

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
LIQUID PROPULSION SYSTEMS CENTRE, VALIAMALA (LPSC)
THIRUVANANTHAPURAM**

Tender for VIRTUAL REALITY FACILITY

Bids to be submitted online

Tender No.: LPSC/LVF/LP202400081601 dated 19-09-2024

A. Tender Details

Tender No :	LPSC/LVF/LP202400081601
Tender Date :	19-09-2024
Tender Classification:	GOODS
Purchase Entity :	LVF
Centre :	LIQUID PROPULSION SYSTEMS CENTRE, VALIAMALA (LPSC)

SUPPLY, INSTALLATION AND COMMISSIONING OF VIRTUAL REALITY FACILITY

For and on behalf of the President of India, the Head, Purchase & Stores, Liquid Propulsion Systems Centre (LPSC), Valiamala, Thiruvananthapuram invites tenders through e-procurement mode; <https://eproc.isro.gov.in>

Prospective vendors interested in participating in the tendering process need to get registered in the portal. Offers submitted through our online portal only will be considered and no other means will be considered. Detailed instruction, pre-requisites and illustrative tutorials for bid enrollment, preparation etc are available in the portal. A help desk is also functioning to assist the vendors whose contact details are available in the portal.

EGPS helpdesk

email id: eproc@vssc.gov.in

Ph No: 0471 256 5454/4162

A.1 Tender Schedule

Bid Submission Start Date :	19-09-2024 15:15
Bid Clarification Due Date :	26-09-2024 14:00
Bid Submission Due Date :	17-10-2024 14:30
Bid Opening Date :	17-10-2024 14:35
Price Bid Opening Date :	29-11-2024 14:00

B. Tender Attachments

Technical Write-up/Drawings

Document : Specifications

Instructions To Vendors

2. INSTRUCTIONS TO INDIGENOUS TENDERERS

1. a) As far as implementation of provision for Public Procurement (Preference to Make in India) Order, 2017 is concerned, the Office orders vide No. P-4502/2/2017-B.E-II dt 15.06.2017, which is partially modified by Order No.P-45021/2/2017-PP (BE-II) dt 28.05.2018, Order P- 45021/2/2017-PP (BE-II) dt 29.05.2019, Order No. P-45021/2/2017-PP (BE-II) dt 04.06.2020 and Order No. P-45021/2/2017-PP (BE-II) 16.09.2020 and subsequent Amendments issued by the Department of Promotion of Industries and Internal Trade, Ministry of Commerce and Industry regarding Class-I/Class-II local suppliers, Purchase preference, verification of local contents etc shall be applicable to this tender. Therefore, bidders are requested to ensure compliance of the same while submitting tenders. b) Price Preference shall be extended to the MSEs under the Public Procurement Policy for MSEs. Such MSE s shall produce documentary proof of registration as per provisions of the Policy ie: registration with District Industries Centre (DIC) or Khadi and Village Industries Commission (KVIC) or Khadi and Industries Board (KVIB) or Coir Board or National Small Industries Commission (NSIC) or Directorate of Handicrafts and Handlooms or Udyog Aadhar Memorandum or any other body specified by Ministry of MSME.

2. Applicable Law: - The Contractor shall be interpreted, construed and governed by the Law of India.

3. Bank Details :- The offer should contain Bank details viz., Bankers Name, Address, Phone No. & Mail id, Bank Account No., IFSC code, PAN No., GST No., etc.

4. Contractors Default Liability :- The purchaser may upon written notice of default to the Contractor terminate the Contract in whole or in part in circumstances detailed hereunder: a) If in the judgement of the Purchaser the Contractor fails to make delivery of Stores within the time specified in the Contract/agreement or within the period for which extension has been granted by the Purchaser to the Contractor. b) If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of this Contract.

5. Counter Terms and Conditions of suppliers: - Where counter terms and conditions / printed or cyclostyled conditions has been offered by the Supplier, the same shall not be deemed to have been accepted by the Purchaser unless specific written acceptance thereof is obtained.

6. DELIVERY AND LIQUIDATED DAMAGES (LD) :- (a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates. (b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either. (i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5% per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10%, or (ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or (iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor. In the event of action being taken under sub-clause (ii) & (iii) of clause 15 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the re-purchase or if there is an agreement to re-purchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. The manner and method of such re-purchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

7. Delivery Period :- The time for and the date / period of delivery of the stores stipulated in the Tender / Purchase Order shall be deemed to be the essence of the contract and delivery must be completed on or before the specified dates.

8. Delivery Term :- Ex-Works / FOR LPSC

9. Extension of Time: - If the completion of supply of Stores is delayed due to reason of FORCE MAJEURE such as acts of God, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restrictions, strikes, and freight embargoes etc., the Contractor shall give notice within 15 days to the Purchaser in writing of his claim for an extension of time. The Purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to the other terms and conditions of the Contract.

10. Guarantee & Replacement :- a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance. b) For a period of twelve months or for a period as specified in the tender document after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under

proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty. c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof. d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores. e) The decision of the purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor. f) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of the stores at purchaser's site.

11. Indemnity:- The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of Infringement of any Patent, Copy right or Trade mark and shall at all times indemnify the Purchaser against all claims which may be made in respect of stores for infringement of any right protected by patent, registration of design or trade mark, and shall take all risk of accident or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfilment of the Contract.

12. Language and Measures :- All documents pertaining to the Contract including specification, schedule, notice, correspondence, operating and maintenance instructions, drawings or any other writings shall be written in English Language. The metric system of measurement shall be used exclusively in the Contract.

13. Mode of Despatch :- For supplies BY ROAD / BY RAIL:- The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on 'said to contain' basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract. The Contractor will be held responsible for any demurrage / wharfage paid due to non-receipt of documents in time.

14. Offer Validity :- a) For Single Part Tender - Quotation should be valid for 90 days from the date of opening of the tender or any other period as specified in the tender. b) For Two Part Tender - Quotation should be valid for 120 days from the date of opening of the tender or any other period as specified in the tender. Note :- Offer with validity lesser than that specified is liable for exclusion from the procurement process

15. Packing Forwarding & Insurance:- The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by Rail / Road to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. b) Insurance : The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

16. Payment :- 100% payment shall be made through RTGS within 30 days of receipt and acceptance of the item at our site against submission of PBG.

17. Performance Bank Guarantee (PBG) :- To fulfil guarantee conditions outlined in clause 2(a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 3% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.

18. Price : a) Price should be firm and fixed and should be on the basis of FOR, LPSC / delivery at site. The Purchaser will not pay separately for transit insurance, and the risk and cost during transit shall be exclusively the responsibility of the Contractor and the purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract. b) Tenders offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variations. c) Prices are required to be quoted according to the units indicated in the tender. When quotations are given in terms of units other than those specified in the tender form, relationship between the two systems of unit must be furnished.

19. Quantity (QTY) and Unit of Measure (UOM) Quote should be as per the quantity and unit of measure mentioned the tender. If dimensional details are available, the same should also be indicated in your offer.

20. Resolution of Disputes:- Any dispute, disagreement or question arising out of or relating to or in consequence of the contract or to its fulfillment, or the validity of enforcement thereof which cannot be settled mutually, or the settlement of which is not herein specifically provided for, shall within 30 (thirty) days from the date either party informs the other in writing that such dispute or disagreement exists be referred to arbitration by the sole arbitrator. The Arbitrator shall be appointed As per the Indian Arbitration and Conciliation Act 1996 and proceedings will be conducted in Trivandrum. The Arbitration proceedings shall be conducted in accordance with and subject to the Arbitration and Conciliation Act 1996 (Act 26 of 1996) as amended from time to time and the decision of the Arbitrator shall be final and binding on the parties thereto. Each party shall bear its own cost of preparing and presenting its case. The cost of Arbitration including the fees and expenses of the Arbitrator shall be shared equally

by the parties unless the award provides otherwise. Subject to provisions of this clause, the courts at Kerala shall have exclusive jurisdiction. Performance under this Contract shall, however continue during Arbitration proceeding and no payment due or payable by the parties hereto shall be withheld unless any such payment is/ or forms a part of the subject matter of the Arbitration proceedings.

21. Security Deposit (SD) :- Applicable for order value above INR 5 L (Including taxes and other charges). On acceptance of the order, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding 3 percent of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit Security and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor.

22. Specifications:- a) Stores offered should strictly conform to Purchasers specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Wherever options are called for in our specifications, the tenderer should address all such options. b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to remove the samples at his own expense.

23. Taxes :- The applicable GST / IGST shall be clearly mentioned in your offer along with HSN code of the offered items. We are eligible for IGST @ 5% as per the Department of Revenue Notification No. 25/2018 Integrated Tax (Rate) Schedule-I; Sl.No.243B dated 31.12.2018 (Amendment to Notification No. 7/2018 - Integrated Tax (Rate) dated 25.01.2018 and Notification No. 1/2017 - Integrated Tax (Rate) dated 28.06.2017

24. Training:- The Contractor shall, if required by the Purchaser, provide facilities for the practical training of Purchasers engineering / technical personnel from India and for the active association on the manufacturing processes throughout the manufacturing period of the Contract / Stores, number of such personnel to be mutually agreed upon.

25. LPSC shall have the right to place part order among the parties for the items for which they are the lowest.

26. Option Clause : The Purchase reserves the right to increase/decrease the Ordered Quantity by up to 25% at any time, till final delivery date (or the extended delivery date of the Contract), by giving reasonable notice even though the quantity ordered initially has been supplied in full before the last date of delivery period (or the extended delivery period). It may please be noted that, this clause is not

applicable for Development Orders.

C. Bid Templates

C.1 Technical Bid - VIRTUAL REALITY FACILITY

1. Commercial General Purpose Software - Virtual Reality Software for immersive view of 3D CAD models by one person at a time

Item specifications for Commercial General Purpose Software

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specify Make & Model no.	Required	Yes / No / Explain		
2	Datasheet attached? (Yes / No)	Required	Yes / No / Explain		
3	Is the bidder an OEM or authorized dealer of the OEM for quoted VR software? (Yes / No)	Required	Yes / No / Explain		
4	Should provide integrated immersive studies and design review capabilities, from 3D models, using a VR kit and VR-supported hardware	Required	Yes / No / Explain		
5	Should have capability to view 3D data in i) STL (Stereolithography)	Required	Yes / No / Explain		
6	Should have capability to view 3D data in ii) IGES (Initial Graphics Exchange Specification)	Required	Yes / No / Explain		
7	Should have capability to view 3D data in iii) STEP (Standard for Exchange of Product Data)	Required	Yes / No / Explain		
8	Should have capability to view 3D data in iv) Parasolid	Required	Yes / No / Explain		
9	Should have capability to view 3D data in v) JT (Jupiter Tessellation)	Required	Yes / No / Explain		

10	Should have capability to view 3D data in vi) CGM (Computer Graphics Metafile)	Required	Yes / No / Explain		
11	Should have capability to view 3D data in vii) 3MF (3D Manufacturing Format)	Required	Yes / No / Explain		
12	Should have capability to view 3D data in viii) OBJ File Format	Required	Yes / No / Explain		
13	Should have capability to view 3D data in ix) IFC (Industry Foundation Classes)	Required	Yes / No / Explain		
14	Should have capability to view 3D data in x) Polygon File Format	Required	Yes / No / Explain		
15	Should provide an immersive VR experience from a 3D model provided, with no data preparation, using the VR headset provided against item no. 2	Required	Yes / No / Explain		
16	Should have VR environment for displaying 3D models in shaded rendering style	Required	Yes / No / Explain		
17	Should be capable to simulate the VR experience in, over a floor grid, composed of X-Y axes, with the Z-axis as the up vector.	Required	Yes / No / Explain		
18	Should be capable to navigate throughout the entire VR environment, and not just in the area of the model, with the VR headset provided against item no. 2	Required	Yes / No / Explain		

19	Should be capable to translate and move towards, away, side to side, and around the model, as well as elevate up and down, scale, and rotate	Required	Yes / No / Explain		
20	Should facilitate the users to explore the model using real-world movements, such as walking and looking around	Required	Yes / No / Explain		
21	Should have features to select objects using a virtual pointer	Required	Yes / No / Explain		
22	Should have capability to teleport to a specific location, without physically walking	Required	Yes / No / Explain		
23	Should be capable to view component and part attributes defined on the CAD model	Required	Yes / No / Explain		
24	Should have features for changing visibility controls and resetting options, using menus	Required	Yes / No / Explain		
25	Should have functionalities to section a model, to analyze its interior details	Required	Yes / No / Explain		
26	Should have functionalities for checking measurements and for saving it to the same location	Required	Yes / No / Explain		
27	Should have features to save the current VR state of the model as a snapshot that can be used to quickly return to the VR environment	Required	Yes / No / Explain		
28	Should have functionalities to display context menu	Required	Yes / No / Explain		

29	Should have functionalities to display the properties panels in VR environment	Required	Yes / No / Explain		
30	Should have functionalities for highlighting an area of concern.	Required	Yes / No / Explain		
31	Should have capabilities for desktop mode visualization	Required	Yes / No / Explain		
32	Should provide feature for audio integration	Required	Yes / No / Explain		
33	Should have feature for visualizing 3D models generated using master-model concept. (Master model concept in CAD allows to use one part file (master file) to define multiple parts. The multiple parts thus defined will have one feature that references the master part file so that changes in the master file gets reflected in the parts defined based on that)	Required	Yes / No / Explain		
34	Should have feature for visualizing 3D models generated using parametric as well as non-parametric (direct) ways of modeling	Required	Yes / No / Explain		
35	Should have feature for displaying hierarchical information about the assembly	Required	Yes / No / Explain		
36	Should provide support for future augmentation to multi-user VR sessions	Required	Yes / No / Explain		

37	Should provide support for future augmentation to collaborate with multiple users, across different geographical locations with audio integration	Required	Yes / No / Explain		
38	The Virtual reality software provided by the supplier should integrate with the 3D CAD software (item no:4) offered by them. There shall be direct connection between CAD Software and Virtual Reality Software that ensures seamless data transfer without any data loss	Required	Yes / No / Explain		
39	The supplier should take the responsibility of integrating the 3D CAD software and the Virtual Reality Software. The supplier should submit an undertaking regarding the same along with their offer.	Required	Yes / No / Explain		
40	Solution provided should be on-premise which can work without internet connectivity	Required	Yes / No / Explain		
41	Licensing: Subscription license for 3 Years should be provided. Updates and support shall be provided during the subscription period	Required	Yes / No / Explain		
42	Manufacturer Authorization Form (MAF) from the OEM of VR software, guaranteeing updates and support during the subscription period should be provided, in case the bidder is not an OEM of VR Software quoted	Required	Yes / No / Explain		

43	Bidder shall quote the rates for additional 3 years AMC after initial 3 year subscription period for VR software in the financial / price bid	Required	Yes / No / Explain		
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2. Virtual reality headset and accessories

Item specifications for Virtual reality headset

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specify Make & Model no.	Required	Yes / No / Explain		
2	Bidder shall attach the datasheet	Required	Yes / No / Explain		
3	Headset type	Wireless	Yes / No / Explain		
4	Screen type	LCD	Yes / No / Explain		
5	Resolution	1224 x 1224 pixels per eye or more	Yes / No / Explain		
6	Refresh rate	90 Hz or more	Yes / No / Explain		
7	Field of view	90 degrees (horizontal) or more	Yes / No / Explain		
8	Audio output	Required	Yes / No / Explain		
9	Audio input	Required	Yes / No / Explain		
10	Motion tracking provision	Required	Yes / No / Explain		
11	Ergonomics	Adjustable head strap to be provided	Yes / No / Explain		
12	Battery	Required	Yes / No / Explain		
13	Charging cord	Required	Yes / No / Explain		
14	Compatibility	The VR kit should be compatible with the VR software quoted for itemno. 1	Yes / No / Explain		

15	Warranty	1 year	Yes / No / Explain		
16	In case the OEM provides more than one year of comprehensive warranty support, the same shall be passed on to LPSC	Required	Yes / No / Explain		

3. Workstation Computer for running VR Software

Item specifications for Workstation Computer

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specify Make & Model no.	Required	Yes / No / Explain		
2	Datasheet attached? (Yes / No)	Required	Yes / No / Explain		
3	Processor	Intel Xeon W7 2495X processor (Equivalent or better)	Yes / No / Explain		
4	Processor - No. of cores	24	Yes / No / Explain		
5	Processor - No. of threads	48	Yes / No / Explain		
6	Processor - Base Frequency	2.5GHz or more	Yes / No / Explain		
7	Processor Cache	45 MB Cache or more	Yes / No / Explain		
8	Memory	128 GB (4x32 GB DDR5 4800 MHz RDIMM ECC Memory)	Yes / No / Explain		
9	Storage (1)	512 GB M.2 PCIeNVMe SSD	Yes / No / Explain		
10	Storage (2)	1TB 7200 RPM 3.5" SATA HDD	Yes / No / Explain		
11	Video Card	Nvidia RTX A6000, 48 GB, 4DP	Yes / No / Explain		
12	Operating System	Windows 11 Pro for Workstations (English)	Yes / No / Explain		
13	Network card	Dual Gigabit NIC	Yes / No / Explain		

14	I/O Ports (1)	USB 2.0 - Minimum 1 No.	Yes / No / Explain		
15	I/O Ports (2)	USB 3.0 or better - Minimum 2 Nos.	Yes / No / Explain		
16	Monitor	27" Monitor or better	Yes / No / Explain		
17	Keyboard	USB Keyboard	Yes / No / Explain		
18	Mouse	USB Optical Scroll Mouse	Yes / No / Explain		
19	Power Cord	Indian Standard Power plugs required	Yes / No / Explain		
20	Warranty	Onsite comprehensive warranty for 5 years	Yes / No / Explain		
21	The drivers and any supporting software required for the proper working of the GPU mentioned in SI. No. 11 should be provided by the vendor	Required	Yes / No / Explain		

4. Computer-aided design software - 3D modelling Software

Item specifications for Computer-aided design software

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Specify Make & Model no.	Required	Yes / No / Explain		
2	Datasheet attached? (Yes / No)	Required	Yes / No / Explain		
3	Is the bidder an OEM or authorized dealer/reseller of the OEM for quoted 3D modeling software? (Yes / No)	Required	Yes / No / Explain		
4	The CAD software should have core Modeling capabilities for creating and editing designs of mechanical components and assemblies with solid modeling and drafting	Required	Yes / No / Explain		

5	Provision to create and edit 3D part and assembly models and create 2D drawings that update with design changes	Required	Yes / No / Explain		
6	It shall support both parametric and non-parametric (direct) modeling	Required	Yes / No / Explain		
7	Modeling capabilities shall have feature based solid modeling including wireframe, surface, and solid	Required	Yes / No / Explain		
8	The CAD software should have functionalities to create and modify standard design features such as holes, fillets, chamfers and patterns	Required	Yes / No / Explain		
9	Capability in the solid Modeling environment to directly edit 3D models that may or may not have any feature history. Intelligence in the software to preserve design intent of 3D parts when faces are dynamically dragged for re-orienting and re-positioning	Required	Yes / No / Explain		
10	Capability for creating 3D assemblies using both top-down and bottom-up approaches	Required	Yes / No / Explain		
11	Software should have capability to provide geometric constraints between components like touch & align, concentric, parallel, perpendicular and centered constraints as well as allow to create the joints like hinge, slider, cylindrical and ball.	Required	Yes / No / Explain		

12	Software should have ability to create exploded views of assemblies.	Required	Yes / No / Explain		
13	Capability to create projected views, detail views, section views including straight sections, stepped sections, half-cut sections, revolved section sections, break-out sections, folded & unfolded sections and pictorial section views.	Required	Yes / No / Explain		
14	Data Exchange: Capability to import/export 3D data to/from various standard formats like STL, IGES, STEP, Parasolid and JT.	Required	Yes / No / Explain		
15	Licensing: Subscription license for 3 Years should be provided. Updates and support shall be provided during the subscription period	Required	Yes / No / Explain		
16	Manufacturer Authorization Form (MAF) from the OEM or authorized dealers/resellers of OEM of 3D CAD software, guaranteeing updates and support during the subscription period should be provided, in case the bidder is not an OEM of the 3D modeling tool quoted	Required	Yes / No / Explain		
17	Bidder shall quote the rates for additional 3 years AMC after initial 3 year subscription period for 3D Modeling software in the financial / price bid?	Required	Yes / No / Explain		

5. Installation and Commissioning

Common Specifications (Applicable for all items)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Bidder shall quote for all the products mentioned in the specification	Required	Yes / No / Explain		
2	Make and model for all items quoted shall be explicitly mentioned	Required	Yes / No / Explain		
3	Bidder shall attach Datasheet or document from OEM (with the specifications highlighted) for the quoted items	Required	Yes / No / Explain		
4	Bidder shall carry out Installation & commissioning at LPSC Valiamala, as per LPSC's requirements	Required	Yes / No / Explain		
5	Bidder shall be ready to supply all necessary mounting and fitting accessories, items, cables, connectors, converters, consumables, and other accessories required for the installation and commissioning	Required	Yes / No / Explain		

6	Bidder shall quote for additional items, if any, which is not included in the above tables, but essential for establishing a standalone VR facility	Required	Yes / No / Explain		
7	Bidder shall include Bill of Materials (BoM) without price in Part 1 (Techno-commercial offer)	Required	Yes / No / Explain		
8	Bidder shall be ready for demonstration of the sample product at LPSC at the time of technical evaluation, if requested.	Confirmation for readiness for demonstration shall be provided	Yes / No / Explain		
9	As the scope involves supply, installation and commissioning of a Virtual Reality (VR) facility, splitting of PO to multiple parties shall not be carried out. The project shall be executed as a turnkey solution	Bidder shall agree to this clause	Yes / No / Explain		

10	During the warranty period, if any damage to the hard disk occurs, the supplier has to replace the item, without taking back the original from LPSC campus. As per ISRO's IT security policy, hard disks are not permitted to be taken outside the campus.	Bidder shall agree to this clause	Yes / No / Explain		
11	Supplier shall quote maintenance charges for three more years after the initial three-year subscription period for VR software and 3D modeling software	Bidder shall agree to this clause	Yes / No / Explain		

12	The AMC charges for 4th, 5th and 6th years will not be accounted for L1 calculation. At the end of initial three year subscription period, LPSC shall place another Purchase Order at its discretion for the maintenance for additional three years at the quoted rates and the party is bound to provide the same at the rates quoted. Updates and support shall be provided during the maintenance period	Bidder shall agree to this clause	Yes / No / Explain		
13	MII content (in %) of total value	Shall be mentioned. A minimum of 20% MII content (excluding installation, warranty and support) is required for the total items quoted.	Yes / No / Explain		
14	Location in India where value addition is made	Shall be mentioned	Yes / No / Explain		
15	Delivery period	8 weeks for delivery from date of PO placement.	Yes / No / Explain		
16	Installation period	1 week for installation from date of item acceptance	Yes / No / Explain		

Supporting Documents required from Vendor

1. Details of additional items with price and price break up details, if any (Price Bid Related)
2. Maintenance charges for three more years after the initial three-year subscription period for VR software and 3D modeling software (Price Bid Related)

3. Bill of Material without price

4. Manufacturer Authorization Form (MAF) from the OEM or authorized dealers/resellers of OEM of 3D CAD software, guaranteeing updates and support if bidder is not an OEM of the 3D modeling tool quoted

5. Manufacturer Authorization Form (MAF) from the OEM of VR software, guaranteeing updates and support during the subscription period if the bidder is not an OEM of VR Software quoted

6. Data Sheet / Document from OEM with specifications highlighted for 3D modelling Software

7. Data Sheet / Document from OEM with specifications highlighted for VR Software

8. Data Sheet for VR Kit

9. Data Sheet for Workstation offered

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	<p>As per the Rule 144(xi) of General Financial Rule ,2017, any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy service and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the competent authority ie., Department for Promotion of Industry and Internal Trade (DPIIT). Hence, Vendors or Agents of a Vendor (Indian or others) from a country sharing border with India shall submit copy of valid registration made with Department for Promotion of Industry and Internal Trade (DPIIT), Government of India along with the tender mandatorily, without which the offer will be treated as invalid.</p>	Yes / No / Explain	
2	<p>Whether applicable GST percentage mentioned in your offer. If mentioned as EXTRA OR INCLUDED in your quote, please mention the percentage in Remarks Column).</p>	Yes / No / Explain	
3	<p>ISRO is eligible for Customs Duty Concession vide Notification No.12/2012-Customs dated 17.03.2012. and Notification No. 50/2017-customs dtd 30.06.2017 [We will provide Customs Duty Concession Certificate for bought out items being imported for manufacturing the ordered items (List of items to be imported with quantities to be enclosed along with offer) OR for Orders placed on Foreign Vendors OR for High Sea Sale orders.]</p>	Yes / No / Explain	
4	<p>Installation Charges, if any, (If mentioned as EXTRA OR INCLUDED in your quote, please mention the percentage in Remarks Column).</p>	Yes / No / Explain	

5	<p>Delivery Term :- FOR : LPSC, VALIAMALA In case of Foreign orders, FOB or FCA.</p> <p>If "NO" specify the exact delivery term with relevant details in remarks column</p>	Yes / No / Explain	
6	<p>Delivery Period (If any specific delivery period is mentioned in the tender, please comply the same. If not agreed, please mention your delivery period in remarks column OR if already mentioned in your quote please mention as already furnished in the quote)</p>	Yes / No / Explain	
7	<p>Payment Term :- (a)100% payment shall be made through RTGS within 30 days of receipt and acceptance of the item at our site. (b)In case of Foreign orders, Payment term shall be SIGHT DRAFT / 80% BY IRREVOCABLE LETTER OF CREDIT AND BALANCE 20% BY WIRE TRANSFER AFTER RECEIPT & ACCEPTANCE OF THE ORDERED ITEM.</p>	Yes / No / Explain	
8	<p>Liquidated Damages (LD) :- If the ordered items are not supplied within the delivery schedule, LD shall be levied from your bill @ 0.5% per week for the undelivered items subject to a maximum of 10% of the order value for the delayed period.</p>	Yes / No / Explain	
9	<p>Warranty (item wise warranty periods mentioned in specifications)</p>	Yes / No / Explain	
10	<p>Security Deposit (SD) :- (only for order value above Rs.5 Lakh) You have to furnish a Bank Guarantee for 3% of the order value (from a bank of international repute in case of foreign vendors) within 10 days of receipt of Order towards the faithful execution of the order valid till the completion of the scope of work as per order plus sixty days. (This will be returned to you immediately on execution of the order satisfactorily as per order terms. In case of non-performance / poor performance, the amount will be forfeited).</p>	Yes / No / Explain	

11	<p>Performance Bank Guarantee (PBG) :- You have to submit a PBG from a Nationalised / Scheduled Bank (from a bank of international repute incase of foreign vendors) for 3% of the order value towards the performance of the system at the time of supply valid till the completion of warranty period plus 60 days as per the format provided by the Department.</p> <p>OR</p> <p>3% OF THE ORDER VALUE SHALL BE WITH HELD TILL THE COMPLETION OF WARRANTY PERIOD PLUS 60 DAYS.</p>	Yes / No / Explain	
12	<p>In case, if parties are unable to provide two separate BGs, i.e., one for SD and one for PBG, they can submit a combined BG for SD & PBG within 10 days of receipt of order for 3% of order value valid till the completion of total contractual obligation (i.e., supply period plus warranty period plus 60 days) as per the format provided by the Department.</p>	Yes / No / Explain	
13	<p>Insurance :- Being a Govt. Of India Dept., Insurance is not required at our cost. Please ensure the safe delivery of the ordered item with proper AIR / SEA / ROAD worthy packing.</p>	Yes / No / Explain	
14	<p>Validity of Offer :-</p> <p>(a)The validity of the offers should be 90 days (in case of single part tender) from the date of opening of the tenders.</p> <p>(b)The validity of the offers should be 120 days (in case two part tender) from the date of opening of the tenders.</p> <p>Note :- Tenders shorter than offer validity mentioned above will not be considered for evaluation.</p>	Yes / No / Explain	
15	<p>Bank Details, viz., Bank Name, Branch, Address, Account No., IFSC (Details to be given in Vendor Terms Column)</p>	Yes / No / Explain	
16	<p>PAN No. (Details to be furnished in Vendor Terms Column)</p>	Yes / No / Explain	
17	<p>GST No. (Details to be given in Vendor Terms Column)</p>	Yes / No / Explain	
18	<p>Purchase Order to be placed on whom (Please mention the Address, Phone No. & E-mail id)</p>	Yes / No / Explain	

19	HSN Code of offered items	Yes / No / Explain	
20	Local content involved in the quoted item shall be declared/ certified in percentage.	Yes / No / Explain	
21	Furnish the details of place(s) where the value addition for the quoted item takes place.	Yes / No / Explain	
22	State whether MSE or not. If yes, please provide the necessary documentary proof	Yes / No / Explain	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Other Costs, if any	Remark
1	Commercial General Purpose Software - Virtual Reality Software for immersive view of 3D CAD models by one person at a time	1.00 Nos.		-			
2	Virtual reality headset and accessories	1.00 Nos.		-			
3	Workstation Computer for running VR Software	1.00 Nos.		-			
4	Computer-aided design software - 3D modelling Software	1.00 Nos.		-			
5	Installation and Commissioning	1.00 Lot		-			

Common charges (Applicable for all items)

Additional Costs, if any	
Additional Costs, if any (Value)	