

## MEDIA RELEASE

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### SIT and Seatrium Launch Offshore & Marine Digital Learning Lab to Accelerate Maritime Digitalisation and Sustainability

- *New lab to upskill >1,000 professionals and >700 undergraduate students over 3 years*
- *Applied research will drive innovation and green energy transition for Singapore's offshore and marine sector*



*SIT and Seatrium signed a Research Collaboration Agreement on Energy Digital Twin Modelling at the launch of the Offshore & Marine Digital Learning Lab at SIT Punggol Campus. (From left) Professor Chua Kee Chaing, SIT President; Professor Susanna Leong, Vice President (Applied Research), SIT; Mr Lim Shih Hsien, Executive Vice President, Cyber IT & OT, Seatrium; Mr Chris Ong, Chief Executive Officer, Seatrium. (Photo: SIT & Keng Photography)*

- 1 **Singapore, 11 February 2026** – The Singapore Institute of Technology (“SIT”) and global offshore and marine engineering leader Seatrium Limited (“Seatrium”) have inaugurated the **Offshore & Marine Digital Learning Lab** at SIT Punggol Campus, marking a key execution milestone in a strategic industry – academia partnership to advance Singapore’s offshore and marine industry. The lab serves as a dedicated platform for applied learning, workforce

development and industry-driven innovation, supporting national priorities in maritime digitalisation, sustainability and workforce development.

- 2 Building on a Memorandum of Understanding (MOU) signed in 2024<sup>1</sup> and supported by cash investments by Seatrium, the lab is a platform for industry transformation, providing a shared environment for academia and industry to jointly develop solutions addressing real operational challenges in shipyard and offshore contexts. With the lab now operational, undergraduate students, adult learners and industry practitioners will be able to tap into the deep industry knowledge and technical industry experience that Seatrium has built up over decades. Students will be engaged in applied learning and research focused on enhancing productivity, resilience and sustainability outcomes for the offshore and marine ecosystem.

The Offshore & Marine Digital Learning Lab is designed to support industry transformation by driving the adoption of advanced technologies such as artificial intelligence (AI), digital twin technologies and smart microgrid systems for offshore and marine operations.

### **A unique PET–CET–Applied Research ecosystem**

- 3 A key differentiator of the lab is its integrated Pre-Employment Training (PET), Continuing Education and Training (CET), and Applied Research model within a single ecosystem. This end-to-end approach supports the entire talent lifecycle from undergraduates preparing to enter the workforce to working professionals upgrading their skills, while jointly developing industry-relevant solutions. The curriculum is also further enhanced by Seatrium’s industry experience, which provides additional depth and real-world case studies to bridge the gap between academic learning and industry application, and lay a strong foundation for a future-ready offshore and marine workforce.
- 4 Over the next three years, the lab is expected to support more than 700 undergraduates through applied learning modules. It will also train over 1,000 CET learners, serving the wider offshore and marine sector.
- 5 Through this dual-purpose model, the lab functions both as a training platform and an industry-facing innovation testbed, supporting capability-building and digital transformation efforts for companies across the sector.

### **Applied research with measurable outcomes**

- 6 Applied research conducted at the lab is designed to support Singapore’s maritime digitalisation roadmap and energy transition goals by enabling industry stakeholders to test, evaluate and refine solutions in an authentic environment with industry-grade equipment. The lab’s research efforts focus on optimising energy efficiency, developing AI-enabled analytics for remote operations, and building scenario-based digital twin simulators to support smarter planning and more resilient offshore and marine operations. These applied research initiatives are anchored on three strategic themes:
  - Sustainability and Energy Efficiency – including microgrid digital twins, energy system modelling and simulation to support energy infrastructure build up serving nearshore and coastal power demand
  - 5G Maritime Industrial Use Cases – including AI-driven remote inspection, monitoring and mixed-reality collaboration to improve operational efficiency
  - Digital Yard Technology – including AI-enabled digital twin simulators that perform “what-if” scenario planning to improve operational resilience and decision-making.

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<sup>1</sup> <https://www.singaporetech.edu.sg/news/seatrium-and-sit-establish-digital-learning-lab-industrial-learning-research-collaboration>

- 7 Target impact metrics under development include:
- Accelerating the adoption of greener and smarter embedded generation by at least 10%, thereby reducing carbon emissions;
  - Boosting the accuracy of remote operations through vision AI solutions by 20%, strengthening safety, reliability and performance;
  - Cutting the time needed to generate operational scenarios by up to 20% through new digital yard technologies developed through the Lab, further enhancing decision-making processes;

Collectively, these target outcomes underscore the Lab's role in advancing innovation that delivers clear, quantifiable and industry-relevant results.

### **Industry-embedded learning in action**

- 8 The O&M Digital Learning Lab enhances applied learning for SIT undergraduates by providing hands-on access to industry-grade equipment, digital systems and real-world problem statements. It supports selected modules across engineering, systems modelling, energy storage and cyber-physical digital twins, and creates opportunities for capstone projects, internships and industry-linked applied research.

One such example is Najih Ahmed bin Hajasheik Allauddin, a third-year Robotics Systems undergraduate at SIT, who is currently undergoing his Integrated Work Study Programme (IWSP)<sup>2</sup> with Seatrium, working on humanoid robotics applications for shipyard environments.

- 9 “Working in the Offshore & Marine Digital Learning Lab has allowed me to apply what I learn in class to real industrial challenges,” said Najih. “Through my work on humanoid robotics, I am gaining hands-on experience in configuring and training robots for practical yard applications, while also exploring advanced object detection and imitation learning using simulation frameworks. This exposure has been invaluable in preparing me for the realities of working in a highly digitalised industrial environment.”
- 10 **SIT President Professor Chua Kee Chaing** said, “The offshore and marine sector is evolving rapidly, and preparing talent to meet these challenges is critical. As Singapore’s University for Industry, SIT is committed to working closely with our industry partners to develop a vibrant environment of lifelong learning and innovation. By integrating applied learning, workforce upskilling and industry-driven research in one ecosystem, this partnership with Seatrium enables our students and adult learners to develop future-ready skills while contributing directly to the transformation of the sector.”
- 11 **Mr Chris Ong, Chief Executive Officer of Seatrium Ltd** said, “The Offshore & Marine Digital Learning Lab’s launch marks a significant step in translating our partnership into tangible impact for Singapore and our industry. As a Singaporean company, we are proud to bring our global experience – both industry expertise, and use of technology to manage complex operations worldwide – back home to develop future talent and co-innovate with Singapore’s brightest minds to ensure our sector stays competitive amid the global energy transition. We are honoured to represent Singapore on the world stage through projects that support critical energy ecosystems, and equally energised to help mould the future of Singapore’s offshore and marine industry by advancing applied learning, research and workforce capabilities alongside SIT.”

For more images of the Offshore & Marine Digital Learning Lab, click [here](#).

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<sup>2</sup> The Integrated Work Study Programme (IWSP) is SIT’s signature internship programme that places students in extended, real-world work attachments. More information here: <https://www.singaporetech.edu.sg/integrated-work-study-programme>

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**For media queries, please contact:**

**Yip Min-ting (Ms)**

Manager, Corporate Communications

Singapore Institute of Technology

Tel: (65) 6592 1120

Email: [yip.minting@singaporetech.edu.sg](mailto:yip.minting@singaporetech.edu.sg)

**Allison Worldwide on behalf of SIT**

Mobile: (65) 8815 9355

Email: [sit@allisonworldwide.com](mailto:sit@allisonworldwide.com)

**Clarissa Ho (Ms)**

Senior Manager, Investor Relations and Corporate Communications

Seatrium Ltd

Tel: +65 9632 1253

Email: [Shufang.ho@seatrium.com](mailto:Shufang.ho@seatrium.com)

**About the Singapore Institute of Technology**

As the university for industry and Singapore's first university of applied learning, the Singapore Institute of Technology (SIT) offers industry-relevant degree programmes that prepare its graduates to be work- and future-ready professionals. Its mission is to maximise the potential of its learners and to innovate with industry, through an integrated applied learning and research approach, so as to contribute to the economy and society.

The University's unique pedagogy integrates work and study, embracing authentic learning in a real-world environment through collaborations with key strategic partners. Its focus on applied research with business impact is aimed at helping industry innovate and grow. SIT's new centralised campus within the larger Punggol Digital District features a vibrant learning environment where academia and industry are tightly integrated with the community.

For more information, visit [www.SingaporeTech.edu.sg](http://www.SingaporeTech.edu.sg)

**About Seatrium Limited**

Seatrium Limited provides innovative engineering solutions to the global offshore, marine and energy industries. Headquartered in Singapore, the Group has over 60 years of track record in the design and construction of rigs, floaters, offshore platforms and specialised vessels, as well as in the repair, upgrading and conversion of different ship types.

The Group's key business segments include Oil & Gas Newbuilds and Conversions, Offshore Renewables, Repairs & Upgrades, and New Energies, with a growing focus on sustainable solutions to advance the global energy transition and maritime decarbonisation.

As a premier global player offering offshore renewables, new energies and cleaner offshore & marine solutions, Seatrium is committed to delivering high standards of safety, quality and performance to its customers which include major energy companies, vessel owners and operators, shipping companies, and cruise and ferry operators.

Seatrium operates shipyards, engineering & technology centres and facilities in Singapore, Brazil, China, India, Indonesia, Japan, Malaysia, the Philippines, Norway, the United Arab Emirates, the United Kingdom and the United States.

Discover more at [www.seatrium.com](http://www.seatrium.com).