## Expression of Interest (EoI) for Transfer of Technology

### Indigenous Color Doppler ultrasound scanner with PNDT Compliance.

### Issued by



### National Institute of Electronics and Information Technology (NIELIT) Calicut.

(An Autonomous Scientific Body of Ministry of Electronics and Information Technology, Govt. of India.)

NIT Campus PO, Kozhikode, Kerala, India-673601.

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### **Expression of Interest**

National Institute of Electronics and Information Technology (NIELIT) Calicut (NIELIT Calicut herein after referred as "Authority") invites Proposal for the purpose of TECHNOLOGY TRANSFER OF Indigenous Color Doppler Ultrasound Scanner with PNDT Compliance (ICDU) from reputed Private / Public sector units (An Indian registered legal entity) with relevant experience preferably in the field of Radiology/High end medical equipment. The Bidders are required to submit their "Expression of Interest" as laid down in this document. The EoI documents will be available on official website of NIELIT Calicut, namely www.nielit.gov.in/calicut and also on https://eprocure.gov.in.

### Acronyms

Abbreviations	Description
MeitY	Ministry of Electronics and Information Technology
NIELIT	National Institute of Electronics and Information Technology
EoI	Expression of Interest
STED	Smart Technology and Education Division
PNDT	Prenatal Diagnostic Technique
FPGA	Field Programmable Gate Array
HV	High Voltage
LV	Low Voltage
LVDS	Low Voltage Differential Signaling
DBF	Digital Beamformer
PWM	Pulse Width Modulation
PMDB	Power Management and Debugger Board
CW	Continuous Wave
PW	Pulsed Wave
FMC	FPGA Mezzanine Connector

### 1. About this EoI

### 1.1 Introduction

The Ministry of Electronics& Information Technology, Government of India initiated the Design and Development of indigenous color Doppler ultrasound scanner with prenatal diagnostic techniques (PNDT) compliance, with National Institute of Electronics and Information Technology (NIELIT) Calicut as the implementing agency. The project conceptualizes the indigenous development of medical ultrasound hardware and software technologies.

The smart technology and education division(STED) of NIELIT, Calicut has developed the indigenous ultrasound scanner technology, and the technology is available for transfer to interested establishments. NIELIT, Calicut would like to invite competent industrial partners for commercialization of the indigenous color Doppler ultrasound scanner through transfer of technology.

### 1.2. About NIELIT Calicut

**National Institute of Electronics and Information Technology (NIELIT)** Calicut is an autonomous scientific establishment under the administrative control of Ministry of Electronics and Information Technology (MeitY), Government of India established in 1989 as a premier organization for education, training, R&D and consultancy in Electronics Design & Information Technology. More details about NIELIT, Calicut can be found at https://www.nielit.gov.in/calicut.

### 1.3 General Instructions and Important Dates

- i. Bidding agencies are advised to study this EoI document carefully before submitting their proposals in response to the EoI Notice. Submission of a proposal in response to this notice shall be deemed to have been done after careful study and examination of this document with full understanding of its terms, conditions and implications.
- ii. EoI shall be published on website www.eprocure.gov.in and on our websites (www.nielit.gov.in/calicut).
- iii. Corrigenda: Corrigenda, if any to this EoI will be published on our websites (www.nielit.gov.in/calicut). The bidders are advised to check our website, before submitting the bid.
- iv. Bids should be dropped in Tender Box.
- v. Bids received via e-mail, fax and Late Bids will not be considered.
- vi. Unsuccessful bidders will not be formally informed of the result of their bid.
- vii. This EoI document is not transferable.
- viii. The response to this EoI should be full and complete in all respects. Failure to furnish all information required by the EoI documents or submission of a proposal not substantially responsive to the EoI documents in every respect will be at the bidder's risk and may result in rejection of its Proposal.
- ix. Bidders interested in participating in pre-bid meetings must communicate about their participation at least two working days before by the e-mail. The information regarding persons participating in pre-bid meeting and their details should be communicated. The participants should carry letter of authorization from the company stating that they are

authorized to attend the pre-bid meeting on behalf of the company. Looking into COVID-19 pandemic pre-bid meeting may be conducted online or offline depending upon COVID-19 situation and guidelines issued by Government authority at that time. In case of offline pre-bid meeting, maximum two persons per bidder will be allowed to take part in pre-bid meeting. The participants must strictly follow COVID-19 guidelines issued by the authority during pre-bid meeting. In case number of participant exceed the limit, pre-bid meeting may be arranged in staggered time/hours.

x. Jurisdiction: Cochin, Kerala.

1.	EoI Release Date	25/02/2022	
2.	Last date for submission of written queries for	9/03/2022	
	clarifications for first pre-bid meeting		
3.	Date of pre-bid meeting	11/03/2022	
4.	Last Date (Deadline) for submission of Bids	21/03/2022	
5.	Opening of responses: Pre-Qualification Bids	23/03/2022	
6.	Opening of Technical bids	23/03/2022	
7.	Opening of Financial bids	30/03/2022	
8.	Contact person for queries	Dr. Jayaraj U Kidav,	
		Mob:9495642541	
9.	Email Address for all Bid Correspondence	jayaraj@nielit.gov.in,	
		jayaraj@calicut.nielit.in	
10.	Addressee and Address at which proposal in response	The Purchase Officer,	
	to EoI notice is to be submitted	NIELIT Calicut	
11.	EMI/Bid Security	As per OM dated 12th	
		November 2020 by Ministry of	
		Finance, instead of taking	
		actual EMD, only Bid Security	
		Declaration will be taken as	
		per the format at Annexure C2.	
1.0		DD 5000/ 1 DD	
12.	Tender/ EoI document fee (Non-refundable and Not	INR 5000/- by DD	
	exempted)	There will not be any	
		"Tender/EoI document Fee" if	
		tender document is	
		downloaded from the on-line	
		portal.	
13.	EoI document may be downloaded from websites www.nielit.gov.in/calicut, and also		
	from www.eprocure.gov.in		

### 2. Terms of Reference

### 2.1. Objective of the EoI

Ministry of Electronics and IT (MeitY), Govt. of India had sponsored the project of indigenous development of Color Doppler Ultrasound scanner with PNDT Compliance. NIELIT Calicut has developed various subsystems and lab model prototype of the machine. The machine is in the advanced stage of final integration and testing etc. After completing the necessary testing, it is essential to seek required approvals from appropriate authorities for deployment in hospitals for diagnosis. NIELIT Calicut is ready to pass on the technical know-how to prospective industry/s that is/are willing to take the challenge of completing the pending activities of the system and commercial manufacturing of indigenous ultrasound machines in India. NIELIT Calicut seeks proposals from bidders for Transfer of Technology, manufacturing, and supply of indigenous color Doppler ultrasound scanner machines in India and abroad. This EoI would be awarded to the bidder according to the Bid evaluation procedure.

### 2.2. Scope of work

### 2.2.1. The Bidder (Bidder used interchangeably for Transferee/ Developer/ Manufacturer)

### **Extent of Work**

- i. To manufacture Indigenous color Doppler ultrasound Machines and its Sub-systems based on the technical knowhow provided by NIELIT Calicut.
- ii. To establish and run both manufacturing and testing facilities which are required to achieve the Extent of Work.
- iii. To obtain required approvals from the appropriate authorities to establish & operate the facility and manufacturing of machine. (Example: Medical grade regulations as per IEC standards, Government of India and others).
- iv. To install & commission indigenous ultrasound machine machine at the user Hospitals / Radiotherapy Centers / Medical Research Centers, located in India and abroad.
- v. To service and maintain indigenous ultrasound machines at the end users site.
- vi. To market indigenous ultrasound machines both in India and abroad.
- vii. To establish Quality Assurance and Quality Control (QC) facilities to ensure compliance of the manufactured indigenous ultrasound machines to Radiation Safety Standards & QA/QC provisions of IEC and any other related National and International standards.
- viii. To upgrade the proposed manufacturing facility from time to time as per internationally acceptable guidelines/ benchmarks.
- ix. To offer comprehensive after sales service including comprehensive maintenance and assured supply of spare parts for 15 Years.

### 2.2.2. Technical Knowhow Transfer from NIELIT Calicut

i. NIELIT Calicut will transfer the technical knowhow of the indigenous color Doppler Ultrasound system **on non-exclusive** basis for period of **66 months** from the date of

signing of ToT agreement. The knowhow shall be provided on "as is where is basis." The bidder is expected to develop one model/piece of the "regulatory approved" commercially deployable indigenous machine within 18 months from the date of signing the ToT agreement. The progress of the work shall be reviewed periodically.

- ii. NIELIT Calicut will provide its laboratory design documentation for the indigenous ultrasound machine and its sub-systems as mentioned in the scope of the work to the selected Bidder.
- iii. NIELIT Calicut will offer guidance to the Bidder in understanding its documents.
- iv. The selected Bidder is expected to prepare detailed documents of fabrication, development & testing of various sub-systems.
- v. The selected Bidder should prepare the final documentation as per industry standards.
- vi. Implementation of this Technology transfer project would necessitate multidisciplinary proficiency. NIELIT"s experts in these various areas can be made available as consultant on applicable charges.

### 2.3. Technologies involved

A brief description of the technologies involved in making of medical indigenous ultrasound scanner is given below. NIELIT Calicut has developed and established the technological expertise listed below that are required for the design and manufacturing of indigenous ultrasound machines and its sub-systems.

### i. Medical Ultrasound system technology

Fig. 1 shows the overall system block diagram of the developed 128 channel ultrasound imaging system prototype. As shown in Fig. 1 the system comprises an ultrasound scanner section and a power supply section. In the ultrasound scanner section, the front end is implemented by an FPGA-based 128 channel ultrasound transceiver board and a digital beamformer board, and the backend by an Intel®-Core<sup>TM</sup>-i5 based PC. The ultrasound transceiver followed by the digital beamformer is frontend processing, and the frontend section needs to handle higher computational and data rate requirements for system fulfillment. Therefore, to handle the higher data rates and the computational requirements, FPGA-based front-end processing, and PC-based backend processing is accomplished. As depicted in Fig. 1, after proper power surge protection and isolation of the main supply (230V, 50Hz), a 12V, 53A medical grade power supply is used to derive the necessary High Voltage (HV) and the Low Voltage (LV) power supplies needed for the system. The required HV and the LV supplies for the front-end section are integrated into the transceiver and the digital beamformer boards. Microcontroller-based power management and debugger board (PMDB) integrated into the system, performs the required power sequencing, the power rail monitoring, and protection.

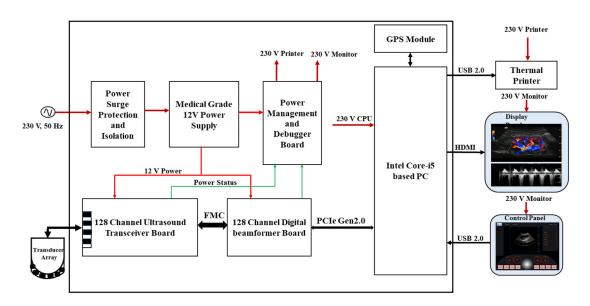


Fig. 1 128 Channel Ultrasound Scanner System Architecture

### ii. Medical Ultrasound Front-End technology -Ultrasound Transceiver Hardware

The developed ultrasound transceiver hardware are shown in Fig. 2, and the board features are summarized in Table-1. The ultrasound transceiver hardware is designed based on Xilinx® Kintex-7 FPGA (XC7K160T), MAXIM® MAX14808 Transmit pulsar cum Transmit/Receive Switch chip, and Texas Instruments® AFE 5818 chip. To accomplish a 128 channel ultrasound transceiver solution, eight 16 channels AFE chips, sixteen 8 channels pulser chips, FPGA, and other pervasive sections (power supplies, power tree, clock tree, power management, etc.) were accommodated and interconnected into a single board. In addition, the Analog TGC and CWD circuits are were also combined with the hardware system.



Fig. 2 Developed 128 Channel Ultrasound Transceiver Board.

Table-1 US transceiver board features

Parameter	Details
Number of Ultrasound Channels	128

FPGA	Xilinx Kintex-7 XC160T
Analog Frontend	AFE5818 X 8
Transmit Pulse cum T/R Switch	MAX14808 X 16
Input Frequency Range	50KHz to 30MHz
Ultrasound Imaging Techniques	CW,PW
ADC Sampling Frequency	Up to 65MHz
Linear input Voltage Range	0.25v to 1V peak to peak
Signal chain Gain	54dB Max
Memory	256Mb SPI Flash
Interfaces	UART,JTAG,FMC
Output data rate	71.68 Gbps
HV Power Supply	+/- 5V to 100 V
LV Power Supply	+/- 5V, 3.3V,2.5V, 1.8V

# iii. Medical Ultrasound Front-End technology- Ultrasound Digital Beamformer Hardware Fig. 3 depicts the developed ultrasound digital beamformer (DBF) board. The board is designed with high-end Xilinx-7 series FPGA (Kintex-7 XC7K410T). The FPGA has 406,720 logic cells, 28,620Kb Block memories, 1540 DSP slices, etc. In addition, the FPGA supports high-speed SerDes, PCIe, and Gigabit interfaces. The DBF board supports high-speed Serializer (SerDes) connectivity via the board to board or the (FPGA Mezzanine Connector (FMC)). Furthermore, the board has two PCIe Gen 2.0 X 8 links, and a Gigabit Ethernet link. Therefore the peak data rate support is up to 65Gbps. The board also has 2GB, Byte peripheral Interface (BPI) flash, 128Mb SPI Flash, and 512Mb SRAM memories to store the FPGA configuration bit files and the beamformer delay tables, configuration parameters, etc. For FPGA programming and board debugging, the DBF board is equipped with JTAG and UART interfaces. The board features are summarized in Table-2.

Table-2 DBF Board features

Parameter	Details
Number of LVDS Channels	128
FPGA	Xilinx Kintex-7 XC410T
Input Data Rate	71.68 Gbps
Output data rate Max	65Gbps
Processing Gain Max	21dB
Memory	2GB BPI Flash, 512 Mb SRAM, 128Mb
	SPI Flash
IO Interfaces	FMC, PCIe, Gigabit Ethernet.
Programming and Debug Interfaces	UART,JTAG
LV Power Supply	3.3V,2.5V, 1.8V, 1.2V



Fig. 3 Developed Digital Beamformer board

### iv. Medical Ultrasound Backend technology

In the 128 channel ultrasound imaging system developed an Intel® Core<sup>TM</sup>-i5 processor running at 3.3 GHz is used for backend processing. The processor is loaded with Linux OS, and the kernel was optimized by keeping the necessary system functions. The high-speed interface links like PCIe and Gigabit Ethernet interfaces are used for connectivity with the frontend section. The complex backend processing algorithms are implemented by using optimized Intel Performance Primitive (IPP) functions. For display and control panel, Qt-QML based Graphic User Interface (GUI) is developed. The backend section also provides GPS connectivity, Digital Imaging and Communication in Medicine (DICOM) support, etc.

### v. <u>Medical Ultrasound power system technology</u>

In the system prototype, a 12V medical-grade power supply is used to derive the required regulated power supplies for the analog and digital circuits. The HV power supplies for the pulser are also derived from the 12V power supply. It used a quasi-resonant circuit with a switching frequency of 500 kHz, transformer, and Pulse Width Modulation (PWM) based feedback circuit to generate a programmable HV power supply. The needed HV and LV power supplies are integrated with Transceiver and DBF boards. In addition, an external HV/LV power supply board (Fig. 4) was designed and developed to reduce the power supply switching noise generated in US transceiver board.

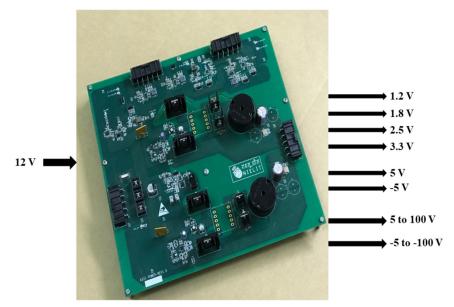


Fig. 4 Developed HV/LV power supply board

A Microcontroller (STM32) based power management and debugger board(PMDB) was designed and attached with the system prototype to control the power on/off mechanism of the system. Fig. 5 shows the developed PMDB board. The board is also provided with the facility to debug the power rail status of transceiver and DBF boards. The input 230 V AC mains is power surge protected and isolated from the system for the reduction in power supply noise. Also, input AC mains is supplied to a 12V medical grade power supply as well as power management and debugger board. From the power management and debugger board, the input main supply is directly connected to the CPU cabinet, CPU Monitor, and Thermal printer. The ON/OFF mechanism of the thermal printer and monitor will be controlled by relay switches. The ON/OFF mechanism for the system prototype is as follows: 1) Microcontroller-based power management and debugger board. 2) Transceiver FPGA Board 3) Digital Beamformer Board 4) CPU/Intel Core-i5 PC.

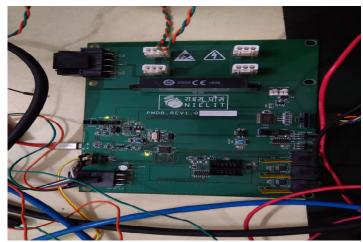


Fig. 5 Developed Power Management and Debugger Board

### 2.4. Technical Specifications

Fig. 6 shows the lab model prototype of the 128-channel ultrasound imaging system developed, and Table-3 summarizes the system specifications. As listed in Table-3, the system prototype can support B-mode, M-mode, Color Flow Imaging mode, and spectral PW and CW modes. For display, a 18-inch medical-grade multi-touch screen LCD monitor is attached for displaying B-mode, M-mode, CW, and PW Doppler modes. Also, to configure the system for various imaging modes and the associated parameters settings, a similar (18-inch) touch-based control panel monitor is attached. The system can store 256 images in the hard disk as cine, and the clinician can export them to display eight images at a time for evaluation. Touch-based tarball and keyboard-type buttons are used for menu navigation. Fig. 7 shows the developed human machine interface (HMI) for the system prototype.

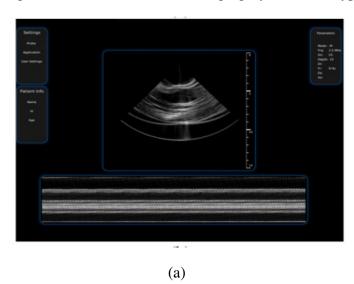
**Table-3 Prototype System Specifications** 

Number of Channels	128 Max.		
Power	12V,53A Medical Grade Power Supply		
Display	18-inch multi-touch based LCD, 640 X 480 VGA		
Number of Probe Ports	1		
Scanning System	Electronic Linear Scanning, Sector Scanning		
Probe Operating Modes	B Mode, M Mode, PW Doppler, CW Doppler		
Transducer array	2.5 MHz sector, 3.5MHz convex, 7.5MHx linear		
Diagnostic Distance	0.5 to 30 cm(each Probe has a diagnostic Limit)		
Display Modes	B Mode, M mode, PW and CW Doppler		
Transmission Method	Simplified Compound Pulse Wave Generator (CPWG)(Maximum		
	number of Burst wave is 64) Real-Time Transmission Voltage		
	Control		
Transmission Voltage	+/- 5V to +/- 100V, For CW Mode 5V		
Receiving System	Digital Beamformer		
Image Quality	Gain 54dB Max.		
Adjustment	Contrast 16 steps (B and M)		
	TGC 6 sliders, Analog Controlled		
	Steered Beam Max +/-45° (0.5 to 5° steps), Flow, Doppler and		
	Spectral independent.		
Spectral Doppler	Frequency Analysis System: FFT		
	Display :Power Spectrum		
	Frequencies: PW Doppler 2.5, 3.5. 7.5MHz		
	CW Doppler :2.5, 7.5 MHz		
	Analysis Rate: There are limits depending on the probe frequency		
	PW Doppler: +/-6.22-398.4 cm/sec		
	CW Doppler +/- 24.9 – 796.2 cm/sec		
	Sample Point: One point		
	Sampling Volume :0.5-20mm		
	Doppler Gain: 0-50dB,128 Step		
	Contrast 16 Levels		
	Audio Output : Speaker		
Color Flow	Frequency Estimation System Display		

	Flow Gain 0-31.75 dB
Velocity Range: +/-6.22-159.4 cm/sec	
	Depth Max 30cm
	Sampling Changes with Depth Range
	Average: Fixed
	Color Edge Smooth: Available
Cine	256 frames
Patient Information	Available
management	



Fig. 6 Lab model Ultrasound Imaging System Prototype



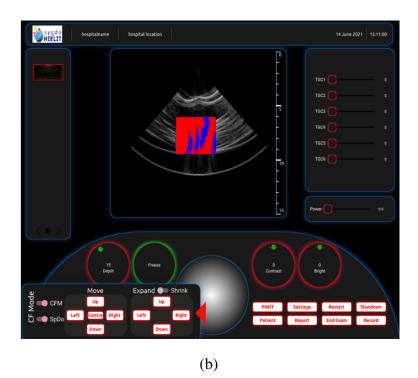


Fig. 7 HMI Developed for System prototype a) Display panel b) Cont

### 2.5. Status of Development

The Lab Model Prototype Design is completed and Manufactured (Fig.6). The prototype system has a touch-based control and display panel. The system supports three ultrasound array geometries (linear, phased, and convex), and based on the application any one of the arrays can be attached to the system and the imaging can be performed. The necessary software for control and display panel configuration is developed using Qt/QML. The hardware boards like 128 channel Ultrasound transceiver, Digital Beamformer and Power Management and Debugger Board Design, development, and bring up are completed. The 128 Channel Transceiver and DBF board integration is completed and basic B-mode imaging is performed. Also, the basic Phantom trials are completed.

The FPGA implementation of Digital beamformer, Continuous Wave (CW)/Pulse Wave (PW) processor, Time Gain Compensation (TGC) Controller, Analog Frontend (AFE) Controller, etc. is completed and ported on to the respective hardware boards. The ultrasound backend software is developed using high-performance signal processing Intel Performance Primitive (IPP) libraries.

SUMMARY: READYNESS OF TECHNOLOGY BY NIELIT CALICUT

Sl. No.	Technology	Readiness of the technology
1	Lab model Ultrasound prototype system	Ready with B-mode and M-
		Mode.
2	128- channel ultrasound transceiver hardware	Ready with minor revisions.
		Layout reworking is required
		to improve SNR
3	High-end FPGA (Kintex7-XC410T) based signal	Ready for ToT
	processing board	

4	128-channel High Voltage and Low Voltage	Ready for ToT
	Ultrasound power supply board.	
5	Power management and debugger board	Ready for ToT
6	128-channel configurable digital beamformer IP	Ready for ToT
7	CW/PW Doppler subsystems	Ready for ToT
8	PCIe, Gigabit Eth and High speed SERDES	Ready for ToT
	Interface Controllers.	
9	Intel IPP based Ultrasound backend signal	Ready for ToT
	processing modules. (Envelope detection,	
	dynamic range compression, scan conversion,	
	etc.)	
10	Human machine interface and post processing	Ready for ToT
	functions.	
11	PNDT Compliance software	Ready for ToT (Permission
	_	from UIDAI is required)

### Balance work / activities to be carried out:

- 1. Layout reworking of 128-channel ultrasound transceiver hardware to improve noise performance. Schematic revision by removing the high voltage power supply section from the ultrasound transceiver board. Fabrication assembly and testing.
- 2. Minor revisions of Ultrasound high-end FPGA based signal processing board and power supply board.
- 3. Industrial engineering design and fabrication as per IEC standards.
- 4. System integration and testing.
- 5. Clinical trials as per medical regulations and guidelines.
- 6. Test certification as per IEC standards for EMI/EMC.
- 7. Test for certification for electrical safety as per IEC standards.

### 3. Pre-bid Queries

- i. NIELIT Calicut will hold a pre-bid briefing meeting with the prospective bidders at NIELIT Calicut or via. online mode. The bidders will have to send their queries to NIELIT Calicut by email to jayaraj@nielit.gov.in or jayaraj@calicut.nielit.in
- ii. All enquiries / clarifications from the bidders, related to this EoI, must be directed in writing exclusively to the contact person notified in this EoI document. Please refer to Annexure: C1 "Request for Clarifications" for pre-bid queries format.
- iii. The preferred mode of delivering written questions to the aforementioned contact person would be through email. Telephone calls will not be accepted. In no event NIELIT Calicut will be responsible for ensuring that bidders' inquiries have been received by NIELIT Calicut. The queries by the bidders will be provided in the format mentioned in Annexure C1
- iv. After distribution of the EoI, the contact person notified by NIELIT Calicut will begin accepting written questions from the bidders. NIELIT Calicut will make efforts to provide a full, complete, accurate, and timely response to all questions. However, NIELIT Calicut makes no representation or warranty as to the completeness or accuracy of any response, nor does NIELIT Calicut undertake to answer all the queries that have been posed by the bidders.

### 4. Bid submission

### 4.1. Bid Submission Instructions

- i. The bidders should submit their offers in three parts Pre-Qualification Bid, Technical Bid and Financial Bid as per format given in this document.
- ii. The bidder shall submit following envelopes:

Envelope	Marked As	Content of Envelope
Number		
One	Response to Pre-	One Original Hard Copy, One Duplicate
	Qualification criterion from	Hard Copy & One Soft Copy of the
	< <bidder name="">&gt;</bidder>	documents as per Annexure C.14
Two	Technical bid/proposal from	One Original Hard Copy, One Duplicate
	<< Bidder Name>>	Hard Copy & One Soft Copy of the
		documents as per Annexure C.15
Three	Commercial bid/proposal	One Original Hard Copy of the
	from	Commercial bid/proposal as per
	< <bidder name="">&gt;</bidder>	Annexure C.16
	Also, marked as "To be	
	opened only post Technical	
	evaluation of bids"	

- iii. The bidders should submit soft copy of technical bid in a sealed envelope. Technical bid should be in a single file in PDF format.
- iv. The soft copy media (CD/DVD/USB) must be duly signed using a permanent Pen/Marker and should bear the name of the bidder.
- v. The bidder shall seal the response to the invitation of EoI, including response to prequalification bid and Technical bids in an outer envelope marked "Response to the invitation of EoI for ToT OF INDIGENOUS COLOR DOPPLER ULTRAZSOUND SCANNER". The envelope shall indicate the name and address of the bidder.
- vi. The outer envelope shall indicate the name and address of the bidder to enable the proposal to be returned unopened in case it is declared "late". Both inner and outer envelopes shall be addressed to NIELIT Calicut at the address specified in section 1.2.
- vii. The original proposal shall be prepared in indelible ink. It shall contain no inter-lineation or overwriting, except as necessary to correct errors made by the bidder itself.
- viii. Any such corrections must be initialed by the person (or persons) who sign(s) the proposals.
- ix. All pages of the proposal must be sequentially numbered and shall be initialed by the Authorized Representative of the bidder.
- x. A bidder is eligible to submit only one Bid against this EoI.
- xi. To assist in the examination, evaluation and comparison of bids, NIELIT Calicut at its discretion can ask the bidder for the clarification of its bid. The request for clarification and the response shall be in writing. However, post submission of bid, no clarification at the initiative of the bidder shall be entertained.

- xii. Bidders if they choose, May prior to submitting their bid, visit NIELIT Calicut, with prior appointment.
- xiii. Bidders may be called for making a presentation before the committee.
- xiv. Authority may visit bidder"s facilities for the assessment.
- xv. At any time before the submission of EoI, the Authority may carry out amendment(s) to this EoI document and/or the schedule. The amendment will be made available on our websites (www.nielit.gov.in/calicut) and will be binding on the bidder. The Authority may at its discretion extend the bid schedule for the submission of proposals.
- xvi. The Authority reserves the right to accept or reject any application without assigning any reason thereof.
- xvii. Bids that are incomplete in any respect or those that are not consistent with the requirements as specified in this document or those that do not adhere to formats, wherever specified may be considered non-responsive and may be liable for rejection and no further correspondences will be entertained with such bidders.
- xviii. Canvassing in any form would disqualify the applicant.
- xix. For any clarifications on the Expression of Interest, the following may be contacted through email/Letter

Dr. Jayaraj U Kidav Scientist 'D' NIELIT Calicut, Calicut,Kerala-673601. e-mail: jayaraj@nielit.gov.in, jayaraj@calicut.nielit.in

### 4.2. Bid Security Declaration

- i. Bidders shall submit, along with their Bids, Bid Security declaration as given in Annexure C.2.
- ii. Proposals submitted without Bid Security declaration or containing Bid Security declaration with infirmity (ies), shall be summarily rejected.
- iii. The firm, which is submitting the current bid, will be suspended for the period of three years from being eligible to submit bids for contracts with NIELIT Calicut, if:
  - a. If a bidder withdraws the bid during the validity period or any extension agreed or varies his quoted prices during the period of bid validity or its extended period, if any; or
  - b. In the case of a successful bidder, if the bidder fails to sign the Contract or to furnish Bank Guarantees within specified time in accordance with the format given in the EoI.
  - c. If the proposal is varied or modified in a manner not acceptable to the NIELIT
     Calicut after opening of proposal during the validity period or any extension thereof.
  - d. If the bidder tries to influence the evaluation process.
  - e. If the shortlisted bidder withdraws its proposal during negotiations.
  - f. If the bidder being found to have indulged in any suppression of facts, furnishing of fraudulent statement, misconduct, or other dishonest or other ethically improper activity, in relation to this EoI.
  - g. If any default by the bidder in respect of EoI terms & conditions.

iv. The Bid Security declaration shall be submitted along with Prequalification Bid.

### 4.3. Technical Proposal guidelines

- i. The bidder is expected to understand the complete scope of this technology transfer for manufacturing indigenous ultrasound machine as per know how transfer by NIELIT Calicut on "as is where is basis" described in this EoI under para 2.2, 2.3, 2.4 & 2.5. Bidder is required to give the acceptance to receive the technology on "as is where is basis" as per technical specifications and status of development described under 2.4 & 2.5.
- ii. NIELIT Calicut retains the right of the final say in the interpretation of the scope of the Project in terms of Technology Transfer for Manufacturing and deployment of indigenous ultrasound scanner machine, as listed in this EoI.
- iii. The bidder is expected to submit their bid in the format specified. Failure to use the specified formats may result in disqualification of the proposal.
- iv. The Technical Proposals must be direct, concise, and complete. Any information which is not directly relevant to this EoI should not be included in the proposal by the bidder.
- v. The bidder is requested to provide documentary evidence of experience, methodology or any other information provided in the Technical Bid. The bidders are not expected to attach any promotional material or brochures with the proposal.
- vi. The bidder shall number all the pages of the Technical Bid including the annexure and other attachments. All pages should be signed by the authorized signatory.
- vii. The Technical proposal shall include the following major sections:
  - i) Section I Understanding of Scope of Technology Transfer for Manufacturing of indigenous ultrasound machines. The bidder is expected to understand the complete scope of this technology transfer for manufacturing dual indigenous ultrasound machines as per know how transfer by NIELIT Calicut on "as is where is basis" described in this EoI under para 2.2, 2.3, 2.4 & 2.5. Bidder is required to give the acceptance to receive the technology on "as is where is basis" as per technical specifications and status of development described under 2.4 & 2.5.
  - ii) Section II Proposed Approach and Methodology Overall tentative approach and methodology for manufacturing indigenous ultrasound machines with all sub-systems
    - Methodology for manufacturing electrical / electronic subsystems
    - Methodology for manufacturing mechanical sub-systems
    - Methodology for integration and testing
  - iii) Section III Broad Work Plan
    - Proposed stages of product development with timeline
    - Proposed plan for manufacturing first unit including QA/QC and obtaining type approval from appropriate authority
    - Proposed plan for manufacturing subsequent units
- viii. Additional information directly relevant to the scope of technology transfer process provided in the EoI may be submitted to accompany the proposal. In submitting additional information, please mark it as supplemental to the required response. However, this information will not be considered for evaluation purposes.

### 4.4. Venue and Deadline for submission

- i. Proposals must be received at the address specified in section 1 of this EoI.
- ii. Any proposal received by the NIELIT Calicut after the above deadline shall be rejected and returned unopened to the bidder.
- iii. NIELIT Calicut shall not be responsible for any postal delay or non-receipt/ non-delivery of the documents. No further correspondence on the subject will be entertained.
- iv. NIELIT Calicut reserves the right to
  - a. relax or waive any of the conditions stipulated in this EoI document as deemed necessary in the best interest of the Nation and the objective of the scheme without assigning any reasons thereof and
  - b. Include any other item in the scope of work at any time after consultation in the prebid meeting or otherwise.
- v. NIELIT Calicut reserves the right to modify and amend any of the above-stipulated condition/criterion depending upon project priorities.
- vi. In case, the day of bid submission is declared holiday by Govt. of India, the next working day will be treated as day for submission of bids. There will be no change in the timings.

### 4.5. Bid Opening

There will be three bid-opening events:

- a. Pre-Qualification bid
- b. Technical bid
- c. Commercial bid

The venue, date and time for opening the Pre-qualification bid are as mentioned in section 1.2. The date and time for opening of Technical bid and Commercial bid would be communicated to the qualified bidders. The Technical Bids of only those bidders will be opened who clears the Pre-qualification stage.

The Commercial Bids of only those bidders will be opened who qualify in Technical Bid.

### **IMPORTANT NOTE:**

- a. Participation in Bid Opening will be STRICTLY via ONLINE VIRTUAL PLATFORM.
- b. Vendors interested must fill the ONLINE FORM available at www.nielit.gov.in/calicut, two working days before the tender opening date.
- c. On the day of Bid opening, a virtual meeting link will be provided through mail to the vendors who have registered for participating in the EoI bidding. Only the vendors who have submitted the offer can participate in the online tender opening.
- d. It will be assumed that those Vendors who did not fill in the form are not interested in joining the EoI bid Opening Process.

### 4.6. Right to Accept Any Proposal and To Reject Any or All Proposal(s)

NIELIT Calicut reserves the right to accept or reject any proposal, and to annul the tendering process and reject all proposals at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for NIELIT Calicut"s action.

### 4.7. Notification of Award

- i. Prior to the expiration of the validity period, NIELIT Calicut will notify the successful bidder in writing or by fax or email, that its proposal has been accepted. In case the evaluation process has not been completed within the stipulated period, NIELIT Calicut reserves the right to extend the validity period of the bid.
- ii. The notification of award will constitute the initial formation of the contract which shall be valid till the execution of the agreement between the parties.

### 5. Bid Evaluation

### **5.1.** Technology Transfer Committee (*TTC*)

- i. The Technology Transfer Committee (TTC) constituted by the NIELIT Calicut shall evaluate the Bids.
- ii. The decision of the TTC in the evaluation of the Technical (including Pre-Qualification) and Financial bids shall be final. Technical Bid evaluation is to ensure that the proposed solution by the bidder meets the functional/technical requirements as outlined in the EoI Document. No correspondence will be entertained outside the process of discussion with the Committee.
- iii. TTC will evaluate and compare the bids determined to be substantially responsive. It is TTC"s intent to select the proposals that are responsive to the project needs and each proposal will be evaluated using the information furnished in technical bid as per section 4.3.
- iv. To qualify the Technical Bid Evaluation, the bidder must conform to all the requirements stated in the EoI document.
- v. Financial bids of only those bidders will be opened who qualify the pre-qualification criteria and the technical bid evaluation.

### 5.2. Pre-qualification Evaluation

- i. The bidders must have furnished the necessary documents to establish their eligibility (indicating the page number in the bid) for each of the items given as per Annexure A: ELIGIBILITY CRITERIA. Relevant portions in the documents should be highlighted. If a bid is not accompanied by all the necessary documents, it will be summarily rejected.
- ii. A Bid that does not fulfill all the stipulated eligibility conditions/criteria will not be considered.

### 5.3. Technical Bid Evaluation

- i. Technology Transfer Committee (TTC) constituted by the NIELIT Calicut will carry out a detailed evaluation of responses to the EoI and all supporting documents/ documentary evidence. Technical Bids received will be evaluated to determine whether they are substantially responsive to the requirements set forth in the Expression of Interest. In order to reach such a determination, TTC will examine the information supplied by the bidders, and shall evaluate the same. In the event of inability to submit requisite supporting documents / documentary evidence, bid shall be rejected.
- ii. **Proposal Presentations:** The Committee shall invite bidders who meet pre-qualification criteria to make a Presentation. The purpose of such presentations would be to allow the bidders to present their proposed approach to the TTC and the key point in their respective proposals.
- iii. The technical evaluation of Bids will be carried out to ensure technical and functional compliance with requirements mentioned in the EoI. For all technically qualified bidders the financial bids will be opened for further evaluation.
- iv. The decision of the TTC in the evaluation of responses to the Expression of Interest shall be final. No correspondence will be entertained in this regard.

- v. TTC will evaluate bidder"s proposal based upon its clarity and the directness of its response to the requirements of the project as outlined in this EoI.
- vi. NIELIT Calicut reserves the right to ask for more information in terms of customer name, experience or deliverables and the bidder is required to provide details about the information enquired.
- vii. TTC reserves the right to reject any or all proposals on the basis of any deviations.
- viii. Financial bids of only those bidders will be opened whose technical proposal complies with the requirements mentioned in the EoI document.

### **5.4. Financial Bid Evaluation**

- i. Based on the technical evaluation, the Financial Bids of only the technically qualified bidders shall be opened by the TTC. The Financial evaluation will take into account the information supplied by the bidders in the Financial Proposal, and shall evaluate the same as per the evaluation criteria specified in ANNEXURE: B of this EoI.
- ii. Financial evaluation of the proposal will be carried out after determining whether the Financial Proposals are complete, qualified and unconditional. The quoted amount by the bidder towards the royalty component and the transfer of technology fee shall be considered for this purpose as per Annexure B. The quoted price indicated in the Financial Proposal shall be deemed as final.
- iii. The Financial bid should indicate ToT fees excluding govt. taxes. The govt. taxes as applicable shall be charged at actuals.
- iv. Mention of any condition in the financial bid will lead to summary disqualification of the entire bid and forfeiture of the EMD.

### 6. Appointment of Successful bidder

### 6.1. Award Criteria

NIELIT Calicut will award the Contract to the successful bidder based on the evaluation criteria described herein.

### 6.2. Bank Guarantee against ToT fees

i. On award of contract, the successful bidder must give Bank Guarantee equivalent of 50% of the total ToT fees for the period of fifteen months while signing the agreement as security measure.

### **6.3. Signing of Contract/Agreement**

After NIELIT Calicut notifies the successful bidder that its proposal has been accepted, the bidder must submit bank guarantees within 30 days of notification of award and must sign the contract/agreement within 30 days of notification with NIELIT Calicut.

### 6.4. Failure to Agree with the Terms and Conditions of the EoI

- i. Failure of the successful bidder to agree with the Legal Agreement and Terms & Conditions of the EoI shall constitute sufficient grounds for the annulment of the award, in which event NIELIT Calicut may award the contract to the next qualifying bidder or call for new proposals from the interested bidders.
- ii. In such a case, the NIELIT Calicut shall invoke the Bid Security Declaration and/or Bank Guarantee of the defaulting bidder.

### 7.0 Deliverables, Payments and Timelines

i. The successful bidder shall render progress-cum-achievement reports to NIELIT Calicut on quarterly basis on the progress made on all aspects of the project.

ii. The payment schedule and timelines are divided into following phases:

Sl. No	Description	Timeline (T)	Amount
1	Signing of ToT agreement	Within 30 days from award of contract	Industry to pay 50% of ToT fees to NIELIT Calicut
2	Handing over of ToT documents and Training	6 months	Industry to pay 25% of ToT fees to NIELIT Calicut within 6 months of signing of the ToT agreement  Industry to pay balance 25% of ToT fees to NIELIT Calicut within 12 months of signing of the ToT agreement
3	Manufacturing of ready to deliver first machine including approvals from appropriate authorities.	18 months	-
4	Payment of Royalty	Immediately after sale of every machine	A minimum @ 4 % of Ex-works price to be paid to NIELIT Calicut.

### 8. Progress Review and Monitoring

### 8.1. Technology Transfer Committee

Technology Transfer Committee Constituted by NIELIT Calicut will meet on a regular basis to review and monitor the implementation of the ToT.

In case of delay, the successful bidder will be called for meeting with TTC to explain the reasons for the delay to enable TTC to make recommendations regarding termination of exclusivity clause of the contract. TTC"s decision will be final and binding on the bidder.

### 8.2. Technical Review Committee

A Technical Review Committee (TC) will be set up during the start of the project. The TC will, at the minimum, include a designated point of contact from bidder. It will also include key persons from various stakeholders like NIELIT Calicut, field experts and other officials/representatives by invitation. The operational aspects of the TC shall be handled by NIELIT Calicut including maintaining monthly statuses, minutes of the meetings, project plans, etc.

Technical committee will meet formally covering, at a minimum, the following agenda items:

- i. Project Progress
- ii. Technical challenges and support required from stakeholders
- iii. Issues and concerns
- iv. Discussion on submitted deliverables
- v. Discussion/Clarifications on progress-cum-achievement reports
- vi. Any other issues that either party wishes to add to the agenda

### 9. General Terms and Conditions

### 9.1. Terms and Conditions

- i. While every effort has been made to provide comprehensive and accurate background information on requirements and specifications, bidders must form their own conclusions about the solution needed to meet the requirements. Bidders and recipients of this EoI may wish to consult their own legal advisers in relation to this EoI. All information supplied by bidders may be treated as contractually binding on the bidders, on successful award of the assignment by Authority on the basis of this EoI.
- ii. Bidder shall sign agreement with NIELIT Calicut. In case of consortium, all the consortium members shall have to enter in a multi-party agreement with NIELIT Calicut.
- iii. If bidder quotes NIL charges/consideration, the bid shall be treated as unresponsive and will not be considered.
- iv. Any notification of preferred bidder status by NIELIT Calicut shall not give rise to any enforceable rights by the bidder. NIELIT Calicut may cancel the whole EoI process at any time prior to a formal written contract being executed by or on behalf of the NIELIT Calicut.
- v. This EoI supersedes and replaces any previous public documentation & communications related to the components mentioned in the EoI and bidders should place no reliance on such communications.
- vi. Bidders are advised to study all instructions, forms, terms, requirements and other information in the EoI documents carefully. Submission of the bid shall deemed to have been done after careful study and examination of the EoI document with full understanding of its implications.
- vii. The response to this EoI should be full and complete in all respects. Failure to furnish all information required by the EoI documents or submission of a proposal not substantially responsive to the EoI documents in every respect will be at the bidder's risk and may result in rejection of its Proposal.
- viii. The bidder is responsible for all costs incurred in connection with participation in this process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, providing any additional information required by NIELIT Calicut to facilitate the evaluation process, and in negotiating a definitive Contract or all such activities related to the bid process. NIELIT Calicut will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- ix. All materials submitted by the bidder become the property of NIELIT Calicut and may be returned completely at its sole discretion.
- x. At any time prior to the last date for receipt of bids, NIELIT Calicut may for any reason whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the EoI document by an amendment.
- xi. The amendment will be published on the NIELIT Calicut website.
- xii. In order to afford prospective bidders reasonable time in which to take the amendment into account in preparing their bids, NIELIT Calicut may, at its discretion, extend the last date for the receipt of Bids.
- xiii. The bidders are allowed to resubmit their bid, if required, after such amendments.

- xiv. If NIELIT Calicut deems it appropriate to revise any part of this EoI or to issue additional data to clarify an interpretation of provisions of this EoI, it may issue supplements to this EoI. Any such corrigendum shall be deemed to be incorporated by this reference into this EoI.
- xv. NIELIT Calicut may, in exceptional circumstances and at its discretion, extend the deadline for submission of proposals by issuing a corrigendum published in the NIELIT Calicut website in which case all rights and obligations of the project and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.
- xvi. NIELIT Calicut may terminate the EoI process at any time and without assigning any reason. NIELIT Calicut makes no commitments, express or implied, that this process will result in a business transaction with anyone. The bidder must specifically indicate if there is any conflict of interest arising as a result of bidder or any consortium partner.
- xvii. IPR must also reside in India so that India has access and complete control to these rights in times of emergency to protect our national interest.
- xviii. The Grantee (bidder) shall not on its own name or in the name of any third party, file any patent Application for the grant of patent of the said KNOW-HOW provided by NIELIT Calicut hereby licensed and shall also not oppose at any patent application made by NIELIT Calicut. That is the IPR of the ultrasound system technology KNOW-HOW provided by NIELIT Calicut will reside with NIELIT Calicut and the IPR of the product developed will reside jointly with NIELIT Calicut and Grantee (bidder). The IPR pertaining to the new innovation/technology developed by the Grantee (bidder) shall be in the name of the Grantee (bidder).
- xix. The details of the add-on knowhow brought in by the Grantee (bidder) by Modifications / Improvements will not be passed on to other agencies by NIELIT Calicut without the Grantee (bidder) so consent.
- xx. Any minor modifications / improvements to the existing designs which the Grantee (bidder) may consider essential while in the process of commercial production of the article covered under this agreement may be introduced only with prior permission of NIELIT Calicut in writing. Any such modification and improvement shall constitute an add-on knowhow to the original knowhow provided by this agreement and shall as such belong to NIELIT Calicut.
- xxi. Any new accessories / attachments / features which the Grantee (bidder) may consider essential during the process of commercialization of the article covered under this agreement may be developed and retrofitted by the Grantee (bidder) if these items result in an upgrading of the specification without degrading the performance. All such items will be introduced with prior intimation of the same to NIELIT Calicut in writing. If introducing such items make it necessary to get approval from the regulatory authority, Grantee (bidder) will be solely responsible to obtain all such approvals. NIELIT Calicut reserves the right to conduct such test and evaluation on the Product that are manufactured after introducing such items, as NIELIT Calicut may consider necessary to satisfy itself as to the performance of the Product till this agreement is in force. Grantee (bidder) shall indemnify NIELIT Calicut from any deterioration of the system performance arising out of the modification carried by Grantee (bidder).
- xxii. There would be a licensing mechanism for each product manufactured by the Grantee (bidder) and the Grantee (bidder) should accept the licensing mechanism form by NIELIT Calicut.

- xxiii. If NIELIT Calicut completes the TRL-9(productization) activities of the indigenous ultrasound system technologies developed, the TRL-9 technology will be transferred to the successful bidder.
- xxiv. The successful bidder shall comply with all applicable laws (including without limitation labor laws, insurance laws, etc.) while providing the services.
- xxv. All clauses of the EoI shall mutatis mutandis apply to consortium members of the successful bidder to the extent of their scope of work.
- xxvi. Subcontracting of this contract as a whole is not allowed.
- xxvii. In case of any dispute on any matter related to the project during the course of its implementation, the decision of the Secretary, MeitY shall be final and binding.

### 9.2. Instructions for Consortium

Bidder can form consortium with the partners to leverage the expertise of the partners – Design/Fabrication/Sales or any other relevant expertise required to manufacture and supply indigenous color Doppler ultrasound scanner.

- 1. All members in the consortium should be registered legal entity in India.
- 2. At least one member of consortium should meet the turnover, project experience mentioned in Annexure A.
- 3. The lead bidder should be liable for the entire scope of work and risks involved thereof (the liability should be for the entire value of the contract).
- 4. The non-lead bidders should be liable for the scope of work for which they are responsible along with the lead bidder (Liability should be limited to the value of the scope of work; while the lead bidder still carries the liability for the entire scope of work.)
- 5. The maximum number of partners in the consortium shall not exceed 3.
- 6. Any change in the consortium member at a later date would not be allowed without prior permission of NIELIT Calicut for cases where the consortium has benefited from the non-lead bidders credentials/ experience.
- 7. Member of the one consortium cannot be part of any other consortium for the bidding.

### 9.3. Conflict of Interest

- 1. The bidder must specifically indicate if there is any conflict of interest arising as a result of any share or investment of the **NIELIT Calicut** or any consortium partner.
  - 1.1 If there is a conflict of interest, the bidder must mention such conflict of interest in their bid for evaluation by NIELIT Calicut and if requested by NIELIT Calicut, give such undertaking as may be required by NIELIT Calicut to mitigate any adverse impact of such conflict on the project.
- 2. The bidder must specifically indicate if there is any conflict of interest arising if any staff/official who may be involved in the preparation, negotiation, management or enforcement of the contract has any private interest relevant to the proposal. If there is a conflict of interest, the bidder must give undertaking, indemnifying NIELIT Calicut and confirming that the existence of any such staff/official will not affect the project.

### 9.4. Inspection, Quality Control and Audit

The selected bidder shall, whenever required, furnish all relevant information, records, and data to auditors and/or inspecting officials of NIELIT Calicut and or any authority designated by NIELIT Calicut. NIELIT Calicut reserves the right to call for any relevant material information/report which would help it in arriving at a decision.

### 9.5. Manage Risks

- 1. The successful bidder shall identify and bear all the risks associated with Development, Implementation, and Support & Maintenance for supply of indigenous color Doppler ultrasound scanner machines.
- 2. NIELIT Calicut shall not compensate for any losses if any incurred by the successful bidder during entire contract period.

### 9.6. Disqualification

- i. The proposal is liable to be disqualified in the following cases or in case bidder fails to meet the bidding requirements as indicated in this EoI:
- ii. Proposal not submitted in accordance with the procedure and formats prescribed in this document or treated as non-conforming proposal.
- iii. During validity of the proposal, or its extended period, if any, the bidder varies its quoted prices.
- iv. Bidder"s proposal is conditional and has deviations from the terms and conditions of EoI.
- v. Proposal is received in incomplete form.
- vi. Proposal is received after due date and time.
- vii. Proposal is not accompanied by all the requisite documents
- viii. Information submitted in bid proposal is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract or during the tenure of the contract including the extension period if any.
- ix. Bidder tries to influence the proposal evaluation process by unlawful/corrupt/fraudulent means at any point of time during the bid process.
- x. In case any one party submits multiple proposals or if common interests are found in two or more bidders, the bidders are likely to be disqualified, unless additional proposals/bidders are withdrawn upon notice immediately.

### 9.7. 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 the case of Gross Negligence or Willful Misconduct on the part of the successful bidder or on the part of any person acting on behalf of the successful bidder executing the work or in carrying out the Services, the successful bidder, with respect to damage caused by the successful bidder including to property and/or assets of NIELIT Calicut or its stakeholders shall regardless of anything contained herein, not be liable for any direct loss or damage that exceeds (A) the Support Amount or (B) the proceeds the Selected Agency may be entitled to receive from any insurance maintained by the Selected Agency to cover such a liability, whichever of (A) or (B) is higher.
- iii. This limitation of liability slated in this Clause, shall not affect the successful bidder"s liability, if any, for damage by successful bidder to a Third Party's real property, tangible personal property or bodily injury or death caused by the successful bidder or any person acting on behalf of the successful bidder in executing the work or in carrying out the Services and shall also not affect indemnity provisions under clause 9.8 below.

### 9.8. Indemnify

The selected bidder must indemnify NIELIT Calicut and its stakeholders against all third party claims of intellectual property rights infringement including infringement of patent, trademark/copyright or industrial design rights arising from the use of the services, designs, codes, chips etc. and related services or any part thereof. NIELIT Calicut and its stakeholders stand indemnified from any claims that the hired manpower / bidder vendor manpower may opt to have towards the discharge of their duties in the fulfillment of the contract. NIELIT Calicut and its stakeholders also stand indemnified from any compensation arising out of accidental loss of life or injury sustained by the hired manpower / bidder manpower while discharging their duty towards fulfillment of the contract.

### 9.9. Termination for Default

NIELIT Calicut may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the bidder, terminate the contract in whole or part: if the bidder fails to deliver any or all of the systems within the period(s) specified in the Contract, or within any extension thereof granted by the NIELIT Calicut pursuant to conditions of contract or if the bidder fails to perform any other obligation(s) under the Contract. In the event NIELIT Calicut terminates the Contract in whole or in part.

### 9.10. Termination for Insolvency

NIELIT Calicut may at any time terminate the contract by giving four weeks written notice to the selected bidder, without any compensation to the selected bidder, if the selected bidder becomes bankrupt or otherwise insolvent or a bankruptcy or insolvency etc. proceeding is initiated against the successful bidder.

### 9.11. Force Majeure

If at any time, during the continuance of the contract, the performance in whole or in part by either party of any obligation under the contract is prevented or delayed by reasons of any war, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts, acts of God (hereinafter referred to as "events") neither party shall, by reason of such event, be entitled to terminate the contract, nor shall either party have any claim for damages against the other in respect of such non-performance or delay, provided the performance and/or delivery is resumed as soon as practicable after such event has come to an end or ceased to exist. The decision of NIELIT Calicut as to whether the performance or delivery has so resumed or not, shall be final and conclusive, provided further, that if the performance in whole or in part or any obligation under the contract is prevented or delayed by reason of any such event for a period exceeding 30 days, the NIELIT Calicut may at its option, terminate the contract without any obligation to compensate.

### 9.12. Governing Law and Disputes

The contract shall be interpreted in accordance with the laws of the Government of India.

All disputes or differences whatsoever arising between the parties out of or in connection with this contract or in discharge of any obligation arising out of the Contract (whether during the progress of work or after completion of such work and whether before or after the termination of this contract, abandonment or breach of this contract), shall be settled amicably. If however, the parties are not able to solve them amicably, either party (NIELIT Calicut or bidder), give written notice to other party clearly setting out there in specific dispute(s) and/or difference(s) and shall be referred to a sole arbitrator mutually agreed upon, and the award made in pursuance thereof shall be binding on the parties. In the absence of consensus about the single arbitrator, the dispute may be referred to joint arbitrator; one to be nominated by each party and the said arbitrators shall nominate a presiding arbitrator, before commencing the arbitration proceedings. The arbitration shall be settled in accordance with the applicable Indian Laws. Any appeal will be subject to the exclusive jurisdiction of courts at Mumbai. The bidder shall continue work under the Contract during the arbitration proceedings unless otherwise directed by the NIELIT Calicut or unless the matter is such that the work cannot possibly be continued until the decision of the arbitrator is obtained. Arbitration proceeding shall be held at Cochin, India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be in English. In the event of a dispute or a difference of any nature whatsoever between the parties during the course of performance of respective obligations arising out of this Agreement, the parties agree to refer the matter to the Heads of the Institutions to resolve the disputes keeping in view the best interest of the Parties and in keeping with the spirit of performance of this Agreement. If the matter still remains unresolved, then the same may be referred to for arbitration under the Arbitration and Conciliation Act, 1996.

### **JURISDICTION**

The Parties to this Agreement hereby declare that the Courts in Cochin, Kerala alone are competent to deal with disputes, if any, arising out of this Agreement.

### 9.13. 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 EoI, NIELIT Calicut shall reject a Proposal 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, NIELIT Calicut shall, without prejudice to its any other rights or remedies, forfeit and appropriate the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre- estimated compensation and damages payable to the Authority for, inter alia, time, cost and effort of the Authority, in regard to the EoI, including consideration and evaluation of such bidder"s Proposal.

- b) Without prejudice to the rights of the NIELIT Calicut under Clause above and the rights and remedies which NIELIT Calicut may have under the Agreement, if a bidder, as the case may be, is found by the 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 execution of the Agreement, such bidder shall not be eligible to participate in any tender or EoI issued by NIELIT Calicut during a period of 2 years from the date such bidder, as the case may be, is found by NIELIT Calicut to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.
- c) For the purposes of this Section, the following terms shall have the meaning hereinafter respectively assigned to them:
- d) "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 NIELIT Calicut who is or has been associated in any manner, directly or indirectly with the Selection Process 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 NIELIT Calicut, 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 execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the Agreement, who at any time has been or is a legal, financial or technical consultant/ adviser of NIELIT Calicut in relation to any matter concerning the Project;
- e) "fraudulent practice" means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;
- f) "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;
- g) "undesirable practice" means (i) establishing contact with any person connected with or employed or engaged by NIELIT Calicut 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
- h) "Restrictive practice" means forming a cartel or arriving at any understanding or arrangement among bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.

### Annexure A - Eligibility Criteria

Sl.	Criteria	Documentary proof to be
No.		submitted
1.	An applicant (referred to as "bidder") shall be a Limited Liability Partnership registered under the LLP Act or a Company incorporated and registered in India under the Companies Act, 1956. Certification by chartered Accountant for minimum of Fifty one percent shareholding by Indian entities is to be furnished. The LLP/Company should be operational in India for at least last five financial years as of 31st March, 2021 as evidenced by the Certificate of Incorporation issued by the Registrar of Companies, India.	Documents in the format as mentioned in Annexure C7
2.	The bidder should have an annual turnover of <b>INR 3.0 crores</b> or more in each of the last three financial years ending 31st March 2021 as evidenced by the audited accounts of the company.  In case of consortium, at least one member of consortium should meet the turnover requirement.	Documents in the format as mentioned in Annexure C9
3.	The bidder should have a positive net worth for the last three financial years ending 31 <sup>st</sup> March 2021 as evidenced by the audited accounts of the company. Net worth is defined as sum of shareholders capital and Reserves & Surplus.	Documents in the format as mentioned in Annexure C9
4.	The bidder should have executed work related to design, manufacture, supply and maintenance during the last 5 financial years.  In case of consortium, at least one member of consortium should meet the experience requirement	Documents in the format as mentioned in Annexure C10
5.	The bidder should possess ISO 9000/9001 /13485 or equivalent certified.	Copy of valid certificates
6.	Firms/ Companies may enhance their qualifications/ competence by forming a Consortium with other firms/companies. It is clarified that in case of Consortium, the Lead Bidder, who shall submit the bid, shall be a firm established in India or a Company incorporated in India.	Copy of Power of Attorney with clear roles & responsibilities and defining joint and several liabilities and Consortium Agreement.
7.	The bidder (Single firm or Consortium) shall not have been blacklisted by or entangled in legal disputes with Central Government or any State Government Organization / Department PSU in India at the time of submission of the Bid.	Documents in the format as mentioned in Annexure C8.

8.	The Bidder should have adequate manpower to undertake this work.	Manpower strength i. Technical; ii. Non-technical at various levels to be furnished.
9.	The Bidder should have adequate inspection and Quality control facilities for this work.	The list of equipments available to be furnished.
10.	The Bidder should have service engineers to attend service calls for this unit.	The details of this are to be furnished.
11.	The Bidder should have well-established sales and marketing network.	The details of this are to be furnished.

The eligibility criteria for the start-up industries to participate in the bidding process are as follows:

Sl. No.	Criteria	Documentary proof to be submitted
1.	An applicant (referred to as "bidder") should satisfy the conditions for startups as per the Government of India norms.	Documents in the format as mentioned in Annexure C7. In addition, all the details
	An entity shall be considered as a Startup:	regarding the startup qualification need to be furnished.
	<ul> <li>Upto a period of ten years from the date of incorporation/ registration, if it is incorporated as a private limited company (as defined in the Companies Act, 2013) or registered as a partnership firm (registered under section 59 of the Partnership Act, 1932) or a limited liability partnership (under the Limited Liability Partnership Act, 2008) in India, or defined as per the extant norms notified by DIPP/Ministry of MSME.</li> <li>Turnover of the entity for any of the financial years since incorporation/ registration has not exceeded one hundred crore rupees.</li> <li>Entity is working towards innovation, development or improvement of products or processes or services, or if it is a scalable business model with a high potential of employment generation or wealth creation. Provided that an entity formed by splitting up or</li> </ul>	

	reconstruction of an existing business shall not be considered a 'Startup'.	
	Provided that such entity is not formed by splitting up, or reconstruction, of a business already in existence.  An entity shall cease to be a Startup on completion of ten years from the date of its incorporation/ registration or if its turnover for any previous year exceeds one hundred crore rupees.	
	Entity means- Private Limited Company (under The Companies Act, 2013) or a Registered Partnership Firm (under The Indian Partnership Act, 1932) or Limited Liability Partnership (under The Limited Liability Partnership Act, 2002)	
2.	Startup Industries should be registered under the institute of National importance/Deemed universities/startup initiative scheme by Govt. of India.	Documentary proofs need to be furnished.

At any point of time if practice for fraud start-up is found the agreement will terminate immediately and the necessary legal action will be rendered.

The bidder is required to download the EoI document from the website. The complete document is required to be signed on each page along with the company seal and submitted along with the prequalification bid.

#### Annexure B - Financial Bid Evaluation Criteria

The minimum one-time Transfer of Technology (ToT) Fee to be paid by the Bidder to NIELIT Calicut is INR 20.0 Lakhs (Rupees twenty Lakhs only). Any bids with ToT fee of less than INR 20.0 Lakhs shall be rejected.

A minimum royalty amount @ 4% of the Ex-works price of each machine is payable by the ToT partner. However, bidding on the royalty component is also encouraged.

The technology will be transferred on NON Exclusive basis to the bidder who quotes the highest ToT fee and the royalty amount. However, the authority may consider transferring the technology also to the other bidders on NON Exclusive basis who match the ToT Fee and the royalty component of the highest bidder. If bidders are not quoted on the royalty component it is assumed that the bidders are accepted to pay the royalty amount @4% of the Ex-works price of each machine.

The ToT fee waiver is applicable to startup industries who qualify the eligibility criteria listed in Annexure-A. However, the startup industries need to provide an agreement stating that the ToT fee will be paid after the successful rollout of 20 machines to the market.

### **Annexure C - Bid formats**

### **C1 Request for Clarifications**

Bidders requiring specific points of clarification may communicate with NIELIT Calicut during the specified period using the following format:

bidder's Request for Clarification					
Name of the Organizat	ion				
Representative Name					
Position / Designation					
Email Address					
Contact Details N		lob:	Landline:		
<b>Clarifications Reques</b>	Clarifications Requested				
Sl. No EoI Page No – Section		Content of the EoI	Points of Clarification		
Sub-section					

Yours faithfully,

Designated

Contact Person Company name Designation

Company Seal

## **C2 Bid Security Declaration**

<Letterhead of the bidder>

Bid Securing Declaration Form
Dated:
To, Purchase Officer, NIELIT Calicut, NIT Campus PO, Calicut 673601.
Sir, I, the undersigned, declare that:
1. I am duly authorised to submit bid and undertakings in response to your tender No
2. I understand that the bidders are required to submit Bid Security of the prescribed amount, while submitting bids in response to tender enquiries of the NIELIT Calicut.
3. As an alternative to the Bid Security, I hereby declare that my firm, which is submitting the current bid, will be suspended for the period of time specified in the request for bid document or for a period of three years if no such period of time is specified in the request for bid document, from being eligible to submit bids for contracts with NIELIT Calicut,  i. if we withdraw or modify the bid during the period of validity (including the extended period of validity)
or
ii. If we fail to sign the contract, or to submit the performance security before the deadline prescribed in the request for bid document or in the communication sent by NIELIT Calicut.
Signature with seal:
Name:
Designation
Name of the firm

#### **C3** Authorization Letter

Duly authorized to sign the Tender Response for and on behalf of:

(Name and Address of Company) (Seal/Stamp of bidder)

Witness Signature:

Witness Name:

Witness Address:

#### CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, <representative *name*>, the Company Secretary of <*name of the organization*>, certify that <*Representative name*>who signed the above Bid is authorized to do so and bind the company by authority of its board/ governing body.

Date: Name:

Designation:

Signature: (Company Seal)

**Note**: Authorized signatory should be an employee of the bidder organization and should have been authorized vide a board resolution, authorizing him/her to sign/execute the proposal as a binding document and also to execute all relevant agreements forming part of EoI. Copy of board resolution should be provided.

#### **C4 Litigation Impact Statement**

<Company letter head>

<Date>

<Address>

## Ref: EoI for TECHNOLOGY TRANSFER AND MANUFACTURING OF INDIGENOUS CPOLR DOPPLER ULTRASOUND SCANNER

Dear Sir,

We have read and understood the contents of the Expression of Interest and pursuant to this hereby confirm that we continue to satisfy the eligibility criteria laid out at the time of short-listing us to participate in the bidding process to EoI for TECHNOLOGY TRANSFER AND MANUFACTURING OF INDIGENOUS COLOR DOPPLER ULTRASOUND SCANNER. There are no pending litigations in any court of law, which are likely to have a materially adverse impact on our ability to deliver under this project, or to pay our debts as they fall due or on our ability to enter into any of the transactions contained in or contemplated in respect of the technology transfer and manufacturing of INDIGENOUS COLOR DOPPLER ULTRASOUND SCANNER Systems.

<Signature> <Designation>

Duly authorized to sign the EoI Response for and on behalf of: Sincerely,

Company Seal

Name

Designation

Signature

Date

<Name and Address of Company>

Seal/Stamp of the Company

#### C5 Bid Cover Letter

<Company letter head>

<Date>

<Address>

Dear Sir,

## Ref: EoI for TECHNOLOGY TRANSFER AND MANUFACTURING INDIGENOUS COLOR DOPPLER ULTRASOUND SCANNER

Having examined the EoI, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the professional services as required and outlined in the EoI for Technology Transfer and Manufacturing of INDIGENOUS COLOR DOPPLER ULTRASOUND SCANNER systems.

We attach hereto the response as required by the EoI, which constitutes our proposal. 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 NIELIT Calicut is 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 the corporation 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 agreement during the project, if selected to do so. We agree for unconditional acceptance of all the terms and conditions set out in the EoI document and also agree to abide by this tender response from the date fixed for bid opening.

We hereby declare that in case the agreement is awarded to us, we shall submit the bank guarantee in the form prescribed format in the EoI.

We agree that NIELIT Calicut is not bound to accept any tender response that they may receive. We also agree that NIELIT Calicut reserves the right in absolute sense to reject all or any of the products/ services specified in the tender response.

It is hereby confirmed that I/We are 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.

The following persons will be the authorized representatives of the company for all the future correspondence till the completion of the bidding process, between NIELIT Calicut and our organization.

Details	Primary Contact	Secondary
Name		
Designation		
Address		
Landline No.		
Mobile No.		
Fax No.		
Email Address		

We understand that it will be the responsibility of our organization to keep NIELIT Calicut informed of any changes in this list of authorized persons and we fully understand that NIELIT Calicut shall not be responsible for non-receipt or non-delivery of any communication and/or any missing communication in the event reasonable prior notice of any change in the authorized person(s) of the company is not provided to NIELIT Calicut.

Sincerely, Company Seal

Name Designation Signature Date

<Name and Address of Company> Seal/Stamp of the Company

45

#### **C6 Conflict of Interest**

<Company letter head>

<Date>

<Address>

Sir,

## **Sub: Undertaking on Conflict of Interest regarding Technology Transfer and Manufacturing of INDIGENOUS COLOR DOPPLER ULTRASOUND SCANNER**

I/We do hereby undertake that there is absence of, actual or potential conflict of interest on the part of the bidder or any prospective subcontractor due to prior, current, or proposed contracts, engagements, or affiliations with NIELIT Calicut.

I/We also confirm that there are no potential elements (time-frame for service delivery, resource, financial or other) that would adversely impact our ability to complete the requirements as given in the EoI.

We undertake and agree to indemnify and hold NIELIT Calicut harmless against all claims, losses, damages, costs, expenses, proceeding fees of legal advisors (on a reimbursement basis) and fees of other professionals incurred (in the case of legal fees and fees of professionals, reasonably) by NIELIT Calicut and/or its representatives, if due to any such conflict any loss or damage is suffered by NIELIT Calicut.

<Signature> <Designation>

Duly authorized to sign the EoI Response for and on behalf of: Sincerely,

Company Seal Name Designation Signature Date

<Name and Address of Company Seal/Stamp of the Company

#### C7 Details of bidder Organization

To be filled separately by consortium members

<Company Letter Head>

<b>Details of the bidder Organization</b>	
Name	
Nature of the legal status in India	
Nature of business in India	
Date of Incorporation	
Date of Commencement of Business	
ROC Reference No	
Address of the Headquarters	
Address of the Registered Office in India	
Address of offices in India	

#### Other relevant information

Name of the contract person:

Address:

Telephone:

Fax:

E-mail:

#### Permanent Account Number:

#### **GSTN**

The bidder profile, giving details of current activities and management/personnel structure including evidence of incorporation:

The in-house expertise available in the following to be furnished:

- 1. Medical electronics
- 2. Medical imaging technology
- 3. Electronic hardware design
- 4.PCB design
- 5. Hardware testing
- 6.Electronic system integration
- 7. Industrial engineering design

The list of technical collaborators on similar technology is to be furnished.

**Mandatory Supporting Documents:** 

- a. Certificate of Incorporation from Registrar Of Companies (ROC)
- b. Relevant sections of Memorandum of Association of the company or filings to the stock exchanges to indicate the nature of business of the company
- c. Certification on commencement of business
- d. Copy of board resolution authorizing the bid signatory along with power of attorney

### CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, <representative *name*>, the Company Secretary of <*name of the organization*>, certify that <*Representative name*>who signed the above Bid is authorized to do so and bind the company by authority of its board/ governing body.

Date:
Name:
Designation:
Signature:
(Company Seal)

#### C8 Undertaking of not being Black Listed

To be submitted on the Letterhead of the bidder)
<Date>

<Address>

Dear Sir,

We confirm that our company is not blacklisted in any manner whatsoever by MeitY, any State Government, Central Government or any other Public sector undertaking or a Corporation or any other Autonomous organization of Central or State Government as on Bid submission date. Further we confirm that, our company is not convicted of an offence (a) under the Prevention of Corruption Act, 1988; or (b) the Indian Penal Code or any other law for the time being in force, for causing any loss of life or property or causing a threat to public health as part of execution of a public procurement contract, during last 3 years from date of submission of this bid. It is hereby confirmed that I/We are 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.

Sincerely,

<Signature>

<Company Seal>

Name:

Designation:

Name and Address of Company:

#### C9 Financial Information of the bidder

To be filled separately by consortium members

<Date>

Financial Information			
	2018-19	2019-20	2020-21
Turnover in cores			
Profit Before Tax (in			
INR crores)			
Net Worth (in INR			
crores)			

Other Relevant Information

Mandatory Supporting Documents:

- a. Audited financial statements for each of the three financial years as mentioned above (Please include only the sections on P&L, revenue and the assets, not the entire balance sheet.)
- b. Certification by the company auditors supporting the revenue break-up

<Signature>

<Company Seal>

Name:

Designation:

Name and Address of Auditor:

#### C10 Bidder's Experience

To be filled separately by consortium members

### Bidder's experience in the last 5 financial years from the date of publishing of EoI

#### **Product development**

The previous experience of manufacturing products under the ToT/own internal development by the Bidder is preferred. Please furnish the details.

NIELIT Calicut would inspect the manufacturing facilities of the Bidder, and the decision of TOT committee would be final and binding on all the parties.

#### Products manufactured as regular activity

List of products manufactured as regular activity in last five years. Give the list of products with general specifications and the customers.

#### List of clients

List of PSUs/ Govt, customers- with the contact details

(Address, Telephone Number, and the name of contact person)

List of other important customers – with the contact details

(Address, Telephone Number, and the name of contact person)

#### **Supporting Documents**

bidders to submit (a) Work Order/Purchase Order/Contract + Completion Certificates from the client; OR (b) Work Order/Purchase Order/Contract + Certificate of Completion by the Statutory Auditor; (c) OR Work Order/Purchase Order/Contract + Phase Completion Certificate for Projects for which Development is complete The above supporting document(s) should clearly specify the value of the purchase order

The above document(s) should be duly certified by authorized signatory.

Please use separate forms for multiple citations.

<On behalf of bidder Name>
Authorized Signature [In full and initials]:
Name and Title of Signatory:
Name of Firm: Address:
Seal/Stamp of bidder:

#### C11 Technical Proposal Cover Letter

<Letterhead of the bidder>

<Date>

<Address>

## Ref: EoI for Technology Transfer and Manufacturing of INDIGENOUS COLOR DOPPLER ULTRASOUND SCANNERS

Dear Sir,

Having examined the bid document, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to bid for Technology Transfer and Manufacturing of INDIGENOUS COLOR DOPPLER ULTRASOUND SCANNERs as required and outlined in the EoI.

We attach hereto the bid Technical response as required by the bid document, which constitutes our proposal.

We undertake, if our proposal is accepted, to provide all the services put forward in this EoI or such features as may subsequently be mutually agreed between us and NIELIT Calicut or its appointed representatives.

We agree for unconditional acceptance of all the terms and conditions in the bid document and also agree to abide by this bid response till the expiry of the Bid Validity Period. Until a formal contract is prepared and executed, this bid response (along with any changes agreed by us), together with your written acceptance thereof in your notification of award, shall constitute a binding contract between us, NIELIT Calicut.

We confirm that the information contained in this proposal or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to NIELIT Calicut is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead NIELIT Calicut as to any material fact.

We agree that you are not bound to accept any bid response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ service specified in the bid response without assigning any reason whatsoever.

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

Dated this ...... Day of ...... 20....

(Signature) (In the capacity of) Duly authorized to sign the Bid Response for and on behalf of:

(Name and Address of Company) Seal/Stamp of bidder

#### CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, certify that I am .....<br/>
Name of the Respondent>.....<br/>
who signed the above response is authorized to bind the corporation by authority of its governing body.

Date
(Seal here)

Signature

#### C12 Financial Proposal Cover Letter and Bid Format

<Letterhead of the bidder>

<Date>

<Address>

## Ref: EoI for Technology Transfer and Manufacturing of INDIGENOUS COLOR DOPPLER ULTRASOUND SCANNER

Dear Sir,

Having examined the Bid Document, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to undertake Technology Transfer and Manufacturing of INDIGENOUS COLOR DOPPLER ULTRASOUND SCANNER. Following is our quotation summarizing our Commercial proposal.

We provide hereto the Commercial proposal as required by the Bid document, which constitutes our proposal.

Particulars	Indian Rupees in	figures	Rupees in words
Technology transfer fees to be paid to NIELIT Calicut			
Royalty: @ 4% of Ex-work Price of each machine to be paid to NIELIT Calicut			LIT Calicut
Validity of the offer – Should be m	inimum 90 days	Days:	
from the due date of submission or	f bids.		

We undertake, if our proposal is accepted, to provide all the services to implement the solution as put forward in the EoI or such modified requirements as may subsequently be mutually agreed between us and NIELIT calicut or its appointed representatives.

If our proposal is accepted, we will obtain a Bank Guarantee in the format given in the bid document issued by any Nationalized Banks or scheduled bank in India, acceptable to NIELIT Calicut for a sum as mentioned in Section 6.2 & 6.3

We agree for unconditional acceptance of all the terms and conditions in the bid document and also agree to abide by this bid response for a period of contract from the date fixed for opening the Commercial bid and it shall remain binding upon us, until within this period a formal agreement is prepared and executed, this bid response, together with your written acceptance thereof in your notification of award, shall constitute a binding agreement between us.

We confirm that the information contained in this proposal or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to NIELIT Calicut is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead MeitY as to any material fact.

We also agree that you reserve the right in absolute sense to reject all or any if the products/ service specified in the bid response without assigning any reason whatsoever.

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

Dated this Day of <b>20</b>
(Signature) (In the capacity of) Duly authorized to sign the Bid Response for and on behalf of:
(Name and Address of Company) Seal/Stamp of bidder
CERTIFICATE AS TO AUTHORISED SIGNATORIES
I, certify that I am designation> of the Company Name>, and that Name of the Respondent> who signed the above response is authorized to bind the corporation by authority of its governing body.
Signature:
Date:

#### C13 Bank Guarantee

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

Whereas, <<name of the supplier and address>> (hereinafter called "the bidder") has undertaken, in pursuance of contract no. <Insert Contract No.> dated. <Date> to undertake <<name of the assignment>> to NIELIT Calicut (hereinafter called "the beneficiary")

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 the bidder 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.

## C14 Pre-Qualification Bid Format

Sl. No	Section Heading	Details
1	Bid Cover Letter	Annexure C.5
2	Authorization Letter	Annexure C.3
3	Bid Security Declaration and tender Fees	Annexure C.2
4	Conflict of Interest	Annexure C.6
5	Litigation Impact Statement	Annexure C.4
6	Details Of Bidder Organisation	Annexure C.7
7	Bidders Experience	Annexure C.10
8	Undertaking Of Not Being Black Listed	Annexure C.8
9	Financial Information Of The Bidder	Annexure C.9
10	Pre-Qualification Criteria	Annexure A
11	Signed copy of EoI	

## C15 Technical Bid Format

Sl. No.	Section Heading	Details
1	Technical Proposal Cover Letter	Annexure C.11
2	Technical Proposal (with all relevant	Section 4.3
	documents)	

## **C16 Financial Bid Format**

Sl. No.	Section Heading	Details
1	Financial Proposal Cover Letter and Bid	Annexure C.12
	Format	
	Section Heading	Details

### Annexure-D - Indigenous color Doppler scanner brochure



# Indigenous color Doppler ultrasound scanner with PNDT Compliance

#### INTRODUCTION

The Indigenous color Doppler ultrasound scanner system developed by NIELIT Calicut supports up to 128-channels. The indigenous ultrasound scanner system is architected in such a way that the frontend is based on developed indigenous hardware and the backend is an Intel Core-i5 based PC. The hardware and software technologies required for the system prototype are designed and developed indigenously. A 128-channel ultrasound transceiver, power supply, and highend FPGA (Xilinx-Kintex-7 XC410T) based signal processing boards are designed and developed in-house and integrated. The necessary ultrasound imaging and the human-machine interface (HMI) software's are developed and ported into the system prototype.

#### LAB MODEL SYSTEM PROTOTYPE



#### **SYSTEM FEATURES**

- Phased/Linear/Convex array probe system with 32/64/128 Electronic independent channels.
- 32/64/128 Phased and Linear array transmit and receive beam forming
- 256 gray shades for sharp contrast resolutions (B-mode).
- M-Mode and Color Doppler Mode (Spectral and CFM)
- Phased/Curvilinear/Linear Array imaging.
- Automated Gain control for additional level of flexibility to image quality control.
- Real time 2D imaging.
- Cine loop memory greater than 100 frames.
- Frame grabber facility for post analysis/processing.
- · Frame rate: 30 FPS or more.
- Provision for independent waveform transmission along each transmit channel
- Pre-Natal Diagnostic Techniques (PNDT) Registration facility
- · Thumb Finger print (Aadhar) data correction
- · Auto PNDT Forms availability
- Filled PNDT Forms to PNDT Server
- PC or Laptop Interface
- · Inbuilt Thermal printer
- Touch based control and display panel