सत्यमेव जयते
Ministry of Defence
Government of India

REQUEST FOR PROPOSAL BY MINISTRY OF DEFENCE GOVERNMENT OF INDIA FOR PROCUREMENT OF

10 x SPECIAL OPERATIONS ASSAULT CRAFT (SOAC) UNDER BUY (INDIAN-IDDM) CATEGORY

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The contents of this RFP must not be disclosed to unauthorised persons and must be used only for the purpose of submission of Bids.

This document contains 141 pages including cover page and Appendices

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O/o ADG Acq Tech (M&S)

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File No:TM(M)/ 0025/ DSOD /SOAC

ADG Acq - Tech (M & S)
Room No. 5, D-II Wing
Ground Floor, Sena Bhavan
Rajaji Marg
New Delhi - 110011

17 Jul 26

To,

All Concerned

REQUEST FOR TECHNICAL AND COMMERCIAL PROPOSAL FOR SPECIAL OPERATIONS ASSAULT CRAFT (SOAC)
CATEGORY: BUY (INDIAN-IDDM)

Dear Sir/ Madam,

1. The Ministry of Defence, Government of India, intends to procure 10 Special Operations Assault Crafts (SOAC) under Buy (Indian-IDDM) category and seeks participation in the procurement process from prospective Bidders subject to requirements in succeeding paragraphs.

Synopsis

2. **Broad Description of Equipment/ System**. The instant case is for procurement of 10 Special Operations Assault Craft (SOAC) with Unmanned Aerial System (UAS) which would be an armed, shallow draught, stealthy high-speed craft equipped with modern weapons (combination of modular and integral weapons), sensors and capable of operating in all weather conditions. It is envisaged to undertake *IN* operations at high seas and in shallow water. It will also be capable of operating unmanned aerial systems, loitering munitions and underwater vehicles towards accomplishing assigned missions. It will have an enclosed cabin with bulletproof protection and open deck layout towards the aft to operate unmanned systems.

3. The salient aspects and timelines of the acquisition are tabulated below. In case of any variation in the details furnished below or in any annexure(s) with that mentioned in the RFP, information furnished in the main body of the RFP at referred paragraph is to be followed.

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Ser No.	Description	Details	Reference Para of the RFP
(a)	Equipment/System required	SOAC with UAS	Para 1 and 2
(b)	Quantity Required	10	Para 1 and 2
(c)	Categorisation of Procurement	Buy (Indian- IDDM)	Para 7/ Part I
(d)	Minimum IC Content required	IC $\geq$ 50 % and IC for Material Component / Software manufactured in India $\geq$ 50% of the overall IC.	Para 7/ Part I
(e)	Place(s) of Delivery	(i) Material Organisation, Ghatkpoar West, Mumbai - 400086 (ii) Material Organisation Kancherapalem post, Vishakhapatnam 530008	Para 1.1 of Appendix G
(f)	Warranty Period	24 Months	Para 11/ Part I
(g)	CMC Period, if any	10 years	Para 34/ Part II
(h)	EMD amount	2 Crore	Para 20/ Part I
(j)	Last date for submission of Pre-bid queries	07 Aug 26	Para 22/ Part I
(k)	Date and time for Pre-bid meeting	31 Aug 26, 1100 hrs	Para 23/ Part I
(l)	Last date and time for Bid Submission	09 Oct 26, 1200 hrs	Para 24/ Part I

4. **Special features of the RFP**. The RFP will be promulaged on Open Tender Enquiry (OTE) basis as Buy Indian (IDDM) with IC $\geq$ 50 % *iaw* Chapter I of DAP 20.The Unmanned Aerial Systems provided with SOAC should be compatible with the Command and Control platforms being operated by Indian Navy. These unmanned aerial systems should be capable of transmission and reception of telemetry, sensor data, command and control signals with *IN* Command and Control platforms.

5. This Request for Proposal (RFP) consists of following four parts:-

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(a)	Part I – General Requirements	8
(b)	Part II – Technical Requirements	14

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(c)	Part III – Commercial Requirements	20
(d)	Part IV – Bid Evaluation and Acceptance Criteria	21

6. The Government of India invites responses to this request only from Original Equipment Manufacturers (OEM) or Authorised Vendors or Government Sponsored Export Agencies (applicable in the case of countries where domestic laws do not permit direct export by OEM) subject to the condition that in cases where the same equipment is offered by more than one of the aforementioned parties, preference would be given to the OEM.

7. The end user of the equipment is the Indian Navy.

8. This RFP is being issued with no financial commitment; and the Ministry of Defence reserves the right to withdraw the RFP and change or vary any part thereof or foreclose the procurement case at any stage. The Government of India also reserves the right to disqualify bidder should it be so necessary at any stage on grounds of National Security.

9. This RFP is non-transferable.

10. In addition to various Appendices and their Annexures, attached with this RFP, reference to various paragraphs of DAP-2020 has been made in the RFP. The DAP-2020 is an open domain document that is available at GoI, MoD website www.mod.gov.in.

11. The receipt of the RFP may please be acknowledged.



Yours faithfully

(Aditya Singh Dadwal)
Commodore
DDG Acq Tech (Maritime)



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DISCLAIMER

1. This RFP is neither an agreement and nor an offer by the MoD to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in submitting their proposals pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the MoD in relation to the Project. This RFP document and any assumptions, assessments and statements made herein do not purport to contain all the information that each Bidder may require. In the event of any discrepancies, ambiguities or contradiction in the information, data or details provided in different sections of this RFP, the same shall be clarified during the pre-bid meeting, and the clarification issued thereafter shall prevail and be binding on all bidders. The Bidder shall bear all its costs associated with or relating to the preparation and submission of proposal pursuant to this RFP. Wherever necessary, MoD reserves the right to amend or supplement the information, assessment or assumptions contained in this RFP. The MoD reserves the right to withdraw the RFP or foreclose the procurement case at any stage. The issuance of this RFP does not imply that the MoD is bound to shortlist a Bidder for the Project. The MoD also reserves the right to disqualify any Bidder should it be so necessary at any stage on grounds of National Security.





PART I – GENERAL REQUIREMENTS

1. This part consists of the general requirement of the Goods (also referred as equipment/systems/deliverables) and Services, hereafter collectively referred as 'Deliverables', the numbers required, the time frame for deliveries, conditions of usage and maintenance, requirement for training, and warranty/ conditions, etc. It includes the procedure and the date & time for submission of bids.

Non-Disclosure

2. The Bidding documents, including this RFP and all attached documents provided by the MoD, are and shall remain or become the property of the MoD. These are transmitted to the Bidders solely for the purpose of preparation and the submission of a proposal in accordance herewith. Bidders are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their proposal. The provisions of this Para shall also apply mutatis mutandis to Bids and all other documents submitted by the Bidders, and the MoD will not return to the Bidders any proposal, document or any information provided along therewith (except unopened Commercial Bid and EMD, as relevant).

3. Information relating to the examination, clarification, evaluation and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process, or concerning the Bidding Process. The MoD will treat all information, submitted as part of the Bid, in confidence and will require all those who have access to such material to treat the same in confidence. MoD may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or MoD or as may be required by law or in connection with any legal process.

4. **Confidentiality of Information**. No party shall disclose any information to any 'Third Party' concerning the matters under this RFP generally. In particular, any information identified as 'Proprietary' in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to the sub-contractors, consultants, advisors or the employees engaged by a party with equal force.

Business Eligibility

5 (a). **Undertaking by Bidders**. The Bidder will submit an undertaking that they are currently not banned /debarred /suspended from doing business dealings with Government of India/ any other government organisation and that there is no investigation going on by MoD against them. In case of ever having been banned/ debarred/ suspended from doing business dealings with MoD/ any other government organisation, in the past, the Bidder will furnish details of such ban/ debarment along with copy of government letter under which this ban/ debarment/ suspension was lifted/ revoked. The Bidder shall also declare that their sub-contractor(s)/ supplier(s)/

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technology partner(s) are not Suspended or Debarred by Ministry of Defence. In case the sub-contractor(s)/ supplier(s)/ technology partner(s) of the Bidder are Suspended or Debarred by Ministry of Defence, the Bidder shall indicate the same with justification for participation of such sub-contractor(s)/ supplier(s)/ technology partner(s) in the procurement case.

5 (b). Subsequent to submission of bids if any sub-contractor(s)/ supplier(s)/ technology partner(s) of the Bidder is suspended or debarred by Ministry of Defence, the Bidder shall intimate the Ministry of Defence regarding suspension or debarment of its sub-contractor(s)/ supplier(s)/technology partner(s) within two weeks of such order being made public.

6. **Pre-Qualification Criteria {for multi-vendor cases in Buy (Indian-IDDM), Buy (Indian) and Buy & Make (Indian) cases}**. The detailed Pre-Qualification criteria for the Bidders for participation in the instant procurement case are placed at **Appendix K** to this RFP. All Bidders are to submit details as per the criteria along with the Technical Bids. These would be evaluated by the TEC.

7. **Indigenous Content**. The IC for the case is to be ≥ 50 % *iaw* Chapter I of DAP 20. For the purposes of this RFP and the acquisition contract is signed by the Ministry of Defence with a successful Bidder, indigenous content shall be as defined under **Para 8 to 12 of Chapter I** and **Para 1 to 3A and relevant extracts** of **Appendix B** to **Chapter I** of DAP **2020** and amendment issued vide **MoD ID No 1(8) / D(Acq) / 21 dated 18 Mar 24**. In addition, reporting requirements for prime (main) Bidder and for suppliers shall be as prescribed under **Para 4 to 7** of **Appendix B** to **Chapter I** of DAP **2020**. The right to audit Bidder/ sub-contractors/ suppliers/ technology partners shall vest in the Ministry of Defence as prescribed under **Para 10 of Appendix B to Chapter I** of DAP **2020**; and aspects of delivery, certification, payments, withholding of payments and imposition of penalties shall be as prescribed under **Para 11** to **15** thereof. Furthermore, Bidders in 'Buy (Indian-IDDM) will be required to submit indigenisation plan in respect of indigenous content as stipulated in **Para 4 to 7** of **Appendix B** to **Chapter I** and **Para 39** of Chapter II of DAP 2020. The same is to be forwarded in a separate envelope alongwith the commercial proposal. The Format for certification of Indigenous content is placed at **Appendix L**. The DAP 2020 is available at MoD, GoI website www.mod.gov.in for reference and free download.

8. **Year of Production**. Deliverables {Special Operations Assault Craft (SOAC) with Unmanned Aerial System (UAS) equipment/ systems} supplied under the contract should be of latest manufacture i.e. manufactured after the date of Contract with unused components/ assemblies/ sub-assemblies, conforming to the current production standard and should have 100% of the defined life (other than permitted running hours during assembly/ acceptance trials) at the time of delivery. Deviations, if any, should be clearly brought out by the Bidder in the Technical Proposal.

9. **Delivery Schedule**. The delivery schedule of equipment and services along with the relevant payment stages is specified at **Annexure VI to Appendix G**. The





SOACs with UAS are to be delivered within 24 months from the date of advance payment (T_0).

10. Once the contract is concluded and the delivery schedule is established, the Bidder shall adhere to it and ensure continuity of supply of deliverables and their components under the contract.

11. **Warranty**. The warranty shall commence from the date of the acceptance of the respective SOAC and UAS. The warranty period for all SOACs and UAS would expire together post completion of 24 months from the date of acceptance of last batch of SOACs and UAS. Warranty Clause is given at **Appendix C** to this RFP.

12. **In Service Life/ Shelf Life**. The Service/Shelf Life of the SOAC, UAS and associated equipment shall be at least **12** years. In case of shelf life, the relevant storage conditions should be clearly specified. The Bidder is required to give details of reliability model, reliability prediction and its validation by designer/ manufacturer to ensure reliability of stores throughout Service/ shelf life. The efficacy of reliability model/ prediction/ validation would be verified during technical and environmental evaluation as indicated in **Para 36** of this RFP.

13. **Product Support**. The Bidder would be bound by a condition in the contract that he is in a position to provide product support in terms of maintenance, materials and spares for a minimum period of **15** years. Even after the said mandatory period, the Bidder would be bound to give at least two years notice to the Government of India prior to closing the production line so as to enable a Lifetime Buy of all spares before closure of the said production line. This, however, shall not restrict the Buyer from directly sourcing sub-equipment/ sub-assembly and spares from their respective OEMs/sub-vendors on completion of warranty. In case the sub-equipment/sub-assembly/parts require tuning/calibration/integration by the Bidder prior replacement, the same is to be undertaken by the Bidder at fair and reasonable cost, as mutually agreed between Buyer and Bidder. All upgrades and modifications carried out on the equipment during the next 15 years or during its life cycle must be intimated to the Naval Headquarters, Ministry of Defence (Navy)/ Directorate of Special Operation and Diving (DSOD).

14. **Codification**. The Bidder agrees to provide existing NATO Stock Numbers (NSNs) of OEM for each item supplied under the contract as per part list. In case, the NSNs are not available, the bidder agrees to codify using basic technical characteristics as required for codification in consultation with MoD/ Directorate of Standardisation. In case of IPR issues, codification will be undertaken as Type IV codification (where only the manufacturer details and part number are to be provided). The seller should have applied for codification before signing of contract.

15. **Obsolescence Management Plan**. An actionable Obsolescence management plan is to be proposed by the Bidder along with the mechanism for

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intimation of notification of obsolescence. The modalities of the mechanism for intimation of notification would be deliberated during CNC. The mutually agreed mechanism for intimation would form an integral part of the contract. All upgrades and modifications carried out on the equipment during the next **15** years or during its life cycle must be intimated to the SHQ as per the agreed mechanism.

16. **Training of Crew and Maintenance Personnel**. A training package for training of operators, operator trainers and maintenance personnel to undertake operation and maintenance of equipment, along with tools and test jigs would be required to be carried out in English language and Hindi language. This training shall be designed to give the operators and maintainers necessary knowledge and skills to operate & maintain equipment (level 1 to 4 or 'O'/ 'I'/ 'D'), as applicable. The syllabus will be defined by the Bidder in consultation with the Buyer at the time of FET. The maintenance training will be imparted to the satisfaction of the Buyer and Bidder will ensure that the training content and period will be to impart working proficiency up to the required level. All training requirements such as training aids, projection system, complete equipment with accessories / optional, technical literature, spares, test equipment / test set up, charts, training handouts, power point presentations, Computer Based Training (CBT), Documentation, Simulators etc will be catered by the Bidder.

(a) **Operator Training**. Operator training for two weeks duration for each batch (in working days), for 20 personnel strength in two (10 each) batches are to be provided in Buyer premises. First batch would be trained in Mumbai within 03 months of JRI of first SOAC and second batch would be trained in Vishakhapatnam within 03 months of JRI of third batch of SOAC.

(b) **Repair and Maintenance Course**. Maintenance training for two weeks duration for each batch (in working days), 20 personnel strength in two (10 each) batches at Buyer premises. First batch would be trained in Mumbai within 03 months of JRI of first SOAC and second batch would be trained in Vishakhapatnam within 03 months of JRI of third batch of SOAC.

(c) The above training should meet the needs of repair & maintenance of the complete equipment, SMTs/STEs, test set up, assemblies/sub-assemblies as per the stipulated repair philosophy.

17. **Government Regulations**. It may be confirmed that there are no Government restrictions or limitations in the country of the Bidder or countries from which subcomponents are being procured and/or for the export of any part of the deliverables being supplied.

18. **Model Certificate for Tenders**. The bidders will submit a Model Certificate for Tenders in compliance to rule 144 (xi) of the General Financial Rules (GFR), 2017 issued vide Ministry of Finanace Order (Public Procurement Order No 4 dt 23 Feb 2023). The format of certificate is given at **Appendix M**. It may be further confirmed

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that all national and international obligations relevant to transfer of conventional arms of the country of the supplier or countries from which parts and components are being procured, have been taken into account for the duration of the contract. Accordingly, thereafter there would be no review, revocation or suppression of Defence export licence and other related clearance issues to the supplier for the contract that could impinge on the continuity of supply of items and their parts or components under the contract.

19. **Patent Rights**. The Bidder should confirm that there are no infringements of any Patent Rights in accordance with the laws prevailing in their respective countries.

20. **Integrity Pact**. In the subject RFP, the Bidder is required to sign and submit Pre Contract Integrity Pact (PCIP) given at **Annexure I to Appendix J** to this RFP and shall also deposit EMD as applicable as per the contract.

21. **Fall Clause**. If the equipment being offered by the Bidder has been supplied/contracted with any organisation, public/ private in India, the details of the same may be furnished in the technical as well as commercial offer. The Bidder is required to give a written undertaking that they have not supplied/is not supplying the similar systems or subsystems at a price lower than that offered in the present bid to any other Ministry/Department of the Government of India and if the similar system has been supplied at a lower price, then the details regarding the cost, time of supply and quantities be included as part of the commercial offer. In case of non-disclosure, if it is found at any stage that the similar system or subsystem was supplied by the Bidder to any other Ministry/Department of the Government of India at a lower price, then that very price, will be applicable to the present case and with due allowance for elapsed time, the difference in the cost would be refunded to the Buyer, if the contract has already been concluded.

Bid Timelines

22. Any queries/clarifications to this RFP may be sent to this office by 07 Aug 26 A copy of the same may also be sent to:-

The Commodore (SOD)
Directorate of Special Operations and Diving
Room No. 4, Ground Floor, 'A' Block
Defence Offices Complex
Africa Avenue, New Delhi – 110023
Tel: 011- 20862612

23. **Pre-Bid Meeting**. A pre-bid meeting will be organised by SHQ at 1100 hrs on 31 Aug 26 at the address mentioned above at **Para 22** to answer any queries or clarify doubts regarding submission of proposals. The Bidder or his authorised representative is requested to attend. Necessary details may be sent a week in

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advance to Directorate of Special Operations and Diving, Naval Headquarters, Ministry of Defence to facilitate obtaining of security clearance.

24. **Submission of Bids**. The Technical and Commercial Proposals along with IP and EMD should be sealed separately in three separate envelopes clearly indicating Commercial/ Technical/ IP and EMD and any other bank guarantee, as applicable, and then put in one envelope and sealed **(all the envelopes should clearly state the letter No of RFP and the name of equipment and Bidder name)** and submitted to the undersigned at the following address by 1200 hours on 09oct26:-

O/o ADG Acq Tech (M & S)
Room No. 5, D-II Wing
Ground Floor, Sena Bhavan
Rajaji Marg
New Delhi – 110011

25. Offer opening by an Offer opening committee will be held at 1500hrs on 09oct26 at the same venue as indicated at **Para 24** above. The Bidder or his authorised representative is welcome to be present at the opening of the proposals. Necessary details may be sent atleast one week in advance (two weeks in case of foreign Bidders) to facilitate obtaining of security clearance.

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PART II – TECHNICAL REQUIREMENTS

26. The second part of the RFP incorporates the aspects of SQRs describing the technical parameters of the proposed equipment, and the environmental parameters for functioning. The operational characteristics and features that should be met by the equipment are elucidated at **Appendix A** to this RFP and the Compliance Table at **Appendix B** to this RFP. The Bidder would be required to offer the equipment for field evaluation on a "No Cost No Commitment" basis.

27. **Operational Characteristics and Features**. The operational characteristics of the Special Operations Assault Craft (SOAC) with Unmanned Aerial System (UAS) are elucidated at **Appendix A** to this RFP.

28. **Technical Offer** The Technical Offer must enable detailed understanding of the functioning and characteristics of the equipment as a whole and each sub system independently. It must include the performance parameters as listed at **Appendix A** to this RFP and any other information pertaining to the technical specifications of the equipment considered important/ relevant by the Bidder. The technical proposal should also include maintenance schedules to achieve maximum life and expected life of each assembly/subassembly {or Line Replaceable Unit (LRU)/ Shop Replaceable Unit (SRU)}, storage conditions/environment condition recommended and the resultant guaranteed in- service/shelf life.

29. If there is any associated optional equipment on offer that should also be indicated separately along with the benefit that are likely to accrue by procuring such optional equipment. Should the Bidder be contemplating any upgrades or modifications to the equipment being offered, the details regarding these should also be included in the Technical Proposal.

30. **Technical Details**.

(a) The technical details should be factual, comprehensive and include specifications of the offered system/equipment against broad requirements listed in **Appendix A** to this RFP. In cases where a Bidder claims to have equipment meeting the EPP, details of the same will be provided in the technical bid. EPP details not provided in technical bids, will not be allowed to be claimed subsequently.

(b) Insufficient or incomplete details may lead to rejection of the offer. Mere indication of compliance may be construed as incomplete information unless system's specific technical details are available in the offer. A format of the compliance table for the technical parameters and other conditions of RFP is attached as **Appendix B** to this RFP.

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31. The technical offer should have a separate detachable compliance table as per format given at **Appendix B** to this RFP stating specific answers to all the parameters as listed at **Appendix A** to this RFP. It is mandatory to append answers to all the parameters listed in **Appendix A** to this RFP. Four copies of the Technical Proposal should be submitted (along with one soft copy), however only one copy of the commercial proposal is required.

32. **Malicious Code Certificate**. The Bidders are required to submit a 'Malicious Code Certificate' (only for electronic items and Software) along with the Technical Proposal. The format is placed at **Appendix D** to this RFP.

33. **Field Evaluation**. The Bidder is requested to confirm his willingness to provide the equipment for trial evaluation in India on "No Cost No Commitment" basis when so requested. The Buyer, at his own expense, will depute its representatives for the Field Evaluation trials (FETs). If any part of the FETs are conducted in the Buyer's facilities, the Bidder shall depute his personnel and equipment at his own expenses and bear the cost of all expenses of trials other than the cost of ranges, platform or facilities which the Buyer may choose to provide free of cost.

34. **Product Support (CMC)**. After induction, the equipment/ system would be repaired and maintained as per the repair and maintenance philosophy at **Appendix E** to this RFP. The details of CMC proposals must also be submitted separately by the Bidder with technical aspects being included in the technical offer and commercial aspects being included in the commercial offer. The details for CMC proposals for 10 years after warranty period of 24 months, must be submitted separately by the bidder in the commercial offer.

35. **Active Technology Obsolescence Management**. Bidder is to indicate the methodology on how the Bidder intends to undertake Active Obsolescence Management through life cycle of equipment which would include upgradation of system/ subsystem/ units on completion of its fair service life. The Bidder/ OEM shall also intimate Buyer on likely technology obsolescence of various sub-assemblies/ units/ modules of equipment through an Annual Bulletin. In case of impending obsolescence of components, bulletin should specify either alternate item or option for life- time buy as under:-

(a) The Bidder/ OEM will notify the Buyer not less than two years before the closure of its equipment for provision production line about the intention to close production of equipment for provision purchasing spare parts, before closure of the said production line.

(b) Three years prior to completion of design/ service life of equipment, the Bidder/ OEM will submit techno-proposal for upgradation of equipment, wherever applicable, to mitigate technology obsolescence and for ensuring product support for next 15 years.

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Evaluation of Technical Offers

36. The Technical Offer submitted by the Bidder will be evaluated by a Technical Evaluation Committee (TEC) to confirm that the equipment being offered meets the requirement of Essential Parameters and Enhanced Performance Parameters (EPP) as elaborated at **Appendix A**. For cases where Essential Parameters 'B' are involved, TEC will confirm that the Bidder has submitted the undertaking to this effect (Refer **Para 14(b)** of Chapter II of DAP-20) as per the format given at **Annexure I** to **Appendix A** to this RFP. For cases where ToT for license production/maintenance infrastructure is sought, the TEC will examine the compliance of the Bidder as per the stated requirements of RFP. Thereafter, the Bidder of the short listed equipment would be asked to provide the equipment (Nos) for trial evaluation as per trial methodology given at **Appendix F** to this RFP, in India at 'No Cost No Commitment' basis. Field Evaluation Trials have to be conducted *iaw* Para 65 of Chapter I of DAP ,20.

Field Evaluation Trials

37. For an equipment to be introduced in service, it is mandatory that it successfully clears all stipulated tests/trials/evaluations as per RFP. The trial evaluation process comprises of the following:-

(a) **User Trials**. These will involve functional trial by user of the equipment in various specified conditions as per requirement and may be done in more than one phase. Trials will be conducted only pertaining to conditions where the equipment is most likely to be deployed. In other conditions where the probability of deployment is not high, appropriate vendor certifications confirming the functional effectiveness under such conditions can be given and simulations based testing can be resorted to wherever applicable. In case, equipment fielded requires any repairs/ modifications during the course of trials, these in situ servicing, repair, maintenance actions or modifications as requested by the vendor will be permitted. Towards this, Vendors shall ensure availability of requisite maintenance teams/ experts onsite during the conduct of trials. Permission for trial equipment to move out of the trial location for a defined period for such repairs or modifications can be permitted on a case to case basis. In single vendor cases permission for the above may be permitted by the OIC Trials itself.

38. Commercial offers will be opened only of Bidders whose equipment is short-listed, after technical trials and evaluation and these have been accepted technically. In other words, the equipment would be required to be trial evaluated and found suitable prior to commencement of any commercial negotiations.

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Quality Assurance Instructions & Technical Evaluation Plan

39. Bidder is to submit Draft Acceptance Test Procedure (ATP) alongwith the technical bid at least one month before commencement of FET. Acceptance of SOAC would be based on functional trials by DSOD. The craft would be built and tested as per latest High Speed Craft (HSC) Code. The model testing/ CFD analysis of the vessel will be undertaken in order to ascertain the hydrodynamic parameters and sea worthiness of the vessel. The vendor is required to submit a draft ATP atleast one month before commencement of FET. The ATP would be approved by DSOD and would be the guiding document for conduct of the user trials. The charges for third party Inspection agencies would be paid by the vendor.

40. However, for electrical/ electronics equipment following would be applicable:-

(a) Inspection Authority :- DQA (N), RK Puram, New Delhi

(b) Inspection Agency :- DQA (N), Nominated Inspection Agency

41. **For Electrical/ Electronic Equipment**. The vendor is required to submit a draft QAP for electrical/ electronic equipment to the DQA (N), nominated Inspection Agency, alongwith the technical bid at least one month before commencement of FET. DQA (N) would be the approving authority for the QAP and QA checks would be undertaken based on the approved QAP. I – Note would be issued by Inspection Agency for the electrical/ electronic equipment. If required, query regarding DQA policies would be resovled as part of pre bid query. The equipment being provided must comply with following :-

(a) **Environmental Testing (ET)**. All naval equipment are required to comply to MIL STD 810 G/H or equivalent if sourced from overseas and JSS 55555: 2020 (Rev -4) for indigenously manufactured/ sourced equipment. However, the above are to be used as guidelines and ETs may be modified/ tailored depending upon various aspects viz. environmental operating conditiond during use, operational philosophy of the equipment, criticality of operation under hostile conditions, manufacturer's capability to meet the specific severities etc.

(b) **Type Test**. Type Testing, if required, is to be conducted as per DQA (N) policy no. DQAN/ Policy/ SG-I/ 2025/ 02 dated 27 Feb 25.

(c) **Shock Standards**. The system should comply with shock standard as per MIL STD 901D for imported items and BR 3021 for Indigenous manufactured items. NSS Grade I (for equipment fitted below waterline) 120g, 8ms (vertical) and 70g, 8ms (lateral) and NSS Grade II (for equipmet fitted above waterline) 50g, 11ms (vertical) and 22g , 11 ms (lateral).

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(d) **Environmental Stress Screening (ESS) Test**. ESS test is to be carried out as per DQA (N) guidelines promulgated vide DQAN/SG/1001/ ESS dated 30 May 22 for indigenous manufactured items and Mil Hand book 344 or Mil std 2164A for Imported items.

(e) **EMI/ EMC Test**. The equipment is required to comply to MIL STD 461 F/G or latest. The supplier will formulate an EMI/ EMC acceptable plan (EMIAP) post placement of order for vetting of same by NEC (MB) and will be approved by NHQ.

(f) **Burn-in/ Endurnace Test**. The Burn-in/ Endurance test is required to be conducted on the system as per DQA (N) Ploicy No 66301/ Policy-10/ DQA (N) dated 14 Jun 13.

(g) **Imported Items**. Products/ stores of imported nature shall be accepted against validation of import documents as per DQA (N) guidelines 66301/ Policy/ DQA (N)/ SG dated 14 Nov 17.

(h) **Acceptance of COTS Items**. These items indictaing Make & Model shall be approved by NHQ/ DSOD and would be based on COCs, functional checks and firm's Guarantee/ Warrantee certificates.

(j) **Quality Assurance Plan (QAP)**. The supplier/ firm will submit draft QAP to DQA (N) for approval within three months of placement of Contract through DQA (N) field unit.

Marking and Packaging

42. **Marking of Deliverables**. The Bidder shall ensure that each deliverable is marked clearly and indelibly, as follows:-

(a) In accordance with the requirements specified in the RFP or if no such requirement is specified, with the indicated codification number or alternative reference number specified.

(b) Ensure that any marking method used does not have a detrimental effect on the strength, serviceability or corrosion resistance of the deliverables.

(c) Where the deliverables have a limited shelf life, with the cure date/date of manufacture or expiry date expressed as months and years.

43. Where it is not possible to mark a deliverable with the required particulars, these should be included on the package in which the deliverable is packed.





44. **Packaging of Deliverables**. The Bidder shall pack or have packed the deliverables, as applicable:-

(a) In accordance with DEFSTAN 81-041 (Part 1)/ STANAG-4280 or equivalent Military Standard.

(b) To ensure that each deliverable may be transported in an undamaged and serviceable condition.

45. The Bidder shall ensure that each package containing the deliverable is labeled to include:-

(a) The name and address of the consigner and consignee including:-

(i) The delivery destination/address if not of the consignee.

(ii) Transit destination/address (for aggregation/disaggregation, onward shipment etc).

(b) The description and quantity of the deliverables.

(c) The full part number in accordance with codification details.

(d) The makers part, catalogue, serial, batch number, as appropriate.

(e) The contract number.

(f) Any statutory hazard markings and any handling markings including the mass of any package which exceeds 3 kgs.

(g) The Packaging Label (military J, N or P, special H, commercial A, C etc) (reference to DEFSTAN 81-041 (Part 1)/STANAG-4280 or equivalent Military Standard needs to be specified by the Bidder.)





PART III - COMMERCIAL REQUIREMENTS

46. The third part of the RFP consists of the commercial clauses and Standard clauses of contract. The bidders are required to give confirmation of their acceptance of these clauses.

Commercial Bid

47. The Bidder is requested to take into consideration the ***Commercial Clauses and Payment Terms*** given at **Appendix G** to this RFP while formulating the Commercial Offers. The bidders are required to quote their price in Price bid format given in **Appendix H** to this RFP.

48. Commercial offers will be opened only of the Bidder whose equipment is short-listed, after technical trials and staff evaluation. The Commercial Offer must be firm and fixed and should be valid for at least **18 months** from the last date of bid submission.

Commercial Bid Opening

49. The Commercial Offers will be opened by the Contract Negotiation Committee (CNC) and if Bidder desires he may depute his representative, duly authorised in writing, to be present at the time of opening of the offers.

50. The date, time and venue fixed for this purpose will be intimated separately after the evaluations are completed.

51. The CNC will determine the lowest bidder (L1).

Additional Aspects

52. **Standard Conditions of RFP**. The Government of India desires that all actions regarding procurement of any equipment are totally transparent and carried out as per established procedures. The bidder is required to accept our standard conditions furnished at **Appendix J** to this RFP regarding Agents, penalty for use of undue influence and Integrity Pact, access to books of accounts, arbitration and clauses related to Law. These conditions along with other clauses of the Contract form the Standard Contract Document (as at **Chapter VI** of DAP 2020) indicates the general conditions of contract that would be the guideline for all acquisitions. The draft contract would be prepared as per these guidelines.





PART IV: BID EVALUATION AND ACCEPTANCE CRITERIA

53. A list of documents/details to be submitted along with the bids is placed at **Appendix N** as a reference to help in completeness of bid and meeting the procurement process schedule.

54. The bids shall be unconditional and unqualified. Any condition or qualification or any other stipulation contained in the bid shall render the bid liable to rejection as a non- responsive bid.

55. The bid and all communications in relation to or concerning the bidding documents shall be in English language.

56. **Evaluation and Acceptance Process**.

(a) **Evaluation of Technical Proposals**. The technical proposals forwarded by the Bidders will be evaluated by a Technical Evaluation Committee (TEC). The TEC will examine the extent of variations/differences, if any, in the technical characteristics of the equipment offered by various Bidders with reference to the QRs and prepare a "Compliance Statement" for shortlisting the Bidders. The shortlisted Bidders shall be asked to send the desired units of the equipment/weapon system for Field Evaluation in varying climatic, altitude and terrain conditions. Staff Evaluation will be carried out, which will give out the compliance of the demonstrated performance of the equipment vis-à-vis the requirements. The compliance would be determined only on the basis of the parameters specified in the RFP. The Staff Evaluation will analyse the field evaluation results and shortlist the equipment recommended for introduction into service.

(b) **Evaluation of Commercial Bid**. The Commercial bids of only those bidders will be opened, whose technical bids have been cleared by TEC; equipment has been shortlisted after Field Evaluation (Trials)/ Technical Trials and Staff Evaluation Comparison of bids would be done on the basis of Evaluation criteria given in **Appendix H** to this RFP. The L-1 bidder would be determined by Contract Negotiation Committee (CNC) on the basis of **Appendix H** to this RFP. Post evaluation of Commercial bid, bidder would be invited for negotiations by CNC.

(c) **Contract Conclusion / Placement of Order (as applicable)**. The successful conclusion of CNC will be followed by contract conclusion/placement of order.

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Appendix A
(Refers to Para 27 of RFP)

OPERATIONAL CHARACTERISTICS AND FEATURES

SECTION A - General

1. **Introduction**. Special Operations Assault Craft (SOAC) is envisaged as fire support vessel to support *IN* Special Operations at high seas and in shallow water. The operational parameters, viz. speed, endurance, sea keeping ability etc. are envisaged to be as per the operational requirements of Indian Navy. Additionally, SOAC will have an enclosed cabin with bulletproof protection, integral fire power and ISR capability. SOAC with Unmanned Aerial System (UAS) and its accessories would be supported with a Comprehensive Maintenance Contract (CMC) to ensure smooth operations for a duration of 10 years post expiry of warranty period.

2. **Roles of SOAC with UAS**.

(a) Launch independent attack using integral weapon and sensors with capability to provide fire support to other craft in company at sea/ shallow waters.

(b) Carryout surveillance and reconnaissance mission using integral sensors and Unmanned Aerial Systems (UAS) at sea including littoral/ hinterland.

3. **Key Requirements and Design Considerations**.

(a) Capable of safe operations upto Sea State 4. Cabin windshield and frontage sufficiently strengthened to withstand the operations in sea state 4. Additionally, manufacturer to provide operational envelope certified by class for the boats, based on 45 kn at sea state 1 and 20 kn in sea state 4.

(b) **Enclosed Cabin**. An enclosed cabin which would be climate controlled and strong enough to absorb any kind of shock for the range of operating conditions. It will have all around ballistic protection of BIS-threat level 6 in accordance with *Bureau of Indian Standards (BIS)-IS 17051*. The enclosed cabin will have space for following: -

(i) Integrated Control Station.

(ii) Shock mitigating seats with arm rests and height adjustable mechanism for crew and passengers (**refer para 17**).

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(iii) Design of glass windows/ coxswain seating should facilitate optimal field of view for navigation in narrow channels.

(iv) Stowage space with rugged foldable racks and securing arrangement for team equipment/ spare ammunition.

(v) Strength of enclosed cabin to support fitment of gun and other accessories on top.

(vi) All equipment and accessories in the cabin to be of shock dampening design.

(vii) Suitable number of handholds to be provided all around the cabin and also on cabin top for crew and passengers.

(c) **Guns and Accessories**. Two guns with accessories (**refer para 7**).

(d) **Open Deck**. Open deck space of minimum dimensions (4M x 3M) in the aft, smartly designed to allow operation of various payloads in a reconfigurable/ swappable mechanism as per mission requirement: -

(i) Fitment and operation of aft Gun {**refer para 7(a)(iii)**}.

(ii) Operation of UAS (**refer para 34 and para 35**).

(iii) Fitment and Operation of Mission Based Weapons (**refer para 8**).

(e) **Ballistic Protection**. SOAC will have all round ballistic protection either by design or by fitment of Kevlar/ ALON ballistic plates as per Threat level 5 and 6 of BIS- IS 17051. The vulnerable portion of craft including crew gun post, enclosed cabin etc. will be provided protection by fitment of Threat level 6 ballistic plates and remain portions with Threat level 5. These plates to be of man portable dimensions and fitted with bolt-on mechanism in a modular and detachable format to facilitate removal/ fitment/ interchanging as per the mission.

(f) **Gyroscopic Stabilisation System**. To enhance targeting through onboard weapons/ sensors in rough sea condition, SOAC will be provided with a gyroscopic stabilisation system in a modular arrangement.

(g) **Shallow Water Operations**. Shallow draught and maneuverability for operation in narrow and shallow creeks.

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(h) **Integral ISR Capability**. A robust ISR capability at sea, including littoral and hinterland areas through Integral Mid-Range/ Close-Range Unmanned Aerial Systems (UAS) (**refer para 34 and para 35**).

(j) **Integration of Buyer Furnished Equipment**. SOAC manufacturer would have to factor smooth integration of various Buyer Furnished Equipment including Communication (**refer para 10**) and Mission Based Weapon (**refer para 8**). Binding data and miscellaneous integration aspects for the same would be provided by user.

(k) **Other Design Considerations**.

(i) SOAC is to be designed for rugged military use ensuring safety of occupants, reduction of operator fatigue whilst achieving the desired operational parameters.

(ii) Mast for fitment of navigation, communication and surveillance sensors/ aerial. (Mast design should be foldable type to enable safe hoisting/lowering operation of SOAC onboard ships).

(iii) Capable of being transported using earmarked ships.

(iv) Capable to be refuelled at sea (**refer para 14**).

(v) The SOAC would be a sea going craft and should be built as per NHQ approved Classification Society Standards/ Norms and be suitably compliant in respect of afloat safety in accordance with the MCA requirements for the boats and in compliance with NHQ. The Craft should also comply with the latest High Speed Craft (HSC) rules of the class and LSA/FFA to be as per *IN* requirements.

4. **Dimensions (Approx)**.

(a)	**Length Extreme**	:	Between 14 to 17 m.
(b)	**Beam**	:	Not more than 05 m.
(c)	**Draught Max**	:	Not more than 01 m in fully loaded mode.
(d)	**Displacement**	:	Not more than 17 tons.





5. **Operational Parameters**.

(a)	**Max Speed** (at max payload)	:	Not less than 40 kn at 85% MCR. Sprint speed not less than 45 kn.
(b)	**Endurance** (at max payload)	:	Not less than 400 nm (at cruising speed of 30 kn).
(c)	**Crew/ Carrying capacity**	:	08 personnel including crew.
(d)	**Sea worthiness**	:	Upto sea state 04.

6. **Miscellaneous Parameters**.

(a) **Transmission**. As per design and technical team assessment to support craft operations (**refer para 5**) (*Preferred options: Inboard engine with Waterjet propulsion or Surface Drive (Surface Piercing Propeller).*

(b) **Operational Life**. Built for an operational life of atleast 12 years and sustain operations for about 8 hours or more per day with the annual exploitation envisaged to 1500 hours.

(c) **Reserve of buoyancy**. As per requirements of Classification Society.

(d) **Area of Operation and Environmental Conditions**. SOAC should be able to operate in tropical conditions (Area of Operation will be 'Indian Ocean Region (IOR)'). The equipment and the machinery fitted on SOAC should comply to marine operating standards and capable of satisfactory operation in Indian tropical ambient environmental conditions as under: -

(i)	Ambient air temperature	:	Zero to +50° C.
(ii)	Water temperature	:	01° C to 35° C.
(iii)	Max relative humidity	:	100% at 35° C.
(iv)	Salinity of water	:	up to 36000 ppm.

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(v) Water density : 1010 to 1025 Kg/m^3.

(vi) Compliant to IP 56 ingress protection standards.

(vii) The central Climate Control Units/ Marine Air Conditioning unit is to be designed to perform at rated conditions under the following environmental conditions:-

(aa) Ambient Air temperature : 41° C dry bulb.

(ab) Surface Sea Water Temperature : 38° C.

(viii) **Roll/ Pitch**. Sustain Roll at 25° and Pitch of 8°.

SECTION B - Armament/ Mission Based Weapons

7. **Gun System**. SOAC would be fitted with following guns and associated equipment: -

(a) **Guns (*Buyer Furnished*)**. SOAC would be fitted with two guns as listed below (*Both guns would be Buyer Furnished Equipment). Detail of guns would be shared with SOAC manufacturer for integration*):-

(i) **Forward Gun**. One

(ii) 12.7 mm gun on top of enclosed cabin or at a location facilitating un-hindered vision from navigation post. *(Option: Stabilised Remote Control Gun (SRCG) or 12.7 mm HMG).*

(iii) **Aft Gun**. One * 7.62 mm gun in aft *(Option: 7.62 mm Gatling Gun or 7.62 mm MMG).*

(b) **Associated Equipment for Gun Firing (to be *provided by SOAC manufacturer*)**. Each gun would have dual firing feature: 'Crew served (from local post)', and 'remote controlled from a Weapon Control Station'. Following associated accessories will be provided by craft manufacturer :-

(i) **Gun Mounts**.

(aa) **Forward Gun Mount**. 12.7 mm SRCG - rugged base for gun mounting.

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(ab) **Aft Gun Mount**. A Gyro stabilised universal type gun mount for 12.7 mm HMG or 7.62 mm gun.

(ac) A modular gyroscopic gun mount. *{refer para 3(f)}*

(ii) **Electro Optical Infra-Red (EOIR)**. EOIR System feed integrated at Weapon Firing Station and Surveillance Panel with following specifications:-

(aa) Pan and Tilt: Azimuth: n x 360°; Elevation: - 30° to 70°C.

(ab) **Camera**:-

(aaa) **High Definition Day Camera**. Resolution 1028 x 768 pixels or above. Optical Zoom of not less than 30x and Digital Zoom of Not less than min 12x.

(aab) **IR Thermal Camera**. Resolution 640 x 512 cooled or above, for use in day and night.

(aac) Automatic 'Search and Tracking' capability for tracking upto human targets from a range of 5 km in day and from 4 km in night.

(aad) Laser range finder.

(aae) Gyrometer module for stabilisation in azimuth and elevation.

(aaf) **Monitor**. A rugged display loaded with Graphical User Interface (GUI) software with touchscreen control of EOIR and touchscreen tracking.

(aag) Joystick Control with dual functionality operations of EOIR.

(aah) Extractable data including size and directions of detected targets with a storage facility in a hardrive of min 1 TB.

(aaj) Weight < 25 kg.

(aak) IP 67 ingress protection and Mil Standard 810.

(iii) Weapon Fire Control Station at Integrated Controls Station.

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(iv) One Removable/ detachable waterproof Ammunition box per mount for belted ammunition in close proximity of the weapon mount.

(v) Safety limiters for gun ensuring safe firing arcs.

8. **Integration Aspects of Mission Based Weapons on SOAC**. Binding data for various mission based weapons (*buyer furnished*) that are required to be integrated by SOAC manufacturer in reconfigurable/ swappable mechanism are follows:-

Ser	Equipment	Binding Data/ Integration Aspects
(a)	Loitering Munition Ver 1.0	(i) Firing space (l * b *h) - 1.9 m * 0.5 m * 0.5 m. (ii) Stowage space with securing arrangement for 04 munitions. (iii) Weight penalty will be 22 kg per system. (iv) Clear firing arcs for angle of elevation upto 30°. (v) Fitment of GCS antennae (BFE).
(b)	Spike Missile	(i) Firing Space (l * b* h) – 1.5 m * 0.5 m * 0.5 m. (ii) Provision of a bolting adapter to facilitate fitment of Spike firing mechanism on aft gun mount (**refer para 7(b)(i)(ab)**). (iii) Weight penalty (including one missile, iCLU and firing stand) will be 71 kg with addition of 37 kg/ missile. (iv) Stowage space with securing arrangement for 04 missile. (v) Clearance WDA firing arcs as follows:- (aa) **Front**. 10° either side along canister LOS, 0.6 m wide at canister extending to 03 m wide at distance of 07 m along canister LOS before launch. (ab) **Rear**. 7° either side in rear of canister extending upto 01 m wide at a distance of 04 m.
(c)	Loitering Muniton, Ver 2.0 (as per mission, in lieu of	(i) Fitment of launcher (450 kg) with bolt on mechanism. (ii) Firing space (l * b* h) – 3.5 m * 1 m * 1.5 m. (iii) Clear firing arcs for angle of elevation upto 20°.

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	Spike Missile)	(iv) Weight penalty (including one missile and launcher) will be 555 kg with addition of 105 kg per Munition (in canister). Other modular fitment in SOAC can be removed to maintain the weight aspect for this role. (v) Stowage space with securing arrangement for 04 Munitions. (vi) Fitment of GCS antennae of Loitering Munition. (vii) Deck strengthening and bolting mechanism for fitment of launcher in a reconfigurable/ swappable mechanism.

SECTION C - Navigation And Communication

9. **Navaids**. SOAC be equipped with the following sensors as part of navigation suite providing input to a multifunction navigation display at Navigation Control Station in accordance with NHQ/ DSR policy letter **'WP/0204 dated 17 Feb 14' and 'WP/0204 dated 07 Mar 19'** (or latest as applicable) placed at **Annexure II** to **Appendix A** :-

(a) One Low power navigation radar (Radom type).

(b) One ECDIS integrated with Navigation Control Station.

(c) One Echosounder.

(d) One Gyro compass (Capable of maintaining position without GPS input with error ≤ 01 nm in 72 hours).

(e) One GPS (G3I receiver RF enabled).

(f) One EM log.

(g) One Automatic Identification System (AIS).

(h) One Boat Compass.

(j) **Nav Lights**. Two sets of navigation lights, one with IR filter are to be provided as per International Regulations for Prevention of Collisions at Sea, 1972, applicable for the SOAC of this size.

(k) One High beam search light.

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10. **Communication**. Following integrated Mil Specs compliant communication suite to be fitted/ integrated on SOAC:-

(a) 08 x Hand held VHF set with voiceducers and accessories.

(b) One Intra boat communication system with noise cancellation over the ear headsets and one microphone for platform communication.

(c) SATCOM (Buyer Nominated Equipment):-

(i) 01 x MSS MII SOR.

(ii) 01 x ISAT phone.

(d) **GMDSS**.

(i) 01 x VHF MMB (with DSC).

(ii) 01 x INMARSAT 'C'.

(iii) 01 x EPIRB.

(iv) 01 x SART.

(e) **Additional Communication Equipment**. To facilitate secure line of sight communication with SF Teams, *IN* Surface, Sub-Surface and Air platforms and during tri-services operations, following communication equipment to be integrated into SOAC in reconfigurable/ swappable mechanism:-

(i) **Special Operations Communication System (SPOCs)**. (*Buyer Furnished Equipment – binding data will be shared with OEM as required*).

(ii) ***IN* SDRs**. (*Buyer Nominated Equipment*).

Ser	Equipment a.	Quantity b.	Vendor c.
1	SDR (FP)	01	M/s Bharat Electronics Limited
2	SDR (MP)	01	
3	SDR (HH)	04	

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(iii) 01 x portable loud hailer (battery operated) and 01 x fixed loud hailer with 360 degree rotation and microphone fitted on Coxswain console.

(iv) 01 x 5" COTS Hand Signalling Lantern with stowage box.

(v) **Flags/ Navigational Shapes**. Two complete set of alphanumeric flags and pennants of appropriate size, flag of ensign and two sets of semaphore flags complete with Staffs shall be supplied and stowed in Flag Locker. Three sets of navigational shapes (Ball, Diamond and Triangle) made of high quality military grade canvas are to be provided.

(vi) **Fog Horns**. Two class approved marinised Electric Fog Horns with manual backup are to be provided on top of the Wheel House with local operating controls and provision for remote operations from the bridge.

(vii) **Electric Horn**. One class approved Electric Horn to be positioned, with operating controls on the bridge.

11. **Aerial/ Sensors (For Navigation, Communication, Surveillance and Armaments)**. Dimensions, material used and fitment of all aerials/ sensors should be rugged such that they are not susceptible to breakage during operations in high sea and wind conditions. Parts and components used to be compatible with the systems used in civil field, to facilitate easy replacement. The fitment of sensors/ aerials for all navigation (**refer para 9**), communication (**refer para 10**), surveillance {**refer para 7(b)(ii), 34(e)** and **35(e)**} and mission based equipment (**refer para 8**) be carried out on mast/ above enclosed cabin/ suitable location on SOAC.

Integrated Control Station

12. **Integrated Control Station**. To enhance command and control functionality of SOAC from inside the enclosed cabin, various control sections are to be positioned in form of an Integrated Control Station. This will include:-

(a) **Machinery Control Station**. One monitoring and control station for engine, Waterjet/ Surface Drive operations, steering, power generation and other associated machineries.

(b) **Navigation Control Station**. One integrated multifunction navigation display with feeds from all navigation sensors as mentioned at **para 11**.

(c) **Weapon Control Station**. Following be available at Weapon Control Station:-

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(i) Remote firing of both guns {**refer para 7(a)(i) and para 7(a)(iii)**}.

(ii) Operating controls of Loitering Munitions.

(iii) Main feed of EOIR to assist remote firing of Guns.

(d) **Communication Station**. Communication Station should have the provision for effecting communication as per communication package of SOAC (**refer para 10**).

(e) **Surveillance Station**. To enhance command and control, the surveillance station should have control of undermentioned surveillance equipment:-

(i) Feed of EOIR.

(ii) GCS of Mid-Range UAS and Close-Range UAS.

SECTION D - Seamanship

13. **Towing Arrangements**. The forward and aft section of the SOAC should have suitable towing arrangement.

14. **Fuelling at Sea**. SOAC should be capable to be re-fuelled at sea from the earmarked *IN* ships viz. RE/PE/WJFAC in a stopped/ tied alongside condition (while at anchor or adrift). Adequate rugged fuelling arrangements to be provided (including compatible couplings to facilitate fuelling at faster rate).

15. **Hoisting, Lowering and Stowing Arrangements**. SOAC should have following arrangement for hoisting/ lowering using jetty cranes/ ship borne cranes:-

(a) Non-fouling/ snagging strong points.

(b) Certified lifting sling/ strop/ loading arm (two sets per SOAC). The lifting sling/ strop should be of minimum length whilst ensuring safe hoisting of SOAC.

(c) Lifting hooks provided on SOAC should be able to bear strain up to 45° angle and be designed to withstand prolonged lifting. Two in number Henriksen Release Hooks would be fitted for lifting arrangement for ship borne operations. Maintenance and supportability for the same may be factored.

(d) Adequate sling/ cargo nets to be provided for separate hoisting and lowering of modular fitting/ equipment.

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(e) Choke and cradle (one per SOAC) to cater for deployment to forward bases/ ships/ stowage in shed.

(i) Chokes to have a minimum 2 feet ground clearance to facilitate bottom maintenance of SOAC when on chokes.

(ii) Collapsible chokes be factored to facilitate smooth transfer of chokes to planned stowage locations (earmarked ships).

(f) One compatible road trailer for every two SOAC is mandatory. The trailer should be configured to undertake slipway launch.

16. **Anchors and Berthing**. Suitable anchor as well as a separate rope for mooring, berthing and towing is to be provided. The anchor should be stowed in the anchor pit, flushed with the deck for enhanced ergonomics and unhindered crew movement.

17. **Shock Mitigating Seats**.

(a) **Coxswain/ Crew Seat**. Shock mitigating seats with adjustable safety harness, handle on backrest, foldable footrest and seating height adjust feature to adjust to maximum field of view during navigation.

(b) **Passenger Seat**. Compact (occupying less space) shock mitigating seats with adjustable safety harness, handle on backrest and foldable footrest to improve crew comfort.

18. **Life Saving Equipment**. Hazardous Duty Life Jacket (HDLJ) for 14 personnel per boat are to be supplied in accordance with NCD 3926. Following be additionally provided for each boat:-

(a) Two Lifebuoys with night marker.

(b) One Lifebuoy with 30 m lifeline attached. Two rescue quoit with 30 m buoyant line. One Admiralty pattern Jason Cradle, which can be fitted on either port or starboard collar.

(c) Four Buoyant paddles with stowage pockets.

(d) **Self-Righting Mechanism**. A mechanism for Self-righting of craft in case of capsizing be provided.

19. **Deck**. Workspace/ decks should be non-skid type. All steel deck fittings shall be of Stainless Steel grade AISI 316L. All these fittings should be fastened through

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hull on to a S.S. backing plate with S.S. fasteners. The backing plate shall be laid up and covered up with adequate number of layers. All the deck fittings need to be as per IS/ International Standards and to be certified by class. Boat hook/ Pole, fairleads aft, forward bow cleats/ mooring bollard with fairleads and in addition sufficient eye bolts on the floor to secure equipment/ loads.

20. **Weatherproof Covers**. Tailor made weatherproof cover per SOAC is also to be provided for preservation when on the cradle/ chokes. In addition two sets of lightweight weatherproof covers are to be provided for each weather deck fitting and console.

SECTION E - Construction

21. **Hull Form**. SOAC hull is to be constructed using suitable light weight, high strength material meeting requirement of Class for fire and strength. Recommended type hull material should be class approved marine grade composites with carbon fibre. The shape and fittings on the SOAC are to be of robust nature capable to sustain rough operational environment. In addition, availability of the following is to be ensured: -

(a) Transom mounted crash protection frame.

(b) Under deck foamed compartments.

(c) External and internal lifelines.

(d) Triple fendering and full nose cladding as also double skinning wear patches for areas prone to rapid wear and tear are to be ensured.

(e) Adequate ventilation of engine compartment to avoid over heating or subsequent condensation.

(f) **Buoyancy**. SOAC shall be fitted with sufficient buoyancy. Closed cell buoyancy materiel to be used. The GM arrangement of buoyancy proposed should be as per Class Rules.

(g) Vacuum Infusion process to be included to reduce weight of hull. Usage of plywood and piercing of deck to be avoided.





SECTION F – Engine/ Systems

22. **Propulsion**. The mode of operation would be Waterjet /Surface Drive (Surface Piercing Propeller). The propulsion package is to comprise of the following: -

(a) Main Engine should comply to Def Stan 02-313, Reduction Gear should comply to Def Stan 02-305, and Shafting and propeller to comply to Def Stan 02-304. In case of waterjet, the same should comply to *IN* approved SOTR.

(b) The transmission gearbox with suitable reduction ratio to match performance of propulsor and engine.

(c) The seawater cooling system for the main engines should incorporate special fitments/ mechanism for shallow/ muddy water operations.

(d) Main propulsion of the vessel should comply to *IN* shock Grade 'A' iaw *IN* Shock Policy EG/5522/POLICY dated 16 may 07.

(e) The propulsion units are to be seated on suitable vibration mounts to minimise the vibrations.

(f) The engine and bucket integrated control to be through joystick, to ensure automatic adjustment of engine RPM and corresponding response of the hydraulic system.

(g) Rugged and reliable hydraulic system to cope up with the corresponding engine parameters, to give optimum performance.

(h) Engine and steering control is to be connected in parallel to both hydraulic motors to ensure engine and steering control availability during failure of one of the hydraulic motors.

(j) The suction side jet to have heavy duty/ multi-level strainer to avoid various FODs entering impellor/ Tail pipe assembly (if applicable).

(k) Auto Reverse Blast feature to facilitate automatic cleaning of choked suction line (if applicable).

(l) Fuel tanks of the SOAC to have an option of cross connection in between each other, to utilise the tanks in case of corresponding engine failure, by the other engine.

23. **Tank Capacities**. To meet the specified endurance, in consonance with type of engines, the tanks are to be designed to ensure complete stability at various rates

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of consumption. The fuel tanks should cater for normal endurance of SOAC with 25% reserve without lowering the operating parameters outlined at **Para 5**.

24. **Fire Fighting**. Adequate fire fighting arrangements meeting Classification Society requirements are to be provided. Additionally, the following are to be provided:-

(a) The engine room should be provided with a fixed fire fighting system consisting of NOVEC 1230 in accordance with NHQ policy letter EG/4707/06/NBCD dated 10 Jun 20 with the control at console.

(b) One injection point on coxswain console to extinguish bilge/ engine/ electrical fire with suitable capacity NOVEC 1230.

(c) A fume/ smoke detection system shall be fitted in the hold near the diesel tank and engine room with alarm at control console. Engine room ventilation and exhaust arrangements should be as per class requirements and in consonance with engine OEM recommendations.

25. **Power Generation**. Diesel Engine (Prime mover) for power generation is to comply to Def Stan 02-313 and should have 100 % redundancy.

26. **Bilge Pump**. SOAC is to have one each electric and hand operated bilge pump capable of completely clearing the hull cavity and bilges.

27. **Miscellaneous**.

(a) The boat is to be provisioned with an emergency stop switch causing the engine to stop instantly.

(b) The boat is to be fitted with a natural safety switch to prevent the Engine from starting when the Gear gets engaged.

(c) An emergency fuel supply shutoff valve is to be provided outside the casing, to prevent spreading of engine fire.

(d) Separate hydraulic pump for Port jet Bucket/ Steering system along with provisioning of Cross Connection to ensure smooth operation despite breakdown of one of the systems (if applicable).

(e) **Stern Guard**. One SS propeller guard shall be fitted on the transom to prevent damage to stern drive.

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(f) The Black Box (Engine Parameter Controller) to be preferably kept outside the engine compartment to avoid over heating/ subsequent condensation.

SECTION G – Electrical

28. **Power Supply**. The Power Generation and Distribution (PGD) system comprising of alternator, suitable conversion equipment (viz transformer/ rectifier, inverter etc.), distribution panels and associated gear etc. should conform to the Classification Society's norms. The power supply should cater for uninterrupted power supply to various consumers viz. radar, control system, navigation and communication aids, and lighting/ electrical appliances fitted on the SOAC. Standard power supplies ie 230V, 50 Hz, 1 Phase and 24 V DC are to be used. Any other power supply requirement (for a particular consumer) is to be catered internally by the respective system.

(a) The vessel should be provided with suitably rated Generators, along with Switchboard/ control panels, conforming to latest Classification Society rules/ specifications and suitable for marine use for providing supply to various onboard consumers. The quantity and rating of the DA should be in accordance with the load requirements of various consumers, catering for adequate levels of redundancies and growth margin stipulated as per Class regulations for the vessel.

(b) Complete electrical installation including layout of cables will be as per class requirements. Cables used will be electron beam irradiated cross linked type and to be approved by class. No electrical fittings/ cables to be provided for engines at the bottom near the bilges to maintain better electric hygiene. All cables and wires used must be LFH (Low Fire Hazard) cables.

(c) All cables, control boxes and electrical fittings shall be well clear of the bilges *iaw* Class rules. The boat starter must be well protected inside a casing from ingress of water and muck from the bilges.

(d) All electrical equipment such as sockets, lights and enclosures are to be rated to IP 66 or above.

(e) All sockets are required to be provided along with mated plug.

29. **Miscellaneous**.

(a) **Shore Supply Arrangements**. A suitably rated shore supply connection box confirming to latest classification society rules/ specification and standards for marine use of enclosure protection IP-57 shall be fitted on

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weather deck at appropriate position to facilitate power supply to the vessel and charging of batteries. The shore supply box should have suitable terminals for connecting flexible cables. One set of flexible shore supply cable of 50-75 m length should be provided.

(b) **Window Wiper**. Class approved window wipers confirming to classification society rules to be provisioned.

(c) **Motors, Starters and Control Panel**. All motors, starters and control panel should confirm to classification rules suitable for marine use.

(d) **HV Mats**. High voltage insulated synthetic mats confirming to IS-15652-2006 are to be used in spaces/ area housing machinery, switchboards, converters, equipment and batteries.

30. **Batteries**. Suitable number of maintenance free batteries of contemporary technology to cater for back up supply for the total electrical load and engine starting requirement be provided. A suitable battery charger confirming to Classification Society rules for marine use should be provided to facilitate charging of batteries from the available primary supply and shore/ mother ship.

31. **Equipment/ Lighting**. All electrical equipment, cables and fittings shall be of proven design and shall conform to Classification Society's regulations. Following COTS general lighting and fittings are to be provided: -

(a) Adequate LED based lighting/ luminaries to illuminate the main console, deck fixtures, instrument gauge and alarm panels. Preferably, single core cable is to be used for lighting circuits.

(b) Emergency light fittings of 24 V are to be supplied at appropriate locations.

(c) All electrical and machinery equipment are to be installed with due regard to EMI/ EMC issues as per classification society regulations.

(d) Document consisting of basic electrical diagram be provided for generator and other conversion machineries.

32. **Night Vision Compatibility**. The instrument panel, displays etc. onboard the vessel be also Night Vision Imaging System (NVIS) compatible, confirming to Classification Society regulations.

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SECTION H – Medical

33. **Medical Wall**. To support CASEVAC role a detachable medical rack along with customised equipment is to be supplied and fitted inside the enclosed cabin. The modular rack should have one each of the following equipment fitted:-

(a) BP/ECG Monitors.

(b) Portable defibrillator.

(c) Field Trauma Medicine (Adv) kit in a back pack format.

(d) 10 litre Oxygen cylinder with stowage arrangements.

(e) Focus lights on the area where the stretcher will be positioned.

(f) Collapsible stretcher, with suitable securing arrangement.

SECTION J – Unmanned Aerial System

Unmanned Aerial Systems (UAS). Unmanned Aerial System will consist of two types of Aerial Systems, viz. Mid-Range Unmanned Aerial System and Short-Range Unmanned Aerial System. The specifications and scaling are enumerated in succeeding paragraphs: -

34. **Mid-Range Unmanned Aerial System (UAS)**.

(a) **Launch**. Capable to launch (preferably VTOL, or else rail launched) from mobile SOAC at sea.

(b) **Recovery**. Autonomous or operator assisted recovery as follows:-

(i) Land onboard a mother vessel at sea (*IN* ship in vicinity) with an open deck of 08 m by 08 m in sea states upto 02.

(ii) Autonomous landing on a designated waypoint at land.

(c) **Operation**. Operation from mobile SOAC at sea with following capability:-

(i) Endurance - not less than 12 hours.

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(ii) Mission Range :-

(aa) Not less than 80 nm.

(ab) Telemetry and payload control upto full mission range using SDRs.

(iii) Wind resistance - not less than 30 kn.

(iv) Ceiling Height - not less than 2500 m.

(v) **Data Relay**. Ability to transmit ISR feed to forward deployed teams.

(vi) **Shifting of Control**. Ability to transfer control (hand shake) to forward deployed team upto mission range.

(d) **Payloads (swappable)**.

(i) **EOIR with gimbal stabilisation** with following characteristics: -

(aa) Medium Wavelength Infrared (MWIR) with not less than 15x optical zoom ratio and 4x digital zoom.

(ab) Laser Range Finder not less than 10 km.

(ac) EO full HD sensor with not less than 45x optical zoom ratio, in addition 4x digital zoom.

(ad) Laser Illuminator.

(ae) AI based object detection and classification, moving object tracking, geo location of target, and extractable real time during surveillance mission.

(af) Ability to continuously track the target maintaining relative position of UAS with target.

(ii) **Communications relay** *and* bridging capabilities (specific radio types and bands would be user defined, available option - L3Harris RF-7850A-UA).

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(iii) **COMINT (user defined).**

(aa) **COMINT.**

(aaa) Dual Channel duplex SDR transceiver.

(aab) Frequency range of Operation – 1 MHz to 3 GHz.

(aac) Communication intercept support for PTT (PMR), Telecom and satcom.

(aad) An onboard version of PCLe storage {(Gen 4.0 or above), latest being Gen 5.0 should be fitted.

(aae) A scalable X 86 based processor for onboard edge processing of signals of interest.

(aaf) Output supported for voice, texts and encrypted comms.

(aag) RF Direction finding for entire tuning range.

(aah) RF based geolocation for pinpoint targeting.

(aaj) Secure Communication downlink utilizing AES 256 or latest encryption standards.

(aak) Extended temp ranges (- 40 Deg to 85 deg C).

(aal) Ability to detect in an automated fashion and direction- finding commercial drone UAV links in 433 MHz, 915 MHz, 2.4 GHz, 5.1 GHz and 5.8 GHz bands.

(iv) **EW payload (user defined bands).**

(aa) **ELINT.**

(aaa) Ability to record and direction find arbitrary RF signals within the entire tuning range for future analysis and mapping.

(aab) Electronic Surveillance Measures to be operationally demonstrated between 0.05 – 18 Ghz.

(aac) Identify, classify, and geolocate RADAR signals, including automated mapping of enemy air Defence RADARS along with logging of critical RF parameters such as frequency, pulse repetition interval, pulse shapes, modulation type, frequency agility, chirp pattern and signal strength.

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(aad) Ability to perform RF fingerprinting on RADAR emitters.

(aae) Automated detection of GNSS jamming and direction finding of hostile emitters performing the same

(aaf) Geotagged survey of RADAR signals for AIR Defence RADAR monitoring.

(v) **Synthetic Aperture Radar (SAR).**

(e) **Ground Control Station (GCS).** GCS should have:-

(i) A Tracking/ Directional Antennae.

(ii) An Omni directional antennae.

(iii) Gyro stabilised mount for fitment of antennae.

(iv) Toughbook with touchscreen and joystick controls integrated at Surveillance panel.

(v) Spare batteries/ fuel stowage arrangement (as applicable).

(vi) Other accessories as required to support UAV operation.

(f) **Scaling.** The envisaged scaling of Mid-Range UAS is as follows:-

(i) Each UAS will consist of **two** UAVs and **one** GCS with **one** payload of each type as specified.

(ii) One UAS will be provided with two SOACs (a total of **five** UAS).

(g) Encryption – AES 256 or latest Encryption.

(h) **Testing Standards.** Mid-Range UAS shall comply with IP rating 56 and applicable JSS 55555 2020 testing standards (for imported equipment - MIL STD 810G or equivalent standard followed in the country of manufacturer).

35. **Close-Range Unmanned Aerial System (UAS).**

(a) **Launch.** Ability to be launched, controlled and recovered from mobile SOAC at sea. (Preferably VTOL, or tube launched).

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(b) **Recovery**. Capable of recovery onboard mobile SOAC at sea. (Auto home shift feature to facilitate landing on a mobile platform).

(c) **Operation**. Operation from mobile SOAC at sea with following capability:-

(i) Endurance -

(aa) Not less than 120 min with EO/IR payload.

(ab) Not less than 60 min with max payload of 10 kg.

(ii) Mission Range with EOIR payload:-

(aa) Not less than 10 nm.

(ab) Telemetry and payload control upto full mission range using SDRs.

(iii) Wind resistance - not less than 20 kn.

(iv) Weight of UAS - not more than 20 kg.

(v) Ceiling Height - not less than 2500 m.

(vi) **Detectability**. The visual and aural signature of UAV be such that it remains undetected from human surveillance at a slant range at which it can detect and track human size target.

(vii) **Data Relay**. Ability to transmit surveillance data to forward deployed teams.

(viii) **Shifting of Control**. Ability to transfer control (hand shake) to forward deployed team

(d) **Payloads** :-

(i) **EOIR with gimbal stabilisation**:-

(aa) Long Wavelength Infrared (LWIR) with not less than 5x optical zoom ratio.

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(ab) EO full HD sensor with not less than 45x optical zoom ratio, in addition 4x digital zoom.

(ac) Laser Illuminator.

(ad) AI based object detection and classification, moving object tracking, geo location of target, and extractable real time during surveillance mission.

(ae) Ability to continuously track the target maintaining relative position of UAS with target.

(ii) Carry and drop **explosive payload/ cargo** of not less than 10 kg.

(iii) **Relay communication** (swappable with explosive payload).

(e) **GCS**. GCS should have following:-

(i) A Tracking/ Directional Antennae.

(ii) An Omni directional antennae.

(iii) Gyro stabilised mount for fitment of antennae (as required).

(iv) Toughbook with touchscreen and joystick controls integrated at Surveillance panel.

(v) Spare batteries/ fuel stowage arrangement (as applicable).

(vi) Other accessories as required to support UAV operation.

(f) **Scaling**. The envisaged scaling of UAS is as follows:-

(i) Each UAS will consist of **two** UAVs and **one** GCS with **one** payload of each type as specified.

(ii) One UAS will be provided with each SOAC (a total of **ten** UAS).

(g) Encryption – AES 256 or latest encryption.

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(h) **Testing Standards**. Close-Range UAS shall comply with IP rating 67 and applicable JSS 55555 2020 testing standards (for imported equipment MIL STD 810G or equivalent standard followed in the country of manufacturer).

36. **Approval of Drawings & Documents**. Approval of documents to be done by the Classification society as per classification society rules for all equipment (Refer Annexure I of this Appendix).





Annexure I to Appendix A
(Refers to Para 36 of RFP)

DRAWINGS, DOCUMENTS AND CERTIFICATES

1. **Drawings**. Once the contract has been placed, the ordering of long delivery items, e.g., engines, gearboxes, fittings may be progressed, but no construction shall commence until the following class approved drawings are approved by Class. Post approval, Builder shall forward, three copies of following drawings with estimated weight of structure, equipment etc.

(a) Faired lines plan with table of offsets.

(b) Model test report.

(c) Hydrostatic curves and stability calculations.

(d) Detailed General Arrangement.

(e) Weight book indicating CG of each items in X, Y & Z directions.

(f) Structural drawings duly approved by Classification Society. These should include following:-

(i) Sections showing longitudinal and transverse strength members.

(ii) Profile and decks.

(iii) Watertight bulkheads.

(iv) Integral tanks.

(v) Aft end construction.

(vi) Engine room construction.

(vii) Fore end construction.

(viii) Longitudinal and transverse framing system.

(ix) Wheel house/ Navigational Console.

(x) Lifting Arrangement.

2. Following class approved system drawings are to be submitted subsequently to Indian Navy, before commencement of fitting out work: -

(a) Engine cooling (FW/SW) system.

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(b) Bilge system.

(c) Fresh water system.

(d) All Machinery seatings/ installation drawings, illustrating Engine support, control panel position and details.

(e) Fuel oil/Lubrication Oil system with storage tanks.

(f) Drawing of switch panel, control panel etc.

(i) Diagram of connections details and schematic.

(ii) Details of type, make and rating quality of switches, fuses, instruments etc.

(iii) Complete wiring circuit diagram of all electrical fittings and controls must be provided. The diagram may be documented. In addition, a metallic plate with engraved diagram also may be fitted inside the boat for ready reference.

(g) Deck plan of the craft showing position of all equipment/ light fitting etc, and the routing diagram of electric cables.

(h) Power Generation and Distribution drawing.

(j) Load chart for minimal power requirements.

(k) Ventilation calculation and system drawing, as applicable.

3. Where applicable each drawing shall show the scantlings of all fittings, reference to material specifications, method of fitting/ working and the location.

4. **As Fitted Drawings/ Documents**. On successful completion of all tests/ trials and prior to the delivery of the specific boat, the builder shall supply to Indian Navy, consignee and Inspecting Agency one copy each of the following as fitted /as made drawings and documents. All documents to be supplied are to be original OEM issued and to be distributed as follows: -

(a) One set to consignee with each boat.

(b) Two sets per contract to Indian Navy.

(c) One set per contract to inspecting agency.

5. Copies of as fitted drawings / documents for serials listed at **Para 1** to **Para 3** above.





6. **Boat Hand Book**. Boat hand book containing brief description of all features of the boat and its photographs from various angles. This should cover following in brief: -

(a) Purpose.

(b) Identity.

(c) Speed.

(d) Endurance.

(e) Displacement & weighing.

(f) Draught corresponding test certificate to displacements.

(g) Principal Dimension.

(h) Environmental limitation.

(j) Manning requirement.

(k) Carrying capacity.

(l) Brief description of lifting arrangement and precautions to be observed by the user.

(m) Safety equipment provided.

(n) Fuel and coolants to be used as recommended by OEMs.

(p) List of principle drawings and documents.

(q) Brief operating instructions on main engine and generators.

(r) PGD diagram with brief description.

(s) Parameters of stability.

(t) Any limiting criteria for operation and maintenance.

7. Original OEM Operation/ maintenance manuals/ CPL/ PIL of main engine, steering system, DG sets and Pumps, as applicable in consultation with Class shall be handed over with each boat.

8. Electrical Technical and Operating Manuals for Automatic Fire Detection, Control Panel, Navigation Panel, GPS and Communication sets, as applicable in consultation with Class.

9. **Photographs**. One soft copy and two enlarged colour printed copies of the following views as photographed: -

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(a) Full starboard profile view on transom showing propeller, rudder etc, with boat out of water on chocks.

(b) A view of the bow to show lines of the boat (out of water).

(c) Starboard profile of boat in water (preferably looking down on the boat)

(d) A view on starboard bow (approx. 45° to centre line).

10. **Equipment Schedule (D-787)**. The boat builder is to prepare an equipment Schedule covering all items provided on boat, giving their make, model number, material specification, original supplier and their address. Equipment schedule is to be submitted to Inspecting agency for approval at least four weeks prior to pre-despatch inspection. The boat is to be handed over to consignee as per the approved equipment schedule. Equipment schedule is to contain following. (Sample of the same may be obtained from Indian Navy/ DNA on placement of order).

(a) Certificate 'A' contains handing / taking over statements from the builder to consignee.

(b) Certificate 'B' contains statement of transfer of Boat.

(c) Certificate 'C' contains handing/ taking over statements between the Naval Officers responsible for the boat.

(d) List of Documents supplied.

(e) List of As fitted Drawings.

(f) List of fitted items (Hull/ Engineering/ Electrical)

(g) List of loose items (Hull/ Engineering/ Electrical)

(h) List of On Board Spares (Hull/ Engineering/ Electrical)

(j) List of Tools supplied.

(k) Blank Form for utilization of OBS (Hull/ Engineering/ Electrical).

(l) All the relevant load test certificates.

(m) Conformity to Naval Standards/ Class Standards, as applicable.

11. **Report of Tests and Trials**. All tests and trials carried out by Class/ Navy reps are to be compiled into a book form by the boat builder and a copy of same is to be forwarded to the consignee along with the boat with a copy to Indian Navy/ DNA. The following reports are to be included: -

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(a) PDI Report, Weight record, Test and Trials report as specified including Speed Vs RPM curve.

(b) Certificate of approval by Govt. authorised agencies for Life Saving Appliances.

(c) Report of Final Inspection.

(d) Form IN 701, ie, Load test Certificates for boat slings and lifting points.

(e) Boat Warranty certificate.

12. **Boat Log Book**. A printed blank book containing specific forms (sample can be obtained from Indian Navy/ DNA on placement of order) are to be supplied with the boat to record repairs / maintenance undertaken during the life cycle of the boat.





Annexure II to Appendix A
(Refers to Para 9 of
Appendix A of RFP)

POLICIES FOR NAVIGATION RADAR FOR SMALL SHIPS/ BOATS

1. The internal landing craft embarked on board *IN* ships are envisaged to undertake 'Over-the-Horizon' operations at sea. It is therefore required that a few basic navigation aids be fitted onboard such craft to ensure their effective and optimal utilisation. Accordingly, it is envisaged to fit 'Integrated Navigation Suite for Boats (INSB)' on such craft. The INSB will consist of the following:-

(a) Low Power Radar (Radome Type).

(b) Multi Function Console (MFC).

(c) Automatic Identification System (AIS)

(d) Global Positioning System (GPS).

(e) Heading Sensor.

(f) Fixed VHF MMB.

2. **Fitment of INSB**. All internal landing craft which are embarked on board may be fitted with the INSB as a standard fit. Fitment of INSB could also be considered on other platforms (with power generation capacity) namely yard-craft, self propelled barges, passenger ferries etc based on the requirement by Command Headquarters.

3. **Procurement Methodology**. Integrated Navigation Suite for Boats (INSB) is to be fitted in compliance with the Naval Staff Qualitative Requirements (NSQRs) placed at enclosure. The procurement is to be carried out as follows:-

(a) Under the delegated powers of Command HQs for in-service integral landing craft, embarked on board *IN* ships.

(b) As a Buyer Nominated Equipment (BNE), for integral landing craft of new construction ships, through the shipyard route.

4. **Vendor List**. The approved list of vendors for procurement of INSB is as mentioned below.





Ser	Name of Vendor and Contact Details
(a)	OM&V Infratrade (India) Pvt Ltd OMV House, Opposite Saviour Hospital Navarangpura, Ahmedabad 380014 Tele: 079-26463181/82 Fax: 079-26407753
(b)	Navicom Technology International Pvt Ltd The Great Eastern Summit, Wing B, 11th Floor, Sector 15, CBD Belapur, Navi Mumbai 400614 Tele: 022-27563119/5175/5176 Fax: 022-27563121 Web: http://navicom.in
(c)	M/s Elcome Integrated Systems 11th Floor, Great Eastern Summit A, Plot No 56 Sector 15, CBD Belapur Navi Mumbai 400614 Tele: 022-67618000/8149 Fax: 022-67124694
(d)	OS Marine Products and Systems Pvt Ltd 1st Floor, Wings of Eagles, SS Commercial Estate Nagavarapalaya Main Roadm CV Raman Nagar Bangalore 560093 Phone/ Fax: 080-25241044 Web: www.osimaritime.com

5. **Review of Policy**. The revised policy spelt out herein, on the fitment of Integrated Navigation Suite for Boats (INSB), would be reviewed, based on feedback of Command HQs and when major changes are considered operationally necessary.

6. **Purpose**. The 'Integrated Navigation Suite for Boats (INSB)' is required to be fitted on integral craft embarked on IN Ships viz LCAs, LCACs etc and similar other craft for an integrated presentation of the navigational situation, whilst undertaking operations at sea. The INSB will consist of the following:-

(a) Low Power Radar (Random Type)
(b) Multi Function Console (MFC)
(c) Automatic Identification System (AIS)
(d) Global Positioning System (GPS)
(e) Heading Sensor
(f) Fixed VHF MMB.

7. The requirements envisaged for the 'Integrated Navigation Suite for Boats (INSB)' are enumerated in the succeeding paragraphs.

8. **Radar**. The INSB will have an 'I'-Band radar housed in Randome. The specifications of radar are as follows:-

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(a) **Functional Characteristics**.

(i) Display clear raw video of all moving and stationery contacts, coastline, creeks, navigational buoys and marks, harbour installations, jetties etc.

(ii) Display own position and coordinates of the detected contacts in Latitude and Longitude when GPS feed is available.

(iii) Should be able to track at least 10 radar contacts and display at least 50 AIS contacts at a time.

(iv) Display coordinates of the tracked contacts in Lat/ Long and Range/ Bearing for own boat.

(v) Support Mini Automatic Radar Plotting Aid (MARPS)/ ARPA with the ability to provide Range, bearing, course, speed, CPA and TCPA of contact being tracked.

(vi) The user should be able to select between Head Up, Course Up and North Up display.

(vii) The user should be able to select True/ Relative Motion display for contacts being tracked.

(viii) The MFC should have provision to depict range rings when required by the user.

(ix) Should have the facility for off-centring chart/ radar.

(b) **Technical Characteristics**.

(i) Frequency of transmission between 9300 to 9500 Mhz.

(ii) The peak power output of radar should not exceed 4 Kw.

(iii) Instrumented Range should be 24 nm or more.

(iv) Minimum detectable range should be 50 m or less.

(v) Time taken to transmit from a cold start should not exceed 03 min.

(vi) The horizontal and vertical beam width should be 5°±1° and 25°±2° respectively.

(vii) The size of randome should not be more than 20 inches.

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(viii) IP 66/ IPX6 or higher ingress protection standards for randome.

9. **Multi Function Console**. The INSB is to have a Multi Function Console with the capability to providing a chart overlay and integrate data from radar (along with heading sensor input), AIS and GPS. The specifications of MFC are as follows:-

(a) The size of the MFC should be between 12 to 15 inches depending on the size of landing craft/ boat. There should be access control through a 'Password" protection when MFC is switched 'ON'.

(b) The resolution of the display should be 1280 x 1024 pixels or higher. The screen should be day readable.

(c) The ENCs should be loadable on the MFC using external DVD drive through a USB/ suitable interface. The USB port should have suitable covering arrangement to prevent ingress of salt and water.

(d) The system should have the capability to load ENCs in S63 and ARCS.

(e) Data input/ MFC functional control should be available in form of a mini flushed keyboard or a joystick device which should be able to withstand corrosive marine environment and should be IP 67/ IPX7 compliant.

(f) The cursor position on the MFC is to indicate 'Range & Bearing' and 'Lat & Long'. The user should have this data available on MFC screen.

(g) The user should be able to make a track, area, create a waypoint and label them on the MFC.

(h) It should have memory to store at least 1000 user points and 100 routes/ areas. There should be a facility to playback the sortie with time stamping for at least 72 hours of operation.

(j) It should have a facility for a proximity alarm (for any target closing the boat) at the range defined by the user.

(k) MFC screen should be able to split either to display radar or chart along with navigational data simultaneously.

(l) The MFC should have Ingress Protection IP 67/IP X7 and should be flushed or bracket mounted.

(m) A light weight cover should be provided to cover the MFC in harbour for protection against physical damage to the screen.

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10. **Function Box**. The Function Box is required to house AIS, GPS and associated electronics. The radar processor is also to be accommodated in the Function Box, if the same is not a part of the MFC. The Function Box should be able to undertake necessary exchange of data with MFC. The features of a Function Box should be as follows:-

(a) The function Box should be IP 66/ IPX6 compliant.

(b) All External connectors should be made of corrosion resistance material.

(c) There should be no ingress of water when the connectors are mated.

11. **Function Box – Sub Assembly**. The details of sub-systems that are to be housed in the Function Box are as follows:-

(a) **Automatic Identification System**. The equipment should be able to transmit and receive AIS data. Additionally, the AIS should have the following characteristics and functionality:-

(i) The operator should be able to use AIS in 'Receive-only' mode when required. It should be possible to seize the transmission through the MFC/ muting switch on the function box.

(ii) Should be able to provide dynamic, static and voyage related data on MFC.

(b) **Global Positioning System**. The GPS should have the following characteristics and functionality:-

(i) Minimum 12 receiver channels with accuracy better than 10m.

(ii) WGS 84 as the default datum.

(iii) The loss/ non-availability of GPS signal should be indicated on MFC.

12. **Power Control and Distribution Unit (PCDU) Box**. The purpose of PCDU is to provide stabilised power supply to INSB. The PCDU should have an auto-changeover mechanism so that secondary supply takes over in case the primary supply fails. The PCDU is to meet IP66/ IPX6 or higher ingress protection standards. The PCDU is required to cater for two input supplies as indicated below:-

(a) **Primary- Generator Supply**. To receive the AC input of 220-260V 50Hz from the generator and provide stabilised AC/ DC supply to the sub-systems as required.

(b) **Secondary- Battery**. The PCDU should have the provision of receiving 24V DC supply from an external battery (when the INSB is being

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operated on a battery, all functionalities should be available except the radar to conserve the battery power).

13. **Heading Sensor**. The INSB should have a heading sensor having accuracy of ± 2 deg in static/ dynamic conditions. It should be able to withstand this accuracy up to 30 deg of platform roll conditions. The output of heading sensor should be available to INSB as required for using features like ARPA/ MARPA etc. The heading Sensor is to be fitted as an independent unit on any suitable angled bulkhead with waterproofing arrangements meeting IP66/ IPX6 standards.

14. **VHF MMB**. The fixed VHF MMB should be having following functional and operational specifications:-

(a) **Frequency**. The frequency of operation for transmission and reception should be between 156.050 to 157.425 MHz and 156.000 to 163.275 MHz respectively.

(b) The MMB should have a whip antenna. The antenna should have ratchet mount so that it can be struck down whilst hoisting the craft.

(c) Ability to store at least 05 channels.

(d) A large display with backlight.

(e) Should have one touch access to Ch 16.

(f) Should be able to operate for at least 8 hours continuously.

(g) Should have a speaker for reception audio output.

(h) Should have a flexi-cord attached with the microphone. The microphone should have a PTT (Press-to-talk switch).

(j) Should have an output of 20W or more with an option to transmit at a lower power, if required by the user.

(k) The MMB set should be compliant to IP 66/ IPX6 or higher ingress protection standards.

'I' Band COTs Radar

15. **Purpose.** The purpose of this radar is to serve as primary navigation radar onboard small ships for presentation of navigational situation to assist safe navigation of ships in restricted areas and at sea.

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16. **Functional Characteristics**. The radar should perform the following functions as per the performance standards prescribed in IMO Resolution MSC.192(79), as amended from time to time:-

(a) Display clear raw video of all moving and stationery contacts, coastlines, creeks, navigational buoys and marks, harbours installations, jetties, etc.

(b) Display own position and coordinates in Latitude and Longitude when CPS feed is available.

(c) Track atleast 20 radar contacts and display atleast 20 AIS contacts (including 100 sleeping AIS contacts) at a time.

(d) Display coordinates of the tracked contacts in Lat/Long and Range/ Bearing from own position.

(e) Solve relative velocity problems, for collision avoidance

(f) Support Mini Automatic Radar Plotting Aid MARPA/ ARPA with ability to provide Range, Bearing, Course, Speed, CPA and TCPS of contact being tracked.

(g) The user should be able to select between Head Up, Course Up and North up display.

(h) The user should be able to select True/ Relative Motion display for contacts being tracked.

(j) Provision to depict range rings when required by the user.

(k) It should have the facility for off-centering.

17. **Technical Characteristics**.

(a) Frequency of transmission needs to be between 9300 to 9500 Mhz.

(b) The peak power output of radar should be between 10-12 Kw.

(c) Instrumented Range should be 48 nm or more.

(d) Minimum detectable range should be 50 m or less.

(e) Time taken to transmit post start up should not exceed 04 min.

(f) The horizontal and vertical beam width should be $\leq 2^{\circ}$ and $\geq 20^{\circ}$ respectively.





(g) The size of antenna should be < 5ft.

(h) The ADE (Above Deck Equipment) should comply with ingress protection standard IP66/ IPX6.

18. **Multi Function Console**. The radar is to have a Multi Function Console with the capability of providing a chart underlay and integrate data from radar, AIS and GPS. The specifications of MFC are as follows:-

(a) The diameter of the minimum display area of the MFC should be between 12 to 19 inches.

(b) The resolution of the display should be 1024 x 768 pixels or higher. The screen should be day and night readable.

(c) The ENCs (S-63)/ CMAP should be loadable on the MFC using external DVD drive through a USB/ suitable interface. The data port should have suitable covering arrangement to prevent ingress of salt and water.

(d) The system should have the capability to load ENCs/ CMAP.

(e) Data input/ MFC functional control should be available in the form of a mini flushed keyboard or a joystick device which should be able to withstand corrosive marine environment and should be IP66/ IPX6 compliant.

(f) The cursor position on the MFC is to indicate 'Range & Bearing' and 'Lat & Long'.

(g) The user should be able to generate manual track, create area, waypoint and label them on the MFC.

(h) It should have memory to store at least 1000 user points and 100 routes/ area.

(j) There should be a facility to playback the sortie with time stamping for at least 72 hours of operation, alternatively external DVR may be provided.

(k) It should have facility for a proximity alarm (for any target closing) the area defined by the user.

(l) The MFC should have Ingress Protection IPX6 and should be flushed or bracket mounted.

(m) A light weight cover should be provided to cover the MFC in harbour for protection against physical damage to the screen.

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19. **Miscellaneous Issues**.

(a) **Modular Fitment**. Fitment of the system should be modular so that it can be removed and re-installed by trained ship staff. All connectors should be accessible to the maintainer.

(b) **Interface**. The system should have an open architecture to integrate sensors such as GPS, Echo Sounder, AIS, Log and ECDIS on the MFC.

(c) **Graceful Degradation**. In case, if any sensor is not working, this should not affect functioning of other sensors. All failures/ non-availability of data from any sensor should be indicated on MFC.

(d) **Weight and Dimensions**. The weight of the entire system should not exceed 65 kg.

(e) **Power Consumption**. The maximum power consumption of the radar should not exceed 600 watts.

(f) **Power Supply**. The power supply of the radar and MFC should be 24V DC.

(g) **Software**. The software used should be certified by the respective OEM and should be valid for the complete lifetime of the equipment. The software should be free of any malicious code. The backup software is to be provided on a DVD/ CD and should be loadable by ship staff in case the system fails/ crashes. In case of its non-availability, alternative arrangement should be provided for loading.

20. **Built In Test Equipment (BITE)**. The system should have Built-in-Test facility to identify, locate and indicate to the operator any fault that has occurred in the system during the operation. The BITE software should run automatically at power-up and should have control over the sub-systems hardware. The BITE should isolate all faults upto LRU level and be capable of identifying specific faults of break(s) in physical communication.

21. **Environmental Standards**. The equipment should comply with IEC 60945 standards or equivalent contemporary versions of environmental and EMI/ EMC standards.

22. **Certificate/ Compliance Certificate**. The certificate of compliance and conformity with IEC 60945 or higher standards by OEM is to be provided.

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Appendix B
(Refers to Para 26 of RFP)

COMPLIANCE TABLE

FOR PROCUREMENT OF SPECIAL OPERATIONS ASSAULT CRAFT

Ser No	Requirement as per the RFP	Compliance/ Partial Compliance	Indicate references of Paras/Sub Paras of the Main Technical Document
General conditions as per RFP (para 1 to 56)			
Technical Parameters as per RFP			
Commercial Parameters of RFP			
(a)	Performance-cum-Warranty Bank Guarantee as per Annexure III of Appendix G of RFP		
(b)	Advance Bank Guarantee as per para Annexure II of Appendix G of RFP		
(c)	Performance Bank Gurantee for CMC as per Annexure IV of Appendix G		
(d)	EMD as per Annexure I of Appendix J of RFP (indicate amount in EMD)		





Appendix C
(Refers to Para 11 of RFP)

WARRANTY CLAUSE

(To be amended as per requirement and all blank spaces to be filled up)

1. The **SELLER** warrants that the goods/ services supplied under this contract conform to technical specifications prescribed and shall perform according to the said Technical Specifications.

2. The **SELLER** warrants for a period of **24 months**. The warranty shall commence from the date of the acceptance of the respective SOAC with UAS. The warranty period for all SOACs and UAS would expire together post completion of 24 months from the date of acceptance of last batch of SOACs and UAS. The goods/stores/services supplied under this contract and each component used in the manufacture thereof should be free from all types of defects/failures (including latent and patent defects).

3. If within the period of warranty, the goods/stores are reported by the **BUYER** to have failed to perform as per the specifications, the **SELLER** shall either replace or rectify the same free of charge, maximum within **15 days** of notification of such defect by the **BUYER** provided that the goods are used and maintained by the **BUYER** as per instructions contained in the Operating Manual. Warranty of the equipment would be extended by such duration of downtime. **Repairs during warranty period would be undertaken at any port/place in India**. Record of the down time would be maintained by user in log book. Spares and all consumables required for warranty repairs shall be provided free of cost by **SELLER**. The **SELLER** also warrants that the special oils and lubricants required for the warranty repair of the equipment shall be provided by the **SELLER** himself. **All activities including diagnosis, rectification, calibration, transportation etc, required for making equipment serviceable and available would be the SELLER's responsibility**. The **SELLER** also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the **BUYER** and the **SELLER**. The **SELLER** shall intimate the assignable cause of the failures. All periodic routines (time based or operation/ usage based)/ PPM on SOAC and UAS includes all internal equipment provided by the vendor or equipment OEM during the period of warranty.

4. **SELLER** hereby warrants that necessary service and repair backup during the warranty period, shall be provided by the **SELLER** and he will ensure that the





cumulative downtime **period for the equipment does not exceed 10 % of the warranty period**. Repair services would be provided by the seller in **any other port of India** during warranty period.

5. If a particular equipment/ goods fails frequently and/or, the cumulative down time exceeds **5 %** of the warranty period **or a common defect is noticed in more than 10 % of the quantity of goods with respect to a particular item/component/sub- component**, that complete item/equipment shall be replaced free of cost by the **SELLER** within a stipulated period of **15 days** of receipt of the notification from the **BUYER** duly modified/upgraded through design improvement in all equipment supplied/yet to be supplied and ESP supplied/yet to be supplied.

6. **SELLER shall associate technical personnel of maintenance agency and QA of BUYER during warranty repair and shall provide complete details of defect, reasons and remedial actions for averting recurrence of such defects.**

7. In case the SOAC and UAS are at sea, urgent repairs (O level maintenance) would be undertaken by crew. For such repairs, warranty spares based on the exploitation pattern of the equipment as explained in **Para 6** will have to be positioned on each SOAC and UAS by the vendor. The spares consumed during the sailing by the **BUYER** is to be replenished by the **SELLER** within **07 days** of the SOAC and UAS arriving harbour. Warranty spares are to be delivered alongwith delivery of each SOAC and UAS *iaw* delivery schedule given in **Annexure VI** to **Appendix G**.

8. In case the complete delivery of the Engineering Support Package is delayed beyond the period stipulated in this contract, then the **SELLER** undertakes that the warranty period for the goods/stores shall be extended to that extent.

9. The **SELLER warrants that the goods supplied will conform to the Temperature and Humidity conditions as mentioned in Appendix A to this RFP.**

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Appendix D
(Refers to Para 32 of RFP)

CERTIFICATE: MALICIOUS CODE

(To be rendered on the Company Letter head)

1. This is to certify that the Hardware and the Software being offered, as part of the Contract, does not contain embedded malicious code that would activate procedures to:-

(a) Inhibit the desired and designed function of the equipment.

(b) Cause physical damage to the user or equipment during the exploitation.

(c) Tap information resident or transient in the equipment/ networks.

2. The firm will be considered to be in breach of the procurement contract, in case physical damage, loss of information or infringements related to copyright and Intellectual Property Rights (IPRs) are caused due to activation of any such malicious code in embedded software.

(Signed)
Date: Designation/Name/Address of firm

MALICIOUS CODE CERTIFICATE FROM HARDWARE OEM

1. It is certified that the firmware/ microcode installed in the hardware products listed below. Which is proposed to be delivered by our Business Partner M/s _____, is approved by the OEM. The products have been thoroughly tested and found to be working as per the OEM's specifications at the time of delivery and no malicious code has been found in these products. Patch level update of the system is enclosed.

2. The latest security patches as available at the time of supply, have been updated in the firmware. We undertake to provide solutions to address all security issues during the installations, warranty and support period of the equipment, provided end of support for the same has not been declared for the equipment by the OEM(s).

Signed)
Date: Designation/ Name/ Address of Firm





MALICIOUS CODE CERTIFICATE FROM SOFTWARE OEM

1. It is certified that the firm has taken all steps to ensure that the software products listed below, which is proposed to be licensed by _____ is found to be working as the OEM's specifications at the time of delivery and no malicious software computer program/ code hidden within the software that performs a function unauthorised by the OEM's published documentation has been introduced in these products. Patch level update of the software is enclosed.

2. The latest security patches as available at the time of supply, have been updated in the software. We undertake to provide solutions to address all security issues during the installation, warranty and support period of the software, provided end support for the same has not been declared for the equipment by the OEMs.

Date:

(Signed)
Designation/ Name/ Address of Firm

MALICIOUS CODE CERTIFICATE FROM BIDDER

1. This is to warrant that the hardware and software being offered, as part of the contract does not contain embedded malicious code at the time of installation and commissioning. Patch update of the hardware/ software is enclosed.

2. The firm will be considered to be in breach of the contract, in case any physical damage or any compromise in the information and cyber security or infringement related to copyright and Intellectual Property Right (IPRs) is caused due to activation of any malicious code embedded in the hardware/ software.

3. The latest security patches as available at the time of installation and commissioning, have been updated in the hardware/ software. We undertake to provide solutions to address all security issues during the warranty and support period of the hardware/ software, provided end support for the same has not been declared for the equipment by the OEMs and to address all exposed security issues by exercising immediate Work-around until the OEM has made the respective solutions available.

Date:

Signed)
Designation/ Name/ Address of Firm

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Appendix E
(Refers to Para 34 of RFP)

PRODUCT SUPPORT

1. **Maintenance Philosophy**. The operational/In-service life of equipment has been stipulated as **12 years or 18000** hours of operation. Maintenance of the equipment is structured as **Two years** of Warranty and balance **ten years** of Comprehensive Maintenance Contract (CMC). The maintenance philosophy of the SOAC and UAS is enumerated in the succeeding paragraphs:-

(a) **'O' Level**. Includes Unit and Field Repairs (1st & 2nd Level).

(i) **Unit Repairs**. Repairs, carried out within the unit holding the equipment using tools supplied by the manufacturer as per scaling. These repairs generally pertain to cleaning, lubrications, minor repairs and replacement of components and minor assemblies including Line Replaceable Units (LRUs) etc, carried out without any sophisticated tools or test equipment. The manufacturer is required to provide the following as per provisions in the RFP for carrying out such repairs:-

(aa) Table of Tools and Equipment (TOTE) with each equipment including operators manual.

(ab) Onboard spares.

2. **At Sea Repairs**. The Bidder shall provide adequate stock of Ready Use (RU) spares as part of CMC/ waranty on the statistical data regarding failure rate and the equipment exploitation pattern, for users to undertake 'O' level repairs at sea during the warranty period and during the period of Comprehensive Maintenance Contract (CMC).

3. **Technical Documentation**. The Bidder will be required to provide the technical literature preferably in IETM (Interactive Electronic Training Manuals) in Level 4 format or higher. The details of technical literature to be supplied with the system should be listed as per the suggested format at **Annexure I** to this Appendix. This should be provided with both Technical and Commercial Proposals. The cost column may be left blank in the Technical Proposal. An illustrated list of documents which may be submitted by the Seller is as under:-

(a) User Handbook/Operators Manual in English.

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(b) **Technical Manuals**. (as per governing JSG/ Guide for other technologies).

(i) **Part I**. Tech description, specifications, functioning of various systems.

(ii) **Part II**. Inspection/Maintenance tasks repair procedures, materials used, fault diagnosis.

(iii) **Part III**. Procedure for assembly/disassembly, repair up to component level, safety precautions.

(iv) **Part IV**. Part list with drawing reference.

(v) Rotable list, norms of consumption, mandatory/ non-mandatory spares list for each system.

(c) Table of Tools & Equipment (TOTE) & carried spares.

(d) Complete Equipment Schedule.

(e) Repair and Servicing schedule.

(f) Design Specifications.

(g) Condemnation limits.

(h) Packing specifications /instructions.

(j) Any additional information suggested by the OEM.

4. **Training**. A training package for operators, operator trainers and maintenance personnel to undertake operation and maintenance of equipment (level 1 to 4 or 'O'/ 'I'/ 'D') and QA personnel for QA of equipment as stipulated in respective contract, along with tools and test jigs training would be required to be carried out in English language. Requirements such as training aids, projection system, complete equipment with accessories, technical literature, spares, test equipment, test set up, charts, training handouts, power point presentations, Computer Based Training (CBT), Documentation, Simulators etc will be provided by the Seller for the conduct of training. Training should preferably be conducted before the induction of the equipment. The Seller will provide the Operator and Maintenance & Repair training, for the duration, strength and locations specified in the RFP and Contract. The details of Training are provided in **Para 16** of the RFP. The following may also be noted:-

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(a) The requirement of training and associated equipment must be clearly specified in Part I and details should be placed as per **Annexure II** to this Appendix.

(b) The costs for aggregates and training must only be indicated in the commercial proposal.

(c) **Sufficiency clause** in terms of installation material and spares should also be included.

Maintenance Contracts

5. **Comprehensive Maintenance Period (CMC)**. After the expiry of specified warranty period, the vendor will be required to undertake Comprehensive Maintenance Contract (CMC) for a period of Ten (10) years. CMC Contract for executing the CMC of SOAC between **BUYER** and **SELLER** would be signed with the main contract.

6. **Exploitation Pattern**. The SOAC will be required to operate at sea on a regular basis. The **SELLER** will be required to propose the list of CMC Ready Use (RU) spares required on the basis of following exploitation pattern of the crafts:-

(a) SOAC should be able to operate for minimum 08 hrs per day with annual exploitation envisaged to 1500 hours. It should have operational life of atleast 12 years.

(b) The spares should be stocked catering for SOAC to be away from shore for 03 days at a stretch.

(c) The locations for CMC are tabulated below:-

Ser No	CMC locations for 10 SOACs	Remarks
(i)	Mumbai	
(ii)	Vishakhapatnam	

7. The aim of Comprehensive Maintenance Contract by the **SELLER** is to provide technical services including spares/ expertise/ support and consultancy services on round the clock basis for the SOACs supplied under this contract.

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8. **Maintenance Management Function during CMC**. The scope of Comprehensive Maintenance will be as under:-

(a) **Preventive Maintenance**. The maintenance of the equipment is to be carried out by the Bidder at the Buyer premises. The equipment will be maintained as per the OEM specified maintenance schedules and equipment manuals. However, the number of visits by the Bidder to the customer premises should be at least once a quarter or as agreed to in the contract. The preventive maintenance team visiting the unit should be composite and possess sufficient expertise and spares to carry out preventive maintenance activities and resolve any pending serviceability issues of the equipment.

(b) **Breakdown Maintenance**. In addition to preventive maintenance, the Bidder will also be responsible to undertake breakdown maintenance of the equipment. Defects on the equipment as and when observed, will be intimated to the Bidder by telephone/fax/email. The Bidder will depute a team for undertaking repairs of the equipment within two working days from the reporting of the defect, in order to make the equipment operational. The Bidder will need to diagnose, test, adjust, calibrate and repair / replace the goods/ equipment during the CMC period. However, defective hard disks, strong devices, if any, of the equipment, will not be returned to the Bidder and would be retained for destruction / safe custody. The downtime of the equipment will commence from the time a defect is reported by the user and the log of the same would be maintained.

(c) **Calibration**. Periodic inspection and calibration services as set forth in the equipment manual shall be provided by the Bidder, to ensure operational availability of the equipment. Requisite certificates may be rendered whenever major repairs/ maintenance on equipment is undertaken.

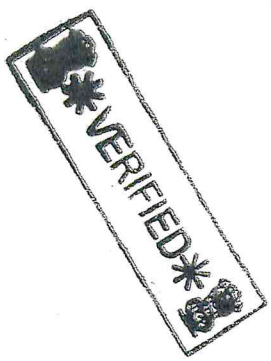
(d) **Spares**. Supply of all parts (spares sourced from the OEM/ OEM authorised vendor), including consumables, if any and material required for the optimal performance of the equipment as per the designed specifications mentioned in the equipment manual would be the responsibility of the Bidder.

(e) **Software**. The Bidder will provide support for maintenance of the software(s) during the period of CMC and would include the following:-

(i) Upgrades, patches, fixes to the OS and the Application software.

(ii) Back-up and restoration of software, as and when required.

(iii) No malware certificate.





(iv) Version of the software and IV & V (Independent verification and validation) certificate as per the applicable CMM Level, depending on the criticality of the equipment.

(v) Method of checking the health of the software and debugging methods.

(f) **Obsolescence Management**. The obsolescence management for the equipment delivered under the scope of contract would from part of CMC Services. The obsolescence management will include providing "Form, Fit and Function" replacement of any system/ sub system rendered obsolete during the period of CMC.

9. **SELLER Scope of Supply and Work for CMC**. The scope for CMC by the SELLER will include the following:-

(a) Deployment of Maintenance Team(s) as per the routine maintenance plan.

(b) Deployment of Specialist Team for Preventive Maintenance of SOACs.

(c) Supply of Spares for Preventive maintenance and Breakdown maintenance of the equipment (Software and Hardware).

(d) Provide adequate stock of Ready Use (RU) CMC spares on board based on the statistical data regarding failure rate and the equipment exploitation pattern, for SOAC staff to undertake 'O' level repair at sea during CMC.

(e) On call assistance (in cases where physical presence of engineer may not be required) for generic fault identification/ rectification.

(f) Supply of Breakdown Spares and Repair services.

(g) Co-ordination with **BUYER** for system/ equipment for maintenance activities.

(h) Adherence to all safely guidelines for the above maintenance services.

(j) Standard Tool Kits shall be available with the **SELLER'S** Maintenance Team.

(k) Transportation of Special Tools Kit to location on returnable basis and sending back after completion/ rectification of problem.

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(l) The **SELLER** shall undertake maintenance and repair of the SOAC where ever SOAC is deployed.

10. The exclusions from the CMC are mentioned below:-

(a) Carrying out any un-authorised modification/ changes in the system after acceptance or handing over of the system.

(b) Renewal/ obtaining any statutory approvals from Govt authorities after acceptance or handing over the system.

(c) Any defects arising out of any unauthorised access or maintenance by **BUYER'S** personnel without the consent/ clearance of **SELLER's** Maintenance Team (less 'O' level repairs undertaken by crew at sea).

(d) Physically damaged items resulting due to mishandling/ misuse/ improper storage.

11. **BUYER'S Scope of Supplies and Work for CMC**. **BUYER** shall be responsible for the following:-

(a) Monitoring, Inspection and for proper operation and maintenance.

(b) Adherence to all personnel and equipment safety guidelines as per supplier documentation.

(c) Issuance of End User Certificate in case of any import of spares, as required.

(d) Permission to work beyond working hours as required for completing the activity.

12. Terms and conditions of CMC are as follows:-

(a) The CMC shall be for the period of Ten (10) years post completion of Warranty Period of 24 months of last batch of SOAC.

(b) The **BUYER** can depute their personnel to be attached with the **SELLER'S** Maintenance Team during the maintenance/ repair activities.

(c) Equipment Spares and consumable spares and all breakdown spares shall be covered under CMC.

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(d) **SELLER** shall only use authorised/ standard spares parts for repairing. However, in case of obsolescence, alternate solutions/ spares may be used for repairing of the equipment.

(e) The faulty/ failed components(s) / spares/ module(s) shall be replaced or rectified free of cost during the CMC. To ensure timely repairs, the **SELLER** shall maintain adequate quantities of stock of spares based on statistical data regarding the observed failure rates and the same be used for carrying out Defect Rectification (DR).

(f) Adequately qualified, skilled and experienced personnel shall be deployed for the performance of the Contract. Seller shall impart Technical and Safety training to personnel after full mobilisation of team.

(g) The **SELLER** would be required to provide product support through their network of qualified technical engineers.

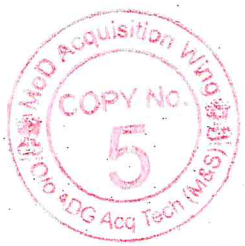
(h) Preventive maintenance and Breakdown maintenance (software and hardware) has to be provided by physical attendance at site by the engineers from the **SELLER**.

(j) All spares, components, sub-assemblies and manpower etc required for carrying out Defect Rectification should be provided by the **SELLER** under CMC at no extra cost to the **BUYER**.

(k) If the equipment fails to perform as per its specifications, the **SELLER** shall rectify the defects through replacement or repair free of charge within **7 days** of the defect being reported by the user for SOACs being in ports as per consignee locations and within **14 days** in case of SOAC being in **any other port of India.**

(l) In case the SOAC is at sea, urgent repairs ('O' Level Maintenance) would be undertaken by the ship staff. For such repairs, Ready Use (RU) CMC spares would be used. **SELLER** is to provide adequate stock of Ready Use (RU) CMC spares on board based on the statistical data regarding failure rate and the equipment exploitation pattern for SOAC staff to undertake 'O' level repair at sea during CMC.

(m) Only in exceptional circumstances, spares from the OBS held with the **BUYER** may be used for Defect Rectification (DR) by the **SELLER** during CMC. In such a case, the OBS used by the CMC engineers for undertaking the repair are to be replenished free of cost by the **SELLER** within 07 days from the date of issue of spares to **SELLER**.





(n) In case any OBS is consumed by the SOAC staff for urgent repairs at sea, then such spares would need to be replenished within 07 days of SOAC arriving harbor.

(p) The maximum permissible down time commencing from the notification of defect should not exceed a cumulative period of 30 days within a period of 12 months. The year wise calculation will commence from the date of commencement of the CMC.





Annexure I to Appendix E
(Refers to Para 3 of Appendix E)

TECHNICAL LITERATURE

EQUIPMENT: Special Operations Assault Craft (SOAC)

Original Equipment Manufacturer (OEM): _____

Ser No	Technical Literature	Unit Cost	Total Cost	Remarks
1.	User Handbook / Operator's Manual (Qty – 04 Sets)			
2.	Design Specifications			
3.	Technical Manual. (Qty – 04 Sets)			
	(a) Part-I. Tech description, specifications, functioning of various Systems.			
	(b) Part-II. Inspection/ Maintenance tasks, Repair procedures, materials used, fault diagnosis.			
	(c) Part-III. Procedure assembly/ disassembly, repair up to component level, safety precautions.			
	(d) Part IV.			
	(i) Part list with drawing reference			
4.	CD / DVDs on the above Tech literature			
5.	Any other (specify)			
Total Cost:				

Note:

(i) In case any additional equipment is used their tech literature will be included.

(ii) If certain technical literature is being provided free of cost it should be indicated in the remarks column.





Annexure II to Appendix E
(Refers to Para 4 of Appendix E)

TRAINING AGGREGATES

EQUIPMENT: **Special Operations Assault Craft (SOAC)**

Original Equipment Manufacturer (OEM): _____

Ser	Description of Training Aggregate	Scale for Qty equipment	Unit Cost	Total Cost	Remarks
1.	Shop Replaceable Units (SRU)/ PCB/ Modules / Assemblies	10			
2.	Computer based training package based on interactive multimedia. One set to include (a) Full graphics, Animation test and sound (b) Symptoms-fault correlation (expert system).	10 set			
3.	Training Aids to include (a) Charts (b) Slides (c) Training Brochures (d) Training Work models (e) Blow up diagram (f) Video films	10 sets			
4.	Cost of training	02 weeks training for 02 batches comprising of 10 personnel each for operaters and maintenainers separately at Mumbai and Visakhapatnam respectively			
5.	Any other				
Total Cost:					

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Appendix F
(Refers to Para 36 of RFP)

TRIAL METHODOLOGY

Trail Methodology for the SOAC, UAS and associated equipment is as follows :-

Sr No	SOAC Operational Features	Trial Methodology	Compliant/ Non-Compliant
1.	**Essential Features**. The SOAC should be: -		
	(a) Capable of safe operations up to Sea State 4, incorporated with special features for shallow/ muddy water operations.	Documentation & Certification	
	(b) High stability and resistance to capsize. The SOAC should be "Self Righting Type'.	Demonstration	
	(c) The SOAC shall offer good maneuverability and throttle response throughout its speed range, particularly when coming alongside or breaking away from a vessel underway with its full load and complement.	Demonstration	
	(d) **Ballistic Protection**: -		
	(i) All around ballistic protection of BIS - threat level 5 and 6 in accordance with Bureau of Indian Standards (BIS) - IS 17051.	Certification & Documentation	
	(ii) The vulnerable portion of craft including crew gun post, enclosed cabin etc. will be provided protection of threat level 6 ballistic plates and remaining portions with threat level 5. Plates to be portable and of detachable format.	Certification & Documentation	
	(e) Built to classification society norms and be ***SOLAS*** compliant in respect of afloat safety.	Documentation	
	(f) Built for an operational life of at least 12 years and sustain operations for about 8 hours or more per day with the annual exploitation envisaged to 1500 hours.	Documentation	
	(g) Designed especially for operations in extreme tropical conditions.	Certification	

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	(h) SOAC should have reserve of buoyancy as per requirements of Classification Society.	Certification	
	(j) The SOAC would be a sea going craft and should be built as per the per NHQ approved Classification Society Standards/ Norms and be suitably compliant in respect of afloat safety in accordance with MCA requirements for the boats and in compliance with NHQ. The Craft should also comply with the latest High-Speed Craft (HSC) rules of the class and LSA/ FFA to be as per *IN* requirements.	Certification	
2	**General Description**. The SOAC should conform to the following general parameters: -		
	(a) **Length Extreme:** Between 14 to 17 m	Demonstration	
	(b) **Draught Max:** Not more than 01 m in fully loaded mode.	Demonstration	
	(c) **Beam**: Not more than 05 m	Demonstration	
	(d) **Displacement**: Not more than 17 tons.	Documentation	
	(e) **Max Speed** (with max payload) : Not less than 40 knots at 85% MCR. Sprint speed not less than 45 kn.	Demonstration at Sea	
	(f) **Endurance** (at max payload) : Not less than 400 nm (at cruising speed)	Documentation & Demonstration	
	(g) **Fuel/ Oil capacity**: The fuel tank should cater for normal endurance of the SOAC with 10% reserve. Should have a provision of carrying 15 % additional fuel in flexible fuel tanks for extended operations.	Certification & Documentation	
	(h) **Reserve of buoyancy** : As per requirements of Classification Society.	Certification & Documentation	
	(j) **Sea worthiness**: The SOAC should be sea-worthy upto Sea State 4.	Certification from Class	
	(k) **Carrying capacity/ Payload**: Capable of carrying atleast **08** personnel including crew.	Certification & Documentation	
	(l) **Transom Tie Downs** : Minimum two.	Documentation	
	(m) **Roll/ Pitch** : Sustain Roll at 25° and Pitch of 8°	Documentation	
3	**Propulsion**. Suitable propulsion based on 'Class' requirements is to be provided.	Documentation	
4	**Equipment Operating Conditions**. The equipment and the machinery fitted on the SOAC should comply to marine operating standards and capable of satisfactory operation in Indian tropical ambient environmental conditions as under: -	Certification	

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	(a) Ambient air temperature from Zero to + 50° C. (b) Water temperature from 01 to 35° C. (c) Max relative humidity of 100% at 35° C. (d) Salinity of water up to 36000 ppm. (e) Water density from 1010 to 1025 Kg/m^3. (f) Compliant to IP 56 ingress protection standards.		
5	**Design**. The SOAC is to be designed to ensure safety of occupants, reduction of operator fatigue whilst achieving the desired standards for rugged military use. It is to be designed for high speed and high sea state operations with good sea keeping features and soft riding hull characteristics even at maximum speed. The hydrodynamics is to afford stability when operating at less speed in high sea states and eliminate incidents of bow plunging or duck dive in heavy seas. Cabin windshield and frontage sufficiently strengthened to withstand the operations in sea state 4. The design of the crew and passenger seating should be such as to afford optimal visual field of view. The strength of enclosed cabin to support fitment of gun and other accessories on top. All equipment and accessories in the cabin to be of shock dampening design. The underside of SOAC to be compatible for being launched from Slipway.	Certification & Documentation	
6	**Stability**. The SOAC should be designed to remain intact and provide damage stability as per classification society norms.	Certification & Documentation	
7	**Weapon Mounts**. (a) SOAC should have two-gun mounts, forward and aft. Forward mount on top of enclosed cabin or at a location facilitating unhindered vision from navigation post for SRCG or 12.7 mm HMG and aft gun mount would be gyro stabilized Universal type Gun Mount for 12.7 mm HMG or 7.62 mm gun. (b) Provision of a bolting adapter to facilitate fitment of Spike firing mechanism on aft gun mount. (c) Sufficient space for firing of Loitering Munitionand fitment of launcher. Clear firing arcs for angle of elevation upto 30°. (d) Strengthened deck and bolt mechanism for fitment of launcher of Loitering munition in a configurable/ swappable mechanism.	Design & Documentation	

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8	**Storage Space** (a) Sufficient arrangement for stowage of belted ammunition boxes and 24 grenades in removable/ detachable waterproof poncho/ bag in close proximity of the weapon mount. (b) Arrangement for stowage of Pyrotechnics (10 flares and 12 rounds of Vary's Pistol), in removable/ detachable waterproof poncho/ bag in close proximity of the main console. (c) Watertight, easily accessible compartment for stowing special operations equipment of eight combatants. (d) The storage space should be ballistic protected (Threat level 5 & 6 of BIS – IS 17051). (e) Stowage space with securing arrangement for 04 munitions of each Loitering munitions.	Demonstration Demonstration Demonstration Certification Demonstration	
9	**Main Console**. An ergonomically designed console to enable discharge of all command-and-control functions with comfortable seats for the crew. Additionally, the following is to be catered for: - (a) Clear all round vision from the main console housing the multifunction display for the radar, mounted GPS, boat compass, EM log and echo sounder and electro optical/ Infra-Red sight. (b) Remote control facility for operations of engines and auxiliary machinery. (c) Low power radar (Radom type), ECDIS and Echo sounder. (d) Engine performance monitoring panel, fuel state indicators, battery state indicator, battery charging indicator, switch for Nav lights/ dimmer for Nav and panel lights etc as per classification society rules. (e) All instruments and switches shall be weather proof/ non-fading and shock resistant. (f) Separate pressure indicator of the hydraulic system to be present at the main console.	Documentation & Demonstration	
10	**Navaids**. The SOAC is to be equipped with the following navigation suite providing input to a multifunction Navigation display: (a) One Echo sounder. (b) ECDIS integrated with Navigation Control Station.	Demonstration & Documentation	

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	(c) One EM Log. (d) Inertial Navigation System. (e) G3I Navic (RS) receiver. (f) Low power navigation radar (Radom type). (g) Automatic Identification System (AIS). (h) Electro optical/ Infra-Red sight display. (j) Boat Compass.	Demonstration & Documentation	
11	**Nav Lights**. Two sets of navigation lights, one with IR filter are to be provided as per International Regulations for Prevention of Collisions at Sea, 1972, applicable for the SOAC of this size.	Documentation & Demonstration	
12	Integrated Mil Specs compliant communication suite to be fitted on the boat is as enumerated: -		
	(a) 08 x Hand held VHF set with voiceducers and accessories.	Demonstration & Documentation	
	(b) Intra boat communication system with noise cancellation over the ear headsets and microphone for platform communication.	Demonstration & Documentation	
	(c) Suitable power supply/ space to be designated for Buyer nominated Satcom Suit including (i) MSS MII SOR (ii) One ISAT Phone	Demonstration & Documentation	
	(d) VHF MMB (with DSC) - One	Demonstration & Documentation	
	(e) INMARSAT 'C' - One	Demonstration & Documentation	
	(f) Search and Rescue Transponders (SART) for contingencies. - One	Demonstration & Documentation	
	(g) EPIRB (Emergency Position indicating Radio Beacon) - One	Demonstration & Documentation	
	(h) IN SDRs (i) One SDR (FP) (ii) One SDR (MP)	Demonstration & Documentation	

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	(iii) One HF SDR Manpack (HF-SDR MP) (iv) 04 SDR (HH)		
	(j) Class approved Electric Horn.	Demonstration	
	(k) Antenna length and material to be adjusted to operate in high sea/ wind conditions. It should not be susceptible to breakage with normal usage. Parts and components used to be compatible with the system used in civil field, to facilitate easy replacement.	Demonstration	
	(l) All sensors and autonomous equipment fitted onboard the SOAC should be integrated with *IN* NCO grid.	Demonstration	
13	**Seamanship Fittings**.		
	(a) **Anchor/ Berthing Arrangement**. Suitable anchor as well as a separate rope for mooring, berthing and towing is to be provided. The anchor should be stowed in the anchor pit, flushed with the deck for enhanced ergonomics and unhindered crew movement.	Demonstration	
	(b) **Towing Arrangement**. The forward and aft section of the SOAC should have a suitable towing arrangement.	Demonstration	
	(c) **Lifting & Stowing Arrangements**. Non-fouling/ snagging strong points are to be provided for hoisting the SOAC. Certified lifting sling/ strop/ loading arm is also to be provided for hoisting the SOAC @ two sets per SOAC as per individual design parameters. Further, the SOAC should have provisions to enable it to be hoisted/ lowered using both shore/ ships borne overhead crane as also davit. The lifting sling/ strop should be of minimum length whilst ensuring safe hoisting of SOACs. Lifting hooks provided on SOAC should be able to bear strain up to 45 ° angle and be designed to withstand prolonged lifting and be able to remain hoisted condition for extended durations. Two in number Henriksen Release Hooks would be fitted for lifting arrangement for ship borne operations. Maintenance and supportability for the same may be factored.	Demonstration & Documentation	
	(d) Since the SOAC will be deployed at dispersed locations and moreover as the SOAC will be stowed out of water, each SOAC is to be supplied with chokes/ cradle. Chokes to have minimum 2 feet ground clearance to facilitate bottom maintenance of SOAC on chokes. Chokes must be collapsible to facilitate smooth transfer of chokes to different stowage locations/ earmarked ships.	Demonstration & Documentation	
	(e) A compatible road trailer for every two SOAC is mandatory. The trailer should be configured to undertake slipway launch.	Demonstration & Documentation	

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	(f) Boat hook/ Pole, fairleads aft, forward bow cleats/ mooring bollard with fairleads and in addition sufficient eye bolts on the floor to secure equipment/ loads.	Demonstration & Documentation	
14	**Weatherproof Covers.** Two sets of lightweight weatherproof covers are to be provided for each weather deck fittings and console. In addition, tailor made weatherproof cover for the entire boat is also to be provided for preservation when on the cradle/ chokes.	Demonstration	
15	**Life Saving Equipment.** (a) Hazardous Duty Life Jacket (HDLJ) for 14 personnel per boat are to be supplied in accordance with NCD 3926. (b) All removable seats (**Make** – Ullman or equivalent) and gun mount to be provided with safety harness and hand hold/ rails throughout the boat. All seats should have mechanisms to dampen the shock experienced as the boat bounces at high speed during rough weather.	Demonstration Demonstration	
16	**Deck/ Deck Fittings.** Workspace/ decks should be non-skid type. All steel deck fittings shall be of Stainless-Steel grade AISI 316L. All these fittings should be fastened through FRP on to a S.S. backing plate with S.S. fasteners. The backing plate shall be laid up and covered up with adequate number of FRP layers. All the deck fittings need to be as per IS/ International Standards and to be certified by class.	Documentation	
17	**Construction** **Hull Form**. SOAC hull is to be constructed using suitable light weight, high strength material meeting requirement of Class for fire and strength. Recommended type hull material is class approved marine grade composites with carbon fibre. The shape and fittings on the SOAC are to be of robust nature capable to sustain rough operational environment. In addition, availability of the following is to be ensured: - (a) Transom mounted crash protection frame. (b) Under deck foamed compartments. (c) External and internal lifelines.	Documentation	

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	(d) Triple fendering and full nose cladding as also double skinning wear patches for areas prone to rapid wear and tear are to be ensured. (e) Adequate ventilation of engine compartment to avoid over heating or subsequent condensation. (f) **Buoyancy**. SOAC shall be fitted with sufficient buoyancy. Closed cell buoyancy materiel to be used. The GM arrangement of buoyancy proposed should be as per Class Rules. (g) Vacuum Infusion process to be included to reduce weight of hull. Usage of plywood and piercing of deck to be avoided.	Documentation	
18	**Tank Capacities**. To meet specified endurance, in consonance with type of engines, the tanks are to be designed to ensure complete stability at various rates of consumption. The fuel tanks should cater for normal endurance of the SOAC with 25% reserve without lowering the operating parameters outlined at Serial 2.	Demonstration	
19	**Propulsion Package**. The propulsion package is to comprise of the following: - (a) High efficiency propulsors with power output to meet operational exploitation mentioned at Serial 2. (b) Main Engine should comply to Def Stan 02 -313, Reduction Gear should comply to Def Stan 02-305, and shafting and propeller to comply to Def Stan 02-304. In case of waterjet, the same should comply to *IN* approved SOTR. (c) Main propulsion of the vessel should comply to *IN* shock Grade 'A' *iaw IN* Shock Policy EG/ Policy/ TSV/12/23 dated 31 Jan 23. (d) The transmission gearbox with suitable reduction ratio to match performance of propulsor and engine. (e) The propulsion package should be able to provide sustained operations for an endurance of 400 Nm at cruising speed.	Documentation Documentation Documentation Demonstration Demonstration & Documentation	

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	(f) The seawater cooling system for the main engines should incorporate special fitments/ mechanism for shallow/ muddy water operations.	Demonstration	
	(g) The propulsion units are to be seated on suitable vibration mounts to minimise the vibrations.	Demonstration	
	(h) The engine and Bucket integrated control to be through joystick, to ensure automatic adjustment of engine RPM and corresponding response of the hydraulic system (if applicable).	Demonstration	
	(j) Hydraulic system should be strong enough to cope up with the corresponding engine parameters, to give optimum performance.	Documentation	
	(k) Engine and steering control are to be connected in parallel to both hydraulic motors to ensure engine/ Steering control during one of the hydraulic motors being failed.	Demonstration	
	(l) The suction side jet to have heavy duty/ multi-level strainer to avoid various FODs entering impellor/ Tail pipe assembly (if applicable).	Documentation	
	(m) Provisioning of auto Reverse Blast feature to facilitate automatic cleaning of choked suction line (if applicable).	Demonstration	
	(n) Fuel tanks of the SOAC to have an option of Cross Connection in between each other, to utilise the tanks in case of corresponding engine failure, by the other engine.	Demonstration	
	(p) Compatibility of fuelling at sea from earmarked *IN* ships, including compatible couplings to facilitate fuelling at faster rate.	Demonstration	
20	**Fire Fighting**. Adequate firefighting arrangements meeting Classification Society requirements are to be provided. Additionally, the following are to be provided: -		
	(a) The engine room should be provided with a fixed firefighting system consisting of NOVEC 1230 in accordance with NHQ policy letter EG/ 4707/ 06/ NBCD dated 10 Jun 20 with the control at console.	Documentation & Demonstration	

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	(b) One injection point on coxswain console to extinguish bilge/engine/electrical fire with suitable capacity CO_2 cylinder.	Documentation & Demonstration	
	(c) A fume/ smoke detection system shall be fitted in the hold near the diesel tank and engine room with alarm at control console. Engine room ventilation and Exhaust arrangements should be as per class requirements and in consonance with engine OEM recommendations.	Documentation & Demonstration	
21	**Bilge Pump**. The SOAC is to have one each electric and hand operated bilge pump capable of completely clearing the hull cavity and bilges.	Demonstration	
22	**Miscellaneous**.		
	(a) The boat is to be provisioned with an emergency stop switch that is operated via a cord clipped to the coxswain. In the event of the coxswain falling overboard, the cord should operate the emergency stop switch causing the engine to stop instantly.	Demonstration	
	(b) The boat is to be fitted with a natural safety switch to prevent the Engine from starting when the Gear gets engaged.	Demonstration	
	(c) An emergency fuel supply shutoff valve is to be provided outside the casing, to prevent spreading of engine fire.	Demonstration & Documentation	
	(d) Separate hydraulic pump for Port jet Bucket/ Steering system along with provisioning of Cross Connection to ensure smooth operation despite breakdown of one of the systems (if applicable).	Demonstration	
	(e) **Stern Guard**. One SS propeller guard shall be fitted on the transom to prevent damage to stern drive.	Demonstration & Documentation	
23	**Power Supply**. The Power Generation and Distribution (PGD) system comprising of alternator, suitable conversion equipment (viz transformer/ rectifier, inverter etc), distribution panels and associated gear etc should conform to the classification society's norms. The power supply should cater for uninterrupted power supply to various consumers viz. radar, control system, navigation and communication aids, and lighting/ electrical appliances fitted on the SOAC. Standard power supplies ie 230V, 50 Hz, 1 Phase and 24 V DC are to be used. The Black Box (Engine Parameter Controller) to be preferably kept outside the engine compartment to avoid over heating/ subsequent condensation.	Demonstration & Documentation	

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24	**Batteries**. Suitable number of maintenance free batteries of contemporary technology to cater for back up supply for the total electrical load and engine starting requirement be provided. A suitable battery charger confirming to Classification Society rules for marine use should be provided to facilitate charging of batteries from the available primary supply and shore/ mother ship.	Demonstration & Documentation	
25	**Equipment/ Lighting**. All electrical equipment, cables and fittings shall be of proven design and shall conform to Classification Society's regulations. Following COTS general lighting and fittings are to be provided: -	Documentation	
	(a) Adequate LED based lighting/ luminaries to illuminate the main console, deck fixtures, instrument gauge and alarm panels. Preferably, single core cable is to be used for lighting circuits.	Documentation	
	(b) Emergency light fittings of 24 V are to be supplied at appropriate locations.	Documentation	
	(c) All electrical and machinery equipment are to be installed with due regard to EMI/ EMC issues as per classification society regulations.	Documentation	
	(d) Document consisting of basic electrical diagram be provided for generator and other conversion machineries.	Documentation	
	(e) Following *IN* standards to be complied :-	Documentation	
	(i) EED-50- 33 (R1) - LED based light fittings.		
	(ii) EED-50-12 (R3) - Power/ lighting cables along with LFH cables for equipment.		
	(iii) EED-Q-264 - Air Circuit Breaker/ MCCBs/ MCBs.		
	(iv) EED-50-81 - 230V Double Pole Switch and Switch Socket.		
26	Motorised search and spot lights is to be provided at suitable locations.	Demonstration	
27	Switch sockets are to be of Double Pole type iaw EED -50-17.	Demonstration	
28	**Medical Wall**. A detachable medical rack along with equipment customised to be fitted towards the rear of the boat is to be supplied. The modular rack should have the following equipment fitted: -	Demonstration & Documentation	
	(a) BP/ ECG Monitors (b) Portable Defibrillator (c) Basic first aid equipment		

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	(d) 10 Litre Oxygen cylinder withs stowage arrangements (e) Focus lights on the area where the stretcher will be positioned.		
29	**Seating.** (a) Coxswain / Crew Seat. Shock mitigating seats with adjustable safety harness, handle on backrest, foldable footrest and seating height adjust feature to adjust to maximum field of view during navigation. (b) Passenger Seat. Compact (occupying less space) shock mitigating seats with adjustable safety harness, handle on backrest and foldable footrest to improve crew comfort.	Demonstration	
30	**Panelling.** Panelling of seating spaces (open/enclosed), engine compartment and main console etc should be fire retardant.	Documentation	
31	**Unmanned Aerial System** Unmanned Aerial System will consist of Two types of Aerial Systems, viz, Mid-Range Unmanne Aerial System and Short Range Unmanned Aerial System.		
32	**Mid-Range Unmanned Aerial System (UAS)** (a) Launch. Mid-Range Unmanned Aerial System (VTOL) should be capable to launch from mobile SOAC at sea.	Demonstration	
	(b) Recovery. Autonomous or operator assisted recovery as follows: -		
	(i) Land onboard a mother vessel at sea with an open deck of 08 m x 08 m in sea state upto 02.	Demonstration	
	(ii) Autonomous landing on a designated waypoint at land.	Demonstration	
	(c) Operation. Operation from mobile SOAC at sea with following capability: -		
	(i) Endurance – Not less than12 hours.	Demonstration	
	(ii) Mission Range	Demonstration	
	(aa) Not less than 80 nm.		
	(ab) Telemetry and payload control upto full mission range using SDRs with additional support for Indian Military band (2500 Mhz) at a transmit power of more than 4 Watts.	Demonstration	

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	(iii) Wind resistance – Not less than 30 kn. (iv) Ceiling Height - Not less than 2500m. (v) Data Relay – Ability to transmit ISR feed to forward deployment teams. (vi) Shifting of Control. Ability to transfer control (hand shake) to forwatd deployment team upto mission range.	Demonstration & Documentation	
	(d) **Payloads** (swappable) :- (i) EOIR with gimbal stabilisation with following accessories. (aa) Medium wavelength Infrared (MWIR) with not less than 15X optical zoom ration and 4x digital zoom. (ab) Laser range Finder not less than 10 km. (ac) EO full HD sensor with not less than 45x optical zoom ration, in addition 4x digital zoom. (ad) Laser illumination. (ae) AI based object detection and classification, moving object tracking, geo location of target, and extractable real time during surveillance mission.	Demonstration & Documentation	
	(af) **COMINT** (i) Dual Channel duplex SDR transceiver. (ii) Frequency range of Operation – 1 MHz to 3 GHz. (iii) Communication intercept support for PTT (PMR), Telecom and satcom (iv) An onboard version of PCLe storage {(Gen 4.0 or above), latest being Gen 5.0 should be fitted. (v) A scalable X 86 based processor for onboard edge processing of signals of interest. (vi) Output supported for voice, texts and encrypted comms. (vii) RF Direction finding for entire tuning range.	Demonstration & Documentation Demonstration Demonstration	

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	(viii) RF based geolocation for pinpoint targeting.	Certification
	(ix) Secure Communication downlink utilising AES 256 or latest encryption standards.	Certification
	(x) Extended temp ranges (- 40 Deg to 85 deg C).	Demonstration & Documentation
	(xi) Ability to detect in an automated fashion and direction finding commercial drone UAV links in 433 MHz, 915 MHz, 2.4 GHz, 5.1 GHz and 5.8 GHz bands.	
	(ag) **ELINT**	Demonstration & Documentation
	(i) Ability to record and direction find arbitrary RF signals within the entire tuning range for future analysis and mapping.	
	(ii) Electronic Surveillance Measures to be operationally demonstrated between 0.05 – 18 Ghz.	
	(iii) Identify, classify, and geolocate RADAR signals, including automated mapping of enemy air Defence RADARS along with logging of critical RF parameters such as frequency, pulse repetition interval, pulse shapes, modulation type, frequency agility, chirp pattern and signal strength.	
	(iii) Ability to perform RF fingerprinting on RADAR emitters.	
	(iv) Automated detection of GNSS jamming and direction finding of hostile emitters performing the same.	
	(vi) Geotagged survey of RADAR signals for AIR Defence RADAR monitoring.	
	(ah) EW Payload. Broadband high-power jammer with directional antenna. Continuous coverage from 10 KHz to 20 GHz with power output of 10 watts across the entire jamming frequency range. Minimum jamming bandwith of 100 MHz with power output of 10 watts across all bands.	
(e)	**Ground Contorl Station (GCS)**. GCS should have: -	Demonstration & Documentation
	(i) A tracking/ Directional antenna.	
	(ii) An omni dircetional antenna.	

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	(iii) Gyro stabilized mount for fitment of antenna. (iv) Toughbook with touchscreen and joystick controls integrated at Surveillance panel. (v) Spare batteries/ fuel stowage arrangement (as applicable). (vi) Other accessories as required to support UAV Operation. (f) **Encryption** - AES 256 or latest encryption standards. (g) **Testing Standards**. Mid-Range UAS shall comply with IP rating 56 and applicable JSS 55555 2020 testing standards (for imported equipment – MIL STD 810G or equivalent standard followed in the country of manufacturer).	Certification Certification	
33	**Close -Range Unmanned Aerial System (UAS)** (a) **Launch**. Close Range Unmanned Aerial System (VTOL) should be capable to be launched, controlled and recovered from mobile SOAC at sea. (b) **Recovery**. Capable of recovery onboard mobile SOAC at sea. (Auto home shift feature to facilitate landing on a mobile platform). (c) **Operation**. Operation from mobile SOAC at sea with following capability: - (i) Endurance (aa) Not less than120 min with EO/ IR payload. (ab) Not less than 60 min with max payload of 10 kg. (ii) Mission Range with EOIR payload: - (aa) Not less than 10 nm. (ab) Telemetry and payload control upto full mission range using SDRs. (iii) Wind resistance – Not less than 20 kn. (iv) Weight of UAS – not more than 20 kg. (v) Ceiling Height - Not less than 2500 m.	Demonstration Demonstration Demonstration Demonstration Demonstration Demonstration Demonstration Demonstration Demonstration	

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	(vi) **Detectability**. The visual and aural signature of UAV be such that it remains undetected from human surveillance at a slant range at which it can be detect and track human size target.	Demonstration
	(vii) **Data Relay** – Ability to transmit ISR feed to forward deployment teams.	Demonstration
	(viii) **Shifting of Control**. Ability to transfer control (hand shake) to forward deployed team upto mission range.	Demonstration
	(d) **Payloads** (swappable): -	Demonstration
	(i) EOIR with gimbal stabilisation with following accessories: -	
	(aa) Long wavelength Infrared (LWIR) with not less than 5x optical zoom ratio.	
	(ab) EO full HD sensor with not less than 45x optical zoom ration, in addition 4x digital zoom.	
	(ac) Laser illumination.	
	(ad) AI based object detection and classification, moving object tracking, geo location of target, and extractable real time during surveillance mission.	
	(ae) Ability to continuously track the target maintaining relative position of UAS	
	(ii) Carry and drop explosive payload/ cargo of not less than 10 kg.	
	(iii) Relay communication (swappable with explosive payload).	
	(e) **Ground Control Station (GCS)**. GCS should have: -	Demonstration
	(i) A tracking/ Directional antenna.	
	(ii) An Omni directional antenna.	
	(iii) Gyro stabilized mount for fitment of antenna.	
	(iv) Toughbook with touchscreen and joystick controls integrated at Surveillance panel.	
	(v) Spare batteries/ fuel stowage arrangement (as applicable).	

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	(vi) Other accessories as required to support UAV Operation.		
	(f) **Encryption** - AES 256 or latest encryption standards	Certifcation	
	(g) **Testing Standards**. Mid-Range UAS shall comply with IP rating 56 and applicable JSS 55555 2020 testing standards (for imported equipment – MIL STD 810G or equivalent standard followed in the country of manufacturer).	Certifcation	

Note: -
Documentation – would be considered valid if verified by OEMs third party certified lab.
Certification – would be considered valid if certified by a NABL accredited third party lab/ Govt lab in India/ internationally accredited third-party lab in the country of origin, if equipment is sourced from abroad.





Appendix G
(Refers to Para 47 to RFP)

COMMERCIAL CLAUSES

1. **Payment Terms**

1.1 **INCOTERMS for Delivery**

1.1.1 The delivery of goods will be based on DDP INCOTERMS-2020 with ultimate consignee as under:-

Ser	Batch No.	SOAC Qty	Delivery Location
(a)	1st	1st	Material Organisation, Ghatkpoar West, Mumbai - 400086
(b)	2nd	2nd, 3rd	Material Organisation, Ghatkpoar West, Mumbai - 400086
(c)	3rd	4th to 7th	Material Organisation Kancherapalem post, Vishakhapatnam - 530008
(d)	4th	8th to 10th	Material Organisation, Ghatkpoar West, Mumbai - 400086

1.2. **Currency of Payment**

1.2.1 The Price Bid should be submitted in Indian Rupees (INR).

1.3 **Contract Price and Requirement of Bank Guarantees**

1.3.1. **Total Contract Price**. The Total Contract Price will be the final price negotiated by CNC including taxes and duties applicable at the time of signing of Contract.

1.3.2 **Base Contract Price**. The Base Contract Price will be considered as Total Contract Price excluding taxes and duties applicable at the time of signing of Contract and excluding the Total Price of CMC.

1.3.3 **Bank Guarantee(s)**. For the purpose of payment of Advances to the Bidder and submission of various Bank Guarantees by the Bidder i.e Advance Payment Bank Guarantee (APBG) and Additional Bank Guarantee (ABG), as applicable, Base Contract price will be considered. For Performance cum Warranty Bank Guarantee (PWBG), Total Contract Price including taxes and duties is to be considered.

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1.3.4 For orders with CMC, an additional Performance Bank Guarantee (PBG) is to be submitted by the Bidder for which the Total Price of CMC for contracted duration will be considered.

1.3.5 All Bank Guarantee(s) requirements viz Advance Payment Bank Guarantee (APBG), Performance-cum-Warrantee Bank Guarantee (PWBG), Additional Bank Guarantee (ABG), Performance Bank Guarantee (PBG) etc are to be submitted as per following:-

1.3.5.1 **Indian Bidder**. In case of Indian Bidders, the Bank Guarantee(s) shall be from any Indian Public or Private Scheduled Commercial Bank which is authorised by RBI for government transactions.

1.4 **Payment to Indian Bidders**. **The schedule for payments will be based on the Buyers requirements, enumerated at succeeding Paragraphs. The summary of delivery schedule, payments to be made and schedule of submission/ release of Advance Bank guarantee (s), as applicable, is specified at Annexure VI to Appendix G.**

1.4.1 **Advance Payment**. Fifteen (15) % of the Base Contract Price less CMC shall be paid within thirty (30) days of submission of claim and a Bank Guarantee for the equivalent amount, subject to correction and acceptability of the documents submitted. The prescribed format of the Advance Payment Bank Guarantee (APBG) is placed at **Annexure II to Appendix G**. The Advance Payment Bank Guarantee (APBG) will deemed to be proportionately and automatically reduced until full extinction along with and prorate to value of each delivery, as evidenced by corresponding copy of document proving delivery and invoices of goods/services supplied/provided. The date of delivery would be reckoned from the date of release of Advance Payment by the Buyer to the Seller (T_0) provided the Seller submits the documents mandated by the DAP for release of advance by the Buyer within 45 days of signing of contract. In the event of the Seller not submitting the said documents within 45 days of signing of contract, the period between the 45 day and actual submission of documents will be excluded from the actual date of advance payment to arrive at the delivery date. In case, no advance is to be paid, the date for reckoning date of delivery would be the date of signing of contract. This clause will not be applicable in cases wherein Advance payment is released after FOPM is successfully validated. In such cases, date of accord of Bulk Production Clearance will be date for reckoning date of delivery.

1.4.2 **Post Completion of JRI**. 75 % of the Base contract price (excluding CMC and training) of deliverables shall be paid on pro rata basis on production of Joint Receipt Inspection (JRI) certificate issued by the buyer designated

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inspection agency. Number and date of the Railway/Road/Air Transport receipt under which the deliverables charged for in the bill are dispatched by rail/road/Air and the number and date of letter with which such receipt is forwarded to the consignee, should be quoted on the bill. The payment will be made by PCDA/CDA, Delhi through cheque/Electronic Fund Transfer (EFT) on submission of following documents: - (Note-The list given below is illustrative. The documents that may be required, depending upon the peculiarities of the procurement being undertaken, may be included/ excluded in RFP).

1.4.2.1 Ink-signed copy of Seller's bill.
1.4.2.2 Ink-signed copy of Commercial invoice.
1.4.2.3 The relevant Transport Receipt.
1.4.2.4 Inspection Acceptance Certificate of Buyer's QA agency demonstrating compliance with the technical specifications of the contract.
1.4.2.5 Packing List.
1.4.2.6 Certificate of Origin.
1.4.2.7 Claim for statutory and other levies to be supported with requisite documents/GST invoice (with QR code, when made applicable)/proof of payment, as applicable.
1.4.2.8 Exemption certificate for taxes/duties, if applicable.
1.4.2.9 Warranty certificate from the SELLER.
1.4.2.10 JRI Certificate/ Certified Receipt Voucher (CRV) issued by the BUYER.

1.4.3 In case of failure of the Seller to deliver the deliverables to the Buyer or inordinate delay in the said delivery leading to Termination of the Contract in accordance with Article 22A.1 of SCD, the SELLER will be liable to return payments received against dispatch.

1.4.4 **On Final Acceptance and Installation/Commissioning**. The remaining 10 % of the Base Contract Price (excluding CMC and training) of deliverables shall be paid within thirty (30) days of final acceptance trials of all deliverables including and submission of the Acceptance Certificate & Certified Receipt Voucher (CRV) issued by the Buyer and other relevant documents as mentioned above for final payment, but such payments will be subject to the deductions of such amounts as the Seller may be liable to pay under the agreed terms of the Contract. The concerned PCDA/CDA will release the payment through cheque/EFT. 85% of training cost will be paid on completion of training for operators and maintainers.

1.4.5 **Part-Dispatch/ Part-Shipment**. Part-dispatch or part-shipment of goods is permitted and corresponding payment will be released to the Seller.

1.4.6 **CMC**. Annually payments will be made by PCDA/CDA on submission of User clearance certificate through issue of cheque/ ECS.

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1.4.7 **Payment of Taxes and Duties**. Payment of taxes, duties and statutory levies will be made on submission of requisite documentary proof to Paying authority. Reimbursement of taxes and duties will be as per rates and amounts indicated in the commercial bid/contract or as per actuals whichever is lower.

1.4.8 **Exchange Rate Variation**. Exchange Rate variation shall be applicable for Rupee contracts with Indian Vendors, based on RFPs issued under all categories of capital acquisitions mentioned at Para 8 to 12 of Chapter I of DAP. The indigenous & import components as also the various currencies (of the import components) for ERV purposes, must be determined in advance. The guidelines on protection of Exchange Rate Variation are given at **Annexure I** to this Appendix.

2. **Performance-cum-Warranty Bank Guarantee Clause**. A Performance-cum-Warranty Bank Guarantee (PWBG) of 5 % of value of the Total Contract Price including taxes and duties would be furnished by the Bidder in the form of a Bank Guarantee to sequentially act as Performance Bank guarantee till the delivery and as Warranty Bank Guarantee on delivery. The PWBG shall be submitted by the Bidder within one month of signing of contract and shall be valid for a period, until three months beyond the warranty period, as specified in the RFP. If at any stage, the Performance Guarantee is invoked by the Buyer either in full or in part, the Bidder shall make good the shortfall in PWBG within 30 days by an additional Bank Guarantee for equivalent amount. In the event of failure to submit the required Bank Guarantee against invoked Performance Guarantee, equivalent amount will be withheld from the next stage payment till the shortfall in the Bank Guarantee is made good by the Bidder. The prescribed format of the Performance-cum-Warranty Bank Guarantee is placed at **Annexure III** to **Appendix G**.

3. **Performance Bank Guarantee for CMC**. The Bidder will be required to furnish a Performance Guarantee by the way of a Bank Guarantee of a sum equal to 5% of the Total Price of CMC–including taxes and duties–for contracted duration prior to expiry/return of the PWBG of the Main Contract. Performance Bank Guarantee should be valid for 03 months beyond the period of the CMC. The format of the Performance Bank Guarantee for CMC is to be as per **Annexure IV** to **Appendix G**.

4. **Inspection**. Pre Dispatch Inspection (PDI) would be at the discretion of the Buyer. In addition Joint Receipt Inspection (JRI) may also be carried out. If it is PDI, the Bidder should intimate at least 45 days prior to the day when the equipment is to be offered for PDI to enable Buyer's QA personnel to be available for inspection. All the expenses towards PDI will be borne by the Bidder except transportation and accommodation of Buyer's PDI team, which will be deputed at Buyer' expense. In case of rejection of Goods during PDI, re-PDI will be undertaken at Bidder's premises at Buyer's sole discretion. All expenses including transportation and accommodation of Buyer's PDI team will be borne by the Bidder. Towards this, the expenses towards

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transportation and accommodation of Buyer's PDI team will be initially done by the Buyer and subsequently reimbursed by the Bidder either by remittance or by recovery from the Balance Payment/PWBG. In the event of a failed PDI, the Bidder shall consult the Buyer for rescheduling re-PDI. In case of JRI, the representative of the Seller may be present for inspection after the equipment reaches the concerned destination. The Seller would be informed of the date for JRI.

5. **Liquidated Damages (LD)**. In the event of the Bidder's failure to submit the Documents, supply the stores/ goods, perform services, conduct trials, installation of equipment, training and FET as per schedule specified in this contract, the BUYER may, at his discretion withhold cost of the specific lot/batch or 1% of the Total Project cost, whichever is higher, until the completion of the contract. The BUYER may also deduct from the SELLER as agreed, liquidated damages to the sum of **1/100 of the delay percentage** {Delay percentage = (Period of Delay in Delivery in Weeks) x 100 / (Delivery Period in weeks as per contract)} of the Base Contract Price of the delayed/ undelivered stores/ services mentioned above for every week of delay or part of a week, subject to the maximum value of the Liquidated Damages being not higher than 10% of the base contract price of the value of delayed stores/ services (Any extension given by the Buyer for delay attributable to Buyer or Force Majeure Clause to be factored in delivery period).

6. **Payment Deductions and Damages for Shortfalls in CMC Services.**

The clause for payment deductions and damages for shortfall in AMC/CAMC/PBL/LCSC services is to be formulated on case to case basis. A sample formulation is given below.

In case the cumulative downtime exceeds 30 (working days) in the Year, payment will be deducted. The total downtime will be calculated at the end of the Year and payments will be deducted. The total payments to be deducted will be calculated as follows:-

(a) *Payments would be deducted on pro-rate basis for the duration, by which cumulative downtime exceeds (working days), as follows:-*

(i) Per year CMC = 'X_1'

(ii) Period by which cumulative downtime exceeds the specified cumulative downtime, in days = 'Y_1'

(iii) Payment Deduction = 'Z_1',

*Where Z_1 = [(X_1/ Number of days in the year) * Y_1]*

(b) *In addition, damages would be deducted to the sum of 0.1% of the per annum CMC cost per day, for the duration, by which cumulative downtime exceeds the maximum permissible cumulative downtime per year, subject to the maximum value of this damages not being higher than 5% of the annual AMC/CMC/PBL/LCSC cost.*

7. **Denial Clause**. In case the delay in delivery is attributable to the Seller or a non-force majeure event, the Buyer may protect himself against extra expenditure during the extended period by stipulating a denial clause (over and above levy of LD)

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in the letter informing the Seller of extension of the delivery period. In the denial clause, any increase in statutory duties and/or upward rise in prices due to the Price Variation Clause (PVC) and/or any adverse fluctuation in foreign exchange are to be borne by the Seller during the extended delivery period, while the Buyer reserves his right to get any benefit of downward revisions in statutory duties, PVC and foreign exchange rate. Thus, PVC, other variations and foreign exchange clauses operate only during the original delivery period. The format for extension of delivery period/performance notice under the Denial clause is at **Annexure V** to **Appendix G**.





Annexure I to Appendix G
(Refers to Para 1.4.8 of Appendix G)

GUIDELINES OF PROTECTION OF EXCHANGE RATE VARIATION IN CONTRACTS

1. Parameters to be kept in view while formulation ERV Clause.

(a) In contracts with Indian Vendors in all categories of capital acquisitions where there is an import content, ERV clause will be provided. However, ERV clause shall not be applicable to contracts in following conditions:-

(i) The delivery period is less than one year; or

(ii) The rate of exchange variation is within the band of +/- 2.5%.

(b) ERV clause will be framed according to the specific requirements of the contract. While calling for information at the RFP stage/formulation of ERV clauses in the contracts, the following factors are to be taken into consideration depending upon the requirements of the individual contracts:-

(i) Year wise and major currency wise import break up is to be indicated.

(ii) Detailed time schedule for procurement of imported material/Services and their value at the FE rates adopted for the contract is to be furnished by the vendor as per the format given below:-

YEAR	TOTAL COST OF IMPORTED MATERIAL/ SERVICES (In rupees)	FE CONTENT-OUT FLOW (equivalent in rupees ₹ in crore)			
		DOLLAR DENOMINATED	EURO DENOMINATED	POUNDS DENOMINATED	OTHER CURRENCIES DENOMINATED (as applicable)

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(iii) ERV clause will not be applicable in case delivery periods for imported content are subsequently to be refixed/extended unless the reasons for delivery period extension are attributable to the buyer.

(iv) For purposes of ensuring uniformity, the Base Exchange Rate on the ERV reckoning date will be adopted for each of the major foreign currencies. The Base Exchange Rate will be the BC Selling Rate of the Parliament Street Branch of State Bank of India, New Delhi. The ERV reckoning date will be the last date of submission of commercial bids as per RFP. In cases where Option Clause is exercised, the date of reckoning of ERV will be the last date of submission of bids for the RFP of the Original Procurement Case.

(v) ERV clause in the contract is to clearly indicate that ERV is payable/ refundable depending upon exchange rate as prevalent on the date of transaction with reference to Base Exchange Rate on the ERV reckoning date.

(vi) Other issues which are peculiar to the contract.

2. **Methodology For Claiming ERV**

"The prices finalised in the contract are based on the base exchange rates indicated in the contract. The year-wise amount of foreign exchange component of the imported items as indicated in the contract shall be adjusted for the impact of exchange Rate Variation of the Rupee based on the exchange rate prevailing on the date of each transaction, as notified by the SBI, Parliament Street Branch, New Delhi. The impact of notified Exchange Rate Variation shall be computed on an yearly basis for the outflow as tabulated in Annexure..... (The table at Para 1(b) (ii) is to be an Annexure to the contract) and shall be paid/refunded before the end of the financial year based on the certification of Finance Head of the concerned Division.....".

3. Paying authority is to undertake a pre-audit of the documents before payment.

4. Documentation for Claiming ERV. The following documents would need to be submitted in support of the claim on account of ERV:-

(a) A bill of ERV claim enclosing worksheet.

(b) Banker's Certificate/debit advice detailing Foreign Exchange paid and Exchange rate as on date of transaction.

(c) Copies of import orders placed on the suppliers.

(d) Invoice of supplier for the relevant import orders.

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Annexure II to Appendix G
(Refers to Para 1.4.1 of Appendix G)

BANK GUARANTEE FORMAT FOR ADVANCE

To

The _____
Ministry of _____
Government of India
_____ (complete postal address of the beneficiary)

1. "Whereas President of India represented by the _____ Ministry of_____ Government of India (hereinafter referred to as BUYER) have entered into a Contract _____ No._____ (No.of Contract), dated_____ (Date of Contract) with M/s _____ (Name of SELLER) (referred to as SELLER) and whereas according to the said Contract the BUYER has undertaken to make an advance payment of Rs _____ being payment of 15 % of the Base Contract Price of Rs _____ of the said Contract, against issuance of an advance guarantee by a bank."

2. We _____ (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the BUYER intimating that the SELLER is in breach of the Contractual obligations stipulated in the said Contract. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our total liability under this guarantee shall be restricted to an amount not exceeding Rs _____.

3. We undertake to pay to the BUYER any money so demanded notwithstanding any dispute or disputes raised by the SELLER in any suit or proceedings pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the SELLER shall have no claim against us for making such payment.

4. We, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the BUYER under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged or till _____ office /Department/ Ministry of _____ certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said SELLER and accordingly discharges this guarantee.

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5. We, further agree with the BUYER that the BUYER shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said SELLER from time to time or to postpone for any time or from time to time any of the powers exercisable by the BUYER against the said SELLER and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, Amendment issued vide MoD ID No. 4(50)/D(Acq)/08 dated 20.06.2016 or extension being granted to the said SELLER or for any forbearance, act or omission on the part of the BUYER or indulgence by the BUYER to the said SELLER or by any such matter or thing whatsoever which under law relating to sureties would, but for this provision, have effect of so relieving us.

6. The amount of this guarantee will be progressively reduced by (percentage of advance) _____ of total value of each part shipment/services against the stage payment released by the BUYER for that shipment/services made by the SELLER and presentation to us of the payment documents.

7. This guarantee will not be discharged due to the change in the constitution of the bank or the BUYER/SELLER.

8. We, undertake not to revoke this guarantee during the currency except with the previous consent of the BUYER in writing.

9. Notwithstanding anything contained herein above:-

(a) Our liability under this guarantee shall not exceed Rs _____ (in words) _____.

(b) This guarantee shall remain valid until _____ (hereinafter the expiry date of this guarantee) the guarantee will cease to be valid after _____ irrespective whether the Original Guarantee is returned to us or not.

(c) We are liable to pay guaranteed amount or any part thereof under this guarantee only and only if you serve upon us a written demand or a claim in writing on or before _____ (Expiry Date).

Dated the _____ day of _____(month and year)
Place :
Signed and delivered by _____ (Name of the bank)
Through its authorised signatory
(Signature with seal)

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Annexure III to Appendix G
(Refers to Para 2 of Appendix G)

BANK GUARANTEE FORMAT FOR PERFORMANCE-CUM-WARRANTY

To

The _____
Ministry of _____
Government of India _____
_____ (complete postal address of the beneficiary)

Dear Sir,

1. Whereas President of India represented by the _____ Ministry of _____, Government of India (hereinafter referred to as BUYER) have entered into a Contract No. _____ dated _____ (hereinafter referred to as the said Contract) with M/s. _____ (hereinafter referred to as the SELLER) for supply of goods as per Contract to the said BUYER and whereas the SELLER has undertaken to produce a bank guarantee amounting to Rs _____ which is 5% of the Total Contract Price (including taxes and duties) to cover 5% of Total Contract Price (including taxes and duties) each for Performance and Warranty in sequence, to secure its obligations towards Performance-cum- Warranty to the BUYERs.

2. We, the _____ bank hereby expressly, irrevocably and unreservedly undertake the guarantee as principal obligors on behalf the SELLER that, in the event that the BUYER declares to us that the amount claimed is due by way of loss or damage caused to or would be caused or suffered by the BUYER by reason of breach/failure to perform by the said SELLER of any of the terms and conditions in the Contract related to Performance and Warranty clauses, we will pay you, on demand and without demur, all and any sum up to {5% of Total Contract Price (including taxes and duties)} _____ Rupees only at any instance under this Guarantee. Your written demand shall be conclusive evidence to us that such repayment is due under the terms of the said Contract. We shall not be entitled to ask you to establish your claim or claims under this guarantee but will pay the same forthwith without any protest or demur. We undertake to effect payment upon receipt of such written demand.

3. We shall not be discharged or released from the undertaking and guarantee by any arrangements, variations made between you and the SELLER, indulgence to the SELLER by you, or by any alterations in the obligations of the SELLER or by any forbearance whether as to payment, time performance or otherwise.

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4. We further agree that any such demand made by the BUYER on the Bank shall be conclusive, binding, absolute and unequivocal notwithstanding any difference or dispute or controversy that may exist or arise between you and the SELLER or any other person.

5. In no case shall the amount of this guarantee be increased.

6. This Performance-cum-Warranty guarantee shall remain valid for a period until three months beyond the warranty period as specified in the Contract i.e. up to _____.

7. Subject to the terms of this Bank Guarantee, the issuing bank hereby irrevocably authorizes the beneficiary to draw the amount of up to Rs_____ {5% of Total Contract Price (including taxes and duties)} for breach/failure to perform by the SELLER of any of the terms and conditions of the Contract related to performance and warranty clause. Partial drawings and multiple drawings under this Bank Guarantee are allowed within the above stated cumulative amount subject to each such drawing not exceeding 5% of the Total Contract Price (including taxes and duties) (Rs _____ only) (Mention BG amount).

8. This guarantee shall be continuing guarantee and shall not be discharged by any change in the constitution of the Bank or in the constitution of M/s . We undertake not to revoke this guarantee during the currency except with previous consent of BUYER in writing.

9. Notwithstanding anything contained herein above:

(a) Our liability under this Guarantee shall not exceed Rs _____ (Rupees _____ only (in words).

(b) This Bank Guarantee shall remain valid until 3 months from the date of expiry of warranty period of the Contract, i.e up to _____ (mention the date) which is 3 months after expiry of the warranty period and the BG shall cease to be valid after_____ irrespective whether the Original Guarantee is returned to us or not.

(c) We are liable to pay guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written demand or a claim in writing on or before _____ (Expiry Date).

Dated the _____ day of _____ (month and year)

Place :
Signed and delivered by _____ (name of the bank)
Through its authorised signatory (Signature with seal)





Annexure IV to Appendix G
(Refers to Para 3 of Appendix G)

FORMAT FOR PERFORMANCE BANK GUARANTEE FOR CMC

To

The _____
Ministry of _____
Government of India _____
_____ (complete postal address of the beneficiary)

Dear Sir,

1. Whereas President of India represented by the _____ Ministry of _____, Government of India (hereinafter referred to as BUYER) have entered into a Contract No. _____ dated _____ (hereinafter referred to as the said Contract) with M/s. _____ (hereinafter referred to as the SELLER) for supply of goods as per Contract to the said BUYER and whereas the SELLER has undertaken to produce a bank guarantee amounting to Rs _____ which is 5% of the Total Contract Price (including taxes and duties) to cover 5% of Total Contract Price of CMC (including taxes and duties) for CMC in sequence, to secure its obligations towards CMC to the BUYERs.

2. We, the _____ bank hereby expressly, irrevocably and unreservedly undertake the guarantee as principal obligors on behalf the SELLER that, in the event that the BUYER declares to us that the amount claimed is due by way of loss or damage caused to or would be caused or suffered by the BUYER by reason of breach/failure to perform by the said SELLER of any of the terms and conditions in the Contract related to Performance and Warranty clauses, we will pay you, on demand and without demur, all and any sum up to {5% of Total Contract Price of CMC (including taxes and duties)} _____ Rupees only at any instance under this Guarantee. Your written demand shall be conclusive evidence to us that such repayment is due under the terms of the said Contract. We shall not be entitled to ask you to establish your claim or claims under this guarantee but will pay the same forthwith without any protest or demur. We undertake to effect payment upon receipt of such written demand.

3. We shall not be discharged or released from the undertaking and guarantee by any arrangements, variations made between you and the SELLER, indulgence to the SELLER by you, or by any alterations in the obligations of the SELLER or by any forbearance whether as to payment, time performance or otherwise.

4. We further agree that any such demand made by the BUYER on the Bank shall be conclusive, binding, absolute and unequivocal notwithstanding any difference or

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dispute or controversy that may exist or arise between you and the SELLER or any other person.

5. In no case shall the amount of this guarantee be increased.

6. This Performance Bank Guarantee shall remain valid for a period until three months beyond the warranty period as specified in the Contract i.e. up to _____.

7. Subject to the terms of this Bank Guarantee, the issuing bank hereby irrevocably authorizes the beneficiary to draw the amount of up to Rs_____ {5% of Total Contract Price of CMC (including taxes and duties)} for breach/failure to perform by the SELLER of any of the terms and conditions of the Contract related to performance and warranty clause. Partial drawings and multiple drawings under this Bank Guarantee are allowed within the above stated cumulative amount subject to each such drawing not exceeding 5% of the Total Contract Price (including taxes and duties) (Rs _____ only) (Mention BG amount).

8. This guarantee shall be continuing guarantee and shall not be discharged by any change in the constitution of the Bank or in the constitution of M/s . We undertake not to revoke this guarantee during the currency except with previous consent of BUYER in writing.

9. Notwithstanding anything contained herein above:

(a) Our liability under this Guarantee shall not exceed Rs _____ (Rupees _____ only (in words).

(b) This Bank Guarantee shall remain valid until 3 months from the date of completion of CMC, i.e up to _____ (mention the date) which is 3 months completion of CMC and the BG shall cease to be valid after_____ irrespective whether the Original Guarantee is returned to us or not.

(c) We are liable to pay guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written demand or a claim in writing on or before _____ (Expiry Date).

Dated the _____ day of _____ (month and year)

Place :
Signed and delivered by _____ (name of the bank)
Through its authorised signatory (Signature with seal)





Annexure V to Appendix G
(Refers to Para 7 of Appendix G)

FORMAT FOR EXTENSION OF DELIVERY PERIOD/ PERFORMANCE NOTICE

Name of the Procuring Entity.....

Extension of Delivery Period/Performance Notice

To
M/s (name and address of firm)

Sub: Contract No..... dated.....for the supply of.....

Ref: Your letter no. ..... dated: .....

Dear Sir,

1. You have failed to deliver {the (fill in qty.) of Stores/the entire quantity of Stores} within the contract delivery period [as last extended up to] (fill in date). In your letter under reply you have asked for [further] extension of time for delivery. In view of the circumstances stated in your said letter, the time for delivery is extended from (fill in date) to (fill in date).

2. Please note that notwithstanding the grant of this extension in terms of Clause (fill in clause number) of the subject contract an amount equivalent to ..... % (.....per cent) of the delivered price of the delayed goods for each week of delay or part thereof (subject to the ceiling as provided in the aforesaid clause) beyond the original contract delivery date/the last unconditionally re-fixed delivery date (as & if applicable), viz., (fill in date) will be recovered from you as liquidated damages. You may now tender the Stores for inspection [balance of the Stores] in terms of this letter. Stores if any already tendered by you for inspection but not inspected will be now inspected accordingly.

3. You are also required to extend the validity period of the performance guarantee for the subject contract from (fill in present validity date) to (fill in required extended date) within15 (fifteen) days of issue of this amendment letter.

4. The above extension of delivery date will also be subject to the following Denial Clause:-

(a) That no increases in price on account of any statutory increase in or fresh Imposition of customs duty, GST or on account of any other taxes/duty,

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including custom duty), leviable in respect of the Stores specified in the said contract which takes place after (insert the original delivery date) shall be admissible on such of the said Stores, as are delivered after the said date; and,

(b) That notwithstanding any stipulation in the contract for increase in price on any other ground including foreign exchange rate variation, no such increase which takes place after (insert the reckoning date as per DAP 2020) shall be admissible on such of the said Stores as are delivered after the said date.

(c) But nevertheless, the Buyer shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty, GST or on account of any other Tax or duty or on any other ground as stipulated in the price variation clause or foreign exchange rate variation which takes place after (insert the original delivery date).

5. All other terms and conditions of the contract remain unaltered. This is without any prejudice to Buyer's rights under the terms and conditions of the subject contract.

6. Please intimate your unconditional acceptance of this amendment letter within 10 (ten) days of the issue of this letter failing which the contract will be cancelled at your risk and expense without any further reference to you.

Yours faithfully,
(Authorised Officer)
Duly authorised,
for and on behalf of
The President of India

Note: Select one option within { } brackets; delete portion within [ ] brackets, if not applicable; fill in ( ) brackets. Brackets and this note are not to be typed.

Substitute following first para instead of first para in format above, for issuing a performance notice.

1. You have failed to deliver {the (fill in qty.) of Stores/the entire quantity of Stores} within the contract delivery period [as last extended up to] (fill in date). In spite of the fact that the time of delivery of the goods stipulated in the contract is deemed to be of the essence of the contract, it appears that (fill in the outstanding quantity) are still outstanding even though the date of delivery has expired. Although not bound to do so, the time for delivery is extended from (fill in date) to (fill in date) and you are requested to note that in the event of your failure to deliver the goods within the delivery period as hereby extended, the contract shall be cancelled for the outstanding goods at your risk and cost.





Annexure VI to Appendix G
(Refers to Para 9 Part I of RFP and Para 1.4 of Appendix G)

DELIVERY SCHEDULE AND STAGES OF PAYMENT

1. **Delivery Schedule**. Broad delivery schedule of SOAC with UAS is as follows:-

Ser	Batch No	SOAC Qty	Delivery Schedule
(a)	Batch 1	1st SOAC	T_0 + 09 months
(b)	Batch 2	2nd to 3rd SOAC	T_0 + 14 months
(c)	Batch 3	4th to 7th SOAC (including two Mid Range UAS and four Close Range UAS)	T_0 + 20 months
(d)	Batch 4	8th to 10th SOAC (including three Mid Range UAS and six Close Range UAS)	T_0 + 24 months

2. **Payment Terms**.

Ser No	Description	Delivery Timelines (T_0+Months)	% of Payment	Remarks
(a)	Advance payment	T_0	**15%** of the Base Contract Price,less CMC.	APBG of equivalent amount to be submitted. PWBG of **5%** of the Total Contract Price within 30 days of signing of the contract.

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Ser No	Description	Delivery Timelines (T_o+Months)	% of Payment	Remarks
Deliverables				
(b)	On Completion of JRI for SOACs, UAS and all deliverables	**T_o+09 to T_o+24**	**75%** of Base Contract price of deliverables (excluding CMC and training) on pro rata basis	Payment to be released on furnishing of JRI certificate and relevant documents. APBG is to be returned on delivery and final acceptance of each batch on pro-rata basis
(c)	On Completion of Acceptance trials of all deliverables	-	**10%** of the Base Contract price (excluding CMC and training)	-APBG is to be returned on completion of training and acceptance of documentation on pro-rata basis
Training				
(d)	On completion of training	-	85% of the total training cost on pro rata basis	Copy of completion certificate issued by NHQ
(e)	**Comprehensive Maintenance Contract**			
	Year 1	Annual Payment post completion of 02 years of warranty	100% of Annual CMC cost shall be paid, as per system on a pro rata basis	Return of PWBG after completion of warranty	Payment would be done against a 'Certificate of Satisfactory Service' during relevant CMC
	Year 2				
	Year 3				
	Year 4				
	Year 5				

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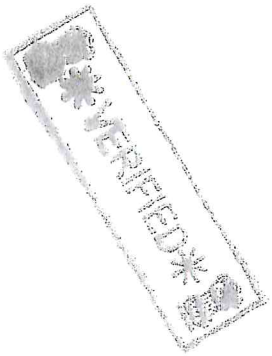
Ser No	Description	Delivery Timelines (T_o+Months)	% of Payment	Remarks	
	Year 6 Year 7 Year 8 Year 9 Year 10		every year. Payment will be made by CDA Navy through issue of cheque.	and before submissio n of additional PBG for CMC.	period issued b NHQ/ DSOD post completion of CM period on yearl basis. The bills in respect of eac system will need t be submitted by firm on completion c every one year o CMC

3. Payment of taxes, duties and statutory levies will be made on submission of requisite documentary proof to Paying authority. Reimbursement of taxes and duties will be as per rates and amounts indicated in the commercial bid/contract or as per actuals whichever is lower.





Appendix H
(Refers to Para 47 and 56(b) of RFP)

EVALUATION CRITERIA AND PRICE BID FORMAT

1. **Evaluation Criteria**. The guidelines for evaluation of Bids will be as follows:-

1.1. Bid will be evaluated, only if found to be fulfilling all the eligibility and qualifying requirements of the RFP, both technically and commercially. The bidder, whose price is arrived as lowest as per Evaluation criteria given in this Appendix, will be declared as L-1 bidder by Buyer.

1.2 **In 'Buy (Indian-IDDM)'**

1.2.1 **Where DCF Technique as Given in Para 3 is Applicable**. DCF technique will be applied on quoted cost of all items including taxes and duties payable to Central/State/Local Governments to ascertain the NPV which would be used for determining L1 bidder.

1.3 Custom duty on input materials shall not be loaded by the Indian Bidders in their price bids, if they are exempted under the existing Notifications. In such cases, necessary Custom Duty Exemption Certificate (CDEC) shall be issued by the Buyer. In cases where Custom Duty is not exempted, Basic Custom Duty on input material is to be included in the cost of Basic Equipment, Installation/Commissioning/Integration, BNE, ToT, MRLS, SMT, STE , ESP and any other item listed at Column (ii) of Para 2 below.

1.4 If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected based on indicative rates of taxes and duties at columns (vi) and (vii) of Para 2 below. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.

2. **Price Bid Format**. The Price Bid Format is given below and Bidder is required to fill this correctly with full details. No column of the Bid format has to be left blank. The clubbing of serials/sub serials to indicate a consolidated cost is not acceptable. Columns of 'quantity', 'unit cost', 'total cost (including all taxes and duties)', 'GST/IGST (%) and Custom Duty (%) are to be filled up with '0', 'positive numerical values' or 'Not Applicable' at every row as applicable. If any column is not applicable and intentionally left blank, the reason for the same has to be clearly indicated in the remarks column.

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Ser	Items	Qty	Unit Cost	Total Basic Cost (iii) x (iv)	Indicative Rate of Taxes & Duties used to arrive at Total Cost (as applicable)		Total Cost (including all taxes & duties) (v) + (vi) +(vii)	Remarks
					GST/ IGST (%)	Custom Duty (%)		
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
A.	A1. **SOAC** Full break-up details may be given.	**10**						
	A2. **Mid Range UAS.**	**05**						
	A2. **Close Range UAS.**	**10**						
B.	Cost of **Accessories.** Full break-up details may be given.							
C.	Cost of **Technical Literature** as per Annexure I to Appendix E.	**10 sets**						
D.	Cost of **Training** excluding the cost of travel and boarding and lodging, separately for operators and maintenance technicians.							As pe Para16/ Part1
E.	**CMC (10 years)** Cost giving year-wise break-up.							
	First Year							
	Second Year							
	Third Year							
	Fourth Year							
	Fifth Year							
	Sixth Year							
	Seventh Year							
	Eighth Year							
	Ninth Year							

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Ser	Items	Qty	Unit Cost	Total Basic Cost (iii) x (iv)	Indicative Rate of Taxes & Duties used to arrive at Total Cost (as applicable)		Total Cost (including all taxes & duties) (v) + (vi) +(vii)	Remarks
					GST/ IGST (%)	Custom Duty (%)		
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
	Tenth Year							
F.	Any other cost (to be specified).							
G.	**Freight and Transit Insurance** Cost (where applicable).							
H.	**Total Cost** (Total of Serial A to G) To be indicated in figures and words							# This will be used to determine L1 vendor (duly applying provision of Para 1 above)
J.	**Foreign Exchange component** of the proposal. (for Indian Vendors only)							This will be with reference to Para 1.2.1 of Appendix G.
K.	**CDEC (if applicable)**, its authority and amount for which required.							

Note: ***Taxes and Duties***. *All Indirect Taxes and Duties will be paid at actuals or as indicated in the Commercial bid by the Bidder, whichever is lower. In case of any change in the tax structure/rates by BUYER's Government, only incremental/decremented change will be paid.*

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3. **Evaluation of Bids by DCF Technique.** This technique will be utilized for price bid evaluation since it involves CMC.

3.1 Net Present Value (NPV) is a variant of DCF method, which will be used by the Buyer for evaluation of Bids. The Net Present Value of a Bid will be equal to the sum of the present values of all the cash flows associated with it. The following formula will be used for calculating NPV of a bid –

$$NPVn = \sum_{t=1}^{n} At/ (1+r)^t$$

Where,

NPV = Net Present Value

A_t = Expected cash flow occurring at the end of year 't' as mentioned in the Payment schedule of Bid

n = Duration of cash flow stream

r = Discounting Rate

t = The period after which payment is done

The bid with the lowest NPV would be selected.

3.2. The Discounting rate will be %". (Note-This will be the Government of India's lending rate on loans given to state governments, as notified by Budget Division of Ministry of Finance annually)

3.3. **Structuring Cash Flows for Tenders/ Bids Received in the Same Currency**. The cash outflows as shown in price bids will be taken into consideration. NPV of different bids will be calculated using the formula given above and the one having lowest NPV will be selected as L-1.

3.4 **Structuring Cash Flows for Tenders/Bids Received in Different Currencies**. Where bids are received in different currencies/combination of currencies, the cash outflow will be brought to a common denomination in rupees by converting foreign currency bids into rupees by taking into account the BC selling rate of Parliament Street Branch of State Bank of India, New Delhi on the ERV reckoning date (as defined in Annexure I to Appendix M), ie the last date of submission of Commercial Bids as per RFP. Thereafter, the procedure as described above in Para 4.3 will be applied to arrive at NPV.

3.5 All bidders are required to indicate year-wise and currency-wise amount required as per their price bid in format given below. In case the firm a bidder

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does not provide year-wise cash flow details in price bid, the amount quoted in their price bid will not be discounted for comparison purposes.

Year	Dollars	Euros	Pound Sterling	Rupees	Total Cash-flow

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Appendix J
(Refers to Para 52 of RFP)

STANDARD CONDITIONS OF RFP

LAW

1. The present Contract shall be considered and made in accordance to the laws of Republic of India.

ARBITRATION
(For Indian Private Vendors)

2.1 All disputes or differences arising out of or in connection with the present Contract, including the one connected with the validity of the present Contract or any part thereof, shall be settled by bilateral discussions.

2.2 Any dispute, disagreement of question arising out of or relating to this Contract or relating to construction or performance (except as to any matter the decision or determination whereof is provided for by these conditions), which cannot be settled amicably, shall within sixty (60) days or such longer period as may be mutually agreed upon, from the date on which either party informs the other in writing by a notice that such dispute, disagreement or question exists, will be referred to the Arbitration Tribunal consisting of three arbitrators.

2.3 Within sixty (60) days of the receipt of the said Notice, one arbitrator shall be nominated in writing by SELLER and one arbitrator shall be nominated by BUYER.

2.4 The third arbitrator, shall be nominated by the parties within ninety (90) days of the receipt of the notice mentioned above, failing which the third arbitrator may be nominated under the provision of Indian Arbitration and Conciliation Act, 1996 (as amended from time to time) or by dispute resolution institutions like Indian Council of Arbitration or ICADR, at the request of either party, but the said nomination would be after consultation with both the parties. The arbitrator nominated under this Clause shall not be regarded nor act as an umpire.

2.5 The Arbitration Tribunal shall have its seat in New Delhi or such other place in India as may be decided by the arbitrator.

2.6 The Arbitration Proceedings shall be conducted in India under the Indian Arbitration and Conciliation Act, 1996 (as amended from time to time) and the award of such Arbitration Tribunal shall be enforceable in Indian Courts only.

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2.7 The decision of the majority of the arbitrators shall be final and binding on the parties to this contract.

2.8 Each party shall bear its own cost of preparing and presenting its case. The cost of arbitration including the fees and expenses of the third arbitrator shall be shared equally by the SELLER and the BUYER.

2.9 In the event of a vacancy caused in the office of the arbitrators, the party which nominated such arbitrator, shall be entitled to nominate another in his place and the arbitration proceedings shall continue from the stage they were left by the retiring arbitrator.

2.10 In the event of one of the parties failing to nominate its arbitrator within sixty (60) days as above or if any of the parties does not nominate another arbitrator within sixty
(60) days of the place of arbitrator falling vacant, then the other party shall be entitled after due notice of at least thirty (30) days to request dispute resolution institutions in India like Indian Council of Arbitration and ICADR to nominate another arbitrator as above.

2.11 If the place of the third arbitrator falls vacant, his substitute shall be nominated according to the provisions herein above stipulated.

2.12 The parties shall continue to perform their respective obligations under this contract during the pendency of the arbitration proceedings except in so far as such obligations are the subject matter of the said arbitration proceedings.

ARBITRATION
(For Central & State PSEs)

3. In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 (as amended from time to time) shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law &Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary/Additional Secretary, when so authorised by the Law Secretary, whose decision shall bind the Parties finally and

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conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

ARBITRATION
(For Defence PSUs)

4. In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party to the Arbitrator(s) appointed by Defence Secretary. The award of the Arbitrator(s) shall be binding upon the parties to the dispute.

FORCE MAJEURE

5.1 Should any force majeure circumstances arise, each of the contracting party shall be excused for the non-fulfilment or for the delayed fulfilment of any of its contractual obligations, if the affected party within (**30 days**) of its occurrence informs in a written form the other party.

5.2 Force majeure shall mean fires, floods, natural disasters or other acts such as war, turmoil, strikes, sabotage, explosions, beyond the control of either party.

5.3 Provided the acts of The Government or any state parties of the seller which may affect the discharge of the Seller's obligation under the contract shall not be treated as Force Majeure.

PENALTY FOR USE OF UNDUE INFLUENCE

6.1 The Seller undertakes that he has not given, offered or promised to give, directly or indirectly any gift, consideration, reward, commission, fees brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contracts or forbearing to do or for having done or for borne to do any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government. Any breach of the aforesaid undertaking by the seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the seller) or the commission of any offence by the seller or anyone employed by him or acting on his behalf, as defined in relevant sections of the Bhartiya Nyaya Samhita, or the Prevention of Corruption Act, 1988 or any other Act enacted for the prevention of corruption shall entitle the Buyer to cancel the contract and all or any other contracts with the seller and recover from the seller the amount of any loss arising from such cancellation. A decision of the buyer or his

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nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller.

6.2 Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the seller towards any officer/employee of the buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.

INTEGRITY PACT

7.1 Further signing of an 'Integrity Pact' would be considered between government department and the bidder for schemes exceeding **₹ 20 Crores**. The Integrity Pact is a binding agreement between the agency and bidders for specific contracts in which the agency promises that it will not accept bribes during the procurement process and bidders promise that they will not offer bribes. Under the IP, the bidders for specific services or contracts agree with the procurement agency or office to carry out the procurement in a specified manner. The essential elements of the IP are as follows:-

(a) A pact (contract) between the Government of India (Ministry of Defence) (the authority or the "principal") and those companies submitting a tender for this specific activity (the "bidders");

(b) An undertaking by the principal that its officials will not demand or accept any bribes, gifts, etc., with appropriate disciplinary or criminal sanctions in case of violation;

(c) A statement by each bidder that it has not paid and will not pay, any bribes;

(d) An undertaking by each bidder that he shall not pay any amount as gift, reward, fees, commission or consideration to such person, party, firm or institution (including Agents and other as well as family members, etc., of officials), directly or indirectly, in connection with the contract in question. All payments made to the Agent 12 months prior to tender submission would be disclosed at the time of tender submission and thereafter an annual report of payments would be submitted during the procurement process or upon demand of the MoD.

(e) The explicit acceptance by each bidder that the no-bribery commitment and the disclosure obligation as well as the attendant sanctions remain in force for the winning bidder until the contract has been fully executed;

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(f) Undertakings on behalf of a bidding company will be made "in the name and on behalf of the company's chief executive officer";

(g) The following set of sanctions shall be enforced for any violation by a bidder of its commitments or undertakings:

(i) Denial or loss of contract;

(ii) Forfeiture of the EMD (Pre-contract) and Bank Guarantee (after signing of contract).

(iii) Payment to the Buyer of any such amount paid as gift, reward, fees or consideration along with interest at the rate of 2% per annum above prevailing base rate of SBI.

(iv) Refund of all sums already paid by the Buyer along with interest at the rate of 2% per annum above the prevailing base rate of SBI.

(v) Recovery of such amount, referred to in (iii) and (iv) above, from other contracts of the Seller with the Government of India.

(vi) At the discretion of the Buyer, the Seller shall be liable for action as per extant policy on Putting on Hold, Suspension and Debarment of Entities.

(h) Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.

(j) The draft Pre-Contract Integrity Pact is attached as **Annexure I to this Appendix**. The vendors are required to sign them and submit separately along with the technical and commercial offers.

7.2 In respect of bids from DPSUs, the concerned DPSU shall enter in to a Pre-Contract Integrity Pact, on the same lines with their sub-vendors individually, in case the estimated value of each sub-contract(s) exceed ₹ 20 Crore and such subcontract(s) are required to be entered in to by the DPSU with a view to enable DPSU to discharge the obligations arising out of their bid in question in response to this RFP.

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AGENTS

8. The Seller confirms and declares to the Buyer that the Seller is the original manufacturer of the stores referred to in this contract. The Seller confirms that he has not engaged any person, party, firm or institution as an Agent including his Agents already intimated to MoD; to, influence, manipulate or in any way to recommend to any functionaries of the Government of India, whether officially or unofficially, to the award of the contract to the Seller, or to indulge in corrupt and unethical practices. The Seller has neither paid, promised nor has the intention to pay to any person, party, firm or institution in respect of any such intervention or manipulation. The Seller agrees that if it is established at any time to the satisfaction of the buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that Seller has engaged any such person, party, firm or institution and paid, promised or has intention to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this contract, the Seller will be liable for any or all of the following actions:-

(a) To pay to the Buyer any such amount paid as gift, reward, fees or consideration along with interest at the rate of 2% per annum above prevailing base rate of SBI.

(b) The Buyer will also have a right to put on hold or cancel the Contract either wholly or in part, without any entitlement or compensation to the Seller who shall in such event be liable to refund all payments made by the Buyer in terms of the Contract along with interest at the rate of 2% per annum above prevailing base rate of SBI.

(c) The Buyer will also have the right to recover any such amount referred in (a) and (b) above from other contracts of the Seller with the Government of India.

(d) At the discretion of the Buyer, the Seller shall be liable for action as per extant policy on Putting on Hold, Suspension and Debarment of Entities

9. In case it is found to the satisfaction of the BUYER that the SELLER has engaged an Agent, or paid commission or influenced any person to obtain the contract as described in clauses relating to Agents and clauses relating to Penalty for Use of Undue Influence, the SELLER, on demand of the BUYER shall provide necessary information/inspection of the relevant financial documents/ information, including a copy of the contract(s) and details of payment terms between the vendors and Agents engaged by him.

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Annexure I to Appendix J
(Refers to Para 20 of RFP)

PRE-CONTRACT INTEGRITY PACT

General

1. Whereas the PRESIDENT OF INDIA, represented by Joint Secretary & Acquisition Manager (Maritime & Systems), Ministry of Defence, Government of India, hereinafter referred to as the Buyer and the first party, proposes to procure (Name of the Equipment), hereinafter referred to as Defence Stores and M/s _____ represented by, _____ Chief Executive Officer (which term, unless expressly indicated by the contract, shall be deemed to include its successors and its assignees), hereinafter referred to as the Bidder/Seller and the second party, is willing to offer/has offered the Defence stores.

2. Whereas the Bidder is a private company/public company/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the Buyer is a Ministry of the Government of India performing its functions on behalf of the President of India.

Objectives

3. Now, therefore, the Buyer and the Bidder agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/unprejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:

3.1 Enabling the Buyer to obtain the desired defence stores at a competitive price in conformity with the defined specifications of the Services by avoiding the high cost and the distortionary impact of corruption on public procurement

3.2 Enabling Bidders to abstain from bribing or any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also refrain from bribing and other corrupt practices and the Buyer will commit to prevent corruption, in any form, by their officials by following transparent procedures.

Commitments of the Buyer

4. The Buyer commits itself to the following:-

4.1 The Buyer undertakes that, no official of the Buyer, connected directly or indirectly with the contract will demand, take a promise for or accept, directly or

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through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the Bidder, either for themselves or for any person, organisation or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the Contract.

4.2 The Buyer will, during the pre-contract stage, treat all Bidders alike and will provide to all Bidders the same information and will not provide any such information to any particular Bidder which could afford an advantage to that particular Bidder in comparison to other Bidders.

4.3 All the officials of the Buyer will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

5. In case of any such preceding misconduct on the part of such official(s) is reported by the Bidder to the Buyer with full and verifiable facts and the same is prima facie found to be correct by the Buyer, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Buyer and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Buyer the proceedings under the contract would not be stalled.

Commitments of Bidders

6. The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre- contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits himself to the following:

6.1 The Bidder will not to offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer, connected directly or indirectly with the bidding process, or to any person, organisation or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.

6.2 The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government.

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6.3 The Bidder will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

6.4 The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

6.5 The Bidder further confirms and declares to the Buyer that the Bidder is the original manufacturer/integrator/authorised government sponsored export entity of the Defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Buyer or any of its functionaries, whether officially or unofficially to the award of the contract to the Bidder, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company or Agent in respect of any such intercession, facilitation or recommendation.

6.6 The bidder would not enter into conditional contract with any Agents, brokers or any other intermediaries wherein payment is made or penalty is levied, directly or indirectly, on success or failure of the award of the contract. The bidder while presenting the bid, shall disclose any payments he has made during the 12 months prior to tender submission or is committed to or intends to make to officials of the buyer or their family members, Agents, brokers or any other intermediaries in connection with the contract and the details of such services agreed upon for such payments. Within the validity of PCIP, bidder shall disclose to MoD any payments made or has the intention to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution as an annual report during the procurement process.

6.7 The Bidder shall not use improperly, for purposes of competition or personal gain or pass on to others, any information provided by the Buyer as part of the business relationship regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.

6.8 The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts. Complaint will be processed as per **Guidelines for Handling of Complaints** in vogue. In case the complaint is found to be vexatious, frivolous or malicious in nature, it would be construed as a violation of Integrity Pact.

6.9 The Bidder shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

7. **Previous Transgression**

7.1 The Bidder declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other

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company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India.

7.2 If the Bidder makes incorrect statement on this subject, Bidder can be disqualified from the tender process or the contract and if already awarded, can be terminated for such reason.

8. **Bid Security: Earnest Money Deposit**

8.1 Every bidder, while submitting commercial bid, shall submit Bid Security in the form of Earnest Money Deposit (EMD), in cases where applicable (as provided in Clause 8 herein).

(a) To safeguard against a bidder(s) withdrawing or altering its bid during the bid validity period, Bid Security (also known as EMD) is to be obtained from all bidders except for cases upto 100 Crores (i.e, all cases upto 100 crores of AoN will be exempted from payment of EMD) as follows: -

EMD TABLE

Estimated Cost of Procurement Scheme (Crore)		EMD Amount
Above (Not including)	To (Including)	
-	100	Nil
100	150	30 Lakh
150	300	70 Lakh
300	1000	**2 Crore**
1000	2000	5 Crore
2000	3000	10 Crore
3000	5000	15 Crore
5000	-	25 Crore

(b) EMD is not required from Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium enterprises (MSME) or are registered with the Central Purchase Organisation or the concerned Ministry or Department or Startups as recognised by Department of Industrial Policy & Promotion (DIPP), in accordance with the Ministry of Finance office memorandum bearing No. F.20/2/2014-PPD (Pt.) dated July 25, 2017 (as amended from time to time).

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(c) DPSUs are not required to submit EMD when nominated as ab-initio single vendor. DPSUs will submit all BGs and EMD as applicable while participating in multi vendor cases with private vendors.

(d) **Format of EMD**. The Bid Security may be accepted in the following forms, safeguarding the Buyer's interest in all respect:-

(i) Bank Guarantee from any Indian Public or Private Scheduled Commercial Bank notified by RBI or first-class banks of international repute. The format of the Bank Guarantee for Bid Security is provided at Annexure I to Appendix J.

(ii) Insurance Surety Bond - The format and guidelines pertaining to the same shall be issued / notified by the Ministry of Defence.

(iii) Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque shall be payable in an acceptable form. The Beneficiary Bank Details for furnishing the same are as follows:

(IFSC Code - SBIN0000691)
State Bank of India New Delhi Main Branch
C Block, 11 Parliament Street
New Delhi, Pin: 110001

(e) **Validity of EMD**. The EMD will be valid for eighteen months or till signing of contract, whichever is later. The EMD shall be extended from time to time as required by the Buyer and agreed by the Bidder. No interest shall be payable by the Buyer to the Bidder(s) on the EMD for the period of its currency. For unsuccessful bidders EMD will be returned on declaration of successful bidder(s).

(f) **Instances of Forfeiture of EMD**.

(i) If the Bidder withdraws or amends, impairs or derogates from the Bid in any respect within the period of validity of this tender.

(ii) If the Bidder having been notified of the acceptance of his tender by the Buyer during the period of its validity.

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(aa) If the Bidder fails to furnish the Performance Security for the due performance of the contract.

(ab) Fails or refuses to accept/ execute the contract.

(iii) In case of violation of Pre-Contract Integrity Pact, EMD will be forfeited besides other legal penalties as may be decided by the Ministry of Defence.

8.2 In the case of successful bidder a clause would also be incorporated in the Article pertaining to Performance-cum-Warranty Bank Guarantee Bond in the Purchase Contract that the provisions of Sanctions for Violation shall be applicable for forfeiture of Performance Bond in case of a decision by the Buyer to forfeit the same without assigning any reason for imposing sanction for violation of this pact.

8.3 The provisions regarding Sanctions for Violation in Integrity Pact include forfeiture of Performance-cum-Warranty Bank Guarantee Bond in case of a decision by the Buyer to forfeit the same without assigning any reason for imposing sanction for violation of Integrity Pact.

8.4 No interest shall be payable by the Buyer to the Bidder(s) on EMD for the period of its currency.

9. **Company Code of Conduct**

9.1 Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.

10. **Sanctions for Violation**

10.1 Any breach of the aforesaid provisions by the Bidder or any one employed by him or acting on his behalf (whether with or without the knowledge of the Bidder) or the commission of any offence by the Bidder or any one employed by him or acting on his behalf, as defined in Chapter IX of the Bhartiya Nyaya Samhita, 2023 or the Prevention of Corruption Act 1988 or any other act enacted for the prevention of corruption shall entitle the Buyer to take all or any one of the following actions, wherever required:

(i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the Bidder. However, the proceedings with the other Bidder(s) would continue.

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(ii) The EMD shall stand forfeited either fully or partially, as decided by the Buyer and the Buyer shall not be required to assign any reason therefore.

(iii) To immediately cancel the contract, if already signed, without any compensation to the Bidder.

(iv) To recover all sums already paid by the Buyer, in case of an Indian Bidder with interest thereon at 2% higher than the prevailing Base Rate of SBI and in case of a Bidder from a country other than India with interest thereon at 2% higher than prevailing base rate of SBI. If any outstanding payment is due to the Bidder from the Buyer in connection with any other contract for any other defence stores, such outstanding payment could also be utilised to recover the aforesaid sum and interest.

(v) To encash the advance bank guarantee and Performance-cum-Warranty Bond if furnished by the Bidder, in order to recover the payments, already made by the Buyer, along with interest.

(vi) To cancel all or any other Contracts with the Bidder.

(vii) To Put on Hold or Suspend or Debar the bidder as per the extant policy.

(viii) To recover all sums paid in violation of this Pact by Bidder(s) to any Agent or broker with a view to securing the contract.

(ix) If the Bidder or any employee of the Bidder or any person acting on behalf of the Bidder, either directly or indirectly, is closely related to any of the officers of the Buyer, or alternatively, if any close relative of an officer of the Buyer has financial interest/stake in the Bidder's firm, the same shall be disclosed by the Bidder at the time of filing of tender. Any failure to disclose the interest involved shall entitle the Buyer to debar the Bidder from the bid process or rescind the contract without payment of any compensation to the Bidder. The term **'close relative'** for this purpose would mean spouse whether residing with the Government servant or not, but not include a spouse separated from the Government servant by a decree or order of a competent court; son or daughter or step son or step daughter and wholly dependent upon Government servant, but does not include a child or step child who is no longer in any way dependent upon the Government servant or of whose custody the Government servant has been deprived of by or under any law; any other person related, whether by blood or marriage, to the Government servant or to the Government servant's wife or husband and wholly dependent upon Government servant.

(x) The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any

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employee of the Buyer and if he does so, the Buyer shall be entitled forthwith to rescind the contract and all other contracts with the Bidder. The Bidder shall be liable to pay compensation for any loss or damage to the Buyer resulting from such rescission and the Buyer shall be entitled to deduct the amount so payable from the money(s) due to the Bidder.

(xi) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the Buyer with the Bidder, the same shall not be opened.

10.2 The decision of the Buyer to the effect that a breach of the provisions of this Integrity Pact has been committed by the Bidder shall be final and binding on the Bidder, however, the Bidder can approach the Independent Monitor(s) appointed for the purposes of this Pact.

11. **Fall Clause**

11.1 The Bidder undertakes that he has not supplied/is not supplying the similar products, systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India and if it is found at any stage that the similar system or sub-system was supplied by the Bidder to any other Ministry/Department of the Government of India at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the Bidder to the Buyer, even if the contract has already been concluded.

11.2 The Bidder shall strive to accord the most favoured customer treatment to the Buyer in respect of all matters pertaining to the present case.

12. **Independent Monitors**

12.1 The Buyer has appointed Independent Monitors for this Pact in consultation with the Central Vigilance Commission. The names and addresses of nominated Independent Monitors (at the time of issue of RFP) are as follows (however the vendor must refer to the MoD website at www.mod.gov.in to check for changes to these details):-

Shri Ranjan Kumar Ghose, IA&AS (Retd)
DX-145, Kendriya Vihar, Sector-56,
Gurugram, Haryana - 122011

Shri Yogender Tripathi, IAS (Retd)
Flat No. 2802, 28th floor, Tower B2, County 107,
Sector-107, Noida, UP-201301

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12.1A All communications to Independent Monitors will be copied to Director (Vigilance). The Designation and Contact details of Director (Vigilance) are as follows:-

The Director (Vig)
Room – 340, B-Wing
Sena Bhawan
Rajaji Marg
New Delhi 110011

12.2 After the Integrity Pact is signed, the Buyer shall provide a copy thereof, along with a brief background of the case to the Independent Monitors, if required by them.

12.3 The Bidder(s), if they deem it necessary, may furnish any information as relevant to their bid to the Independent Monitors.

12.4 If any complaint with regard to violation of the IP is received by the buyer in a procurement case, the buyer shall refer the complaint to the Independent Monitors for their comments/enquiry.

12.5 If the Independent Monitors need to peruse the relevant records of the Buyer in connection with the complaint sent to them by the Buyer, the Buyer shall make arrangement for such perusal of records by the Independent Monitors.

12.6 The report of enquiry, if any, made by the Independent Monitors shall be submitted to the head of the Acquisition Wing of the Ministry of Defence, Government of India for a final and appropriate decision in the matter keeping in view the provision of this Pact.

13. Examination of Books of Accounts

In case of any allegation of violation of any provisions of this Integrity Pact or payment of commission, the Buyer or its agencies shall be entitled to examine the Books of Accounts of the Bidder and the Bidder shall provide necessary information of the relevant financial documents in English and shall extend all possible help for the purpose of such examination.

14. Law and Place of Jurisdiction

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the Buyer i.e. New Delhi.

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15. **Other Legal Actions**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

16. **Validity**

16.1 The validity of this Integrity Pact shall be from date of its signing and extend up to 5 years or the complete execution of the contract to the satisfaction of both the Buyer and the Bidder/Seller, whichever is later.

16.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

17. The Parties hereby sign this Integrity Pact at _____ on

BUYER

_____

MINISTRY OF DEFENCE,
GOVERNMENT OF INDIA

Witness
1.
2.

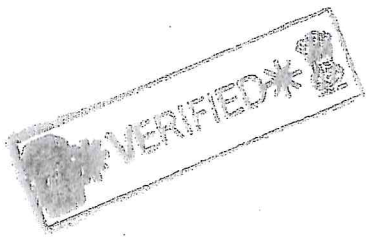
BIDDER

_____

CHIEF EXECUTIVE OFFICER

Witness
1.
2.





Refers to Para 8.1 of Pre-Contract Integrity Pact

EMD BANK GUARANTEE FORMAT

Whereas .....(hereinafter called the "Bidder") has submitted their offer dated.....for the supply of ..... (hereinafter called the "Bid") against the Buyer's Request for proposal No. ..... KNOW ALL MEN by these presents that WE .....of ..... having our registered office at ..... are bound unto ..... (hereinafter called the "Buyer") in the sum of ....for which payment will and truly to be made to the said Buyer, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this..... day of .....20.....

The conditions of obligations are:-

(1) If the Bidder withdraws or amends, impairs or derogates from the Bid in any respect within the period of validity of this tender.

(2) If the Bidder having been notified of the acceptance of his tender by the Buyer during the period of its validity.

(a) If the Bidder fails to furnish the Performance Security for the due performance of the contract.

(b) Fails or refuses to accept/execute the contract.

(3) If the bidder violates Pre-Contract Integrity Pact.

WE undertake to pay the Buyer up to the above amount upon receipt of its first written demand, without the Buyer having to substantiate its demand, provided that in its demand the Buyer will note that the amount claimed by it is due to it owing to the occurrence of above mentioned conditions, specifying the occurred condition or conditions. This guarantee will remain in force upto and including 45 days after the period of 18 months/
contract signing whichever is later and any demand in respect thereof should reach the Bank not later than the above date.

.....

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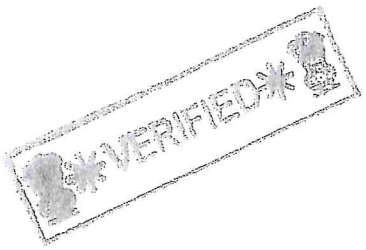
(Signature of the authorised officer of the Bank)
Name and designation of the officer
Seal, name & address of the Bank and address of the Branch





Appendix K
(Refers to Para 6 of RFP)

CRITERIA FOR VENDOR SELECTION / PRE-QUALIFICATION FOR - RFP ISSUE / INCLUSION IN RFP REQUIREMENTS (Only For Multi Vendor Cases. Not applicable to DPSUs/PSUs.)

1. The following parameters may be used, as a guideline for the Collegiate to adopt, for inclusion in the RFP.

Sl No	Parameter	For all Cases except Shipbuilding (Ch XII), Make (Ch III & IV) a Strategic Partnerships (Ch VII)
1	**Financial**	
a	Credit Rating	Long term credit rating of CCR-BBB or better and SME-04 or better SMEs as on 31st March of the previous financial year Not applicable for cases below Rs 150 Crs.
b	Average Annual Turn Over	Min Avg Annual Turnover for last 03 financial years, ending 31st Marc of the previous financial year, should not be less than 30% of estima annual outflow of project cost of the Buy (Indian-IDDM) and Buy (Indi project and for Buy & Make (Indian) should not be less than 30% o estimated annual outflow of the project cost of the make portion. Not applicable for cases below Rs 150 Crs.
c	Net Worth	Net worth of entities, ending 31st march of the previous financial ye should not be less than 5% of the estimated cost of the Buy (Indi IDDM) and Buy (Indian) project and for Buy & Make (Indian) should no be less than 5% of estimated cost of the Make portion. For orders abc Rs 5000 Cr, the Networth of group companies can be considered or production of suitable documentary assurance. Not applicable for cases below Rs 150 Crs. But Net worth should be Positive.
d	Insolvency	The entity should not be under insolvency resolution as per IBC at a stage of procurement process from the issuing of RFP to the signing o contract.
2	**Technical**	
a	Nature of Business	Manufacturing entity or System Integrator of defence equipment and no a trading company, except in cases where OEM participates only through its authorised Vendors.

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b	Experience in related field	Min 02 Yrs. experience in broad areas like manufacturing/ engineering/ electronics/ explosives etc. as applicable in the instant case. If not, then cumulative experience of at least 03 years in above areas, resulting in gaining of competence for manufacturing the proposed product. (In case SHQ feels that for particular equipment a lesser experience could be accepted, then the same should be specifically approved by the RFP approving authority before including the same in the RFP).
c	(i) Integration Experience (ii)Turnkey Projects Experience	(i) Cases involving Integration – Where product involves integration, previous experience of not less than one year/ one project in integration of systems/ equipment shall be required. (ii) Turnkey Projects – Experience of successful completion of one Turnkey project of similar nature within last 05 Years with value of at least 20% of AoN cost or currently executing a contract of similar nature with value of at least 30% of the AoN cost. In case of no experience in turnkey projects the vendor for main component of the turnkey project may be selected if it has experience as per Srl 2(b) above and experience of installation or integration of similar equipment/ system or system of systems.
d	Quality control	For ICT Cases – (i) Certification to be included if linked to scope of work – Gartner Quadrant/ ISO9001/ CMMi3 or more (specifying development/ service/ acquisition models) / ISO 27001. For Information Security and large value projects preferably CMMi5 may be specified. (ii) Compliance with IEEE/ ITU standards depending upon nature/type of project or solution required.
3	**Others**	
a	Industrial License	Posses or be in the process of acquiring a license, if the product under project requires license as per DIPP licensing policy.
b	Registration	Registered for Min 02 Years, 01 years for MSMEs. Min no of years not applicable for JVs constituted specifically for a project.

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Appendix L
(Refers to Para 7 of the RFP)

FORMAT FOR CERTIFICATION OF INDIGENOUS CONTENT

VENDOR'S CERTIFICATE

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

Signed by: 'Responsible Designated Official'
---------- (Name of Vendor)

Seal of Vendor
Date :

AUDITOR'S CERTIFICATE

We (legal name of Verification Firm) _____, established in _____ (Full address) represented for signature of this Verification Certificate by (Name and designation of Authorised Representative), hereby certify that, The above mentioned Indigenous Content (IC) proforma has been examined and all checks of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our Verification, the Indigenous Content percentage _____ % (in numbers and words) reflected in the above mentioned proforma has been achieved by _____ (Name of Vendor) during the manufacture of _____ (Name of Equipment).

Certified by:

Statutory Auditor/ Cost Auditor/Certified or
Licensed Cost Accountant / Chartered Accountant
(as applicable)
(Name /Name of Firm)
Membership Number / Registration Number

Seal of Verification Firm
Date :

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Appendix M
(Refers to Para 18 of the RFP)

CERTIFICATES TO BE SUBMITTED BY THE BIDDER AS PER RESTRICTIONS UNDER RULE 144 (xi) OF THE GENERAL FINANCIAL RULES (GFRS) 2017

Model Certificate for Tenders

"I have read the clause (Restriction under Rule 144(xi) of the General Financial Rules (GFRs), 2017 issued vide Ministry of Finance Order (Public Procurement Order No 4 dt 23 Feb 2023) regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that ..... (Bidder) is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that ..... (Bidder) fulfils all requirements in this regard and is eligible to be considered (where applicable, evidence of valid registration by the Competent Authority shall be attached)".

Model Certificate for Tenders for Works involving possibility of sub-contracting

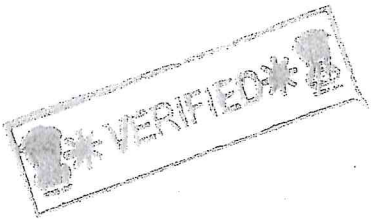
"I have read the clause (Restriction under Rule 144(xi) of the General Financial Rules (GFRs), 2017 issued vide Ministry of Finance Order (Public Procurement Order No 4 dt 23 Feb 2023) regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that ..... (Bidder) is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that ..... (Bidder) fulfils all requirements in this regard and is eligible to be considered (Where applicable, evidence of valid registration by the Competent Authority shall be attached)".

Model additional certificate by Bidders in the cases of specified ToT

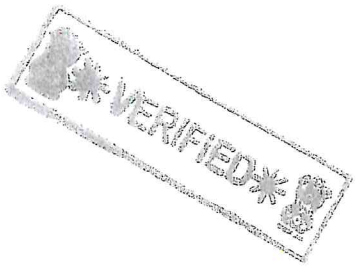
"I have read the clause (Restriction under Rule 144(xi) of the General Financial Rules (GFRs), 2017 issued vide Ministry of Finance Order (Public Procurement Order No 4 dt 23 Feb 2023) regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. I certify that ..... (Bidder) does not have any ToT arrangement requiring registration with the competent authority".

OR





"I have read the clause (Restriction under Rule 144(xi) of the General Financial Rules (GFRs), 2017 issued vide Ministry of Finance Order (Public Procurement Order No 4 dt 23 Feb 2023) regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. I certify that ..... (Bidder) has valid registration to participate in the procurement".





Appendix N
(Refers to Para 53 of RFP)

DOCUMENTS TO BE SUBMITTED BY THE BIDDER ALONG WITH THEIR TECHNO-COMMERCIAL PROPOSALS

The list of documents which needs to be mandatorily submitted by the Bidders as part of Technical Proposal are placed below. Non-submission of the documents may result in disqualification of the Bidder from the bidding process.

Ser No.	Reference	Document Description
1.	Para 5 of RFP	Declaration by Bidder : Debarment of vendors
2.	Para 17 of RFP	Declaration by Bidder: Government Regulation
3.	Para 18 of RFP	Declaration by Bidder: Obligations Relevant to Transfer of Conventional Arms
4.	Para 19 of RFP	Declaration by Bidder : Patent Rights
5.	Para 21 of RFP	Declaration by Bidder : Fall Clause
6.	Appendix B	Compliance Table
7.	Appendix C	Warranty Clause
8.	Appendix D	CERTIFICATE: Malicious Code
9.	Annexure I & II to Appendix E	Technical Literature and Training Aggregates
10.	Appendix H	Price Bid
11.	Annexure I to Appendix J	Pre-Contract Integrity Pact
12.	Annexure I to Appendix J	EMD
13.	Appendix L	Format for certification of indigenous content

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Appendix P

GLOSSARY

AoN	Acceptance of Necessity
ATP	Acceptance Test Procedure
CNC	Contract Negotiation Committee
DA	Direct Action (Mission)
DAC	Defence Acquisition Council
DGNAI	Director General Naval Armament Inspectorate
DGQA	Director General of Quality Assurance
DAP	Defence Acquisition Procedure
DRDO	Defence Research and Development Organisation
ECDIS	Electronic Chart Display Information System
EMC	Electro Magnetic Compatibility
EMD	Earnest Money Deposit
EMI	Electro Magnetic Interference
ESP	Engineering Support Package
FET	Field Evaluation Trials
GoI	Government of India
IC	Indigenous Content
IDDM	Indegineously Desined Developed and Manufactured
IP	Integrity Pact
IPBG	Integrity Pact Bank Guarantee
LRU	Line Replaceable Unit
MIO	Maritime Interdiction Operations
MoD	Ministry of Defence
MRLS	Manufacturer Recommended List of Spares
OEM	Original Equipment Manufacturer

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OTE	Open Tender Enquiry
PCIP	Pre Contract Integrity Pact
QA	Quality Assurance
RFP	Request for Proposal
SDR	Software Defined Radio
SHQ	Service Headquarters
SRU	Shop Replaceable Unit
SOAC	Special Operations Assault Craft
UAS	Unmanned Aerial System
UPMS	Unmanned Platform Management System
SORHB	Special Operations Rigid Hull Boats
UUVs	Unmanned Underwater Vehiccles
ISR	Intelligence, Surveillance and Reconnaissance



