

INTEGRATED HEADQUARTERS OF MINISTRY OF DEFENCE (NAVY)
DIRECTORATE OF STAFF REQUIREMENTS (DSR)

INVITATION FOR EXPRESSION OF INTEREST (EOI)

INDIGENOUS DEVELOPMENT OF EXPENDABLE UNDERWATER TARGET
PROJECT EUT

File No. WP/1280/MAKE/EUT

14 Jun 19

Reference : Defence Procurement Procedure – Chapter III A of (DPP 16)

Appendices & Annexures:

- Appendix A** : Indigenous Content Aspect.
- Appendix B** : IPR of Government.
- Appendix C** : Association of Persons Agreement.
- Appendix D** : Evaluation of Financial and Commercial Criteria.
- Appendix E** : Evaluation of Technical Capability Criteria.
- Appendix F** : Information Performa/Additional Information.
- Appendix G** : Certificate.
- Annexure H** : PSQRs - EUT

1. **Introduction.** Indian Navy has always remained focussed on developing indigenous platforms, equipment and systems towards achieving enhanced self-reliance. In continuation of the same impetus, this **Expression of Interest (Eoi)** invites responses from eligible Indian Companies for project '**Expendable Underwater Target**' here and after referred as **EUT for Indian Navy**. The present proposal for development of EUT under '**Make II**' sub category of the 'Make' category is termed as 'Project EUT'. Project EUT is designed to provide certain operational capabilities to the Navy. The Ministry of Defence (MoD), Govt of India, shall own the Project EUT. The information regarding the project will be shared strictly on 'Need to Know' basis. The prototype (**Qty 10**) development of EUT has been approved as 'Make II' category project. Subsequent procurement of 300 EUT (@ 60/ year) will be under the '**Buy (Indian-IDDM)**' category.

2. **Objective.** The objective of this Eoi is to seek response from eligible Indian industries and to shortlist potential companies. Response to Eoi would be evaluated as per the assessment criteria given in the Eoi. Project shall be progressed even if only one Eoi respondent is found meeting eligibility criteria.

3. **Layout.** The Eol has been covered under the following parts:-

- (a) Part I - General Information.
- (b) Part II - Technical Requirements.
- (c) Part III - Critical Technology Areas.
- (d) Part IV - Guidelines for formation of Association of Persons (AOP) i.e. consortium.
- (e) Part V - Eligibility Criteria.
- (f) Part VI - Assessment Parameters.
- (g) Part VII - Evaluation Criteria of Assessment Parameters.
- (h) Part VIII - Documents to be submitted by Eol Respondents.
- (j) Part.IX - Queries and Clarifications.
- (k) Part X - Miscellaneous

PART I: GENERAL INFORMATION

4. The project on indigenous development of **Expendable Underwater Target (EUT)** has been approved under the 'Make II' category for prototype development of 10 numbers and for subsequent procurement under the 'Buy (Indian-IDDMM)' Category as per DPP 2016. Details of the stages involved in the development process are enumerated in Chapter IIIA of DPP 2016. The progress of the project will be monitored by the Project Facilitation Team (PFT) of Indian Navy/MoD constituted for the purpose. PFT would act as interface between Indian Navy and Industry during the design and development stage of the project. No reimbursement of development cost is permissible under Make II scheme.

5. **Eligibility to Respond to an Eol as Individual Entity or as Consortium.** The Eol can be responded to, at the option of an Eol recipient, by any of the following entities:-

- (a) Individual Eol Recipient; or
- (b) **Association of Persons (AoP)** i.e. Consortium of Indian Companies consisting of two or more than two Eol recipients, undertaking joint and several liability and an Eol Recipient designated as the lead member through a '**Association of Persons (AoP) Agreement**'. All Eol Recipients as the members of the AoP would sign the contract with MoD. This Agreement will be applicable for the entire project including but not limited to Production Phase and Lifecycle/Technology Refresh Contract placed by MoD, if any.

6. **Indigenous Content.** In accordance with Para 6 of Chapter 1 of DPP 2016, products indigenously designed, developed and manufactured should have minimum of 40% Indigenous Content (IC) on cost basis of the total contract value. Apart from overall IC as detailed above, the same percentage of IC will also be required in (a) Basic Cost of Equipment; (b) Cost of Manufacturers Recommended List of Spares (MRLS); and (c) Cost of Special Maintenance Tools (SMT) and Special Test Equipment (STE), taken together at all stages, including FET stage. For IC on cost basis, vendor should ensure compliance as detailed in **Appendix 'A'**.

7. **Intellectual Property Rights (IPRs).** Intellectual Property Rights of Government in "Make" projects is placed at **Appendix 'B'**. Development Agency/ Agencies (DA/DAs) shall retain title or ownership and all other rights in intellectual property generated during the development of project. However, the Government shall have March-in rights under which the Government can require the contractor to grant, or may itself grant license for, inter alia, the following reasons:-

- (a) For National Security Reasons;
- (b) Where health and safety requirements so require the Government to act in public interest;
- (c) To meet requirements for public use not reasonably satisfied by the contractor;
- (d) For failure of the contractor to substantially manufacture the products embodying the subject invention in India; or
- (e) For failure of the contractor to comply with any of the requirements laid down under these guidelines.

8. **Foreign Collaboration.** If the DA(s) collaborate(s) with a foreign firm as a technology provider in a certain technology area for the project, the nature of such collaboration and the technology areas being transferred must be clearly stated in the response. The contribution of the Indian industry in acquiring, developing and indigenising critical technologies shall be one of the key criteria in assessment of various proposals.

9. No component or any sub-system of EUT shall be subjected to any type of inspection or audit by any Foreign Govt or Agency without prior approval of MoD, Govt of India.

10. A trusted supply chain that will include the engineering support requirements would be established for all components of EUT. All documents related to the EUT project are liable to be audited by the Indian Govt or its nominated agency.

11. Detailed information about blacklisting of the company/consortium partners and foreign technology partner by any Govt Agency in India/any other country would be provided as part of the response. Companies currently blacklisted by any Indian Govt Agency are ineligible for participation. Any such information not disclosed but revealed at a later stage would render the Company/Consortium ineligible for further participation.

12. **Time Frames and Critical Activities.** The important time frame and critical activities for the project EUT are as follows:-

<u>Ser</u>	<u>Activity</u>	<u>Time in Weeks from Submission of Eol (T₀)</u>
(a)	Eol Response submission	T ₀
(b)	Eol Response Evaluation	T ₀ +5 (T ₁)
(c)	Issue of Project Sanction Order	T ₁ +2 (T ₂)
(d)	Design & Development of prototype	T ₂ +130 – 156 (T ₃)
(e)	Conversion of PSQRs to SQRs/ Solicitation of Commercial offer	T ₃ +4 (T ₄)
(f)	User trails & Staff evaluation	T ₄ +8-26

13. **Milestones of the Project.**

(i) **Evaluation of Eol Responses.** Eol responses would be evaluated in accordance with assessment parameters and evaluation criteria as given in Part VI & VII of this Eol. All shortlisted companies will be called Development Agencies (DAs). Project shall be progressed ahead even if only one Eol respondent is found meeting the eligibility criteria.

(ii) **Project Sanction Order.** PFT will issue Project Sanction Order for the development of prototype with **Nil** financial implication for Indian Navy/MoD. In case of only single vendor having offered the prototype within timelines stipulated in the Project Sanction Order, not more than two time extensions will be accorded and thereafter the case is to be progressed as Resultant Single Vendor Case (RSVC).

(iii) **Design and Development of Prototype.** PFT will act as the primary interface between the Indian Navy and the industry during the design and development stage under Make-II subcategory projects and facilitate the following:-

- (i) Finalisation of Trial Methodology.
- (ii) Provision of requisite professional inputs/documentation to industry.
- (iii) Providing clarifications related to functional or operational aspects of the equipment under development, as may be sought by the DAs from time to time, during the design and development of prototype.

(iv) **Finalisation of SQRs.** PFT will facilitate the finalisation of SQRs based on inputs from the DAs during the development stage, prior to commencement of user trials. The SQRs of the equipment would thereafter be a part of the trial directives, and only the essential parameters as detailed in the SQRs will be tested.

(v) **Solicitation of Commercial Offers.** A commercial Request for Proposal (RFP) for 'Buy (Indian-IDDM)' phase, will be issued to all Development Agencies for submission of their commercial offer prior to commencement of User Trials.

(vi) **User Trials.** User Trials would be carried out by the Indian Navy to validate the performance of the system, against the parameters/specifications approved, after the development of prototype. Indian Navy will formulate the trial directives and constitute the Trial Team. The 'trial directive' will specify the fundamental points that need to be addressed for validating the 'essential' parameters. The validation of the support system and maintainability trials, integral to and complimenting the trial programme of the defence equipment/ upgrades/product/system will be held simultaneously, wherever feasible. The user can recommend modification to the system for ease of handling and its maintainability.

(vii) **Staff Evaluation.** Based on the User Trials, the Indian Navy would carry out a Staff Evaluation, which gives the compliance of the demonstrated performance of the equipment vis-a-vis the SQRs. On acceptance of Staff Evaluation report, the SQRs shall form the basis for the 'Buy (Indian-IDDM)' category of acquisition. If the prototype of only a single firm/individual clears, the trials would be progressed as resultant single vendor.

(viii) **Award of Contract.** Commercial Offers of only those vendors will be opened, whose equipment has been short-listed consequent to Staff Evaluation and the L1 bidder would be determined based on the provisions of the Commercial RFP and awarded the contract for manufacture.

14. Once the prototype is successfully validated, three hundred (300) such systems shall be procured by MoD, Govt of India under Buy (Indian - IDDM) category. Delivery of EUT should be undertaken at the rate of 60 EUT/year.

15. Other successful development agencies that have developed the prototype successfully but have not qualified as L1, would be issued a certificate by MoD/DDP indicating that product/system has been successfully trial evaluated.

16. **Multiple Technological Solutions.** Not Applicable.

PART II: TECHNICAL REQUIREMENTS

17. **Scope of the Project.** Project EUT entails Indigenous Design, Development and Manufacture of an Expendable Underwater Target for **IN**, in order to simulate the presence of an actual submarine. The EUT would be used to train the crew of Indian Naval Ship, submarines and aircraft in detecting, tracking and attacking an underwater target.

(a) 10 EUT would be developed as a part of Prototype Development. EUT being an expendable equipment, 10 prototype would be required to ascertain the performance of the EUT through extensive field trials.

(b) Post successful validation and acceptance of prototype, 300 EUTs would be procured (@ 60 EUT/year).

Concept of Operations

18. **Deployment of EUT.** The EUT should be capable of being deployed from ships and helicopters. No modifications should be required to be undertaken on the vessel from which the EUT is to be launched.
19. **Associated Hardware for EUT.** The associated hardware required for programming the EUT should be portable (with weight < 50 Kg) and compatible for operation using the ship's electric supply (220 V, 1Ø, 50 Hz AC).
20. **Employment of EUT.** The EUT would be used to:-
- (a) Train sonar operators of ship, submarine, aircraft and helo in detecting, tracking and classifying a variable speed manoeuvring underwater target.
 - (b) Act as a credible target against which torpedo firings can be undertaken.
21. **Subsystems of EUT.** The EUT system should broadly consist of the following sub-systems: -
- (a) Self-propelled expendable target body.
 - (b) Control Console capable of programming trajectory and signature of EUT prior launch.

Capabilities

22. **General Capabilities.** The EUT should possess the following general capabilities: -
- (a) **Expendable.** The EUT should be a cost effective expendable underwater target capable of being utilised by ships, submarines, helos and aircraft for Anti Submarine exercises.
 - (b) **Manoeuvrability.** The EUT should be capable of manoeuvring in azimuth and depth, according to operator defined programmes. It should be capable of manoeuvring at speeds upto 8 knots.
 - (c) **Submarine Signature.** The EUT should be capable of imitating the acoustic signature of a manoeuvring submarine. It should have an active sonar echo repeater being triggered by transmissions of sonar and torpedoes. The EUT should be capable of operating in a multiple sonar signal scenario. It should also be capable of transmitting programmed low frequency tonal discrettes suitable of being detected by passive sonars and sonobuoys.
 - (d) **Launch Platform.** The EUT should be capable of being launched from ships and helicopters.
 - (e) **Sea State.** The EUT should be capable of operating upto Sea State 4.

Characteristics of EUT

23. **Self-Propelled Expendable Body.** The self-propelled expendable body should have the following characteristics: -

- (a) It should be of hydrodynamic design.
- (b) It should be battery powered.
- (c) It should be lightweight (less than 50 Kg) and capable of being launched manually by lowering from ship's side and/or launched from helo.
- (d) Dimensions of the EUT should not exceed 1500mm x 300mm x 300mm.
- (e) It should be capable of operating at speeds between 1 and 8 Kn, which should be programmable in steps of 1 Kn (as required by the operator).
- (f) It should have an endurance of more than 4 hours while operating between 3 and 5 Kn for 70% of the run and 6 and 8 Kn for balance 30%.
- (g) It should be capable of being maneuvered in azimuth and depth according to an operator defined program. In the azimuth plane, it should have all-round maneuverability. In the depth plane, it should be capable of operating from 10 to 150 meters.
- (h) The self-propelled body should be interfaced with Control Console for feeding trajectory and signature program.
- (j) EUT should have a service life of not less than 5 years without any requirement of maintenance. The service life of the battery should also be not less than 5 years to obviate the requirement of changing batteries during its service life.
- (k) EUT should retain pre-fed data for at least one hour prior launch.
- (l) EUT should automatically sink post completion of run.
- (m) In case of error during launch the body should remain afloat.

24. The body should respond to sonar and torpedo transmissions. It should be:-

- (a) An active sonar echo repeater between 1.5 to 35 KHz.
- (b) Capable of generating broadband noise and narrowband tonals in frequency range from 100 Hz to 2000 Hz.
- (c) Compatible for operations with low and medium frequency sonars and high frequency torpedo acoustic homing heads.
- (d) Capable of varying power level of the acoustic signals as per the program fed by the operator.

- (e) Capable of pre-programmed manoeuvres on receipt of active sonar transmissions.
- (f) Capable of operation in multiple regimes (combination of speed and acoustic signature).
- (g) Capable of operating at depths upto 150m.
- (h) The Source Level for the acoustic section should be more than 120 dB.

25. **Control Console (CC)**. The Control Console should be lightweight, portable and ruggedised equipment preferably operating on COTS based OS. The CC should be capable of:-

- (a) **Mission Planning**. It should provide user friendly programming tools to define the entire profile of the EUT. It should be interfaced with the Expendable Body to upload the user-defined azimuth and depth programmes along with speed profile.
- (b) **Pre-Launch Test and Maintenance**. The CC should be capable of undertaking systems checks and defect identification prior deploying the EUT.
- (c) **Feeding Multiple Default Programmes**. The CC should have a minimum set of 10 user defined trajectory and acoustic signatures, which could be used for programming the EUT. These programs should be in addition to the provision of generating a program by the user.

Specifications

26. **Environmental Specifications**. The system should be capable of being operated in following environmental conditions:-

- (a) Sea surface temperatures : 4° C to 35° C.
- (b) Ambient temperature : 5° C to 55° C.
- (c) Humidity : 95%.

27. **Qualification Testing**. As the equipment would be operated in tropical marine environment, it should comply with Environmental Tests as per MIL STD 810G or equivalent standards and JSS 55555:2012 (Rev-3) for indigenous sourced equipment.

- (a) **Environmental Testing (ET)**. The scope of the ET should include the following tests:-

Ser	Parameters	Specification
(i)	High Temperature	<u>For Indigenous</u> JSS-55555:2012 (Rev-3)
(ii)	Low Temperature	

Ser	Parameters	Specification	
(iii)	Damp Heat	<u>For Imported</u> MIL STD 810 G or equivalent standard followed in the country of manufacture	
(iv)	Driving Rain		
(v)	Salt Corrosion		
(vi)	Fine Mist		
(vii)	Mould Growth		
(viii)	Tropical Exposure		
(ix)	Vibration		
(x)	Immersion		
(xi)	Sealing		
(xii)	Shock Test		<u>For Indigenous</u> <u>NSS Grade I</u> (for equipment fitted below waterline) <u>NSS Grade II</u> (for equipment fitted above waterline) <u>For Imported</u> MIL STD 901D

(b) **Environmental Stress Screening (ESS)**. Since the equipment comprises of electrical/electronic components, it should be compliant to the following Environmental Stress Screening:-

Ser	Parameters	Specification
(i)	Thermal Cycling at PCB Level	<u>For Indigenous</u> DQAN Policy letter No. 66301/Policy-07/DQAN/QA-07 dated 09 Aug 16.
(ii)	Random Variation at PCB Level	
(iii)	Thermal cycling at Sub-unit/equipment level	<u>For Imported</u> MIL STD 2164A/344A or equivalent standard followed in the country of manufacture

(c) **EMI/EMC**. The equipment is to comply with MIL STD 461E/F and OEM/firm is to formulate an EMI/EMC Acceptance Plan (EMIAP) post placement of order for approval of IHQ MoD(N)/NEC (Mbi). In case of imported equipment, relevant test reports are to be submitted for scrutiny of IHQ MoD(N)/NEC (Mbi).

(d) **Endurance (Burn-in) Test**. This test is to be carried out as per DQA(N) guidelines promulgated vide letter No. 66301/Policy-10/DQA(N)/QA-10 dated 14 Jun 13.

28. **Storage.** The EUT should be capable of being stored under the following conditions:-

(a) Temperature : 5° to 55° C.

(b) Humidity : Upto 95%.

29. **Launch Mechanism.** The EUT should either be capable of being launched with ease over the ship's side. No modifications should be required to be undertaken on the platform from which the EUT is to be launched.

30. **Helo Drop.** The body should be capable of being dropped from a helicopter from a height of upto 50 m.

31. **Equipment Containers.** The equipment for the EUT and the EUT body should be supplied along with containers and the maximum weight for any container inclusive of the equipment should not exceed 70 Kg. The containers should be rugged and Mil Spec.

32. **Maintenance.** The Expendable Body should not require any maintenance while being stowed onboard ships/yards.

33. **Built-in Test Equipment.** The CC shall have built-in test facility to enable fault-diagnosis, automatic fault location and failure identification of expendable body by the operator. In addition, the Control Console must also have a built-in test facility.

34. **Upgradation of System.** The system should incorporate features for software upgradation. As far as possible, such upgrades should be possible, with minimal change in system configuration.

35. **Software Standards.** As per IEEE 12207.

PART III: CRITICAL TECHNOLOGY AREAS

36. The capability assessment of the Development Agencies (DAs) will largely depend on their ability to design and develop critical technologies like inertial navigation system, control systems, high performance batteries, charging systems, software, transducer, power amplifiers, associated electronics and the ability to absorb the same if obtained from any other agency. It is imperative that the project attains a higher technological threshold and minimises the dependence on foreign technology partners. **The contribution of the Indian industry in acquiring and developing technologies in critical areas shall be a key criterion in assessment of the proposal.**

37. The assessment of critical technologies for the Project EUT offered by the DA(s)/Consortium must be supported with all Rights and Licenses (IPR) as mentioned at **Appendix 'B'**.

PART IV: GUIDELINES FOR FORMATION OF

ASSOCIATION OF PERSONS (AOP) OR CONSORTIUM

38. Where an AoP/Group of Eol recipients ("Consortium") comes together to implement the project in accordance with the mechanisms outlined under Para 5(b) above, there must exist, at the time of responding to Eol, an '**Association of Persons (AoP) Agreement**' to form an AoP i.e. Consortium to execute and implement the complete "Make" project.

39. Where the Eol Respondent is an AoP/Consortium, it shall, while responding to the Eol, comply with the following additional requirements:-

- (a) Number of members in a consortium shall not exceed 05 (five).
- (b) The Eol Response should contain requisite information for each member of the AoP/Consortium.
- (c) Members of the AoP/Consortium shall nominate one member as the Lead Member (the "Lead Member").
- (d) The Eol Response should include a description of the roles and responsibilities of individual members, particularly with reference to production arrangements in India and R&D activities for which IPRs will vest with MoD as per **Appendix 'B'**.
- (e) An individual Eol respondent cannot at the same time be member of an AoP/Consortium responding to the Eol. Further, a member of a particular responding AoP/Consortium cannot be member of any other Consortium responding to the Eol.
- (f) Members of the AoP/Consortium shall enter into a legally binding Agreement, substantially in the form specified at **Appendix 'C'** for the purpose of responding to the Eol. The Agreement to be submitted along with the Eol Response, shall, *inter alia*:-
 - (i) Form the basis for the AoP members to enter into a contract and perform all the obligations of the Development Agency in terms of the contract, in case a development contract to undertake the "Make" Project is awarded to the Consortium;
 - (ii) Clearly outline the proposed roles and responsibilities, if any, of each member;
 - (iii) Include a statement to the effect that members of the AoP/Consortium shall be liable jointly and severally for all obligations of the development agency in relation to the "Make" Project as required under these Guidelines.

Change in Membership of a Consortium

40. Change in the composition of an AoP/Consortium will not be permitted after the submission of EoI responses until the award of a Development Contract for Prototype Development.
41. Where the EoI Respondent is an AoP/Consortium, change in the composition of a Consortium AoP may be permitted by the Authority after the award of a development contract only where:-
- (a) The Lead Member continues to be the Lead Member of the AoP/Consortium and shall not be changed under any circumstances;
 - (b) The non-lead substitute member(s) shall continue to meet eligibility criteria for membership of an AoP/Consortium;
 - (c) The new Member(s) expressly adopt(s) the EoI Response and the Development Contract already made on behalf of the AoP/Consortium as if it/they were a party to it originally and is/are not a Member of any other Consortium short-listed for the "Make" Project, while undertake the joint and several or joint liabilities (as applicable) of the member it/they are replacing.
42. Any change in the composition of an AoP/Consortium shall require prior approval of MoD/DDP.
43. The approval to such changes shall be at the sole discretion of MoD/DDP and must be approved by them in writing for the approval to take effect.
44. The modified AoP/Consortium/Partners shall submit a revised 'Association of Persons Agreement'.

Miscellaneous Provisions

45. Any violation of any of the guidelines by any company shall render it liable to initiation of proceedings for suspension and/or banning of business dealings as per the Guidelines for Putting on Hold, Suspension, Debarment and any other penal action on the Entities dealing with the Ministry of Defence, as promulgated by Government from time to time, will be applicable on procurement process and bidders.

PART V: ELIGIBILITY CRITERIA

46. Indian entity satisfying all of the following criteria shall be considered as eligible 'Indian Vendor' for issue of EoI by the PFT:-
- (a) Public limited company, private limited company, partnership firms, limited liability partnership, one Person Company, sole proprietorship registered as per applicable Indian laws. In addition, such entity shall also possess or be in the process of acquiring a license as per Department of Industrial Policy and Promotion (DIPP's) licensing policy.

(b) The entity has to be owned and controlled by resident Indian citizens; entity with excess of 49% foreign investment will not be eligible to take part in Make category of acquisition.

(c) Start-ups recognised by the Department of Industrial Policy & Promotion (DIPP) and registered on start-up India portal under any of the following:-

(i) **Category**

- (aa) Engineering
- (ab) Manufacturing
- (ac) Government

(ii) **Industry Domain**

- (aa) Aeronautics/Aerospace & Defence
- (ab) Artificial Intelligence
- (ac) Technology Hardware

47. This EoI is being published on MoD/DDP website inviting Company (ies) to participate in the "Make-II" Project. The EoI is also issued to the DA(s) who have indicated willingness to participate in the Development of EUT since hosting of the requirements on 'www.makeinindiadefence.gov.in' and/or firms which participated in Feasibility Study.

48. **Vendors are required to be compliant to Chapter III-A of DPP 2016 (Document available on open domain www.makeinindiadefence.gov.in)**

PART VI: ASSESSMENT PARAMETERS

49. The assessment of the EoI responses would be based on the following Evaluation Criteria, details of which are elaborated in the succeeding paragraphs:-

- (a) Financial and Commercial Criteria.
- (b) Technical Capability Criteria.

50. **Financial and Commercial Assessment Criteria.** The EoI respondents would furnish their response to the Financial and Commercial Criteria as per **Appendix 'D'**. The company shall possess a license or be in the process of acquiring a license as per DIPP's licensing policy under Ministry of Commerce and Industry. The EoI respondents would submit their responses and furnish necessary authenticated and verifiable documents in support of the claims. **In case EoI respondents are a Consortium, they are required to execute the AoP Agreement as per Appendix 'C'**. Failure to do so will result in treating the offer as non-responsive and will be summarily rejected. Further, in their offer letter, Consortium are required to mention details of Consortium members, their respective share-holding in the AoP and it must be signed by authorised signatories of all members.

51. **Technical Capability Criteria**. The project EUT is a system which will require sound knowledge of unmanned systems, underwater acoustics and quality control. The DA(s) should have a good understanding of Project Management, required for EUT. The contribution of the DA in acquiring and developing technologies in critical areas shall be an important criterion in assessment of the proposal. The respondents to this EoI are required to furnish information about their technical capabilities as per **Appendix 'E'**.

PART VII: EVALUATION CRITERIA OF ASSESSMENT PARAMETERS

52. **Evaluation Criteria**. The response to this EoI would be evaluated based on the assessment parameters given at **Appendices 'D' and 'E'** to identify Companies/ Consortia with proven Commercial and Technical strengths and capabilities as follows:-

- (a) Financial and Commercial Criteria (other than startups).
- (b) Technical Capability Criteria.

53. The assessment would be done based on following parameters:-

(a) **Financial and Commercial Criteria for all Entities other than Start-ups.**

(i) Average annual turnover of the firm for the last three financial years ending 31st Mar of the previous financial year should not be less than Rs 6.726 Cr.

(ii) Net worth of all the entities ending 31st March of the previous financial year should be "Positive".

(b) **Technical Capability Criteria**. Firm to have domain expertise in designing and manufacturing autonomous underwater vehicle products and a strong R & D setup with adequate experienced personnel.

54. MoD, Govt of India reserves the right to disqualify a respondent/consortium if he/they fail to comply with specific criteria at any stage of the evaluation process by the PFT. **No amendment/change in response to EoI will be accepted under any circumstances once the EoI response is submitted.**

Note1. Details regarding proposed expenditure/establishment of facilities/lab etc. are liable to be included in the contract in case the Company/Consortium get shortlisted for development of EUT.

Note 2. Company/Consortium giving False/Misleading information will be barred from participation in the project EUT.

PART VIII: DOCUMENTS TO BE SUBMITTED BY EOI RESPONDENTS

55. Following documents are required to be submitted by EOI respondents:-

- (a) Annexure I of Appendix 'A'.
- (b) Appendix 'C', if applicable.
- (c) Appendices 'D' and 'E'.
- (d) Information Performa as per Appendix 'F'.
- (e) Certificate as per Appendix 'G'.
- (f) Documents in proof of Evaluation Criteria (ie Financial and Commercial and Technical capability)

56. The Eoi respondents shall submit three (03) copies of response to Eoi, clearly marking one copy as 'Original Copy' and the remaining two as 'Copy No 2&3'. The respondents are also required to submit a soft copy of the response to Eoi in a CD/ DVD. In the event of any discrepancy between the content in copies of documents submitted, the contents in the 'original copy' shall govern/prevail. Each page of the response will bear the signatures of the authorised signatory of the Company/Lead Member in a Consortium.

57. **Guidelines for Submitting Eoi Responses.**

- (a) The responses should be submitted strictly as per the formats given in respective appendices. Should a Vendor/Consortium need to mention any other information, a separate column may be added as the last column only.
- (b) All response appendices should be submitted in a single file/folder. Supporting documents/additional reference should be submitted in a separate folder with proper reference mentioned against each parameter/sub-parameter in respective appendices.
- (c) Any supporting document/evidence without any reference to specific parameter of criteria will not form part of the assessment.

58. The envelopes shall be addresses as under:-

Secretary, PFT
Project EUT
Directorate of Staff Requirements
IHQ MoD (Navy)
A Block
Dara Shikoh Road
New Delhi – 110 011
Email: dsr-navy@nic.in
Tele/Fax No:011-26181834

59. The response to this EoI must be submitted by **1400 hrs** on **26 Jul 19** at the address mentioned above.

60. A Company/Consortium can submit only one response to this EoI. If a company submits more than one response, then all responses of the Company will be rejected and the Company/Consortium, to which the Company belongs, would not be assessed further.

61. MoD, Govt of India at its discretion can extend this deadline for the submission of responses to EoI and the same shall be notified in writing.

PART IX: QUERIES AND CLARIFICATIONS

62. Following aspects will govern the procedure for queries and clarifications:-

(a) **Companies/Consortium may submit written queries/clarification/amplifications on specific issues by 12 Jul 19.** Consolidation and examination of the queries received will be carried out by the PFT and clarification will be given to all the industries during the pre-response meeting.

(b) **Pre-Response Meeting.** A pre-response meeting is scheduled on **19 Jul 19 at 1530 hrs** at Directorate of Staff Requirements, IHQ MoD (Navy), A Block, Dara Shikoh Road, New Delhi – 110 011, to clarify the issue/queries raised to facilitate submission of response.

(c) If deemed necessary, a written reply may be given to all respondents after the meeting.

PART X: MISCELLANEOUS

63. This EoI is being invited with no financial commitment on part of the Govt. of India/MoD. Govt of India reserves the right to withdraw or change or vary any part thereof at any stage. MoD, Govt of India also reserves the right to disqualify any company should it be so necessary at any stage on grounds of national security.

64. Respondent/consortium would be disqualified if they make false, incorrect, or misleading claims in their response to this EoI. A certificate as per the format at **Appendix 'G'** would be furnished as part of the response, including respective consortium partners, where applicable.

Note. The above guidelines are to be read in conjunction with the guidelines under Chapter IIIA of DPP 2016.


(Richie Ranjan)
Captain
Captain (SR) - ASW
Chairman PFT
14 Jun 19

Enclosure:- Appendix 'A' to 'G'

Distribution:- Shortlisted vendors & hosted in MoD/DDP website

Appendix 'A'**{Refers to Para 6 & 55(a)}****INDIGENOUS CONTENT ASPECTS****Definitions**

1. "Indigenous Content"(IC) for an equipment or an item shall be arrived at by excluding from the total cost of that equipment/item the following elements at all stages (tiers) of manufacturing/production/assembly:

(a) Direct costs (including freight/transportation and insurance) of all materials, components, sub-assemblies, assemblies and products imported into India.

(b) Direct and Indirect costs of all services obtained from non-Indian entities/citizens.

(c) All license fees, royalties, technical fees and other fees/payments of this nature paid out of India, by whatever term/phrase referred to in contracts/agreements made by vendors/sub-vendors.

(d) Taxes, duties, cesses, octroi and any other statutory levies in India of this nature.

2. Further, "on cost" basis for 'Buy (Indian IDDM)' cases, shall imply the IC is required as specified under Para 5 of Chapter III-A of DPP 2016, read with additional specific requirements in this regard, if any, mentioned in the EoI/ RFP.

Reporting Requirements

3. IC as defined in Para 1 and 2 above shall be mandatorily reported by all stages (tiers) of manufacturing/ production/ assembly to their higher stages (tiers). All stages (tiers) are required to aggregate indigenous content based on certifications and inputs from lower tiers, as well as on the basis of their own procurement actions and manufacturing activities undertaken. The final aggregation of IC shall be undertaken by the prime (main) contractor with whom an acquisition contract is signed by the Ministry/SHQ.

4. All contracts, sub-contracts, agreements and MoUs made by prime (main) contractors (and their lower tier suppliers/vendors) with their business partners/suppliers, insofar as these contracts, agreements or MoUs relate to the main acquisition contract, shall mandatorily incorporate the definition and reporting requirements for IC in terms of Para 3. Similarly, these business partners/suppliers shall sequentially incorporate these definitions and reporting requirements with their next levels of business partners/suppliers and so on, till the lowest tier in the manufacturing/production/assembly chain.

Audit

5. The Ministry of Defence can exercise its right to conduct an audit of all certifications and costs relevant to IC at all or any stages (tiers) of manufacturing/production/assembly, starting from the prime (main) contractor downwards. The audit(s) could be conducted by the Ministry itself and/or by an agency/institution/officer(s) nominated by the Ministry, as may be decided by the Ministry.

6. All contracts, sub-contracts, agreements and MoUs made by prime (main) contractors (and their lower tier suppliers/vendors) with their business partners/suppliers, insofar as these contracts, agreements or MoUs relate to the main acquisition contract, shall mandatorily incorporate the right of Ministry of Defence to conduct an audit in terms of Para 5. Similarly, these business partners/suppliers shall sequentially incorporate these definitions and reporting requirements with their next levels of business partners/suppliers and so on, till the lowest tier in the manufacturing/production/assembly chain.

Certification

7. All relevant deliveries made under contract shall be accompanied by a certificate of IC issued by the Chief Financial Officer (CFO). All final deliveries under contract shall be accompanied, in addition to the certificate issued by the CFO of the prime (main) contractor as aforesaid, by its Company Auditor's certificate. An Indigenisation Plan for Buy (Indian-IDDMM), Buy (Indian), Buy & Make (Indian) and Buy & Make cases will be required to be submitted by the vendor to meet the requirement of IC as specified in Para 5 of Chapter III-A. Further, the equipment offered for trial shall be accompanied with a certificate of IC issued by the CFO of the prime (main) bidder. The format for certification of IC by the CFO/Company Auditor shall be as per **Annexure to this Appendix**.

8. Final payments shall be released only after the submission of a certificate of IC furnished by the CFO of the prime (main) contractor and a certificate from its Company Auditor, in addition to any other requirements specified elsewhere in the DPP or in the contract.

9. Deliveries at each stage of contract must conform to IC requirements and categorisation relevant to that particular stage. The Performance-cum-Warranty Bank Guarantee shall not be released before completing an audit of the IC in all relevant deliveries by the Ministry or its nominated agency/institution/officer(s), if such an audit is ordered.

Withholding of Payments and Imposition of Penalties

10. In case a particular delivery is deficient in achieving mandatory IC for that stage, an amount of 5% of the cost of that stage delivery shall be withheld from payment for that stage. However, if the vendor achieves the mandatory IC on a cumulative basis by the next stage of delivery, the amount so withheld shall be released to the vendor without interest. All such payments withheld above shall be forfeited upon failure to

achieve required IC by the stage of last delivery of the relevant product. In addition, the Performance-cum-Warranty Bank Guarantee shall also be forfeited upon failure to discharge IC obligations as per contract.

11. In case mandatory IC is not achieved by a vendor and/or if a false certificate is furnished by a vendor/sub-vendor, the Ministry can initiate proceedings for banning or suspension of business dealings with the erring Indian vendor/sub-vendor and its allied firms for all future contracts for a period upto 5 years. This right can be exercised by the Ministry at any point of time; and initiation of banning or suspension proceedings, if ordered, shall be in addition to any other action that may be taken/ordered by the Ministry against the erring vendor/sub-vendor under any law(s) in force.

Miscellaneous

12. In the event of non-incorporation of the definitions and/or audit requirements laid down under Para 1 to 6 in contracts or agreements vendors with next tier at any stage (tier) of manufacturing/production/assembly, it shall be presumed that items/services provided by that stage/tier to the next (tier) have no IC for the purposes of the DPP. Similarly, in the event of non-certification of IC at any stage (tier) as required herein, it shall be presumed that items/services provided by that stage/tier to the next stage (tier) have no IC for the purposes of the DPP. In such cases, the Ministry of Defence can take any of the steps under Para 7 to 11 above against erring vendors/sub-vendors.

Annexure to Appendix 'A'

FORMAT FOR CERTIFICATION OF INDIGENOUS CONTENT

This is to certify that we, _____ (Name of Prime/Main Vendor) have achieved/are offering the following IC in the accompanying delivery under contract/equipment being offered for trials/prototype, as defined under the Defence Procurement Procedure and as required under the RFP/Contract (tick whichever is applicable) No. _____ dated _____.

Description of Supplies and Indigenous Content Therein:

Sl.No.	Description of Supplies	IC achieved/ being offered	IC required to be achieved/ offered as per RFP/Contract
1			
2			

Signed by:

1. CFO

----- (Name of Prime/Main Vendor)

2. Statutory Auditor (if required under Appendix A)

----- (Name of Prime/Main Vendor)

Appendix 'B'**{Refers to Para 7, 37 & 39(d)}****INTELLECTUAL PROPERTY RIGHTS OF GOVERNMENT
IN "MAKE" PROJECTS****Guiding Principles**

1. The Government shall retain only a license in the Intellectual Property being generated under contract; and the contractor retains title or ownership and all other rights in intellectual property that are not granted to the Government, subject to conditions prescribed herein.
2. During the development of prototype, if any technology/product is developed, which the Government considers to be sensitive or classified and needs to be restricted for use in other purposes or for export, the Government through IPMT or any other expert or body may identify such technology/product and shall retain the full ownership of IPRs in respect of such technology/product.
3. All technology licensing is divided up between two mutually exclusive categories of deliverables: (a) Technical Data (TD)¹ and (b) Computer Software (CS)². The Government shall also have certain rights to subject inventions and patents generated under the "Make" contract.
4. The EoI shall contain details of (a) the delivery requirements, storage formats and storage medium; and (b) the associated data rights, in all technologies required to be developed or delivered under the "Make" contract. Officials connected with award of "Make" projects shall ensure that all such delivery requirements are clearly stated in the EoI and the "Make" contract signed, if any, including delivery and form in which source code is required as a contract deliverable.
5. The Government's standard license rights in (a) subject inventions and associated data; and (b) all other data generated under the "Make" contract, including technical data and computer software whether associated with such subject inventions or otherwise, shall be 'Government-Purpose Rights' (GPR). In respect of subject inventions, the Government shall hold a non-exclusive, non-transferable, irrevocable,

¹"Technical data" means recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation). The term does not include computer software or data incidental to contract administration, such as financial and/or management information.

²(a) "Computer software" means computer programs, source code, source code listings, object code listings, design details algorithms, processes, flow charts, formulae and related material that would enable the software to be reproduced, recreated or recompiled. Computer software does not include computer data bases or computer software documentation. (b) "Computer program" means a set of instructions, rules, or routines recorded in a form that is capable of causing a computer to perform a specific operation or series of operations. (c) "Computer software documentation" means owner's manuals, user's manuals, installation instructions, operating instructions, and other similar items, regardless of storage medium, that explain the capabilities of the computer software or provide instructions for using the software. (d) "Computer data base" means a collection of data recorded in a form capable of being processed by a computer. The term does not include computer software.

paid up (royalty-free) license to practice, or have practiced for on its behalf, the subject invention throughout the world.

6. These guiding principles shall apply at both the prime and subcontract levels; i.e., the prime DA(s) shall incorporate the rights of the Government as prescribed in this Annexure in all their subsequent sub-contracts and agreements insofar as technology development under "Make" projects is concerned.

Government Rights

7. The Government shall have "Government-Purpose Rights" and "Unlimited Rights" as explained below:-

8. For all subject inventions³ under the "Make" Contract, including technical data and computer software associated with such subject inventions, the Government shall hold "Government-Purpose" Rights (GPRs), in that it shall hold a non-exclusive, non-transferable, irrevocable, paid up (royalty-free) license to practice, or have practiced for on its behalf, the subject invention throughout the world. These GPRs shall automatically convert to "Unlimited Rights" as defined under this section upon the expiry of ten years.

9. For the purpose of all technical data and computer software, whether related to subject inventions or otherwise, GPRs shall imply the right to use such technical data and computer software within the Government without restriction and the right to authorize any other entity for any government purpose including re-procurement. More specifically, "Government-Purpose" rights include the rights to:-

- (a) Use, modify, reproduce, release, perform, display, or disclose technical data within the Government without restriction; and
- (b) Release or disclose technical data outside the Government and authorise persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for Government purposes.
- (c) Form, Fit and Function data: and Manuals or instructional and training materials for installation, operation, or routine maintenance and repair;
- (d) Computer software documentation required to be delivered under the "Make" contract;
- (e) Corrections or changes to computer software or computer software documentation furnished to the contractor by the Government;
- (f) Computer software or computer software documentation that is otherwise publicly available or has been released or disclosed by the contractor or subcontractor without restrictions on further use, release or disclosure other than a release or disclosure resulting from the sale, transfer, or other

³"Subject Invention" implies any invention of the contractor conceived or first actually reduced to practice in the performance of work under a Government Contract. "Invention" implies any invention or discovery that is or may be patentable or otherwise protectable under the Patent Laws in force in India.

assignment of interest in the software to another party or the sale or transfer of some or all of a business entity or its assets to another party;

10. For the purposes of these guidelines, "Government Purpose" means an activity in which the Government of India is a party, including cooperative agreements with international or multinational Defence organizations, or sales or transfers by the Government of India to foreign Government or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data for commercial purposes or authorize others to do so.

11. In addition to standard GPRs, Government rights in computer software to be delivered under contract shall also include the right to:-

- (a) Use of a computer program with government computer(s);
- (b) Transfer to another Government computer;
- (c) Make copies of computer software for safekeeping; backup or modification purposes;
- (d) Modify computer software;
- (e) Disclose to service contractors;
- (f) Permit service contractors to use computer software to diagnose/correct deficiencies, or to modify to respond to urgent or tactical situations; and
- (g) Disclose to contractors or any other third-parties for proposes of emergency repair and overhaul.

March-In Rights

12. The Government shall have "March-In" rights for all items covered under its "Government-Purpose Rights". "March-In" Rights shall include the right to work the patent, either by itself, or by another entity on behalf of the Government, in case the contractor fails to work the patent on its own within a specified and reasonable period of time.

13. Under its march-in rights, the Government can require the contractor to grant, or may itself grant license for, inter alia, the following reasons:-

- (a) The contractor fails to work the patent towards practical application within a reasonable time; or
- (b) Where health and safety requirements so require the Government to act in public interest;
- (c) For National Security Reasons;

- (d) To meet requirements for public use not reasonably satisfied by the contractor;
- (e) For failure of the contractor to substantially manufacture the products embodying the subject invention in India; or
- (f) For failure of the contractor to comply with any of the requirements laid down under these guidelines.

Miscellaneous

14. The contractor is required to have a timely and efficient disclosure system in place for reporting of intellectual property generation under the "Make" contract to the Ministry of Defence. Failure to disclose in timely manner, or failure on part of the contractor to invoke his/her default right of ownership, shall imply that all IPRs shall ab-initio vest in the Government of India. The contractor may elect to retain title of any invention made in the performance of work under a contract. If the contractor does not elect to retain title, the title shall ab-initio vest in the Government as stated above and the contractor shall only be entitled to a license on such terms and conditions that the Government may deem it fit. Such license to the contractor shall usually be (a) revocable, non-exclusive and royalty-free; (b) extend to its domestic subsidiaries and affiliates; and (c) include the right to sublicense; but (d) shall not be transferable without prior approval of the Government.

15. The contractor shall also be required to submit periodic reports above commercialization and manufacturing activities undertaken for products embodying the subject invention under "Make" contracts.

16. The Government's IPRs shall flow down from the prime contractor to all sub-contractors at all tiers; that is, every sub-contractor will have the same obligations vis-à-vis the Government as applicable to the prime contractor under the main procurement contract. To this end, the subcontractors shall have limited contractual privity with the Government solely for the purposes of their IPR obligations to the Government.

17. The ownership of any rights by the contractor does not include an absolute right to transfer of any software, product or documentation; and such transfer, including export thereof, shall continue to be governed by and be subject to the Export Policy, Export Guidelines and all applicable laws, rules, regulations, orders and instructions of the Government of India. All such transfers and exports shall require prior and explicit approval of the Ministry of Defence.

18. Where the DA is not a consortium, ownership rights in intellectual property being generated under the "Make" contract shall vest with the Government upon dissolution of such DA. Where the DA is a consortium, the ownership rights in the IP generated under the "Make" contract, upon dissolution of the consortium, shall vest amongst the partners as per their agreement on the subject contained in the joint partnership agreement of the consortium, without government rights as licensee being adversely affected in any manner.

Appendix 'C'**{Refers to Para 39(f), 50 & 55(b)}****ILLUSTRATIVE: 'ASSOCIATION OF PERSONS AGREEMENT'**

THIS ASSOCIATION OF PERSONS (AOP) AGREEMENT is entered into on this the day of 20.....

AMONGST

1. { Limited, a company incorporated under the Companies Act} and having its registered office at (hereinafter referred to as the "First Part" which expression shall, unless repugnant to the context include its successors and permitted assigns)

AND

2. { Limited, a company incorporated under the Companies Act} and having its registered office at (hereinafter referred to as the "Second Part" which expression shall, unless repugnant to the context include its successors and permitted assigns)

AND

3. { Limited, a company incorporated under the Companies Act and having its registered office at (hereinafter referred to as the "Third Part" which expression shall, unless repugnant to the context include its successors and permitted assigns)}

AND

4. { Limited, a company incorporated under the Companies Act and having its registered office at (hereinafter referred to as the "Fourth Part" which expression shall, unless repugnant to the context include its successors and permitted assigns)} The above mentioned parties of the FIRST, SECOND, {THIRD and FOURTH} PART are collectively referred to as the "Parties" and each is individually referred to as a "Party".

WHEREAS,

(a) The Ministry of Defence, Government of India (hereinafter referred to as the "Buyer" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) has invited responses (the "responses") to its Expression of Interest No..... dated..... (the "EoI") for short-listing of bidders for development of- Project (the "Project").

(b) The Parties are interested in jointly bidding for the Project as an Association of Persons ("AoP") in accordance with the terms and conditions of the EoI document and other documents in respect of the Project and

(c) It is a necessary condition under the EoI document that the members of the AoP shall enter into an Association of Persons Agreement and furnish a copy thereof with the Response.

NOW IT IS HEREBY AGREED as follows:-

5. **Definitions and Interpretations**. In this Agreement, the capitalized terms shall, unless the context otherwise requires, have the meaning ascribed thereto under the EoI.

6. **Association of Persons/Consortium**.

(a) The Parties do hereby irrevocably constitute an Association of Persons/consortium (the "Consortium") for the purposes of jointly participating in the bidding process for the Make Project and executing and implementing the complete "Make" project upto the completion of the Production Phase or any subsequent Lifecycle Support or technology Refresh/Upgrade Contract that MoD places on the Lead Member of AoP before completion of the Warranty Period, whichever is later.

(b) The Parties hereby undertake to participate in the "Make" Project only through this AoP Agreement and not individually and/or through any other AoP/consortium constituted for this Project, either directly or indirectly or through any of their Associates.

7. **Covenants**. The Parties hereby undertake that in the event the AoP is declared the selected Development Agency and awarded the project, the parties shall enter into a Contract with the Buyer for performing all its obligations as the Development Agency in terms of the contract for the Project.

8. **Role of the Parties**. The Parties hereby undertake to perform the roles and responsibilities as described below: -

(a) Party of the First Part shall be the Lead member of the Consortium for and on behalf of the Consortium during the bidding process and until the Appointed Date under the Contract.

(b) Party of the Second Part shall be responsible for

(c) Party of the Third Part shall be responsible for

(d) Party of the Fourth Part shall be responsible for

9. **Joint and Several Liabilities**. The Parties do hereby undertake to be jointly and severally responsible for all obligations and liabilities relating to the Project and in accordance with the terms of the EoI and subsequently in accordance with the development contract, if and when awarded.

10. **Lead Member**. Without prejudice to the joint and several liabilities of the parties, each party agrees that it shall communicate with the MoD in matters of the EoI and the Development and Production Contract, as applicable through the Lead

Member and the Buyer shall be entitled to communicate with such Lead Member as the representative of all the members. Each party agrees and acknowledges that:-

(a) The Lead Member shall take prior written consent by all participating AOP members before sending any communication regarding a decision (including without limitation, any waiver or consent), action or omission, before communicating the same to MoD. The AoP Members shall send their responses to the Lead Member and ensure that stipulated timelines of MoD are met with by the Lead Member;
and;

(b) Any decision (including without limitation, any waiver or consent), action, omission communicated by the Lead Member on any matters related to the Contract shall be deemed to have been on its behalf and shall be binding on it. The Buyer shall be entitled to rely upon any such action, decision or communication from the Lead Member;
and;

(c) Any notice, communication, information or documents to be provided to the Development Agency shall be delivered to the authorised representative of the Development Agency (as designated pursuant to the Contract) and any such notice, communication, information or documents shall be delivered to all the Parties by the Lead Member.

11. **AoP Bank Account/ Payments.** The Parties will open a separate single bank account ("**AoP Account**") for payments to be received from the Buyer in the name of the AoP which account shall be operated jointly by all the AoP members. Each of the Parties shall raise separate invoices on Buyer, which will be presented to the Buyer by the Lead Member under a Covering Letter. The Buyer shall make the payment(s) into the designated AoP account and the Buyer shall not in any manner be responsible or liable for the inter se allocation of payments, works etc. among the Parties. Disbursal of the amount lying in the AoP account to each of the Parties shall be made directly to such Party, from the AoP Account. Each Party shall be responsible for ensuring the Invoice and the accompanying documentation is complete and accurate.

12. **Representation of the Parties**

12.1 Each Party represents to the other Parties as of the date of this Agreement that:-

(a) Such Party is duly organized, validly existing and in good standing under the laws of its incorporation in India and has all requisite power and authority to enter in to this Agreement;

(b) The execution, delivery and performance by such Party of this Agreement has been authorized by all necessary and appropriate corporate or governmental action and a copy of the extract of the charter documents and board resolution/power of attorney in favour of the person executing this Agreement for the delegation of power and authority to execute this Agreement on behalf of the Consortium Member is annexed to this Agreement and will not, to the best of its knowledge:-

- (i) Require any consent or approval not already obtained;
- (ii) Violate any Applicable Law presently in effect and having applicability to it;
- (iii) Violate the memorandum and articles of association, by-laws or other applicable organizational documents thereof;
- (iv) Violate any clearance, permit, concession, grant, license or other governmental authorization, approval, judgment, order or decree or any mortgage agreement, indenture or any other instrument to which such Party is a party or by which such Party or any of its properties or assets are bound or that is otherwise applicable to such Party; or
- (v) Create or impose any liens, mortgages, pledges, claims, security interests, charges or Encumbrances or obligations to create a lien, charge, pledge, security interest, encumbrances or mortgage in or on the property of such Party, except for encumbrances that would not, individually or in the aggregate, have a material adverse effect on the financial condition or prospects or business of such Party so as in all matters before the Buyer, signing and execution of all contracts and undertakings consequent to acceptance of the Consortium's proposal and generally dealing with the Buyer in all matters in connection with or relating or arising out of the Project.

13. **Termination.** This Agreement shall be effective from the date hereof and shall continue in full force and effect until completion of the Make project and in accordance with the contract, in case the Project is awarded to the Consortium. However, in case the Consortium is either not prequalified for the Project or does not get selected for the award of the Project, the Agreement will stand terminated or upon return of the Bid Security, if any, by the Buyer to the Bidder, as the case may be. Upon completion of the Development Contract, this Agreement may be terminated by the Parties upon written mutual consent, if the AOP fails to win Contract from MoD, during the implementation of the 'Buy (Indian-IDDM)' Project.

14. **Miscellaneous.**

- (a) This Agreement shall be governed by the laws of India.
- (b) In the event of a dispute, the Parties shall attempt to amicably resolve the same, failing which the dispute shall be referred to arbitration which shall be resolved in accordance with the Arbitration & Conciliation Act, 1996. The venue for dispute resolution shall be New Delhi, India. The arbitration proceedings shall be conducted in English language. The arbitration award shall be final and binding upon the Parties.
- (c) The Parties acknowledge and accept that this Agreement shall not be amended by the Parties without the prior written consent of the Buyer.

IN WITNESS WHEREOF THE PARTIES ABOVE NAMED HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

SIGNED, SEALED AND DELIVERED For and on behalf of Lead Member
by:

(Signature)
(Name)
(Designation)
(Address)

SIGNED, SEALED AND DELIVERED For and on behalf of SECOND PART

(Signature)
(Name)
(Designation)
(Address)

SIGNED, SEALED AND DELIVERED For and on behalf of THIRD PART

(Signature)
(Name)
(Designation)
(Address)

SIGNED, SEALED AND DELIVERED For and on behalf of FOURTH PART

(Signature)
(Name)
(Designation)
(Address)

In the presence of: 1.
 2.

Appendix 'D'
 {Refers to Para 50, 52 &
 55(c)}

FINANCIAL AND COMMERCIAL ASSESSMENT CRITERIA

Name of the vendor:

Sl. No	Criteria and Sub-Criteria	Vendor Submissions			Remarks, if any
		Lead Bidder	Partner 1	Partner 2	
(i)	Average annual turnover of the firm for the last three financial years ending 31 st Mar of the previous financial year should not be less than Rs 6.726 Cr.				
(ii)	Net worth of all the entities ending 31 st March of the previous financial year should be "Positive"				Submit documents in support of these claims.
(iii)	Positive Net Worth.				

Station:

Signature

Company Seal

Date :

TECHNICAL CAPABILITY ASSESSMENT CRITERIA

Name of the vendor:

Sl. No	Criteria and Sub- Criteria	Vendor Submissions				Remarks, if any
		Lead Bidder	Partner 1	Partner 2	Partner 3	
(i)	Domain expertise in the fields of underwater sensors and self-propelled unmanned solutions					
(ii)	In house R & D Facility					
(iii)	Infrastructure with availability of Test instruments to support repairs and maintenance					
(iv)	Qualified team working in the area of development of self-propelled unmanned underwater systems					

Station:

Signature

Company Seal

Date:

Appendix 'F'{Refers to Para 55 (d)}INFORMATION PROFORMA: AN ILLUSTRATIVE LIST OF ELEMENTS

1. Name of the Company
2. Name of CEO with Designation
3. Address of the Registered Office
4. Address of the Factory/Factories
5. Company Website(s)
6. Date of Incorporation
7. Brief History of the Company
8. Category of Industry (Large Scale/Medium Scale/Small Scale)
9. Nature of Company (Public Limited/Private Limited)
10. Nature of Business (Please give broad product range against each)
 - (a) Manufacturer
 - (b) Trader
 - (c) Sole Selling or Authorised Agent
 - (d) Dealer
 - (e) Assembler
 - (f) Processor
 - (g) Re packer
 - (h) Service Provider
11. Details of Current Products
 - (a) Type/Description

- (b) Licensed/Installed Capacity
 - (c) Annual Production for Preceding 3 Years
12. Details of Bought Out Items
- (a) Main Equipment
 - (b) Component/Assembly/Sub Assembly/Processes
 - (c) Name and Address of the Sub-Contractor
13. Sources of Raw Materials
- (a) Imported/Indigenous
 - (b) Brief Description
 - (c) Estimated CIF Value
 - (d) Percentage FE Content in Final Product
14. Details of Foreign Collaborations
- (a) Product
 - (b) Name and Address of Collaborator
 - (c) Year of Collaboration
 - (d) Current Status of the Collaboration (whether expired or current)
15. Technology Received from Abroad and Assimilated
16. Technology Transfer MoUs Signed/Under Negotiation
17. Products Already Supplied
- (a) To Indian Army/Air Force/Navy
 - (b) PSUs
 - (c) DRDO and its Laboratories
 - (d) Ordnance Factories

- (e) Any other Defence Organisation
 - (f) To other Principal Customers
18. Details of Registration Certification held (along with product details)
- (a) DGQA
 - (b) DGAQA/DGNAI
 - (c) CEMILAC
 - (d) DGS&D
 - (e) Other Defence Departments
 - (f) Other Government Department
19. Details of ISO Certification(Attach certificate, if any)
20. Details of Pollution Control Certificate(Attach certificate, if any)
21. Latest Certificate of Incorporation by the Registrar of Companies (RoC), if any
22. Details of Credit Rating Certificate (Attach certificate, if any)
23. Details of Patent/IPR certificates (Attach certificate, if any)
24. Details of Permanent Man Power (with the details of qualifications)
- (a) Technical
 - (b) Administrative
25. Total Area of Factory
- (a) Covered (sq. mtrs)
 - (b) Uncovered (sq. mtrs)
 - (c) Bonded Space Available (sq. mtrs)
26. Electric Power
- (a) Sanctioned

(b) Installed

(c) Standby

27. Details of Important Facilities

(a) Production (including Heat Treatment, Dies, jigs and Fixtures)

(b) CAD, CAM, ROBOTS and Other Advanced Technology Tools

(c) Environmental Test Facilities.

(d) Tool Room, Metrology and Test Equipment and Facilities

(e) Type of Instrument

(f) Make and Model

(g) Date of Purchase

(h) Frequency of Calibration

28. Details of Developmental Facilities

(a) R&D Facilities Available

(b) Number of Technical Manpower

(c) Inspection and Quality Control of Raw Material, Components and Finished

(d) Products.

(e) Assistance from Central Agency/Agencies for Testing/Calibration

(f) Laboratory and Drawing Office Facility

(g) Percentage of Total Turn-Over Spent on R&D during the Last Three Years

29. Area of Interest for Future Expansion/Diversification (please provide adequate details)

30. Future Plan (if any) in respect of Expansion Program, Installation of Additional Machines/Test Facilities

31. Turn-Over during the last three Financial Years. (Attach relevant documents, if any)

32. Present Net Worth of the Company (Attach relevant documents, if any)
33. Any other Relevant Information.
34. Contact Details of the Executive Nominated to co-ordinate with the Assessment Team (please provide telephone, mobile and e-mail address).

ADDITIONAL INFORMATION

35. Outline features of the proposal.
36. Recommended stages/ phases of development with priorities and time schedules.
37. Milestones that can be clearly demonstrated to facilitate project monitoring.
38. Estimated capital expenditure for prototype development.
39. Roles Responsibilities and expertise details of consortium members, if any.
40. Role of foreign technology provider, if any, including the agreement intended to be entered into on being shortlisted.
41. Requirement of specialized testing assistance where facilities are available only with DRDO/ DGQA/ DGQAQ/ DGNAI.
42. Indicate the minimum order quantity for execution after the successful completion of the project (prototype development).
43. Undertaking to furnish the cost of the final product during evaluation stage itself, once the final configuration of the end product under development is frozen.
44. Details of the proposed facilities being created for EUT.
45. Any existing facility proposed to be used for production/ manufacture of EUT components.

Appendix 'G'

{Refers to Para 55 (e) & 64}

CERTIFICATE

It is certified that information submitted in the documents as part of the response to Expression of Interest for Project EUT is correct and complete in all respects. It is acknowledged that the company and / or all consortium members will be disqualified from further participation if any information provided is found to be incorrect.

Signature with Company Seal

Company No1

Company No 2

Company No3

Company No4

Company No5



This document contains a total of seven pages, including the cover page. The contents are classified and are not to be disclosed to any unauthorised person.

PRELIMINARY STAFF QUALITATIVE REQUIREMENTS (PSQRs)
FOR EXPENDABLE UNDERWATER TARGET

- | | | | |
|----|--------------------------|---|------------------------------------|
| 1. | Sponsor | : | Directorate of Staff Requirements |
| 2. | Reference No. | : | WP/1280/Make |
| 3. | Staff Requirement Number | : | DSR – ASW |
| 4. | Nomenclature | : | Expendable Underwater Target (EUT) |
| 5. | Security | : | RESTRICTED |
| 6. | Date | : | 12 Jun 18 |

7. **Aim.** There is a requirement of an Expendable Underwater Target (EUT) for undertaking Anti-Submarine Warfare (ASW) training at sea. EUT should be capable of simulating a submarine by being detected, located and tracked by Hull Mounted Sonar, Active/Passive Towed Array Sonars, Helo Dunking Sonar and Sonobuoys. Additionally, it should be capable of simulating a target for Practice/Combat torpedo firings.

Concept of Operations

8. **Deployment of EUT.** The EUT should be capable of being deployed from ships and helicopters. No modifications should be required to be undertaken on the vessel from which the EUT is to be launched.

9. **Associated Hardware for EUT.** The associated hardware required for programming the EUT should be portable (with weight < 50 Kg) and compatible for operation using the ship's electric supply (220 V, 1Ø, 50 Hz AC).

10. **Employment of EUT.** The EUT would be used to :-

- (a) Train sonar operators of ship, submarine, aircraft and helo in detecting, tracking and classifying a variable speed manoeuvring underwater target.
- (b) Act as a credible target against which torpedo firings can be undertaken.

11. **Subsystems of EUT.** The EUT system should broadly consist of the following subsystems: -

- (a) Self-propelled expendable target body.
- (b) Control Console capable of programming trajectory and signature of EUT prior launch.

Capabilities

12. **General Capabilities.** The EUT should possess the following general capabilities: -

(a) **Expendable.** The EUT should be a cost effective expendable underwater target capable of being utilised by ships, submarines, helos and aircraft for Anti Submarine exercises.

(b) **Manoeuvrability.** The EUT should be capable of manoeuvring in azimuth and depth, according to operator defined programmes. It should be capable of manoeuvring at speeds upto 8 knots.

(c) **Submarine Signature.** The EUT should be capable of imitating the acoustic signature of a manoeuvring submarine. It should have an active sonar echo repeater being triggered by transmissions of sonar and torpedoes. The EUT



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should be capable of operating in a multiple sonar signal scenario. It should also be capable of transmitting programmed low frequency tonal discrettes suitable of being detected by passive sonars and sonobuoys.

(d) Launch Platform. The EUT should be capable of being launched from ships and helicopters.

(e) Sea State. The EUT should be capable of operating upto Sea State 4.

Characteristics of EUT.

13. Self-Propelled Expendable Body. The self-propelled expendable body should have the following characteristics: -


- (a) It should be of hydrodynamic design.
- (b) It should be battery powered.
- (c) It should be lightweight (less than 50 Kg) and capable of being launched manually by lowering from ship's side and/or launched from helo.
- (d) Dimensions of the EUT should not exceed 1500mm x 300mm x 300mm.
- (e) It should be capable of operating at speeds between 1 and 8 Kn, which should be programmable in steps of 1 Kn (as required by the operator).
- (f) It should have an endurance of more than 4 hours while operating between 3 and 5 Kn for 70% of the run and 6 and 8 Kn for balance 30%.
- (g) It should be capable of being manoeuvred in azimuth and depth according to an operator defined programme. In the azimuth plane, it should have all-round manoeuvrability. In the depth plane, it should be capable of operating from 10 to 150 meters.
- (h) The self-propelled body should be interfaced with Control Console for feeding trajectory and signature programme.
- (j) EUT should have a service life of not less than 5 years without any requirement of maintenance. The service life of the battery should also be not less than 5 years to obviate the requirement of changing batteries during its service life.
- (k) EUT should retain pre-fed data for at least one hour prior launch.
- (l) EUT should automatically sink post completion of run.
- (m) In case of error during launch the body should remain afloat.

14. The body should respond to sonar and torpedo transmissions. It should be:-

- (a) An active sonar echo repeater between 1.5 to 35 KHz.
- (b) Capable of generating broadband noise and narrowband tonals in frequency range from 100 Hz to 2000 Hz.
- (c) Compatible for operations with low and medium frequency sonars and high frequency torpedo acoustic homing heads.
- (d) Capable of varying power level of the acoustic signals as per the programme fed by the operator.
- (e) Capable of pre-programmed manoeuvres on receipt of active sonar transmissions.
- (f) Capable of operation in multiple regimes (combination of speed and acoustic signature).
- (g) Capable of operating at depths upto 150 m.
- (h) The Source Level for the acoustic section should be more than 120 dB

15. **Control Console (CC)**. The Control Console should be lightweight, portable and ruggedized equipment preferably operating on COTs based OS. The CC should be capable of:-

- (a) **Mission Planning**. It should provide user friendly programming tools to define the entire profile of the EUT. It should be interfaced with the Expendable Body to upload the user-defined azimuth and depth programmes along with speed profile.
- (b) **Pre-Launch Test and Maintenance**. The CC should be capable of undertaking systems checks and defect identification prior deploying the EUT.
- (c) **Feeding Multiple Default Programmes**. The CC should have a minimum set of 10 userdefined trajectory and acoustic signatures, which could be used for programming the EUT. These programmes should be in addition to the provision of generating a programme by the user.


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Specifications


16. **Environmental Specifications.** The system should be capable of being operated in following environmental conditions:-

- (a) Sea surface temperatures : 4° C to 35° C.
- (b) Ambient temperature : 5° C to 55° C.
- (c) Humidity : 95%.

17. **Qualification Testing.** Since the equipment would be operated in tropical marine environment, it should comply with Environmental Tests as per MIL STD 810G or equivalent standard followed in the country of manufacture and JSS 55555:2012 (Rev-3) for indigenous sourced equipment.

(a) **Environmental Testing (ET).** The scope of the ET should include the following tests:-

Ser	Parameters	Specification
(i)	High Temperature	<u>For Indigenous</u> JSS-55555:2012 (Rev-3) <u>For Imported</u> MIL STD 810 G or equivalent standard followed in the country of manufacture
(ii)	Low Temperature	
(iii)	Damp Heat	
(iv)	Driving Rain	
(v)	Salt Corrosion	
(vi)	Fine Mist	
(vii)	Mould Growth	
(viii)	Tropical Exposure	
(ix)	Vibration	
(x)	Immersion	
(xi)	Sealing	
(xii)	Shock Test	


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(b) **Environmental Stress Screening (ESS)**. Since the equipment comprises of electrical/electronic components, it should be compliant to the following Environmental Stress Screening:-

S No	Parameters	Specification
(i)	Thermal Cycling at PCB Level	<u>For Indigenous</u> DQAN Policy letter No. 66301/Policy-07/DQAN/QA-07 dated 09 Aug 16.
(ii)	Random Variation at PCB Level	
(iii)	Thermal cycling at Sub-unit/equipment level	<u>For Imported</u> MIL STD 2164A/344A or equivalent standard followed in the country of manufacture

(c) **EMI/EMC**. The equipment is to comply with MIL STD 461E/F and OEM/ firm is to formulate an EMI/EMC Acceptance Plan (EMIAP) post placement of order for approval of IHQ MoD(N)/NEC(Mbi). In case of imported equipment, relevant test reports are to be submitted for scrutiny of IHQ MoD(N)/NEC(Mbi).

(d) **Endurance (Burn-in) Test**. This test is to be carried out as per DQA(N) guidelines promulgated vide letter No. 66301/ Policy-10/DQA(N)/QA-10 dated 14 Jun 13.

18. **Storage**. The EUT should be capable of being stored under the following conditions:-

(a) Temperature : 5° to 55° C


(b) Humidity : Upto 95%

19. **Launch Mechanism**. The EUT should be capable of being launched with ease over the ship's side. No modifications should be required to be undertaken on the platform from which the EUT is to be launched.

20. **Helo Drop**. The body should be capable of being dropped from a helicopter from a height of upto 50 m.

21. **Equipment Containers**. The equipment for the EUT and the EUT body should be supplied along with containers and the maximum weight for any container inclusive of the equipment should not exceed 70 Kg. The containers should be rugged and Mil Spec.

22. **Maintenance**. The Expendable Body should not require any maintenance while being stowed onboard ships/yards.


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23. **Built-in Test Equipment**. The CC shall have built-in test facility to enable fault-diagnosis, automatic fault location and failure identification of expendable body by the operator. In addition, the Control Console must also have a built-in test facility.
24. **Upgradation of System**. The system should incorporate features for software upgradation. As far as possible, such upgrades should be possible, with minimal change in system configuration.
25. **Software Standard**. As per IEEE 12207.



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