In-water Hull Inspection and Cleaning Innovation Call for Proposals (CFP) 2025
Frequently Asked Questions (FAQs)

A CFP briefing session was held on 21 November 2025. The following are the consolidated FAQs. We have combined the similar questions from the attendees for ease of reference.

Grant Scheme for the CFP

1. What is Maritime Innovation and Technology (MINT) Fund?

- This scheme supports applied R&D, product development and test-bedding of technology relevant to the maritime industry and encourages development of maritime technology and IP/patent and capabilities development.

- Relevant outcomes include new technology and services developed and deployed for the maritime industry with researchers, engineers and scientists trained in the new maritime technology capabilities.

- The scheme is relevant to maritime technology developers, marine and port equipment makers and maritime companies with in-house R&D outfit in Singapore.

2. What are the eligibility criteria for MINT Fund?

- The applicant should be
    - a company incorporated under the Companies Act (Cap 50) and operating in Singapore, with a minimum paid-up capital of 50% of the total project costs; or
    - a classification society appointed as a Recognised Organisation under the Merchant Shipping (Authorised Organisations) Regulations.

- The research and development of new or better maritime products and solutions must be carried out in Singapore.
    - Projects applying for the MINT Fund should be technology oriented, relevant to the maritime industry, develop products and solutions that have commercialisation potential, and satisfy the MINT-RPD criteria. For more information, please refer to MINT Fund website.

3. Can a Small and Medium-sized Enterprise (SME) without an at least 30% local owned by Singaporean or Singapore Permanent Resident qualify?

- Yes. MPA accepts both Singapore-registered SME and non-SME applications. There is no requirement for 30% local equity.

Scope and Performance

4. Is the CFP for inspection and/or cleaning?

- The CFP aims to support the development and deployment of in-water robotics inspection and cleaning technologies. Applicants can submit proposals on either in-water hull inspection or cleaning, or both.

5. **For hull cleaning system, is the CFP for cleaning hulls with heavy fouling or cleaning up to micro fouling levels? Does this CFP focus solely on in-water cleaning, or it also includes cleaning in shipyards?**

    - For hull cleaning system, the CFP covers both macro and micro fouling conditions, with proactive and reactive in-water cleaning using robotic technologies. It does not cover operations in shipyards.

6. **For hull inspection system, is the scope limited to biofouling detection, or could it also extend to more advanced techniques such as ultrasonic testing, corrosion detection, and similar applications?**

    - The CFP focuses on in-water hull inspection and cleaning. Applicant could highlight in the proposal if the proposed technology could be extended for other maritime applications.

7. **What is the performance acceptance criteria and operation design domain? What are the technical specifications of filtration system and environmental standards the applicants can refer to?**

    - Applicants are advised to discuss with its test-bedding partners to provide the actual test cases, targets and demonstrate that the developed solution meets the focus area.

    - Applicants can refer to “Guidance on In-Water Cleaning of Ships' Biofouling” (MEPC.1/Circ.918) on the minimum performance standard and other relevant standards (e.g., ISO 20679:2025 or other recognized standards).

8. **Clarification on whether this CFP may be seen as reinventing the wheel (i.e., creating solutions that are already available), and the R&D and innovation opportunities.**

    - Existing robotic solutions for in-water hull inspection and cleaning offer a broad range of capabilities for the maritime industry. However, several gaps remain across most solutions, creating R&D and innovation opportunities to improve in-water robotic performance.

    - Key areas for development include enhancing operational efficiency in harsh environmental conditions, developing advanced systems for inspecting and cleaning complex hull geometries such as propellers and rudders, integrating certified waste capture and filtration systems with sustainable recycling solutions, improving real-time data processing and decision-making capabilities, and scaling solutions to support large-scale port operations. Addressing these gaps through innovation will strengthen the industry's ability to meet the growing demand for safe, efficient, cost-effective, and

sustainable maritime services. Applicants are advised to review the existing solutions and establish a clear build/adapt/buy strategy.

9. How does the CFP protect companies' interest to remain competitive?

- The CFP provides opportunities for marinetech companies and start-ups to trial their in-water robotic solutions to accelerate both technology development cycle and commercialisation. It also provides R&D co-funding opportunities to derisk company's R&D investment.

Partnerships

10. Can this be a joint proposal with partner companies? Can the collaborator be an overseas company? Do the Applicants need to find their own programmer for Autonomous function or MPA will match with local R&D support?

- Applicants can collaborate with overseas companies. Project work should be done in Singapore. Overseas companies are not eligible for the grant under Maritime Innovation and Technology (MINT) Fund.

- Applicants will engage their own programmer(s). If there are specific R&D capabilities that the applicants would like to tap from local research institutions, MPA and the Singapore Maritime Institute (SMI) could facilitate the link-up.

11. Can academic institutes participate in this CFP? Is such academic-industry partnership encouraged to strengthen the R&D capabilities of the proposal?

- An academic/research institute can be a project partner to the Applicant. Academic-industry partnership is encouraged with clear roles and objectives to translate and commercialise R&D outcomes to advance the maritime technologies from Singapore.

12. Can companies form a consortium under this CFP? If yes, how will the grant be awarded?

- Applicants are encouraged to work with their value chain partners as a project team or consortium with the roles and responsibilities, scopes, cash and in-kind contribution for each partner clearly defined in the proposal.

- The grant for the approved project will be awarded to the applicant that represents the consortium. Consortium members that meet the qualifying criteria are eligible for co-funding. Please refer to the Application Form for more details.

Planning and Execution

13. What is the plan, direction, and targeted timeline to achieve goal and how to implement further?

- Applicants will need to include their project plan, targets within the CFP scope and complete the approved projects within 18 months. Applicants are also required to include the implementation/commercialisation plans as part of their proposals. Please refer to the Application Appendixes for more details.

14. What are expected operational conditions and locations for the trials that will be provided, including details such as permitted areas within the port, vessel types, depth ranges, typical visibility, and environmental constraints?

- Applicants are encouraged to work with their test-bedding partners (i.e. vessel owners) to plan for the trials. Depending on the technologies to be demonstrated, test-bedding partners' vessel types and schedules, the possible locations could be alongside a terminal or at the anchorage, subjected to approval by the relevant authority. The trial plan should be presented to MPA during the project update meeting.

15. Is cleaning at PSA terminal possible?

- Cleaning alongside the terminal / berth is possible and subjected to terminal operators' approval in addition to informing MPA of Underwater Diving Operation through the underwater diving operation permit.

16. For this programme, should all development, trials and deployment activities take place in Singapore?

- Yes. The development, trials and deployment should take place in Singapore.

17. Regarding the hull inspection and cleaning, will there be any new challenges when the vessels are powered by alternative energy sources?

- There could be potential new technical and operational challenges with alternative energy options for the vessels. Applicants are encouraged to discuss with their test-bedding partners.

18. Besides the requirement to be recycled, what other strict regulations are there for robots to enter the port for cleaning operations?

- Applicants can refer to "Guidance on In-Water Cleaning of Ships' Biofouling" (MEPC.1/Circ.918) on system design and specification for in-water cleaning systems, and relevant rules and guidelines from classification societies.

- All trials with underwater robots / remotely operated vehicles in port will be subject to the relevant risk assessments and approvals, including navigational safety.

19. How to kick start with the programme?

- The completed proposal should reach MPA by 5 Jan 2026. The evaluation process will take place and the shortlisted applicants will be notified by Q1 2026. Refers to CFP website for more updated information.

Research Infrastructure

20. It is difficult to get shipowners to agree to test these solutions, so having a dedicated test space, i.e., a large wall for test bedding, would be highly beneficial for companies.

- The CFP encourages shipowners to participate as test-bedding partners. Research infrastructure to support technology development will be assessed separately from this CFP.

Regulations

21. Is collection of biofoulings going to be mandated in Singapore waters? When will closed loop hull cleaning and propeller polishing become mandatory.

- While regulatory review is not part of this CFP, the outcome from the trials may provide inputs to the regulatory review.

- Marine Environment Protection Committee (MEPC 83) agreed on a new output on the "Development of a legally binding framework for the control and management of ships' biofouling". We will continue to monitor the development.

22. Does Singapore have specific regulations for the recycling and disposal of this type of waste? Are there any facilities for local disposal?

- Disposal of biofouling will have to be made through a National Environment Agency (NEA) licensed toxic industrial waste collectors (TIWCs). Companies shall take guidance from the latest edition of Singapore Standard SS603 Code of Practice for Hazardous Waste Management. The list of TIWCs can be found on NEA's website.

23. How are pollution and debris collection standards controlled or enforced, e.g. collection of water sample to be submitted to authority as evidence etc?

- Companies will be required to provide a report on an ad-hoc basis when requested by the authority. The report shall include minimally the sampling results and disposal receipt.

Evaluation Criteria

24. What are the evaluation criteria, the quantification methods and weights of each evaluation criterion?

- The applications will be evaluated based on the following criteria with equal weightage:

- Relevance and impact to the maritime industry
- Innovation and differentiation from existing solutions
- Capability development in Singapore
- Local value capture
- Organisation and team competency

Budget & Funding Support

25. What is the total / maximum budget that will be awarded by the agency for this proposal?

- R&D co-funding support will be evaluated and determined based on the scope of the project. MPA may reach out to the Applicants to clarify the budget items. Applicants are advised to itemise its budget items with justifications and documented in a Microsoft Excel file as part of the proposal submission. MPA's decision on the co-funding amount is final.

26. Does the Programme offer any additional support in addition to the funding?

- Additional support beyond the CFP scope will be assessed on a case-by-case basis.

Intellectual Property

27. What are regulations / requirements regarding the Intellectual Property (IP) and which part will be published?

- MPA does not mandate IPs to be published. Applicants can refer to Intellectual Property Office of Singapore (IPOS)' recommended National IP Protocol which can be found in the IPOS website.

28. Each company has its own technologies and IPs. With this MINT-funded project, how does MPA view the handling of their Intellectual Property Rights (IPRs)?

- MPA does not own any IPRs from the projects. Applicants are advised to discuss with their project collaborators and manage the IPRs in accordance with the Terms of Funding for MINT Fund.

Training/Certification Programme

29. Are there any certification program for Remotely Operated Vehicle (ROV) pilots?

- There are commercial training providers for ROV pilots training and certification.