Press Release

November 6th, 2025

MTI Co., Ltd.
Mitsubishi Shipbuilding Co., Ltd.
TSUNEISHI SHIPBUILDING Co., Ltd.
Japan Agency for Marine-Earth Science and Technology
Japan Marine United Corporation
MITSUI E&S Co., Ltd.
National Maritime Research Institute
TSUNEISHI AKISHIMA LABORATORY Co., Ltd.
The University of Osaka
Kyoto University

Ten organizations have jointly launched a project titled "Development of Integrated Simulation Platform for Sustainable and Competitive Maritime Industry"

MTI Co., Ltd. (a NYK Group company, hereinafter "MTI"), Mitsubishi Shipbuilding Co., Ltd. (hereinafter "MHIMSB"), TSUNEISHI SHIPBUILDING Co., Ltd. (hereinafter "TSUNEISHI"), Japan Agency for Marine-Earth Science and Technology (hereinafter "JAMSTEC"), Japan Marine United Corporation (hereinafter "JMU"), MITSUI E&S Co., Ltd. (hereinafter "MITSUI E&S"), National Maritime Research Institute (hereinafter "NMRI"), TSUNEISHI AKISHIMA LABORATORY Co., Ltd. (formerly Akishima Laboratory Inc., hereinafter "TSUNEISHI AKISHIMA"), Graduate School of Engineering The University of Osaka (hereinafter "UOsaka") and Kyoto University (hereinafter "KU") cooperatively proposed a project "Development of Integrated Simulation Platform for Sustainable and Competitive Maritime Industry" and the project has been selected by JST, Japan Science and Technology Agency. It aims at to realize the R&D Concept of "Advanced Technologies for High-Performance Next-Generation Ships Using Digital Solutions, and for High-Resolution and High-Precision Atmosphere/Ocean Forecasting to Support Safe and Stable Ship Navigation" set out in the Key and Advanced Technology R&D through Cross Community Collaboration Program (K Program) of Japanese Government. (refer to "Related Links: I")

Following coordination with the Program Director, subcommittee members, and JST, we have finalized the detailed plan for this research and development initiative. With the completion of this coordination, the following R&D project was officially launched on October 1st.

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1. Project Title:

Development of Integrated Simulation Platform for Sustainable and Competitive Maritime Industry

2. Project Leader:

Hideyuki ANDO, Director of MTI

3. Co-Leaders:

MHIMSB	Shingen TAKEDA Senior Vice President, CTO, Head of Marine Engineering Center
TSUNEISHI	Kazutaka SEKI General Manager, Ship Planning Dept. & Model Based Design Promotion Dept., Design Div.
JAMSTEC	Yasumasa MIYAZAWA Principal Researcher, Seasonal Prediction Center for Shipping Digital Transformation
JMU	Yutaka NISHIMURA General Manager, Corporate Planning Department
MITSUI E&S	Kazutaka SHIMADA Deputy General Manager, Engine Design Dept.
NMRI	Kunihide OHASHI Deputy Director, Fluids Engineering and Ship Performance Evaluation Department
TSUNEISHI AKISHIMA	Koyu KIMURA Director, Head of Research & Development Division
UOsaka	Atsuo MAKI Professor, Division of Global Architecture Graduate School of Engineering
KU	Takeshi ENOMOTO Professor, Disaster Prevention Research institute

4. Project Outline:

The focus of ship demand will shift toward high-performance next-generation ships that adopt alternative fuels to reduce greenhouse gas emissions, energy-saving technologies

such as wind propulsion, and advanced integrated control systems including autonomous navigation. Japan's maritime industry faces the challenge of developing and supplying next-generation ships with increasingly sophisticated and complex functions in shorter lead time, while also expanding its shipbuilding capacity to meet growing global demand amid a declining labor force.

To address this, this research and development project will establish an “Integrated Simulation Platform” that enables simultaneous consideration of ship lifecycle and supply chain, at the initial development and design stages, to optimize ship design and construction plans. This project will promote the implementation of virtual engineering concept and techniques into the maritime industry.

Additionally, regarding weather and sea condition predictions that impact the safe and stable ship operations, a seasonal prediction technology, covering 1 to 3 months in advance, including extreme phenomena such as typhoons, will be developed and integrated into the platform.

5. Research and Development Items

Item 1: Research on Implementation of Integrated Simulation Platform in Society
Leader: Hideyuki ANDO, MTI
Participating Organizations: MTI / MHIMSB / TSUNEISHI / JAMSTEC

Item 2: Research on Preemptive Development Simulator
Leader: Kazutaka SEKI, TSUNEISHI
Participating Organizations: TSUNEISHI / MTI / TSUNEISHI AKISHIMA / NMRI
MITSUI E&S / MHIMSB / JMU

Item 3: Research on Ship Design and Ship Building
Leader: Hiroshi TANAKA, MHIMSB
Participating Organizations: MHIMSB / JMU / NMRI

Item 4: Research on Commissioning and Sea Trial
Leader: Kiyoko SUGIYAMA, TSUNEISHI
Participating Organizations: TSUNEISHI / MTI / MITSUI E&S
UOsaka / TSUNEISHI AKISHIMA

Item 5: Research on Operation and Maintenance Simulator
Leader: Ryo KAKUTA, MTI

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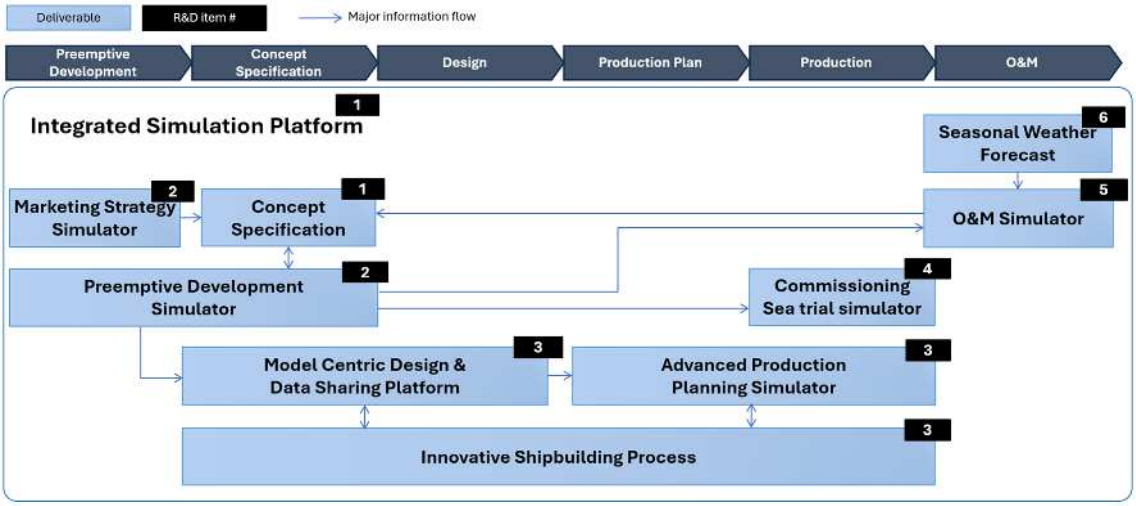
Participating Organizations: MTI / TSUNEISHI / TSUNEISHI AKISHIMA
UOsaka / MITSUI E&S

Item 6: Research on Seasonal Meteorological and Oceanographic Forecast Simulator
Leader: Yasumasa MIYAZAWA, JAMSTEC
Participating Organizations: JAMSTEC / KU / MTI / <Additional Open Call>

6. Project Period:

5 years from October 1st, 2025 to September 20th, 2030

Based on the components of the Integrated Simulation Platform, research and development will be promoted across six R&D items. In 2028, an interim evaluation including a stage-gate assessments will be conducted, and by 2030, the deliverables from each R&D topic will be integrated into the Integrated Simulation Platform (see diagram below), aiming for its demonstration in the design and construction of actual ships.



Components of the Integrated Simulation Platform

7. Project Budget:

Maximum JPY 12 billion

*Total budget for the R&D Project

8. Contact Information:

MTI Co., Ltd.

JCAST Project Management Office under K Program

E-mail: MTI.ML.JCAST_Admin@monohakobi.com

9. Related Links:

i. JST Press Releases (in Japanese)
https://www.jst.go.jp/pr/info/info1772/index.html

ii. “Development of Integrated Simulation Platform for Sustainable and Competitive Maritime Industry” has been selected as a R&D project under K Program
https://www.monohakobi.com/en/company/news/news_20250708/

iii. Additional Call for Proposals for R&D topic 6 of “Development of Integrated Simulation Platform for Sustainable and Competitive Maritime Industry” (in Japanese)
https://www.monohakobi.com/ja/company/news/news_20250902/