

INVITATION OF BIDS

Request for Proposal (RFP) for Supply, Installation, Commission, Operation and Maintenance of Ground Segment Hub for Maritime Asset Monitoring including Civil, Electrical & Environmental Infrastructure



16 March 2024

NewSpace India Limited

[A Government of India company under Department of Space]
ISRO HQ campus, Bengaluru – 560 094

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NewSpace India Limited (NSIL)
[A Government of India Company under Department of Space]

**INVITATION OF BIDS/
REQUEST FOR PROPOSAL (RFP)**

Volume I: RFP and Instruction to bidders

Tender Reference Number: Ref. No. NSIL/RFP/HUB/VCS-MCS/2024/02
Date of Publication: 16 March 2024

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Volume I: RFP and Instruction to Bidders

RFP letter of Invitation

Letter of Invitation



NewSpace India Limited

[A Government of India company under Department of Space]

Ref: NO. NSIL/RFP/ HUB/ VCS-MCS/ 2024/02

16 March 2024

Sub: Supply, Installation, Commission, Operation and Maintenance of Ground Segment Hub for Maritime Asset Monitoring including Civil, Electrical & Environmental Infrastructure-Reg.

1. NewSpace India Limited (NSIL), a wholly owned Government of India company under Department of Space (DOS), is the commercial arm of Indian Space Research Organization (ISRO). NSIL as part of its mandate to commercially exploit the products and services emanating from Indian Space Programme, is keen to harness the potential of indigenously developed ISRO technology and provide space-based solutions to meet various requirements including the requirements from Govt. and strategic sector related to telecommunication, broadcasting, security etc.
2. NSIL, hereby invites through this Request for Proposal ("RFP"), the interested bidders for Supply, Installation, Commission, Operation and Maintenance of Ground Segment Hub for Maritime Asset Monitoring including Civil, Electrical and environmental infrastructure.
3. The tender/bid in response to this RFP is to be submitted in two parts viz., Technical and Financial bid in two separate sealed covers super-scribing the enquiry reference number, name of the respective bid and due date. Both the sealed covers containing Technical and Financial bids are to be put in one sealed cover duly super scribing the enquiry reference number & due date, failing which the bids will be considered as invalid.
4. The contents of the technical bid shall also be submitted in digital format along with the signed physical copy of the documents in the same envelope as the technical bid. The digital media shall also be super-scribed with the name of the bidding party, the enquiry reference number, and the name of the respective bid.

5. The address and contact numbers for sending Bid or seeking clarifications, if any, regarding this RFP are given below:

(a)	Bid/Queries are to be addressed to:	Sathish Babu E Dy. Manager, Commercial
(b)	Postal address for sending the Bids:	NewSpace India Limited (NSIL) ISRO HQ Campus New BEL Road Bengaluru-560 094
(c)	Name/designation of the contact person:	Dy. Manager, Commercial
(d)	Telephone numbers of the contact person:	080- 2217 2699
(e)	E-mail ID of contact person:	E-mail: purchase@nsilindia.co.in

6. Details regarding cost of the bid document, validity of the bids, mode of submission of bids, evaluation criteria and the EMD to be enclosed and payment terms are defined in detail in the RFP.

7. The RFP consists of three volumes viz.

- Volume I : RFP and Instruction to Bidders
- Volume II : Detailed Scope of work, Deliverables, Delivery schedule and technical specifications
- Volume III : General conditions of contract & special conditions of contract

8. Schedule of the Bidding Process is as follows:

S. No.	Activity	Schedule
a)	Document reference No	NSIL/ RFP/ HUB/VCS-MCS/ 2024/ 02
b)	RFP issue date	16 March 2024
c)	Pre-Bid Meeting	25 March 2024
d)	Completion of clarification on RFP queries	02 April 2024
e)	Submission of RFP responses	09 April 2024

-Sd-
[Sathish Babu E]
Dy. Manager, Commercial

Volume I: RFP and Instruction to Bidders

Chapter 1: Introduction

1.1. NewSpace India Limited

NewSpace India Limited (NSIL), a Government of India company under Department of Space (DOS), is the commercial arm of Indian Space Research Organization (ISRO). NSIL has the mandate of enabling Indian Industries to scale up high-technology manufacturing and production base for meeting the demands from domestic and international customers. NSIL's major businesses involves building satellite and launch vehicles; owning and operating satellites; providing launch services onboard ISRO's operational launch vehicles to global customers; providing satellite-based services (Earth observation and communication); establishing ground segment and providing mission support services; and technology transfer to Indian Industries.

1.2. Objective of the RFP

NSIL through this RFP aims to select vendor for Supply, Installation, Commission, operation and maintenance of dedicated 9m C-band ground station, hub baseband system for Maritime Asset Monitoring including Civil & Electrical work. This activity is part of a project on National Rollout plan for installation of ~100K MSS terminals (Xponders) in marine fishing vessels (mechanised and motorised boats) and establishment of Vessel communication and Support system for monitoring, control and surveillance (MCS).

The overall scope of work of the project includes establishment of a dedicated MSS Satcom network for supporting Emergency Communication and Tracking of Maritime assets. The proposal includes establishment of dedicated 9m C-band ground station at allotted premises. The centralized hub will gather the position data of all the maritime assets in real-time, support two-way emergency messaging and broadcast weather and PFZ alerts etc through this network. A centralized web-based Network Management System software will perform all network management & control applications and access to which will be made available to all stake holders/states to perform management and administrative operations as per their governing guidelines. The location data may also be shared through a secured private communication link to state and central agencies in their premises for further monitoring and analysis.

The objective of the present RFP is to seek proposals from bidders for Supply, Installation, Commission, Operation and Maintenance of Ground Segment Hub for Maritime Asset Monitoring including Civil, Electrical and Environmental infrastructure.

Volume I

Chapter 2: Definitions and Acronyms

S. No	Term/ Acronym	Description
1.	Applicable Law(s)	Any statute, law, ordinance, notification, rule, regulation, judgment, order, decree, bye-law, approval, directive, guideline, policy, requirement or other governmental restriction or any similar form of decision applicable to the relevant party and as may be in effect on the date of the execution of this Agreement and during the subsistence thereof, applicable to the Project.
2.	Affected Party	Means Owner or the Contractor whose performance has been affected by an event of Force Majeure
3.	Authority	Shall mean the NewSpace India Limited (NSIL), a Government of India company under Department of Space (DOS), a commercial arm of Indian Space Research Organization (ISRO)
4.	Site/ Location	Hyderabad
5.	Authorized Signatory	A person who is duly authorised from the bidder through the Power of Attorney (Volume I Annexure 7.3) in respect to take all decisions related to the RFP and sign on behalf of the bidder.
6.	Appointing Authority	for the purpose of arbitration shall be the any person so designated by the Owner.
7.	Arbitrator	means the person or persons appointed by agreement between the Owner and the Contractor to make a decision on or to settle any dispute or difference between the Owner and the Contractor referred to him or her by the parties.
8.	ATP	ATP means Acceptance Test Plan
9.	Bid	Offer by the Bidder to fulfil the requirement of the Purchaser for an agreed price. It shall comprise of a comprehensive technical and financial response to the RFP
10.	Bid Document	The document submitted by the Bidder containing a comprehensive technical and financial response to the RFP
11.	Bid Due date	Shall mean as defined in bidding schedule provided in the letter of invitation in this RFP

S. No	Term/ Acronym	Description
12.	Bidder	<p>Shall mean a party or parties being legal person/(s) owned by Resident Indian citizens with at least majority of the Board of Directors being Resident Indian citizens and may be a One Person Company (OPC), Private or Public Company, Listed or Unlisted Company registered in India, who is a legal person as above.</p> <p>A Company would be deemed to be owned by resident Indian Citizens, if more than fifty (50) percent of equity shares of the Company are owned by Resident Indian Citizens or Companies and/ or LLPs registered in India that are, in turn, ultimately owned and controlled by Resident Indian Citizens</p>
13.	BoM	Shall Mean Bill of Material
14.	Completion	Shall mean the fulfilment of the Related Services by the vendor in accordance with the terms and conditions set forth in the Contract
15.	Company	means a body incorporated in India under the Indian Companies Act, 1956 or Companies Act, 2013 including any amendment thereto.
16.	Conflict of Interest	<p>A Bidder shall be deemed to have a Conflict of Interest affecting the Bidding Process, if:</p> <p>The Bidder(s) (or its members) have common controlling shareholders or other ownership interest; However, this disqualification shall not apply in cases where the direct or indirect shareholding of a Bidder (or its members) is only a minor shareholding of less than 5%; OR</p> <p>A constituent of such Bidder is also a constituent of another Bidder; OR</p> <p>Such Bidder (or its members) receives or provides any direct or indirect subsidy, grant, concessional loan or subordinated debt from any other Bidder (or its members); OR</p> <p>Any two Bidders have the same legal representative for purposes of this Tender; OR</p> <p>There is access of information or influence between any two Bidders of this Tender by virtue of a relationship, directly or through common third party/ parties; OR</p> <p>Any Bidder (or its members) who has participated as a consultant to the Authority in the preparation of any documents, design or technical specifications of this Engagement.</p>

S. No	Term/ Acronym	Description
17.	Commissioning	means a project shall be considered commissioned if all equipment/ hardware/ software/ firmware, mentioned under the scope of contract, has been successfully installed and ready for operation.
18.	EMD	Earnest Money Deposit
19.	Contract	Authority after evaluation of bids identifies
20.	GCC	General Conditions of Contract
21.	Goods	All of the equipment, sub-systems, hardware, software, products accessories, software and/or other material / items which Bidder is required to deliver under the scope of work.
22.	Intellectual Property Rights	Any patent, copyright, trademark, trade name, service marks, brands, proprietary information whether arising before or after the execution of this Contract and the right to ownership and registration of these rights.
23.	ISRO	Indian Space Research Organisation
24.	MSS	Mobile satellite services
25.	NDA	Non-Disclosure Agreement
26.	Non-Compliance	Shall mean failure/refusal to comply the terms and conditions of this RFP/ tender
27.	Non-responsive	means failure to furnish complete information in a given format and manner required as per the tender documents or non-submission of tender offer in given forms / pro forma or not following procedure mentioned in this tender or any of required details or documents is missing or not clear or not submitted in the prescribed format or non-submission of tender fee on EMD
28.	Notice	a notice; or a consent, approval or other communication required to be in writing under this Contract.
29.	NSIL	NewSpace India Limited
30.	Party & Parties	Shall mean the party and its plural parties has been used to indicate bidder and bidders, the two terms shall hold the same meaning in this document
31.	Required Consents	The consents, waivers, clearances and licenses to use Authority's Intellectual Property Rights, rights and other authorizations as may be required to be obtained for the software and other items that NSIL and their nominated agencies are required to make available to Bidder pursuant to this Agreement;

S. No	Term/ Acronym	Description
32.	SCC	Special Conditions of Contract
33.	Selected Party	Shall be defined as Bidder who has been selected through the bidding process and with whom the Authority shall get into a contract for undertaking the work described in this RFP, as defined in this RFP
34.	Sub-Contractor	Shall mean the entity named in the contract for any part of the work or any person to whom any part of the contract has been sublet with the consent in writing of the Authority and the heirs, legal representatives, successors and assignees of such person
35.	Technical Bid	Shall be as defined in Volume I Section 3.17.1 of this RFP
36.	Technically Qualified Bidder	The bidder who has submitted the response in compliance with the RFP term and has been meeting the eligibility criteria would be declared as Technically Qualified Bidder.
37.	Tender Evaluation Committee (TEC)	Shall mean the committee formed by the Authority to evaluate the response to this RFP
38.	Xponders	MSS user Terminals installed as part of satcom network for establishing vessel communication and support systems on marine fishing vessels
39.	Vendor	Successful Bidder or "Vendor" means any firm / company, etc., to whom work has been awarded and whose Bid has been accepted by Purchaser and shall include its authorized representatives, successors and permitted assignees.
40.	PO	Purchase Order
41.	SLA	Service Level Agreement
42.	NMS	Network Management System
43.	SGU	Satellite Gateway Unit
44.	VSWR	Voltage Standing Wave Ratio
45.	SAC	Space Applications Centre
46.	MSS	Mobile Satellite Services
47.	ACU	Antenna Control Unit
48.	HMC	Hub Monitoring & Control Centre
49.	TDMA	Time Division Multiple Access
50.	SoC	Statement of Compliance
51.	TWTA	Travelling Wave Tube Amplifier
52.	BUC/ BDC	Block Up Converter/ Block Down Converter



S. No	Term/ Acronym	Description
53.	LNA	Low Noise Amplifier

Volume I

Chapter 3: Instructions to Bidders

3.1. General

- a. While every effort has been made to provide comprehensive and accurate background information, requirements and technical details, Bidders must form their own conclusions about the solution(s) needed to meet the requirements of the Authority.
- b. All information supplied by the Bidders as part of their bids in response to this RFP, may be treated as contractually binding on the Bidders, on successful award of the assignment by the Authority based on this RFP.
- c. No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract (PO) has been executed by Authority. Any notification of preferred bidder status by Authority shall not give rise to any enforceable rights by the Bidder. Authority may cancel this public procurement at any time prior to a formal written contract being executed by Authority.
- d. Sealed bids shall be received by the Authority at the address indicated in the schedule of the Bidding Process before the time and date specified in the schedule of the Bidding Process.
- e. In the event of the specified date for the submission of tender offers being declared a public holiday, the offers will be received up to the appointed time on the next working day. The Authority may, at its discretion, extend this deadline for submission of offers by issuing corrigendum and intimating the Bidders through e-mail.

3.2. Language of Bid submission

- a. The bid should be prepared and submitted by the Eligible Bidders in English language only. If any submitted supporting documents are in any language other than English, translation of the same in English language is to be provided (duly attested by the Authorized Signatory) by the Eligible Bidders. For purposes of interpretation of the documents, the English translation shall govern.

3.3. Eligibility Criteria

The bidder shall meet the following technical criteria:

System Integrators (SI) or Original Equipment Manufacturers (OEMs) or their authorized representatives with following eligibility criteria are invited to bid for the project. The bids submitted by the System Integrators (SI) or OEMs or SI/OEM through authorized agent not meeting these eligibility criteria shall not be considered.

3.2.1 The bidder shall be System Integrator (SI) / OEM / any Authorized Agent/Vendor for OEM/SI or an organization/ a limited company, private company or any agency capable of taking up works of such nature and magnitude and shall produce an undertaking from OEM that the bidder is an authorized entity to quote for this tender and will provide support and spares directly to purchaser, if required, for the offered system (major items) and also that the offered system (major items) will be supported by the OEM for the period of **minimum 10 years**. The authorization shall be tender specific and addressed to the tender issuing authority.

3.2.2 The Bidder (SI) shall have at least 5 years of experience in installation and commissioning of ground station (of similar nature) for satellite communication. Also, must have necessary expertise for configuration of RF baseband System, Antenna foundation, Civil, Electrical and Environmental infrastructure.

3.2.3 Bidder shall provide the details of purchase orders, completion certificates and completion schedule with relevant references/ contact details that are executed by them to prove that the bidder has executed the project involving supply, installation and commissioning of the ground station. Submission of purchase order is not adequate to substantiate the experience. Satisfactory completion certificate from the customer is a must to substantiate the experience indicating the scope of work, duration of completion of work against the order.

3.2.4 The bidder/OEM must submit customer satisfaction certificate with respect to the successful completion of installation and commissioning of at least one number of 9 m or above size in either C-Band or Higher bands during last 6 years. The experience of OEM (Whose Antenna system is being offered) will also be considered for this eligibility. Customer address and contact numbers are to be mentioned in the certificate for verification of bidder claim with regard to successful completion of the project. With regard to this the bidder need to mandatorily fill up the Relevant Experience of the Bidder as per the format (Annexure 7.5 Relevant Experience of the Bidder) with relevant information failing which the bid will be rejected.

3.2.5 Bidder shall provide details of financial profile of the company (SI), product range, manpower profile, turn-over status and experience in the field of satellite

communication of the company for the last 05 years. Bidder shall have executed at least one order of minimum value of Rs.08 Crore in Satcom field in last 05 years. To substantiate such claim must be supported by documentary proof.

Note: Bidders will be communicated regarding the date and time for Pre-bid meeting.

3.4. Bidder to Inform

- a. The Bidder shall be deemed to have carefully examined the Terms & Conditions, Scope, Delivery Schedule, Specifications, and Schedules of this RFP. If bidder has any doubts/clarifications as to the meaning of any portion of the Conditions or the specifications he shall, before the last date for Submission of Pre-Bid Queries set forth the particulars thereof and submit them to Authority in writing in order that such doubt may be removed, or clarifications are provided. The timeline for submission of Pre-Bid Queries is indicated in the Schedule of the Bidding Process in the letter of invitation in this RFP.

3.5. Compliant Bids/ Completeness of Response

- a. The Eligible Bidders are advised to study all instructions, forms, terms, requirements, and other information in the RFP documents carefully. Submission of the bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.
- b. Failure to comply with the requirements of this paragraph may render the bid non-compliant and the Bid may be rejected. The Eligible Bidders must:
 - i. Include all documentation specified in this RFP, in the bid
 - ii. Follow the format of this RFP while developing the bid and respond to each element in the order as set out in this RFP
 - iii. Comply with all requirements as set out within this RFP
 - iv. Submit duly signed para wise compliance to the RFP

3.6. Authentication of Bids

- a. The Authorized Signatory of the Bidder shall initial all pages of the Technical and the Financial Bids.
- b. Bid should be accompanied by an authorization in the name of the Authorized Signatory of the Bid. The authorization shall be in the form of a written power of attorney accompanying the Bid as per the attached format in [Volume I Annexure 7.3](#) of this RFP

3.7. Total Responsibility

- a. The Bidder shall issue a statement undertaking total responsibility for delivery of the components, subsystem, systems and services described in the Detailed Scope of Work and Technical Specifications (Volume II) of this RFP as per the format mentioned in Volume I Annexure 7.6 of this RFP

3.8. Deviations and Exclusions

- a. Bids shall be submitted strictly in accordance with the requirements and terms and conditions of the RFP.
- b. Bidders are advised not to take any exception/ deviations/ exclusions to the RFP. However, during evaluation of bids NSIL may ask the bidder for clarifications/ confirmations/ deficient documents of its bid. If the bidder still maintains exceptions/ deviations/ exclusions in the bid, such conditional/ non-conforming bids shall not be considered and shall be rejected.
- c. The Bidder shall submit a No Deviation Certificate as per the format mentioned in Volume I Annexure 7.7 of this RFP

3.9. Non-Conforming bids

A bid may be construed as a non-conforming bid and ineligible for consideration:

- i. If it does not comply with the requirements of this RFP.
- ii. If a bid does not follow the format requested in this RFP or does not appear to address any particular requirements of the scope of work.
- iii. If a bid deviates from terms and conditions of the RFP

3.10. Late Bids

- a. Late submission will not be entertained
- b. Authority shall not be responsible for any non-receipt/ non-delivery of the documents due to technical snag whatsoever at Bidder's end. No further correspondence on the subject will be entertained.
- c. The bids submitted by telex/ telegram/ fax/ e-mail etc. shall not be considered. No correspondence will be entertained on this matter.
- d. Authority reserves the right to modify and amend any of the above-stipulated condition/ criteria with due notice to the respective Bidders.

3.11. Acceptance/Rejection of Bids

- a. Authority reserves the right to reject in full or part, any or all bids without assigning any reason thereof. Authority reserves the right to assess the Bidder's capabilities and capacity. The decision of the Authority shall be final and binding.
- b. Bid should be free of over writing. All erasures, correction or addition must be clearly written both in words and figures and attested by the Authorized Signatory.
- c. In the event of any assumptions, presumptions, key points of discussion, recommendation(s) or any points of similar nature submitted along with the Bid, Authority reserves the right to reject the Bid and forfeit the EMD.
- d. If there is any discrepancy in the Financial Bid, it will be dealt with as per the following:
 - i. If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly.
 - ii. If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail, and the total shall be corrected.
 - iii. If there is a discrepancy between words and figures, the amount in words shall prevail.
 - iv. If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the Authority, the bid is liable to be disqualified.

3.12. Disqualification

The bid is liable to be disqualified in the following cases or in case bidder fails to meet the bidding requirements as indicated in this RFP:

- a. During validity of the bid, or its extended period, if any, the Eligible Bidders revise their quoted prices without change of scope having been expressly specified by NSIL
- b. The Eligible Bidders' bid is conditional and has deviations from the terms and conditions of RFP
- c. Bid is received in incomplete form

- d. Bid is not accompanied by all the requisite documents as per the terms and formats provided in this RFP
- e. Information submitted in technical bid is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract (no matter at what stage)
- f. Financial bid is enclosed with the same document as the technical bid.
- g. The Eligible Bidders try to influence the bid evaluation process by unlawful/ corrupt/ fraudulent means at any point of time during the bid process
- h. In case any one Bidder is found to have common interests with another Bidders' bid, both Bidders are likely to be disqualified, unless additional bids/bidders are withdrawn upon notice immediately

3.13. Bid Validity Period

- a. Bid shall remain valid for a period of 180 days from the bid submission date.
- b. On completion of the validity period, the Bid validity will be further extended with mutual consent.

3.14. Withdrawal, Substitution, and Modification of Bids

- a. An Eligible Bidder may withdraw its Bid (technical and/ or financial) by writing to the address indicated for bid submission in the schedule of the bidding process prior to final bid submission date indicated in the schedule of the bidding process. Withdrawal of the Bid may lead to forfeiting of the EMD made by the Bidder.
- b. Request for withdrawal of a bids post the bid submission deadline shall normally not be considered, however in case a Bidder still wishes to withdraw a bid post the bid submission deadline the Bidder shall forfeit the EMD and the Authority may give the Bidder a tender holiday including intimation to other government departments.
- c. Bids withdrawn shall not be opened and processed further.
- d. In case a bidder has submitted multiple bids, the latest submitted bid shall be considered

3.15. Bid document costs

- a. The cost of the bid document is Rs.5900/- (Five Thousand and Nine Hundred only).

- b. The cost of the bid document may be paid in the form of Demand Draft in favour of “NewSpace India Limited” payable at “Bangalore”. Bid responses without document cost will be rejected outrightly. The Demand Draft should be kept in a separate sealed cover along with Technical Bid and Financial Bid
- c. The Eligible Bidder shall bear all expenses associated with the preparation and submission of its bid, including expense of presentations, visit to the site/ NSIL/ISRO centres etc. for the purposes of clarification of the bid.

3.16. Contents of Bid

The Bidders shall submit Two envelopes: one containing the Technical Bid along with Bid document cost and the other containing the Financial Bid. The envelopes shall be super scribed as **“Response to Invitation of Bids/Request for Proposal for Supply, Installation, Commission, Operation and Maintenance of Ground Segment Hub for Maritime Asset Monitoring -Technical Bid/Financial Bid”**

- a. Under the Bidding Process, Technical Bid of the Eligible Bidders shall be examined with respect to the Technical and Financial Capacity as indicated in [Volume I Section 3.17](#) of this RFP. For the Technically Qualified Bidders, the Financial Bid (Envelope B) shall be opened and the Bidder with the Lowest quote shall be identified as L1 Bidder.
- b. The contents of the technical bid and financial bid shall also be submitted in digital format along with the signed physical copy of the documents in the same envelope as the technical bid and financial bid respectively. The digital media shall be super-scribed with the name of the bidder and the documents inside the digital media should be password protected, the enquiry reference number and the name of the respective bid
- c. The Bidder shall ensure that the information in the signed documents and the Digital Format is identical, if the Authority finds any discrepancy between the signed and digital copies during any stage of the evaluation, the Bidder may get disqualified.
- d. Prices shall not be indicated in the Technical Bid and shall only be indicated in the Financial Bid. The Technical bid should contain detailed of list of deliverables with price masked as per the format mentioned in financial bid. Any Technical bid that indicates price(s) is liable to be summarily rejected and the EMD forfeited.
- e. All the pages of the bid must be sequentially numbered. The bid documents must contain in the beginning of the document, a list of contents with page numbers. Any deficiency in the documentation may result in the rejection of the Bid.

- f. The original bid shall be prepared in indelible ink. It shall contain no interlineations or overwriting, except as necessary to correct errors made by the Bidder itself. Any such corrections must be initialled by the Authorized Signatory of the Bidder.
- g. All pages of the bid shall be initialled and stamped by the Authorized Signatory of the Bidder.

3.17. Bid Document Constituents

3.17.1. Technical Bid

1. The Bidder Shall submit documentary evidence against each requirement in the Technical Bid. Failure to submit necessary and appropriate documents may lead to rejection of the Bid
2. Failure to meet indicated requirements may lead to rejection of the Bid

Sr. No.	Requirement	Documentary Evidence
1.	Payment of Bid document cost	The Bidder shall submit Demand Draft as indicated in Volume I Section 3.14 of this RFP
2.	Payment of Earnest Money Deposit (EMD)	The Bidder shall submit Bank Guarantee of requisite amount as indicated in Volume I Section 3.17 of this RFP
3.	Bid Response Covering Letter	The Bidder shall submit A covering letter to the bid as per the format indicated in Bid Response cover letter Volume I Annexure 7.2 of this RFP
4.	Signed and Stamped Copy of the Bid Documents	The Bidder shall submit Bid Document which is duly signed and stamped by the Authorised Signatory in accordance with the Power of Attorney as per format mentioned in Volume I Annexure 7.3 of this RFP
5.	Bid checklist	The Bidder shall submit Checklist of bid documents as per format provided in Volume I Annexure 7.1 of this RFP
6.	Bidder Profile	The Bidder shall submit

Sr. No.	Requirement	Documentary Evidence
		A brief profile of the organization as per the format indicated in Volume I Annexure 7.4 of this RFP
7.	Power of Attorney for Signing the Bid	The Bidder shall submit A power of attorney to a representative of the Bidder naming the individual as an Authorised Signatory as per the format indicated in Volume I Annexure 7.3 of this RFP
8.	Legal Status of the Bidder The Bidder shall be registered in India under Companies Act, 1956 or as amended. The Bidder shall be in continuous operation in India for a period of at least 5 years as on the date of the issue of RFP	The Bidder shall submit <ul style="list-style-type: none"> • Copy of Incorporation/ Registration certificate • Copy of PAN card • Copy of GST registration
9.	Status of Ownership and Control of the Bidder The Eligible Bidder shall be legal entities owned by Resident Indian citizens with at least majority of the Board of Directors being Resident Indian citizens The entity/entities bidding as the lead bidder may be a One Person Company (OPC), Private or Public Company, Listed or Unlisted Company registered in India, who is a legal entity as above A Company would be deemed to be owned by Indian Citizens, if more than fifty (50) percent of equity shares of the Company are owned by Resident Indian Citizens or Companies and/or LLPs registered in India that are, in turn, ultimately owned and controlled by Resident Indian Citizens	The Bidder shall submit Regulatory filings indicating the shareholding pattern for the past three years for listed companies or shareholding document filled with Ministry of Corporate Affairs in case of non-listed companies.
10.	Financial stability	The Bidder shall submit

Sr. No.	Requirement	Documentary Evidence
	An undertaking (self-attested) shall be submitted, stating that there has been or is no outstanding bankruptcy, judgment or pending legal action that could impair operations as a going concern.	Certificate signed by the authorized signatory
11.	Track Record The Bidder should not have, during the last five (5) years, either failed to perform on any agreement with either private or government organization, been black listed, or been expelled from any project or agreement or have any agreement terminated for breach of agreement by the Bidder.	The Bidder shall submit Legal Attorney certified letter of undertaking to this effect on the letter head of the company, co-signed by the Bidder's authorized signatory.
12.	Prior experience The Bidder shall have minimum 5 years of experience in installation and commissioning of ground station (of similar nature) for satellite communication. Also, Bidder shall have necessary expertise for configuration of RF baseband System including antenna foundation, Civil, Electrical & Environmental infrastructure. Experience of similar type of projects only are requested to quote for this RFP.	The Bidder shall submit 1. Work order(s) / Contract(s) clearly highlighting the scope of work, Bill of Material and value of the contract/order as per the format mentioned in Volume I Annexure 7.5 2. Work completion certificates to be arranged chronologically
13.	Requisite Statutory and Regulatory Licenses to operate required facilities	The Bidder shall submit 1. Factories License 2. Labour License 3. Registration with EPFO 4. Any other relevant license/ Permission
14.	Non- Deviation Certificate	The Bidder shall submit Self-certificate signed by Authorized Signatory as per format provided in Volume I Annexure 7.7 of this RFP
15.	Non-Blacklisting Certificate	The Bidder shall submit

Sr. No.	Requirement	Documentary Evidence
	The Bidder should not have been blacklisted by any Aerospace and defence manufacturing PSU or government organization in a related field as on bid submission date	Legal Attorney certified letter of undertaking to this effect on the letter head, co-signed by Eligible Bidder' authorized signatory as per format provided in Volume I Annexure 7.8 of this RFP
16.	Anti-collusion certificate/ Conflict of Interest The Parties who are individually or institutionally, in any manner, involved with the selection/screening process of the RFP, and employees of NSIL are ineligible for applying and submitting a proposal against this RFP.	The Bidder shall submit Self-certificate signed by Authorized Signatory as per format provided in Volume I Annexure 7.9 of this RFP
17.	Integrity Pact	The Bidder shall submit Self-certificate signed by Authorized Signatory as per format provided in Volume I Annexure 7.13 of this RFP
18.	Non-Disclosure Agreement	The Bidder shall submit Non-Disclosure Agreement as per the format indicated in Volume I Annexure 7.14 of this RFP signed by Authorized Signatory
19.	Acceptance of complete Scope of Work The bidder shall take responsibility for supply, Installation, Supply, Installation, Commission, Operation and Maintenance of Ground Segment Hub for Maritime Asset Monitoring including Civil and Electrical infrastructure	The Bidder shall submit Self-certificate signed by Authorized Signatory for Acceptance of complete Scope of Work

3.17.2. Financial Bid

- a. The Bidder must submit the Financial Bid to indicate the price as per the format indicated in [Volume I Annexure 7.11](#) of this RFP
- b. The total price quoted for the intended scope of work shall form the basis of comparison between the eligible bidders
- c. The Bidders shall quote for the entire scope of contract on a “overall responsibility” basis such that the total bid price covers all obligations of the Eligible Bidders,

mentioned in or to be reasonably inferred from the bidding documents in respect of providing the product/services, including transportation of system/ hardware to Authority designated site locations.

- d. The Bidders shall give the required details of all applicable taxes, duties, other levies and charges including transportation costs, etc. in respect of direct transaction between the Authority and the Eligible Bidder in the financial Bid.
- e. Prices quoted by the Eligible Bidder shall remain firm at the time of submitting the bid. A bid submitted with an adjustable price quotation shall be treated as non-responsive and rejected.
- f. No price escalation by the bidders shall be permitted during the contract period. The bidders are advised to quote a firm price that shall be valid for the entire duration of the contract
- g. The Bidders shall quote prices in INR only. Any financial bid not in INR shall be summarily rejected.
- h. The bidder must submit the total offer and the details desired therein. The offers which are not complete or mentioning “**shall be furnished later**” will be rejected.

3.18. Earnest Money Deposit (EMD)

- a. EMD of Rs. 20,00,000 (Twenty Lakh rupees only) shall be made through Bank Guarantee in favour of “NewSpace India Limited.” It should be as per the format mentioned in [Annexure 7.15](#).
- b. No exemption for submitting the EMD will be given to any agency. EMD in any other form will not be entertained.
- c. For Unsuccessful bidders: The EMD of all unsuccessful eligible bidders would be refunded without interest by Authority on finalization of the bid in all respects by the successful bidder (Selected Party). This would normally happen within 6 months from the date specified for receipt of response to this RFP.
- d. For the Selected Party: The EMD of the Selected Party would be returned without interest upon submission of Performance Bank Guarantee by the Selected Party.
- e. In case bid is submitted without the EMD then Authority reserves the right to reject the bid without providing opportunity for any further correspondence to the bidder concerned.
- f. The EMD may be forfeited in any of the following circumstances:

- i. If a bidder withdraws its bid during the period of bid validity period as specified in this RFP and as extended by mutual consent of the respective Bidder (s) and the Authority
- ii. In case of a successful bidder, if the Selected Party fails to sign the contract in accordance with this RFP or furnish the Performance Security within the period prescribed thereof in the Agreement
- iii. If the Financial Bid is found to be conditional
- iv. If the Bidder engages in a corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice as specified in the RFP.
- v. If the Bidder is otherwise in breach of the terms of this document.

Volume I

Chapter 4: Evaluation Criteria and Selection Process for Bidder

4.1. Opening of Bids

- a. The Bids received by the Authority shall be opened by the Authority in presence of the Eligible Bidders or their representatives who may choose to be present at the time of opening.
- b. The representatives of the Eligible Bidder shall be required to carry the identity card and a letter of authority from the bidder firms to identify that they are bona fide representatives of the bidder firm, for attending the opening of bid.
- c. There will be two bid-opening events
 - i. **Technical bid opening**
 - ii. **Financial bid opening**
- d. The venue, date and time for opening the Technical bid will be indicated through emails.
- e. The date and time for opening of the Financial Bid shall be communicated to the Technically qualified Bidder through email.
- f. The Financial Bids of only those Eligible Bidder will be opened who are found to be technically qualified as per the RFP criteria.

4.2. Preliminary Examination of Bids and Responsiveness Test

- a. Authority may constitute a Tender Evaluation Committee (TEC) to evaluate the responses of the Bidder. The Authority / Tender Evaluation Committee (TEC) shall evaluate the responses to the RFP and all supporting documents/documentary evidence. Inability to submit requisite supporting documents/documentary evidence by Eligible Bidder may lead to rejection of their bids.
- b. Authority/ TEC shall examine the bids to determine whether they are complete, whether the documents have been properly signed and whether the bids are generally in order. Any bids found to be nonresponsive for any reason or not meeting any criteria specified in the RFP, shall be rejected by Authority and shall not be included for further consideration.
- c. Initial Bid scrutiny shall be held, and bids will be treated as non-responsive, if bids are:
 - i. Not submitted in format as specified in this RFP document

- ii. Submitted without the documents in the manner and format provided in this RFP
- iii. Submitted without a Document/ Documentary Evidence indicated in the list of Technical bid constituents indicated in [Volume I Section 3.17.1](#) of this RFP
- iv. Found with suppression of details, or the information provided in the bid amounts to misrepresentation of fact
- v. With incomplete information, subjective, conditional offers and partial offers submitted
- vi. Non-compliant to any of the clauses mentioned in this RFP
- vii. With a validity period less than 120 days

4.3. Clarification on Bids

During the bid evaluation, the Authority may, at its discretion, ask the Bidder for any clarification(s) of its bid. The request for clarification and the response shall be in writing, and no change in the price or substance of the bid shall be sought, offered, or permitted.

4.4. Evaluation Process

- a. The decision of the Authority/ Tender Evaluation Committee (TEC) in the evaluation of bids shall be final. No correspondence will be entertained outside the process of evaluation with the Committee. The Tender Evaluation Committee may ask for meetings or presentation with the Eligible Bidder to seek clarifications or conformations on their bids.
- b. The Authority/ Tender Evaluation Committee (TEC) reserves the right to reject any or all bids. Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP.
- c. The steps for evaluation are as follows:
 - i. Stage 1: Technical Bid Evaluation
 - ii. Stage 2: Financial Bid Evaluation

4.5. Stage 1: Technical Evaluation

- a. Authority/ TEC shall validate the constituents of the Technical Bid
- b. Authority/ TEC will review the technical bids of the Bidders to determine whether the Technical bids are substantially responsive as per the terms provided in this RFP. Bids that are not substantially responsive are liable to be disqualified at Authority's discretion.

- c. If the contents of the Technical Bid are as per requirements, Authority/TEC shall carry-out a technical evaluation of the bidder response to this RFP. In case, the Bidder does not meet the conditions, the bidder shall be disqualified.
- d. Financial bid shall be opened for only those Bidders, who qualify the technical evaluation

4.6. Stage 2: Financial bid Evaluation

- a. All the technically qualified bidders will be notified.
- b. The financial bids for the technically qualified bidders shall then be opened on the notified date and time and reviewed to determine whether the financial bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at Authority's discretion.
- c. The bid price shall include all taxes and levies and shall be in Indian Rupees and mentioned separately.
- d. Financial Bids that are not as per the format provided in [Volume I Annexure 7.11](#) of this RFP shall be liable for rejection.

4.6.1. Financial Bid Evaluation Framework

- a. The bids received from the Technically Qualified Bidders shall be ranked in ascending order of the quote (Financial Bid)
- b. The technically qualified bidder quoting the Lowest (Lumpsum) Quote shall be deemed the "Selected Party" (L1 Bidder)
- c. For the purpose of arriving at the lowest price (L1), quotes inclusive of any applicable taxes and levies etc. will be considered.
- d. Financial Proposal should not have any conditionality attached or deviations from the Price Quote format as indicated in the Bid document. Bids with conditions attached may be treated as non-responsive and liable for rejection at the discretion of the Authority.
- e. The Authority reserves the right to examine price in the Financial Bid to verify the feasibility of the programme. In case the price is substantially less than the market price/ Authority's purchasing price or any other malpractices are observed in the price bid, NSIL reserves the right to disqualify the Bidder

Volume I

Chapter 5: Terms & Conditions

5.1. Amendment of the RFP

- a. At any time prior to the due date for submission of bid, Authority may, for any reason, whether at its own initiative or in response to a clarification requested by prospective Eligible Bidder(s), modify the RFP document by amendments. Such amendments shall be published in NSIL Website, in the form of corrigendum and shall form an integral part of RFP document. The relevant clauses of the RFP document shall be treated as amended accordingly.
- b. It shall be the responsibility of the prospective Eligible Bidder(s) to check from time to time for any amendment in the RFP document in NSIL's website. In case of failure to get the amendments, if any, Authority shall not be responsible.
- c. In order to allow prospective Eligible Bidders a reasonable time to take the amendment into account in preparing their bids, Authority, at its discretion, may extend the deadline for submission of bids. Such extensions shall be communicated to the Eligible Bidders via update in NSIL's website in the form of corrigendum.

5.2. Right to vary quantity

- a. The selected Vendor shall consider quantity variation without any change in the unit prices or other terms and conditions of the Bid and the bidding documents.
- b. If the Authority does not procure any subject matter of procurement or procures less than the quantity specified in the bidding documents due to change in circumstances, the Eligible Bidder shall not be entitled for any claim or compensation except otherwise provided in the bidding document.
- c. Repeat orders for extra items or additional quantities may be placed, on the rates and conditions given in the contract.

5.3. Right to Terminate the Process

- a. Authority may terminate the RFP process at any time and without assigning any reason. Authority makes no commitments, express or implied, that this process will result in a business transaction with anyone. This RFP does not constitute an offer by the Authority.

5.4. Confidentiality

- a. All the material/information shared with the Bidder during the course of this procurement process as well as the subsequent resulting engagement following this process with the Bidder, shall be treated as confidential and should not be disclosed in any manner to any unauthorized person under any circumstances. The employees of the Bidder who are proposed to be deployed on the project need to furnish a Non-Disclosure Agreement (NDA) as per RFP Volume III. The Bidder shall execute and maintain all copies of the Non-Disclosure Agreement (NDA) and shall produce it when sought by the Authority.

5.5. Fraud and Corrupt Practices

- a. The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this RFP, Authority shall reject a Bid without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the “Prohibited Practices”) in the Selection Process. In such an event, Authority shall, without prejudice to its any other rights or remedies, forfeit and appropriate the EMD or PBG, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to Authority for, inter alia, time, cost and effort of Authority, in regard to the RFP, including consideration and evaluation of such Bidder’s Bid.
- b. Without prejudice to the rights of Authority under Clause above and the rights and remedies which Authority may have under the contract agreement, if a Bidder is found by Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the signing of the contract, such Bidder shall not be eligible to participate in any tender or RFP issued by Authority during a period of 5 years from the date such Bidder is found by Authority to have directly or through an agent, engaged or indulged in any Prohibited Practices.
- c. For the purposes of this Section, the following terms shall have the meaning hereinafter respectively assigned to them:
 - i. “*corrupt practice*” means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of Authority who is or has been

associated in any manner, directly or indirectly with the Selection Process or the LOI or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of Authority, shall be deemed to constitute influencing the actions of a person connected with the Selection Process); or (ii) save as provided herein, engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LOA or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the Award or the Agreement, who at any time has been or is a legal, financial or technical consultant/adviser of Authority in relation to any matter concerning the Project;

- ii. *“fraudulent practice”* means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;
- iii. *“coercive practice”* means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person’s participation or action in the Selection Process;
- iv. *“undesirable practice”* means (i) establishing contact with any person connected with or employed or engaged by Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or (ii) having a Conflict of Interest; and
- v. *“restrictive practice”* means forming a cartel or arriving at any understanding or arrangement among Eligible Bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.

5.6. Conflict of Interest

- a. An Bidder shall not have a conflict of interest that may affect the Selection Process or the Solution delivery (the “Conflict of Interest”). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, Authority shall forfeit and appropriate the EMD, if available, as mutually agreed genuine pre-estimated compensation and damages payable to Authority for, inter alia, the time, cost and effort of Authority including consideration of such Eligible Bidder’s Bid, without prejudice to any other right or remedy that may be available to Authority hereunder or otherwise.
- b. Authority requires that the Bidder provides solutions which at all times hold Authority’s interests paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The Bidder shall not accept or engage in any assignment that would be in conflict with its prior or

current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of Authority.

5.7. Sub-Contracting

- a. The Eligible Bidder shall be allowed to sub-contract / outsource a task, to any vendor or organization related to Civil and Electrical Infrastructure only by intimating the bidding Authority.
- b. Even if the work is sub-contracted / outsourced, the sole responsibility of the work shall lie with the Bidder. The Eligible Bidder shall be held responsible for any delay/error/non-compliance etc. of its sub-contracted vendor.
- c. The Bidder shall not sub-contract any part of the work to any entity that has been blacklisted by a Government Organization, Public Sector Undertaking (PSU), or State Government.

Volume I

Chapter 6: Award of Contract

6.1. Notification of Award

- a. Authority will notify the Selected Party(ies) in writing by e-mail followed by courier, to be confirmed by the Bidder's in writing by email followed by courier.

6.2. Release of Purchase Order

- a. After the notification of award, Authority will issue Purchase Order within fifteen (15) working days of the notification of award. The Vendor would be provided 5 (Five) working days to accept the Purchase Order. The accepted Purchase Order will be treated as contract between Authority and the Vendor. The bidder shall submit a Performance Bank Guarantee within 15 working days from the date of issuance of Purchase order by Authority.
- b. On receipt of the Performance Bank Guarantee, Authority shall enter into a contract with the selected party. The General and Special Terms of contract are indicated in Volume III Chapter 1 and Chapter 2 of this RFP. The Authority reserves the right to modify and/ or augment the terms and conditions prior to release of Purchase Order.

6.3. Performance Bank Guarantee (PBG)

- a. Within fifteen (15) working days from the date of issuance of Purchase order, the selected parties shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) to the Authority.
- b. The PBG shall be from a Nationalized Bank or a Scheduled Commercial Bank in the format prescribed in [Volume I Annexure 7.10](#) of this RFP, payable on demand, for the due performance and fulfilment of the contract by the bidder.
- c. The Bank Guarantees shall be 5% of the value of the Contract
- d. The PBG shall be invoked by Authority, in the event the Bidder:
 - i. Fails to meet the overall condition as mentioned in RFP or any changes agreed between the parties,
 - ii. Fails to perform the responsibilities and obligations as set out in the RFP to the complete satisfaction of Authority,
 - iii. Misrepresents facts/information submitted to Authority

- e. In the event of the Bidder being unable to service the contract for whatever reason(s), Authority shall have the right to invoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of Authority under the contract in the matter, the proceeds of the PBG shall be payable to Authority as compensation for any loss resulting from the bidder's failure to perform/comply its obligations under the contract.
- f. Authority shall notify the bidder in writing of the exercise of its right to receive such compensation within 40 days, indicating the contractual obligation(s) for which the bidder is in default. Authority shall also be entitled to make recoveries from the bidder's bills, performance bank guarantee, or from any other amount due to him, an equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.
- g. In case the project is delayed beyond the project schedule as agreed to by the Authority and selected party upon signing of the contract, the performance bank guarantee shall be accordingly be extended by the Bidder till completion of scope of work as mentioned in the Volume II of this RFP.
- h. The performance bank guarantee may be discharged/returned by Authority upon being satisfied that there has been due performance of the obligations of the bidder under the contract. However, no interest shall be payable on the performance bank guarantee.
- i. On satisfactory performance and completion of the order in all respects and duly certified to this effect by the Project Coordinator, Contract Completion Certificate shall be issued and the PBG would be returned to the Bidder.

6.4. Failure to agree with the Terms & Conditions of the RFP

- a. Failure of the selected party to agree with the Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the award, in which event Authority may award the contract to the next best value bidder(s) at L1 price or call for new bids.
- b. In such a case, Authority shall forfeit the EMD of selected party/bidder.

Volume I

Chapter 7: Annexures

7.1. Technical bid checklist

Sr. No.	Requirement	Documentary Evidence	Compliance (Yes/ No)	Section No. & Page No. in Bid Document
1.	Payment for Bid document	The Bidder shall submit Cost of Bid Document requisite amount as indicated in Volume I Section 3.15 of this RFP		
2.	Payment of Earnest Money Deposit (EMD)	The Bidder shall submit Bank Guarantee of requisite amount as indicated in Volume I Section 3.18 of this RFP		
3.	Bid Response Covering Letter	The shall submit A covering letter to the bid as per the format indicated in Volume I Annexure 7.2 of this RFP		
4.	Signed and Stamped Copy of the Bid Documents	The Bidder shall submit Bid Document which is duly signed and stamped by the Authorised Signatory in accordance with the Power of Attorney as per the format indicated in Volume I Annexure 7.3 of this RFP		
5.	Signed & Stamped RFP document.	Bidder shall submit RFP which is duly signed and stamped at each page by authorised signatory.		
6.	Bid checklist	The Bidder shall submit Checklist of bid documents as per format provided in Volume I Annexure 7.1 of this RFP		
7.	Bidder Profile	The Bidder shall submit A brief profile of the organization as per the format		

Sr. No.	Requirement	Documentary Evidence	Compliance (Yes/ No)	Section No. & Page No. in Bid Document
		indicated in Volume I Annexure 7.4 of this RFP		
8.	Power of Attorney for Signing the Bid	The Bidder shall submit A power of attorney to a representative of the Bidder naming the individual as an Authorised Signatory as per the format indicated in Volume I Annexure 7.3 of this RFP		
9.	Legal Status of the Bidder The Eligible Bidder shall be registered in India under Companies Act, 1956 or as amended. The Eligible Bidder shall be in continuous operation in India for a period of at least 5 years as on the date of the issue of the Expression of Interest (16 th August 2019)	The Bidder shall submit <ul style="list-style-type: none"> • Copy of Incorporation/ Registration certificate • Copy of PAN card • Copy of GST registration 		
10.	Status of Ownership and Control of the Bidder The Eligible Bidder shall be legal entities owned by Resident Indian citizens with at least majority of the Board of Directors being Resident Indian citizens The entity/entities bidding as the lead bidder may be a One	The Bidder shall submit Regulatory filings indicating the share-holding pattern for the past three years for listed companies or shareholding document filled with Ministry of Corporate Affairs in case of non-listed companies.		

Sr. No.	Requirement	Documentary Evidence	Compliance (Yes/ No)	Section No. & Page No. in Bid Document
	<p>Person Company (OPC), Private or Public Company, Listed or Unlisted Company registered in India, who is a legal entity as above</p> <p>A Company would be deemed to be owned by Indian Citizens, if more than fifty (50) percent of equity shares of the Company are owned by Resident Indian Citizens or Companies and/or LLPs registered in India that are, in turn, ultimately owned and controlled by Resident Indian Citizens</p>			
11.	<p>Financial stability</p> <p>An undertaking (self-attested) shall be submitted, stating that there has been or is no outstanding bankruptcy, judgment or pending legal action that could impair operations as a going concern.</p>	<p>The Bidder shall submit</p> <p>Certificate signed by the authorized signatory</p>		
12.	<p>Track Record</p> <p>The Bidder should not have, during the last five (5) years, either</p>	<p>The shall submit</p> <p>Legal Attorney certified letter of undertaking to this effect on the letter head of the company, co-</p>		

Sr. No.	Requirement	Documentary Evidence	Compliance (Yes/ No)	Section No. & Page No. in Bid Document
	failed to perform on any agreement with either private or government organization, been black listed, or been expelled from any project or agreement or have any agreement terminated for breach of agreement by the Bidder.	signed by the Bidder's authorized signatory.		
13.	Prior experience The Bidder shall have minimum 5 years of experience in design and development of Satellite Hub hardware and software including Civil, Electrical & Environmental infrastructure.	The Bidder shall submit 1.Work order(s) / Contract(s) clearly highlighting the scope of work, Bill of Material and value of the contract/order as per the format mentioned in Volume I Annexure 7.5 2.Work completion certificates to be arranged chronologically		
14.	Technology/ necessary expertise for establishment of Satellite Hub	1.Self-certificate signed by authorised signatory for this bid highlighting the Technology/ necessary expertise available with the bidder for establishment of Satellite Hub including Civil & Electrical Infrastructure.		
15.	Price Masked Financial Bid The Bidder shall submit <u>Price Masked</u> financial bid as part of Technical Bid to	The Bidder shall submit Bidder shall submit financial bid with <u>Price Masked</u> as part of Technical Bid		

Sr. No.	Requirement	Documentary Evidence	Compliance (Yes/ No)	Section No. & Page No. in Bid Document
	ensure that the Financial Bid is as per the prescribed format and has no deviation.			
16.	Requisite Statutory and Regulatory Licenses to operate required facilities	The Bidder shall submit 1. Factories License 2. Labour License 3. Registration with EPFO 4. Any other relevant license/ permission		
17.	Non- Deviation Certificate	The Bidder shall submit Self-certificate signed by Authorized Signatory as per format provided in Volume I Annexure 7.7 of this RFP		
18.	Non-Blacklisting Certificate The Bidder should not have been blacklisted by any Aerospace and defence manufacturing PSU or government organization in a related field as on bid submission date	The Bidder shall submit Legal Attorney certified letter of undertaking to this effect on the letter head, co-signed by Eligible Bidder' authorized signatory as per format provided in Volume I Annexure 7.8 of this RFP		
19.	Anti-collusion certificate/ Conflict of Interest The Parties who are individually or institutionally, in any manner, involved with the selection/screening process of the RFP, and employees of	The Bidder shall submit Self-certificate signed by Authorized Signatory as per format provided in Volume I Annexure 7.9 of this RFP		

Sr. No.	Requirement	Documentary Evidence	Compliance (Yes/ No)	Section No. & Page No. in Bid Document
	ISRO are ineligible for applying and submitting a proposal against this RFP.			
20.	Non-Disclosure Agreement	The Bidder shall submit Non-Disclosure Agreement as per the format indicated in Volume I Annexure 7.14 of this RFP signed by Authorized Signatory		
21.	Acceptance of complete Scope of Work	The Bidder shall submit Self-certificate signed by Authorized Signatory for Acceptance of complete Scope of Work		

7.2. Bid Response cover letter

(On the Bidder's letterhead)

To,

Deputy Manager (Commercial)
NewSpace India Limited (NSIL)
ISRO HQ Campus
New BEL Road
Bengaluru-560 094
Ph: 080-2217 2049
E-mail: purchase@nsilindia.co.in

Dear Sir,

Ref: Submission of Bid in respect of the Request for Proposal for
“ _____ ”

Having examined the Request for Proposal (RFP) document dated _____, sent to us by NewSpace India Limited, we attach hereto the response to the RFP as required by you, which constitutes our bid for the RFP.

We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to NSIL are true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead NSIL in its short-listing process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short-listing process, we are liable to be dismissed from the selection process or termination of the contract after the execution of the contract.

We agree to the unconditional acceptance of all the terms and conditions set out in the RFP document.

Any queries or clarifications with respect to our bid may be sent to the following Primary and Secondary contacts for our company:

	Primary Contact	Secondary Contact
Name:		
Title:		



Company Name:		
Address:		
Phone:		
Mobile:		
Fax:		
E – mail:		

It is hereby confirmed that I am entitled to act on behalf of our company/ corporation/ firm / organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this

(Signature)

(In the capacity of)

(Name)

Duly authorized to sign the RFP Response for and on behalf of

(Name and Address of Company) Seal / Stamp of Eligible Bidder

Witness Signature:

Witness Name:

Address:

7.3. Power of Attorney to Authorise Signatory

POWER OF ATTORNEY

[To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney.]

We, M/s. _____ (name of the firm or company with address of the registered office) hereby constitute, appoint and authorise Mr. or Ms. _____ (Name and residential address) who is presently employed with us and holding the position of _____, as our Attorney to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to our RFP for the Project _____ (name of the Project), including signing and submission of the RFP response, participating in the meetings, responding to queries, submission of information or documents and generally to represent us in all the dealings with Client or any other Government Agency or any person, in connection with the works until culmination of the process of bidding till the Project Agreement is entered into with _____ (Client) and thereafter till the expiry of the Project Agreement.

We hereby agree to ratify all acts, deeds and things lawfully done by our said Attorney pursuant to this power of attorney and that all acts, deeds and things done by our aforesaid Attorney shall and shall always be deemed to have been done by us.

Dated this the _____ day of _____ 20__

(Signature and Name of authorized signatory)

Seal of firm Company

Witness 1:

Witness 2:

Notes:

- The Mode of execution of the power of attorney should be in accordance with the procedure, if any laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

7.4. Bidder Profile

A. Brief company profile of the Bidder

Sl. No.	PARTICULARS	DESCRIPTION OR DETAILS
1.	Name(s) of the Eligible Bidder	
2.	Year of Establishment	
3.	Legal status of Eligible Bidder (company, Pvt. Ltd., LLP etc.)	
4.	Main business of the Eligible Bidder	
5.	Core capabilities of the Eligible Bidder	Brief, not more than 2 pages
6.	Registered office address with contact number and email id	
7.	Corporate website URL	
8.	Local address in Bangalore, if any, with contact number and email id	
9.	Addresses of manufacturing and/or operational setup in India (Highlight the address where NSIL representative will visit for audit)	1. 2. 3.
10.	GST number	
11.	PAN number	

B. Brief Financial information of the Bidders

Particulars	2022 – 23	2021 – 22	2020 – 21
Annual Turnover (INR Crores)			

Net Worth (INR Crores)			
Net Revenue from Operations (in INR Crores)			
EBTD [Earnings Before Tax and Depreciation]			
% of Revenue from SATCOM Segment/Unit			
Share Capital			
% of shareholding by Indian			
% of shareholding by Foreign			

C. Summary of Shareholding Pattern of the Bidder

Sl. No	Category of Shareholder	No. of shareholders	% of shareholding
	Total		100%

7.5. Relevant Experience of the Bidder

A. Summary of projects/ activities undertaken by the bidder for installation and commissioning, configuration of RF baseband of ground station for satellite communication, Hub operations and Maintenance.

S.No	Project/Activity Name	Customer/Client Name & Address.	Project Value (in INR)	Antenna size, Frequency	Auto track system (Yes/No). If Yes Type of Technique	Documentary evidence provided (Yes or No),	Project Status (Completed or Ongoing or Withheld)	Customer satisfaction certificate with regard to I & C enclosed(Yes/NO)	Delivery schedule as per PO	Actual Time taken to complete the project
1										
2										
3										

- *Client type – Indicate whether the client is Government or PSU or Private*
- *Documentary evidence provided – Indicate the documentary evidence provided with the detailed project credential like work order or purchase order or completion certificate or letter of appointment*
- *Project Status – Completed (date of project completion) or Ongoing (project start date)*
- More Rows may be added as necessary
- If the project is ongoing, Bidder must clearly specify which of the stages/phases/milestones are completed and which are ongoing and at what stage of completion and produce a self-certificate in a suitable format

7.6. Total Responsibility Certificate

(To be provided on the Company letter head)

I certify that we have understood the complete scope of work required to ensure the final deliveries as per the scope of work in RFP.

I also certify that we undertake the total responsibility for the defect free solution for the entire scope of work as per the requirement of the RFP within the duration mentioned in the RFP.

(Authorised Signatory)

Signature:

Name:

Designation:

Address:

Seal:

Date:

7.7. No Deviation Certificate

(To be provided on the Company letter head)

No Deviation Certificate

This is to certify that our offer is exactly in line with your tender enquiry/RFP (including amendments) no. _____ dated _____. This is to expressly certify that our offer contains no deviation either Technical (including but not limited to Scope of Work, Business Requirements Specification, Functional Requirements Specification, Hardware Specification and Technical Requirements Specification) or Commercial in either direct or indirect form.

(Signature of Authorized signatory of the Eligible Bidder)

Signature:

Name:

Designation:

Address:

Seal:

Date:

7.8. Declaration of Non-Blacklisting

(To be provided on the Company letter head)

Non-Blacklisting Certificate

We confirm that our company or firm, _____, is currently not blacklisted in any manner whatsoever by any of the State or UT and or Central Government in India on any ground including but not limited to indulgence in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

(Signature of Authorized signatory of the Eligible Bidder)

Printed Name

Designation

Seal

Date:

Place:

Business Address:

7.9. Anti-Collusion Certificate

(To be provided on the Company letter head)

Anti-Collusion Certificate

We hereby certify and confirm that in the preparation and submission of our Bid for “_____” against the RFP issued by Authority, We have not acted in concert or in collusion with any other Eligible Bidder or other person(s) and also not done any act, deed or thing, which is or could be regarded as anti-competitive. We further confirm that we have not offered nor will offer any illegal gratification in cash or kind to any person or organization in connection with the instant bid.

We also confirm that neither we or our members have any conflict of interest as provided in section 6.4 with respect to the conflict of interest terms provided in this RFP.

(Signature of Authorized Signatory of the Eligible Bidder)

Printed Name

Designation

Seal

Date:

Place:

Business Address:

7.10. Performance Bank Guarantee

Ref: _____

Date

Bank Guarantee No. _____

<Name>
<Designation>
<Address>
<Phone Nos.>
<Fax Nos.>
<Email id>

Whereas, <<name of the supplier and address>> (hereinafter called “bidder”) has undertaken, in pursuance of contract no. <Insert Contract No.> dated. <Date> for <<name of the assignment>> to NewSpace India Limited (hereinafter called “the Authority”)

And whereas it has been stipulated by in the said contract that the bidder shall furnish you with a bank guarantee by a recognized bank for the sum specified therein as security for compliance with its obligations in accordance with the contract;

And whereas we, <Name of Bank> a banking company incorporated and having its head/registered office at <Address of Registered Office> and having one of its office at <Address of Local Office> have agreed to give the supplier such a bank guarantee.

Now, therefore, we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of Rs.<Insert Value> (Rupees <Insert Value in Words> only) and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of Rs. <Insert Value> (Rupees <Insert Value in Words> only) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the bidder before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and any other supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This Guarantee shall be valid until <<Insert Date>>)

Notwithstanding anything contained herein:

I. Our liability under this bank guarantee shall not exceed Rs. <Insert Value> (Rupees <Insert Value in Words> only).

II. This bank guarantee shall be valid up to <Insert Expiry Date>)

III. It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this bank guarantee that we receive a valid written claim or demand for payment under this bank guarantee on or before <Insert Expiry Date>) failing which our liability under the guarantee will automatically cease.

Date _____

Place _____

Signature _____

Witness _____

Printed name _____

(Bank's common seal)

7.11. Format for Financial Bid

Sl. No.	Item Description	Qty.	Price (INR)	Tax	Price (INR)
A.	RF and baseband equipment (hardware and software)				
1.	Supply of Ground segment (RF and baseband equipment)	Refer Chapter-6, 6.1 List of Deliverables			
2.	Installation, acceptance and commissioning of Ground segment (RF and baseband equipment including hardware and software) including 3 years warranty				
3.	Charge for 24x7 operations of ground segment for three (3) years [Note: One Engineer per shift to be deployed on 24 x 7 basis to support the services, 3 shifts per day]	Per year basis			
Price(A) (INR)					
B.	CIVIL, Electrical & Environmental infrastructure				
1.	End to End Infrastructure solution for CIVIL, Electrical & Environmental unit on turn key basis including 3 years warranty				
Price(B) (INR)					
C.	CAMC				

1.	CAMC for 2 years for RF and baseband equipment (Including hardware and software) [Note: Based on need AMC contract will be finalized and executed by user with separate PO], Bidder should Quote -Mandatory	Per year basis			
Price(C) (INR)					
Total Price(A+B+C) (INR)					
D.	CAMC for 5 years for RF and baseband equipment (Including hardware and software) [Note: Based on need AMC contract will be finalized and executed by user with separate PO] Bidder has to Quote- Purchaser reserves rights to opt or not to opt. Note: This will not be considered for selection of L1	Per year basis			
Price(D) (INR)					

7.12. Template for Pre-Bid Queries

Bidder shall submit all pre-bid queries in excel in the following format.

Queries with respect to clauses of RFP

Sr. No.	RFP Volume and Section	RFP page no	Content in the RFP	Proposed content	Clarification for requested change
1					
2					
3					

7.13. Integrity Pact

(To be provided on the Company letter head)

Pre Contract Integrity Pact (or as revised by Authority)

This Pact made this day of between NewSpace India Limited, a body corporate constituted by the Central Government and having its Corporate Office at -----, hereinafter called the Authority (which term shall unless excluded by or is repugnant to the context, be deemed to include its Chairman cum Managing Director, or Executive Director, Directors, officers, or any of them specified by the Chairman cum Managing Director in this behalf, and shall also include its successors and assigns) of the one part

AND

Represented by of the other part, hereinafter called the “Bidder/Contractor” (which term shall unless excluded by or is repugnant to the context be deemed to include its heirs, representatives, successors and assigns of the Bidder/ Contractor)

WHEREAS the Authority intends to award, under laid down organizational procedures, tender/ contract for The Authority, while discharging its functions on business principles, values proper compliance with all relevant laws and regulations, and the principles of natural justice, ethics, equity, fairness and transparency in its relations with the Bidders/ Contractors.

WHEREAS the Authority is desirous to make its business mechanism more transparent, thus to ensure strict adherence of the aforesaid objectives/goals, the Authority hereby adopts the instrument developed by the renowned international non-governmental organization “Transparency International” (T I) headquartered in Berlin (Germany). The Authority will appoint an Independent External Monitor (IEM) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

AND WHEREAS the Bidder is submitting a tender to the Authority for In response to the NIT (Notice Inviting Tender) dated Contractor is signing the contract for execution of

NOW, therefore,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to

Enabling the Authority to obtain the desired said stores/equipment/execution of works

at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling Authority to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the Authority will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

1. Commitments of the Authority;

- 1.1 The Authority undertakes that no official of the Authority, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or 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, organization 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.
 - 1.2 The Authority will, during the pre-contact 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.
 - 1.3 All the officials of the Authority will report to the appropriate authority office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the Authority with full and verifiable facts and the same is prima facie found to be correct by the Authority, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Authority 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 Authority the proceedings under the contract would not be stalled.

3. Commitments of Bidders/Contractor.

- 3.1 The Bidder/ Contractor commits itself to take all measures necessary to prevent corrupt practice, unfair means and illegal activities during any stage of its 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 commit itself to the following: -

The Bidder/Contractor will not 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 Authority, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

3.2 (i) The Bidder/Contractor further undertakes that it 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 Authority 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 Authority for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Authority.

(ii) The Bidder / Contactor has not entered and will not enter with other bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specification, certifications, subsidiary contracts, submission or non-submission of bids or any actions to restrict competitiveness or to introduce cartelization in the bidding process.

3.3 The Bidder/Contractor shall, when presenting his bid, disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.

3.4 The Bidder/ Contactor shall when presenting his bid disclose any and all the payments he has made or, is committed to or intends to make to agents/brokers or any other intermediary, in connection with this bid/contract.

3.5 The Bidder/ Contractor further confirms and declares to the Authority that the BIDDER is the original manufacturer/integrator/ authorized government sponsored export entity of the 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 Authority 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 in respect of any such intercession, facilitation or recommendation.

3.6 The Bidder/Contractor, either while presenting the bid or during pre-

contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the Authority or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

- 3.7 The Bidder/Contractor 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.
- 3.8 The Bidder/ Contractor will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 3.9 The Bidder / Contactor shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the Authority as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder / Contractor also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.10 The Bidder/ Contractor will inform to the Independent External Monitor.
 - (i) If he receives demand for an illegal/ undue payment/benefit.
 - (ii) If he comes to know of any unethical or illegal payment/ benefit.
 - (iii) If he makes any payment to any Authority's associate(s)
- 3.11 The Bidder/ Contactor commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.12 The Bidder/ Contactor shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
- 3.13 If the Bidder/ Contractor or any employee of the Bidder/ Contractor or any person acting on behalf of the Bidder/ Contractor, either directly or indirectly, is a relative of any of the officers of the Authority, or alternatively, if any relative of an officer of the Authority has financial interest/ stake in the Bidder's/ Contractor's firm, the same shall be disclosed by the Bidder/ Contractor at the time filing of tender. The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.
- 3.14 The Bidder/ Contractor shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Authority.

- 3.15 That if the Bidder/ Contractor, during tender process or before the award of the contract or during execution of the contract/ work has committed a transgression in violation of section 2 or in any other form such as to put his reliability or credibility as Bidder/ Contractor into question, the Authority is entitled to disqualify him from the tender process or to terminate the contract for such reason and to debar the BIDDERS from participating in future bidding processes.

4. Previous Transgression

- 4.1 The Bidder/Contractor declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other 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 that could justify Bidders' exclusion from the tender process.
- 4.2 The Bidder/Contractor agrees that if it makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason and he may be considered for debarment for future tender/contract processes.
- 4.3 That the Bidder/Contractor undertakes to get this Pact signed by the subcontractor(s) and associate(s) whose value of the work contribution exceeds Rs 2 Crores. (Rupees Two Crores.) and to submit the same to the Authority along-with the tender document/ contract before contract signing.
- 4.4 That sub-contractor(s)/ associate(s) engaged by the Contractor, with the approval of the Authority after signing of the contract, and whose value of the work contribution exceeds Rs 2 Crores. (Rupees Two Crores) will be required to sign this Pact by the Contractor, and the same will be submitted to the Authority before doing/ performing any act/ function by such sub-contractor(s)/ associate(s) in relation to the contract/ work.
- 4.5 That the Authority will disqualify from the tender process all Bidder(s) who do not sign this Pact or violate its provisions or fails to get this Pact signed in terms of section 4.3 or 4.4 above.
- 4.6 That if the Contractor(s) does/ do not sign this Pact or violate its provisions or fails to get this Pact signed in terms of Section 4.3 or 4.4 above. Authority will terminate the contract and initiate appropriate action against such Contractor(s).

5. Earnest Money Deposit and its validity i/c Warranty Period, Performance Bank Guarantee/ Bond.

While submitting bid, the BIDDER shall deposit an EMD I/C WARRANTY PERIOD, PBG, VALIDITY ETC, which is as per terms and conditions and details given in RFP sold to the Bidders.

6. Sanctions for Violations/ Disqualification from tender process and exclusion from future Contracts.

6.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the Authority 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.
- ii. To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.
- iii. If the Authority has disqualified/ debarred the Bidder from the tender process prior to the award under section 2 or 3 or 4, the Authority is entitled to forfeit the Earnest Money Deposited.
- iv. To recover all sums already paid by the Authority, with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India. If any outstanding payment is due to the BIDDER from the Authority in connection with any other contract or any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.
- v. To encash the Performance Bank Guarantee, if furnished by the BIDDER, in order to recover the payments, already made by the Authority, along with interest.
- vi. To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the Authority resulting from such cancellation/rescission and the Authority shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.
- vii. To debar the BIDDER from participating in future bidding processes for a minimum period of three years, which may be further extended at the discretion of the Authority.
- viii. To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.

- ix. In case where irrevocable Letters of Credit have been received in respect of any contract signed by the Authority with the BIDDER, the same shall not be opened.
 - x. Forfeiture of Performance Bank Guarantee in case of a decision by the Authority to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
 - xi. That if the Authority has terminated the contract under section 2 or 3 or 4 or if the Authority is entitled to terminate the contract under section 2 or 3 or 4, the Authority shall be entitled to demand and recover from the contractor damages equivalent to 5% of the contract value or the amount, equivalent to Earnest Money Deposited or Performance Bank Guarantee, whichever is higher.
 - xii. That the Bidder / Contractor agrees and undertakes to pay the said amount without protest or demur subject only to condition that if the Bidder/ Contractor can prove and establish to the satisfaction of the Authority that the disqualification / debarment of the bidder from the tender process or the termination of the contract after award of the contract has caused no damage to the Authority.
- 6.2 The Authority will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (xii) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.
- 6.3 That if the Bidder/ Contractor applies to the Authority for premature revocation of the debarment and proves to the satisfaction of the Authority that he has installed a suitable and effective corruption prevention system and also restored/ recouped the damage, if any, caused by him, the Authority may, if thinks fit, revoke the debarment prematurely considering the facts and circumstances of the case, and the documents/ evidence adduced by the Bidder/ Contractor for first time default.
- 6.4 That a transgression is considered to have occurred if the Authority is fully satisfied with the available documents and evidence submitted along with Independent External Monitor's recommendations/ suggestions that no reasonable doubt is possible in the matter.
- 6.5 The decision of the Authority to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent

External Monitor(s) appointed for the purpose of this Pact.

7. Allegations against Bidders/ Contractors/ Sub-Contractors/ Associates:

That if the Authority receives any information of conduct of a Bidder/ Contractor or Sub- Contractor or of an employee or a representative or an Associates of a Bidder, Contractor or Sub-Contractor which constitute corruption, or if the Authority has substantive suspicion in this regard, the Authority will inform the Vigilance Department for appropriate action.

8. Facilitation of Investigation.

In case of any allegation of violation of any provisions of this Pact or payment of commission, the Authority or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such Examination.

9. Law and Place of Jurisdiction.

That this Pact is subject to Indian Law. The place of performance jurisdiction is the Corporate Headquarter of the Authority, as applicable. The courts at Bengaluru shall have exclusive jurisdiction to adjudicate any dispute which may arise in relation to this tender or any way connected or incidental to this tender/Pact.

10. Other Legal Actions

a. That the changes and supplements as well as termination notices need to be made in writing.

11. Pact duration (Validity)

a. 13.1 That this Pact comes into force when both the parties have signed it. It expires for the Contractor 12 months after the final payment under the respective contract, and for all other Bidders 3 months after the contract is awarded.

b. 13.2 That if any claim is made/ lodged during this period, the same shall be binding and continue to be valid despite the lapse of this Pact as specified herein before, unless it is discharged/ determined by Chairman cum Managing Director of the Authority.

c. 13.3 That should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

12. Company Code of Conduct

Bidders are also advised to have a company code of conduct (clearly rejecting

the use of bribe and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.

13. **The** parties hereby sign this Integrity Pact at on ____

AUTHORITY:	BIDDER:
Name of the Officer:	Name (Authorized Signatory):
Designation	Designation:
Witness	Witness:

7.14. NDA

(To be made on Stamp Paper of value INR 100)

THIS NON-DISCLOSURE Agreement made at Bengaluru, India on this _____ day of _____ 20__ between NewSpace India Limited a company registered under the Companies Act, 2013 and having its registered office at ISRO HQ Campus, Bengaluru – 560 094 (hereinafter referred to as “NSIL”) and _____ a company registered under the Companies Act, 1956/ 2013 and having its registered office at _____ (hereinafter referred to as “_____”).

NSIL and _____ shall hereinafter be collectively referred to as “the Parties” and individually as “a Party”.

WHEREAS

A*. NSIL has floated a tender and is required to provide certain information to _____ execute the contract and/or

AA **. The Parties are considering to enter into an engagement with respect to _____ [scope of services] as per the RFP no _____ (“Project”) for which each Party shall provide information (“Disclosing Party”) to the other Party (“Receiving Party”) which at present is confidential and not in the public domain.

B. The Parties intend that the aforesaid information be kept confidential as between the Parties. The Parties undertake and declare that they shall not divulge, publish or reproduce the same before any party or person except in accordance with the terms of this Agreement.

NOW THEREFORE the Parties agree as follows:

1. As used in this Agreement (hereinafter referred to as the “Agreement”) the term “Confidential Information” shall mean any technical, confidential, proprietary or trade secret information or data disclosed by the Disclosing Party in connection with the Project to the Receiving Party including without limitation any written or printed documents, specifications, designs, technical details, facility layouts, general arrangement plans, production schedules, drawings, samples, models, information regarding operations, financial information, strategies, either in writing or orally or any means of disclosing such Confidential Information that the Disclosing Party may elect to use prior to the execution or during the validity of this Agreement. The Receiving Party agrees that all Confidential Information shall be treated as absolute confidential and the Receiving Party shall not disclose to any

person such information otherwise than in terms of this Agreement. The Receiving Party will impose a similar duty of confidentiality on any employee to whom the Receiving Party is permitted to transfer such information in accordance with the terms hereof.

For the purposes of this Agreement, the term “Receiving Party” shall mean and include its officers, employees, directors, agents, contractors, representatives, affiliated companies, successors and assigns provided any claim in connection with the Agreement shall only be made against _____ (the receiving party).

2. Nothing in this Agreement may be construed as compelling the Disclosing Party to disclose any Confidential Information to the Receiving Party or to enter into any contractual relationships with the Receiving Party.

3. Any information or data in whatever form disclosed by the Disclosing Party to the Receiving Party and which (i) is clearly identified as Confidential Information by an appropriate and conspicuous marking or (ii) has been identified as Confidential Information at the time of disclosure shall be subject to the relevant terms and conditions of this Agreement. The Disclosing Party’s decision whether any information disclosed by it under this Agreement is confidential or not shall be final and binding on the Receiving Party.

4. The Receiving Party hereby covenants that the Confidential Information received from the Disclosing Party shall:

(a) Be safely kept by the Receiving Party; the Receiving Party shall protect the Confidential Information with the same degree of care as the Receiving Party uses with its own confidential information in order to prevent its disclosure, copy and / or its use (but in no event less than reasonable care) for purposes other than the Proposal.

(b) Be only disclosed to, and used by, those employees or directors who have a need to know.

(c) Not be disclosed to a third party except those with a need to know provided they receive such information subject to the same restrictions as are contained in this Agreement.

(d) Be used by the Receiving Party directly or indirectly, solely for the purpose of execution of the project.

5. The Receiving Party shall promptly upon requests by the Disclosing Party at any time return all copies of the Confidential Information communicated to it hereunder together with all copies and extracts made thereof and shall not retain any copies of the same, in any form whatsoever except for one copy for its professional records purposes subject to confidentiality obligations herein.

6. The Receiving Party shall have no obligations or restrictions with respect to:
- (a) Information publicly known through no wrongful act of the Receiving Party.
 - (b) Information rightfully disclosed by a third party without breach of this Agreement by the Receiving Party and which can be communicated without restriction.
 - (c) Information which was already known, or which was independently developed by the Receiving Party (provided that the Receiving Party can demonstrate the same).
 - (d) Information, the disclosure of which the Disclosing Party authorizes in writing.
7. Nothing in this Agreement shall be construed as granting to the Receiving Party any patent, copyright or design license, or rights of use under similar intellectual property rights in respect of the Confidential Information.
8. The Receiving Party shall not without prior written consent of the Disclosing Party:
- (a) Disclose to any person, directly or indirectly:
 - i) The fact that the Confidential Information has been made available to the Receiving Party by the Disclosing Party or that the Receiving Party has inspected any portion of the Confidential Information; or
 - ii) The fact that any discussion or negotiation is taking place concerning the Project; or
 - iii) Any of the terms, conditions or other facts with respect to the Project, including the status thereof; or
 - (b) Make any private or public announcement or statement concerning or relating to the Project.
9. The Disclosing Party represents and warrants that save as otherwise notified in writing to the Receiving Party:
- a) Disclosure of information by it to the Receiving Party does not infringe the rights of any third party nor is it under any restriction with regard to the disclosure of any information, and that where applicable, it has obtained all licenses and consents necessary to enable the lawful disclosure of information by it to the Recipient; and
 - b) It is not aware of any restriction on the use of such information by the Receiving Party, save as provided in this Agreement.

c) To the effect that the foregoing representations and warranties shall be deemed to be given at the date of this Agreement and after that date upon and in respect of each disclosure.

The Disclosing Party makes no warranty or representation whatsoever as to the accuracy, completeness, suitability or adequacy of any information or as to the results obtained from it and assumes no responsibility in respect of the use of the information by the Receiving Party.

10. The Receiving Party shall be liable to the Disclosing Party for such loss, damage, costs, expenses or liabilities arising out of any such action, claim or proceeding, brought by any third party pursuant to any unauthorized disclosure or use of any information by the Receiving Party, or by any person for whom the Receiving Party is responsible under this Agreement, or pursuant to any breach of any undertaking, warranty or representation contained in this Agreement as awarded by a court of competent jurisdiction. The Disclosing party will revoke the bank guarantee in case of any breach.

11. For the purposes of this Agreement 'Classified Information' shall mean information, documents and material of any kind which the respective Government i.e. Indian Government has given or caused to be given a security classification irrespective of whether the same is transmitted orally, electronically, in writing or by hand. Notwithstanding any other provision of this Agreement:

a) Each Party hereto undertakes to follow security procedures prescribed for military purposes with respect to disclosure, receipt, production, use and handling of Classified Information as notified by Disclosing Party.

b) Any Classified Information, disclosed by one Party hereto shall be, whatever the method of disclosure be, identified by the Disclosing Party as Classified Information at the time of disclosure.

c) The provisions of this Clause are to remain in full force and effect notwithstanding any termination by expiration or otherwise of this Agreement.

12. In the event the Receiving Party is required to disclose Confidential Information under any provision of law or upon an action, subpoena or order of a court of competent jurisdiction or of any requirement of legal process regulation or governmental order, decree, regulation or rule, the Receiving Party will immediately notify the Disclosing Party of its having received a request to so disclose (along with the terms and circumstances thereof), unless otherwise prohibited by law and consult with the Disclosing Party on action or steps to be taken in response to such request.

13. This Agreement represents the entirety of the agreement of the Parties relating to the disclosure of the Confidential Information and shall not be waived, amended

or assigned by the Receiving Party except by prior written consent of the Disclosing Party. No failure or delay by any party in exercising any right, power or privilege hereunder shall operate as a waiver thereof nor shall any single or partial exercise of any right, power or privilege. The rights and remedies herein provided shall be cumulative and not exclusive of any rights or remedies provided by law.

14. This Agreement shall be valid for a period of _____ years from the date of its execution between the parties. Notwithstanding the aforesaid, the obligations of Parties in connection with confidentiality under this Agreement shall survive in perpetuity.

15. The foregoing constitutes the entire Agreement between the Parties with respect to the subject matter hereof and supersedes and cancels any prior representation, understanding and commitment (whether oral and written) made between the Parties with respect to or in connection with any of the matter of things to which this Agreement applies.

16. This Agreement shall be governed by and shall be interpreted in accordance with the laws of India.

17. Any dispute arising in connection with or out of the validity, performance or the interpretation of this Agreement shall be finally settled by the competent jurisdiction in Bengaluru.

18. The Receiving Party acknowledges that any breach of the terms and conditions of this Agreement may cause the Disclosing Party irreparable damage for which recovery of money damages would be inadequate. Therefore, the Receiving Party agrees that the Disclosing Party shall be entitled, in addition to any other remedies available to it, to seek injunctive relief and/or other equitable relief to prevent or restrain any breach by the Receiving Party or its employees/officials, or otherwise to protect its rights, under this Agreement.

19. Unless otherwise provided herein, all notices or other communications under or in connection with this Agreement shall be given in writing and may be sent by personal delivery or post or courier or facsimile at the address as specified herein below:

To NSIL

To M/s

Address:

Address:

Phone No.:

Phone No.:

Fax:

Fax No. :

E-mail:

E-mail:

Any such notice or other communication will be deemed to be effective if sent by personal delivery, when delivered, if sent by post, 4 (four) days after being deposited in the post and if sent by courier, one day after being deposited with the courier, and if sent by facsimile, when sent (on receipt of a confirmation to the correct facsimile number).

IN WITNESS WHEREOF, this Agreement is executed by authorized representatives of both the Parties in two (2) originals.

Signed by the within named

Signed by the within M/s NSIL

In the presence of

In the presence of

7.15. E. M. D. BANK GUARANTEE FORMAT

WHEREAS M/s. _____ (Name & Address of the Firm) having their registered office at _____ (Address of the firms Registered office) (Hereinafter called the 'bidder') wish to participate in the tender No. _____

for _NewSpace India Limited (NSIL) and WHEREAS a Bank Guarantee for (Hereinafter called the "Beneficiary") Rs. _____ (Amount of EMD) valid till _____ (Mention here date of validity of this Guarantee which from the date of the submission of Tender's offer) which is required to be submitted by the bidder along with the tender.

We, _____ (Name of the Bank and address of the Branch giving the Bank Guarantee) having our registered office at _____ (address of Bank's Registered office) hereby give this Bank Guarantee No. _____ dated _____ and hereby agree unequivocally and unconditionally to pay immediately on demand in writing from the NewSpace India Limited or any officer authorized by it in this behalf any amount not exceeding Rs. (Amount of E.M.D.), (Rupees _____ (In words) to the said NewSpace India Limited on behalf of the bidder.

We _____ (Name of the Bank) also agree that withdrawal of the tender or part thereof by the bidder within its validity or Non submission of Security Deposit by the bidder within one month from the date tender or a part thereof has been accepted by the NewSpace India Limited would constitute a default on the part of the bidder and that this Bank Guarantee is liable to be invoked and encashed within its validity by the Beneficiary in case of any occurrence of a default on the part of the bidder and that the encashed amount is liable to be forfeited by the Beneficiary.

This agreement shall be valid and binding on this Bank upto and inclusive of _____ (mention here the date of validity of Guarantee) and shall not be terminable by notice or by Guarantor change in the constitution of the Bank or the firm of bidder or by any reason whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, conceded with or without our knowledge or consent by or between the bidder and the NSIL.

"Notwithstanding anything contrary contained in any law for the time being in force or banking practice, this Guarantee shall not be assignable, transferable by the beneficiary (i.e. NSIL). Notice or invocation by any person such as assignee,

transferee or agent of beneficiary shall not be entertained by the Bank. Any invocation of the Guarantee can be made only by the beneficiary directly.

NOTWITHSTANDING anything contained hereinbefore, our liability under this guarantee is restricted to Rs. _____ (Amt. of E.M.D.) (Rupees _____) (in words). Our Guarantee shall remain in force till _____ (Date of validity of the Guarantee). Unless demands or claims under this Bank Guarantee are made to us in writing on or before _____ (Date of validity of the Guarantee), all rights of Beneficiary under this Bank Guarantee shall be forfeited and we shall be released and discharged from all liabilities there under:

Place:

Date:

-Please mention here Complete Postal Address of the Bank with Branch Code, Telephone and Fax Nos.

SIGNATURE OF THE BANK'S
AUTHORISED SIGNATORY WITH
OFFICIAL ROUND SEAL

NAME OF DESIGNATED BANKS:

Note1: The Bank Guarantee (B.G) Shall be from the Nationalize Banks or any other Banks, as Notified by the Finance Department, from time to time.

Note2: The B.G shall be signed by two bank officer Jointly if the amount of B.G is more than Rs 50,000/- and B.G must have proper B.G number as per R.B.I guidelines.



NewSpace India Limited (NSIL)
[A Government of India Company under Department of Space]

**INVITATION OF BIDS/
REQUEST FOR PROPOSAL (RFP)**

Volume II: Detailed Scope of Work, Deliverables, Delivery schedule and Technical Specifications

Tender Reference Number: Ref. No.NSIL/RFP/HUB/VCS-MCS/2024/ 02
Date of Publication: 16 March 2024



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Volume II: Detailed Scope of Work, Deliverables, Delivery schedule, Payment terms and Technical Specifications

1.Chapter 1: Introduction

1. Introduction

ISRO has developed and field demonstrated the Mobile Satellite Service network for tracking of maritime assets and emergency communication using high power MSS satellite. Space Applications Centre, ISRO had carried out a pilot project under the directive of central government department. Based on the request of state of Tamil Nadu & directive of Honorable High Court of Tamil Nadu, a rollout of services in the state of Tamil Nadu was initiated for a network of 5000+ maritime assets. Department of Fisheries (DoF), Govt.of India (GoI) approached ISRO & NSIL to setup a dedicated satcom network and offer this as a service at national level supporting all states and UT's covering various maritime assets.

The overall project is for the establishment of a dedicated MSS Satcom network for supporting Two way emergency Communication and MCS of Maritime assets. The project includes establishment of dedicated 9m C-band ground station within DoF premises, arranging for satellite bandwidth & guiding required service approvals and building 100K satellite terminals (Xponders) for field deployment to different states under the guidance of DoF through competent Indian Industries based on ISRO developed technology.

A centralized hub will gather the position data of all the maritime assets in real-time, support two-way emergency messaging and broadcast weather and PFZ alerts etc through this network. A centralized web-based Network Management System software will perform all network management & control applications and access to which will be made available to all stake holders/states to perform management and administrative operations as per their governing guidelines. The location data may also be shared through a secured private communication link to state and central agencies in their premises for further monitoring and analysis.

Hub station Location

The Hub station is required to be installed at INCOIS Hyderabad, Telangana. The Site Geo Location of the Hub station is as below.

Table 1: Site Geo Locations

Earth station Earth Station		
Place	*Latitude (in deg)	*Longitude (in deg)
INCOIS Hyderabad	17.52	78.39

*Note: Site Geo location detail mentioned in table-1 is provided as reference. However, precise location information will be provided during order placement time.

1.1 Network Description

The block diagram of the proposed MSS network and its configuration to meet the requirements of monitoring of maritime assets and Emergency communication is as shown in Figure 1.

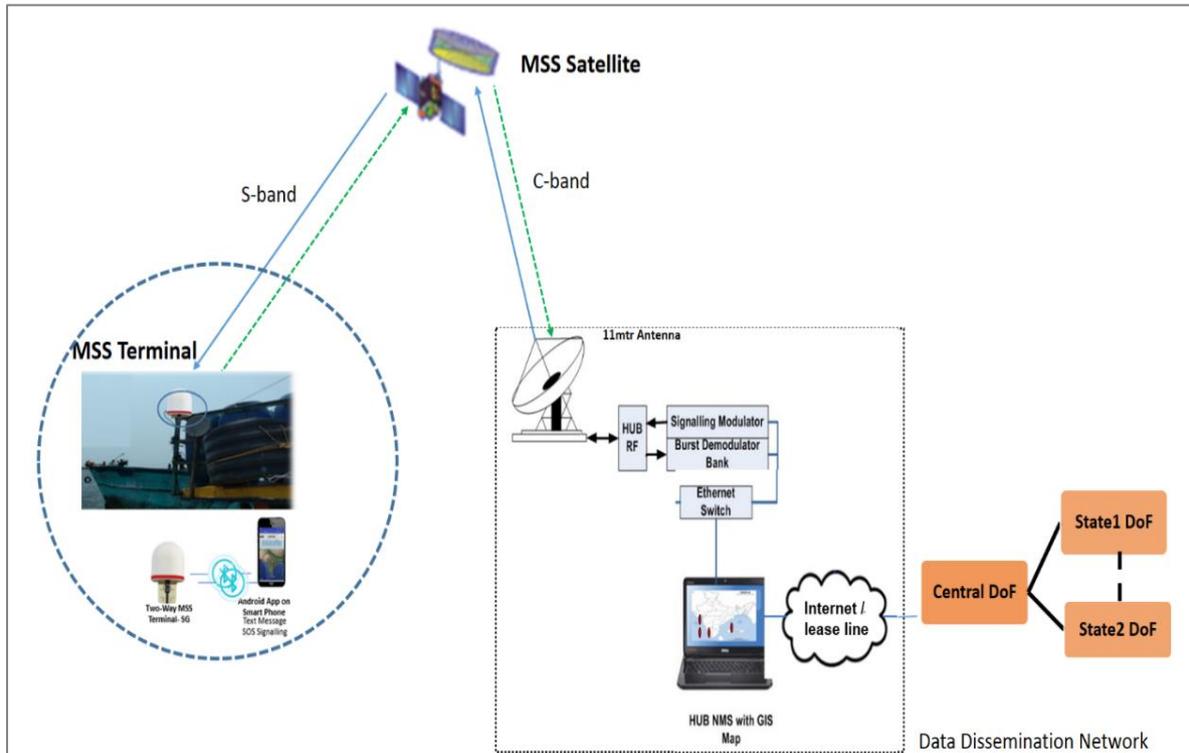


Figure 1: MSS Satcom Network Configuration for DoF

The proposed satcom service network has three major elements:

1. S-band MSS Transceivers (user terminals called Transponder; User Segment)
2. Space Segment (SxC & CxS MSS payload; required Bandwidth & Power)
3. Ground Segment (9mC-band hub with baseband hardware, Umbrella and User Network Management Software solution)

The transponder will be mounted on Maritime Assets and will communicate to Ground station (9m Hub) using High Power MSS satellite for reporting its position periodically and for emergency communication. The network can also perform an emergency broadcast of weather or any other alerts of user interests like Potential Fishing Zone or International water Boundary Crossing alerts etc. Following are the salient features supported by the network:

- ✓ Periodic Position Reporting
- ✓ Two-way Messaging

- ✓ Automatic Boundary Crossing Alerts (Based on Geo-fencing done by network owners)
- ✓ Emergency Weather Alerts, PFZ information dissemination
- ✓ Navigational Assistance to pilots/Fishermen

The central control station at Hub will house an Umbrella Network Management System, which will perform all network administration functionalities and provide filtered data to every state for respective asset management and control applications. This will also have a GIS system built into it to provide a consolidated network view to central administrators for ancillary decision-making tasks.

1.2 Scope of Tender

The work to be carried out under this tender specification shall consist of supply, installation, commissioning and handover of station in the proposed configuration (Ready to use configuration), operations and maintenance: at INCOIS, Hyderabad in accordance with the specifications and tender conditions.

- 1.2.1 End-to-end/turn-key solution for Supply, Installation, Commission, Operation and Maintenance of Ground Segment Hub for Maritime Asset Monitoring including Civil, Electrical and Environmental infrastructure.
- 1.2.2 The actual Supply, Installation, Commission shall take place at the specified location only when the civil infrastructure and all other associated ancillary work related to civil construction is duly completed and thereafter actual Supply, Installation, Commission, Operation and Maintenance of Ground Segment Hub for Maritime Asset Monitoring shall commence. However, if work of Supply, Installation, Commission, Operation and Maintenance of Ground Segment Hub for Maritime Asset Monitoring that is performed by vendor/Bidder for which no civil infrastructure is required then such work activity shall be carried out by the vendor/bidder prior to the completion of Civil Infrastructure.
- 1.2.3 Installation & interfacing of the ground station subsystems and equipment etc. are to be carried out with professional craftsmanship and high-quality accessories.
- 1.2.4 Submission of installation report, operation and maintenance manuals, test certificates given by manufacturer, manufacturer's catalogues, original DVD/CD/Pendrive of the software etc.
- 1.2.5 Comprehensive on-site Warranty of three (03) years to be provided. Terms and conditions are provided in Warranty Section.
- 1.2.6 Comprehensive Annual Maintenance Contract (CAMC) for 2 years post warranty period and has to provide AMC for additional period of 5 years (Optional) if called for by NSIL after successful completion of Three (03) years onsite warranty period and Two (2) years CAMC.

The vendor has to ensure compatibility of ground segment solution with User Segment (MSS terminals). The detailed network communication is stated in “Protocol document for communication between terminal and HUB_v2_8_3.pdf”. Interested vendor can access this document after signing proper NDA with NSIL.

1.3 General guidelines to the Vendor

- a) To understand all the requirements and scope of work completely. In case of any issue in understanding, vendor to submit the query in email or in prebid prior to bid submission in the attached format.
- b) Provide system engineering calculations along with the proposed hardware to meet the requirement, as projected in this RFP
- c) Submit compliance for 3 years comprehensive on-site warranty. After warranty period, vendor must also commit to undertake CAMC services for minimum period of two years and additional 5 years (Optional), if called for by NSIL after three years warranty period and 2-year CAMC. Vendor should also explain their strategy for CAMC.
- d) Prepare the PDR document and Detailed Design Review (DDR) document and make presentation during the DDR to the technical committee appointed by NSIL. It will be mandatory for the vendor to close all actions generated during these reviews. Closure of actions will be without any impact on cost. This review should also provide system engineering details, protocol details, operational details, monitoring, operation and maintenance considerations etc.
- e) Prepare, discuss and submit Acceptance Test Plan (ATP) to NSIL. Changes suggested by NSIL should be implemented by the vendor without any additional cost.
- f) Carry out site preparation and antenna pedestal and other construction work. Install, commission and test the complete ground system as per the requirements given in this RFP
- g) The responsibility of safe transportation / delivery of equipment, total system to the site rests with the Vendor
- h) Supply of required interfacing cables of all types, wave guides, patch panel, patch cords, coaxial connector, etc along with spares of all these interfaces falls under the scope of this work. The Bidder and Purchaser, however, will finalize the exact quantities of individual items, mutually during the finalization of the order. The Bidder, nevertheless, should specify the tentative requirements/quantity of these interfaces in his proposal.
- i) Supply documentation, relevant OEM certificates, performance report of all subsystems and manuals in hard and soft copies

- j) Provide 24x7 technical support as and when required during three (03) years warranty period and Two (02) years AMC period.
- k) Vendor shall provide a list of inventories of critical spares, which the vendor will maintain at respective site for maintenance of services and to meet the Obsolescence issues. This should be handed over in working condition to NSIL/ USER at end of contract.
- l) The selection of the sub-systems of ground system should be done in a manner to ensure the continuity of service for at least 10 years. Vendor shall submit comprehensive obsolescence management plan along with offer, substantiated by OEM certificate or a credible alternative strategy.
- m) Vendor shall propose overall configuration and implementation plan should be clearly explained with the help of block schematic of the complete system.
- n) The vendor must provide a Statement of Compliance (SoC), covering each point of system and sub-system specifications of complete earth station system as mentioned in respective sub-system details. This SoC should be well supported by documentation consisting of data sheets, brochure, calculations, literature etc. All relevant details of each subsystem like make & model number, detailed specifications, block schematic, if possible, test data sheet etc. should also be provided.
- o) After receiving the offers, Vendors will be invited to make technical presentation on their offer to an evaluation committee at NSIL if required. Vendors will be required to provide clarification, if called for, by the evaluation committee, on any matter related to offer.
- p) NSIL shall assign the overall responsibility of implementation on a single vendor (prime vendor) for the entire works. Any dependency on any sub-contractors shall be managed by the prime vendor and should not have any bearing whatsoever on NSIL and the performance of the final contract. The prime contractor should also ensure that sub-contractor also abides the terms & conditions of the RFP. However, the prime vendor must specify the source/partner against the proposed systems and the services which includes information like work/business profile of such a supplier, experience in executing/supplying similar type of system/subsystem for which the subcontract is being awarded, etc. NSIL shall not be liable to provide any warehousing facility to the vendor/Bidder for storage, security and preservation of the material necessary or associated for this rfp.

1.4 Operations of 9.0m C Band Hub station

The qualified vendor to provide skilled manpower for providing operation service of the above mentioned gateway (Antenna and RF and Baseband system). The details of the operation services to be provided are given in the following sections.

Configuration of Gateways

The configuration of C-band gateway is given in Figure-2&3.

1.4.1 Activities to be carried out by Vendor

The operator should carry out the smooth operations of the gateways at INCOIS Hyderabad and associated infrastructure; and ensures that the contractor meets the requirement as defined herein. The vendor has to carry out following activities.

A. Technical and General Activities of Hub Operations:

C-band gateways are operational 24x7. The engineer/operator at site shall operate daily routine work of the Hub. Gateway (Hub) operations includes activities like but not limited to the following:

- a) Monitoring of earth station & all associated hardware
- b) Attending to alarms and faults
- c) Configuration management as per approved SOP
- d) Supporting installation and operations of baseband system
- e) Interfacing with user agencies for operations of the earth station.
- f) Fault finding & correction in case if station is down / non operational
- g) Supporting for interference monitoring and mitigation as per guidance provided by NSIL
- h) Co-operating with field team visiting for maintenance / fault finding
- i) Preparation of operational / status reports
- j) Submission of reports to concerned authorities.
- k) Maintain inventory Log and maintenance log with downtime.
- l) General monitoring and upkeep of electrical, AC and UPS etc. and informing about any malfunction to concerned authorities.
- m) System backup and logs and its dissemination as and when it is required
- n) Any other technical, maintenance and gateway management work as asked by NSIL.

B. Reporting:

The contractor shall report to NSIL on the station activities and the status of equipment's / systems / facilities under contractor responsibility, which shall be affected by means of –

- a) Weekly Operation Reports
- b) Monthly Reports summarizing all activities of Gateways
- c) Special Reports will be submitted as and when called for by NSIL or when considered necessary by the Contractor.
- d) The operator presence and problem reporting is a must and essence of the contract. Operator has to immediately inform through written communication by

email and SMS, and by phone call, to the concerned CAMC vendor as well as NSIL coordinator within a period of 30 minutes of occurring an alarm event or anomaly.

C. Meetings:

At regular intervals, at least once in a year or at a mutually agreed date and venue, a formal co-ordination meeting between representatives from **NSIL** and Contractor shall be held for:

- a) Reviewing the past one year's performance.
- b) Discussing the future station activities.
- c) Handling technical and contractual matters.

Extraordinary meeting may be called either by NSIL or the Contractor when Specific problem arise requiring immediate attention for solution.

D. Coordination and support:

- a) With NSIL officials for infrastructure maintenance
- b) With CAMC contractor and OEM for trouble shooting and repair and maintenance
- c) With NSIL for reporting of parameters, health of gateway, alarm and any event

E. Personnel:

The Vendor shall ensure that the staff employed for operations shall have adequate knowledge of satellite earth station as well as computer hardware and software. As satellite ground station operations are very specific and highly technical in nature, the personnel having experience in satellite Gateway ground station will be preferred for operation service.

- a) The manpower to be deputed for the operations of hub shall be qualified engineering professional
- b) Engineer recruited should be preferably experienced and well trained in the operations of Earth Station hub.
- c) Engineer should be capable of managing Gateway activities end to end.
- d) Engineer deployed for the hub operations shall attend the hub on their own transport arrangement and no conveyance charges will be paid by NSIL.
- e) Arrangement of logistics like lodging, boarding, transport, medical, insurance etc. for the operation engineers will be the responsibility of Vendor for the entire period of contract.

- f) Vendor should provide one time orientation training to the operation engineers for the installed hardware and operations of each gateways through online or offline mode at the commencement of the contract. Training of subsequently joined engineers will be the responsibility of the vendor for smooth and flawless gateway operations for the entire duration of contract.
- g) The contractor shall provide, for approval, copies of the following documents/ certificates in respect of the staff to be employed by them under this contract, before deploying them for duties.
- Bio-data with two copies of pass port size photographs
 - Degree certificates of the qualifying examinations
 - Declaration of Medical Fitness from authorized Medical Professionals.
 - A copy of Aadhaar Card
 - Police verification certificate
- h) In case of temporary/permanent replacement of the manpower, the clause 5.5.7 will also be applicable on them.
- i) One person per shift 24x7 is required for hub operation

F. Staff Management

- a) The Vendor shall arrange and oversee shift duty of staff and deputation of relieving staff to ensure smooth operations of the gateways.
- b) Operator presence may be verified by compiling the information obtained from Access System, CCTV and logs of the Hub. It will be vendor's responsibility to give the proof of operator presence in case required on any occasion whatsoever. NSIL may cross-verify the same.
- c) If an operation engineer is found not performing duty well, vendor shall replace manpower in reasonable time frame and provide necessary orientation training to him/her.
- d) The Vendor is required to replace immediately or in any case within 7 days, an operation engineer found unfit or unsuitable for the work assigned or having resigned or left job, during the tenure of the contract.
- e) The Vendor will be required to adhere by the applicable statutory rules and laws of the land, laid down by Government of India and state Government such as Contract Labour Act 1970, EPF Act 1952, ESI act 1948, Payment of Wages Act 1936 and Workmen Compensation Act 1923 etc. as applicable.
- f) The Vendor has to ensure that the services are not disturbed either due to absenteeism or due to wilful act of his staff.

- g) Attendance sheet for each operation engineer shall be attached to invoice for quarterly payment.
- h) Stay of personnel will be allowed at site on project requisite basis subject to prior intimation and approval from concerned authority.

2.Chapter 2: Technical Specifications of MSS Hub Equipment (Ground Segment)

2.1 Earth Station Configuration and block diagram

The block diagram of the earth station is given in **Figure -2**

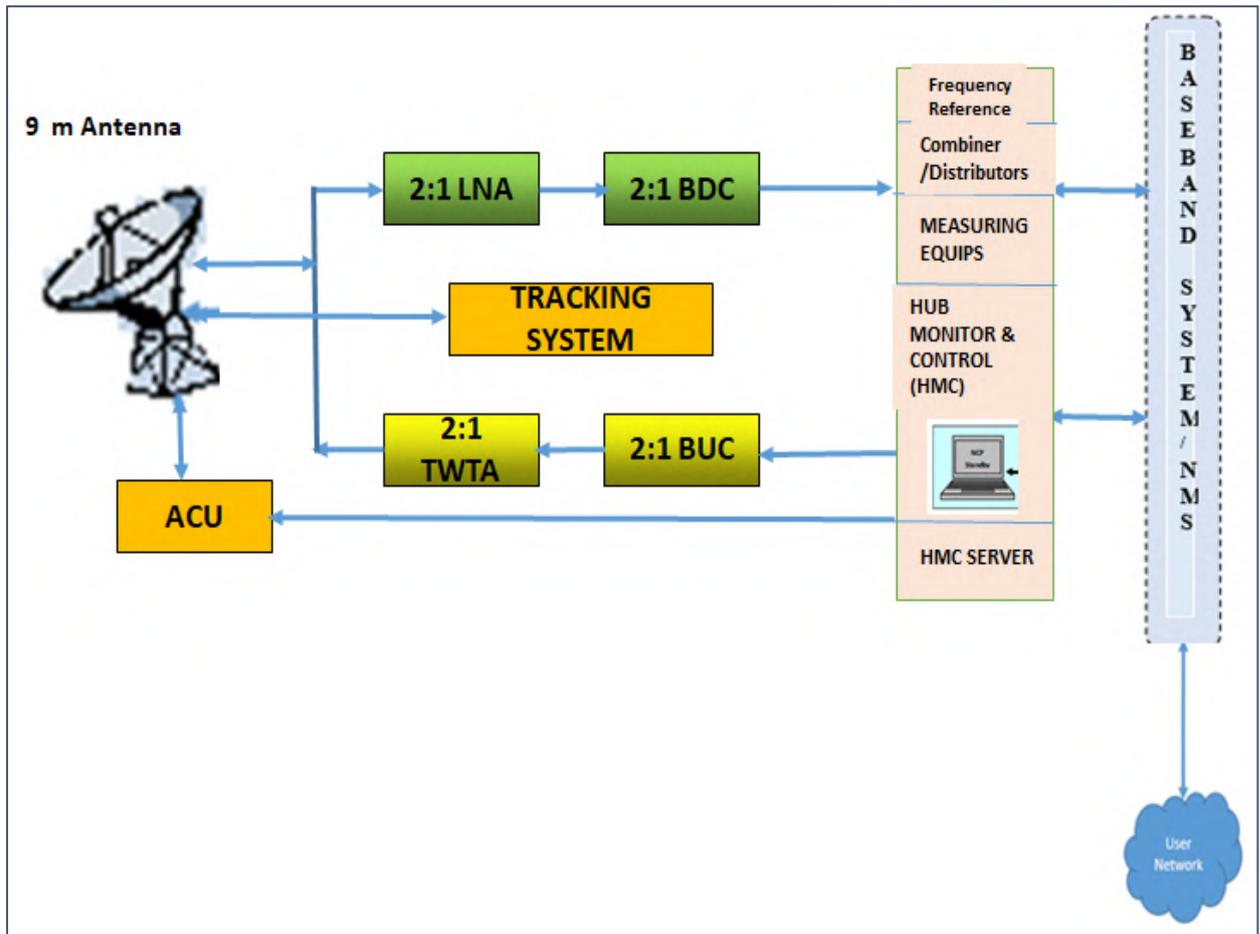


Figure 2: Block Diagram of 9m Earth Station

Brief Description of Earth Station

The representative earth station base line configuration is shown in Figure-3. It has 9m antenna (typical) with RF system and Baseband system.

The antenna has 4-port linear feed with tracking system. Tracking chain contains beacon receiver, motors, encoders and antenna control unit (ACU) etc.

RF system shall have capability to transmit & receive multiple carriers in linear polarizations at C band. As shown in Figure-3, transmit configuration has L band input signal, which is combination of multiple digital modulated carriers available from base band system. This signal is up converted and transmitted by earth station in C band. The redundancy configuration is 2:1 **(one active in each polarization with one hot standby which will be shared on failure of any active unit)** for block up converter and TWTA subsystem in order to increase earth station flexibility and availability during equipment failures. TWTA is required with linearizer, output coupler, Harmonic reject filter, receive reject filter,

In receive configuration LNA and block down converters have 2:1 **(one active in each polarization with one hot standby which will be shared on failure of any active unit)** redundancy similar to transmit section. LNA is required with input/output test coupler & transmit reject Filter. Vendor has to provide provision to connect Radar Cut off Filter

(RCF) and 5G filter before LNA, if required. The down converted L band signal is obtained from the output of block down converter, which is given to base band section.

Earth station RF equipments (block converters) have provision to connect external reference signal. Standard GPS disciplined source or highly stable reference frequency source/OCXO and distribution system is required to connect as common reference frequency source to all RF equipment and baseband equipment.

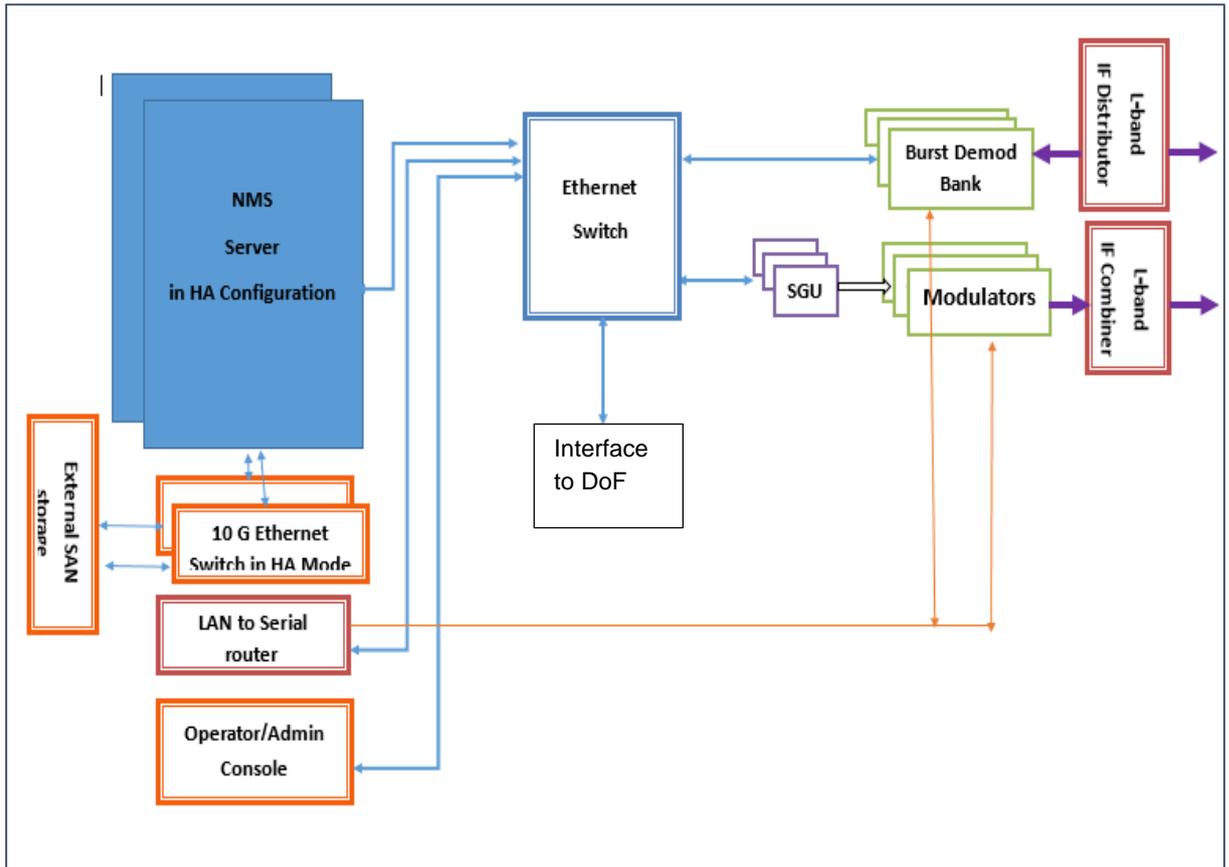


Figure-3: Block Diagram for HUB baseband Subsystem

Baseband system as shown in figure-3 shows the modulators and burst demodulators and satellite gateway units interfacing with RF sub system through power combiners/dividers (IF distribution units)

2.2 Technical Specifications of 9m earth station (Antenna and RF)

Table 3: Technical Specification of Antenna and RF

S. No	Parameter	Specification
1	Frequency of operation (Antenna & Feed) Transmit C band	5.85 –6.425 GHz

S. No	Parameter	Specification
	Receive C band	3.670-4.200 GHz
2	Antenna diameter	≥9.0 m(Typical)
3	Surface accuracy	1.0mm rms(typ) for operational conditions
4	Antenna Mount	Elevation over Azimuth
5	EIRP (at mid band with minimum 3.0 dB waveguide loss to be taken for calculation)	75 dBW, minimum (Provide EIRP break up, HPA configuration and sizing details to meet the above minimum EIRP requirement along with detailed block schematic)
6	G/T at 20° EL	30.0 dB/K, Min, at 4 GHz, at 20° El. (Provide break up in the quote, do not consider RCF and 5G filter for this calculation.)
7	Tracking Mode	Manual, Auto step track, Program track Adapt track/memory track
8	Polarization (Tx/Rx)	Dual Linear orientable (Vertical & Horizontal simultaneous)
9	Tx/.Rx .Side lobes envelope	ITU-R Rec .S.580-5 or latest
10	RMS Pointing error	Better than 1/5 th of 3-dB beam width for operational wind speed (Provide break up in the quote)
11	RMS Tracking error	Better than 1/10 th of 3-dB beam width for operational wind speed (Provide break up in the quote)
12	Travel rate of the antenna Az El	0.05°/sec to 0.25 ⁰ /sec(Typ) 0.05°/sec to 0.25 ⁰ /sec(Typ)
13	Travel Range	Azimuth : 180 ° continuous Elevation :5 - 85 Deg . (0 to 90 deg desirable)
14	Angular resolution	0.001 ° or better
15	Polarization movement	Polarization to match spacecraft polarization angle within 1 degree (Linear rotatable :± 90 deg Ty) through motor with digital display
16	Feed Assembly	4-Port, Tx/Rx Linear Polarized
17	VSWR	1.3:1 for both TX and RX Ports
18	Cross-Pol Isolation (Tx & Rx)	30 dB within 1dB beam width

S. No	Parameter	Specification
19	Power handling capability	1 KW CW
20	Port-to-Port Isolation	
	Tx-Tx/Rx-Rx	30 dB(min) 35 dB(Preferable)
	Rx-Tx Tx-Rx	85 dB 110 dB
Transmit System		
21	Input IF Frequency	L -band (0.95-1.75 GHz)
22	Spectral inversion	No
23	Intermodulation	-24 dBc max .with two equal carriers at total output power 7 dB below rated single carrier output at 4 dB with integral linearizer; All other configurations -23 dBC max .at 7 dB OBO at 4dB OBO with linearizer
24	Tx .Phase noise	As per IESS 308/309 or better
25	Spurious (Signal related)	-50 dBc
26	Spurious (Signal independent)	-60 dBm
27	Gain control	
	Range Step size	20 dB (Typ) 1 dB (Typ)
28	Tx Frequency Stability Over Temperature(0 to 50°C)Over a day	$\pm 2 \times 10^{-8}$ $\pm 5 \times 10^{-9}$
29	External Reference Input	10 MHz, auto take over from external to internal in case of external reference failure, for all equipment
30	External Reference source	10 MHz GPS disciplined source/OCXO
Receive System		
31	Output IF frequency	0.95-1.75 GHz or higher
32	Spectral inversion	No
33	Image rejection	Better than 60 dB
34	Third order Inter modulation distortion	≥ 60 dBc with two 0 dBm output signal
35	Rx .Phase noise	As per IESS 308/309 or better
36	Spurious (Signal related)	-60 dBc

S. No	Parameter	Specification
37	Spurious (Signal independent)	-70 dBm
38	Gain	35 dB
39	Gain control Range Step size	20 dB (Typ.) 1dB (Typ.)
40	Rx Frequency Stability Over Temperature (0 to 50°C)Over a day	$\pm 2 \times 10^{-8}$ $\pm 5 \times 10^{-9}$
42	External Reference Input	10 MHz, auto take over from external to internal in case of external reference failure, for all equipments
43	External Reference source	10 MHz GPS disciplined source/OCXO
Station Reference Frequency Source		
44	Time & frequency reference generation	OCXO/GPS disciplined source with a provision for connecting as external source
45	Frequency	10 MHz
46	Level	0 to ± 3 dBm(Typ)
47	No .of ports required for external Reference distribution	8 (Typ)
Redundancy		
48	RF equipment	Hot Redundancy for all active RF system
49	Antenna Control Unit (ACU) & Hub Monitoring & control System (HMC)	Cold redundancy
Test Loop Translator		
50	Provision to carry out local loop testing	Through Test Loop Translator
51	Input/output Frequency band	C x C, Hub loopback test
52	Third Order Intercept	+18 dBm
53	Frequency Stability	$\pm 2 \times 10^{-8}$ (0-50 deg C) $\pm 5 \times 10^{-9}$ /day
54	External Reference Input	10 MHz
Interface between RF & baseband system		
55	Link to Baseband system	L-band

S. No	Parameter	Specification
56	Spare IF interface	Transmit/Receive both
57	L-band IF level to baseband system	- 50 dBm,(Typ)
58	L-band IF level from baseband system	- 15 dBm, (Typ)
Monitoring and Control		
59	Monitoring and Control	All equipment shall have provision for monitoring and control from local and remote location .All subsystems have Serial or TCP/IP (desirable) interface for remote monitoring is required .
60	User interface	GUI
61	Operating System for Hub monitoring console	Latest licensed versions of Windows or Linux
62	Antivirus protection for Hub monitoring console	Antivirus protection which should be periodically updated as per schedule provided by Antivirus provider.
Prime Power		
63	The vendor shall give details of prime power requirement for the antenna and Electronics .The power distribution shall be done by the vendor Note :The prime power available in India is 220V \pm 10%, 50 Hz \pm 3 Hzfor single phase and 415 +/- 10% 50 Hz +/- 3 Hz for three phase.	
64	Note*: Vendor should work and provide detailed breakup for EIRP, G/T, pointing accuracy and tracking accuracy for the proposed system. Figure.2 above shows representative base line configuration of earth station . Detailed configuration and parameters of subsystem, losses, power consumption etc .are to be specified explicitly in their detailed proposal .	

2.2.1 Receive System including LNA, BDC and TLT for C Band Earth Station

The subsystem specifications mentioned and used are of standard vendor products. However, it is the responsibility of the supplier to integrate and achieve the final system specification using the subsystems.

2.2.2 LNA Assembly with Transmit Reject Filter and Test couplers

Low Noise Amplifier (LNA) system will be mounted along with the feed system. The LNAs are used in (1:1) redundant mode; a redundancy controller hardware/software is required along with LNAs for smooth changeover of live LNA to hot standby LNA in case of failure.

Transmit reject filter, Input/Output test couplers, remote control interface cables and other accessories are required along with the LNA assembly. The required specification is given in Table 4.

Table 4: LNA Assembly Specifications

S No.	Parameter	Specifications for C Band LNA
1.	Frequency range	3.6 – 4.2 GHz
2.	Noise Temperature (LNA)	≤35K min. @25° C
4.	Gain	60 dB, Min
5.	Flatness over the band	±1.5dB , Max
6.	Gain variation over temp.	±1.75dB, Max
7.	Gain stability	±0.2dB Max/day
8.	1 dB gain compression point	+10 dBm min.
10.	RF input port	WR- 229 CPRG
11.	RF output port	N-type, female
12.	Mode of operation	Out of 2 LNAs, 1 Active & 1 hot redundant
13.	Input & output Impedance	50 ohm
14.	Switching	Automatic switching of main LNA to hot standby LNA, in case of failure
15.	Switchover time	≤100 msec
16.	Remote control & monitor	Control and monitoring of parameters. Failure & alarm indication etc. through serial /Ethernet

2.2.3 Transmit Reject Filter (TRF) Details:

Table 5: TRF Specifications

S No.	Parameter	Specifications for C Band
1.	Wave guide (I/P and O/P Port)	CPR-229G
2.	Pass band Frequency (GHz)	3.628-4.2
3.	Insertion loss	≤0.10 dB
4.	VSWR (Max.)	1.3:1
5.	Reject band Frequency (GHz)	5.850 – 6.467 GHz
6.	Attenuation	80 dB(min.) >90 dB(Preferable)

2.2.4 Radar Cut off filter (To be installed whenever required)

Table 6: Radar Cutoff filter Specifications

S No.	Parameter	Specifications for C Band
1.	Wave guide (I/P and O/P Port)	CPR-229G
2.	Pass band Frequency (GHz)	3.6-4.2
3.	Insertion loss	≤0.50 dB (G/T will be measured without this filter at the time of ATP)
4.	VSWR (Max.)	1.3:1
5.	Reject Frequency and rejection	≥30 dB @ 4230-4400 MHz ≥50 dB @ 4400-4500 MHz ≥70 dB @ 5850-6500 MHz
6.	Max RF power handling	100W

2.2.5 5G cut off filter (To be installed whenever required)

Table 7: 5G Cutoff filter Specifications

S No.	Parameter	Specifications for C Band
1.	Wave guide (I/P and O/P Port)	CPR-229G
2.	Pass band Frequency (GHz)	3670 – 4200 MHz
3.	Insertion loss	≤0.70 dB (G/T will be measured without this filter at the time of ATP)
4.	VSWR (Max.)	1.3:1
5.	Reject Frequency and rejection	Below 3300 MHz > 60 dB 3300 – 3600 MHz > 45 dB 4250 – 4295 MHz > 25 dB 4295 – 4400 MHz > 30 dB 4400 – 4800 MHz > 55 dB

2.2.6 L Band tunable filter

L Band tunable filter is required to be installed at the output of the each Block down converter (or at the input of each L Band distributor unit)

Table 8: Specifications of L-Band Tunable Band Pass Filter:

S No.	Description	Specifications
1.	Tuning Range (Fo)	900 - 1750 MHz
2.	Insertion Loss @ Fo	2.5 dB Max.
3.	Nominal 3 dB Bandwidth @ Fo	12-15 MHz Typ.

4.	Rejection +/- 20 MHz from Fo	20-25 dB Typ.
5.	Input / Output Impedance	50 ohms
6.	Input / Output Connector	N - female
7.	Dimensions	206mm x 114mm x 66mm (Approx.)
8.	Tuning Actuation	Knobs (single or Triple)

2.2.7 1:1 Block Down Converter (BDC)

The BDCs are used in (1:1) hot redundant mode; a redundancy controller hardware/software is required along with BDCs for smooth changeover of live BDC to standby BDC in case of failure.

Table 9: 1:1 Block down Converter Specifications

S No.	Parameter	Specifications (C to L Band)
1.	Input RF Frequency	3.6- 4.2 GHz
2.	Output frequency	0.95-1.55 GHz
3.	Spectral sense	Non-Inverted
4.	Input / output impedance	50 Ohms
5.	Gain	35dB Typ
6.	Variable gain control	20 dB in 1.0 dB step typ.
7.	Amplitude response	± 0.5 dB over any 40 MHz
8.	Input/output Return Loss	15 dB (typ.)
9.	Noise figure (max. gain)	≤ 20 dB
10.	Frequency stability (with external reference)	± 2 X 10 ⁻⁸ (0-50 deg C) ± 5 X 10 ⁻⁹ /day
11.	Power output(P1 dB)	≥10 dBm (min)
12.	Image rejection	60 dB typical
13.	Spurious outputs Signal related Signal independent	-60 dBc or better -70 dBm or better
14.	External Reference Input	10 MHz,50 ohms Auto take over from external to internal in case of external Ref. failure.
15.	Switching	Automatic switching of main BDC to hot standby BDC, in case of failure
16.	Remote control & monitor	Control and monitoring of parameters. Failure & alarm indication etc. through serial or Ethernet interface

Transmit System:

The transmit system consists of TWTA (2:1) assembly with integral linearizer

2.2.8 TWTA assembly with integral linearizer

The TWTA in (2:1) redundant configuration with linearizer configuration is used for wideband, multi-carrier satellite service. The TWTAs are used in redundant mode; (Two online and one hot standby) a redundancy controller hardware/software is required along with TWTAs for smooth changeover in case of failure of any TWTA. The TWTA must be indoor TWTA interfacing with the antenna feed using waveguide run.

Specification of High-Power Amplifier (HPA) system is given in Table 10

Table 10: TWTA Specifications

S No.	Parameter	Specifications for C Band TWTA
1	Frequency Range	5.850– 6.450 GHz
2	Power output at flange (CW)	350W, min (It should also meet EIRP specification)
3	Gain	70 dB typ. at rated output
4	RF level adjustment	0 to 20 dB min.
5	Inter modulation with respect to each of two equal carriers 5 MHz apart	Better than -24 dBc max. with linearizer at total output power 4 dB below rated single output power.
6	Harmonic Outputs	-60 dBc max.
7	RF input connector	N- type female
8	RF output connection	CPR-137G waveguide flange
9	RF output monitor	Type N female
10	Remote Operation & monitor	Control and monitoring of parameters. Failure & alarm indication etc. through serial or Ethernet (preferable)

Note : Linearizer, switching controller, wave guide switches, High power dummy load, Harmonic reject filter, Receive Reject filter, isolator, coupler etc. is part of TWTA system

2.2.9 BLOCK UP CONVERTER (BUC) 2:1

The BUCs are used in (2:1) redundant mode; a redundancy controller hardware/software is required along with BUCs for smooth changeover of live BUC to standby BUC in case of failure.

Table 11: 1:1 Block Up Converter (BUC) Specifications

S No.	Parameter	Specifications for L to C Band BUC
1	Input RF Frequency	950 –1550 MHz

2	Output frequency	5.850 – 6.450 GHz
3	Spectral sense	Non-Inverted
4	Input / output impedance	50 Ohms
5	Gain	25 dB minimum.
6	Variable gain control	20 dB in 1 dB or less step typ.
7	Amplitude response	± 0.5 dB over any 40 MHz
8	Input/output Return Loss	15 dB (min.)
9	Frequency stability (with external reference)	± 2 X 10 ⁻⁸ (0-50 deg C) ± 5 X 10 ⁻⁹ /day
10	Power output (P1 dB)	≥ + 13 dBm (min.)
11	Spurious outputs Signal related Signal independent	-60 dBc or better -70 dBm or better
12	External Reference Input	10 MHz, 50 ohms Auto takes over from external to internal in case of external Ref. failure.
13	Remote control & monitor	Control and monitoring of parameters. Failure & alarm indication etc. through serial or Ethernet (preferable)
14	Size	19-inch standard rack mount

2.2.10 Hub Monitoring and Control System (HMC)

Hub Monitoring & Control System (HMC) is a centralized earth station management tool or set of tools for Earth station Equipment. It shall provide the integrated earth station monitoring and control facility during normal operation.

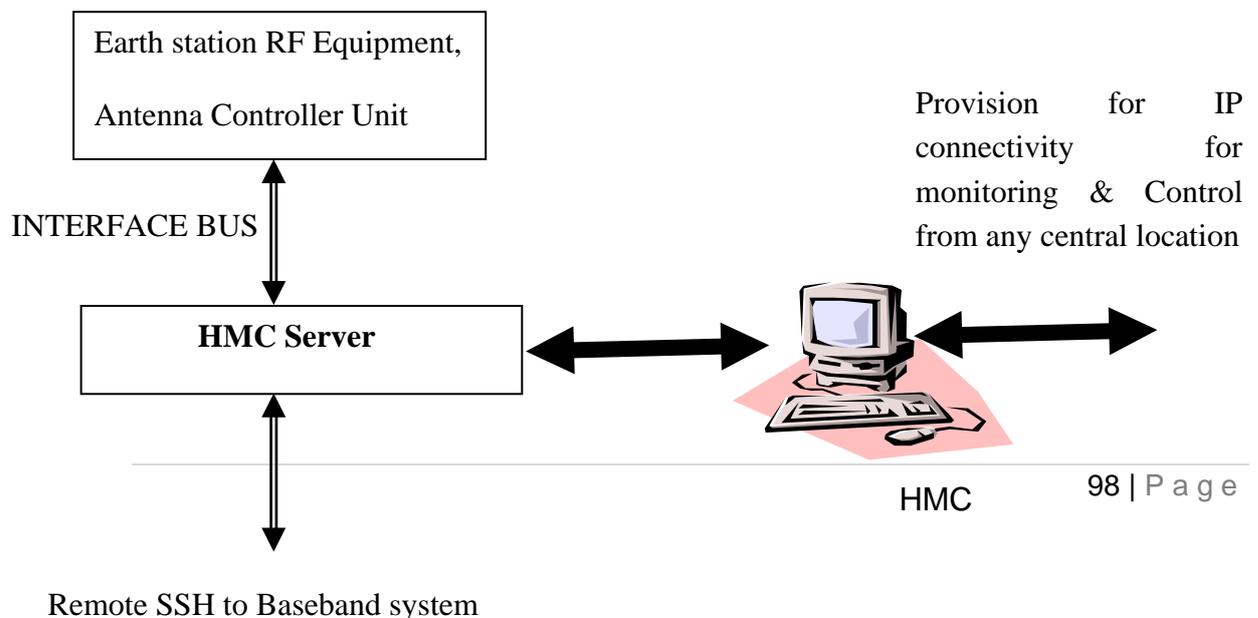


Figure 4: Configuration of HMC

Table 12: Features of HMC

S No	Features
1.	Preferred Architecture: client server, where all back end will reside on server and earth station operator will be provided a front-end console to monitor/manage the earth station.
2.	User-friendly GUI for Earth Station, Click and point interface like windows for easy control to network operator.
3.	One HMC (with 1:1 Hot redundant configuration) per earth station to support the local operations. HMC system with automatic switchover in case of main HMC unit fails
4.	IP based solution for remote control of Antenna, RF equipment and instruments for M&C operation.
5.	Remotely accessible other remote locations with authentication. Main Server take control from remote, any time.
6.	Automatic Earth Station configuration management to configure earth station for different operational requirements with save/recall and scheduling facility.
7.	Multi-level authentication/password protection for Users/operators with login/logout.
8.	Feature level (Admin, Supervisors, Operator, and Guest etc.) as well as equipment level access right to operators.
9.	GUI to show the live information/ parameters values of the earth station equipment's.
10.	Generation of alarms in all abnormal conditions and equipment Alarms
11.	Monitoring and storage of all earth stations' equipment's parameters on regular interval. This monitoring interval should be configurable.
12.	All the user/operator login/logout, user operation event, alarms, any parameter change should be logged and stored in the database with time tag.
13.	Report Generation: All types of log generated in HMC can be viewed as well as operator can generate report based on types of equipment, time duration, days, specific event, severities, particular users, monitoring logs, Alarms, etc.
14.	Provision to export monitored data to some other application for graphical representation/Doc/spread sheet
15.	Self-test facility of complete Gateway, HMC hardware, standby server, equipment etc.

16.	Display of spectrum and control from user console
17.	In case of total power failure or HMC Stuck up (Software hand) then HMC system should recover last stage.
18.	Back up Facility: HMC Data backup can be stored and retrieve from the Hard disk.
19.	Appropriate virus and firewall protection with warranty and support for HMC System.
20.	HMC Server (Minimum Configuration): 2 x Intel Xeon Processor, 32 GB RAM, 2.1 GHz speed or Higher, 2 TB Hard-disk, 4 - 1GB LAN port, DVD read-write with LCD Display Monitor, Keyboard & Mouse.
21.	Carrier monitoring at L-band level for receive and transmit monitoring either by exclusive instrumentation (i.e., Spectrum analyzer, switching unit etc.) or by any other equivalent solution
22.	Vendor to agree on incorporating any changes in HMC during PDR/DDR if asked for, without any cost implications as per requirement.
23.	Vendor should supply the HMC system with Software DVD, Operating System, with OEM Support, Installation manual, User Manual etc.
24.	User Console for operator to be provided
25.	Vendor should integrate HMC with the user network, for monitoring and control of all gateway HMC (based on firewall policies and other network connectivity constraints of User network). User should be able to automatically or manually switch the gateways for operation as and when required. Vendor should provide HMC facility such that It can be remotely accessed from any other location physically separated in the user network.
26.	Spectrum monitoring will be made available on all sites of HMC. Additionally, spectrum monitoring will be made available on an interface to User network (based on firewall policies and other network connectivity constraints of User network). Spectrum monitoring will be limited to the feature set of standard spectrum analyzer.

3.Chapter 3: Baseband Sub-System Requirement & Specifications:

The baseband sub system consists of TDM modulators, Burst demodulators, satellite gateway units and its interfaces

3.1 Technical specifications of TDM MODULATOR

S.No.	Description	Specification
1.	System Specifications (L-band Modulator with IESS waveform)	
	Operating Mode	Continuous
	Frequency Range	950-1750 MHz, step size 100Hz (Preferable 1Hz)
	Data Rate Selection	2.4kbps to 2048kbps or Higher with 1 bps step size (2.4kbps with QPSK is mandatory)

S.No.	Description	Specification
	Symbol Rate min.	2.4ksps to 2048ksps or higher
	Modulation	BPSK, QPSK (preferable with OQPSK, 8PSK)
	Spectrum	Normal, Inverted selectable
	FEC options	<ul style="list-style-type: none"> Selectable Rate 1/2, 3/4, 7/8 Viterbi with K=7 with (Bypass Option) Selectable Option for concatenation (Viterbi + RS (N=126, K=112, depth=4, IESS308)) coding with Bypass option.
2.	Modulator	
	Transmit O/P Power	+5 to -35 dBm in 0.1 dB steps
	IF impedance	50 Ω preferable
	Return loss	14dB typical, 10dB minimum
	Output Phase Noise	Better than IESS-308/309 by 6 dB typical
	Level Stability	± 0.5 dB, 0 ~ 50° C, MHz at 25° C
	Level Accuracy	± 0.5 dB, 950 ~ 1750
	Output Spurious	< -55 dBc/4 KHz
	Carrier on/off Isolation	55dB minimum
	Scrambler Types	IBS, V.35, IESS, RS
	Data Clock Source	Internal, External, Rx clock
	Internal Stability	1×10^{-7} or better
	External Reference Input	10 MHz
3.	Interface	
	Data Input/Output	RS232, RS422, EIA-530(A)
4.	Monitor and Control	
	Front Panel	LCD & Keyboard
	Remote	RS232 & RS485 (preferable with Ethernet also)
5.	Diagnostics	
	Carrier	Pure carrier, sideband
6.	Environmental and Physical	
	Supply	220 VAC $\pm 10\%$, 50Hz

3.2 Technical specifications of BURST DEMODULATOR

S. No.	Parameter	Specification
1.	No of channels per unit	08 (Eight)
2.	IF Frequency	950 MHz to 1750 MHz
3.	Frequency tuning step	1 KHz

S. No.	Parameter	Specification
4.	I/P Frequency acquisition range	$\pm 5\text{KHz}$
5.	I/P Level Range	-45 to -55 dBm(preferable -40 to -70dBm adjustable)
6.	I/P Impedance	50 Ω
7.	I/P return loss	>18 dB
8.	I/P spectrum selection	Normal, inverted
9.	Data rate	selectable 1200bps, 2400bps,2700bps & 4800bps
10.	Modulation	BPSK, QPSK
11.	FEC	R=1/2, K=7 G1=171 ₈ , G2=133 ₈
12.	Descrambler	Polynomial $1+X^{-1}+X^{-15}$, Initial step 6959 (hex)
13.	Phase ambiguity	By UW (64 bit programmable)
14.	PER performance	0.01 at Eb/No of ≥ 7.0 dB (Over frequency and with FEC, scrambler)
15.	Eb/No min for operation	5.0 dB
16.	Carrier recovery symbols	192 Symbol
17.	Clock recovery symbols	64 Symbol
18.	Burst to burst gap (For variable payload data length of maximum payload up to 84byte)	Maximum 350msec @ 1200bps/BPSK/FEC R=1/2 Maximum 250msec @ 2400bps/QPSK/FEC R=1/2
19.	IF Interface	SMA 50 Ohm
20.	M & C Control	RS485
21.	Ethernet port	10/100 base-T – 8 Nos .Individual channel interface
22.	Power Supply	220VAC,230VAC $\pm 10\%$, 50Hz, Dual redundant
23.	Mechanical	Standard 19" Rack Mountable

3.3 Technical specifications of 16-way active power combiner

S.No.	Description	Specification
1.	Frequency Range	950-2150 MHz
2.	Gain	0dB ± 1.5 dB nominal or better, mean across band

S.No.	Description	Specification
3.	Flatness	± 1.0 dB typical or better over frequency range
4.	1 dB Compression	+10 dBm or better
5.	Noise Figure	≤ 26 dB
6.	Isolation between any two-output port	≥ 25 dB
7.	Input Return loss	18dB typical or better
8.	Output Return loss	15dB typical or better
9.	Connector (I/O)	SMA
10.	Impedance	50 Ω
11.	Display	Front Panel LED's for power/status
12.	Supply	Dual Redundant 230VAC $\pm 10\%$, 50Hz
13.	Mechanical	1U 19" Rack Mount

3.4 Technical specifications of 16-way active power splitter

S.No.	Description	Specification
1.	Frequency Range	950-2150 MHz
2.	Gain	0dB ± 1.5 dB nominal, mean across band
3.	Flatness	± 1.0 dB typical or better over frequency range
4.	1 dB Compression	+5 dBm or better
5.	Noise Figure	≤ 12 dB
6.	Isolation	25dB typical or better
7.	Input Return loss	16dB typical or better
8.	Output Return loss	18dB typical or better
9.	Connector (I/O)	SMA
10.	Impedance	50 Ω
11.	Display	Front Panel LED's for power/status
12.	Supply	Dual Redundant 230VAC $\pm 10\%$, 50Hz
13.	Mechanical	1U 19" Rack Mount

3.5 Technical specifications of Satellite Gateway Unit (SGU)

S.No.	Description	Specification
1.	I/O interface	Ethernet (RJ45 10/100) for LAN interface, RS422 for modem data interface, RS232/RS485 for modem control interface
2.	Transmit Protocol	UDP, HDLC, telnet for M&C
3.	Frame delay & size	1 frame delay, variable size (1 to 1500 bytes)
4.	Frame buffer	100 packets in each channel
5.	No. of Channel	8
6.	Clock	both internal and external
7.	Channel Data Rate	2.4 kbps, upto 1.2 Mbps (selectable through M&C)
8.	Embedded Platform	Microcontroller (preferably Rabbit)
9.	Settable parameters	Sync data-rate, UDP destination socket address, local IP address and UDP port no. etc.
10.	M&C software platform	PC (Linux, window)
11.	Size	1 U, 19" Rack mountable
12.	SGU Functionality	The SGU converts the incoming HDLC data frame to UDP/IP datagram and transmit to destination UDP socket. Similarly, it removes IP headers (for data coming from Ethernet interface), make HDLC frame with the data part only and transmits through RS422 port.

3.6 Technical specifications of 10 MHz Distributor

S.No.	Description	Specifications
1	I/P Frequency	10 MHz
2	No. of O/P Port	16
3	Impedance	50 Ohm
4	Return loss	14 dB minimum or better
5	Amplifications	Unity gain (0 dB) \pm 1.0 dB
6	Noise Figure	10 dB or better
7	Output 1 dB compression	-10 dB min
8	Supply	220VAC, 230VAC \pm 10%, 50Hz

11	Humidity	85% non-condensing
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3.7 42 U Racks for MSS Hub room

S.No.	Description	Specification
1.	Standard 19" standard 42 U (800mm depth) size equipment rack (floor standing type enclosure) with following standard mounting: -	Specs should be same for all racks
	Both side powder coated covers with louver	2 no. per rack
	Bottom cover with cut out for cables	
	19" mounting rails	1 set per rack
	Ventilated top cover with one fan tray	
	Fan tray for four fan position	
	Fans as per thermal load requirement calculated by vendor or minimum 250 CFM	4 nos. per rack
	Lockable front glass door with hinges	
	Lockable back Door with perforation or louvers	
	Castor wheels standard	2 no. per rack
	Castor wheels with foot operated breaks	2 no .per rack
2.	Horizontal / vertical AC Power Strip/Power board with MCB	Qty. = 24 points minimum or higher as per power point required + 5 point extra per rack
3.	Support angles for equipment /chassis mounting –heavy duty 'L 'shape, 575mm Depth or as per required depth, with required mounting accessories	Minimum Qty = .25 pairs or higher no .of pairs as per no .of equipment to be mounted in racks
4.	Copper strips for equipment Earthing purpose, size:39U-46U, with required mounting accessories	Qty .– 1 per rack or as per requirement
5.	Front blanking panels /false plates aluminum, anodized standard 19 "& size 1U with required mounting accessories	Qty = .25 minimum or higher as per requirement
6.	Captive mounting Hardware sets for equipment 'L 'shape angles mounting, front blanking panel mounting, equipment mounting or not specified above	As per requirement
7.	Cable guide (horizontal and vertical)	As per requirement

3.8 Acceptance Testing for MSS Hub

1. The acceptance test plan for complete Hub system is described here. The test plan shall contain various tests suggested in this section as a minimum requirement and shall also include additional tests as decided during design reviews or other engineering reviews, subsequent to the placement of the order.
2. All formal acceptance testing shall be documented and signed by representatives of vendor, DoF, NSIL and SAC/ISRO.
3. Bidder shall provide a brief description of the test method of evaluation and a block diagram of the intended test configuration. Test procedures shall also include a list of equipments. If Bidder wants to develop any special test equipment for the test programme, such equipment shall be described in detail. The test procedure shall be written to ensure that the tests are repeatable.
4. List of Test and measurement equipments for installation, testing and maintenance should be provided by vendor during design review. Equipments to be arranged by vendor.
5. NSIL/DoF shall approve all test procedures. The Bidder shall make revisions if considered necessary by Purchaser, and shall resubmit new revisions to NSIL/DoF. This will be a mutually agreed document.
6. Site acceptance testing shall begin only with approved test procedures.
7. Acceptance testing will be done at following stages.
 - (i) Subsystem level tests prior to dispatch or on at site on receipt of the items.
 - (ii) Testing of antenna, control and tracking system.
 - (iii) Testing of the integrated transmit chain.
 - (iv) Testing of the integrated receive chain.
 - (v) Testing of the earth station in TLT configuration.
 - (vi) Final acceptance testing of the earth station with spacecraft.
8. Subsystem level tests
 1. Full electrical testing of the units will be carried out at site and it also includes visual inspection of the units.
 2. Bidder shall ensure that test schedules are informed well in advance to Purchaser for its participation.
 3. Bidder shall list the parameters to be tested for each subsystem and shall also provide the detailed measurement procedure in its proposal.

9. Testing of antenna, control and tracking system

Table 13: Testing of Antenna System

Acceptance Test	
1	The vendor shall perform factory and site acceptance testing in accordance with the requirements set forth in the approved test procedures. Factory acceptance test and site acceptance test data shall be recorded in the appropriate section of the procedures and shall become part of the test data package. The test data package shall include the recorded test results, material certification, analysis data, functional demonstration and inspection compliance.
Documentations: In addition to the list of the documents mentioned, vendor shall also provide the three hard copies and one soft copy of each of the following:	
2	Set of assembly drawings, interface drawings, etc.
3	Antenna Optics for the dual reflector geometry.
4	Details of all safety aspects such as lightning arrestor, earthing, ladder, etc.
5	Primary radiation pattern of the feed and secondary radiation pattern, Antenna Gain, XPI data as measured in the test range.
6	Measured data on complete antenna, control and tracking system like insertion loss, return loss of the feed assembly over the complete frequency range, isolation between Tx and Rx ports, etc.
7	Mechanical panel alignment report
8	Wind load calculations, structural/design analysis reports.
9	Error budget analysis estimating pointing error/tracking errors.
10	Soil data and true north marking data.
11	Break up of G/T, Antenna gain, system noise temp, total EIRP achieved and EIRP stability.
On Site Inspection	
12	Torque values should be specified and furnished for each interface for verification by Purchaser.

13	Alignment of foundation bolts orientation.
14	Alignment of Az & El axes.
15	Alignment of reflector surface, feed and sub reflector.
16	Complete assembly of finished part of antenna by confirming the torque values.
17	Coverage specifications w.r.t. True North and steerability aspects.
On-Site Tests	
18	<p>The Bidders testing shall include the following tests as a minimum and additional test as recommended by the Bidder or by mutual agreement during design review or other engineering reviews:</p> <ol style="list-style-type: none"> Antenna Coverage Gear Backlash Alignment Antenna Speed Polarization Movement Pressurization & leakage rate Antenna Gain: Gain data as measured by the Vendor in the test range shall be verified at site after installation, using spacecraft. Cross Polarization Isolation Satellite tracking in all the modes (step track, program track, etc.) with beacon or any modulated carrier

10. Testing of integrated transmit chain

- The performance of the integrated transmit chain shall be characterized and output power at the test coupler shall be calibrated. The Bidder shall provide the calibrated data on the test coupler during the test.
- Various parameters will be tested for acceptance of the system including but not limited to those given in table below.

Table 14: Testing of Integrated Transmit chain

Test Parameter	Remarks
Line loss from HPA to the feed over the frequency band. Return loss, Transmit power, EIRP stability, IMD frequency response & frequency stability. Noise floor and spurious response shall be measured and recorded.	Characterization shall be done at low and high-power levels. Transmit power and frequency stability shall be performed at least 3 frequencies in the specified band shall not be less than 24 hours. Output power shall be maximum available from the system.

11. Testing of integrated receive chain

- a) The performance of the integrated receive chain shall be characterized and input power at the test coupler shall be calibrated. The Bidder shall provide the calibrated data on the test coupler during the test.
- b) Various parameters will be tested for acceptance of the system including but not limited to those given in table-13 below:

Table 15: Testing of integrated receive chain

Test Parameter	Remarks
Line loss to be measured over the frequency band. System Noise temperature Frequency stability, frequency response, Noise floor and spurious response shall be measured and recorded.	Characterization shall be done at low power levels. Calibrated test coupler data will be required. Frequency stability shall be performed at least 3 frequencies in the specified band shall not be less than 24 hours.

12. Testing of the earth station in TLT configuration

The performance of the earth station shall be checked in TLT configuration. Various parameters will be tested for acceptance of the system.

13. Final acceptance testing of the earth station with spacecraft The performance of the earth station shall be checked through spacecraft. Tracking performance of the system (like tracking accuracy etc.) shall be checked with satellite in all the modes (i.e., auto step track and program track mode). Various parameters will be tested for acceptance of the system including but not limited to those given in table below:

Table 16: Final Acceptance testing

Test Parameter	Remarks
G/T EIRP, transmit and receive gain, XPI, radiation patterns Frequency response, C/N, S/N, BER, Noise floor and spurious response shall be measured and recorded. Pressurization and leakage rate	Measurements shall be performed with at least 2 different procedures. Bidder shall specify the methods. This shall be done at the minimum threshold values of the demodulators as and where applicable. Vendor to support obtain necessary DoT/NOCC/WPC/WMO Clearance of

	ground segment for establishment & operations.
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- b. The overall operation and the various specified functions of the Hub Monitoring System (HMC) shall also be tested in the integrated system before giving final acceptance of the earth station system.

3.9 Documentation and test certificates

The following documents to be supplied by the Vendor at different stages of implementation:

1. Preliminary Design review document.
2. Detailed Design review document.
3. Bidders to provide MTBF figures for all subsystems
4. Material test certificates.
5. Part/component calibration data and certificates.
6. Test procedures for parameters measured at subsystem and integrated system levels. It should include measurement uncertainties for each measured parameter.
7. Test records of all the measurements performed.
8. Compliance certificate.
9. Non-conformance reports.
10. Acceptance test reports.
11. Acceptance test certificates.
12. Three copies each of the operational and service manuals for all the subsystems and systems.
13. Supply of final sets of drawings (assembly drawings, interface drawings, drawings related to maintenance of antenna systems and subsystems etc.) including soft copy.

3.10 Training

- a) Bidder/Vendor shall provide the training to the personal identified/nominated by the NSIL/Authority.
- b) Authority shall take decision regarding the mode of training, training schedule and

venue as per the requirement and same will be communicated to Vendor.

- c) Necessary training should be provided which includes but not limited to system configuration, operation, troubleshooting and preventive/corrective maintenance, emergency procedures etc.

4. Chapter.4: Civil, Electrical & Environmental Infrastructure:

4.1 Brief Particulars of Project & Scope of Civil Work

Construction of Facility consisting of:

- 1) Antenna park for installation of $\sim \geq 9\text{m}$ dia Antenna supported over RCC pedestal of required dimensions and strength.as per design finalized during PDR or any design review.
- 2) Diesel Generator area for installation and commissioning of DG set.
- 3) Equipment bay / server room for providing and fixing of base bands (20 nos.).

- 4) Operator and monitor room for 5 nos. of work stations with required furniture and TV.
- 5) One room for keeping repair and testing equipment.
- 6) One meeting room with required furniture items.
- 7) One operator room with attached toilet facility.
- 8) Toilet block consisting of ladies and gents toilets.
- 9) Security cabin for 24 hours security.
- 10) One UPS room.
- 11) One electrical panel room.
- 12) One store room.

Available plot size for above facilities is 20mtr x 20mtr approximately. Facility to be constructed as RCC framed structure with brickwork for panel walls and required joinery material for doors and windows. Tentative line diagram / sketch is made available in the bid documents. All drawings (architectural and structural) are to be got cleared by department before execution of work.

4.1.1 Tentative sketch

Tentative sketch of proposed layout plan is as shown in Figure-5

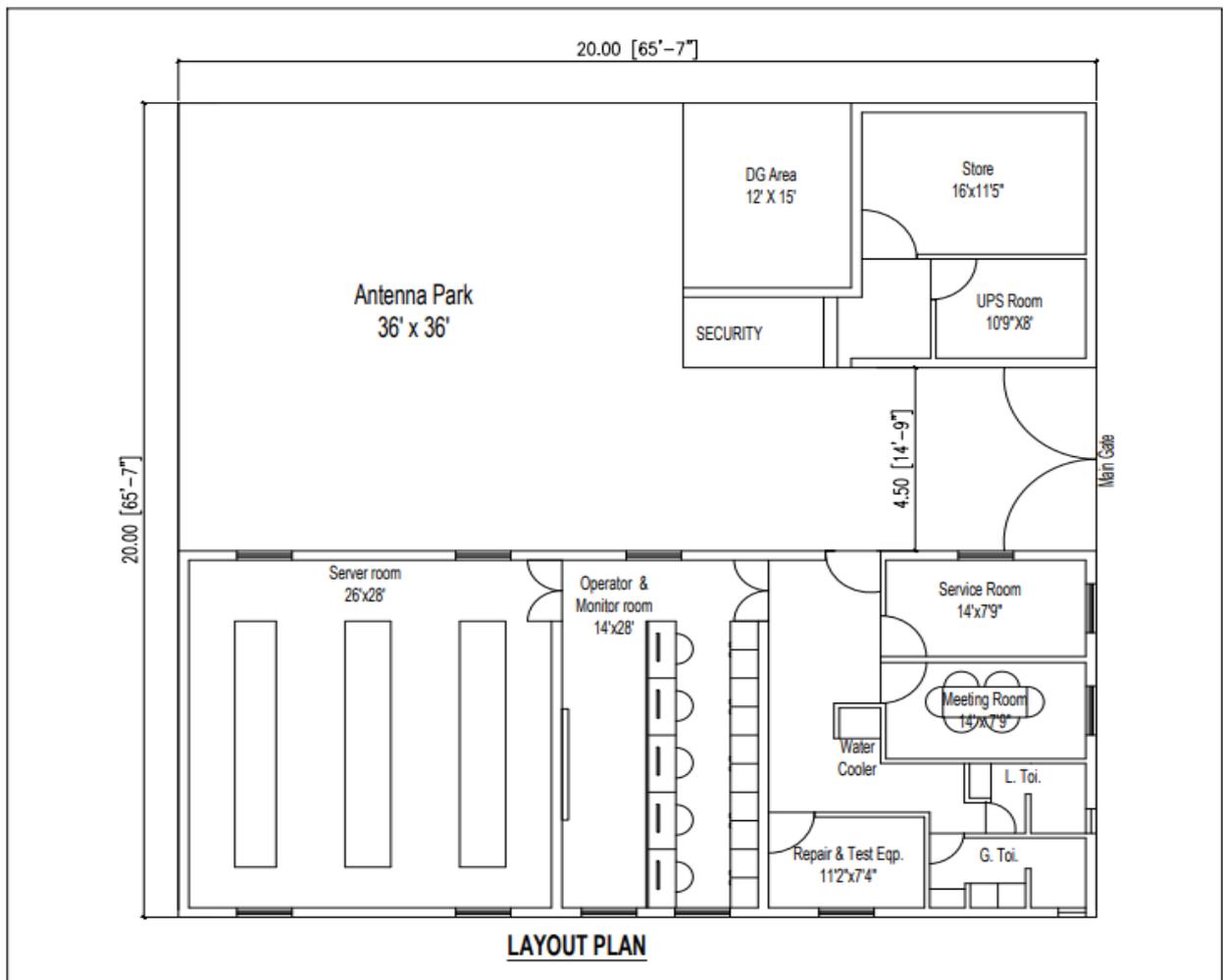


Figure-5 Proposed layout plan

The Consultant shall carry out the following but not limited to, listed below:

- Carry out feasibility studies and thereafter identify suitable site location based on primary & secondary survey data collection.
- Conduct required Survey and Investigations; formulate Detailed Project Report and Construction Methodology.
- Preparation of drawings and design based on the requirements by Department. A detailed project report on preliminary design, construction, installation and operation of the proposed facilities / structures after preliminary field survey data collection, meeting established standards viz. Indian standards / internationally recognized standards and regulations such as ISO / latest relevant standard, its analysis should be prepared and submitted to department along with preliminary drawings.

4.2 Brief specifications for civil works:

1. Brickwork to be carried out burnt clay bricks of class designation 3.5 in cement mortar 1:5 / 1:4 / 1:3.
2. 15mm / 12 mm thick smooth Internal plaster in cement mortar 1:5 / 1:4 / 1:3 for walls and ceiling.
3. Double layer external plaster with base layer 15mm thick external in cement mortar 1:5 and top layer 7mm thick in cement mortar 1:3.
4. Joinery for doors and windows shall be of anodized aluminium work of approved make as per design.
5. All RCC work shall be as per approved design and in accordance with IS: 456.
6. Steel reinforcement bars to be used shall be approved make Fe 500D grade.
7. Internal paint shall be low VOC acrylic emulsion paint of approved brand.
8. External paint shall be low VOC exterior emulsion paint of approved brand.
9. Water proofing at terrace shall be three layer integral water proofing using burnt clay brick.
10. Flooring.
 - (a) Vitrified ceramic tiles in server room, operator & monitor room, service room, meeting room, repair and test equipment room and passages.
 - (b) Polished Kota stone flooring in electrical panel room, UPS room, Store room, Security area.
 - (c) Matt finish vitrified tiles in flooring and Dado upto lintel level for toilet & water cooler area.
 - (d) Antistatic flooring in server and operator room.

4.3 Brief specifications for Electrical works:

1. LED light fitting with wiring with FRLS type copper wiring in Heavy Duty PVC pipe in all area as per standard practice.
2. Ceiling Fan in all rooms with FRLS type copper wiring in Heavy Duty PVC pipe
3. Air conditioning split AC with auto change over maintaining temperature 22 Degree Celsius in server room and operator room, service room, meeting room and repair and text equipment room with 25 Deg. Celsius with humidity control in control room.
4. 1:1 hot standby 40 kVA or higher 3 phase UPS with 30 min backup time with necessary K10 Isolation transformer and AVR & battery and surge protection, Copper plate neutral earthing etc.
5. 1:1 Hot stand by 50 KVA 3 phase DG set with necessary on load automatic change over switch & associated with LT panels with some spare switch including 2 Nos Copper plate earthing for neutral & 2 Nos pipe earthing for DG set.
6. Separate sub meter for complete electrical infrastructure.
7. Industrial Socket for server & 5/15 Amp Sufficient power point with separate control associated with MCB& ELCB Distribution Boards having FRLS type copper wiring in Heavy Duty PVC pipe.
8. All power interconnecting Power Cable with cable tray etc. as required.
9. Power point for Antenna Facility & earthing for lighting protection
10. Fire Alarm system and fire extinguishers appropriate type.
11. Street light /Area Lighting/ antenna lighting
12. Telephone point and internet point.
13. CCTV outdoor and indoor at appropriate places
14. Biometric access system

4.4 Civil/Environmental Infrastructure

4.4.1 Provisional Civil Requirement for AC system:

Openings of appropriate size in the wall for laying refrigerant lines/condensate water drain/power cables. Provision for terminating the condensate water drains line. Provision for installing the Outdoor units of AC Units. Openings of appropriate size in the floor of 1st floor for routing the supply/Return air from and to the AC unit respectively. Provision in the false ceiling of ground floor for installing the supply/return air grills/diffusers. Ensure sufficient space around Outdoor as well as Indoor units for free circulation of air and Maintenance (The AC system shall propose to be installed at first floor). This requirement depends on the type of AC system being offered & acceptable to purchaser.

- 1.1. Required cut-outs shall be planned in the equipment building / pedestal for Air-conditioning facilities and other requirements.

- 1.2. The equipment building / pedestal shall have cable trenches & trays for routing RF, control and Power cables & opening for routing cables from existing facilities.
- 1.3. Proper staircase with steel railing.
- 1.4. pathways for building access from near available main road/pathway.
- 1.5. The Building Management System (BMS) to be a basic system having fire hydrants and interfacing of fire alarms, etc.
- 1.6. Any other civil works required to complete the project.

4.4.2 Painting work:

i) Inside: -

Wall & ceiling should be painted with three coat of plastic emulsion paint of Asian/Burger/Nerolac make approved shade inclusive of necessary repairing, smooth the surface & cleaning the spots etc.

ii) Outside: -

Walls should be three coats of Appex of Asian/ Burger/ Nerolac make approved shade inclusive of necessary repairing, smooth the surface & cleaning the spots etc.

4.5 Air conditioning system/Air handling system

- 1) Air Conditioning System to be planned according to Weather conditions Hyderabad. Bidder to provide details of configuration & rating of AC system planned
- 2) A state of art suitable modular Air conditioning system to be installed for maintaining temperature 22 ± 2 deg Celsius and Humidity of about $55 \pm 10\%$ RH.
- 3) Proper Venting and ducting shall be implemented.
- 4) System configuration: 1:1 (1working + 1 standby).
- 5) Preferred AC system: Down flow precision DX air cooled Packaged AC unit of 5 +/-1 TR cooling capacity with all standard accessories of CEPO approved Brand/Make. Refrigerant gas: R-410A/R407C or equivalent Eco-friendly refrigerant. (R-22 or equivalent refrigerants are not acceptable). (CEPO approved Brand:Virtiv/Slitz/Bluestar/Schneider/Climaventa/SwegonBluebox)
- 6) A display system to show present Temperature and Humidity inside the equipment building shall be installed. This shall be interfaced with centralized monitoring station. Successful bidder shall coordinate for such integration.
- 7) The heat budget to be presented and documented.

4.6 Electrical

- 1) The building / pedestal shall have required energy efficient electrical fittings for lighting, wall sockets for utility, electrical DBs for UPS and utility separately, etc.
- 2) Customer responsibility is to provide one feeder point for short break (Utility Power. Bidder responsibilities to Tap power from feeder points which is about 200mtrs from proposed installation site. Cables should sustain entire load.
- 3) Internal Distribution for the supplied equipment including Distribution Panels and Power Cables shall be the scope of the bidder. Distributional panel shall be planned to accommodate user future expansion requirements.
- 4) The Building /Pedestal shall have the Lighting circuits with 30% from the Technical Power and remaining from the Utility Power.
- 5) The Lighting shall be designed such that the illumination levels in the area (Inside the building and outside the building in the close vicinity) shall be suitable for Operation and Maintenance of the Equipment& as per relevant Indian and international Standards. The Design shall take care of light output at the end of life.
- 6) All switchgears shall be of Industrial standard only.
- 7) All the Cables & Wires should be IS standard or International Standards. The insulation of Cables shall be FRLS OR HFFR type.
- 8) Additional points to be made available in the technical & utility power Distribution Panels for powering customer supplied equipment for future purpose.
- 9) Electrical requirements for AC system: 440V/3Ph/50Hz power supply (with suitable MCB/MCCB, ELR) to the AC system. UPS power supply to the fire alarm system and AC DDC system. Providing earthing for AC system.
- 10) Equipment to take primary power of 400V±5% three phase, 4 Wire/ 230V±5% single phase at 50 Hz ± 4% frequencies.

Note: Description of Civil & Electrical infrastructure work mentioned above is illustrative and **not exhaustive** and they will have to consider all incidental works if involved while conducting the job in giving their rates. No incidental/additional charges will be payable for any other miscellaneous works connected with the handling of above jobs.

4.7 Safety

- 1) The bidder shall ensure that the entire infrastructure meet the local safety requirements in force at the site.
- 2) Lightning Protection System for Building to be installed by the bidder. Grounding of Lightning arrestor and Earthing shall be planned separately.

- 3) State of the art Analog Addressable Smoke / fire detection and alarm initiation system with Fire Alarm Control Panel to be installed.
- 4) Fire Safety for AC System: Fire damper with 24V AC/DC actuators shall be installed in both Supply and return air path/duct. Fire alarm system with min. 4 Nos. of fire/smoke sensors shall be provided and interfaced with fire dampers and Main MCB of AC system. Fire alarm system shall switch OFF the incoming power supply to the AC system and close the fire dampers in case of fire.
- 5) Fire alarm system to be integrated with existing local centralised system.
- 6) First aid & firefighting equipment to be deployed in and around the facility in sufficient number.
- 7) The building design shall take care of all safety aspects including human safety in the event of fire hazard or any calamity of similar nature.
- 8) The entry and exit to and from the station is to be regulated through an electronic access control system, the door should be compatible for the above mentioned system.
- 9) CCTV Camera (at least 05 Nos, rotatable -HD) should be installed at appropriate places and it should be interfaced with monitoring system. CCTV system to be 'ONVIF' compliant. Suitable licenses shall also be provided. Appropriate recording arrangement atleast 15 days to be made.

Chapter 5: Detailed Scope of Development and Project Execution

5.1 Detailed Scope of Work RF and Baseband sub-system

Sr. No	Vendor's Responsibility	NSIL/DoF Responsibility
1.	Supply, transportation to the Site, Preliminary testing, Installation & Integration, Acceptance Testing, Commissioning, Training and Maintenance of all Hardware and Software of the RF and baseband sub-system for complete Maritime Asset Monitoring solution	
2.	The vendor shall establish the MSS Hub. This will include all civil engineering work for building the MSS hub room for RF equipment (approx. 5m x 5m), preparation of drawings, antenna foundation design, preparation of Antenna base/foundation/pedestal, antenna mounting, provisioning of the RF, IF and Baseband equipment, interfacing cables, wave guides, patch panel, patch cords, coaxial connectors, UPS, air-conditioning etc required in the Hub and installation & configuration of entire hub	<ul style="list-style-type: none"> •To verify and approve all reports •Rack space for installation of MSS Hub baseband equipment shall be provided by DoF

	<p>equipment. The RCC structure for the antenna shall be designed & built to withstand the load of antenna at wind velocity of 200 kmph, vibration due to heavy train movements in the vicinity and shall be earthquake resistant as well. Survey of site, soil testing test etc. shall be done by the vendor for finalizing the design/structure. The vendor shall submit the civil structure design along with survey/soil test reports to NSIL for approval. Rack space for installation of MSS Hub baseband equipment shall be provided by DoF. All liaisoning work required to be done with government agencies like DoF for setting up the MSS Hub shall be the responsibility of the vendor. Liaisoning work will inter-alia include preparing of related documents and submission of proposal to DoF, obtaining all type of approvals/clearances & licenses required, any time during the currency of the contract, from DoF. NSIL shall provide the requisite help in obtaining these approvals.</p>	
3.	<p>Supply of all required structured LAN cabling components required within Racks for RF equipment connectivity/interfaces in MSS Hub room (server room) and its connectivity with baseband equipment to be installed in the datacenter. The distance between MSS Hub room and datacenter would be about 150 meters</p>	
4.	<p>The vendor shall provide technical support and onsite manpower resources from OEM of all the supplied components (all hardware & software components) including Servers, all system software & middleware, Hub equipment during implementation this project for successful commissioning of the system.</p>	
5.	<p>The vendor shall provide training to DoF personnel as per requirements for RF and baseband systems.</p>	
6.	<p>The vendor shall provide Warranty Support/Annual Technical Support of entire Hardware & Software infrastructure valid for a</p>	

	period of 03 year from the date of commissioning of the system	
7	Vendor should read/ask the relevant document prior to submission of bid inter-operability of terminal and hub will be responsibility of vendor.	

6. Chapter 6: List of Deliverables

6.1 List of Deliverables (RF and Baseband):

S. No	Item Description	Qty	Remarks
1.	9m antenna and related sub-system	1 set	
1.1.	Civil work and antenna foundation		
1.2.	9 m Antenna system with control electronics including tracking receiver		
1.3.	2:1 TWTA & BUC		
1.4.	2:1 LNA & BDC & Tuneable filter		
1.5.	Dehydrator		
1.6.	10 MHz reference system and distribution unit		
1.7.	Interfacing accessories, patch panel and distribution and combiner		
1.8.	HMC system		
1.9.	Integration and installation material		
2.	Tdm modulator	4	

S. No	Item Description	Qty	Remarks
3.	Burst demodulator	80	
4.	16-way active power combiner	1	
5.	16-way active power splitter	1	
6.	Satellite Gateway Unit (SGU)	1	
7.	10 Hz Distributor	1	

The table 6.1 List of Deliverables (**not exhaustive**), list “include major deliverables for **RF and Baseband** system, but are not limited to,”. Bidder to note that the offer needs to include all the items required to realize the Hub station as per the required configuration and specification.

Chapter 7: Bid Submission Guidelines & Project Execution

7.1 Bid Submission Guidelines

- Indian Vendors, as per Order No. P-45021/2/2017-PP(BE-II) dated 04.06.2020 issued by Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India [copy attached-Annexure IV] and with minimum 5 yrs. past experience in design and development of RF and digital system of similar type of projects only are requested to quote for this RFP. Vendors are requested to provide necessary documentary proof along with their bids.
- This is a two-part tender. Vendors are requested to submit the technical and commercial bid separately. The Technical bid should contain detailed of list of deliverables with price masked as per the format mentioned in financial bid. Any disclosure about price in technical bid will disqualify the quote for commercial bid opening.
- A pre-bid meeting will be arranged after two weeks of publication of this RFP. The pre-bid meeting will be held on virtual mode and the interested bidders are required to inform the details of the participants vide email to “purchase@nsilindia.co.in”. The details of the meeting will be informed subsequently.
- Only technically qualified proposals will only be considered for price bid opening.
- The vendors are requested to go through the RFP thoroughly and offer compliance/non-compliance of each requirement (point by point). In case of non-compliance, the deviation from the specified parameter shall be furnished and for compliance the complete details about parameters, vendor specifications (better

or similar) shall be provided. Necessary documentary evidence like datasheet, field result, etc to be provided.

- f) Vendors may further note that NSIL also reserves the right of not considering an offer, if there are any deviations in the commercial and/or general terms and conditions offered against the requirements as per this RFP, even if the offer is technically suitable.

7.2 Payment Terms & Schedule

7.2.1 Payment Terms

The Successful bidder will be paid at different milestones of the project appropriately. The details of the payment for Ground Segment Hub are as follows:

7.2.1.1 Advance Payment. An advance payment of 15% of the total order value of Purchase order for Deliverables and services, Civil, Electrical and Environmental infrastructure (Excluding AMC) shall be paid to Bidder/Seller within 45 days of Signing PO/Contract and after receipt of

Bank Guarantee for the same value of Advance payment.

7.2.1.2 The remaining payment 85 % will be paid as follows: -

A. RF and Baseband Equipment

1. Deliverables

- a) The Second Payment of 75 % of the order value is for deliverables, where deliverables stands for Antenna & RF subsystem, Control & Tracking system, L Band interface, Hub Monitoring & Control (Hardware & Software), test & measuring instruments, baseband system including Modulators/Demodulators/SGU and accessories, Inter facility link (like cable, connectors, switches, patch panels, etc.). All the deliverables should have 3 years onsite warranty support. Payment shall be made to the Bidder/SELLER on production of inspection and dispatch of equipment's at Customer site (INCOIS, Hyderabad). The payment will be made on production of the following documents duly certified by the Buyer/Customer/Authority.
- (i) Commercial Invoices
 - (ii) Inspection Certificate.
 - (iii) Packing list
 - (iv) Store Receipts
 - (v) Insurance documents.
- b) The Balance Payment of 10 % of the order value for deliverables will be paid to the bidder/SELLER on producing commissioning certificates by Buyer/Customer/Authority.

2. Cost of Services: -

- c) Second Payment of 75% of the order value for Services where service includes Installation and Commissioning (Hardware & Software) Charges including 3 years onsite warranty support along with applicable service taxes with actuals will be paid on pro rata basis on submitting proof of successful Installation and integration by SELLER signed by the Buyer/Customer/Authority and Commercial Invoice.
- d) The Balance Payment of services of 10 % of the Charges for Service along with applicable service taxes with actuals will be paid on successful Commissioning including training on duly certified by the Buyer/Customer/Authority

3. Support(24X7)

- e) Support Charges for 24X7 Operations of Hub/ground segment for Three (3) years after commissioning of entire system. Shall be paid on per yearly basis against the satisfactory performance Certificate issued by concerned engineer/ site in-charge after deducting the penalty amount if any.

B. Civil, Electrical & Environmental Infrastructure

- f) Maximum to 85% of civil & electrical infrastructure cost including Advance in different stage of completion of Civil & Electrical work (restrict to 3 bills at stage i.e., Completion of structure-35%, Finishing work & fixing of fixtures-25% & completion of all ancillaries & site clearance-10%) with production invoice and statutory requirement. This payment shall be treated as advance against final acceptance.

Note: End to End solution for Civil, Electrical & Environmental infrastructure solution on turn key basis including **3 years warranty**.

- g) Remaining 15 % of civil & electrical Infrastructure cost, will be paid after successful commissioning and acceptance by Buyer/Customer/Authority

C. CAMC (RF and Baseband Equipment) - 2 Years

h) AMC- 2 years (Mandatory, Separate PO)

A Comprehensive AMC for 2 years period for entire system, including Spares for Hardware and updates/upgrades for software shall be placed against the requirement. Shall be paid on half yearly basis on completion of each six-month period, post standard comprehensive on-site warranty of 3 years for a period of 2 years against the satisfactory performance Certificate issued by concerned engineer/ site in-charge after deducting the penalty amount if any.

D. CAMC (RF and Baseband Equipment) - 5 years

i) **AMC- 5 years (Optional, Separate PO)**

A Comprehensive AMC for 5 years post completion of standard comprehensive on-site warranty of 3 years and CAMC of 2 years will be placed against requirement. Shall be paid on half yearly basis on completion of each six-month period, against the satisfactory performance certificate issued by concerned engineer/ site in-charge after deducting the penalty amount if any.

7.3 Delivery Terms, Schedule & Milestone Review

The supplier shall deliver all deliverable items within 60 weeks from placement of order. The schedule break up shall be provided with the proposal. The duration of ATP and fixing of any problem should be within above specified duration. No extension in delivery schedule will be granted without a valid reason approved by NSIL. There will be regular review of the complete activities of vendor by NSIL from time to time as per the details given in Tables below.

T₀: Date of order acceptance but not later than 5 working days from the date of Purchase Order

a) **Development Schedule (RF & baseband)**

Sr. No.	Activity Milestone	Time (in weeks)
1.	Preliminary Requirements Review and Finalization	T ₀ +2
2.	System Requirements and design document finalization, submission of drawings for MSS Hub Antenna/RF room setup etc for review and finalization by NSIL.	T ₀ +4
3.	ATP document submission and finalization	T ₀ +8
4.	Supply, installation and integration of MSS Hub RF and baseband equipment and preliminary testing	T ₀ +48
5.	On-site Integrated ATP of MSS Hub - RF, Baseband and Software elements locally and in satellite link. Performance and functional evaluation with actual MSS terminals.	T ₀ +60
6.	Operator training, Operation and maintenance	T ₀ +60 onwards

b) **Civil, Electrical and Environmental Infrastructure**

Sr. No.	Activity Milestone	Time (in weeks)
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1.	Preliminary Design Review of Civil, Electrical and Environmental infrastructure design documents as per the sketch/building plan	T ₀ +2
2.	Completion of structure including Antenna foundation	T ₀ +16
3.	Finishing work & fixing of fixtures	T ₀ +32
4.	completion of all ancillaries & site clearance	T ₀ +46

Review Milestones:

a) RF & baseband

Sr.No.	Milestone	Schedule
1.	Preliminary Design Review	(T ₀ + 2) weeks
2.	Review of Hardware and Software Design Document	(T ₀ + 4) weeks
3.	ATP Document for RF, Baseband & Package Design etc.	(T ₀ + 8) weeks
4.	Review of Integrated Ground Segment Performance	(T ₀ +60) weeks
5.	Review of Integrated System Performance (Ground segment with MSS terminals combined performance)	(T ₀ +60) weeks

b) Civil, Electrical and Environmental Infrastructure

Sr. No.	Milestone	Schedule
1.	Preliminary Design Review of Civil, Electrical and Environmental infrastructure design documents as per the sketch/building plan	(T ₀ + 2) weeks
2.	Review of Completion of structure including Antenna foundation	(T ₀ + 16) weeks
3.	Review of Finishing work & fixing of fixtures	(T ₀ + 32) weeks
4.	Review of completion of all ancillaries & site clearance	(T ₀ +46) weeks

7.4 General Terms and Conditions

- All the design details provided in this document are guidelines and the vendor can propose the complete solutions meeting above specifications at the time of design

review. The design review team will review and make suggestions on the proposed design which the vendor will be implementing to meet design specifications.

- During implementation and warranty support period, if it is observed that any of the supplied components of the system (software and hardware) are not able to handle load or its performance is not able to meet the functional requirements/ technical specifications given in the Tender, the vendor at its own cost shall replace that component (software or hardware) with higher end equipment or provide additional Hardware (along with Operating System)/software components/Licenses for meeting the technical specifications and user requirements.
- All information provided by NSIL should be treated confidential and shall be used only for the purpose as mentioned. The hardware design details, software design details (including source code of all software with all platform and compilation details) and mobile APP (in source form) will be deliverables and it will be the intellectual property of User/NSIL. Its re-use will be subject to written permission from User/NSIL. User/NSIL will be free to use these items as any other project also.
- The vendor shall understand that this is a development activity and minor changes in functionalities are expected as per field deployment needs. The vendor shall accommodate such changes during development or acceptance or activities at no extra cost. The vendor is also responsible for resolving any operational issues.
- No data, during testing and operational phase, shall be disclosed to any outside party without the consent of User/ISRO. The data shall be treated as confidential.
- The vendor has to provide warranty for all deliverables for 36 months. Any bug arising during this period or any performance issue observed during this period has to be resolved by vendor at no additional cost.
- It is mandatory that in case of hardware failure, the repair and maintenance has to be provided by vendor as per mutually agreed terms and conditions.
- The vendor has to provide adequate training and software walk through for smooth operation and maintenance to user agency. The vendor has to depute one engineer to provide training and support during initial operations for a period of 4-6 weeks as part of ground segment deployment plan.

7.4.1. ANNEXURE-1**Environmental Specifications**

The equipment used shall have the capability to following environmental condition:

Table 18: Environmental Specifications

SN	Parameter	
	Indoor Units	
1	Operating Temperature	0° C to +35° C
2	Storage temperature	-40° C to +60° C
3	Humidity	95% RH @ 40° C
4	EMI/EMC	As per IEC, class A equipment
	Outdoor Units	
1	Operating Temperature Range	-10° C to +55° C
2	Storage temperature	-40° C to +60° C
3	Humidity	95% RH @ 40° C
4	Rain	IP-65 or equivalent
5	Wind Speed (Antenna)	
	Operational	70 kmph, gusting to 95 kmph
	Stow wind speed	120 kmph
	Survival	200 kmph

*For other accessories, cables and connectors, environmental specifications as per OEM standard design applies.

7.4.2. ANNEXURE-2

Specifications of Measuring and Test Equipment

The vendor should provide the following Measuring and test equipment one each as per the specifications

A). Spectrum Analyzer (Quantity-1)

Frequency Range	: 9 kHz to 8 GHz
Frequency Counter	
(a) Resolution	: 1 Hz Min.
(b) Frequency span	: 0 Hz (zero span), 100 Hz to 8GHz
(c) Max. Span Accuracy	: 3%
Spectral Purity	
(a) SSB Phase Noise @ 10KHz offset	: <-90 dBc/Hz at 1 GHz
(b) Harmonics, @ -40dBm level	: ≤ -60 dBc
Sweep time	
(a) Span ≥ 10 Hz	: 2.5 ms to 1000 s
(b) span = 0 Hz	: 10 micro s to 2000 s
Bandwidth	
(a) Resolution Bandwidth (-3dB)	: 10 Hz to 3 MHz in steps
(b) video Bandwidths	: 30 Hz to 1 MHz in steps
Amplitude	
(a) Max.Input level for Protection	: +30 dBm
(b) Max.input level for Measurement	: +20 dBm
(d) Displayed average noise level	: <-110 dBm for 10 MHz to 3 GHz (300 Hz RBW, 10 Hz VBW) <-105 dBm for 3 GHz to 8 GHz
Markers	: Normal and delta
Trigger	: Free run, Video, External
Traces	: Min.3
Display	: TFT color display

Interface	: USB and LAN
Measurement features	: C/N Ratio, Adjacent Channel Power and occupied Bandwidth, Channel Power measurement, Phase Noise Measurement,
Operating Temperature	: 10 to 40 °C temperature and 80% RH at 40 °C
Power Requirement	: 220 +/- 10 % VAC,50 Hz

(B) RF signal Generator (Quantity-1)

RF Signal Generator 10 MHz to 6 GHz

1. General purpose, wide frequency range, AM & FM features:
 - (a) Frequency Range: 10 MHz to 8 GHz
 - (b) Frequency Resolution: 0.1 Hz
2. Frequency Stability
 - (a) Ageing Rate for reference frequency: 10^{-6} per year
 - (b) Temperature stability for reference frequency: 1×10^{-6}
3. Spectral Purity
 - (a) SSB phase noise at 6GHz on 20KHz off set CW and 1 Hz BW : < -100 dBc
 - (b) Harmonics at 6 GHz at level 0 dBm : < -30 dBc
 - (c) Non Harmonics (>50 KHz carrier offset): < -55 dBc
4. Output Level
 - (a) Range: -105 dBm to + 5 dBm
 - (b) Resolution: 0.1 dB
 - (c) Accuracy (for levels > -100 dBm) at 25 Deg C : $< + / - 1$ dB at 8 GHz, 0 dBm
 - (d) Frequency response at 0 dBm : < 1 dB
 - (e) VSWR : < 2 at all operating frequencies
5. Modulation shall be AM & FM
 - (a) Amplitude Modulation: Internal, external
 - (i) Modulation Frequency Range(3dB), $f > 100$ kHz : DC/ 20 Hz to 20 KHz
 - (ii) Modulation Depth: 0 to 90%
 - (iii) AM Distortion at 1 kHz ($m < 80\%$), 0 dBm : $< 5\%$ of reading + 0.2%
 - (b) Frequency Modulation: Internal, external
 - (i) Frequency Deviation: 20 to 100 kHz
 - (ii) Resolution: 1%, min. 1 Hz
 - (iii) Modulation frequency range (-3dB) standard: DC/20 Hz to 80 KHz
6. Memory: 10 Storage settings
7. Digital Sweep
 - (a) RF Digital Sweep: Automatic single manual or externally triggered
 - (i) Sweep range and width (lin) : Freely selectable
 - (ii) Sweep Time: 30 ms to 1 s with resolution of 1 ms.
 - (b) RF Analog Sweep
 - (i) Sweep range: Freely selectable ; (ii) Sweep Time: 30 ms to 90 s.
8. Interface: IEEE 488/USB/LAN
9. Operating Temperature Range: 5 to 40 degree C
10. Power Requirement: 220 V +/-10% AC,50 Hz +/- 3%

(C) Power Meter (Quantity-1)

1. Frequency range : 10Hz to 8GHz
2. Dynamic range : >60dB
3. Peak power : -40 to +20dBm
4. CW measurement : -70 to +20dBm
5. No of channels : 2
6. Display : Graphic LCD
7. Operating temperature : 0-50 Deg C
8. Storage temp : -40 to 70Deg C

(D) Digital Multimeter (Quantity-1)

1. Voltage : DC 600V, AC 600V
2. DC Accuracy : +/- 0.5% + 2 digit
3. AC Accuracy : +/- 1% + 3 digit
4. Resistance : 40 M Ohm
5. Safety ratings : CAT III 600 volts
6. Measurements : AC/DC voltage, resistance, capacitance,
diode and continuity test with buzzer
7. Display : 5 digit or higher



NewSpace India Limited (NSIL)
[A Government of India Company under Department of Space]

INVITATION OF BIDS/

Volume III: Agreement: General Conditions of Contract and Special Conditions of Contract

REQUEST FOR PROPOSAL (RFP)

Tender Reference Number: Ref. No.NSIL/RFP/HUB/VCS-MCS/2024/ 02

Date of Publication: 16 March 2024

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Volume III

1. Chapter 1: General Conditions of Contract

1.1. Interpretation

In this Contract unless a contrary intention is evident:

- a. The clause headings are for convenient reference only and do not form part of this Contract
- b. Unless otherwise specified a reference to a clause number is a reference to all its sub-clauses
- c. The word “include” or “including” shall be deemed to be followed by “without limitation” or “but not limited to” whether or not they are followed by such phrases
- d. Unless otherwise specified a reference to a clause, sub-clause or section is a reference to a clause, sub-clause or section of this Contract including any amendments or modifications to the same from time to time
- e. A word in the singular includes the plural and a word in the plural includes the singular
- f. A word importing a gender includes any other gender
- g. A reference to a person includes a partnership and a body corporate
- h. A reference to legislation includes legislation repealing, replacing or amending that legislation
- i. Where a word or phrase is given a particular meaning it includes the appropriate grammatical forms of that word or phrase which have corresponding meanings
- j. In the event of an inconsistency between the terms of this Contract and the RFP and the Bid, the terms hereof shall prevail. In case there is a contradiction between the sections, the below hierarchy of sections in order of precedence:
 - i. Pre-bid clarification and Corrigendum, if any
 - ii. Volume III of RFP (GCC holds precedence over SCC)
 - iii. Volume II of RFP
 - iv. Volume I of RFP
- k. If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract

- I. This Contract along with the Pre-bid clarifications, corrigendum and communications in relation to the entire tender process constitutes the entire agreement between the Authority and the Vendor.

1.2. Conditions Precedent

This Contract is subject to the fulfilment of the following conditions precedent by Vendor.

- a. Furnishing by Vendor an unconditional and irrevocable Performance Bank Guarantee (PBG) acceptable to the Authority which would remain valid until such time as stipulated by the Authority
- b. obtain all statutory and other approvals required for the performance of the Services under this Contract. This may include approvals/ clearances, wherever applicable, that may be required for execution of this Contract e.g. clearances from Government authorities for importing equipment, exemption of Tax/ Duties/ Levies, work permits/ clearances for Vendor/ Vendor's team, etc.
- c. Furnishing of such other documents as the Authority may specify/ demand.

1.3. Key performance measurements

- a. Unless specified by the Authority to the contrary, Vendor shall deliver the goods, perform the services and carry out the scope of work in accordance with the terms of this Contract, Responsibility Matrix as laid down in [Volume II](#) of this RFP and global best practices of the industry.
- b. The Authority reserves the right to amend any of the terms and conditions in relation to the Contract/ Service Specifications and may issue any such directions which are not necessarily stipulated therein if it deems necessary for the fulfilment of the Schedule of Requirements.

1.4. Commencement and Progress

- a. Vendor shall subject to the fulfilment of the conditions precedent above, commence the performance of its obligations in a manner as per the detailed Scope of Work as defined in [Volume II](#) of this RFP.
- b. Vendor shall proceed to carry out the activities / services with diligence and expedition in accordance with any stipulation as to the time, manner, mode, and method of execution contained in this Contract.

- c. Vendor shall be responsible for and shall ensure that all activities/ services are performed in accordance with the Contract, Scope of Work and Service Specifications and Vendor's all other standards, terms and other stipulations/ conditions set out hereunder or as intimated by the Authority or its representative from may from time to time.
- d. Vendor shall perform the activities/ services and carry out its obligations under the Contract with due diligence, efficiency, and economy, in accordance with generally accepted techniques and practices used in the industry and shall observe sound management, engineering and security practices. Vendor shall always act, in respect of any matter relating to this Contract, as faithful advisors to the Authority and shall, at all times, support and safeguard the Authority's interests in any dealings with Third parties.

1.5. Standards of Performance

Vendor shall perform the Services and carry out its obligations under the Contract with due diligence, efficiency and economy, in accordance with generally accepted techniques and best practices used in the industry and with standards recognized by international professional bodies and shall observe sound management, engineering and security practices. It shall employ appropriate advanced technology and engineering practices and safe and effective equipment, machinery, material and methods. Vendor shall always act, in respect of any matter relating to the Contract, as faithful advisors to the Authority and shall, at all times, support and safeguard the Authority's legitimate interests in any dealings with Third Parties.

1.6. Vendor Vendor's Obligations

- a. Vendor Vendor's obligations shall include all the activities as specified by the Authority in the Detailed Scope of Work and other sections of the RFP and Contract and changes thereof to enable Authority to meet the objectives and operational requirements.
- b. The Authority reserves the right to review the terms of the Warranty and Annual Maintenance agreements if any until the expiry of this contract, entered into between Vendor and their suppliers/ OEMs and no such agreement/contract shall be executed, amended, modified and/or terminated without the prior written consent of the Authority. An executed copy of each of such agreements/contracts shall, immediately upon execution be submitted by Vendor to the Authority.
- c. Vendor shall ensure that their suppliers/ OEMs provide the support and assistance to Vendor in case of any problems / issues arising due to integration of components supplied by him with any other component(s)/ product(s) under the purview of the overall solution.

- d. Vendor's representative(s) shall have all the powers requisite for the execution of scope of work and performance of services under this contract. Vendor's representative(s) shall liaise with the Authority's representative for the proper coordination and timely completion of the works and on any other matters pertaining to the works. Vendor shall extend full co-operation to Authority's representative in the manner required by them for supervision/ inspection/ observation of the equipment/ goods/ material, procedures, performance, progress, reports and records pertaining to the works. He shall also have complete charge of Vendor's personnel engaged in the performance of the works and to ensure compliance of rules, regulations and safety practice. He shall also cooperate with the other Service Providers/ Vendors of the Authority working at the Authority's office locations & field locations.
- e. Vendor shall be responsible on an ongoing basis for coordination with other Vendors and agencies of the Authority in order to resolve issues and oversee implementation of the same. Vendor shall also be responsible for resolving conflicts between vendors in case of borderline integration issues.
- f. The Vendor shall provide a detailed schedule in the Detailed Project Plan with respect to the activities that may be required to be carried out within ISRO premises to the Authority Location within fifteen (15) days of signing of this Agreement and shall inform the Authority at least seven working days before the scheduled activity.
- g. Vendor shall not publicise or advertise the work performed under the scope of work as provided in the RFP in any paper, electronic/ digital or any other media.

1.7. Reporting Progress

- a. Vendor shall monitor progress of all the activities related to the execution of this Contract and shall submit to the Authority, progress reports with reference to all related work, milestones and their progress shall be outlined.
- b. Formats for all above mentioned reports and their dissemination mechanism shall be discussed and finalized along with Project Plan. The Authority on mutual agreement between both parties may change the formats, periodicity and dissemination mechanism for such reports.
- c. Periodic meetings shall be held between the representatives of the Authority and Vendor at least once in every 15 days discuss the progress of the work.
- d. Vendor shall ensure that the respective solution teams involved in the execution of work are part of such meetings.
- e. A Programme Monitoring Committee involving representative of the Authority and senior officials of Vendor shall be formed for the purpose of this programme. This Committee shall have the authority to constitute smaller sub-committees to monitor

specific aspects of the Programme. These committees shall meet at intervals, as decided by the Authority at the time of the committee's constitution, to oversee the progress of the implementation.

- f. All the goods, services and manpower to be provided / deployed by Vendor under the Contract and the manner and speed of execution and maintenance of the work and services are to be conducted in a manner to the satisfaction of Authority's representative in accordance with the Contract.
- g. The Authority reserves the right to inspect and monitor/ assess the progress/ performance of the work / services at any time during the course of the Contract. The Authority may demand and upon such demand being made, Vendor shall provide documents, data, material or any other information which the Authority may require, to enable it to assess the progress/ performance of the work / service.
- h. At any time during the course of the Contract, the Authority shall also have the right to conduct, either itself or through another agency as it may deem fit, an audit to monitor the performance by Vendor of its obligations/ functions in accordance with the standards committed to or required by the Authority and Vendor undertakes to cooperate with and provide to the Authority/ any other agency appointed by the Authority, all Documents and other details as may be required by them for this purpose. Such audit shall not include Vendor's books of accounts.
- i. Should the rate of progress of the works or any part of them at any time fall behind the stipulated time for completion or is found to be too slow to ensure completion of the works by the stipulated time, or is in deviation to Tender requirements/ standards, the Authority's representative shall so notify Vendor in writing.
- j. Vendor shall reply to the written notice giving details of the measures he proposes to take to expedite the progress so as to complete the works by the prescribed time or to ensure compliance to RFP requirements. Vendor shall not be entitled to any additional payment for taking such steps. If at any time it should appear to the Authority or Authority's representative that the actual progress of work does not conform to the approved plan Vendor shall produce at the request of the Authority's representative a revised plan showing the modification to the approved plan necessary to ensure completion of the works within the time for completion or steps initiated to ensure compliance to the stipulated requirements.
- k. The submission seeking approval by the Authority or Authority's representative of such plan shall not relieve Vendor of any of its duties or responsibilities under the Contract.
- l. In case during execution of works, the progress falls behind schedule or does not meet the Tender requirements, Vendor shall deploy extra manpower/ resources to make up the progress or to meet the RFP requirements. Plan for deployment of extra manpower/ resources shall be submitted to the Authority for its review and approval.

All time and cost effect in this respect shall be borne, by Vendor within the contract value.

1.8. Project Plan

- a. Within 15 calendar days of effective date of the contract/ Issuance of Lol, Vendor shall submit to the Authority for its approval a detailed Project Plan with details of the project showing the sequence, procedure and method in which he proposes to carry out the works. The Plan so submitted by Vendor shall conform to the requirements and timelines specified in the Contract and shall be in line with the scope of work as provided in Volume II of this RFP. The Authority and Vendor shall discuss and agree upon the work procedures to be followed for effective execution of the works, which Vendor intends to deploy and shall be clearly specified. The Project Plan shall include but not limited to project organization, communication structure, proposed staffing, roles and responsibilities, processes and tool sets to be used for quality assurance, security and confidentiality practices in accordance with industry best practices, Project Plan and delivery schedule in accordance with the Contract. Approval by the Authority's Representative of the Project Plan shall not relieve Vendor of any of its duties or responsibilities under the Contract.
- b. If Vendor's work plans necessitate a disruption/ shutdown in Authority's operation, the plan shall be mutually discussed and developed so as to keep such disruption/ shutdown to the barest unavoidable minimum. Any time and cost arising due to failure of Vendor to develop/adhere such a work plan shall be to its account.

1.9. Adherence to safety procedures, rules regulations and restriction

- a. Vendor's Team shall comply with the provision of all laws including labour laws, rules, regulations and notifications issued there under from time to time. All safety and labour laws enforced by statutory agencies and by Authority shall be applicable in the performance of this Contract and Vendor's Team shall abide by these laws. The Vendor shall also submit the compliance of the laws with the Authority.
- b. Access to the Site shall be strictly restricted. No access to any person except the essential members of Vendor's Team who are authorized by the Authority and are genuinely required for execution of work or for carrying out management/ maintenance shall be allowed entry. Even if allowed, access shall be restricted to the pertaining equipment of the Authority only. Vendor shall maintain a log of all activities carried out by each of its team personnel.
- c. No access to any staff of Vendor, except the essential staff who has genuine work-related need, should be given. All such access should be logged in a loss free manner for permanent record with unique biometric identification of the staff to avoid misrepresentations or mistakes

- d. Vendor shall take all measures necessary or proper to protect the personnel, work and facilities and shall observe all reasonable safety rules and instructions. Vendor's Team shall adhere to all security requirement/ regulations of the Authority during the execution of the work. Authority's employee also shall comply with safety procedures/ policy.
- e. Vendor shall report as soon as possible any evidence, which may indicate or is likely to lead to an abnormal or dangerous situation and shall take all necessary emergency control steps to avoid such abnormal situations.

1.10. Statutory Requirements

During the tenure of this Contract nothing shall be done by Vendor in contravention of any law, act and/ or rules/regulations, there under or any amendment thereof governing inter-alia customs, stowaways, foreign exchange etc. and shall keep Authority indemnified in this regard.

1.11. Authority's Obligations

- a. Authority shall nominate a representative to act as the nodal point for implementation of the contract and for issuing necessary instructions, approvals, commissioning, acceptance certificates, payments etc. to the Vendor.
- b. Authority shall make best efforts to provide timely approval to the Vendor as and when required, which may include approval of Project Plan, work methodology, design documents, specifications, or any other document necessary in fulfilment of this contract.
- c. The Authority's representative shall interface with Vendor, to provide the required information, clarifications, and to resolve any issues as may arise during the execution of the Contract. The Authority shall provide adequate cooperation in providing details, coordinating and obtaining of approvals from various governmental agencies, in cases, where the intervention of the Authority is proper and necessary.
- d. Authority may provide on Vendor's request, particulars/ information/ or documentation that may be required by Vendor for proper planning and execution of work and for providing services covered under this contract and for which Vendor may have to coordinate with respective Vendors.

1.12. Payments

- a. Subject to due completion of the work and certification by Authority/Authority's representative Authority shall make payments to Vendor at the times and in the manner set out in the Payment schedule as specified in this RFP. Authority shall make

- all efforts to make payments to Vendor within 45 days of receipt of invoice(s) and all necessary supporting documents.
- b. All payments agreed to be made by the Authority to the Vendor in accordance with the Bid shall be inclusive of all statutory levies, duties, taxes and other charges whenever levied/applicable, if any, and Authority shall not be liable to pay any such levies/ other charges under or in relation to this Contract and/or the Services.
 - c. No invoice for extra work/ change order on account of change order shall be submitted by Vendor unless the said extra work/ change order has been authorized/ approved by the Authority in writing in accordance with Change Control Note (Volume III section 2.9 & 2.10 of this RFP).
 - d. In the event of Authority noticing at any time that any amount has been disbursed wrongly to Vendor or any other amount is due from Vendor to the Authority, the Authority may without prejudice to its rights recover such amounts by other means after notifying Vendor or deduct such amount from any payment falling due to the Vendor. The details of such recovery, if any, shall be intimated to the Vendor. The Vendor shall receive the payment of undisputed amount under subsequent invoice for any amount that has been omitted in previous invoice by mistake on the part of the Authority or the Vendor.
 - e. All payments to Vendor shall be subject to the deductions of tax at source under Income Tax Act, and other taxes and deductions as provided for under any law, rule or regulation. All costs, damages or expenses which Authority may have paid or incurred, for which under the provisions of the Contract, Vendor is liable, the same shall be deducted by Authority from any dues to Vendor. All payments to Vendor shall be made after making necessary deductions as per terms of the Contract and recoveries towards facilities, if any, provided by the Authority to Vendor on chargeable basis.

1.13. Intellectual Property Rights

- a. The Authority shall retain ownership of, right, title and interest in all technical information, designs, and drawings shared with the Vendor including all worldwide Technology and intellectual property and proprietary rights
- b. Preservation of Notice Licensee shall not remove, efface or obscure any copyright notices or other proprietary notices or legends from any Licensed Technology or materials provided under this Agreement, and shall reproduce all such notices and legends when incorporating Licensed Technology or materials into any Integrated Products.
- c. The Vendor must ensure that while using any software, hardware, processes, document, and design or material in the course of performing the Services, it does not

infringe the Intellectual Property Rights of any person/ Company. The Vendor shall keep the Authority indemnified against all costs, expenses and liabilities howsoever, arising out any illegal or unauthorized use (piracy) or in connection with any claim or proceedings relating to any breach or violation of any permission/ license terms or infringement of any Intellectual Property Rights by Vendor or Vendor's Team during the course of performance of the Services. Vendor's liability is excluded regarding any claim based on any of the following (a) anything Authority provides which is incorporated into the Solution; (b) the Authority's modification of the solution; (c) the combination, operation, or use of the solution with other materials, if the third party claim has been caused by the combination, operation or use of the solution

- d. Authority shall own and have a right in perpetuity to use all newly created Intellectual Property Rights which have been developed solely during execution of this Contract, including but not limited to all processes, products, specifications, reports and other documents which have been newly created and developed by Vendor solely during the performance of Services and for the purposes of inter-alia use or sub-license of such Services under this Contract. Vendor undertakes to disclose all such Intellectual Property Rights arising in performance of the Services to the Authority, execute all such agreements/documents and obtain all permits and approvals that may be necessary in regard to the Intellectual Property Rights of the Authority.
- e. If Authority desires, Vendor shall be obliged to ensure that all approvals, registrations, licenses, permits and rights etc. which are inter-alia necessary for use of the goods supplied / installed by Vendor, the same shall be acquired in the name of the Authority, prior to termination of this Contract and which may be assigned by the Authority to Vendor for the purpose of execution of any of its obligations under the terms of the Bid, Tender or this Contract. However, subsequent to the term of this Contract, such approvals, registrations, licenses, permits and rights etc. shall endure to the exclusive benefit of the Authority.
- f. Vendor shall not copy, reproduce, translate, adapt, vary, modify, disassemble, decompile or reverse engineer or otherwise deal with or cause to reduce the value of the Materials except as expressly authorized by Authority in writing.
- g. The NDA signed by the Vendor shall also form part of this Agreement.

1.14. Taxes

- a. Vendor shall bear all personnel taxes levied or imposed on its personnel, or any other member of Vendor's Team, etc. on account of payment received under this Contract. Vendor shall bear all corporate taxes, levied or imposed on Vendor on account of payments received by it from the Authority for the work done under this Contract.
- b. Vendor shall bear all taxes and duties etc. levied or imposed on Vendor under the Contract including but not limited to CGST, SGST, IGST other applicable indirect

taxes and all Income Tax levied under Indian Income Tax Act – 1961 or any amendment thereof during the entire contract period, i.e., on account of material supplied and services rendered and payments received by him from the Authority under the Contract. It shall be the responsibility of the Vendor to submit to the concerned Indian authorities the returns and all other connected documents required for this purpose. The amount of tax withheld by the Authority shall at all times be in accordance with Indian Tax Law and the Authority shall promptly furnish to the Vendor original certificates for tax deduction at source and paid to the Tax Authorities.

- c. Vendor agrees that he shall comply with the Indian Income Tax Act in force from time to time and pay Indian Income Tax, as may be imposed/ levied on them by the Indian Income Tax Authorities, for the payments received by them for the works under the Contract
- d. Vendor's shall fully familiarize themselves about the applicable domestic taxes (such as CGST, SGST, IGST, etc.) on amounts payable by the Authority under the Agreement. All such taxes must be included by Vendors in the financial proposal. (Vendor to find out applicable taxes for the components being proposed.)
- e. Should Vendor fail to submit returns/pay taxes in times as stipulated under applicable Indian/State Tax Laws and consequently any interest or penalty is imposed by the concerned authority, Vendor shall pay the same. Vendor shall indemnify Authority against any and all liabilities or claims arising out of this Contract for such taxes including interest and penalty by any such Tax Authority may assess or levy against the Authority/Prime Vendor.
- f. The Authority shall if so, required by applicable laws in force, at the time of payment, deduct income tax payable by Vendor at the rates in force, from the amount due to Vendor and pay to the concerned tax authority directly.

1.15. Indemnity

- a. Vendor shall indemnify the Authority from and against any costs, loss, damages, expense, claims including those from third parties or liabilities of any kind howsoever suffered, arising or incurred inter alia during and after the Contract period out of:
 - i. any negligence or wrongful act or omission by Vendor or any third party associated with Vendor in connection with or incidental to this Contract; or
 - ii. any breach of any of the terms of Vendor's bid as agreed, the RFP and this Contract by Vendor
 - iii. any infringement of patent, trademark/copyright or industrial design rights arising from the use of the supplied goods and related services or any part thereof

- b. Vendor shall also indemnify the Authority against any privilege, claim or assertion made by a third party with respect to right or interest in, ownership, mortgage or disposal of any asset, property etc.
- c. Regardless of anything contained (except for the Vendor's liability for bodily injury and/or damage to tangible and real property for which it is legally liable and its liability for patent and copyright infringement in accordance with the terms of this Agreement) the total liability of Vendor, is restricted to the total value of the contract and Vendor is not responsible for any third party claims.

1.16. Warranty & CAMC

NSIL is establishing C -band hub at INCOIS, Hyderabad. C Band hub is 9m Antenna system with RF electronics interfaced at L-Band. Hub consists of following sub-systems:

- Antenna & RF sub-system
- Hub Monitoring & Control
- Civil, Electrical and Environmental Infrastructure.

1.16.1 Activities to be carried out by Bidder/Vendor during Warranty and CAMC

The vendor has to carry out following activities:

- a) The vendor shall carry out On Site Comprehensive Maintenance Services for Hub
- b) The details of equipment at Hubs, are as per supply contract of this document. The address details of hubs will be made available at the time of installation.
- c) Preventive maintenance (PM) for hub would be done every three months during the period of contract, where subsystems will be thoroughly checked, serviced and adjusted. A comprehensive PM report against each hub shall be submitted to NSIL. The format of the report will be jointly finalized at appropriate time.
- d) After every visit, the service engineer should take the signature of the custodian (Will be conveyed at appropriate time) of the site with photograph and RF spectrum plot of the fully installed hub.
- e) The vendor has to prepare detailed maintenance report for each maintenance activity carried out for Hubs
- f) The maximum acceptable down time for an earth station is 4 hours after reporting of problem. If the earth station down time exceeds 04 hours (excluding administrative permission/delay on the account of purchaser), then the warranty of the earth station shall be extended by 1 day for each 04 hours (or fraction thereof) of the downtime. Any communication from the Purchaser/User in this regard shall be final and binding to the Vendor.

1.16.2 Terms & Conditions

- a) Vendor has to provide certificates of OEM (Original Equipment Manufacturer) for the equipment used in HUB to support maintenance activity related to Hub, during warranty period.
- b) The term comprehensive means Vendor will diagnose repair / replace the faulty component / system / peripherals / software and OS installed for Hub with its own resources and equipment within given time frame, make system operational and all expenditure during warranty has to be borne by Vendor.
- c) All logistics like arrangement of required transport of equipment and lodging / boarding for maintenance personnel will be the responsibility of Vendor.
- d) In the event of the damages to user's property or personal injury to user / Vendor personnel due to the negligence of employee of Vendor, the responsibility shall be solely rest with vendor. ISRO shall not be responsible for the loss of life of employee of Vendor at the time of performance of contract at user agency's premises due to natural calamities / accident explosion etc, if any, the persons engaged by the Vendor for carrying out the maintenance work will not have any right or claim for regular employment in any of the ISRO / DOS and these establishments.
- e) For any problem reported by the user, the problem shall be attended within 4 hours for Hub. Parts / equipment replaced duly repaired should be of same type & capacity. In case any part is replaced by lower capacity; the original capability should be restored within 3 months. In case of non-availability of identical replacement, suitable new equivalent replacement with similar or better specification should be carried out with approval of NSIL/User.
- f) Replacement of defective spare parts shall be arranged by vendor at no extra charge. The replacement shall be a new part.
- g) The faulty part replaced can be taken by Vendor. Vendor should prepare maintenance report for each maintenance activities carried out and sent to the Engineer -in- charge / focal person.
- h) Vendor should maintain sufficient spares to meet the warranty requirement. Vendor to provide list of spares. NSIL will review list of spares and suggest any addition deletion in the list during DDR with mutual agreement. The cost of spares is to be borne by vendor
- i) Vendor should define proper call reporting formats and reporting procedures
- j) As maintenance is comprehensive in nature, Vendor should stock spares of essential nature or as recommended by manufacture(s). Purchaser shall not issue

any Customs Duty/GST exemption certificates for such spares/replacements during warranty period.

- k) Vendor shall be responsible for all types of charges like lodging, boarding, fares etc for visits to hubs by their personnel.
- l) The Vendor warrants that the Goods supplied under the Contract shall be of proven technology, new, non-refurbished, unused and recently manufactured.
- m) The Vendor further warrants that the Goods supplied under this Contract shall be free from all encumbrances and defects/faults arising from design, material, manufacture or workmanship (except insofar as the design or material is required by the Authority's Specifications).
- n) The Authority shall promptly notify the Vendor in writing of any claims arising under this warranty.
- o) Upon receipt of such notice, the Vendor shall, with all reasonable speed, repair or replace the defective Goods or parts thereof, without prejudice to any other rights which the Authority may have against the Vendor under the Contract.
- p) If the Vendor, having been notified, fails to remedy the defect(s) within a reasonable period, the Authority may proceed to take such remedial action as may be necessary, at the Vendor's risk and expense and without prejudice to any other rights which the Authority may have against the Vendor under the Contract and/ or under Applicable Law.
- q) Any Approved Vendors specific warranty terms that do not conform to conditions under this Contract shall not be acceptable.
- r) Successful bidder must carry out comprehensive on-site warranty for three years from the effective date of commissioning of the entire system based on certification from purchaser.
- s) Successful bidder shall provide contact details of focal point of maintenance team which will receive the complaints from the user and resolve the problem within the stipulated time during warranty period. The maintenance of the system shall be carried out by the bidder in the 3-year warranty period. The warranty shall be on all the supplies under this contract.
- t) Bidder shall be fully responsible for the manufacturer's warranty in respect of proper design, quality and workmanship of overall hardware, software, accessories, etc., covered by the offer. The bidder must cover warranty for all hardware equipment, software, accessories, etc., against any manufacturing defects/malfunctioning during the Warranty period. During the warranty period the bidder shall maintain the hardware, software, accessories, and repair /

replace all the defective components and software elements at the installed site free of cost.

- u) The bidder should ensure that the defects in the system reported on any working day are attended and resolve the complaints as per the SLA time lines. If Complaint is not attended/rectified within reasonable period/15 days of reporting, then suitable Penalty shall be levied/recovered from the successful bidder as a compensation for downtime beyond admissible time at 0.5% per week of the failed unit, with a capping of 10% of total order value. For the total system down period penalty will be charged @ 0.5% of the total cost of entire station, per week with a capping of 10%. Recovery of compensation shall be made from PBG.
- v) Repair to be carried out at the installed site only. In case the system or any equipment cannot be repaired at the installed site, successful bidder can take the equipment outside the premises with prior permission and need to provide bank guarantee for the particular faulty unit (equal to unit cost) to take out. Bank guarantee will be released after the unit is brought back to the unit in working condition.
- w) In case, the system or any equipment cannot be repaired at the installed site within the stipulated period, the bidder should provide the identical replacement till the system/equipment is returned duly repaired and take the defective unit to service centre. In case the manufacturer discontinues any model, Successful bidder shall supply spare /item with equivalent / higher model meeting required specifications at no extra cost and ensure that it gets integrated with the system seamlessly.
- x) NSIL/Customer reserves the right to get defects rectified through another agency in the event of failure to provide services by successful bidder within a reasonable period, Such Cost shall be charged to the successful bidder. This shall not alter the liabilities of the bidder on the warranty for its remaining period.
- y) If faulty equipment is not repairable, successful bidder shall intimate NSIL/Customer regarding replacement of faulty unit, giving all the details/specifications of the replacement unit. Consent from NSIL/Customer shall be obtained before replacement.

1.17. Term and Extension of The Contract (Contract Period)

- a. The Contract period shall commence from the date of signing of contract or Issuance of Lol, whichever is earlier, and shall remain valid for 24 Months from the date of signing of the Contract
- b. If the delay occurs due to circumstances beyond control of Vendor such as strikes, lockouts, fire, accident, defective materials, delay in approvals or any cause

whatsoever beyond the reasonable control of Vendor, a reasonable extension of time shall be granted by the Authority.

- c. The Authority reserves the sole right to grant any extension to the term abovementioned and shall notify in writing to Vendor, at least 1 (one) month before the expiration of the Term hereof, whether it shall grant Vendor an extension of the Term. The decision to grant or refuse the extension shall be at the Authority's discretion and such extension of the contract, if any, shall be as per terms agreed mutually between the Authority and the Vendor.
- d. Where the Authority is of the view that no further extension of the term be granted to the Vendor, the Authority shall notify the Vendor of its decision at least 3 (three) months prior to the expiry of the Term. Upon receipt of such notice, the Vendor shall continue to perform all its obligations hereunder, until such reasonable time beyond the Term of the Contract within which, the Authority shall either appoint an alternative agency/ Vendor or create its own infrastructure to operate such Services as are provided under this Contract.

1.18. Dispute resolution

- a. If during the subsistence of this Contract or thereafter, any dispute between the Parties hereto arising out of or in connection with the validity, interpretation, implementation, material breach or any alleged material breach of any provision of this Contract or regarding any question, including as to whether the termination of this Contract by one Party hereto has been legitimate, the Parties hereto shall endeavour to settle such dispute amicably and/ or by Conciliation to be governed by the Arbitration and Conciliation Act, 1996 or as may be agreed to between the Parties. The attempt to bring about an amicable settlement is considered to have failed as soon as one of the Parties hereto, after reasonable attempts; which attempt shall continue for not less than thirty (30) days, gives thirty (30) day notice to refer the dispute to arbitration to the other Party in writing.
- b. In case, a dispute is referred to arbitration, the arbitration shall be under the Indian Arbitration and Conciliation Act, 1996 and any statutory modification or re-enactment thereof. The Arbitration proceedings shall be held in Bangalore.
- c. The Arbitration proceeding shall be governed by the substantive laws of India.
- d. The proceedings of Arbitration shall be in Hindi/English language.
- e. Except as otherwise provided elsewhere in the contract if any dispute, difference, question or disagreement arises between the parties hereto or their respective representatives or assignees, at any time in connection with construction, meaning, operation, effect, interpretation or out of the contract or breach thereof the same shall be referred to a Tribunal of three (3) Arbitrators, constituted as per

the terms of and under the (Indian) Arbitration and Conciliation Act, 1996. Each party to the contract shall appoint/ nominate one Arbitrator each, the two Arbitrators so appointed/ nominated by the Parties herein shall together choose the third Arbitrator, who shall be the Presiding Arbitrator of the Tribunal. The consortium of the three Arbitrators shall form the Arbitral Tribunal.

- f. In case, a party fails to appoint an arbitrator within 30 days from the receipt of the request to do so by the other party or the two Arbitrators so appointed fail to agree on the appointment of third Arbitrator within 30 days from the date of their appointment upon request of a party, the Chief Justice of the Bangalore High Court or any person or institution designated by him shall appoint the Arbitrator/Presiding Arbitrator upon request of one of the parties.
- g. Any letter, notice or other communications dispatched to Vendor relating to either arbitration proceeding or otherwise whether through the post or through a representative on the address last notified to the Authority by Vendor shall be deemed to have been received by Vendor although returned with the remarks, refused 'undelivered' where about not known or words to that effect or for any other reasons whatsoever
- h. If the Arbitrator so appointed dies, resigns, incapacitated or withdraws for any reason from the proceedings, the replacement shall be appointed in the same manner as specified in clause (f) above. Such person shall in the event both parties consent and in so far as practicable proceed with the reference from the stage where the predecessor had left. The Arbitrator may otherwise initiate proceedings de novo.
- i. It is a term of the Contract that the party invoking arbitration shall specify all disputes to be referred to arbitration at the time of invocation of arbitration and not thereafter.
- j. It is also a term of the Contract that neither party to the Contract shall be entitled for any interest on the amount of the award.
- k. The Arbitral Tribunal shall give reasoned award and the same shall be final, conclusive and binding on the Parties.
- l. The fees of the arbitrators, costs and other expenses incidental to the arbitration proceedings shall be borne equally by the parties.

1.19. Conflict of Interest

- a. Vendor shall disclose to the Authority in writing, all actual and potential conflicts of interest that exist, arise or may arise (either for Vendor or Vendor's Team) in the course of performing the Services as soon as practical after it becomes aware of that conflict.

1.20. Publicity

- a. The Vendor shall not make or permit to be made a public announcement and/ or media release about any aspect of this Contract unless the Authority first gives the Vendor its written consent.
- b. In case the Vendor is found to have made public announcements and/ or media releases about any aspect of this Contract without the Authority's written consent, the Authority reserves the right to apply penalties and/ or blacklist the Vendor.

1.21. Force Majeure

a. Force Majeure Event

As used in the Contract, Force Majeure Event means the occurrence of any of the Non-Political Events, the Political Events or the Other Events, set out in the Contract including the impact/ consequence thereof which:

- i. Is beyond the control of the Party claiming to be affected thereby (the "**Affected Party**");
- ii. Prevents completely or partially the Affected Party from performing or discharging its obligations under the Agreement; and
- iii. The Affected Party has been unable to overcome or prevent despite exercise of due care and diligence.

b. Non-Political Events

Any of the following events which prevent the Affected Party from performing any of its obligations for a continuous period of not less than 7 (seven) Days from the date of its occurrence, shall constitute a Non-Political Event:

- i. Act of God, epidemic, extremely adverse weather conditions, lightning, earthquake, cyclone, flood, volcanic eruption, chemical or radioactive contamination or ionizing radiation, fire or explosion (to the extent of contamination or radiation or fire or explosion originating from a source external to the Project Site and by reasons not attributable to the Vendor or the Contractor or any of the employees or agents of the Vendor or the Contractor);
- ii. Strikes or boycotts (other than those involving the Vendor, Contractors or their respective employees/representatives, or attributable to any act or omission of any of them), and not being an "Other Event" set forth in Volume III Section 1.28, labour disruptions or any other industrial disturbances not arising on account of the acts or omissions of the Vendor or the Contractor;
- iii. Any event or circumstance of a nature analogous to any of the foregoing.

c. Political Events

Any of the following events shall constitute Political Event:

- i. Change in Law for which no relief is provided under the provisions of the Agreement, resulting in Material Adverse Effect;
- ii. Action of a Government having Material Adverse Effect including but not limited to:
 - I. Acts of expropriation, compulsory acquisition or takeover by any Government of the Project/Project Facilities and Services or any part thereof or of the Vendors or the Contractor's rights under any of the Project Contracts, and
 - II. Any unlawful, unauthorized or without jurisdiction refusal to issue or to renew or the revocation of any Applicable Permits, in each case, for reasons other than the Vendor's or the Contractor's breach or failure in complying with the Project Requirements, Applicable Laws, Applicable Permits, any judgment or order of a Governmental Agency or of any contract by which the Vendor or the Contractor as the case may be is bound
- iii. Early determination of the Agreement by AUTHORITY for reasons of national emergency, national security or the public interest;
- iv. Any failure or delay of a Contractor caused by any of the aforementioned Political Events, for which no offsetting compensation is payable to the Vendor by or on behalf of the Contractor; or
- v. Any event or circumstance of a nature analogous to any of the foregoing.

d. Other Events

Any of the following events which prevents the Affected Party from performing any of its obligations under the Agreement for a continuous period of not less than 14 (fourteen) Days from the date of its occurrence, shall constitute the Other Event:

- i. An act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, riot, insurrection, terrorist or military action, civil commotion or politically motivated sabotage;
- ii. Industry wide or State-wide strikes or industrial action;
- iii. Any civil commotion, boycott or political agitation which prevents collection of Fee by the Vendor;
- iv. Epidemics, pandemics or quarantine restrictions

- v. Any judgment or order of a court of competent jurisdiction or statutory AUTHORITY in India made against the Vendor or the Contractor in any proceedings which is non-collusive and duly prosecuted by the Vendor; and any judgment or order of a court of competent jurisdiction or statutory AUTHORITY in India made against the Vendor or the Contractor in any proceedings which is non collusive and duly prosecuted by the Vendor other than relating to proceedings
 - I. Pursuant to failure of the vendor to comply with any Applicable Law or Applicable Permit; or
 - II. on account of breach of any Applicable Law or Applicable Permit or of any contract; or
 - III. Enforcement of the Agreement; or
 - IV. With respect to exercise of any of its rights under the Agreement by Authority;
 - vi. Any event or circumstance of a nature analogous to any of the foregoing.
- e. Notice of Force Majeure Event
- i. The Affected Party shall give written notice to the other Party in writing of the occurrence of any of the Force Majeure Event (the “Notice”) as soon as the same arises or as soon as reasonably practicable and in any event within 14 (fourteen) Days after the Affected Party knew, or ought reasonably to have known, of its occurrence and the adverse effect it has or is likely to have on the performance of its obligations under the Agreement.
 - ii. The Notice shall *inter-alia* include full particulars of:
 - I. The nature, time of occurrence and extent of the Force Majeure Event with evidence in respect thereof;
 - II. The duration or estimated duration and the effect or probable effect which such Force Majeure Event has or will have on the Affected Party’s ability to perform its obligations or any of them under the Agreement;
 - III. The measures which the Affected Party has taken or proposes to be taken, to alleviate the impact of the Force Majeure Event or to mitigate the damage; and
 - IV. Any other relevant information.

- iii. So long as the Affected Party continues to claim to be affected by a Force Majeure Event, it shall provide the other Party with periodic (fortnightly/monthly) written reports containing the information called for by Section above and such other information as the other Party may reasonably request.
- f. Performance of Obligations
- i. If the vendor is rendered wholly or partially unable to perform any of its obligations under the Agreement because of a Force Majeure Event, it shall be excused from performance of such obligations to the extent it is unable to perform the same on account of such Force Majeure Event provided that:
 - I. Due notice of the Force Majeure Event has been given to Authority as required by the preceding Article
 - II. The excuse from performance shall be of no greater scope and of no longer duration than is necessitated by the Force Majeure Event
 - III. The vendor has taken all reasonable efforts to avoid, prevent, mitigate and limit damage, if any, caused or is likely to be caused to the Property/Project Asset/Project Facilities as a result of the Force Majeure Event and to restore the Property/Project Asset/Project Facilities, in accordance with the Good Industry Practice and its relative obligations under the Agreement
 - IV. When the vendor is able to resume performance of its obligations under the Agreement, it shall give to the other Party written notice to that effect and shall promptly resume performance of its obligations hereunder, the non-issue of such notice being no excuse for any delay for resuming such performance;
 - V. The vendor shall continue to perform such of its obligations which are not affected by the Force Majeure Event and which are capable of being performed in accordance with the Agreement;
 - VI. Any insurance proceeds received shall be entirely applied to repair, replace or restore the assets damaged on account of the Force Majeure Event, in accordance with Good Industry Practice, unless otherwise agreed to by Authority.

1.22. Delivery

- a. Vendor shall bear the cost for packing, transport, insurance, storage, Installation and delivery of all the goods/ hardware for all locations identified by the Authority and as per the scope of work and the delivery schedule.

- b. The Goods and manpower supplied under this Contract shall conform to the standards mentioned in the RFP, and, when no applicable standard is mentioned, to the authoritative standards; such standard shall be approved by Authority.

1.23. Insurance and others

- a. The Goods supplied under this PO/Contract shall be comprehensively insured by Vendor at its own cost, against any loss or damage, for the entire period of the contract. Vendor shall submit to the Authority, documentary evidence issued by the insurance company, indicating that such insurance has been taken.
- b. The Vendor shall bear all the statutory levies like customs, insurance, freight, etc. applicable on the goods and also the charges like transportation charges, octroi, etc. that may be applicable till the goods are delivered at the respective sites of installation.
- c. The Vendor shall take out and maintain at its own cost, on terms and conditions approved by the Authority, insurance against the risks, and for the coverages, as specified below:
 - i. At the Authority's request, shall provide evidence to the Authority showing that such insurance has been taken out and maintained and that the current premiums therefor have been paid.
 - ii. Employer's liability and workers' compensation insurance in respect of the Personnel of the Company, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate
 - iii. insurance in respect of the Personnel of the Company, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate

1.24. Transfer of ownership

- a. The Vendor shall transfer all titles to the assets and goods procured for the purpose of the project to the Authority at the time of Acceptance of System. This includes all licenses, titles, source code, certificates, hardware, devices, equipment's etc. related to the system designed, developed, installed and maintained by the Vendor. The Vendor is expected to provide ownership right of only those solutions and goods which would be customized by the Vendor for the use of NewSpace India Limited. For any pre-existing work, the Vendor and the NewSpace India Limited shall be held jointly responsible and its use in any other project by Vendor shall be decided on mutual consent.

- b. Forthwith upon expiry or earlier termination of the Contract and at any other time on demand by the Authority, the Vendor shall deliver to the Authority all Documents provided by or originating from the Authority and all Documents produced by or from or for the Vendor in the course of performing the Services, unless otherwise directed in writing by the Authority at no additional cost. The Vendor shall not, without the prior written consent of the Authority store, copy, distribute or retain any such Documents.

1.25. Exit management plan

- a. An Exit Management plan shall be furnished by the vendor in writing to the Authority within 90 days from the date of signing the Contract or acceptance of the Purchase Order(PO) , which shall deal with at least the following aspects of exit management in relation to the PO/contract as a whole and in relation to the Project Implementation, and Delivery Schedule monitoring.
- i. A detailed program of the transfer process to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer;
 - ii. Exit Management plan in case of normal termination of Contract period
 - iii. Exit Management plan in case of any eventuality due to which Project is terminated before the contract period.
 - iv. Exit Management plan in case of termination of vendor
 - v. A representative of the Authority shall certify that all necessary tests have been successfully carried out and the Project is completed as per the standards and specifications mentioned in Volume II of the RFP
- b. Exit Management plan at the minimum adhere to the following:
- i. Complete handover of the Planning documents, bill of materials, functional requirements specification, technical specifications of all equipment, change requests if any, sources codes, wherever applicable, reports, documents and other relevant items to the Independent Engineer/ Authority
- c. In the event of termination or expiry of the contract, Project Implementation, or Delivery Schedule monitoring, both vendor and Authority shall comply with the Exit Management Plan.
- d. During the exit management period, vendor shall use its best efforts to deliver the services.

Volume III

2. Chapter 2: Special Conditions of Contract

2.1. Performance Bank Guarantee (Performance Security)

- a. Vendor shall furnish Performance Bank Guarantee to the Authority at the time of signing/acceptance of the Purchase Order (PO)/Contract which shall be equal to 05% of the value of the Contract and shall be in the form of a Bank Guarantee from a Nationalized/ Scheduled Bank in the Proforma given in the RFP within 15 days after issuance of letter of intent (LOI) or Letter of Award (LoA) which would be valid up to a period of six months after the PO/contract period.

2.2. Liquidated Damages

- i. If the vendor fails to carry out the work laid out in the scope of work of any or all of the goods as per the contract, within the time period(s) as specified in this RFP, the Authority without prejudice to its other rights and remedies under the Contract, deduct from the Contract price, as liquidated damages, a sum equivalent to 0.5 % per week or part thereof of contract value for a milestone.
- ii. The deduction shall not in any case exceed 10% of the contract value.
- iii. The Authority may without prejudice to its right to effect recovery by any other method, deduct the amount of liquidated damages from any money due to the vendor (which includes the Authority's right to claim such amount against vendor Bank Guarantee) or which may become due to vendor. Any such recovery or liquidated damages shall not in any way relieve the vendor from any of its

obligations to complete the Work or from any other obligations and liabilities under the Contract.

- iv. Delay not attributable to the vendor shall be considered for exclusion for the purpose of computing liquidated damages.

2.3. Risk Purchase Clause

If the Vendor fails to deliver the whole or any part of the goods or services within the stipulated delivery period mentioned in the Purchase order/ contract/ workorder, NSIL shall be entitled to terminate the contract and to purchase the same or “the best and the nearest available substitute” from elsewhere at the risk and cost of the seller either the whole or any part of the goods/ services. In case of deviation or non-acceptance of Risk purchase clause, the offer/ order shall be liable for rejection. Risk & Cost Amount payable by Supplier or recoveries in-lieu of Risk Purchase may be recovered from the vendor by encashing/invoking Bank Guarantee, Security Deposits available with NSIL against the same or any other contract or may be adjusted against dues payable to the Vendor by NSIL against other any purchase orders/contracts/work orders etc. of NSIL.

2.4. Limitation of Liability

a. Limitation of Liability:

- i. Neither Party shall be liable to the other Party for any indirect or consequential loss or damage (including loss of revenue and profits) arising out of or relating to the Contract.
- ii. Except in case of gross negligence or wilful misconduct on the part of Vendor or on the part of any person or company acting on behalf of Vendor in carrying out the Services, the Vendor shall not be liable to Authority with respect to damage caused by Vendor to Authority’s property for an amount exceeding the amount specified in clause iv herein below:
- iii. For any indirect or consequential loss or damage; and
- iv. For any direct loss or damage that exceeds (A) the total payments payable under the Contract to Vendor hereunder, or (B) the proceeds Vendor may be entitled to receive from any insurance maintained by Vendor to cover such a liability, whichever of (A) or (B) is higher.
- v. This limitation of liability shall not affect the Vendor liability, if any, for damage to Third Parties caused by the Vendor or any person or company acting on behalf of the Vendor in carrying out the Services.

2.5. Security and safety

- a. The vendor shall comply with the directions issued from time to time by the Authority and the standards related to the security and safety, in so far as it applies to the provision of the Services.
- b. The vendor shall upon reasonable request by the Authority, or its nominee(s) participate in regular meetings when safety and information technology security matters are reviewed.

2.6. Confidentiality

- a. The Vendor shall not, either during the term or after expiration of this Work Order/Purchase Order/Contract, disclose any proprietary or confidential information relating to the Services/ Contract and/ or Authority's business/ operations, information, Application/ software, hardware, business data, architecture schematics, designs, storage media and other information/ documents without the prior written consent of the Authority.
- b. The Authority reserves the right to initiate legal proceedings, civil or criminal, against the Vendor in relation to a dispute arising out of breach of obligation by the Vendor under this clause.
- c. The Vendor shall do everything reasonably possible to preserve the confidentiality of the Confidential Information including execution of a Non-Disclosure Agreement with the Authority to the satisfaction of the Authority.
- d. The Vendor shall notify the Authority promptly if it is aware of any disclosure of the Confidential Information otherwise than as permitted by the Contract or with the authority of the Authority.
- e. The Vendor shall be liable to fully compensate the Authority for any loss whether monetary or otherwise from breach of confidentiality.
- f. As part of this clause, the Vendor shall execute the Non-Disclosure Agreement as per the format indicated in this RFP.

2.7. Events of default by the vendor

The failure on the part of Vendor to perform any of its obligations or comply with any of the terms of this Contract shall constitute an Event of Default on the part of the Vendor. The events of default are but not limited to:

- a. The Vendor/ Vendor's Team has failed to perform any instructions or directives issued by the Authority which it deems proper and necessary to execute the scope of work or provide services under the Contract, or
- b. Vendor / Vendor's Team has failed to confirm / adhere to any of the key performance indicators as laid down in the Key Performance Measures/ Delivery Schedule, or if Vendor has fallen short of matching such standards/ benchmarks/ targets as the Authority may have designated with respect to the system or any goods, task or service, necessary for the execution of the scope of work and performance of services under this Contract. The above-mentioned failure on the part of Vendor may be in terms of failure to adhere to performance, quality, timelines, specifications, requirements or any other criteria as defined by the Authority;
- c. Vendor has failed to remedy a defect or failure to perform its obligations in accordance with the specifications issued by the Authority, despite being served with a default notice which laid down the specific deviance on the part of Vendor / Vendor's Team to comply with any stipulations or standards as laid down by the Authority; or
- d. Vendor / Vendor's Team has failed to adhere to any amended direction, instruction, modification or clarification as issued by the Authority during the term of this Contract and which the Authority deems proper and necessary for the execution of the scope of work under this Contract
- e. Vendor / Vendor's Team has failed to demonstrate or sustain any representation or warranty made by it in this Contract, with respect to any of the terms of its Bid, the RFP and this Contract
- f. There is a proceeding for bankruptcy, insolvency, winding up or there is an appointment of receiver, liquidator, assignee, or similar official against or in relation to Vendor.
- g. Vendor/ Vendor's Team has failed to comply with or is in breach or contravention of any applicable laws.

Where there has been an occurrence of such defaults inter alia as stated above, the Authority shall issue a notice of default to Vendor, setting out specific defaults/ deviances/ omissions/ non-compliances/ non-performances and providing a notice of thirty (30) days to enable such defaulting party to remedy the default committed.

Where despite the issuance of a default notice to Vendor by the Authority, the Vendor fails to remedy the default within the cure period specified above to the satisfaction of the Authority, the Authority may, where it deems fit, extend the cure period or terminate the contract forthwith by issuing a termination notice.

2.8. Termination

Under normal circumstances, termination/ short closing of the contract to be entered into with the Vendor, pursuant to acceptance by the Authority of its offer following the issue of RFP, is not foreseen. However, the Authority, reserves the right to terminate the Contract in whole or part by giving ninety (90) days prior notice in the following circumstances.

- a. Due to repeated or material non-performance in the execution of contract so entered into;
- b. If the Vendor fails to deliver/ meet the requirements of Authority within the stipulated delivery schedule (and extension, if any granted by the Authority) thereof;
- c. If the Vendor fails to honour the whole or any part of the contract to be entered into including failure to deliver/ meet the requirements of Authority within the stipulated time as per the contract;
- d. If the Vendor is found to have made any false or fraudulent declaration or statement in the offer made following the issue of RFP, to obtain the contract or the Vendor is found to be indulging in unethical or unfair trade practices;
- e. If the Vendor is found to have been engaged in unethical and incorrect practices
- f. If the Vendor is subject to a proceeding for insolvency which is admitted and no stay of such order is obtained within a period of one month.
- g. Vendor fails to comply with the Delivery Schedule specified in this RFP
- h. When both the parties agree mutually for termination
- i. Any special circumstances, which in the sole discretion of the Authority justifies the termination of contract, such as infringement of Intellectual Property Rights, failure to comply with confidentiality obligations, or failure to comply with security related directions and/ or guidelines etc.

Without Fault of the Vendor

- a. The Authority may in its sole discretion terminate this Contract without assigning any reason or default of the Vendor.
- b. In the case of termination of the Contract by the Authority without any fault of the Vendor, the Vendor shall, on receipt of the Authority's instructions, forthwith take the necessary steps to implement them. The period to be allowed to implement them shall be fixed by the Authority after discussion with the Vendor and, in general, but shall not exceed ninety (90) days.
- c. Subject to the Vendor conforming with the instructions, Authority shall take over from the Vendor at a fair and reasonable price all finished parts not yet delivered to the

Authority, all unused and undamaged material, bought-out components and articles in course of manufacture in the possession of the Vendor and property obtained by or supplied to the Vendor for the performance of the contract, except such material, bought-out components and articles in course of manufacture as the Vendor shall elect to retain, with the written consent of the Authority.

- d. The Authority will agree to indemnify the Vendor against such part of any loss of profit as is proven to be attributable to the cancellation of the contract to be entered into and against any damage resulting from the cancellation of such contract, in particular against any commitment, liabilities or expenditure which are reasonably and properly chargeable by the Vendor and are related to such contract, in so far as the said commitments, liabilities or expenditure would otherwise represent an unavoidable loss to the Vendor by reason of the cancellation of the contract to be entered into.
- e. The amount of compensation payable shall be fixed on the basis of evidence produced by the Vendor and accepted by the Authority, which will be binding on the Vendor.
- f. The Authority shall in no circumstances be liable to pay any sum which, when added to the other sums paid, due or becoming due to the Vendor under the contract to be entered into, exceeds the total payment for the work set forth in the contract.
- g. The ownership of all materials, parts and unfinished work paid for by the Authority under the provisions of this paragraph shall be vested in or transferred to the Authority as soon as they have been paid for.

With fault of the Vendor:

- a. The Authority reserves the right, after full consideration of all relevant circumstances, including the observations of the Vendor, to cancel a contract in any of the following circumstances.
 - i. In the event of the Vendor's failure to meet:
 - ii. The Technical requirements of the contract and Project; and
 - iii. The Progress and/or delivery requirements of the Project.
- b. If the Vendor has not observed the provisions set out in concerning the disclosure and use of information provided by the Authority;
- c. If the Vendor transfers its contract to be entered into pursuant to acceptance of its offer following the issue of RFP without the Authority's prior written authorization or concludes sub-contracts against the Authority's explicit directive; and
- d. In the event the Vendor repudiates the contract or fails to dispatch or deliver all or part of the goods ordered for reasons other than those proven to be owing to the Authority's actions, the Authority may, by giving an appropriate notice in writing to the Vendor, fix a Date of Essence by which the Vendor must complete the dispatch in full. If the

Vendor fails to do so, Authority, in addition to its right to recover liquidated damages in terms of the contract to be entered into, shall also have the right to cancel such contract and make substitute risk purchases from other sources at the cost of the Vendor. If the goods are in a partial state of fabrication, Authority may have the fabrication completed by other means, in which event the Vendor shall be liable to Authority for the additional expenses incurred by Authority thereby, and the Vendor shall not have any claim on savings, if any, in such cases.

- e. In the event of such cancellation, Authority shall, unless otherwise specified in the contract, only pay:
 - i. The contractual value of items delivered and accepted under the contract before receipt of notification of cancellation, or to be accepted under the special conditions of cancellation.
 - ii. A fair and reasonable price in respect of such work as has been carried out prior to the receipt of notification of cancellation by the Vendor.
- f. In case of cancellation due to the fault of the Vendor, AUTHORITY may, at its option and without prejudice to its right of claiming compensation for damage other than the damage already covered by the provision of sub-paragraphs a, b, and c below:
 - i. Have the work performed in its own establishments, in which case, the Vendor shall be charged with all additional costs arising out of this action and the Vendor shall, in addition, pay compensation in accordance with the scale referred to in the agreement, for each week the work is not completed after the delivery date laid down in the contract.
 - ii. Have the work performed by way of a replacement contract with a third party, in which case, the Vendor shall be charged with the additional costs arising out of this action and the Vendor shall, in addition, pay compensation in accordance with the scale referred in the contract to be entered into, running from the delivery date laid down in the contract up to the delivery date stipulated in the replacement contract.
 - iii. Have the work terminated, in which case the Authority shall be entitled to full compensation for the damage caused due to lack of delivery. However, the contract may stipulate that this damage may be liquidated by an amount as specified in the contract.

The damages already due under the provisions of the Contract to be entered into before cancellation of the Contract will remain payable, but such amount shall be deducted from the compensation due under the provision's clause. In the case referred to in sub-points (a) and (b) above, and in order to ensure completion of the supply of the goods and/or services under the Project, the Vendor in default shall, where the use of intellectual property rights is required, do everything in its power to enable the new Party or Authority

to use the rights concerned. The Vendor in default shall make no claim in respect of such use and shall bear the cost of the fees due to third parties for the use of their rights.

2.9. Consequence of Termination

- a. In the event of termination of the Contract due to any reason the Authority shall be entitled to impose any such obligations and conditions and issue any clarifications as may be necessary to ensure an efficient transition and effective business continuity of the project which Vendor shall be obliged to comply with and take all available steps to minimize loss resulting from that termination/ breach, and further allow and provide all such assistance to the Authority and/ or the successor agency/ service provider, as may be required, to take over the obligations of the Vendor in relation to the execution/ continued execution of the requirements of the Contract.
- b. Where the termination of the Contract is prior to its stipulated term on account of a Default on the part of the Vendor or due to the fact that the survival of the Vendor as an independent corporate entity is threatened/ has ceased, or for any other reason, whatsoever, the Authority, through unilateral re-determination of the consideration payable to the Vendor, shall pay the Vendor for that part of the Services which have been authorized by the Authority and satisfactorily performed by the Vendor up to the date of termination. Without prejudice to any other rights, the Authority may retain such amounts from the payment due and payable by the Authority to the Vendor as may be required to offset any losses caused to the Authority as a result of any act/ omissions of the Vendor. In case of any loss or damage due to the default on the part of the Vendor in performing any of its obligations with regard to executing the Schedule of Requirements under the Contract, the Vendor shall compensate the Authority for any such loss, damages or other costs, incurred by the Authority. Additionally, members of its team shall perform all its obligations and responsibilities under the Contract in an identical manner as were being performed before the collapse of Vendor as described above in order to execute an effective transition and to maintain business continuity. All third parties shall continue to perform all/ any functions as stipulated by the Authority and as may be proper and necessary to execute the Schedule of Requirements under the Contract in terms of Vendor's Bid, the Bid Document and the Contract
- c. Nothing herein shall restrict the right of the Authority to invoke the Bank Guarantee and other Guarantees furnished hereunder and pursue such other rights and/ or remedies that may be available to the Authority under law except in a case, where the services are terminated due to force majeure.
- d. The termination hereof shall not affect any accrued right or liability of either Party nor affect the operation of the provisions of the Contract that are expressly or by implication intended to come into or continue in force on or after such termination.

2.10. Defect Liability after Termination

The Vendor shall be responsible for all defects and deficiencies in the Project for a period of 180 (One hundred and eighty) days after Termination, and it shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies observed by the Authority in the Project during the aforesaid period. In the event that the Vendor fails to repair or rectify such defect or deficiency within a period of 15 (fifteen) days from the date of notice issued by the Authority in this behalf, the Authority shall be entitled to get the same repaired or rectified at the Vendor's risk and cost so as to make the delivered systems conform to the technical requirements that shall be provided at the time of signing of the contract.

2.11. Change Control

- a. This applies to and describes the procedure to be followed in the event of any proposed change to contract, implementation plan, and Delivery Schedule.
- b. The change shall be notified using the Change Control Note (CCN) which is indicated in this RFP.
- c. Change requests in respect of the contract, implementation plan, or the Delivery Schedule shall emanate from the Vendor's representative who shall be responsible for obtaining approval for the change and who shall act as its sponsor throughout the Change Control Process.
- d. The Vendor's representative shall complete Part A of the CCN. CCNs shall be presented to the other Party's representative who shall acknowledge receipt by signature of the authorized representative of the Authority.
- e. The Vendor and the Authority while preparing the CCN, shall consider the change in the context of whether the change is beyond the scope of Services including ancillary and concomitant services required
- f. The CCN shall be applicable for the items which are beyond the stated/ implied scope of work as per the RFP document.
- g. Vendor shall assess the CCN and complete Part B of the CCN. In completing Part B of the CCN Vendor shall provide as a minimum:
 - i. a description of the change;
 - ii. a list of deliverables required for implementing the change;
 - iii. a timetable for implementation;
 - iv. an estimate of any proposed change;
 - v. any relevant acceptance criteria;
 - vi. an assessment of the value of the proposed change;
 - vii. Material evidence to prove that the proposed change is not already covered within the scope of the RFP, Agreement and Delivery Schedule.
- h. Prior to submission of the completed CCN to the Authority or its nominated agencies, Vendor shall undertake its own internal review of the proposal and obtain all necessary internal approvals. As a part of this internal review process, Vendor shall

consider the materiality of the proposed change in the context of the Agreement, the sites, Delivery Schedule affected by the change and the total effect that may arise from implementation of the change.

2.12. Change Control Note

Change Control Note	CCN Number:
Part A: Initiation	
Title:	
Originator:	
Sponsor:	
Date of Initiation:	
Details of Proposed Change	
(To include reason for change and appropriate details/specifications. Identify any attachments as A1, A2, and A3 etc.)	
Authorized by Authority	Date:
Name:	
Signature:	
Received by the Vendor	Date:
Name:	
Signature:	
Change Control Note	CCN Number:
Part B: Evaluation	
(Identify any attachments as B1, B2, and B3 etc.)	
Changes to Services, payment terms, payment profile, documentation, training, Delivery Schedule and component working arrangements and any other contractual issue.	
Brief Description of Solution:	
Impact:	
Deliverables:	
Timetable:	
Charges for Implementation: (Including a schedule of payments)	



Other Relevant Information: (including value-added and acceptance criteria)	
Authorized by the Vendor	Date:
Name:	
Signature:	
Change Control Note	CCN Number:
Part C: Authority to Proceed	
Implementation of this CCN as submitted in Part A, in accordance with Part B is: (tick as appropriate)	
Approved Rejected Requires Further Information (as follows, or as Attachment 1 etc.)	
For Authority and its nominated agencies	For Vendor
Signature	Signature
Name	Name
Title	Title
Date	Date

@@@@@