
Assam State Space Application Centre
(Autonomous Body of Science Technology and Climate Change Department,
Government of Assam
Bigyan Bhawan, G.S.Road, Guwahati-5)

Email: dirassac2021@gmail.com

EXPRESSION OF INTEREST
for
Empanelment of VENDORS for Remote
Sensing, GIS and GPS Application,
DESIGN, DEVELOPMENT &
DEPLOYMENT

Ref No.: ASSAC/EMPANELMENT OF VENDORS/ 41/2022-23

Date of Release: May 14, 2022

Pre-bid Meet: June, 03, 2022 (3.00 PM) in hybrid mode

Submission: June 24, 2022

Cost of the Tender Money (Non Refundable): Rs.5,000/- (one time): Interested bidder has to submit a Demand Draft of Rs. 5000/- (Rupees five thousand only) in favour of Director, ASSAC payable at Guwahati and to be submitted along with the bid document on or before **June 24, 2022 or may be e transferred enclosing the transferred reference particulars**

Detail of ASSAC Bank Account as follows:

Assam State Space Application Centre

S.B. Account No. 40759020516. IFSC Code: SBIN 0007700, SBI GMC Br.

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1. EXPRESSION OF INTEREST

ASSAC hereby invites a Proposal for empanelment of interested and qualified organizations / vendors in the business of application of remote sensing (i.e. Interpretation of satellite data), GIS-based analysis, integration of geospatial data and analysis, web based application i.e. dashboard development and management etc. & mobile software development, field data collection, geo-tagging etc., UAV flying, analysis of DRONE based image, DGPS survey and integration in GIS. ASSAC would like to include newer areas if there is demand from User Departments. We may include the newer areas based on the Expression of Interest (EOI) submitted by the bidders. The (EOI) Notice document is placed at the website: astec.assam.gov.in

Bidders are advised to study the document carefully before submitting their proposals in response to the Expression of Interest (EOI) Notice. Submission of a proposal in response to this notice shall be deemed to have been done after careful study and examination document with a full understanding of its terms & conditions and implications.

Interested bidders are advised to check the prequalification criteria before submission of Bids.

1.1 Key Events and Dates

Sr. No.	Information	Details
1.	Advertising Date	May 13, 2022
2.	Document available for download	From May 13, 2022
3.	Pre-bid meet discussions and clarifications, if any	June 03, 2022 @ to 3.00 p.m.
4.	Response to clarifications by ASSAC	June 07, 2022
5.	Last date for submission of bids physical in a sealed envelope in the office of ASSAC, Guwahati.	June 24, 2022 by 2.00 p.m.
6.	Date Time and Place of the opening of bids	June 24 at 3:00 P.M. at ASSAC Office, Guwahati
7.	Detail of the contact person and Address at which the sealed bids are to be submitted in person (Bids by post/courier shall be posted)	The Director, ASSAC, BIGYAN BHAWAN, G.S.ROAD, GUWAHATI-5

2. INSTRUCTION TO BIDDERS

2.1 Introduction of ASSAC

Assam State Space Application Centre (ASSAC) Guwahati was established as an autonomous body under the administrative control of Science technology and Climate Change Department, Government of Assam. ASSAC was formerly known as Assam Remote Sensing Application Centre (ARSAC) a core division of Assam Science Technology and Environment Council (ASTECC) and was working in the field of Remote Sensing (RS) and Geographic Information System (GIS) since 1988. The Centre has carried out various projects important to State and Central Government. ASSAC is State Nodal Agency and act as Partner Institute with NRSC, ISRO, SAC & NESAC. At present ASSAC has a repository of geospatial databases comprising village/city cadastral database administrative boundaries and a wealth of natural resources databases generated using satellite Remote Sensing and GIS technology at various scale. As a recent mandate assigned by Govt. of Assam, ASSAC is working on a strategy for using such vast databases in shared mode by the State as well as Central Government departments for geospatial services in G2G & G2C domains. In view of this, the Government of Assam has notified then ARSAC as a “Nodal Agency for Remote Sensing, GIS an GPS related activities and services including procurement of satellite data vide Assam Govt. Notification No.STE/86/2016/93 dated 23rd March,2018 . As a Mandate to this,ASSAC will provide technical support and assistance to various departments under Assam for all their Geospatial activities and provide them a decision support system (DSS) which will be useful to them in their day-to-day activities

2.2 Purpose

ASSAC is intending to empanel qualified incorporation who is in the business of GIS-based Software Development for its GIS initiative of serving various departments in Assam using open GIS or ESRI platform (available infrastructure at ASSAC) and all COTS GIS as **applicable. Empanelment basically in core sector such application of Remote ,photogrammetry,DGPS survey, integration of data in GIS, development of mobile apps and geotagging, data generation through UAV, Web GIS application,**

The purpose of this Expression of Interest is to empanel a reputed IT firm/ Firms related to **application remote sensing, GIS, DGPS, Drone Survey, laboratory analysis of field samples having necessary expertise for image interpretation, design, develop, test, implement, operate and maintain GIS-based web & Mobile software, AI based tools and customised s/w development as and when required by ASSAC.** ASSAC may award actual work orders to any of the empanelled vendors through a closed competitive bidding process. Empanelled vendors would be allowed to bid for specific requirements which would be decided on a time-to-time basis by ASSAC as per its requirement.

2.3 Scope of work

In general ASSAC is looking to empanel the vendors for various types of RS, GIS,

GPS/GNSS works of presently in hand and if taken up by ASSAC in future as well. The following is the broad list (not limited to) works to be taken up the qualified bidders:

- Mapping of natural resources (agriculture / forest / water resources)
- Infrastructure development (Highways / Rail / water ways / airports etc.)
- Utility mapping (water supply/ telecommunication / electricity etc.)
- Business development
- Smart city / Urban / rural plan preparations and services i.e taxation / site suitability analysis
- Dashboard web portal services and monitoring (near real time wherever possible)
- Asset mapping, app development and field data collection / geo-tagging and geofencing etc.
- UAV flying, data acquisition, processing and derived product generation etc.
- Visual interpretation / onscreen digitization / digital classification / use of AI/DP for mapping and alert generation etc.
- Coding / app developments / customized solutions according to the User needs
- Cloud based applications

The following is the scope for work for empanelment. However, the scope can be increased at a later stage, as and when required. The final scope of work would be released at a later stage once the project is defined by ASSAC for closed price bidding amongst the empaneled vendors.

2.3.1 Data Integration

- Integration of data in various formats, including text, shapefile, json, geojson, xml, csv, pdf (as and when applicable)
- Integration of WMS/WFS from global service providers
- Data Integration or Data Loading into applications via Open Data API/closed API
- Exposing data in formats mentioned above, as service

2.3.2 Vendor-neutral Service-Oriented Architecture

- Architecture capable of dynamically incorporating services published on vendor Specific platforms and publishing/accessing services in a vendor-neutral manner

2.3.3 Security infrastructure

- Standards-based framework to store, organize, authenticate, and authorize the users.
- Standards include the ISO/IEC 27001 and ISO/IEC 27002 families of standards in addition to those already established by the ASSAC and/or Assam state's DIT
- Configuring access to resources based on multiple dimensions such as geography, position, roles, etc.

2.3.4 Metadata Management Framework

- Framework to create, edit, delete metadata for data in any format. The framework would be enforcing Standards established by ASSAC.

- Search enabled platform-wide Search Engine
- Advanced search for locating any type of data. Data type includes PDF, WORD, Text documents, and spatial/non-spatial data.
- Should include metadata

2.3.5 Applications Management Framework

- Framework to introduce new applications into the current platform ecosystem. There are no examples available that provide this functionality for a government platform.
- Framework to manage access to applications based on security roles. A limited example of such a framework is *Key cloak*, but it does not provide the breadth of functionality required by ASSAC.

2.3.6 GIS-based Web and Mobile Applications

- User-friendly applications
- Security enabled
- Cross-platform compatible applications (mobile, web, tablet, etc)
- Single Sign On (SSO) feature across applications
- Native runtime for Android and iOS applications
- Generation of report

2.3.7 Agriculture field Data collection and Analysis

- Collection of soil, water and plant sample &
- Laboratory analysis of different field samples

2.4 Expression of Interest Notice

The bid is available on <http://astec.assam.gov.in> and bidder shall download the bid document and submit the same. All correspondence related to EOI shall be exchanged through email id dirassac2021@gmail.com only.

2.5 Consortium and Joint ventures

Consortium & Joint venture is allowed; however, Subletting, Subcontracting, and Outsourcing shall not be allowed. ***Consortium or Joint Venture to be finalized at initial stage during submission of bid documents.***

2.6 Completeness of Response

Bidders are advised to study all instructions, forms, terms, requirements, and other information in the Expression of Interest (EOI) documents carefully. Submission of a bid shall be deemed to have been done after careful study and examination of the EOI document with the full understanding of its implications. The response to this Expression of Interest (EOI) document should be full and complete in all respects. Failure to furnish all information required by the Expression of Interest document or submission of a proposal not substantially responsive to the Expression of Interest document in every respect will be at the bidder's risk and may result in rejection of its Proposal.

2.7 Proposal Preparation Costs

The Bidder shall submit the bid at its own cost and, ASSAC shall not be held responsible for any cost incurred by the bidder. Submission of bid does not entitle the Bidder to claim any cost and rights over ASSAC and ASSAC shall be at liberty to cancel any or all bids without giving any notice.

2.8 Bidder Inquiries

Bidder shall send their written queries in the prescribed format as mentioned in **Form No. 4 (Pre-Bid Queries)** in the EOI document to the authorized person mentioned in the document at whom the bids are to be submitted. **The response to the queries will be provided to the bidder and this response of ASSAC shall become an integral part of the EOI document. No telephonic/email queries will be entertained.**

2.9 Amendment of EOI Document

Amendments (if any) made in the document would be published at <http://astec.assam.gov.in> and shall be part of the EOI document. All updates (if any) will be communicated through ASSAC website only. The bidders are advised to visit the aforementioned website on regular basis for checking necessary updates. The ASSAC also reserves the right to amend the dates mentioned in this EOI for the bid process.

2.10 Supplemental Information to the EOI

If ASSAC deems it appropriate to revise any part of this Expression of Interest document or to issue additional data to clarify an interpretation of provisions of this EOI document, it may issue supplements to this EOI document. Any such corrigendum shall be deemed to be incorporated by this reference into this EOI document.

2.11 ASSAC's right to terminate the process

ASSAC may terminate the EOI process at any time and without assigning any reason. ASSAC reserves the right to amend/edit/add/delete any clause of this EOI Document. However, this will be informed to all and will become an integral part of Bid/EOI document.

- 2.12 **A) Security Deposit (SD)- Selected Bidder will have to submit 10% of the allotted work value as Security deposit** in the form of Demand Draft or Bank Guarantee in the prescribed format valid for a period of one year from the date of allotment of work.
- B) The validity of the selected empaneled vendors will be for 2 (two) years**
- C) Rates / Price should be quoted inclusive of all applicable taxes, duties ,transportation and other charges if any .**
- D) Works to be allotted in phased manner to the lowest bidder and bidding process will be executed amongst empaneled vendors only.**

2.13 Authentication of Bid

The original copy (hard copies) downloaded from the ASTEC website shall be signed and submitted along with the bid. The authorized person of the bidder who signs the bid shall have the authority letter from the bidder which shall be submitted with the Bid. **All pages of the bid and its annexure, etc. shall be signed and stamped by the person or persons signing the bid.** In case of board resolution, authorizing a person as the person responsible for the bid, the board resolution shall be submitted. The person accountable for the bid shall be the employee of the bidder till the end of the contract period.

2.14 Language of Bids

This bid should be submitted in **English** language only.

2.15 Bid Submission Format

The entire proposal shall be submitted strictly as per the format specified in this Expression of Interest (EOI). Bids with deviation from this format shall be rejected.

Bidders must submit their Human Resource Competence as per the mentioned format **FORM- 2 (B): BIDDER PROFILE**

2.16 Submission of Bids

The bids submitted by the bidder shall comprise of the following:

(A) Technical Bid

The bidder shall submit the Technical Proposal in a Sealed Envelope and super scribe on the sealed envelope "Technical Proposal" and should contain the following.

- 2.16.1 Proposal Covering letter- Refer Form-1.
- 2.16.2 Demand Draft of Rs. 5,000/- (**non-refundable**) drawn in favour of Director, ASSAC payable at Guwahati. (**Firms having MSME, NSIC or SSI, Assam Registration, subject to submission of valid documents as on date are exempted .**)
- 2.16.3 Documents regarding Proprietary Concern/Partnership Firms/LLP/Company having valid registration in India, either as Individual or as 'Joint Venture'
- 2.16.4 Attested copy of the Memorandum and Articles of Association Byelaws/ Partnership Deed.
- 2.16.5 Audited Annual Financial Statements and Annual Report and Certified statement from the current Statutory Auditors of the bidder
- 2.16.6 Copy of Work Orders should be attached.
- 2.16.7 Self-Undertaking that the bidder has not been debarred/blacklisted by any Govt./Semi-Govt. organization for quality of services/products and there are no legal issues/orders prohibiting/restraining the bidder to participate in the bid process.

2.16.8 Technical Proposal.

2.16.9 Signed and stamped copy of the original EOI document downloaded from the ASIEC website along with its annexure/ corrigendum/ documents, etc.

2.16.10 Any other document to support the Bid.

2.17 Late Bids and Bid Validity Period

Any Bid received by ASSAC after the deadline for submission of Bids shall be declared late and will be rejected and returned unopened to the bidder at the discretion of ASSAC.

2.18 Bid Opening

The envelope containing Technical Proposal shall be opened in the presence of the bidders/representatives of the bidder who choose to attend, at the address, date, and time specified in the EOI.

3. EVALUATION PROCESS

3.1 Bid Evaluation Committee

- ◆ The Bid Evaluation Committee constituted by the ASSAC shall evaluate the Bids.
- ◆ The Bid Evaluation Committee shall evaluate the technical bids and submit its recommendation to the Competent Authority whose decision shall be final.

Terms of reference for empanelled Bidders

- ◆ The qualified bidders will be empanelled for carrying various projects of ASSAC. If the volume of the proposed works are of big nature, Director ASSAC will have the discretion to distribute the works amongst empaneled vendors at L1 rate. The total duration is 2 years and it will be renewed meeting the criteria
- ◆ In case the qualified bidder services are found not satisfactory the same will be disqualified and removed from the empanelment list for future works as well.

3.2 Pre-Qualification Criteria

The bidder shall fulfill all of the following eligibility criteria:

Evaluation Area	Pre-qualification Criteria	Supporting Document to be furnished
Bidder's Profile	The bidder should be a Company registered in India under the Companies Act 1956 or a partnership registered under the India Partnership Act 1932 with their registered office in India.	Certificate of Incorporation/ Registration and Attested copy of the Memorandum or Articles of Association Byelaws/ Partnership Deed/Proprietary certificate, etc.
	The bidder shall have an average annual turnover of at least Rs. 15.00 Lakhs over the past three financial years of its existence obtained through RS, GIS applications and software development. (The turnover of three years must be submitted [2020-21, 2019-20 & 2018-19])	Audited Annual Financial Statements and Annual Report and Certified statement from the current Statutory Auditors of the bidder.
	The bidder should have an operational dedicated software development Centre in India.	Certified statement from the Authorized Signatory of the bidder. CMMI L3 will be necessary for s/w development empanelment
Relevant Experience	1)The bidder should be operating in the field of Remote Sensing , GIS , DGPS , UAV , software development, Web GIS application ,development of mobile apps, Dashboard and must have completed minimum 2 assignments, in previous three years. (2020-21, 2019-20, 2018-19) n.b. FY 2017-18 may be considered for works keeing in view of COVID	Copy of Work Orders, Completion report & the customer satisfaction certificate should be attached.
Manpower	Details as per Form-2[B]	Details as per Form 2[B] & 3

3.3 Process of Evaluation

- ◆ Bidder shall be evaluated as per the pre-qualification criteria mentioned in 3.2. The bidders who fulfill all the pre-qualification criteria. Qualification criteria will qualify for further Technical Evaluation.
- ◆ Once the bidder is qualified in the pre-qualification criteria ASSAC would invite bidders to give a presentation on their expertise and experience. ASSAC committee may also interview key personnel and submit their observations to the competent authority.
- ◆ ASSAC may give technical scores based on the technical presentation & interview.

- ◆ The Bid Evaluation Committee reserves the right to accept or reject any or all Bids without giving any reasons thereof.

3.4 Empanelment

- ASSAC shall empanel the technically qualified bidder on the basis of technical evaluation.
- As there are many components of work, the qualified **bidders will be categorized by the evaluation team for different works and the empanelment list will be released accordingly. Decisions on who gets the job will not be decided at the stage of empanelment.**
- Tender will be issued to the empaneled bidders and will be treated as limited/selected tenders.

4. NON-DISCLOSURE AGREEMENT (NDA) - for information only (need not be submitted with the technical proposal)

The successful bidder has to sign the Non-disclosure Agreement with ASSAC as mentioned below on the Non-judicial Stamp paper of Rs. 100/-

Non-Disclosure Agreement

This Non-Disclosure agreement ('Non-Disc') is made and entered into _____ day of _____ month year (effective date) by and between _____ (ASSAC) and _____ ('Bidder's Name'). Whereas, ASSAC and _____ have entered into an Agreement ('agreement') _____ effective _____ for _____;

And

Whereas each party desires to disclose to the other party certain information in oral or written form which is proprietary and confidential to the disclosing party, ('CONFIDENTIAL INFORMATION').

NOW, THEREFORE, in consideration of the foregoing and the covenants and agreements contained herein, the parties agree as follows:

1. **Definitions.** As used herein:

- a) The term 'Confidential Information' shall include, without limitation, all information and materials, furnished by either Party to the other in connection with citizen/users/persons/customers data, products and/or services, including information transmitted in writing, orally, visually, (e.g. video terminal display) or on magnetic or optical media, and including all proprietary information, customer & prospect lists, trade secrets, trade names or proposed trade names, methods, and procedures of operation, commercial or marketing plans, licensed document know-how, ideas, concepts, designs, drawings, flow charts, diagrams, quality manuals, checklists, guidelines, processes, formulae, source code materials,

specifications, programs, software packages, codes and other intellectual property relating to the disclosing parties data, computer database, products and/or services. Results of any tests, sample surveys, analytics, data mining exercises or usages, etc. carried out by the receiving party in connection with ASSAC's Information including citizen/users/persons/ customers personal or sensitive personal information as defined under any law for the time being in force shall also be considered Confidential Information.

- b) The term, "ASSAC" shall include the Director of ASSAC, officers, scientists, employees, agents, consultants, contractors, and representatives of the ASSAC.
2. **Protection of Confidential Information.** With respect to any Confidential disclosed to it or to which it has access, ASSAC affirms that it shall:
- a) Use the Confidential Information as necessary only in connection with Project and in accordance with the terms and conditions contained herein.
- b) Maintain the Confidential Information in strict confidence and take all reasonable steps to enforce the confidentiality obligations imposed hereunder, but in no event take less care with the Confidential Information that the parties take to protect the confidentiality of its own proprietary and confidential information and that of its clients;
- c) Not to make or retain a copy of any commercial or marketing plans, citizen/users/ persons/customers database, Proposals developed by or originating from ASSAC or any of the prospective clients of ASSAC except as necessary, under prior written intimation from ASSAC, in connection with the Project, and ensure that any such copy is immediately returned to ASSAC even without express demand from ASSAC to do so;
- d) Not disclose or in any way assist or permit the disclosure of any Confidential Information to any other person or entity without the express written consent of the other party.
- e) The source code generated under any project should be handed over to ASSAC upon completion of the project.
- f) Not to discuss with any member of public, media, press, any or any other person about the nature of arrangement entered between ASSAC and _____ (company) and the nature of services to be provided by the _____(Company) to ASSAC.

Intellectual Property Rights Protection. No license to a party, under any trademark, patent, copyright, design right, mask work protection right, or any other intellectual property right is either granted or implied by the conveying of Confidential Information to such party.

Dispute Resolution. If any difference or dispute arises between the ASSAC and _____ (Company) in connection with the validity, interpretation, implementation, or alleged breach of any provision of this agreement any such dispute shall be referred to the Secretary, Science Technology and Climate Change Department , Government of Assam and will be within jurisdiction of Guwahati High Court.

Term : the parties have executed this agreement shall remain valid up to years from the “effective date”.

IN WITNESS HEREOF, and intending to be legally bound, the parties have executed this Agreement to make it effective from the date & year first written above.

For ASSAC

For Company

Name:

Title:

Name:

Title:

WITNESSES:

1.

2.

WITNESSES:

1.

2.

n.b

After selection of empanelment under various verticals the selected bidder will be asked to submit the NDA prior to issue of any work order.

5. STANDARD FORMS

FORM-1: EOI SUBMISSION FORM

(To be submitted on the letter head of the Bidder)

To:

Subject: Submission of the Expression of Interest (EOI) for empanelment with ASSAC for providing GIS application development solutions

Dear Sir,

We, the undersigned, offer to provide Design, Development and Deployment of GIS application solution support to ASSAC that that are implementing the projects in accordance with your Expression of Interest (EOI) for Empanelment dated_____. We are hereby submitting our Expression of Interest (EOI).

We hereby declare that all the information and statements made in this Expression of Interest (EOI) are true and accept that any misinterpretation contained in it may lead to our disqualification.

We agree to abide by all the terms and conditions of the EOI document. We understand you are not bound to accept any proposal you receive.

Yours sincerely,

Authorized Signature [In full and initials]: _____

Name andTitle of Signatory: _____

Name of Firm: _____

Address: _____

Email ID: _____

Location: Included in address only _____ Date: _____

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FORM-2 (A): BIDDER PROFILE - Financial Competence

- a) Name of the Bidder _____
- b) Incorporated as _____ in _____ year. (State Registered Firm, Co-operative Society or Partnership Firm)
- c) Bidder profile (*)

Name of the top executive: _____
 Designation: _____
 Bidder Registered Address: _____

 Telephone Number: _____
 Mobile Number: _____
 Email-ID: _____
 GST Number : _____
 PAN: _____

- d) Average annual turnover/ revenue of the agency in INR from assessment services only for best three financial years out of 2020-21, 2019-20, 2018-19.

Financial Year	Total Turnover/revenue (net of taxes and duties) from software development projects/activities
1	2
2020-21	
2019 - 20	
2018 - 19	

Average Turnover/ revenue during Last best 3 (three) Years.....

Authorized Signature [In full and initials]: _____
 Name and Title of Signatory: _____
 Name of Firm: _____
 Address: _____
 Location: _____ Date: _____

Note: Consolidated Audited Annual Reports/Financial Statements for the last three financial years have to be provided as proof for the firm's turnover/revenue.

FORM- 2 (B): BIDDER PROFILE - Human Resource Competence

Details of Educational Qualification & Experience of Technical Professional on Permanent Rolls of Company.

- a) Number of regular Employees involved in Application of Remote Sensing, GIS, Photogrammetry , Web GIS Application, Software Application Development etc. .Technical Manpower Strength: Technical Professionals - __Nos.

S. No.	Resource Category	Prescribed Qualifications	Minimum relevant Experience	Number of full-time resource persons (for each resource category) for the last one year	Number of full time resource persons (out of Col 5 fulfilling the prescribed Qualification	Number of full time Resource persons(out of Col 5 fulfilling the prescribed experience criteria
1	2	3	4	5	6	7
1	Remote Sensing and GIS specialist	a)M.Tech / M.Sc Remote Sensing or PGD Remote Sensing	5-10 years			
		b) M.Sc Geoinformatics	5-10 years			
2	GIS Server Software Engineer	BE/B TECH/MCA with specialization in Computer Science/ IT or equivalent related to software development	5-10 years			
3	GIS Desktop Software Engineer	BE/B TECH/MCA With specialization in Computer Science / IT or equivalent related to software development	5-10 years			

4	GIS Web Software Engineer	BE/B TECH/MCA with specialization in Computer Science / IT or equivalent related to software development	3-5 years			
5	GIS Android Software Engineer	BE/B TECH/MCA with specialization in Computer Science / IT or equivalent related to software development	3-5 years			
6	Software Tester	BE/B TECH/MCA with specialization in Computer / IT or equivalent	3-5 years			
7	Soil, water and plant Sample analysis	M. Sc in Soil Science/ Agril. Chemistry	Minimum 3 years			

b) Domain Expertise for identified verticals for empanelment's:

Sl.No.	Domain / Empanelment	Number of full-time resource persons (for each specific verticals)	No. of projects taken up / completed in last 3 years
1	Application of Remote Sensing (satellite data interpretation visual as well as digital)		
2	Geographical data generation using COTS GIS platform / Open Source Platform, data integration , transformation , analysis and customized application		
3	Geo-web portal development and web services (WMS/WFS/WCS etc.) , Mobile apps for assets mapping, Dashboard Application & Development, customized s/w development		
4	UAV flying as per norms, capturing and data generation and analysis		
5	Phtogrammetry / Orthorectified data generation/ DEM/DTM/DSM, DGPS Survey, establishment of GCP and Contour generation		
6	Soil and Water Quality Mapping by collection of ground sample and analysis in laboaratotry		
7	Advanced AI/ML/DL/ Big data analytics / Near real time data processing/ alerting using optical RS / MWRS satellite data etc.		

Note.:Manpower may be common for both 2 (a) and 2 (b) as above

Date: _____ Authorized Signature [In full and initials]: _____

Place: _____ Name and Title of Signatory: _____

SEAL: _____

Note: Refer Annexure-I for Educational Qualifications & Experience of Technical Professional's details.

FORM- 3: RELEVANT EXPERIENCE - Professional/Practical competence

a) Please specify three software development projects each of value more than **Rs.** developed in-house and successfully completed during dd/mm/yyyy to dd/mm/yyyy Information may be submitted in the following format. Please attach separate sheet for each project and submit unambiguous work orders & satisfactory completion certificates from the clients.

S.No.	Description	Details
1	Name of the Client with address	
2	Project Name and summary (5 lines)	
3	Project Start Date — Month/Year	
4	Project Completion Date — Month/Year	
5	Project Cost — (In Rs. Lakhs)	
6	Whether the project is still operational Yes/No, If yes, date of Go-Live to be mentioned	Yes/No
7	Name of the Client's Contact person with phone number and email ID	

Authorized Signature [In full and Initials]: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

Email ID: _____

Location: _____ Date: _____

Note: Supporting documents (Work order and Completion certificate, Client certificate to be enclosed) in support of the above may be furnished with page numbers indicated in the index. Please use separate sheets wherever necessary.

FORM- 4: Pre-Bid Queries

Sr. No.	Page No. of the Tender document	Clause	Queries

Date:

Authorized Signature [In full and initials]:

Place:

Name and Title of Signatory:

SEAL:

ANNEXURE- I: Qualifications & Experience

Qualifications & Experience of Technical Professionals on permanent rolls of the company.

1. M.Tech / M,Sc Remote Sensing or PGD Remote Sensing / M.Sc Geoinformatics

- Minimum 5-10 years of proven ability to interpret satellite data and understand GIS requirements of local, national, and international Government and Non-Government GIS users
- Experience and proven ability to
 - a) Digital image processing
 - b) Design geodatabases and relational databases, including context-based subtypes, domains, indexing, relationship classes,
 - c) designing topology validation rules,
 - d) designing geometrical networks using ArcGIS Desktop
- Advanced knowledge of ERDAS /ENVI or other image processing software
- Ability to completely administer ArcGIS Server using Java, including publishing and managing Map, GP, Geocode, Image service, backing up the site, restoring site, cluster and machine management, managing extensions deployment and debugging, logging, security (LDAP, ADS), etc.
- Experience and proven ability to design secure and standards-based GIS and non-GIS Service Oriented Architecture (SOA) for deployment in GIS Server environment using Java
- Experience in building custom and platform-independent geoprocessing tools programmatically for GIS data and implementing these tools on Windows/Linux platforms in Desktop/GIS server environments.
- Experience in integrating various types of web services (WMS, WCS, WFS, etc) from other servers (e.g., Apollo server)
- Experience and proven ability to survey and determine the current state of ICT at Government organizations thoroughly and recommend adoption of modern ICT practices for the development of organizations wide Portal infrastructure encompassing Esri's ArcGIS based GIS systems, Open-source software such as Geo-server, etc. and other non-GIS systems

2. GIS Server Software Engineer

- Minimum 5-10 years' experience creating Server Object Extensions (SOEs) for ArcGIS Server-based Map and Image services. Such experience must cover REST accessible SOEs that can take advantage of ArcGIS Security offerings.
- Experience in building web services using Java that can be accessed via REST
- Experience in developing GIS web services based on open-source GIS Databases such as Postgres. Such experience must cover creating Read/Write REST-based services using Java.
- Experience with ArcGIS Server deployment architecture and Administration API (using Arc Objects and REST API).
- Ability to completely administer ArcGIS Server using Java, including publishing and managing Map, GP, Geocode, Image service, backing up the site, restoring site, cluster and machine management, managing extensions deployment and debugging, logging,

security (LDAP, ADS).

- Experience in programming GIS software such as ArcGIS, Geo-server, Geo-tools, etc. using APIs for servers, web, and mobile platforms.
- Designing and developing platform-independent components to provide custom behavior to GIS data services hosted in Service and Cloud environments
- Capability of development of custom and platform-independent Spatial Analysis Geoprocessing models for deployment in Server and Cloud environments as services, managing the execution of custom geoprocessing services on Windows and Linux platforms programmatically
- Experience and proven ability to
 - a) Design geodatabases and relational databases, including context-based subtypes, domains, indexing, relationship classes,
 - b) designing topology validation rules,
 - c) designing geometrical networks using ArcGIS Desktop
- Experience in designing versioned enterprise geodatabase for services to allow data editing on the web.
- Experience in integrating various types of web services (WMS, WCS, WFS, etc) from other servers (e.g. ARC/GIS server, Apollo server, Open source solutions etc.)

3. GIS Desktop Software Engineer

- Minimum 5-10 years' experience building ArcGIS Geoprocessing Tools and Models in Java and integrating them into ArcGIS Desktop and Server programmatically.
- Experience and intimate knowledge of programming models of commercial as well as open-source GIS software such as ArcGIS (Arc objects and Run times) and Geo Servers respectively, along with proven ability to develop applications using these APIs for Server, Web, and Android mobile platforms.
- Experience in developing applications against geodatabases that include programmatically managing GIS artifacts such as
 - a. Context-based subtypes, domains, indexing, relationship classes,
 - b. Topology Datasets and topology validation rules,
 - c. Network Datasets and solving Network Analysis algorithms

4. GIS Web Software Engineer

- Minimum 3-5 years' experience and proven ability to design and develop secure and standards-based HTML5/JavaScript GIS web applications using ArcGIS JavaScript, Open Layers, and Leaflet GIS Web APIs, etc., along with experience creating web applications that
 - a. edit spatial data in the browser,
 - b. provide client-side (in-browser) GIS analysis and
 - c. visualize GIS and non-GIS data in form of web portals/dashboard
 - d. printing maps online (through the web) in the predefined template
 - e. generate report online
- Experience in building applications that demonstrate knowledge and understanding of HTML5 technologies such as Web Sockets and Web Workers.
- Experience in designing and developing secure and standard-based HTML5/JavaScript web applications that consume GIS data services such as map, image, geo-data, and analysis services such as geoprocessing, geocoding, etc. or non-GIS data, in REST services form.

5. GIS Android / IOS Software Engineer

- Minimum 3-5 years' experience developing Android / IOS based mobile applications using ArcGIS Android API and Google Maps Android API / Google API / open-source API
 - a. Consume web GIS data using REST API or other open-source services
 - b. Display GIS data, search and analyze GIS data,
 - c. Edit GIS data in a mobile application
 - d. Provide advanced editing such as Split/Merge of GIS features

6. Tester (Web / Mobile App)

Minimum 3 -5 years' experience

- **Web:**
 - e. Experience to test GIS or non-GIS based web applications developed on the service-based platform
 - f. Experience in building use cases for testing
 - g. Experience in troubleshooting and resolving problems found in the applications.
 - h. Exposure to cloud-based testing also
- **Mobile:**
 - a. Experience to test GIS or non-GIS based mobile applications developed on IOS/Android platforms
 - b. Experience in building use cases for testing
 - c. Experience in troubleshooting and resolving problems found in the applications.

7. Field Sample analysis

- a. Experience in method of field sample collection of plant water and soil
- b. Experience in laboratory analysis of different field sample collected from field.

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ANNEXURE II - Documentary Evidence to be sent with EOI

1. EOI submission form (as per Form-1)
2. Bidder's PROFILE-
 - (a) Certificate of registration of the bidder
 - (b) Financial Competence (As per Form-2(A). Consolidated Audited Annual Reports/ Financial Statements for last three financial as proof for firm's turnover/revenue / IT return.
 - (c) Profile of the bidder giving details of Personnel on permanent rolls of company, Qualification, and Experience (as per Form-2 (B))
3. RELEVANT EXPERIENCE -Professional/Practical Competence (as per Form-3)
 - (a) Contract/Work/Engagement orders, indicating the details of assignment, client, value of assignment, date of award, satisfactory job completion certificate etc. for 5 such projects in last 3 years
4. Checklist (as per Annexure IV)

ANNEXURE-III
BANK GUARANTEE FORM
Date: [insert: *date*]

**EXPRESSION OF INTEREST FOR EMPANELMENT OF VENDORS FOR Remote Sensing, GIS, DGPS
& Drone APPLICATION, DESIGN, DEVELOPMENT & DEPLOYMENT**
Reference No. ASSAC/VENDOR-EMP-GIS/ 01/2022-23

To:
The Director,
ASSAC,
Guwahati

WHEREAS [insert: *name of Bidder*] (hereinafter called "The Vendor") has submitted its /proposal Bid dated [insert: *date of bid*] for the performance of the above-named Contract (hereinafter called "the Bid") under Expression of Interest.

KNOW ALL PERSONS by these present that WE [insert: *name of the nationalized bank*/Scheduled Bank] of [insert: *address of bank*] (hereinafter called "the Bank") are bound unto *Assam State Space Application Centre, Guwahati* (hereinafter called "ASSAC") in the sum of: Rs.1,00,000/- (Rupees One Lacs only), for which payment well and truly to be made to ASSAC, the Bank binds itself, its successors, and assigns by these presents.

Sealed with the Common Seal of the said Bank this [insert: *number*] day of [insert: *month*],[insert: *year*].

THE CONDITIONS of this obligation are the following:

1. If, after the bid submission deadline, The Vendor withdraws its Bid during the period of bid validity specified by The Vendor in the Bid Form, or
2. If the Vendor, having been notified of the acceptance of its Bid by ASSAC during the period of validity
 - (a) fails to accept ASSAC's corrections of arithmetic errors in The Bidder/ Consultant's Bid, if any and/or
 - (b) fails or refuse to participate in the e-tendering / quotation / bidding process.
 - (c) fails or refuses to sign the Contract Agreement when required; or
 - (d) fails or refuses to issue the performance security in accordance with the future Bidding Documents.

We undertake to pay to ASSAC up to the above amount upon receipt of its first written demand, without ASSAC having to substantiate its demand, provided that in its demand ASSAC will note that the amount claimed by it is due it, owing to the occurrence of any one of the three above-named CONDITIONS, and specifying the occurred condition or conditions.

This guarantee will remain in full force up to and including [insert: *the date that is one year from the date of proposal/bid*], and any demand in respect thereof must reach the Bank not later than the above date. (to be renewed if empanelment is for more than one year)

For and on behalf of the Nationalized Bank/Scheduled Bank

Signed: _____

Date: _____

in the capacity of: [insert: *title or other appropriate designation*]

Common Seal of the Nationalized Bank/Scheduled Bank

ANNEXURE IV – Basic Item of Work

Following are the item of works to be executed in general :

- A) Digital Data in Vector Format-GIS Ready (i.e. Landuse / Landcover at various scale say 1:10K, 1:50K , Wetlands (includes river/ stream & other waterbodies), Wasteland, Infrastructure (Road /Rail), Settlements (polygon and point layer),**
- B) Administrative Layers :** Village Boundary with census attributes, Integration of Circle /Block boundary
- C)Transportation layers:** National Highway, State Highway, District Road, Village Road, City / Town road
- D)Generation of Contour/Slope/Aspect, DSM, DTM and TIN**
- E) Watershed Information up to micro watershed level**
- F) Soil Information (Collection of sample and laboratory analysis for Soil Taxonomy, Land Capability, Depth, Texure)**
- G) Grounder Prospect and Quality mapping** using satellite data and ground information
- H) Assets Mapping using Android or IOS based Mobile Apps**
- I) Drone OR UAV Survey :**Analysis, Operation Cost, DGPS points, Post Analysis & output generation (within or outside the state)
- J)Digital Image Processing,** Analysis, Thematic Layer generation and other Customization jobs.
- K) Ortho Rectified Image and DEM corrected with GCPs (Ground Control Points) using DGPS (Differential GPS) with accuracy of 2-3 cms**
- L) DGPS Survey**

Based on above item of works Empanelment will be in following Sector:

- i) Remote Sensing and GIS application for thematic mapping , Digital Image Processing and data integration**
- ii) Drone Mapping (Flight Planning, flying /capturing/ product generation and analysis)**
- iii) Soil Mapping (based on laboratory analysis and correlation with satellite image)**
- iv) Groundwater quality and prospect mapping**
- v) Assets mapping using mobile apps and geotagging**
- vi) DGPS survey and integration of data in GIS**
- vii) Photogrammetry and Ortho rectified Image , generation DEM /DSM/DTM, Contour, Slope**
- viii) Geo-web portal development and web services (WMS/WFS/WCS etc.)**

N.B Based on credentials and pre requisite necessary for analysis of data etc. the interested vendor will be empaneled. It may be mentioned that based on credentials (i.e experience in relevant field and required facility) vendors will be eligible to qualify for more than one sector.

ANNEXURE V - CHECKLIST

S. No.	Empanelment criteria	Supporting documents	Compliance (Yes/ No)
1	The bidder should be a Company registered in India under the Companies Act 1956 or a partnership registered under the India Partnership Act 1932 with their registered office in India or Proprietary / LLP registered with the relevant competent authority.	Certificate of Incorporation/Registration and Attested copy of the Memorandum or Articles of Association Byelaws/Partnership Deed	
2	The bidder should be operating in the field of Remote Sensing , DGPS, Drone survey & processing, GIS software development provided GISsoftware solutions, Data integration for a minimum of last three years and must have completed minimum 2 assignments of GIS websites/ portals/ RS application development for Private/ Central Govt./PSU/State Government	Copy of Work Order & Customer satisfaction certificate should be attached.	
3	The bidder shall have an average annual turnover of at least Rs. 15.00 Lakhs over the past three financial years of its existence,obtained through Remote Sensing, DGPS, Drone or GIS Software Development services..	Audited Financial Statements and Annual Report and Certified statement from the current Statutory Auditors of the bidder	
4	The bidder should not currently have been blacklisted by any Government Agency under a declaration of ineligibility for fraudulent or corrupt practices or inefficient/ineffective performance.	Certified statement from the Authorized or Signatory of the bidder (Declaration format enclosed)	
5	Bidder has an operational dedicated software development center in India	Certified statement from the authorized signatory of the bidder.	
6	Registration under GST	Document of valid GSTIN number to be attached	

Note. Along with the Check list as above , the Bidder should fulfill the Pre-Qualification Criteria mentioned in Clause 3.2 which is equally valid .
