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\$22m to develop maritime decarbonisation and digitalisation projects over next five years



The Singapore Maritime Institute will work with two local universities on deeper research. ST PHOTO: ALPHONSUS CHERN



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SINGAPORE - The use of ammonia as a marine fuel and the study of alternative sources of energy for next-generation multi-purpose ports will move to the next stages of research with an injection of \$22 million over the next five years.

The Singapore Maritime Institute (SMI) will work with two local universities on deeper research into these and other projects, as well as technologies related to decarbonisation and improving the operational efficiency of real-time management of port operations.

Mr Chee Hong Tat, Senior Minister of State for Finance and Transport, announced the funding on Tuesday at the 12th SMI Forum held at Orchard Hotel.

The SMI is awarding \$12 million to the Maritime Energy and Sustainable Development (MESD) Centre of Excellence at the Nanyang Technological University.

This is the continuation of the work that began in October 2017 in the areas of energy management, emission management and sustainable maritime operations.

MESD has worked on 14 maritime decarbonisation research and development projects, including the use of ammonia as a marine fuel.

With input from industry partners and the Maritime and Port Authority of Singapore, MESD has identified 16 other research and development projects to work on from September 2022.



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The work will focus on the management of emissions and the decarbonisation of maritime operations, supporting Singapore's energy strategy to switch to low-carbon alternatives.

SMI said that the areas are aligned with the recommendations from the Singapore Maritime Foundation's international advisory panel on maritime decarbonisation.

The Centre of Excellence in Modelling and Simulation for Next Generation Ports (C4NGP), which is part of the College of Design and Engineering at the National University of Singapore, will be receiving \$10 million.

The five-year funding starts from Jan 2, 2023, and is a continuation of the initiative which started in 2018.

Among the projects undertaken in the earlier phase, C4NGP developed a simulation platform that enables companies to plan their maritime operations based on past, present and future simulated data, without the need for expensive and time-consuming physical simulations.

Projects in the works include advanced port operation planning systems and performance analysis of future automation systems.

It was also announced at the event that \$4.77 million will be awarded to iTrust, the Centre of Research in Cyber Security at the Singapore University of Technology and Design (SUTD).

Working with Singapore Polytechnic's Centre of Excellence in Maritime Safety and the American Bureau of Shipping, SUTD will develop a platform that features both physical and digital components from operational technology systems used in the maritime industry.

This platform will allow the research, training, exercise and education of cyber-security technologies in a realistic and safe environment without disrupting actual vessel operations.