

## FACTSHEET

### **Wärtsilä Voyage and Centre of Excellence in Maritime Safety Memorandum of Understanding to Enhance Maritime Safety through Human Centric Digital Technologies**

Under the MOU, Wärtsilä Voyage and the Centre of Excellence in Maritime Safety (CEMS) will collaborate on maritime safety research concepts and projects over the next two years. The initiatives under this collaboration are:

- Launch a next generation navigational simulator for an ambitious research programme that prepares seafarers for shore-based remote management of vessels and autonomous ship operations. The programme will focus on:
  - next generation digital modelling and simulation to enhance marine and navigational safety;
  - advancing the development of a complex port environment;
  - validating new operational concepts, particularly with smart and autonomous ships; and
  - finding opportunities for CEMS to engage in R&D in multiple skill areas with the support of augmented, mixed, and virtual reality (AR, MR, and VR respectively).
- Based on the Wärtsilä NTPRO Simulation Platform, the next generation simulation platform will cover three core disciplines: seascape, landscape, and the mathematical modelling of all vessel types relevant for training shore-based navigation officers, as well as the development of training guidelines and content for remote operations. These include:
  - the development of assistive technologies for use onboard ships and during training;
  - using simulators and wearable technologies to study human behaviour and enhance the safety of navigation;
  - co-develop scenario-based “Standards Validation” simulation for autonomous vessel research; and
  - Next Generation Navigation Simulator is targeted to complete by Q4 2022.

### **Quotes**

**Chris Chung, Director, Ecosystem Development, Wärtsilä Voyage**, said, “This is a strategically important partnership as CEMS and Wärtsilä Voyage share common objectives of introducing next-generation smart marine technologies safely and with a human-centric approach, both on the vessel and on the shore side. We look forward to working with CEMS and link-minded global partners to advance this important topic”.

**Daniel Zhang, Centre Director, CEMS at Singapore Polytechnic**, said, “As the maritime industry gets more digitally connected, it is opportune to embark on a journey to identify and define new skillsets which the sector views as important and must-have in the near future. . CEMS shares a common vision with Wärtsilä Voyage to embrace technologies and prepare our workforce to be future ready through research and innovation.”

### **Artist Impression**



### **About Wärtsilä Voyage Limited**

Wärtsilä Voyage transforms how vessels execute their voyage by leveraging the latest digital technologies to deliver a step-change in safety, efficiency, reliability, and emissions. We are committed to creating a Smart Marine Ecosystem, whereby every vessel can connect to digital services that make voyaging safer and greener. With the broadest Smart Marine portfolio in the market, we are well-positioned to lead the industry towards becoming digitally connected across the entire value chain and to be the first partner of choice when leveraging the latest digital technologies.

For more information, please visit <https://www.wartsila.com/marine/voyage>

### **About Centre of Excellence in Maritime Safety**

Established in September 2018, the Centre of Excellence in Maritime Safety (CEMS) was jointly launched by the Singapore Polytechnic (SP) and Singapore Maritime Institute (SMI). Together with our valued industry partners, government agencies and Institutes of Higher Learning, we aim to develop Human-Centric technologies to enhance navigational and operational safety.

As part of Singapore's strategy of upgrading the skill sets of our workforce, we will enhance training assessment systems & solutions with Singapore Maritime Academy (SMA) to ensure our seafarers are future ready.

CEMS is a collaboration between the Singapore Maritime Institute (SMI) and Singapore Polytechnic (SP), supported by the Maritime and Port Authority of Singapore (MPA).

For more information, please visit <https://industry.sp.edu.sg/cems/>

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