

FAQs – Automated Marine Vessel Inspection Technology

Last updated January 13, 2025

Would XR technologies that aid in identifying visual inspection, not apparent to the human eye using AI, be desired under this topic solution, or is it limited to robotic solutions?

Extended Reality (XR) technologies are out of scope. The RFI is seeking platforms.

Listed under 'Expected Results' section, it mentions there will be no funding available. Listed under 'Evaluation Criteria,' there is a Cost/Schedule criteria. Can you clarify the discrepancy between the cost/schedule if there is no funding available?

The evaluation criteria language is standard for tech challenges. In this case, the Cost/Schedule criteria is the ability to schedule the demonstration with stakeholders within the notional schedule (i.e. Spring 2025).

Is it feasible to fill the tank with water (fresh or salt) to allow a ROV UUV to perform the inspection?

No.

While the solicitation focuses on confined spaces on marine vessels, could submitted solutions also address underwater inspection needs for other structures like water filled ballast tanks?

Although submerged inspection platforms are interesting for other applications, the vessel inspection requirements are for unsubmerged confined spaces.

Will the proposed robotic platform be required to be able to cross over structures above 7-8 inches in height, as the dimensions of the entry hole may limit the capability of a robotic platform from performing such tasks? Do the taller structures block the path on the ground for the robot or are some of them hanging allowing the robot to duck under? Is it more important to be able to cross over obstacles in the path that are 12 inches tall or more, or to be able to easily enter the vessel through the 12-18 inches entry holes?

There are obstacles to both going over, under, and around past the constrained point of entry. However, entering the space should be prioritized above traversing obstacles since the ability to traverse obstacles is only necessary after entering the space. The entryway may be considered roughly large enough for a human inspector to pass through.

It is mentioned that no funding is currently available for this project. Does this apply only to Phase I, or will there be no budgeted funding for the entire duration of the project? If we were to procure COTS parts for a packaged robotic platform to demonstrate in Phase I, would all associated costs need to be covered by us?

All costs should be covered by the submitting party.

The demonstration in Spring 2025 infers that the project performance period for Phase I is only around three months long (March-End of Spring 2025). Is this correct? Is the expectation to have a prototype robotic platform ready for a demo to showcase by the end of Phase I, or is all the demonstration done in Phase II if selected?

Phase I evaluation will be based on written submission and possible virtual pitches. Parties will be notified by the end of March 2025 if they are selected for Phase II, which includes scheduling the on-site demonstration. Some flexibility is anticipated for scheduling the demonstration, but notionally it will occur between March-June 2025.

The access dimensions provide minimum clearance for accessibility, but do not provide requirements for total distance from entry point or volume of region to be inspected. Can you please advise the total inspection area and duration constraints?

The inspection may be performed in stages with total inspection area being variable depending on vessel size. Platforms that can assist with partial inspections will be considered, so strict area and duration constraints are not available. However, we have suggested a 50-foot length for tethered platforms, so equivalent runtime for 100 linear feet of travel (including ingress and egress) is an appropriate target for battery life, but is not strictly required.