinetics will drive this initiative along with other participating companies through efforts in the 4 key areas of technology transfer, workforce development, technology demonstration and promotion, and services.

As a founding academic institution of this initiative offering technology expertise and knowledge transfer, Professor Liqiu Meng, Senior Vice President for International Alliances and Alumni, TUM says, "Carbon Composites and Fibers are seen worldwide as an outstanding technology with a tremendous impact in engineering, construction, and mobility. Bavaria and TUM have over the last years invested considerably in research, development, training in this new technology, making both, Bavaria and TUM, first movers internationally in this breathtaking new area.

"TUM Asia is excited to spearhead this project with TUM's experience in technology transfer" said Dr. Wächter. "We have been successful in leveraging on our parent university's success in applied science research to deliver relevant industry focused programmes to students here in Singapore. The initiative to look into composite technology research demonstrates our commitment to continually contribute to Singapore's industries through science and technology".

With composite technologies at a turning point, marked by widespread adoption in the aerospace industry and high-volume production breakthroughs in the automotive industry, this extensive partnership established among companies across various industries comes at an opportune timing, as the Singapore government seeks to focus on research and development to upgrade and upskill companies for increasing productivity and global exposure. The development of high-tech capabilities and skills will enable companies to achieve product innovation and reach additional markets.

Singapore Polytechnic and ST Kinetics will play an important role in this project. A composite technology laboratory has been setup within the premises of Singapore Polytechnic to leverage on the training and development skills of its staff to equip the workforce with the know-hows in the latest composite technology. "This new initiative reinforces SP as one of the frontrunners in the field of application engineering. As a result of the collaboration between TUM, TUM Asia and ST Kinetics, we are able to gear our engineering curriculums towards the latest composite technological developments. This empowers our graduating students with the skills and knowledge to contribute to a future workforce that will see an increase in the utilization of composite technologies," said Mr. Tan Choon Shian, Principal and CEO, Singapore Polytechnic.

Such a facility will also offer participating companies options for workforce development and opportunities to expose themselves to high performance technology demonstrations that will be led by experienced educators and engineers from Singapore Polytechnic and ST Kinetics.

"ST Kinetics is pleased to collaborate with TUM, TUM Asia, Singapore Polytechnic, and other local and overseas partners in the development of composite technology and its applications in Singapore. We are committed to contributing our engineering capabilities, culminated from years of experience and innovation, towards establishing Singapore as a composite technology hub," said Mr. Sew Chee Jhuen, President, ST Kinetics.

The MOU signing ceremony was witnessed by State Minister of the Bavarian State Ministry of Sciences, Dr. Wolfgang Heubisch, Senior Parliamentary Secretary, Ministry of Communications and Information & Ministry of Education, Ms. Sim Ann, the Ambassador of the Federal Republic of Germany to Singapore, Her Excellency Angelika Viets and Professor Liqiu Meng, Senior Vice President for International Alliances and Alumni, TUM.

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About TUM Asia

As the first German academic venture abroad, TUM Asia opened its doors in Singapore in 2002. German in its roots and Asian in its approach, TUM Asia combines an emphasis on industry readiness and innovation with a distinct dedication to be relevant to Asia and its development. TUM Asia has seen more than 300 global graduates come through its Master programmes, including graduates from Asia and Europe.

TUM Asia currently offers five Master of Science programmes. The Industrial Chemistry, Integrated Circuit Design, Microelectronics and Aerospace Engineering programmes are jointly offered with Nanyang Technological University (NTU) or National University of Singapore (NUS) – two of Asia's top universities – while the Transport and Logistics programme is offered exclusively by TUM Asia. Our international faculty hail from Germany and more, and their wealth of knowledge from various fields provide a spectrum of experience for the students to glean from.

Recognising the demand for engineering excellence in Singapore, TUM Asia partnered Singapore Institute of Technology (SIT) to offer Bachelor of Science programmes in Electrical Engineering and Information Technology and Chemical Engineering in 2010. It has also set up TUM CREATE in June 2010 to propagate research programmes, where scientists and researchers from both Germany and Singapore can work together for the advancement of science and technology. With the support of the National Research Foundation of Singapore (NRF), researchers at TUM CREATE focus on developing innovative systems that incorporate safety and reliability with functionality and energy efficiency in electric vehicles.

For more information, visit <u>www.tum-asia.edu.sg</u> or contact us at <u>marketing@tum-asia.edu.sg</u>.

About Singapore Polytechnic (www.sp.edu.sg)

Established in 1954 to meet the manpower needs identified by the government, Singapore Polytechnic (SP) is Singapore's first polytechnic. Its 10 academic schools offer 50 full-time diploma courses for its 15,970 students and courses are kept relevant through close links with industry and government bodies, as well as with various overseas institutions.

SP offers broad-based, multi-disciplinary and flexible curriculum dedicated to handson experience. It is committed to the development of its applied research and development capabilities to enhance the quality of teaching and commercialisation efforts. Through Design Thinking, SP offers a revolutionary approach to education, allowing its students to look at problems from different perspectives, and strike a dynamic balance between intuitive and analytical thinking to provide impactful solutions.

Among SP's 166,800 graduates are successful entrepreneurs, top executives in multinational and public-listed corporations, and well-known professionals, many of whom are captains of industries, university professors and researchers, and leaders in government.

SP is the first polytechnic to be awarded the President's Award for the Environment in 2010 and the President's Social Service Award in 2011.

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About ST Kinetics

ST Kinetics (Singapore Technologies Kinetics Ltd) is the land systems and specialty vehicles arm of Singapore Technologies Engineering Ltd. It delivers integrated land systems, specialty vehicles and their related through life support for defence, homeland security and commercial applications. Please visit www.stengg.com.