भारत सरकार/ GOVERNMENT OF INDIA
अंतरिक्ष विभाग/DEPARTMENT OF SPACE
यू. आर. राव उपग्रह केंद्र/U.R.RAO SATELLITE CENTRE
बेंगलूरु/BENGALURU – 560 017
फोन/Phone: +91-080-2508 4370, Fax: +91-080-2520 5283 / 84
संदर्भ.सं/**Ref No**: यू.आर.एस.सी/**URSC/PUR/ISSQ-2022-0-54915/EoI-01/2022-23**   27.09.2022

इच्छा की अभिव्यक्ति हेतु आमंत्रण [ईओआई]
INVITATION FOR EXPRESSION OF INTEREST [EOI]

A. Ada, C/C++, Java, fortran में लिखित सॉफ्टवेयर का स्वतंत्र जाँच तथा वेधता (IV&V) / Independent verification and validation (IV&V) of software written in Ada, C/C++, Java, fortran,

B. IV&V गतिविधियों की सहायता हेतु सॉफ्टवेयर का विकास / software development to support IV&V activities and

C. VHDL कोड का IVaV / IV&V of VHDL Code.

यू.आर. राव उपग्रह केंद्र (यू.आर.एस.सी.), भारतीय उपग्रहों की अभिकल्पना, विकास, संविरचन और परीक्षण के लिए **भारत सरकार के अंतरिक्ष विभाग के तहत भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो)** का अग्रणी केंद्र है। अंतरिक्षयान के प्रापण की अनिवार्यता के परिणामस्वरूप , केंद्र,भारतीय राष्ट्रीय उपग्रह से संबंधित अत्याधुनिक प्रैद्योगिकियों के विकास में जुडा हुआ है।

U.R.Rao Satellite Centre [URSC] of Indian Space Research Organisation [ISRO] under Department of Space, Government of India is the lead Centre of ISRO for Design, Development, Fabrication and Testing of all Indian made satellites. As a sequel to its mandate of spacecraft realisation, the Centre is engaged in the development of cutting-edge technologies of relevance to its Indian National Satellite.

यू.आर.एस.सी, भारतीय उद्योग/ विक्रेता, जो निम्न गतिविधियों के निष्पादन के इच्छुक हैं. से इच्छा की अभिव्यक्ति [EoI] को आमंत्रित करता है।

URSC invites the Expression of Interest [EoI] from Indian Industries/Vendors who are interested in performing following activities:

A. Ada, C/C++, Java, fortran में लिखित सॉफ्टवेयर (IV&V)

IV&V for software written in Ada, C/C++, java, fortran.

B. IV&V गतिविधियों की सहायता हेतु सॉफ्टवेयर का विकास
software development to support IV&V activities

C. VHDL कोड का IVaV / IV&V of VHDL Code.

ईओआई दस्तावेज में संक्षिप्त विवरण उपलब्ध है जिसे हमारे वेबसाईट www.isro.gov.in निविदा सूचना के अंतर्गत) तथा www.eprocure.gov.in (केंद्रीय लोक क्रय पोर्टल) से डाउनलोड किया जा सकता है।

Brief description is available in the EoI document which can be downloaded from our website www.isro.gov.in (under 'Tender Notices') & www.eprocure.gov.in (Central Public Procurement Portal).

इच्छुक विक्रेता जिन्हें पर्याप्त जानकारी, अनुभव तथा वित्तीय पृष्ठभूमि है, उन विक्रेताओं से , यू.आर.एस.सी, बेंगलूरु के उपरोक्त गतिविधियों के लिए अपनी इच्छा अभिव्यक्त करने हेतु आमंत्रित किया जाता है।

Interested Vendors having sufficient know-how, experience and financial background are invited to express their interest to carry out above mentioned activities for URSC, Bengaluru.

इच्छा की अभिव्यक्ति के साथ, विक्रेता को निम्न सूचना को विस्तृत रूप में भरना होगा।

Along with response to Expression of Interest, Vendor should furnish the following information also in detail:

1.	पंजीकृत पता के साथ फोन, फैक्स, ई-मेल, वेब आदि Registered address with Phone, Fax, Email, Web etc.
2.	कंपनी की स्थिति (सरकारी उपक्रम/ स्वामित्व/भागीदारी/निजी/ लिमिटेड आदि) सहित स्वामी, भागीदार, बोर्ड के निदेशक आदि के नाम व पता Company Status (PSU / Proprietary / Partnership / Private Ltd., etc.) with Name and Address of Proprietor, Partners, Board of Directors etc.
3.	सहयोगी: (क) भारतीय (ख) विदेशी ,व्यापार की भागीदारिता का प्रतिशत (यदि कोई हो तो) Associates: (a) Indian (b) Foreign. Percentage of business partnership (if any).
4.	प्रमुख उपभोक्ताओं की सूची के साथ पूरा पता और उनके संपर्क व्यक्ति List of Major Customers with full address and their Contact Persons.
5.	सारणी- II तथा III में उल्लिखित गतिविधियों को पूरा करने के लिए अवसंरचना सुविधा का स्वामित्व / उपलब्धता के ब्यौरे Details of Infrastructure Facilities owned / available to carry out activities mentioned Table – II and III.
6.	सारणी- II में उल्लिखित गतिविधियों को पूरा करने के लिए किए अनुकरण किए जाने वाली प्रक्रिया का संक्षिप्त विवरण आवश्यक विशेषज्ञता सहित साधन आधारित IV&V पर विचार किया जाएगा। A brief process that will be followed to carry out activities mentioned in table-II Tools based IV&V will be preferred with required expertise.
7.	नवीनतम वार्षिक रिपोर्ट की प्रति के साथ पिछले पाँच वर्षों की कुल बिक्री तथा पूँजी Capital and Turnover for last five years with copy of latest Annual Report.

8.	विक्रेता के बैंक का नाम व पता तथा लेखा का विवरण
	Name and Address of Vendor's Bankers and account details.
9.	GST पंजीकरण तथा पैन संख्या
	GST Registration and PAN Number.
10.	व्यवसाय के प्रकार को सूचित करें।
	Nature of Business to be defined
11.	कर्मचारियों की संख्या के साथ संगठनात्मक संरचना।
	Organizational structure along with number of employee.
12.	पूर्व-ईओआई बैठक की दिनांक से 5 दिन पहले पूर्व-ईओआई पूछताछ यू.आर.एस.सी तक पहुँच जाना चाहिए / Pre-EOI Queries from vendors to reach URSC 5 days prior to date Pre-EoI meeting.
13.	कोई अन्य सूचना जो विक्रेता संगत मानते हैं
	Any other information Vendor consider relevant
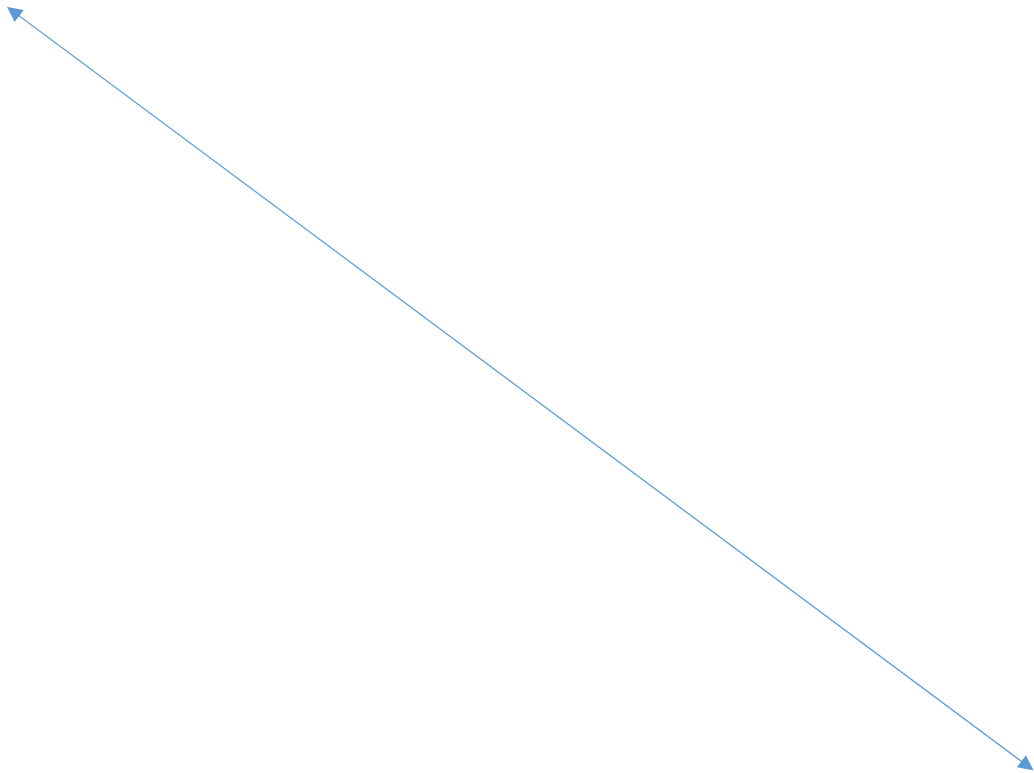
पूर्व ई.ओ.आई. बैठक/Pre-EoI Meeting:

ईओआई के दस्तावेज हेतु हमारे निमंत्रण को अच्छी तरह समझने के लिए यू.आर.राव उपग्रह केंद्र द्वारा एक पूर्व ईओआई बैठक का आयोजन किया गया है। संदेह का निवारण, यदि कोई हो तो, तथा उपरोक्त उल्लिखित गतिविधियों को पूरा करने के लिए अन्य सहायक तकनीक विवरण।

A Pre-EoI meeting is arranged by U.R.Rao Satellite Centre, Bengaluru in order to have a better understanding of our Invitation to EoI document, clarify doubts if any, and other allied technical details for carrying out the activities mentioned above.

इच्छुक विक्रेता(ओं) से एतद्द्वारा अनुरोध किया जाता है कि नीचे उल्लिखित दिनांक, समय और स्थान पर पूर्व ई.ओ.आई. बैठक में भाग लें

The interested Vendor[s] are hereby requested to take part in the Pre-EoI meeting on the Date, Time and Venue mentioned here below:

पूर्व ई.ओ.आई. बैठक की तारीख
Date of Pre-EoI Meeting   : **10th अक्तूबर, 2022(सोमवार)**
                                                10th October, 2022(Monday)

समय व स्थान/Time & Venue   : **10.00 बजे भा.मा.स / IST**
                                                10.00 Hours/ IST
                                                यू.आर. राव उपग्रह केंद्र/U.R.RAO Satellite Centre
                                                एच.ए.एल. एयरपोर्ट रोड/HAL Airport Road
                                                विमानपुरा पोस्ट/Vimanapura Post
                                                बेंगलूरू/Bengaluru-560017

पूर्व इओआई बैठक के लिए केंद्रीय बिंदु
Focal Point for Pre-EoI Meeting   : स्मिता अनिरुद्ध गोखले/ **SmitaAnirudhaGokhale**
                                                जी.एस.क्यू.डी,**GSQD**/आर.क्यू.एस.जी,**RQSG**
                                                एस.आर.क्यू.ए.**SRQA**
                                                संपर्क सं./ **Contact No. 080 25083653**
                                                ई-मेल/ **E-mail: smitadeo@ursc.gov.in**

इच्छुक विक्रेता, पूर्व-ईओआई बैठक में भाग लेने वाले प्रतिनिधियों का विवरण, कृपया मुख्य केंद्रीय बिंदु को पहले ही सूचित कर दें ताकि सुरक्षा की अनुमति ली जा सके। विक्रेता के प्रतिनिधी द्वारा पूर्व-ईओआई बैठक में भाग लेने हेतु एक "प्राधिकरण पत्र " लाना होगा। एक बोलीकर्ता / कंपनी/ संगठन, के लिए दो(2) सदस्य प्रतिनिधी एक तकनीकी तथा वित्तीय सीमित होगे।

Interested Vendor[s] may please provide the details of the representative[s] taking part in the Pre-EoI meeting well in advance to the Focal Point in order to arrange for Security clearance. Vendor representative shall carry an "Authorization Letter" for attending the Pre-EoI meeting. Member Representative limited two (2) per bidder/ company/organisation, one technical and one financial.

कृपया नोट करें कि, "पूर्व-ई.ओ.ओई. बैठक का पूर्वन/ स्थगन " का अनुरोध किसी भी कारणवश स्वीकार नहीं किया जाएगा।

Please note that request for "Pre-ponement/postponement of Pre-EoI meeting" will not be entertained under any circumstances.

इच्छुक विक्रेता, जो भाग लेना चाहते है, उन्हें स्वयं उपस्थित रहना होगा। यू.आर.एस.सी / इसरो द्वारा कोई परिवहन की व्यवस्था नहीं की जाएगी।

The Interested Vendor[s] who are participating are required to be present on their own. No transportation will be arranged by URSC/ISRO.

ईओआई के विवरण को प्रस्तुत करना **Submission of EOI Details**	
ईओआई के प्रस्तुति की अंतिम तिथि Last date for submission of EoI	**नवंबर 10, 2022 को 14.00 बजे** **November 10, 2022 at 14.00 Hrs.**
ईओआई को खोलने की तिथि Opening date of EoI	**नवंबर 11, 2022 को 10.00 बजे** **November 11, 2022 at 10.00 Hrs.**

उपरोक्त निर्दिष्ट दिनांक व समय से पहले, यू.आर.एस.सी के नीचे दिए गए पते पर, संपूर्ण प्रस्ताव प्राप्त हो जाना चाहिए।

Complete proposals must be received at URSC to the address given below, not later than the date and time specified above.

प्रधानर क्रय व भंडा ,
Head, Purchase & Stores
यू.आर. राव उपग्रह केंद्र/U.R.RAO Satellite Centre
पो.बो.सं. 1795,ओल्ड एयरपोर्ट रोड/ Post Box No. 1795, Old Airport Road
विमानपुरा पोस्ट/Vimanapura Post
बेंगलूरू/Bengaluru-560017 भारत/India
ई मेल/E-mail: pso_f@ursc.gov.in (for any clarification)

प्रस्ताव में संपर्क व्यक्ति ,उनका पदनाम ,उचित संपर्क संख्या और ई-मेल पता सम्मिलित होना चाहिए।
Proposal must also include the name of the point of contact, together with the designation, appropriate contact number and e-mail address.

इस प्रस्ताव को पूर्व –ईओआई अर्हता के रुप में पहल की गई है यू.आर.स.सी., सभी या ऐसे "इच्छा की अभिव्यक्ति " को बिना किसी कारण से, जो भी हो, स्वीकृत या अस्वीकृत करने का अधिकार को आरक्षित करता है।
This proposal is initiated as a Pre-EoI Qualification. URSC reserves the right to accept or reject all or any such "Expression of Interest" without assigning any reasons what so ever.

इस ईओआई से संबंधित परिशिष्ठ/शुद्धिपत्र, यदि कोई हो तो, उसे हमारे वेबसाईट www.isro.gov.in पर अपलोड किया जाएगा।
Addendum/Corrigendum, if any, to this EoI, shall be hosted at our website, www.isro.gov.in

Sd/-
प्रधान, क्रय व भंडार/ HEAD, PURCHASE & STORES

Government of India
Department of Space
UR RAO Satellite Centre [URSC]
HAL Airport Road, Vimanapura Post, Bengaluru – 560 017

Invitation for Expression of Interest [EoI]
For
Independent verification and validation [IV&V]of software, Software Development to Support IV&V activities

and

IV&V of VHDL

Sept 2022

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1. Modus Operandi

The Intending Vendors are advised to read the EoI documents, Terms and Conditions and other details carefully relating to the work contemplated for Independent verification and validation of software, software development to support IV&V activities and IV&V of VHDL Code. Vendors are expected to fully acquaint themselves as to all conditions and matters which may in anyway affect the work or cost thereof. The intending Vendor[s] shall mean One Single Vendor only and no consortium shall be allowed. The Vendor[s] shall be deemed to have known the nature, scope and magnitude of the work. Vendor should express their interest only if they consider themselves eligible and if they are in possession of all documents required as per the EoI. The Vendors are required to study EoI document and express their interest after carefully examining all instructions, eligibility criteria, forms, terms, standards and specifications as per the EoI document with full understanding of its implications.

If the Vendors are found ineligible after opening of the EoI, his EoI document shall become invalid *ipso facto*. EoI which are not in compliance with our EoI conditions shall be rejected, without assigning any reasons thereof.Failure to furnish all requisite information and/or documents shall result in repudiation of the EoI notwithstanding the foregoing, UR Rao Satellite Centre [URSC], Bengaluru reserves the right to assess the capability of the Vendor[s] to perform the Contract, keeping in view, the overall interest of URSC. In the event, the Vendor[s] capability and capacity are found to be unsatisfactory; URSC reserves the right to reject the EoI document, without assigning any reasons thereof.

Any negligence or omission or failure on the part of the Vendors in obtaining necessary information as stated above or in any other matter affecting the Vendors shall not relieve him from any risks or liabilities or the entire responsibility for completion of the activities mentioned in Table-II and Table-III, followed by the RFP/SOW document and clearance by URSC.

The requirements stated herein below are a minimum and URSC reserves the right to request for any additional information and also reserves the right to reject the EoI document of Vendors, if in the opinion of URSC, the qualification or data is incomplete or if the Vendors is found to be not qualified to satisfactorily perform the Contract. The Vendors shall bear all costs and expenses associated with preparation and submission of EoI document including post EoI clarifications, discussions, technical and other presentations and URSC shall in no case be responsible or liable for such costs, regardless of the outcome of the EoI process. The Vendors shall also not be entitled to claim any costs, charges and expenses incidental to or incurred by him through or in connection with the submission of the EoI or its consideration by URSC, even though URSC may elect to modify or withdraw the Invitation to EoI or not to accept the EoI. At any time prior to the deadline for submission of EoI, URSC may for any reason on its own initiative modify the EoI document by amendment. The amendment shall be notified in writing or by fax or e-mail to the Vendors or uploaded online on the website. URSC shall bear no responsibility or liability arising out of non-receipt of the same in time or otherwise. Notwithstanding the above, URSC may at its discretion extend the deadline for submission of EoI in order to afford reasonable time to Vendors to take into account the amendment in preparing the EoI. All the EoI must be

submitted before the time and date fixed for the receipt of EoI as set forth in the EoI document. URSC shall not be responsible for non-receipt of EoI due to any postal delays/loss of EoI documents in transit and delay due to courier, etc.and it shall be the sole responsibility of the Vendors to ensure delivery of the EoI within the time fixed. URSC reserves the right to accept or reject any of the EoI in full or part without assigning any reason thereof.

EoI received after stipulated time and date shall be rejected. The EoI documents shall be uploaded on the website i.e. www.isro.gov.in (&) www.eprocure.isro.gov.in. Interested Vendors may download the EoI document from website and submit their response to EoI. After successful completion of the EoI process, URSC may release an SOW based on the revisions in the specifications and other terms as may be agreed upon/felt necessary during the process of the EoI and EoI evaluation. URSC reserves the right to not to release an SOW as a sequel of this EoI.

In the event Vendor[s] request for EoI Documents by post, the postal envelope must be marked as "Request for EoI Documents". If the EoI opening date happens to be on an unidentified Holiday due to any reason, including Force Majeure, tender(s)/EoI shall be opened on the next working day. Vendors shall submit EoI document only in sealed envelopes, super-scribing the Tender Number and the due date of opening of the Tender. The EoI shall be complete in respect of all technical specifications, as per the EoI document. Failure to furnish all information as per the requirements of the EoI document and submission of EoI not substantially responsive to the EoI document shall render the EoI /Vendors liable for rejection. Any/all EoI by way of fax/e-mail shall not be accepted. The Vendor should provide along with their EoI document the Name and complete postal address of their Bankers. The Vendors need to get enrolled in the e-tender portal to access the tender and submit their offer online during RFP/SOW stage. Vendors need to have Digital Signature Certificate as detailed on URSC e-portal and valid email ID to register on the above portal.

1.1   **Methodology to quantify activities mentioned in table-II to be specified in details.**

2. EoI Objective

The purpose of this EoI is to invite proposals from the potential Vendors to carry out activities mentioned in Table II and III.EoI responses shall be submitted in softcopies besides hardcopies. Tables, compliance statements and required information shall be provided in MS Word (or) Excel for convenience.

3. Modes of Operation

Software and FPGA IV&V shall be carried out in different modes as mentioned in Table-I. Depending on infrastructure – tools, expertise, experience and willingness, vendors shall offer their services for activities/Tasks mentioned in

Table-II and III.**Vendors shall provide their proposal for one or more modes as per Table-I.**

Table-I

| Mode	Mode description	Responsibilities
Mode1	Code and documents are delivered to Vendor with Non-Disclosure Agreement (NDA). **All V&V activities are conducted in vendor's premises.**	Where activities are carried out at vendor premises it is the responsibility of vendor to provide working facility and resources including tools, systems with required OS & compiler to successfully carry out the work. Vendor shall provide list of software, that will be used to carry out activities (if any) with licence number. Any shortcoming in the automated tool shall be completed by manual method and shall be demonstrated.
Mode2	Dedicated working place is identified for vendor within URSC campus. Code and documents are delivered to vendor with NDA over Intranet.	All the resources including dedicated sitting place, system, required software tools shall be provided by URSC.
Mode3	Vendor is provided access to dedicated servers inside URSC campus over secure network. Code and documents are delivered to vendor with NDA through this network. All V&V activities are conducted in vendor's premises	All the resources including dedicated sitting place, system shall be provided by Vendor and tools will be hosted at URSC servers. Vendor to access tools and software for V&V over secured network.

4. Nature of Work

This section provides list of activities to be carried out by vendor. **Vendor is expected to provide detailed methodology with checkpoints based on the mode (mode detailsare provided in Table-I).**

Following Tableprovides list of activities and tasks to be carried out by vendor as part of IV&V for software in brief:

Table-II

Sl No.	Activities	Tasks
1.	Forward Traceability	FRD to SRS
		FRD / SRS to design Traceability
		Design to Code Traceability
		Database Traceability
		Traceability Report
2.	Backward Traceability	Requirements based test cases to Code traceability
		Unit Test Cases to Code traceability
		Code to Design traceability
		Design to Requirements traceability
		Database Traceability
		Requirements to FRD
		Traceability Report
3.	Code Inspection	Checklist Based Code Verification
4.	Unit Level Testing	Test Plan Generation
		Unit Test cases identification and generation based on MCDC, cyclomatic complexity and requirement.
		Test Result and path coverage Analysis
		Unit Level Test Report
5.	Software Integration Testing and safety test	Test plan generation
		Test Case generation
		Test Case Execution Generation
		Test Result Analysis
		Path Coverage Analysis
		Test Report
6.	Incremental V&V	Incremental traceability, code inspection, Unit Level

|		Testing and Integration testing.
		Incremental V&V Report
	Non-Conformance Management	Non-Conformance report generation
		Impact Analysis
		Non-Conformance and Impact Analysis Report
7.	Version Management	-
8.	Software development to support IV&V activities	-
9.	Technical Documentation	-
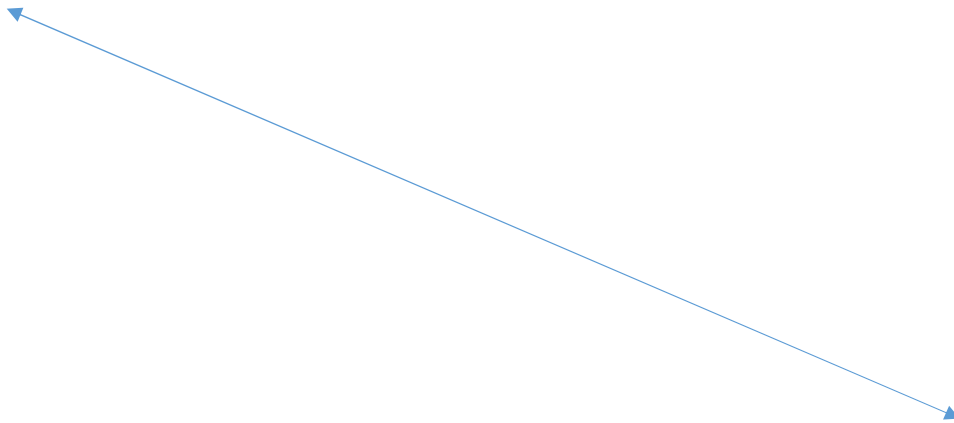
Following Tableprovides list of activities and tasks to be carried out by vendor as part of IV&V for VHDL Code in brief:

Table-III

Sl. No.	Activities	Tasks
1.	Forward Traceability	Requirements-specifications to design Traceability
		Design to HDL code Traceability
2.	Backward Traceability	Requirements based testbench& test vectors to HDL code traceability
		HDL Code to Design traceability
		Design to Requirements-specifications traceability
3.	Tool based Verification	Lint, clock domain crossing analysis, Formal
4.	Code Inspection	Checklist based code verification
5.	Functional simulation	Test Plan Generation
		Testbench generation
		Test cases identification and Execution
		Test Result analysis, Functional and code coverage analysis
6	Synthesis, Place& Route	Verify tool settings for synthesis and Place& Route
		Verification of the constraint file, warning & Gate utilization, Pin assignment & Timing file log
		Gate level Timing performance check as per the guideline.
7	Timing simulation	Static Timing Analysis for intra and inter-clock domain (best and worst case PVT corners)
		Dynamic timing analysis (best and worst case PVT corners) as per the test plan
8.	Incremental V&V	Incremental traceability, code inspection, Functional simulation, Synthesis, Place& Route and Timing simulation.

9.	Non-Conformance Management	Non-Conformance report generation
		Impact Analysis
10.	Technical Documentation	-
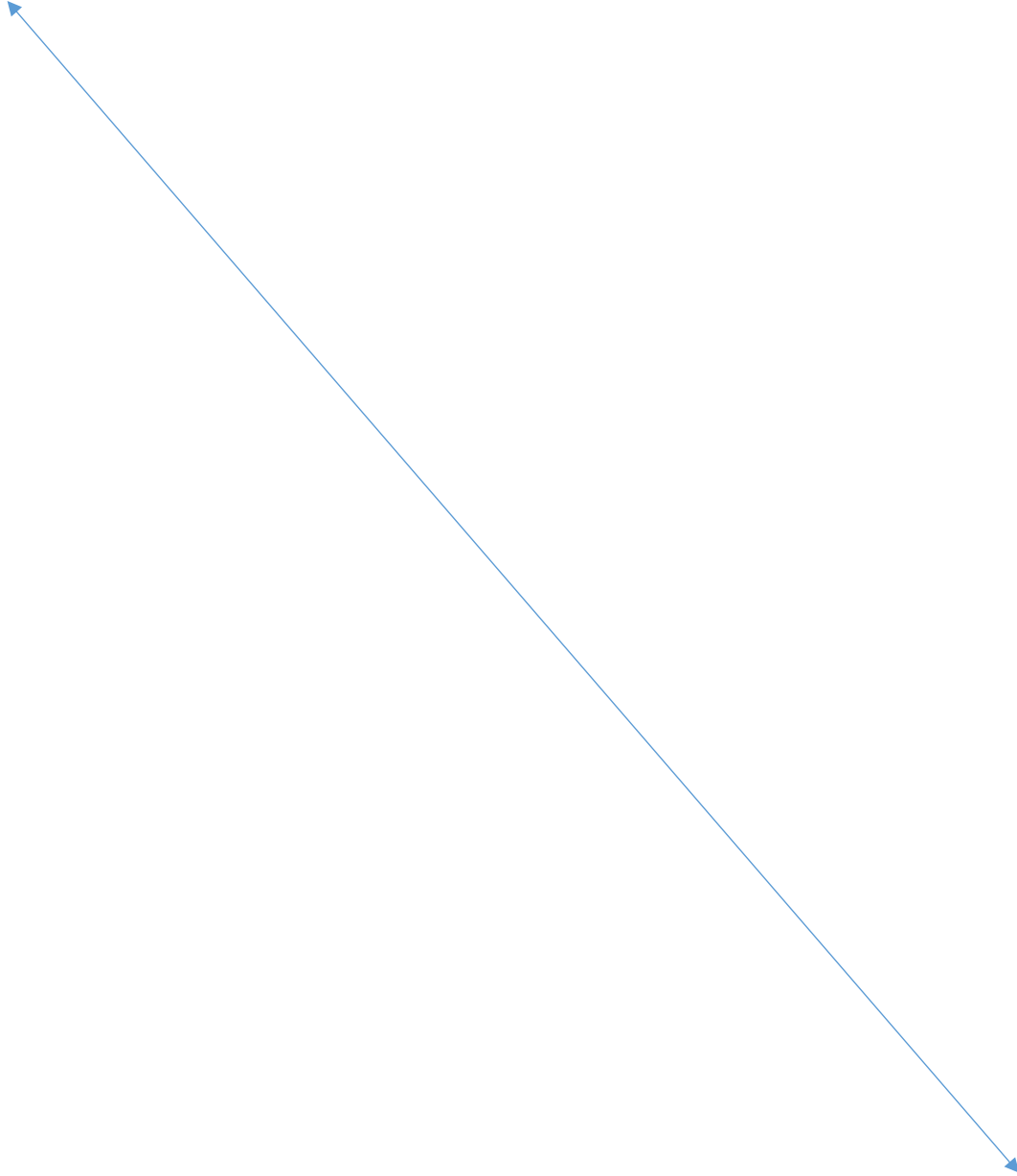
5. List of tools

Vendor to provide tools which will be used to carry out activities as mentioned in Table-II and III.

6. Contract Validity

URSC shall award contract for a period of 2 years, extendable further by 1 year by mutual agreement between URSC and vendor.

7. Terms and Conditions: Finance

7.1   This EoI is for Independent Verification and Validation of Software does not have any relation with respect to the previous Tender floated for similar activities.

8. Terms & Conditions: Organisation Portfolio

8.1   The applicant may be a Proprietorship, Registered Partnership Firm, Indian Company/Domestic Company-Private or Public Company-Listed or Unlisted. Vendor shall submit the interest in the given EoI response sheet.

8.2   An Indian Company would be deemed to be owned by Indian Citizen and by an Indian Company if more than 51 percent of equity interest in the company is beneficially owned by Resident Indian Citizens and Indian Companies that are, in turn, ultimately owned and controlled by Resident Indian Citizens.

8.3 Control has been defined as the right to appoint the majority of the Directors or to control management and policy decisions, including by virtue of their shareholdings or management rights or shareholders or agreement or voting arrangements.

8.4 The applicant must be registered in India as required by law with minimum three years of continuous operation up to the date of publication of this EoI.

8.5 The vendor should also have a valid GST registration. The Vendor should submit Self attested copy(ies) of the Certificates of Incorporation and other certificates that are legally required for carrying out its business activities in India.

8.6 The certificates should be valid at the time of EoI submission and should be certified by an authorized signatory. A copy of PAN Card should also be submitted.

8.7 Income Tax Returns of the last three assessment years duly certified by a Charted Accountant has to be submitted.

8.8 An undertaking (self-certificate) is to be submitted that, the Organization hasn't been blacklisted by any Central/ State Government Department/ Central Government funded organizations/ State Government funded

organizations/ World Bank, or other World Bank organizations and is not under any illegal expression by Government of India.

8.9 The applicant, should not have, during the last three years, either failed to perform on any agreement, or been expelled from any project or agreement or have any agreement terminated for breach by the applicant.

8.10 Persons who are individually or institutionally, in any manner, involved with the selection/screening process of the EoI, and employees of ISRO/URSC are ineligible for applying.

8.11An undertaking (self-attested) is to be submitted that there has been no outstanding bankruptcy, judgment or pending legal action that could impair operating as a going Concern. Also the Vendor must be solvent, in the Legal Court of Law.

9. Terms & Conditions: General

9.1This EoI is not an offer and is issued with no commitment. URSC reserves the right to withdraw the EoI or change or vary any part thereof at any stage. URSC also reserves the right to disqualify any vendor/proposal, should it be so necessary at any stage.

9.2 Timing and sequence of events resulting from this EoI shall ultimately be determined by URSC.

9.3By submitting the EoI proposal, each vendor shall be deemed to acknowledge that the vendor has carefully read all chapters of this EoI, and has fully informed himself as to all existing terms and conditions.

9.4 The EoI and all correspondence and documents shall be written in English.

9.5 Vendor shall compulsorily fill up the Response format and compliance matrix provided in the EoI.

9.6 Participation of Vendors for Pre-EoI Meeting: A Pre-EoI Meeting will be arranged at UR Rao Satellite Centre, Bengaluru in order to have a better understanding of the EoI document with regard to Technical and Commercial aspects, clarify doubts if any, and other allied details. Interested vendors are requested to take part in the Pre-EoI meeting.

9.7 Non-Disclosure Agreement: All documents prepared for carrying out following activities:

1. IV&V for software written in Ada, C/C++, java, fortran.
2. Software development to support IV&V activities
3. IV&V of VHDL Code

and any other communication revealed during the project will be exclusive property of URSC and vendor shall have no right whatsoever on them and shall not disclose to any other person/party not involved in the execution of the allotted work.

9.8Further, the vendor must not quote any of these works in any publications or to any of their customers/public domain without explicit permission from URSC and adhere to strict confidentiality.

9.9URSC reserves the right to change the vendor selection criteria in SOW/ RFP after evaluation of EoI.

9.10 GST Registration:

Important Notice to Vendor

Government of India has implemented Goods and Services Tax [GST] w.e.f 01.07.2017. The Vendor should mandatorily possess a valid GSTIN along with the GST Registration Certificate. Please take note of this aspect.

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10. EoI Response Format

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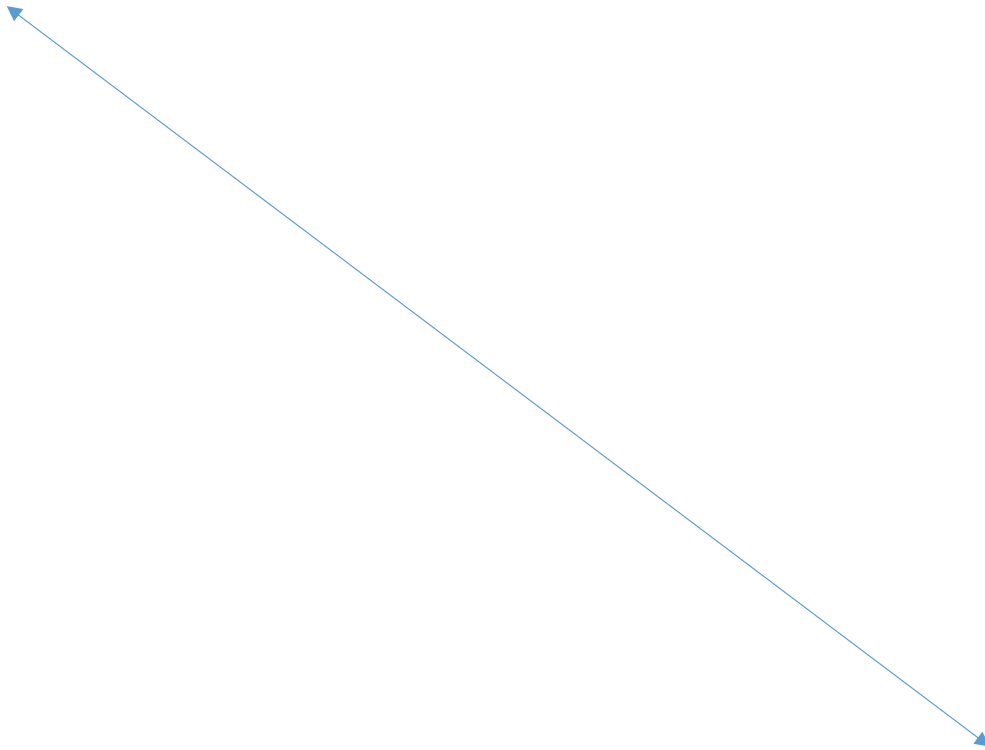
Cover Letter
(Company letterhead)
[Date]

</div>

To,

HEAD, PURCHASE & STORES
UR Rao Satellite Centre
HAL Airport Road, Vimanapura Post
Bangalore -560017
Karnataka

Dear Sir,

Ref: Expression of Interest for "IV&V of software, software development to support IV&V activities" and "IV&V for VHDL Code"

Having examined the Expression of Interest (EoI), the receipt of which is hereby duly acknowledged, we, the undersigned, intend to submit a proposal in response to the Expression of Interest (EoI). We attach hereto the response as required by the EoI, which constitutes our proposal. Primary and Secondary contacts for our company are:

<div align="center">

TABLE - A

</div>

	Primary Contact	Alternate Contact
Name:		
Title:		
Company Name:		
Registered Address& Local Address:		
Phone:		
Mobile:		
Fax:		
e-mail:		

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 URSC 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 URSC in its short-listing process. We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short listing process, we are liable to be dismissed from the selection process or termination of the contract during the execution of the contract. We agree for unconditional acceptance of all the terms and conditions set out in the EoI document.

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.

Dated this

(Signature)   (In the capacity of)

(Name)

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

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

      Witness Signature:

      Witness Name:

      Witness Address:

CERTIFICATE AS TO AUTHORIZED SIGNATORIES

I, …………………………………………., the Company Secretary of ………………………………., certify that ……………………………………………………………………. Who signed the above response to EoI is authorized to do so and bind the company by authority of its board / governing body.

                  Date:


                  Signature:

                  (Company Seal)

11. General Details of the Vendor

TABLE-B

| Sl No.	Checkpoint	Remarks
1.	Name of the Vendor	
2.	Year of Establishment	
3.	Core capabilities of the Vendor	Profile of the Vendor in Annexure A
4.	Head office location and address with contact number & email id:	
5.	Local address in Bengaluru if any with contact number & email id:	
6.	Addresses of manufacturing and/or operational setup in India (Highlight the address where URSC representative shall visit for audit)	
7.	Corporate website URL:	
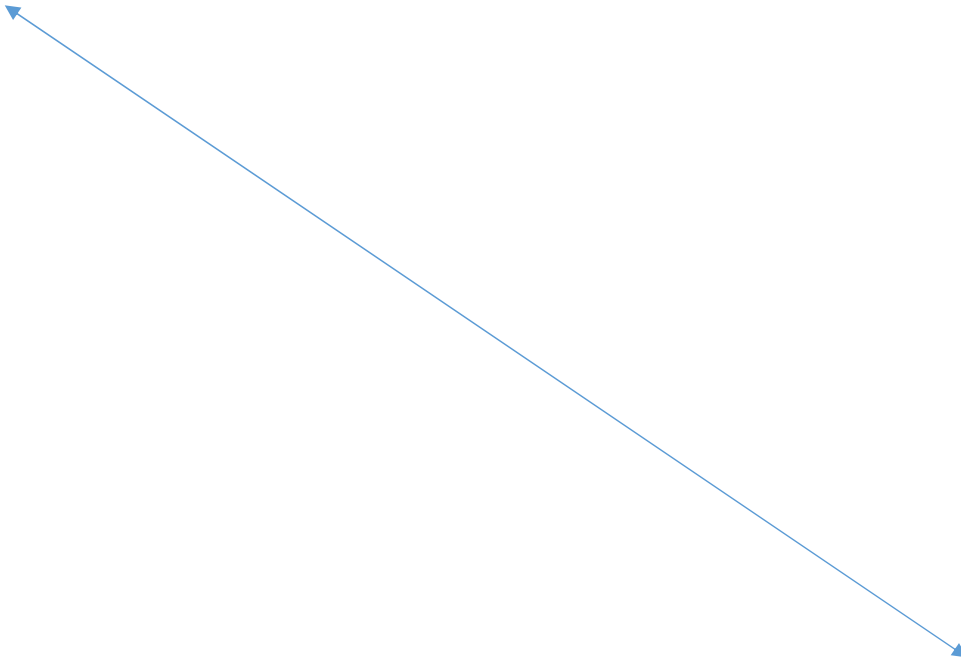
12. Financial Supporting Documents

Auditor certified statements for the last five years, FY 2017-18, FY 2018-19, FY 2019-20, FY 2020-21 & FY 2021-22 in Annexure-B (please provide the profit and loss statement and balance sheet.

TABLE-C

Details	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Net Revenue from Operations (in INR Crores)					
EBTD [Earnings Before Tax and Depreciation]					
Net worth					
Share Capital					
% of shareholding by Indian					
% of shareholding by Foreign					

Unaudited certified statements certified by the company auditors for the latest year 2020-21 (in case auditor certified statement for 2020-21 is not available). Certification by the company auditors supporting the revenue break up.
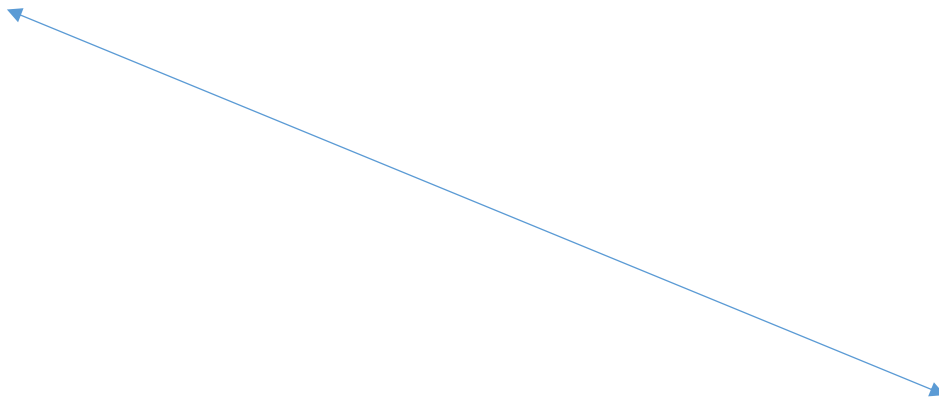
13. Compliance Matrix to be filled by Vendors

13.1 List of Activities for Software

1.1.1 Mode I

Sl. No.	Activities	Tasks	Tools		Lines Of Code (LOC) / day /person
			Complied/Not Complied	Tool Name (if Complied)	
1.	Forward Traceability	FRD to SRS			
		SRS/FRD to design Traceability			
		Design to code Traceability			
		Database traceability			
2.	Backward Traceability	Requirements based test cases to Code traceability			
		Unit Test Cases to Code traceability			
		Code to Design traceability			
		Design to Requirements traceability			
		Database traceability			
		Requirements to FRD			
3.	Code Inspection	Checklist based code verification			
4.	Unit Level Testing	Test Plan Generation			
		Unit Test cases identification based on MCDC, cyclomaticcomplexity and requirement.			
		Test Result and path coverage Analysis			
5.	Software	Test plan generation			

		Test Case generation			
	Integration Testing and safety test	Test case execution generation			
		Test result analysis			
		Path coverage analysis			
6.	Incremental V&V	Incremental traceability, code inspection, Unit Level Testing and Integration testing.			
	Non-Conformance Management	Non-Conformance report generation			
		Impact Analysis			
7.	Version Management	-			
8.	Software development to support IV&V activities	-			
9.	Technical Documentation				

1.1.2   Mode II

Sl No	Activities	Tasks	Tools		LOC / day /person
			Complied/Not Complied	Tool Name (if Complied)	
1.	Forward Traceability	FRD to SRS			
		SRS/FRD to design Traceability			
		Design to code Traceability			
		Database traceability			
2.	Backward Traceability	Requirements based test cases to Code traceability			
		Unit Test Cases to Code traceability			
		Code to Design traceability			
		Design to Requirements traceability			
		Database traceability			
		Requirements to FRD			
3.	Code Inspection	Checklist based code verification			
4.	Unit Level Testing	Test Plan Generation			
		Unit Test cases identification based on MCDC, cyclomatic complexity and requirement.			
		Test Result and path coverage Analysis			
5.	Software Integration Testing and	Test plan generation			

	safety test	Test Case generation			
		Test case execution generation			
		Test result analysis			
		Path coverage analysis			
6.	Incremental V&V	Incremental traceability, code inspection, Unit Level Testing and Integration testing.			
	Non-Conformance Management	Non-Conformance report generation			
		Impact Analysis			
7.	Version Management	-			
8.	Software development to support IV&V activities	-			
9.	Technical Documentation				

1.1.3 Mode III

Sl No	Activities	Tasks	Tools		LOC / day /person
			Complied/Not Complied	Tool Name (if Complied)	
1.	Forward Traceability	FRD to SRS			
		SRS/FRD to design Traceability			
		Design to code Traceability			
		Database traceability			
2.	Backward Traceability	Requirements based test cases to Code traceability			
		Unit Test Cases to Code traceability			
		Code to Design traceability			
		Design to Requirements traceability			
		Database traceability			
		Requirements to FRD			
3.	Code Inspection	Checklist based code verification			
4.	Unit Level Testing	Test Plan Generation			
		Unit Test cases identification based on MCDC, cyclomatic complexity and requirement.			
		Test Result and path coverage Analysis			
5.	Software Integration	Test plan generation			

		Testing and safety test	Test Case generation			
			Test case execution generation			
			Test result analysis			
			Path coverage analysis			
6.	Incremental V&V		Incremental traceability, code inspection, Unit Level Testing and Integration testing.			
	Non-Conformance Management		Non-Conformance report generation			
			Impact Analysis			
7.	Version Management	-				
8.	Software development to support IV&V activities	-				
9.	Technical Documentation					

13.2 List of Activities for IV&V of VHDL Code

Sl.No.	Activities	Compliance
1.	Forward Traceability	
2.	Backward Traceability	
3.	Tool based Verification	
4.	Code Inspection	
5.	Functional simulation	
6	Synthesis, Place& Route	
7	Timing simulation	
8.	Incremental V&V	
9.	Non-Conformance Management	
10.	Technical Documentation	

13.3 Mode of Operation

Sl. No.	Section	Complied/Not Complied
1.	Mode1	
2.	Mode2	
3.	Mode3	
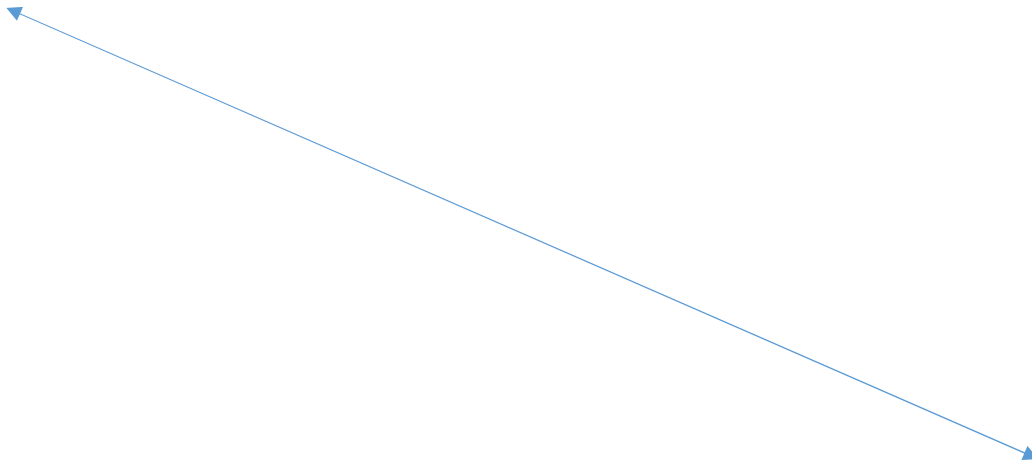
2. EoI Response Format Contents

The proposal should be submitted as an Expression of Interest (EoI) as a collation of the following table of contents as below, in the enclosed format, clearly providing the details requested below with documentary proof/supporting documents as Annexure.

The vendor shall provide the information as per the formats prescribed along with EoI proposal. All these inputs may be furnished in MS word document neatly typed in the said formats.

The proposal and all correspondence and documents shall be written in English.

Sl No.	Contents	PageNo
1.	EoI Response Format	
2.	General Details of the Vendor	
3.	Financial Supporting Documents	
4.	Compliance Matrix to be filled by Vendors	
	4.1List of Activities	
	4.2Mode of Operation	
	4.3Compliance Matrix	
5.	Annexure-A	Company Profile
6.	Annexure-B	Auditor certified statements
7.	Annexure-C	Copies of PO

3. Compliance Matrix

Sl No	Section	Complied/Not Complied
1.	Modus Operandi	
2.	EoI Objective	
3.	Modes of Operation (Table-I)	
4.	Nature of Work (Table-II)	
5.	List of tools	
6.	EOI Response Form (Table-A)	
7.	General Details of Vendor (Table-B)	
8.	Financial Supporting Documents (Table-C)	
9.	Compliance Matrix to be filled by Vendors	
10.	EoI Response Format Contents	

Signature:

Name of the authorized signatory for the company:

Date:

Place:

Note: If required, Provide Documentary Proof as Supporting documents, topics where ever it is deemed necessary sheets can be attached

****