REQUEST FOR PROPOSAL (RFP)

For

Procurement and Deployment of Esri ArcGIS Enterprise Solution, ENVI Remote Sensing Software, Hiring of Services for Design, Development and Maintaining Dedicated Geodata Portal & Field Data Collection Android Based Mobile App

Director Procurement (AGM)

Geological Survey of Pakistan

Trade Center near Expo Center,

M.A. Johar Town, Lahore

Ph. # 0092-42-99232932-3

Table of Contents

Tender Notice

<u>INVITATION TO BID</u>
Government of Pakistan
Geological Survey of Pakistan, Lahore

1. Geological Survey of Pakistan (GSP), an attached department of Ministry of Energy (Petroleum Division), Government of Pakistan, invites bids from the firms/ general order supplier/ companies/Consortium registered with Income Tax, Sales Tax Departments and who are on FBR's Active Taxpayer's List (ATL) for the **"Procurement and Deployment of Esri ArcGIS Enterprise Solution, ENVI Remote Sensing Software, Hiring of Services for Design, Development and Maintaining Dedicated Geodata Portal & Field Data Collection Android Based Mobile App"**

LOT	Details	Bid Security
LOT-1	Procurement and Deployment of Esri ArcGIS Enterprise Solution	Rs. 300,000/-
LOT-2	Design, Development and Maintaining Dedicated Geodata Portal	Rs. 300,000/-
LOT-3	Procurement and Deployment of ENVI Remote Sensing Software	Rs. 200,000/-
LOT-4	Design, Development and Maintaining Field Data Collection Mobile App	Rs. 200,000/-

2. The bidding process will follow "**Single Stage Two Envelop Bidding Procedures"** in accordance with the PPRA Rules 2004.
3. Tender will be processed through **PPRA E-PADS** (eprocure.gov.pk).
4. Public sector Organizations willing to participate in the bidding process are requested to fulfill the legal requirement for their eligibility. Exemption certificates/Proof of compliance with regard to prevailing tax laws must also be provided.
5. The complete tender documents are available at https://eprocure.gov.pk/#/auth.
6. This tender notice is also available on www.gsp.gov.pk, PPRA website www.ppra.org.pk.
7. The time for electronic bid submission is until **16-Feb-2026, till 1200 Hrs**. Bidders are advised to upload the copy of the pay order/CDR/BC electronically and must submit in-Original at the address provided below before the closing of bid submission time.
8. Technical Bids/proposals will be opened on the **same date at 1230 Hrs** in the presence of bidders or their authorized representatives if they opt to attend.

SAJJAD KARAMAT
Director Procurement, AGM Project,
Geological Survey of Pakistan,
Trade Center near Expo Center, M.A. Johar Town, Lahore.
Ph. # 0092-42-99232932-3

Background:

a) The Geological Survey of Pakistan (GSP) is an attached department of the Ministry of Energy (Petroleum Division), Government of Pakistan. It is a national organization which is primarily responsible for collection and dissemination of geological information about the country so that the earth's resources could be best exploited and utilized. The geological information is compiled and disseminated in the form of geological reports and maps.

b) The geological maps and their accompanying digital database incorporate geographical, geological, tectonic, and geochronological data in a form which can easily be manipulated using geographic information system (GIS) technology so that new ideas and insights for the map region can be tested. Essential to the ongoing research on the economic minerals of Pakistan, is the early design and implementation of a comprehensive GIS based database solution. It will integrate various types of geological maps and associated data, including mineralogical, geophysical, geochemical, geological cross-sections, stratigraphic sections, and borehole logs. This database will incorporate all the fields of Geoscientific research (geology; tectonics; geochronology; geochemistry; geophysics; exploratory drilling; etc.). It can enhance communication and collaboration between different stakeholders involved in mineral resource management, like geoscientists, engineers, managers, investors, regulators, and communities.

c) The GSP intends to Procure and Deploy Esri ArcGIS Enterprise Solution, ENVI Remote Sensing Software, Develop Dedicated Geodata Portal, develop Field Data Collection Mobile App.

GENERAL INSTRUCTIONS TO BIDDERS

General Guidelines

a) The bids will be submitted and processed via E-PADS.

b) Single stage – Two envelopes, procedure would be adopted for opening of bids.

c) The mandatory documents and Technical Evaluation Criteria for each LOT are provided in the relevant LOT.

d) Bidding company/firm may participate in whole tender LOTs or any number of LOTs. The bidder who may choose to participate in more than one LOT of this tender must conform to the relevant mandatory and technical requirements of each LOT.

e) Bidders shall have to agree/accept all the terms and conditions of the Tender document including payment terms etc. Acceptance shall be unconditional and Bidders shall have no claim and right in future on their terms, if any.

f) The tender submitted by the Bidder, all subsequent correspondence and documents relating to the tender exchanged between the Bidder and the GSP shall be written in English language.

g) The tenders shall remain valid for acceptance for a period of **90 days (Ninety days)** after the date of opening of technical bids.

h) The GSP reserves the right to accept or reject any tender or to cancel the tendering process and reject all tenders at any time prior to award of contract as per PPRA rules, without incurring any liability, whatsoever to the affected Bidder or Bidders.

i) The Bidder shall bear all the costs and expenditure incurred and/ or to be incurred by them in preparation and submitting their tender including demonstration of Services or Presentations before the Committee that may be deemed necessary by the GSP.

j) The queries related to scope of work and technical evaluation criteria can be sent to GSP through email at naghmahaider@gsp.gov.pk, muhammadimran@gsp.gov.pk, muhammadali@gsp.gov.pk or through call on 051-9255135.

k) Queries sent via email and/or through call at given addresses and phone number shall be entertained on or before **09-February-2026**. No correspondence will be entertained after this date.

l) Prospective Bidders are advised to visit PPRA website (https://eprocure.gov.pk/#/auth.), (https://www.ppra.org.pk) and GSP website(https://gsp.gov.pk) on regular basis for any change in schedule, amendment / corrigendum in Tender Document including technical requirements etc.

Bid Submission

a) All information provided in the proposals should be firm, irrevocable, and not subject to change or escalation on any account. No modification, alteration or deletion in the provided information will be accepted after the bid submission.

b) All the forms enclosed & information provided will be the basis for technical evaluation. Forms must be completed properly and with evidence. Incomplete information may lead to disqualification of the bidder.

c) Technical and financial qualification criteria will be based on the requirements mentioned in subsequent LOTs of the tender document.

d) The proposals should be signed by a person having the authority for this purpose. In case of a proposal submitted by a corporate entity, the same shall bear its seal and be duly signed by its competent authority. All pages of the bid being submitted must be sequentially numbered by the Bidder.

e) Without the earnest money deposit (EMD)/Bid Security, the bid will be treated as canceled.

Technical Proposal should contain the following details;

- Company profile and Infrastructure
- Registration Certificate
- All the mandatory documents required for Eligibility Criteria
- Summary of relevant projects as per **Form-A** and the supporting documents.
- Profile of full-time technical team as per **Form-B.**
- Details of Offices as per **Form-C.**
- Financial Information of the bidder as per **Form-D.**
- Compliance sheet as per **Form-E** and the supporting documents.
- Authority letter as per **Form-F**
- Submission of Tender Acceptance form as per format given in **Form-G**.
- Checklist section (as per **Form-H**); properly filled and signed.
- Any other information/document listed in Form-H.
- Bid Security **(Annexure-I)**
- Integrity Pact **(Annexure-2)**
- Fair Price Certificate **(Annexure-3)**
- Integrity and Ethics Understanding **(Annexure-4)**
- Affidavit that the firm is neither blacklisted nor involved in any active litigation in Pakistan **(Annexure-5)**

Financial Proposal:

The financial bid (as per the format specified in **Form-I** needs to be submitted in accordance with following guidelines.

- The rates are to be quoted in strict compliance to the format (specified in **Form-I**).

- The rates are to be quoted by the Bidders in Pakistani Currency and payment shall be made to successful Bidders in Pakistani currency only.

- The Bidder shall bear all the applicable tax liability as per rates prevailing at the time of undertaking the job in accordance with the tax Ordinance/laws/rules/regulations.

- The price quoted should be inclusive of all applicable taxes and duties.

Bid Evaluation, Procedure and Criteria

Technical Evaluation:

a) Initially, only the "TECHNICAL PROPOSAL" shall be opened.

b) The technical proposals shall be evaluated for compliance with mandatory documents for eligibility and technical specifications of items/services being procured through this tender, without reference to the price. The technical proposal which does not conform to these requirements will be rejected.

c) Technical Evaluation Committee (TEC) will shortlist Technical Bids on the basis of technical parameters and features offered. The TEC can make any inquiry/ seek clarification from the Bidders on the offered Service Solution. In such a situation, the Bidder shall extend full co-operation. The Bidders can also be asked to deliver technical presentation/ discussion on the offered solution, in a short period notice

either at Islamabad or Lahore as deemed appropriate by the TEC.

d) Compliance with all mandatory and technical requirements against relevant lot is a prerequisite for eligibility to participate in the Financial Bid opening.

Financial Evaluation:

- The Financial Bids of only technically compliance bidders/technically qualified bids will be opened in the presence of their representatives on a specified date and time to be intimated to the respective Bidders.
- The financial proposals will be thoroughly evaluated, and total amounts will be verified for accuracy. The contract will be awarded to the lowest-priced bid that is fully compliant with all requirements.
- The bidders will provide a performance guarantee equivalent to **5%** of the bid value at the time of signing of the contract agreement.
- The Work Order will be issued after signing of the contract agreement.
- The place of deployment of services will be at Islamabad.

Delivery Timelines

The successful bidders in each LOT are instructed to deliver complete solutions for each LOT within **ninety (90) days** of issuance of work/purchase order.

Liquidated Damages for Delay

In case of delay in delivery / completion beyond the stipulated period, liquidated damages shall be levied as under:

- 1% of contract value per week for the first week of delay
- 2% per week for the second week
- 3% per week for delay exceeding two weeks Maximum liquidated damages shall not exceed **9%** of the total contract value. Even after imposition of liquidated damages, if the supplier fails to effect delivery / completion, the procuring agency reserves the right to cancel the contract / purchase order and forfeit the bid security and / or performance guarantee after issuing notice.

Governing Law:

This Procurement and any matter relating thereto shall be governed by the prevailing laws of Govt. of Pakistan and PPRA rule 2004.

Force Majeure:

If the agreement cannot be performed due to **force majeure**, the responsibility shall be exempted in part or in whole according to the influence of **force majeure**. However, if **force majeure** occurs after the party delays performance, the party shall not be exempted from liability.

LOT-1
Esri ArcGIS Enterprise solution and deployment on Physical/Virtual server

List of Mandatory Documents for Eligibility

Sr.	Documents.	Remarks
1	Certificate of Company/Firm Registration under the laws of Pakistan with minimum 02 years of Relevant Experience	• Valid certificates/e-certification from concerned regulator/ authority is required. • PO/ Completion Certificates for procurement and implementation of similar services
2	Registration of NTN with Federal Board of Revenue (FBR) and having Active Taxpayer status.	
3	Registration of General Sales Tax (GST) with Federal Board of Revenue (FBR) and having Active Taxpayer status.	
4	The bidder must have completed one (1) similar nature of Job i.e. procurement and deployment of Esri ArcGIS Enterprise solution during the last five (5) years.	Work order and completion certificate from the client is required
5	Instructor-led, in-person training delivered through Esri's original classroom training ecosystem at Official Esri-authorized global training centers.	The company will provide assurance on stamp paper regarding training of Five (5) officers nominated by GSP for ArcGIS Enterprise with no burden on Govt. of Pakistan.
6	Manufacturer Authorization Letter or Authorized Reseller certificate is mandatory.	Valid Authorization Certificate
7	The bidder should have a fully operational office/ Head office in any major city of Pakistan.	Proof of Office setup and address
8	Affidavit that the firm is neither blacklisted nor involved in any active litigation in Pakistan.	Annexure-5
9	Pay Order/Call Deposit Receipt/ Bank Draft for Bid Security of Rs. 300,000/-.	Original is required.
10	At least 30 million cumulative turnover for the last three (3) years	Bank statement for last three (03) years
11	Service contract for 1 year at no additional cost after expiry of warranty period	Affidavit on stamp paper

- The Bidder must provide the details on technical team including GIS specialists.
- The Bidders are requested to furnish documents to establish their eligibility for each of the above clauses. Relevant portions, in the documents submitted in pursuance of eligibility criteria mentioned above, should be highlighted. If tender were not accompanied by all the above documents mentioned, the same would be rejected. Undertaking for subsequent submission of any of the above documents will not be entertained. If upon verification, evaluation/ assessment, the information furnished by the Bidder is found to be false/incorrect, their bid shall be summarily rejected and no correspondence on the same shall be entertained.
- The bid submitted by any bidder failing to fulfill the eligibility conditions/criteria detailed above, will not be considered.

TECHNICAL SELECTION CRITERIA

Parameter	Description	Marks	Marks Obtained
Past Performance and Experience (Total marks 60)	• **Proven Experience in Delivering Similar Services** (Procurement and deployment of Esri ArcGIS Enterprise solution) o Number of similar projects completed **(15 Marks for each Project completed, Maximum 45 Marks)**	**45 Marks**	
	• **Client Feedback/Completion Certificate** o Testimonials and performance reviews from previous clients (**5 Marks for each, Maximum 15 Marks**)	**15 Marks**	
After-Sales Support and Service (Total marks 40)	• **Warranty and Service Agreements** o Availability of service and maintenance contracts of similar nature (**5 mark for each service contract**)	**(10 Marks Maximum)**	
	• **Availability of Local Technical Support** o Number of technical staff available for support and operations: **03 Mark/ staff members** o Developers trained by the manufacturer on relevant solution: **5 Marks/ Developer**	**(15 Marks Maximum)** **(15 Marks Maximum)**	

- **Technical evaluation scores will be given on cumulative profile of the venders/firms participating as Joint Venture (JV)/mutual agreement. Although leading firm must meet the company registration requirement and be on active taxpayer list of FBR.**
- **Minimum 60% technical score for qualification & further evaluation**

Bid Security/Earnest Money Deposit (EMD):
- The Bidder shall furnish earnest money/bid security amounting **Rs: 300,000/-** in the form of original Bank Draft/ Bank Guarantee/CDR/BC of any Scheduled Commercial Bank drawn in favor of the **Director General, Geological Survey of Pakistan**. The Earnest Money is required to protect the GSP rights against the risk of the Bidders unwarranted conduct. EMD also known as bid security deposit.

Form-H (Lot-1): Mandatory Requirements for Bidders (Checklist)

S/N	Attributes	Reference Page in Proposal
1.	Complete firm profile including name, office address, telephone/fax and e-mail address and web address (if any), contact person details etc.	
2.	Proof of Certificate of Incorporation of Registration	
3.	NTN/FTN & GST registration certificates where applicable	
4.	Bank Statement for the last Three (3) years	
5.	Proof of Experience	
6.	List of Clients of similar projects along-with Clientele testimonials (References / Recommendations, if any)	
7.	Proof of Specific / Similar Jobs Completed	
8.	Profiles of all employees who will carry out this assignment, if awarded.	
9.	Details of established office setup	
10.	Signed TENDER submission form.	
11.	Authority Letter for the appointment of an authorized representative.	
12.	Undertaking that the Bidder/firm and its employee(s) have never been blacklisted by any government, semi-government, autonomous or state-owned organization and their cases regarding blacklisting are not under trial by any Court of Law (Annexure-5)	
13.	Proof of any other information provided for submission of this TENDER.	
14.	Bid Security (Annexure-1)	
15.	Manufacturer Authorization Letter or Authorized Reseller certificate	
16.	Assurance on stamp paper regarding training	
17.	Service contract for 1 year at no additional cost after expiry of warranty period (Affidavit on stamp paper)	
18.	Compliance sheet as per Form-E	
19.	Integrity Pact (Annexure-2)	
20.	Fair Price Certificate (Annexure-3)	
21	Integrity and Ethics Understanding (Annexure-4)	

Form-I(LOT-1): Financial bid form

SN	Item	Rate (PKR) Inclusive of all taxes
1	Esri ArcGIS Enterprise solution and deployment on Physical/Virtual servers	

- **Rate must be inclusive of all applicable taxes and duties**

Signature of Tenderer_____   **Seal of Tenderer____**

Scope of Work

Objectives and scope

- **Objective:** Procure, design, deploy, configure, and operationalize one (1) ArcGIS Enterprise standard up to four cores Perpetual License (includes: five (05) creator user type licenses) on physical/virtual servers arranged and managed by GSP and procure and integrate one (1) ArcGIS Enterprise professional plus (formerly advanced) user type Perpetual License on GSP's Machines.

- **In scope:**

  - **Licensing:** One (1) ArcGIS Enterprise standard up to four cores Perpetual License (includes: five (05) creator user type licenses) including Portal for ArcGIS, ArcGIS Server, ArcGIS Data Store, and related entitlements and one (1) ArcGIS Enterprise professional plus (formerly advanced) user type Perpetual License procured in the name of GSP.

  - **Deployment:** Installation and configuration on physical or virtual servers arranged and managed by GSP, including SSO/IdP integration, security hardening, backups, and monitoring.

  - **Enterprise geodatabase:** Centralized SDE on supported RDBMS (SQL Server preferred, PostgreSQL or Oracle acceptable), multi-user versioning, and performance tuning.

  - **Portal enablement:** Full setup of ArcGIS Portal content model, user roles, groups, administrative governance, public sharing workflows, and publishing pipelines for all GSP layers.

Enterprise geodatabase (SDE)

- **Schema:** Scalable Esri geodatabase schema with domains, subtypes, topology rules, spatial indexing, and raster support.

- **Versioning:** Branch or traditional versioning set per workflow; conflict resolution SOPs; scheduled reconcile/post.

- **Performance:** Indexing, compression, statistics updates, DB maintenance plans, query optimization baselines.

- **Capacity:** Minimum 1 TB storage for vector and raster datasets with growth plan.

ArcGIS Portal configuration

- **Identity and access:**

  - **IdP:** Integration with Keycloak/OpenID Connect or SAML SSO; role mapping for GSP roles (System Admin, Content Admin, Publisher, Analyst, Viewer).

  - **RBAC:** Role-based groups and privileges; content lifecycle and approval workflows.

- **Content model:**

  - **Items:** Hosted feature layers, map services, tile services, imagery layers, web maps, web apps.

- o **Metadata:** ISO 19115 or Esri item metadata; required fields for title, abstract, tags, lineage, contact, license.

- **Publishing pipelines:**

  - o **From SDE:** Registered data sources; data stores configured; automated service publishing templates; symbology standards.

  - o **From Data Store:** Hosted layers for lightweight content; caching strategies (tile cache where appropriate).

- **Sharing workflows:** Public, registered, internal groups; approval steps; embargo/unpublish dates; audit logging.

Security, backup, and monitoring

- **Security:** TLS 1.2+, secure ciphers, admin API protection, content sharing policies, audit logs.

- **Backups:** Nightly Portal content, Data Store, SDE backups; weekly full, daily differential; tested restore drills.

- **Monitoring:** Health checks, service availability dashboards, alerts (CPU/RAM, service failures, DB growth), log retention 180 days.

Training & Capacity Building

The bidder must include 5 working days of official Esri training, delivered through Esri's original classroom training ecosystem. Training shall be provided through Esri-authorized global training centers (with official Esri certification). The training should cover the following areas:

- ArcGIS Enterprise Administration
- Enterprise Geodatabase (SDE) Management
- Working with ArcGIS Dashboards
- Image analysis using ArcGIS Pro
- ArcGIS Pro: Essential Workflows
- ArcGIS Enterprise: Configuring a Base Deployment

The number of trainees will be five people nominated by GSP.

Deliverables

- Licenses**:** Proof of purchase, activation keys, entitlement transfer to GSP account.

- Deployment**:** Installed and configured Portal, Server, Data Store, and SDE across Dev/UAT/Prod.

- Architectural documents**:** Logical architecture, network diagrams, server sizing, HA options, SOPs for operations.

- Portal configuration**:** Roles, groups, sharing policies, metadata templates, publishing workflows.

- Data integration**:** At least 30 priority GSP layers published with symbology; standardized enriched metadata; catalog and thumbnails; complete item pages.

- Security and backup**:** Implemented SSL/TLS, backup schedules, recovery procedures, audit logging.

- Training: Delivered through Esri's original classroom training ecosystem with completion certificates, runbooks and quick reference guides.

- Acceptance test plan: Scripts and results for performance, security, failover (if applicable), and publishing.

Acceptance criteria

- Licensing: Licenses verified under GSP ownership; Portal shows correct entitlements.

- Functionality: Portal, Server, Data Store, SDE operational; users can authenticate via IdP; publish services from SDE; view and consume layers publicly where designated.

- Performance: Map service response time ≤ 2.5 seconds median for standard vector layers at national extent; tile cache render acceptable (<1s after cache).

- Capacity: Able to store and serve ≥ 1 TB datasets; SDE versioning functioning with reconcile/post tests.

- Security: SSL configured; no admin endpoints publicly exposed; audit logs enabled; roles enforced.

- Backup/restore: Successful restoration from latest backups to UAT within 4 hours.

- Documentation and training: All materials and training delivered.

Service levels and warranty

- Availability: 99.5% monthly uptime target for Portal/Server (Prod).

- Incident response: Critical incidents ≤ 4 hours to respond, ≤ 24 hours to remediate or provide workaround.

- Warranty: 12 months post-acceptance for configuration defects; patching and updates per Esri schedule

LOT-2
Design, Development and Maintaining Dedicated Geodata Portal on Esri ArcGIS Enterprise Platform

List of Mandatory Documents for Eligibility

Sr.	Documents.	Remarks
1	Certificate of Company/Firm Registration under the laws of Pakistan with minimum 02 years of Relevant Experience	• Valid certificates/e-certification from concerned regulator/ authority is required. • PO/ Completion Certificates for procurement and implementation of similar services
2	Registration of NTN with Federal Board of Revenue (FBR) and having Active Taxpayer status.	
3	Registration of General Sales Tax (GST) with Federal Board of Revenue (FBR) and having Active Taxpayer status.	
4	The bidder must have successfully completed at least one (1) comparable assignment within the preceding ten (10) years, which included the end-to-end design, development, deployment, and operationalization of a GIS-based Geodata Portal for geological and/or mineral resource datasets, comprising both vector and raster data, and implemented for a national, provincial/state, or international-scale organization.	Work order and completion certificate from the client is required
5	The bidder should have a fully operational office/ Head office in any major city of Pakistan.	Proof of Office setup and address
6	Affidavit that the firm is neither blacklisted nor involved in any active litigation in Pakistan.	Annexure-5
7	Pay Order/Call Deposit Receipt/ Bank Draft for Bid Security of Rs. 300,000/-.	Original is required.
8	At least 30 million cumulative turnover for the last three (3) years	Bank statement for last three (03) years

- The Bidder must provide the details on technical team including GIS solution developers.
- The Bidders are requested to furnish documents to establish their eligibility for each of the above clauses. Relevant portions, in the documents submitted in pursuance of eligibility criteria mentioned above, should be highlighted. If tender were not accompanied by all the above documents mentioned, the same would be rejected. Undertaking for subsequent submission of any of the above documents will not be entertained. If upon verification, evaluation/ assessment, the information furnished by the Bidder is found to be false/incorrect, their bid shall be summarily rejected and no correspondence on the same shall be entertained.
- The bid submitted by any bidder failing to fulfill the eligibility conditions/criteria detailed above, will not be considered.

TECHNICAL SELECTION CRITERIA

Parameter	Description	Marks	Marks Obtained
Past Performance and Experience (Total marks 60)	• **Proven Experience in Delivering Similar Services** (GIS-based Geodata Portal development for geological/ mineral datasets (vector & raster) at national/provincial/international scale during last ten (10) years.) o Number of similar projects completed **(15 Marks for each Project completed, Maximum 45 Marks)**	**45 Marks**	
	• **Client Feedback/Completion Certificate** o Testimonials and performance reviews from previous clients **(5 Marks for each, Maximum 15 Marks)**	**15 Marks**	
After-Sales Support and Service (Total marks 40)	• **Warranty and Service Agreements** o Availability of service and maintenance contracts of similar nature **(5 mark for each service contract)**	**(10 Marks Maximum)**	
	• **Availability of Local Technical Support** o Number of technical staff available for support and operations: **03 Mark/ staff members** o Engineers/Staff trained on relevant solution: **5 Marks/ engineer**	**(15 Marks Maximum)** **(15 Marks Maximum)**	

- **Technical evaluation scores will be given on cumulative profile of the venders/firms participating as Joint Venture (JV)/mutual agreement. Although leading firm must meet the company registration requirement and be on active taxpayer list of FBR.**
- **Minimum 60% technical score for qualification & further evaluation**

Bid Security/Earnest Money Deposit (EMD):
- The Bidder shall furnish earnest money/bid security amounting **Rs: 300,000/-** in the form of original Bank Draft/ Bank Guarantee/CDR/BC of any Scheduled Commercial Bank drawn in favor of the **Director General, Geological Survey of Pakistan**.

Form-H(Lot-2): Mandatory Requirements for Bidders (Checklist)

S/N	Attributes	Reference Page in Proposal
1.	Complete firm profile including name, office address, telephone/fax and e-mail address and web address (if any), contact person details etc.	
2.	Proof of Certificate of Incorporation of Registration	
3.	NTN/FTN & GST registration certificates where applicable	
4.	Bank Statement for the last Three(3) years	
5.	Proof of Experience	
6.	List of Clients of similar projects along-with Clientele testimonials (References / Recommendations, if any)	
7.	Proof of Specific / Similar Jobs Completed	
8.	Profiles of all employees who will carry out this assignment, if awarded.	
9.	Details of established office setup	
10.	Signed TENDER submission form.	
11.	Authority Letter for the appointment of an authorized representative.	
12.	Undertaking that the Bidder/firm and its employee(s) have never been blacklisted by any government, semi-government, autonomous or state-owned organization and their cases regarding blacklisting are not under trial by any Court of Law (Annexure-5)	
13.	Proof of any other information provided for submission of this TENDER.	
14.	Bid Security (Annexure-1)	
15.	Compliance sheet as per Form-E	
16.	Integrity Pact (Annexure-2)	
17.	Fair Price Certificate (Annexure-3)	
18.	Integrity and Ethics Understanding (Annexure-4)	

Form-I(LOT-2): Financial bid form

SN	Item	Rate (PKR) Inclusive of all taxes
1	Design, Development and Maintaining Dedicated Geodata Portal on Esri ArcGIS Enterprise Platform	

- **Rate must be inclusive of all applicable taxes and duties**

Signature of Tenderer_____   **Seal of Tenderer____**

Scope of Work
Objectives and scope
- **Objective:** Design, develop, deploy, and maintain a dedicated Geodata Portal on the Esri Enterprise platform that integrates the GIS-based Geoscientific Database, administrative dashboards, and public portals for dissemination, visualization, and download of geoscientific data.

- **In scope:** Full-stack portal implementation with Map View, Browse View, Catalogue View, Product Details, shopping cart, packaging and download, Keycloak-based authentication, QA/QC workflows, multilingual capabilities, and admin curation tools.

User Roles

Public User

Members of the public, such as prospective investors, academic researchers or journalists, who are interested in acquiring geoscientific data that might further their work, and aid with decision-making.
The below functionality will be provided to unregistered users.

- View GIS layers interactively through an online map viewer.

- Browse a data catalogue with metadata descriptions.

- Visualize location boundaries and access abstracts of published reports.

The below functionality will be provided to registered users.
- Download available GIS datasets with symbology.

- Download published maps, reports and associated documents in PDF format.

Content Administrator User

A representative of GSP, responsible for overseeing the management and dissemination of geoscientific information. They would be using the administrative capabilities of the Geodata Portal, uploading files and curating products for download.

System Administrator User

Responsible for managing site-wide access and permissions for users, and other technical aspects of the system. Also monitor visitor's traffic and the countries from where the portal is accessed.

Browsing and Viewing the Catalogue

Map View

A user should be able to have a map-first view of the geodata, consisting of

- A full-screen map, centered on the country

- A legend showing all configured map services (which would typically represent geoscience data available to download), and layers within them, with a symbology key
- Functionality to switch on and off layers for viewing

- Identify functionality to allow the user to click to see details of a feature in a pop-up

- Zoom and pan capabilities

Browse View

A user should be able to browse and search the catalogue to get an idea of what is available before choosing what to download. Since each product within the catalogue has a spatial footprint, the browse view should contain a mapping capability to allow the user to see the location of the product in relation to the local geography. The browse view should also include the following capabilities within the map:

- A legend showing all configured map services (which would typically represent geoscience data available to download), and layers within them, with a symbology key

- Functionality to switch on and off layers for viewing

- Identify functionality to allow the user to click to see details of a feature in a pop-up

The user should be able to use the map view to filter the catalogue down to a list view of products in a particular region by zooming and panning the map view. The user should also be able to filter the catalogue via other criteria:

- Free text within product name and description

- Publish date

- Author

- Product type

- File type

- Tags

- Related license code

Products should only be displayed if the current date is more recent than their publishing date, but not beyond their unpublished date.

Catalogue View

The catalogue view should be similar to the Browse view, as a list, but without the spatial interface. The same non-spatial filter capabilities should be available.

Viewing Product Details

From both the Browse view and the Catalogue view, the user should be able to click through to see the full details of a product, including a map of its location, as well as a summary of each file within the product. If the user wishes to download a product, they should be able to add the product to their cart. If a file has a reference to a spatial representation stored, then a button should be available to cause the object to be rendered in the product map.

Product Checkout and Download

Shopping Cart

The shopping cart view should be accessible via the standard cart icon on the top menu, which should be badged to show the number of products in the cart. The user should be able to remove items from the cart from this view, before proceeding to checkout. When the user chooses to check out, the system should check if they are signed in, and if not so, they should be prompted to sign in or register.

Sign In

When the user is prompted to sign in, they should be directed to the Identity Provider (IdP) to authenticate. Once there is a valid token, they should be returned to the site, with a hook taking them to the page they were using or attempting to use, such as the checkout page.

Registration and Account Creation

If the user clicks the Register button, they should be directed to the IdP to authenticate themselves. Once there is a valid token, they should be returned to the site, with a new account created including their email address and password.

Checkout

On the checkout page, the user should see a list of all products that they have chosen. When they progress to the next step they should be notified that they will receive an email notification once the product(s) are packaged for download.

Product Preparation for Download

Once checkout for all selected products is complete (if required), the system should compile a downloadable package of each product for the user, making a copy of the original files that constitute the product(s). This should be zipped and a passcode generated.

Email Notifications

The user will receive email notifications when their product is ready to download, including a link to the product downloads page and a download passcode.

Product Download

The product download page will show the user a history of their packaged products. These will be available to download at any time. The packaged product contents will not change if the original purchased product changes in any way (including changes in the files).

Spatial Data Administration

Geospatial data that is intended for viewing will be managed in an ArcGIS Server instance and its accompanying data store. Map services of all data to be presented within the geodata portal's map will need to be configured with appropriate layers and symbology. These will need to be made accessible to be consumed by public users of the geodata portal.

System Administration

Map Configuration

For each map, configuration capabilities should be available to determine

- The map services to be consumed in each map

  o Name

  o URL

  o Access credentials

- For each map and layer, which of these should be enabled (checked) by default

User Management

An interface should be available to allow system administrators to view lists, and details, of users, and to be able to make appropriate changes, including changing roles and enabling/disabling access.

Catalogue Administration / Curation

The functionality described in this section should be only available to administration users.

Media File Administration

Search/List Media Files

Browse through a list of existing media files, and use filter/search criteria to narrow down the list of media files. Filter criteria should include:

- Name

- Description

- File type

- Publication date

- Tags

- Location

The admin user should be able to click through to see details of the media file.

View and Edit Media Files

Viewing and Editing Media File Properties

View metadata descriptors of the media file, such as

- Name

- Description

- File type

- Tags

- Author

- Publication date

These should also be able to be edited.

Uploading Media Files

For an existing media file, it should be possible to upload a new file to replace the existing one.

Viewing and Editing Media File Location

Each media file has an associated location (polygon). The admin user should be able to view this shape against a background map imagery. They should also be able to edit this polygon, either by changing it on the map, by editing GeoJSON, or via a tabular representation.

Add New Media Files

An admin user must be able to add a new media file, and capture all the same information that they can when viewing and editing a media file.

Delete Existing Media Files

An admin user must be able to delete a media file that exists. They should be prompted with a warning confirmation before doing so. When deleting a media file, the system should remove both the metadata records, the underlying file in the media library, and its reference within all products in the catalogue. The user should be made aware of all products that will be affected by the media file's removal.

Import Media Files

An admin user must be able to import from an Excel (.xlsx) file to create multiple media file records in the system at once. The source should conform to a fixed format, with column names in the first row indicating the data within. The file path should match the location where the associated digital file is to be retrieved. When a media file with the same name already exists, it should be updated with the matching record's details. No product details or relationships are expected to be added or altered via this import. The Excel file schema will be as follows:

- Name

- Description

- Location (GeoJSON)

- File Type

- Date

- Author

- File location

- Tags (comma-separated string)

Product Administration

Search/list Products

Browse through a list of existing products, and use filter/search criteria to narrow down the list of products. Filter criteria should include the following.

- Name

- Description

- Summary

- Product type

- Publication date

- Tags

- Location

The admin user should be able to click through to see details of the product.

View and Edit Products

Viewing Product Properties

View metadata descriptors of the product, such as

- Name

- Description

- Product type

- Tags

- Author

- Publish date

- Unpublished date

These should also be able to be edited. A "publish" function should be available to cause the product publication date to be set to the present day, and the product to become available for users to find and view.

Adding and Removing Files

An admin user should be able to view the media files that are associated with the product, and add and remove media files from the product. When adding files, the admin user needs a search capability to find files in the media library that meet the product definition. Various criteria should be available, including file name, type, tag, and location. This should include making use of the product's shape as the basis for file selection.

Editing Product Location

Each product has its own location, and the admin user needs to be able to set this, either by selecting this on a map, by editing GeoJSON, or via a tabular representation. Since the product's location should usually be derived from, or associated with, that of the constituent files, functionality should be available to do the following.

- View the shape of the product relative to that of the files within that product

- Generate the polygon shape of the product from the union of the shapes of the files

- Update the polygon shape of the product when the shape of the files changes

Add New Products

An admin user should be able to add new products to the catalogue, using similar functionality as when editing an existing product.

Delete Existing Products

An admin user must be able to delete a product that exists. They should be prompted with a warning confirmation before doing so. When deleting a file, the system should remove the product's metadata records, but leave any associated files untouched.

Import Products

An admin user must be able to import from an Excel (.xlsx) file to create multiple products in the system at once. The source file should conform to a fixed format, with column names in the first row indicating the data within. References to media files should be based on the file ID. When a product with the same name already exists, it should be updated with the matching record's details. No media file details or relationships are expected to be added or altered via this import. The Excel file schema should be as follows:

- Name

- Description

- Summary

- Location (GeoJSON)

- Product Type

- Publish Date

- Tags (comma-separated string)

Multilingual Capabilities

The Geodata Portal should provide multilingual capabilities as follows:

- One, two or three languages should be able to be configured in the system

- All static text displayed by the application should be able to be configured in each of the languages
- Lookup text should be able to be configured in each language for

    o Product type

    o File type

- Product and file text fields (name, description and summary) should be able to be translated into each of the languages
- Author names and tags are not expected to be translatable

- Digital media file content is not to be translated but stored as-is

QA/QC workflows

- **Automated checks:** Geometry validity, attribute completeness, duplicate detection, schema compliance; pre-publication approvals.

- **Audit trails:** Create/validate/approve/publish/archival events recorded; versioning of products and media metadata.

System architecture

- Presentation tier: Geodata Portal (Map, Catalogue, Admin), Umbraco CMS for news, Keycloak IdP.

- GIS integration: ArcGIS Server services; ArcGIS Enterprise Data Store and/or SDE; product/file polygon rendering from catalogue; external services support.

- Data tier: SQL Server database storing product and file metadata, spatial footprints (GeoJSON), user records, purchase/download logs.

- File storage: Original media files on file system; password-protected zipped packages generated at checkout.

- Security: Role-based access, audit logging, secure APIs, compliance with Government of Pakistan IT security policies.

Deliverables
- Portal application: Map, Browse, Catalogue, Product Details, Cart, Checkout, Packaging, Download pages fully functional.

- Admin interfaces: Media and product administration modules; user management; map configuration (service names, URLs, credentials, default layer visibility).

- IdP integration: Keycloak sign-in, registration, MFA optional; admin dashboard for user management.

- GIS publishing: All map services for portal views published via ArcGIS Server; symbology configured; datastore registration complete.

- QA/QC: Validation rules implemented; approval workflow; audit logs visible to admins.

- Multilingual: UI and lookup text localization; content translation interface; language toggle.

- Documentation: System design, API specs, data model, admin run-books, user guides.

- Training: Role-based training of four people (system admin, content admin, publishers, public support); minimum 7 days.

- Sustainability: Maintenance plan, monitoring, and handover procedures.

Service levels and warranty
- Availability: 99.5% monthly uptime target.

- Support: Critical fix response ≤ 4 hours; non-critical ≤ 2 business days.

- Warranty: 12 months for defects; regular updates, security patches, and minor enhancements included.

Terms and conditions for Dedicated Geodata Portal on Esri Enterprise Platform

a) The bidder will be responsible to design and develop the solution using its own logistics and hardware resources.

b) Work closely with GSP at each stage of design/ development for understanding of requirements, functionalities, etc.

c) Firms must implement the system with a selection of such technologies that are able to provide security of the servers/ website/database/and other related entities.

d) Software Licensing except Esri ArcGIS Enterprise Services (including third party, if any) shall be the responsibility of the bidder for sustaining the solution until the end of warranty period.

e) Auto-backup of all the dynamic and static content of the database.

f) Successful bidder should be ready to accommodate changes in web-application-software and its customization etc., to fulfill such requirements that may arise during the intervening period between preparation of this document and commissioning of the system within the scope of the project.

g) Bidder shall provide onsite/online support during warranty.

h) The dashboard shall be compatible with all popular web browsers like Chrome, Mozilla, Opera, Edge, etc.

i) Any other work/development/design/requirement etc. which is not mentioned here in this document but are operationally essential and may arise during the execution of work/design/development/testing/ maintenance of the solution.

j) The bidder will be responsible to link the solution with GSP website (https://gsp.gov.pk)

LOT-3
Perpetual ENVI software license-

List of Mandatory Documents for Eligibility

Sr.	Documents.	Remarks
1	Certificate of Company/Firm Registration under the laws of Pakistan with minimum 02 years of Experience	• Valid certificates/e-certification from concerned regulator/ authority is required.
2	Registration of NTN with Federal Board of Revenue (FBR) and having Active Taxpayer status.	
3	Registration of General Sales Tax (GST) with Federal Board of Revenue (FBR) and having Active Taxpayer status.	
5	The bidder should have a fully operational office/ Head office in any major city of Pakistan.	Proof of Office setup and address
6	Affidavit that the firm is neither blacklisted nor involved in any active litigation in Pakistan.	Annexure-5
7	Pay Order/Call Deposit Receipt/ Bank Draft for Bid Security of Rs. 200,000/-.	Original is required.
8	At least 20 million cumulative turnover for the last three (3) years	Bank statement for last three (03) years
9	Service contract for 1 year at no additional cost after expiry of warranty period	Affidavit on stamp paper

- The bid submitted by any bidder failing to fulfill the eligibility conditions/criteria detailed above, will not be considered.

Form-H (Lot-3): Mandatory Requirements for Bidders (Checklist)

S/N	Attributes	Reference Page in Proposal
1.	Complete firm profile including name, office address, telephone/fax and e-mail address and web address (if any), contact person details etc.	
2.	Proof of Certificate of Incorporation of Registration	
3.	NTN/FTN & GST registration certificates where applicable	
4.	Bank Statement for the last Three (3) years	
5.	Profiles of all employees who will carry out this assignment, if awarded.	
6.	Details of established office setup	
7.	Signed TENDER submission form.	
8.	Authority Letter for the appointment of an authorized representative.	
9.	Undertaking that the Bidder/firm and its employee(s) have never been blacklisted by any government, semi-government, autonomous or state-owned organization and their cases regarding black listing are not under trial by any Court of Law (Annexure-5)	
10.	Service contract for 1 year at no additional cost after expiry of warranty period- Affidavit on stamp paper	
11.	Proof of any other information provided for submission of this TENDER.	
12.	Bid Security (Annexure-1)	
13.	Compliance sheet as per Form-E	
14.	Integrity Pact (Annexure-2)	
15.	Fair Price Certificate (Annexure-3)	
16	Integrity and Ethics Understanding (Annexure-4)	

Form-I(LOT-3): Financial bid form

SN	Quantity	Item	Rate (PKR) per unit Inclusive of all taxes
1	4	Latest Perpetual ENVI Image Processing Software with IDL (Base License Only) per unit price	

- **Rate must be inclusive of all applicable taxes and duties**
- **No optional modules, extensions, plug-ins, or add-on components shall be included in the quoted price.**

Signature of Tenderer_____   Seal of Tenderer____

Bid Security/Earnest Money Deposit (EMD):

- The Bidder shall furnish earnest money/bid security amounting **Rs: 200,000/-** in the form of original Bank Draft/ Bank Guarantee/CDR of any Scheduled Commercial Bank drawn in favor of the **Director General, Geological Survey of Pakistan**. The Earnest Money is required to protect the GSP rights against the risk of the Bidders unwarranted conduct. EMD also known as bid security deposit.

Scope of Work

Objectives and scope
- Objective: Procure latest version with perpetual license of ENVI software for GSP's geospatial analysis needs, including delivery, activation.

- In scope: Licensing, delivery, installation support, activation, documentation.

Licensing requirements
- License type: Latest Perpetual ENVI Desktop licenses (per unit), including core modules for raster processing, classification, change detection, and spectral analysis.

- Seat type: Named user or concurrent/network licenses (bidders to propose both with unit pricing).

- Maintenance: 12 months standard maintenance (updates, patches, vendor support) included.

Technical and delivery requirements
- Compatibility: Windows 10/11 and/or supported Linux distributions; GPU compatibility information if applicable.

- Delivery: License keys and installers supplied to GSP; activation guidance and support.

- Documentation: User manuals, installation guides, release notes.

Deliverables
- Licenses: Per unit perpetual licenses, activation codes, proof of ownership under GSP.

- Installation: Assisted installation on GSP's Machines; activation verification.

- Support: Maintenance and vendor support contacts.

Acceptance criteria
- Activation: Licenses activatable and functional on GSP machines; successful test workflow to ingest imagery and export GeoTIFF/Esri-compatible outputs.

- Documentation: Delivered and acknowledged by GSP.

Lot 4
Development of Android Based Mobile Application for field data collection

List of Mandatory Documents for Eligibility

Sr.	Documents.	Remarks
1	Certificate of Company/Firm Registration under the laws of Pakistan with minimum 02 years of Relevant Experience	• Valid certificates/e-certification from concerned regulator/ authority is required. • PO/ Completion Certificates for procurement and implementation of similar services
2	Registration of NTN with Federal Board of Revenue (FBR) and having Active Taxpayer status.	
3	Registration of General Sales Tax (GST) with Federal Board of Revenue (FBR) and having Active Taxpayer status.	
4	The bidder must have completed one (1) similar nature of Job i.e Design and development of GIS based Android mobile application for field data collection in last five (5) years.	Work order and completion certificate from the client is required
5	The bidder should have a fully operational office/ Head office in any major city of Pakistan.	Proof of Office setup and address
6	Affidavit that the firm is neither blacklisted nor involved in any active litigation in Pakistan.	Annexure-6
7	Pay Order/Call Deposit Receipt/ Bank Draft for Bid Security of Rs. 200,000/-.	Original is required.
8	At least 10 million cumulative turnover for the last three (3) years	Bank statement for last three (03) years
9	Service contract for 1 year at no additional cost after expiry of warranty period	Affidavit on stamp paper

- The Bidder must provide the details on technical team including GIS solution developers.
- The Bidders are requested to furnish documents to establish their eligibility for each of the above clauses. Relevant portions, in the documents submitted in pursuance of eligibility criteria mentioned above, should be highlighted. If tender were not accompanied by all the above documents mentioned, the same would be rejected. Undertaking for subsequent submission of any of the above documents will not be entertained. If upon verification, evaluation/ assessment, the information furnished by the Bidder is found to be false/incorrect, their bid shall be summarily rejected and no correspondence on the same shall be entertained.
- The bid submitted by any bidder failing to fulfill the eligibility conditions/criteria detailed above, will not be considered.

TECHNICAL SELECTION CRITERIA

Parameter	Description	Marks	Marks Obtained
Past Performance and Experience (Total marks 60)	• **Proven Experience in Delivering Similar Services** (Design and development of GIS based Android mobile application for field data collection) o Number of similar projects completed **(15 Marks for each Project completed, Maximum 45 Marks)**	**45 Marks**	
	• **Client Feedback/Completion Certificate** o Testimonials and performance reviews from previous clients (**5 Marks for each, Maximum 15 Marks**)	**15 Marks**	
After-Sales Support and Service (Total marks 40)	• **Warranty and Service Agreements** o Availability of service and maintenance contracts of similar nature (**5 mark for each service contract**)	**(10 Marks Maximum)**	
	• **Availability of Local Technical Support** o Number of technical staff available for support and operations: **03 Mark/ staff members** o Engineers/Staff trained by the manufacturer on relevant solution: **5 Marks/ engineer**	**(15 Marks Maximum)** **(15 Marks Maximum)**	

- **Technical evaluation scores will be given on cumulative profile of the venders/firms participating as Joint Venture (JV)/mutual agreement. Although leading firm must meet the company registration requirement and be on active taxpayer list of FBR.**
- **Minimum 60% technical score for qualification & further evaluation**

Form-H(Lot-4): Mandatory Requirements for Bidders (Checklist)

S/N	Attributes	Reference Page in Proposal
1.	Complete firm profile including name, office address, telephone/fax and e-mail address and web address (if any), contact person details etc.	
2.	Proof of Certificate of Incorporation of Registration	
3.	NTN/FTN & GST registration certificates where applicable	
4.	Bank Statement for the last Three(3) years	
5.	Proof of Experience	
6.	List of Clients of similar projects along-with Clientele testimonials (References / Recommendations, if any)	
7.	Proof of Specific / Similar Jobs Completed	
8.	Profiles of all employees who will carry out this assignment, if awarded.	
9.	Details of established office setup	
10.	Signed TENDER submission form.	
11.	Authority Letter for the appointment of an authorized representative.	
12.	Undertaking that the Bidder/firm and its employee(s) have never been blacklisted by any government, semi-government, autonomous or state-owned organization and their cases regarding black listing are not under trial by any Court of Law	
13.	Proof of any other information provided for submission of this TENDER.	
14.	Bid Security (Annexure-1)	
15.	Service contract for 1 year at no additional cost after expiry of warranty period (Affidavit on stamp paper)	
16.	Compliance sheet as per Form-E	
17.	Integrity Pact (Annexure-2)	
18.	Fair Price Certificate (Annexure-3)	
19	Integrity and Ethics Understanding (Annexure-4)	

Form-I(LOT-4): Financial bid form

SN	Item	Rate (PKR) per unit Inclusive of all taxes
1	Design, develop, host, and maintain an android application enabling real-time and offline field data collection, integrated with the central ArcGIS database	

- **Rate must be inclusive of all applicable taxes and duties**

Signature of Tenderer_____   **Seal of Tenderer____**

Bid Security/Earnest Money Deposit (EMD):

- The Bidder shall furnish earnest money/bid security amounting **Rs: 200,000/-** in the form of original Bank Draft/ Bank Guarantee/CDR of any Scheduled Commercial Bank drawn in favor of the **Director General, Geological Survey of Pakistan**. The Earnest Money is required to protect the GSP rights against the risk of the Bidders unwarranted conduct. EMD also known as bid security deposit.

Objectives and scope

- **Objective:** Design, develop, host, and maintain an Android application enabling real-time and offline field data collection, integrated with the central GIS database and ArcGIS Enterprise.

- **In scope:** App features, security, performance, offline capabilities, device compatibility, data sync, and admin configuration.

Functional requirements

Data collection features

- **Dynamic forms:** Geological mapping, mineral investigations, geophysical surveys, drilling logs; configurable templates and validation.

- **GPS and orientation:** Live GPS tracking, compass; integrated clinometer for measuring trends/orientations.

- **Mapping:** Online basemaps (preferably open-source); offline basemap caching; import and display offline georeferenced maps/images and tools to snap geotagged photos and link them with data points.

- **Digitization/Vector editing:** Create points, lines, polygons; attribute capture; snapping with following functionalities:

  - **On-Screen Digitization**
    - The Field App shall support **direct on-screen digitization** using **finger or active stylus**, including:
    - Creation and editing of **point, polyline, and polygon features**
    - Vertex-level editing (add, delete, move vertices)
    - Reshape and split tools for geological boundaries
    - Undo/redo and geometry validation
    - Snapping controls (vertex, edge, tolerance-based)
  - **Stylus (Pen) Support**
    - The application shall:
    - Fully support **active stylus input** (e.g., Samsung S-Pen or equivalent)
    - Allow smooth freehand drawing for geological contacts and structures
    - Enable pressure-independent precision digitization
    - Distinguish between finger navigation and stylus digitization (where supported by hardware)
  - **Stream / GPS-Based Digitization**
    - The Field App shall include **continuous (stream) digitization** capabilities.
    - Capture **polylines and polygons while walking/driving**
    - Adjustable GPS accuracy thresholds and sampling intervals
    - Pause, resume, and stop streaming tracks
    - Conversion of GPS tracks into editable geological features
    - Display of real-time GPS accuracy and satellite status

- **Imports/exports:** Import vector data (common formats: Shapefile, GeoJSON, KML); export/share to Desktop and web GIS; synchronize with central GIS database.

- **3D visualization:** DEM-based terrain visualization using open-source DEM datasets; profile and elevation tools.

- **Search:** Interactive search tools for layers, features, and forms.

Security and access
- **Users:** Accessible only to GSP registered users; controlled registration via IdP (Keycloak).

- **Authentication:** OAuth2/OIDC tokens; optional MFA; secure token storage.

- **Data protection:** At-rest encryption for cached data; TLS for all API calls; role-based access to layers and forms.

Performance and compatibility
- **Concurrency:** Support at least 200 concurrent users.

- **Devices:** Responsive design for 4" smartphones up to commercial tablets; Android 10+.

- **Offline:** Robust synchronization for field collection with conflict resolution and retry logic; background jobs tolerant to intermittent connectivity.

Administration and configuration
- **Templates:** Admin console to add/remove form templates; include versioning and deprecation.

- **Layers:** Inclusion/omission of products and layers for field use; per-user/per-group layer access policies.

- **Logs:** Activity logs, sync status, error reporting; telemetry for app health and usage.

Integration requirements
- **GIS integration:** Real-time data sync to Enterprise Geodatabase (SDE) or ArcGIS Data Store; publish changes via ArcGIS Server services.

- **Schemas:** Alignment with geodatabase domains/subtypes; enforce schema validation on device.

- **Media handling:** Photo compression options; EXIF preservation; attachment linkage to feature IDs.

Deliverables
- **Mobile app (APK):** Signed, versioned builds; distribution plan; release notes.

- **Admin tools:** Template and layer management interfaces; role controls.

- **Documentation:** User guide, admin run-book, API integration docs, device support matrix.

- **Training:** Minimum 10 days of role-based training (field users, admins).

- **Security artifacts:** Pen-test report; OWASP Mobile Top 10 mitigations checklist; encryption validation.

- **UAT:** Test plans, scenarios, and results for online/offline workflows; 200 concurrent user simulation.

Acceptance criteria
- **Functionality:** All key features operate online/offline; forms and vectors sync to central GIS; attachments linked correctly.

- **Performance:** App responsive; sync jobs complete under typical 4G conditions; stable with 200 concurrent users.

- **Security:** Authentication via IdP; data encrypted; no high-severity findings in pen-test.

- **Compatibility:** Runs on specified device range; layout and UX responsive.

- **Integration:** Data appears in SDE and is publishable via ArcGIS services; schema validations pass.

Maintenance and service levels
- **Updates:** Quarterly feature updates; monthly bugfix releases as needed.

- **Support:** Critical issues response ≤ 4 hours; non-critical ≤ 2 business days.

- **Store readiness:** Option to deploy via private enterprise store or managed distribution.

Cross-cutting requirements (Lots 1, 2, and 4)

Data governance and stewardship
- **Policies:** Define data ownership, custodianship, lifecycle (creation, validation, approval, publication, archival), SOPs, audit trails, and metadata governance.

- **Standards:** Alignment with international geoscience best practices and ISO/Esri metadata standards.

Security and compliance
- **Government policies:** Compliance with Government of Pakistan IT security policies.

- **Audit:** Action logging for admin operations; retention policies.

Documentation and knowledge transfer
- **Run-books:** Administrator and publisher run-books; backup/restore guides; incident procedures.

- **Handover:** Formal handover with asset registers, credentials inventories, and configuration baselines.

General Instructions and Essential Requirements for Mobile Application
   a) The bidder has the responsibility to release and maintain as well as update the app on Android Play store during the contract period.
   b) Latest, standard, proven, preferably open-source technologies shall be used. Entire software Licensing except ESRI ArcGIS Enterprise shall be the

responsibility of the bidder for sustaining the solution until the end of warranty period.

GSP's Obligation:

- GSP will provide administrative support for the development and maintenance of the solution.
- GSP will provide, data files having geoscientific information to be incorporated in the system.

- GSP will provide data collection templates to be incorporated in Mobile Application

Form-A: SUMMARY OF RELEVANT PROJECTS

Sr. #	Client Name	Industry	Location/Address	Duration & Cost	Relevant Details

*Additional pages may be used, if required. Format may be modified.

(Signature of the Bidder)
Name, Sign and Stamp

Note: Please provide documentary evidence for the above.

Form-B: PROFILE OF THE FULL-TIME TECHNICAL TEAM

Give the profiles of key peoples/core members who will be involved in the subject project. Roles & Responsibilities to be mentioned clearly.

Sr. #	Item	Detail
1	Name	
2	Role in subject project	
3	Current job title	
4	Experience in years	
5	Number of years with the organization	
6	Number of Similar Projects Handled	
7	Number of Other Projects	
8	Summary of Professional / Domain Experience	
9	Highlights of assignments handled and significant accomplishments	
10	Educational Background, Trainings/ Certifications	

*Additional pages may be used, if required. Format may be changed.

(Signature of the Bidder)
Name, Sign and Stamp

Form-C: DETAIL OF OFFICES

Sr. #	Address	City	Contact Number

*Additional pages may be used if required.

(Signature of the Bidder)
Name, Sign and Stamp

Form-D: FINANCIAL INFORMATION

(Please attach copies of Audited Financial /bank Statement(s))
Gross Turnover of the Firm/ Company

FY 2022-23	FY 2023-24	FY 2024-25

(Signature of the Bidder)
Name, Sign and Stamp

Form-E: COMPLIANCE CERTIFICATE/UNDERTAKING

I, (Name); (CNIC#); (Designation), (Company Name) have gone through the Terms/Conditions of this TENDER Document and have found the document in whole as non-biased to any particular company/contractor/vendor or product/ brand. I hereby undertake and firmly bound myself to abide by/ comply with all sections / conditions of this TENDER Document.

I do not have any objection/comment on any item and fully understand the item as compliant with PPRA Rules.

Authorized Signature of the bidder: _____

Name and Title of Signatory: _____

Form-F: FORMAT OF AUTHORITY LETTER

Authority Letter

Know all men by these presents, we (name of the company and address of the registered office) do hereby appoint and authorize Mr./Ms. (full name and CNIC #) who is presently employed with us and holding the position of [_____] in [name of the company] to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our proposal for the development & launching of GIS Solution in response to the TENDER invited by the GSP including signing and submission of all documents and providing information/responses to GSP in all matters in connection with our expression.

We hereby agree to ratify all acts, deeds and things lawfully done by our said authorized representative pursuant to this Authority Letter and that all acts, deeds and things done by our aforesaid authorized representative shall and shall always be deemed to have been done by us.

Dated this _____ day of April, 2024.

For:

[Signature]
[Name, designation and Address]

Accepted

[Signature]
[Name, title address of the Authorized Representative]
Date:

The Director Procurement (AGM)
Geological Survey of Pakistan (GSP)
Trade Center near Expo Center, M.A. Johar Town, Lahore
Ph. 0092 42 99232932, 99232934

Reference your advertisement dated _____
_____ regarding TENDER for Hiring of Services for the
Development, and Maintaining GIS Based Geodatabase Solution and Integrated Field Data
Collection Mobile App

.

1. We, hereby submit our bid along-with the requirements as per the TENDER document.
   We acknowledge that GSP is not bound to accept any proposal in this regard and reserve
   the right to accept or reject any offer and to annul the TENDER process and reject all
   proposals with/without assigning any reason or having to owe any explanation
   whatsoever, as per PPRA guidelines.

2. The decision of the Selection / Evaluation Committee shall be final and the Committee
   will not be liable for any loss or damage to any party acting in reliance thereon.

3. We agree to respond to GSP requests within required time in case we qualify for the
   subject project as mentioned in TENDER documents.

4. We submit herewith our bid as one original.

5. We undertake that all the information submitted by us is correct and true to the best of our
   knowledge and belief and nothing has been concealed and misstated by us in the
   TENDER. In case any information is found wrong, misleading or misstated in this
   TENDER, the same may lead to rejection of our bid and our disqualification for further
   proceedings in the subject procurement process.

6. We declare that our TENDER is our only and final and no unsolicited offer of any
   description shall be made for consideration of the GSP.

Authorized Signature:

Name and Title of Signatory:

Name & Address of Firm:

Bid Security (Pay Order/CDR/BC)

Geological Survey of Pakistan
Near Expo Centre, Johar Town, Lahore.

Attach original pay order here

(On official letterhead of the bidder)

INTEGRITY PACT

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS OF GOODS, SERVICES & WORKS IN CONTRACTS WORTH RS. 10.00 MILLION OR MORE

Dated _____

………………………………… [name of Supplier] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan (GoP) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoP through any corrupt business practice.

Without limiting the generality of the foregoing, [name of Supplier] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

[name of Supplier] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[name of Supplier] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [name of Supplier] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

Name of Seller/Supplier: …………
Signature: …………………………   [Seal]

<u>Annexure -3</u>

(On official letterhead of the bidder)

FAIR PRICE CERTIFICATE

WE M/S _____ HEREBY CERTIFY THAT PRICES QUOTED BY US AGAINST GEOLOGICAL SURVEY OF PAKISTAN TENDER ENQUIRY NO. PID _____ ARE THE MOST ADVANTAGEOUS AND MOST COMPETITIVE AS GENERALLY APPLICABLE TO ALL OTHER BUYERS AND OR SOLD THROUGH OUR AGENTS AS PER PREVAILING INTERNATIONAL MARKET AS ON THE DATE OF QUOTE AND IF IT IS ESTABLISHED AT ANY STAGE THAT THESE WERE HIGHER WE SHALL BE HELD RESPONSIBLE AND AGREE TO PAY IMMEDIATELY THE DIFFERENTIAL TO GEOLOGICAL SURVEY OF PAKISTAN.

SIGNATURE AND SEAL OF THE
MANUFACTURER/SOLE AGENT/AUTHORIZED DEALER

NOTE: FAIR PRICE CERTIFICATE WILL BE REQUIRED, IN CASE SINGLE BID IS FOUND TECHNICALLY RESPONSIVE IN THE RESPECTIVE TENDER.

(On official letter-head of the contractor) To be signed by the Chief Executive of the bidding company or a representative duly authorized by board resolution.

(On official letterhead of the bidder)
To be signed by the Chief Executive of the bidding company or a representative duly
Authorized by board resolution.
INTEGRITY AND ETHICS UNDERTAKING

We hereby commit and undertake to observing the following principles during our participation in the tender process and during the contract execution:

a)   That we will not directly or through any other person or firm, offer promise or give to any of the employees of GSP involved in the tender process or execution of the contract any gain, pecuniary benefit or facilitation payment in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of contract.

b)   That we have not and will not enter with other bidders into any undisclosed agreement or understanding either formal or informal to restrict competitiveness or to cartelize in the bidding process.

c)   That we will ensure that the remuneration of agents (if engaged) is appropriate and for legitimate services only.

d)   That we will not use subcontracts, purchase orders or consulting agreements as means of channeling payments to employees of GSP.

e)   That we will not commit any offence under the Pakistan Penal Code, Prevention of Corruption Act or National Accountability Ordinance to achieve any advantage, gain or benefit during the tender process or the execution of contract.

We further understand and acknowledge that any violation or transgression of the above-mentioned principles will attract disqualification from the tender process and may also result in permanent exclusion from future contact award processes.

We also accept and undertake to respect and uphold GSP's absolute right to resort to and impose such disqualification, debarment or exclusion.

For and on behalf of: _____

(On Stamp paper)
<u>Mandatory for Participation in Bidding process</u>

AFFIDAVIT

I, _____ S/o _____ aged _____ years working as Proprietor / Managing Partner / Director of M/s _____ having its registered office at _____ do hereby solemnly affirm and declare on oath asunder:

1. That I am competent to swear this affidavit being proprietor / one or the partners / Director of M/s _____
2. That M/s _____ is a proprietorship / partnership firm / company is participating in tender process conducted by GSP.
3. That I hereby confirm and declare that none of my/our group/sister concern/associate company is participating/ submitting this tender.
4. That I hereby confirm and declare that my/our firm/company M/s and my I our firm/ group/ company/ sister concern/ associate company have not been blacklisted / de-listed by any Institutional agencies / Govt. Dept/ Public Sector Undertaking.
5. That I further undertake that in case any of the facts contained above and in-our application is round other-wise or incorrect or false at any stage, my/ our firm/ company/ group/ sister concerns/ associate companies shall stand debarred from the present and future tenders of the GSP.

(Signature of the Proprietor/ Managing Partner/Director with Seal)

DEPONENT

Verified at _____ on _____ that the contents of paras 1 to 5 of this affidavit are true and correct to best of my knowledge and no part of this is false and nothing material has been concealed or falsely stated there in.

(Signature of the Proprietor/ Managing Partner/ Director with Seal) DEPONENT

(Signature & Seal of Notary)