

September 24, 2026

## Accelerating Japan-U.S. Joint R&D on AI Shipbuilding Technologies

MLIT has been promoting R&D on advanced shipbuilding technologies utilizing artificial intelligence (AI) with the aim of achieving substantial improvement in productivity within the shipbuilding industry.

As part of these efforts, Japanese team visited the U.S. to discuss collaborative R&D initiatives for the introduction of AI shipbuilding technologies for both countries.

### **1. Background**

Last October, Minister Kaneko and U.S. Secretary of Commerce Lutnick signed a Memorandum of Cooperation Regarding the Shipbuilding Between the Government of Japan and the Government of the United States of America (the MOC), which includes fostering of the development of advanced shipbuilding technologies<sup>\*1</sup>.

From this year, MLIT has been promoting the development of various AI shipbuilding robotics that can be utilized in shipbuilding processes, such as plate bending and welding, as well as the development of an AI simulation platform necessary to maximize the effectiveness of these robotics.

As part of this initiative, Japan and the U.S. will jointly develop AI shipbuilding robotics and related technologies under the framework of the MOC, with a view to their early deployment and practical implementation.

<sup>\*1</sup> This project is being implemented as the MLIT's "Technology Development Project Contributing to the Realization of Next-Generation Shipyards through AI Utilization" under the Cabinet Office's "BRIDGE Program (Program for Bridging Research and Development and Society 5.0)."

### **2. Japan-U.S. Collaborative Research and Development Project**

From September 8 to 11, Japanese development team of AI-enhanced production process simulation platform visited Ann Arbor, Michigan, and discussed with the U.S. development team. The two sides confirmed development plans that include the following activities and agreed to continue advancing R&D collaboratively:

- Development and validation of robotics technologies using a large-scale ship hull mock-up structure installed at the University of Michigan;
- Joint development of high-precision sensors for shipbuilding robotics at the University of Michigan;
- Demonstration of the simulation platform using actual shipyards in both Japan and the U.S., including the recreation of shipyard environments in virtual space and verification of robotics operations.

In addition, workshops on U.S.-Japan collaboration in the shipbuilding sector were held in Detroit and Ann Arbor, with the participation of industry, academia government representatives from both countries. During these workshops, the Japan-U.S. AI shipbuilding robotics R&D program was presented, and twelve AI and robotics-related startup companies in the U.S. expressed interest in participating in the initiative. The event strengthened ties between Japanese and U.S. participants, paving the way for future collaboration.

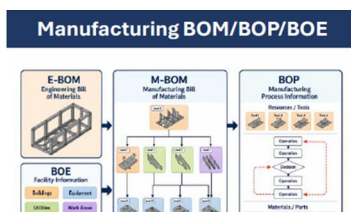
Furthermore, onsite visits was conducted with stakeholders from both countries toward the development of next-generation shipyards incorporating AI shipbuilding robotics and related technologies.

#### Participating Organizations

U.S. Side : University of Michigan, Fraser Shipyards, Huntington Ingalls Industries (HII), Path Robotics, JPMorgan Chase, U.S. Department of Commerce, State of Michigan, e.t.c

Japan Side : MTI, University of Tokyo, Osaka University, Kyushu University, Class NK, Namura Shipbuilding, Kawasaki Heavy Industries, Daihatsu Infinearth, Accenture, MLIT, NMRI, JETRO

#### Production Process Simulation Platform

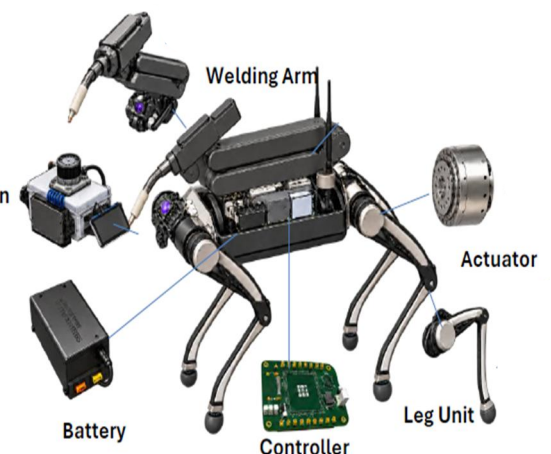


#### Robotics Motion Simulation Platform



Robotics Task Instructions

#### Quadruped Welding Robotics



Development of a Shipbuilding Production Process Simulation Platform and AI Robotics (Conceptual Image)



Workshops on U.S.-Japan Collaboration in the Shipbuilding Sector

#### Contact Information

Shipbuilding and Ship Machinery Division, Maritime Bureau: Fukaishi, Arai  
TEL: 03-5253-8111 (ex. 43641, 43626) TEL: 03-5253-8632 (Direct)