Standard Bidding Document

Procurement of High-Performance Computing, Software and Geospatial Data Acquisition Equipment for Digital Twin Development (Goods)

National

Single Stage-Two Envelope

November 06, 2026

GT&GE Division, NESPAK (Geomatics & GIS Section,),Sr. GIS Analyst
GT&GE Division NESPAK House, 1-C, Block-N, Model Town
Phone: +92-345-201-0107, Email: ch.ahsanlatif.1990@gmail.com

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REQUEST FOR BIDS

PROCUREMENT OF GOODS

1. The **GT&GE Division, NESPAK (Geomatics & GIS Section,)** has reserved Funds for the procurement planned for FY **2026-27**. The **GT&GE Division, NESPAK (Geomatics & GIS Section,)** intends to apply part of the proceeds of this Fund to cover eligible payments under the contract for the " **Procurement of High-Performance Computing, Software and Geospatial Data Acquisition Equipment for Digital Twin Development** " with the reference of **"P190185"**

2. The **GT&GE Division, NESPAK (Geomatics & GIS Section,)** invites sealed Bids from eligible Bidders for procurement of goods described in the bidding documents on **EPADS v2.0**.

3. **Single Stage-Two Envelope** will be used by adopting **Least Cost Based Selection (LCBS)** Technique for the subject procurement, in line with the Public Procurement Rules, 2026 and any Regulations, Regulatory Guides, Procurement Guidelines or Instructions issued by the Authority from time to time.

4. All Bids must be accompanied by a Bid Security amount described in Bid Security Section in Bidding Document in the form of **Pay Order, Call at Deposit, Demand Draft** or all bids must be accompanied by bid securing declaration in the format specified in the Bidding documents

5. E-Bidding documents, containing detailed terms & conditions, specifications and requirements etc. are available on **e-Pak Acquisition and Disposal System (EPADS)** at **https://epads.gov.pk/opportunities/federal/procurements/190185** for all the interested bidders registered on **EPADS v2.0**. Bidders are required to get themselves registered on **EPADS v2.0** to participate in Bidding process.

6. The e-bids, prepared in accordance with the instructions in the e-Bidding Documents, must be submitted through **EPADS v2.0** on or before **Thursday, November 19, 2026 11:00 AM**. E-bids will be opened using **EPADS v2.0** on the same day at **Thursday, November 19, 2026 11:30 AM**. Manual

submission of Bids shall not be entertained. Those vendors who have not yet registered on the new version of **EPADS v2.0,** may register themselves on **https://vendors.epads.gov.pk/**. A tutorial to explain the registration process is available at **https://www.youtube.com/watch?v=MNW6T38v7tc**

In terms of Rule 65 of Public Procurement Rules, 2026 Grievance Redressal Committee (GRC) is notified for the subject procurement and notification copy is available on the procuring agency's website and on Authority's website at (**www.ppra.gov.pk**).

GT&GE Division, NESPAK (Geomatics & GIS Section,), Sr. GIS Analyst
GT&GE Division NESPAK House, 1-C, Block-N, Model Town
+92-345-201-0107
ch.ahsanlatif.1990@gmail.com

Instructions to Bidders

A. Introduction

1.Scope of Bids

1.1 The Procuring Agency (PA), as indicated in the **Bids Data Sheet (BDS)** invites Bids **through EPADS v2.0** for the provision of Goods as specified in the BDS and **in Section V – Evaluation Criteria, Specifications & Schedule of Requirements**. The name, identification, and number of items/deliverables are provided in the **BDS**. The successful Bidders will be expected to provide the goods within the specified period and timeline(s) as stated in the **BDS**.

2. Source of Funds

2.1 Source of funds is referred in Clause-2 I of Invitation for Bids.

3. Eligible Bidders

3.1 A Bidder may be natural person, company or firm or public or semi-public agency of Pakistan or any foreign country**,** or any combination of them with a formal existing agreement (on Judicial Papers) in the form of a joint venture, consortium, or association. In the case of a joint venture, consortium, or association, all members shall be jointly and severally liable for the execution of the Contract in accordance with the terms and conditions of the Contract. The joint venture, consortium, or association shall nominate a Lead Member as nominated in the BDS, who shall have the authority to conduct all business for and on behalf of any and all the members of the joint venture, consortium, or association during the Bidding process, and in case of award of contract, during the execution of the contract.

Verifiable copy of the agreement that forms a joint venture, consortium or association shall be required to be submitted as part of the Bid.

The appointment of Lead Member in the joint venture, consortium, or association shall be confirmed by submission of a valid Power of Attorney to the Procuring Agency.

Any bid submitted by the joint venture, consortium or association shall indicate the part of proposed contract to be performed by each party and each party shall be evaluated (or post qualified if required) with respect to its contribution only, and the responsibilities of each party shall not be substantially altered without prior written approval of the Procuring Agency and in line with any

instructions issued by the Authority.

(The limit on the number of members of JV or Consortium or Association may be prescribed in BDS, in accordance with the guidelines issued by the PPRA).

3.2 The invitation for Bids is open to all prospective suppliers, manufacturers, or authorized agents / dealers subject to any provisions of incorporation or licensing by the respective national incorporating agency or statutory body established for that particular trade or business. Procuring agencies shall specify the registration/licensing requirements for the foreign bidders keeping in view the requirement of that business.

3.3 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this Bidding process, if they:

1. are associated or have been associated in the past, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring Agency to provide consulting services for the preparation of the design, specifications and other documents to be used for the procurement of the Goods to be purchased under this Invitation for Bids.

2. have controlling shareholders in common; or

3. receive or have received any direct or indirect subsidy from any of them; or

4. have the same legal representative for purposes of this Bid; or

5. have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bids of another Bidder, or influence the decisions of the Procuring Agency regarding this Bidding process; or

6. Submit more than one Bid in this Bidding process.

3.4 A Bidder may be ineligible if –

1. he is declared bankrupt or, in the case of company or firm, insolvent;

2. payments in favor of the Bidder is suspended in accordance with the judgment of a court of law other than a judgment declaring bankruptcy and resulting (in accordance with the national laws) in the total or partial loss of the right to administer and dispose of its property;

3. the Bidder is convicted, by a final judgment, of any offence involving professional conduct;

4. the Bidder is blacklisted locally or by international organizations and hence debarred due to involvement in corrupt and fraudulent practices, or submission of false or misleading information or performance failure or involved in disrupting procurement process or due to breach of bid Securing Declaration.

3.5 As and when required, bidders shall provide to the Procuring Agency evidence of their eligibility, proof of compliance with the necessary legal requirements to carry out the contract effectively.

3.6 Bidders shall submit Bids relating to the nature, conditions and modalities of sub-contracting wherever the sub-contracting of any elements of the contract amounting to more than ten (10) percent of the Bid price is envisaged.

4. Eligible Goods and Related Services

4.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries, and all expenditures made under the contract will be limited to such goods and services. For purpose of this Bid, ineligible countries are the countries declared ineligible by the Federal Government.

5. One Bid per Bidder

5.1 A bidder shall submit only one Bid, in the same bidding process, either individually as a Bidder or as a member in a joint venture or any similar arrangement.

5.2 **The Bidder shall not engage a subcontractor for any portion of the contract if the value of such subcontracting exceeds thirty percent (30%) of the total contract amount.**

6. Cost of Bidding

6.1 Any cost incurred by the bidder relating to the preparation and submission of its Bid shall be borne by the bidder, and the Procuring Agency shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. Bidding Documents

7. Contents of Bidding Document

7.1 The Goods required, Bidding procedures, and terms and conditions of the contract are prescribed in the Bidding Documents. In addition to the Invitation for Bids, the Bidding documents which should be read in conjunction with any addenda issued in accordance with **ITB 10.1** include:

Section I -Invitation to Bids

Section II Instructions to Bidders (ITB)

Section III Bid Data Sheet (BDS)

Section IV Evaluation Criteria, Specifications, Schedule of Requirements

Section V Bid Forms

Section VI General Conditions of Contract (GCC)

Section VII Special Conditions of Contract (SCC)

Section VIII Contract Forms

Section IX Integrity Pact

Section X Declaration of Beneficial Ownership Information.

7.2 The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding documents. Failure to furnish all the information required in the Bidding documents through EPADS v2.0 will be at the Bidder’s risk and may result in the rejection of its Bids.

8. Clarification of Bidding documents

8.1 A prospective Bidder requiring any clarification of the Bidding documents may notify the Procuring Agency through EPADS v2.0**.**

8.2 The Procuring Agency will within two (02) working days after receiving the request for clarification, respond to any request for clarification through EPADS v2.0 provided that such request is received not later than three (03) days, prior to the deadline for the submission of Bids as prescribed in **ITB 22**

8.3 The Procuring Agency's response will be forwarded to all identified Prospective Bidders through EPADS v2.0, including a description of the inquiry,

but without identifying its source.

8.4 Should the Procuring Agency deem it necessary to amend the Bidding document as a result of a clarification, it shall do so following the procedure under **ITB 9.**

8.5 If indicated **in the BDS**, the Bidder's designated representative is invited at the Bidder's cost to attend a pre-Bid meeting at the place, date and time mentioned **in the BDS**. During this pre-Bid meeting, prospective Bidders may request clarification of the schedule of requirement, the Evaluation Criteria or any other aspects of the Bidding document.

8.6 Minutes of the pre-Bid meeting, if applicable, including the text of the questions asked by Bidders, including those during the meeting (without identifying the source) and the responses given, together with any responses prepared after the meeting will be uploaded on EPADS v2.0. Any modification to the Bidding documents that may become necessary as a result of the pre-Bid meeting shall be made by the Procuring Agency exclusively through the use of an Addendum pursuant to ITB 9. Non-attendance at the pre-Bid meeting will not be a cause for disqualification of a Bidder.

9. Amendment of Bidding documents

9.1 Before the deadline for submission of Bids, the Procuring Agency for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder or Pre-Bid meeting may modify the Bidding documents by issuing addenda through EPADS v2.0.

9.2 The Procuring Agency shall promptly publish the addendum through EPADS v2.0.

Any addendum issued including the notice of any extension of the deadline shall also be communicated through EPADS v2.0 to all the bidders who have already submitted their bids. Such bidders shall have the right to withdraw their already submitted bid and re-submit the revised bid prior to the original or extended bid submission deadline.

9.3 To give prospective Bidders reasonable time in which to take an addendum/corrigendum into account in preparing their Bids, the Procuring Agency may, at its discretion, extend the deadline for the submission of Bids through EPADS v2.0:

Provided that the Procuring Agency shall extend the deadline for submission of Bids, if such an addendum is issued within last three (03) days of the Bids submission deadline.

C. Preparation of Bids

10. Language of Bid

10.1 The Bid prepared by the bidder, as well as all correspondence and documents relating to the Bids exchanged by the Bidder and the Procuring Agency shall be written in the English language unless otherwise specified in the BDS**.** Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant pages in the English language unless otherwise specified in the **BDS**, in which case, for purposes of interpretation of the Bidder, the translation shall govern.

11. Documents and samples Constituting the Bid

11.1 The Bid prepared by the Bidder shall constitute the documents required in the **BDS**.

Details of sample(s) where applicable and requested in the BDS.

Documentary evidence established in accordance with ITB 13 that the Bidder is eligible and/or qualified for the subject bidding process;

Documentary evidence established in accordance with **ITB 03** that the Bidder has been authorized by the manufacturer to deliver the goods into Pakistan, where required and where the supplier is not the manufacturer of those goods;

Documentary evidence established in accordance with ITB 12 that the goods and related services to be supplied by the Bidder are eligible goods and services, and conform to the Bidding Documents;

Bid security or Bid Securing Declaration furnished in accordance with **ITB ---.**

12. Documents Establishing Eligibility of the Goods and Conformity to Bidding documents

12.1 To establish the conformity of the bidder to the Bidding document, the Bidder shall furnish as part of its Bids the documentary evidence that Goods

provided conform to the technical specifications and standards.

13. Documents Establishing Eligibility and Qualification of the Bidder

13.1 Pursuant to **ITB 10,** the Bidder shall furnish, as part of its Bid, all those documents establishing the Bidder's eligibility to participate in the Bidding process and/or its qualification to perform the contract if its Bid is accepted.

14. Form of Bid

14.1 The Bidder shall fill the Form of Bid furnished in the Bidding document. The Bid Form must be completed without any alterations to its format and no substitute shall be accepted.

15. Bid Prices

15.1 The Bid Prices quoted by the Bidder in the Form of Bid and in the Price Schedules shall conform to the requirements specified below or exclusively mentioned hereafter in the Bidding documents.

15.2 **All items in the Schedule of Requirement must be listed and priced separately in the Price Schedule(s). If a Price Schedule shows items listed but not priced and neither explicitly denied, their prices shall be construed to be included in the prices of other items.**

15.3 In the event that any item(s) in the Price Schedule are not quoted, and such omission is determined by the Procuring Agency not to materially affect the responsiveness of the Bid, the Procuring Agency may, for the sole purpose of bid evaluation and comparison, assign a price to the unquoted item(s) in accordance with the following methodology:

(a) The assigned price shall be the average of the prices quoted for the same item(s) by all substantially responsive bidders; or

(b) In cases where no comparable quotations are available, the Procuring Agency shall apply the corresponding item price from its duly approved cost estimate for evaluation purposes.

The prices so assigned shall be utilized exclusively for bid evaluation and comparison, and shall not, under any circumstances, be incorporated into or form part of the Contract Price.

15.4 The Bid price to be quoted in the Form of Bid in accordance with **ITB 13.1** shall be the total price of the Bid.

15.5 The Bidder shall indicate on the appropriate Price Schedule, the unit prices (where applicable) and total Bid price of the Goods it proposes to provide under the contract.

15.6 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A Bid submitted with an adjustable price will be treated as non-responsive and shall be rejected.

16. Bids Currencies

16.1 Prices shall be quoted in Pakistani Rupees unless otherwise specified in the BDS in accordance with Rule 42 (2) of the Public Procurement Rules, 2026.

17. Bids Validity Period

17.1 Such extensions may be more than one time but the total period of such extension shall not exceed the original bid validity period.

17.2 Bids shall remain valid for the period specified in the **BDS** after the Bid submission deadline prescribed by the Procuring Agency. A Bid valid for a shorter period shall be rejected by the Procuring Agency as non-responsive**.** The period of Bid validity will be determined from the complementary Bid securing instrument, i.e. the expiry period of Bid Security or Bids Securing Declaration as the case may be.

The procuring agency shall ordinarily be under an obligation to process and evaluate the bid and to issue letter of award within the stipulated bid validity period.

17.3 Under exceptional circumstances, prior to the expiration of the initial Bid validity period, the Procuring Agency may request the Bidders' consent to an extension of the period of validity of their Bids through EPADS v2.0,. The Bid Security provided under **ITB 17** shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid security or causing to be executed its Bid Securing Declaration. A Bidder agreeing to the request will not be required nor permitted to modify its Bid, but will be required to extend the validity of its Bid Security or Bid Securing Declaration for the period of the extension.

18. Bid Security or Bid Securing Declaration

18.1 The Bidder shall furnish as part of its Bid, a Bid Security in accordance with Rule 36 of the Public Procurement Rules, 2026.

18.2 The original Bid Security shall be enclosed within the sealed envelope and to be submitted physically before closing time for submission of bids. Whereas, scanned copy of bid security shall be uploaded electronically through EPADS v2.0 before closing hours for submission of bids.

18.3 The Bidder who failed to submit the original Bids security before the submission deadline shall be disqualified straightaway.

18.4 The Bid Security or Bid Securing Declaration is required to protect the Procuring Agency against the risk of Bidder’s conduct which would warrant the security’s forfeiture, pursuant to **ITB 18.7.**

18.5 The Bid Security shall be denominated in the local currency or in another freely convertible currency, and it shall be in the form specified in the BDS which shall be in any of the following:

a) a bank guarantee, a bank draft, an irrevocable letter of credit issued by a Scheduled bank in the form provided in the Bidding Documents or another form acceptable to the Procuring Agency;

b) a cashier’s or certified cheque; or

c) another security if indicated in the BDS.

The Bid Security shall be valid for twenty-eight (28) days beyond the end of the validity of the Bid. This shall also apply if the period for Bid Validity is extended. In either case, the form must include the complete name of the Bidder.

18.6 The Bid Security shall be payable promptly upon written demand by the Procuring Agency in case any of the conditions listed in **ITB 18.7** are invoked.

18.7 Unsuccessful Bidders' Bid Security will be discharged or returned as promptly as possible, however in no case later than thirty (30) days after the expiration of the period of Bid Validity prescribed by the procuring agency pursuant to **ITB 17.** The Procuring Agency shall make no claim to the amount of the Bid Security, and shall promptly return the Bid Security documents, after whichever of the following that occurs earliest:

a. the expiry of the Bid Security;

b. the entry into force of a procurement contract and the provision of a Performance Guarantee, for the performance of the contract if such a guarantee, is required by the Bid documents;

c. the rejection by the Procuring Agency of all Bids;

d. cancellation of procurement proceedings.

e. the withdrawal of the Bid prior to the deadline for the submission of Bids, unless the Bid document stipulates that no such withdrawal is permitted.

18.8 The successful Bidder's Bid Security will be discharged upon the Bidder signing the contract**,** or furnishing the Performance Guarantee.

18.9 The Bid Security may be forfeited or the Bid Securing Declaration executed:

a. if a Bidder:

b. withdraws its Bid during the period of Bid Validity as specified by the Procuring Agency, and referred by the Bidder on the Form of Bids except as provided for in **ITB 16.2**; or

c. does not accept the correction of errors**;** or

d. in the case of a successful Bidder, if the Bidder fails:

e. to sign the contract; or

f. to furnish Performance Guarantee**.**

19. Withdrawal, Substitution, and Modification of Bid

19.1 Before Bid submission deadline, any Bidder may withdraw, substitute, or modify its Bid after it has been submitted through EPADS v2.0.

20. Format and Signing of Bid

20.1 The Bidder shall prepare and submit Bids with due diligence after carefully reading all the terms and condition before bid submission deadline through EPADS v2.0.

D. Submission of Bids

21. Submission of Bids through EPADS v2.0 before bid submission deadline.

21.1 The Technical and Financial Bids, shall be submitted electronically through EPADS, before bid submission deadline. The bid submission option shall be automatically disabled once the deadline is over.

22. Deadline for Submission of Bids

22.1 Bids shall be received by the Procuring Agency through EPADS v2.0 before bid submission deadline.

22.2 The Procuring Agency may, under exceptional circumstances, extend the deadline for the submission of Bids, after recording reasons in writing and in an equal opportunity manner.

In such case, all rights and obligations of the Procuring Agency and the Bidders that were previously governed by the original deadline shall thereafter be subject to the revised deadline.

E. Opening and Evaluation of Bids

23. Opening of Bids

23.1 The respective Bid Evaluation Committee of the Procuring Agency shall open all Bids through the EPADS v2.0, on the date and time specified in the Bid Data Sheet (BDS).

23.2 The respective Bid Evaluation Committee **shall generate minutes through EPADS v2.0 containing brief details of bid opening process.** The record of the Bid opening shall include, as a minimum: the name of the Bidder, the Bid price if applicable, and the presence or absence of a Bid Security or Bid Securing Declaration.

23.3 The procuring agency shall live broadcast the opening of bids on national media or on their website or digital channels, if the volume of procurement exceeds five hundred million rupees in case of goods and services and one thousand million rupees in case of works.

23.4 In case the date of opening of bid has been declared as public holiday or the procuring agency fails to open bid due to any EPADS v2.0 related issues, the submission and opening of bids shall be shifted to the next working day at the same time.

23.5 In case of Single Stage One Envelope Procedure, the Bidders names, the Bid prices, the total amount of each Bid and, the presence or absence of Bid Security, Bid Securing Declaration and such other details as the Procuring Agency may consider appropriate, will be announced by the Bid respective Evaluation Committee.

23.6 No bid will be rejected at the time of bid openning except for bids whose original bid security has not been provided to the procuring agency before bid submission deadline.

24. Clarification of Bids

24.1 To assist in the examination, evaluation and comparison of Bids of the Bidders, the respective Bid Evaluation Committee may, ask any Bidder for a clarification of its Bid including breakdown of prices.

24.2 The request for clarification and the response shall be sought through EPADS v2.0 before **three days prior to the deadline for submission of bids.** No change in the prices or substance of the Bids shall be sought, offered, or permitted.

24.3 The alteration or modification in the bids which in any way affect the following parameters will be considered as a change in the substance of a Bid:

1. evaluation & qualification criteria;
2. required scope of work or specifications;
3. all securities requirements;
4. tax requirements;
5. terms and conditions of Bidding documents.
6. change in the ranking of the Bidder

24.4 From the time of bid(s) opening to the time of Contract award if any Bidder wishes to contact the Procuring Agency on any matter related to the Bids it should do so through **EPADS v2.0**.

25. Preliminary Examination of Bids

25.1 Prior to the detailed evaluation of Bids, the respective Bid Evaluation Committee will determine whether each Bid:

1. meets the eligibility criteria defined in **ITB 3**;

2. has been prepared as per the format and contents defined by the Procuring Agency in the Bidding documents;

3. is accompanied by the required securities; and

4. is substantially responsive to the requirements of the Bidding documents.

25.2 The respective Bid Evaluation Committee's determination of a Bid's responsiveness will be based on the contents of the Bid itself.

25.3 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one that: -

1. affects in any substantial way the scope, quality, or performance of the Goods;

2. limits in any substantial way, inconsistent with the Bidding documents, the Procuring Agency's rights or the Bidders obligations under the Contract; or

3. if rectified, would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

25.4 If a Bid is not substantially responsive, it will be rejected by the respective Bid Evaluation Committee and may not subsequently be evaluated for complete technical responsiveness.

26. Examination of Terms and Conditions; Technical Evaluation

26.1 The respective Bid Evaluation Committee shall examine the Bids to confirm that all terms and conditions specified in the **GCC** and the **SCC** have been accepted by the Bidder without any material deviation or reservation.

26.2 The respective Bid Evaluation Committee shall evaluate the technical aspects of the Bids submitted, to confirm that all requirements specified in Schedule of Requirements and Technical Specifications of the Bidding documents have been met without material deviation or reservation.

26.3 If after the examination of the terms and conditions and the technical evaluation, the respective Bid Evaluation Committee determines that the Bid is not substantially responsive in accordance with **ITB,** it shall reject the Bid.

27. Correction of Errors

27.1 Bids determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows: -

1. if there is a discrepancy between unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected, unless in the opinion of the respective Evaluation Committee there is an obvious misplacement of the decimal point in the unit price, in which the total price as quoted shall govern and the unit price shall be corrected;

2. if there is an error in a total corresponding to the addition or subtraction of sub-totals, the sub-totals shall prevail and the total shall be corrected; and

3. where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.

4. Where there is discrepancy between grand total of price schedule and amount mentioned on the Form of Bid, the amount referred in Price Schedule shall be treated as correct subject to elimination of other errors.

27.2 The amount stated in the Bid will be adjusted by the respective Bid Evaluation Committee in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, its Bid will then be rejected, and the Bid Security may be forfeited or the Bids Securing Declaration may be executed.

28. Conversion to Single Currency

28.1 For the purposes of comparison of bids quoted in different currencies, the price shall be converted into a single currency in accordance with Rule 42(2) of Public Procurement Rules,2026.

29. Evaluation of Bids

29.1 The Bids, quotations, or proposals shall be evaluated by the respective evaluation committees as per evaluation criteria prescribed in the Bidding Documents in accordance with Rule 11, 12 and 13 of the Public Procurement Rules, 2026.

29.2 While evaluating the bids, the procuring agency shall consider the following:

i. Bids will be evaluated on lump sum bid basis or items wise or Lot wise (contracts), as specified in the BDS; and the Bid Price;

ii. correction of arithmetic errors in accordance with ITB 27;

30. Domestic Preference

30.1 The respective Bid Evaluation Committee shall evaluate and compare bids, allow for preference to domestic bidders, while competing with the international bidders in accordance with the policies of the Federal Government.

The percentage of preference, to be accorded shall be clearly mentioned in the bidding documents under the bid evaluation criteria.

31. Determination of Successful Bid

31.1 **Selection technique will be adopted for determining the Successful Bid in accordance with the criteria referred in the BDS or prescribed in the separate section titled as Evaluation Criteria.**

31.2 **Least Cost Based Selection (LCBS)**
After meeting the requirements of eligibility, qualification and substantial responsiveness, the bid in compliance with all the mandatory (technical) specifications/requirements and/or requisite quality threshold (if any), and having lowest evaluated cost (or financial proposal) shall be considered Successful Bid.

31.3 **Quality and Cost Based Selection (QCBS)**
In such combination, there shall be some specific weightage of both the technical features and financial aspects of the proposal. The financial marks shall be awarded on the basis of inverse proportion calculations. The successful bid shall be declared, on the basis of combined evaluation.

31.4 **Quality Based Selection (QBS)**
After meeting the requirements of eligibility, qualification and substantial responsiveness the bid in compliance with all the mandatory (technical) specifications/requirements and attaining highest marks in the Technical Evaluation considering all other qualitative and/or quantitative parameters (or point rated criteria) for technical proposal(s) such as working methodology, implementation plan, resource allocation, additional functionalities, risk

management approach, knowledge transfer techniques, post implementation methodology etc. shall be treated as highest ranked bid. Later on, the financial proposal of highest ranked bidder shall be opened, however, in case of failure to proceed further with such a bidder, the procuring agency may resort to second highest bidder and so on.

31.5 The Procuring Agency may adopt the Quality & Cost Based Selection Technique due to the following two reasons:

1. Where the Procuring Agency knows about the main features, usage and output of the products; however not clear about the complete features, technical specifications and functionalities of the goods to be procured and requires the bidders to submit their proposals defining those features, specifications and functionalities; or

2. Where the Procuring Agency, in addition to the mandatory requirements and mandatory technical specifications, requires parameters specified in Evaluation Criteria to be evaluated while determining the quality of the goods.

31.6 In such cases, the Procuring Agency may allocate certain weightage to these factors as a part of Evaluation Criteria, and may determine the ranking of the bidders on the basis of combined evaluation in accordance with provisions of Rule 2(1)(xxviii) of the Public Procurement Rules, 2026.

32. Abnormally Low Financial Bids

32.1 An abnormally low bid is a bid that, in light of the Procuring Agency's cost estimate, market conditions, or other received bids, appears to be unrealistically low and may not be sustainable for successfull contract execution.

32.2 **Where the Bid price is considered to be abnormally low, the Procuring Agency shall perform price analysis either during determination of Successful Bids or as a part of the post-qualification process.**

32.3 The Procuring Agency may reject an Abnormally low financial bid in accordance with Rule 43 of the Public Procurement Rules, 2026.

32.4 In order to identify the Abnormally Low Bids (ALB) following approaches can be considered to minimize the scope of subjectivity:

1. Comparing the Bid price with the cost estimate;

2. Comparing the Bid price with the Bid(s) offered by other Bidders submitting substantially responsive Bids; and

3. Comparing the Bids price with prices paid in similar contracts in the recent past either government- or development partner-funded.

32.5 The respective Bid Evaluation Committee will determine to its satisfaction whether the Bidder that is selected as having submitted the successful bid is qualified to perform the contract satisfactorily.

32.6 The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Procuring Agency deems necessary and appropriate. Factors not included in these Bidding documents shall not be used in the evaluation of the Bidders' qualifications.

32.7 Respective Bid Evaluation Committee may seek "Certificate for Independent Price Determination" from the Bidder and the results of reference checks may be used in determining an award of contract.

Explanation: The Certificate shall be furnished by the Bidder. The Bidder shall certify that the price is determined keeping in view of all the essential aspects such as raw material, its processing, value addition, optimization of resources due to economy of scale, transportation, insurance and margin of profit etc.

32.8 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's Bid, in which event the respective Bid Evaluation Committee will proceed to the next ranked Bidder to make a similar determination of that Bidder's capabilities to perform satisfactorily.

F. Award of Contract

33. Criteria of Award

33.1 The Procuring Agency will award the Contract to the Bidder whose Bids has been determined to be substantially responsive to the Bidding documents and who has been declared as Successful Bidder.

34. Negotiations

34.1 In accordance with Rule 52A of Public Procurement Rules, 2026, without changing the cost and scope of work or services, the procuring agency may

negotiate with the successful bidder (with a view to streamline the work or task execution, at the time of contract finalization) on methodology, work plan, staffing and special conditions of the contract.

There shall be no limitation on the successful bidder offering voluntary reduction in bid price without affecting the quality or scope of the procurement.

35. Procuring Agency's Right to reject all bids

35.1 The Procuring Agency reserves the right to reject all bids or proposals at any time prior to the issuance of the Letter of Award, without incurring any liability, in accordance with Rule 45 of the Public Procurement Rules, 2026.

36. Cancellation of Procurement

36.1 The procuring agency reserves the right to cancel the procurement proceedings in accordance with Rule 46 of the Public Procurement Rules, 2026.

37. Procuring Agency’s Right to Vary Quantities at the Time of Award

37.1 The Procuring Agency reserves the right at the time of contract award to increase or decrease the **quantity of** Goods originally specified in these Bidding documents provided this does not exceed **by** 15%, without any change in unit price or other terms and conditions of the Bids and Bidding documents.

38. Notification of Award

38.1 Prior to the award of contract, the procuring agency shall announce and publish the result of bid evaluation on EPADS v2.0 in accordance with Rule 48 of the Public Procurement Rules, 2026.

The Bidder whose Bids has been accepted will be notified of the award by the Procuring Agency prior to expiration of the Bids/Bid Validity period. The Letter of Award will state the sum that the Procuring Agency will pay the successful Bidder in consideration for the delivery of Goods as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price).

38.2 The Letter of award will constitute the formation of the Contract, subject to the Bidder furnishing the Performance Guarantee and signing of the contract.

39. Signing of Contract

39.1 Promptly after issuance of Letter of award, Procuring Agency shall send the successful Bidder the draft Contract, incorporating all terms and conditions as agreed by the parties to the contract.

39.2 Immediately after the Redressal of grievance by the GRC (if any), and **after fulfillment of all conditions precedent** of the Contract Form, the successful Bidder and the Procuring Agency shall sign the Contract.

40. Corrupt & Fraudulent Practices

40.1 Procuring Agencies (including beneficiaries of Government funded projects and procurement) as well as Bidders/Contractors under Government financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts, and will avoid engaging in any corrupt and fraudulent practices.

F. Grievance Redressal & Complaint Review Mechanism

41. Constitution of Grievance Redressal Committee

41.1 The Grievance Redressal Committee shall address the grievance, if any submitted by any party, including the bidder, in accordance with Rule 65 of the Public Procurement Rules, 2026 read with Redressal of Grievances Regulations, 2021.

In case if any party or the bidder is not satisfied with the decision of the GRC or if it fails to decide within ten days, the bidder or the party may file an appeal before the Appellate Committee of the Authority in accordance with Rule 65(7) of the Public Procurement Rules, 2026 to be read with Redressal of Grievances Regulations, 2021.

G. Mechanism of Blacklisting

42. Mechanism of Blacklisting

42.1 The Procuring Agency shall initiate blacklisting proceedings against any bidder, supplier, or contractor in accordance with the Rule 25 of the Public Procurement Rules, 2026.

42.2 The blacklisted/debarred bidder may file the review petition before the Authority in accordance with Rule 25 (6) of the Public Procurement Rules, 2026 to be read with Procedure of filing and disposal of Review Petitions Regulations, 2021.

43. Contract Management

43.1 For each procurement, the Procuring Agency shall designate a Contract Manager, who shall be duly responsible for the efficient management and administration of the contract in strict compliance with the provisions set forth under Rules 58, 59, and 60 of the Public Procurement Rules, 2026.

44. Inspection of goods and evaluation of services.

44.1 The Inspection Committee or the Firm shall have the right to conduct inspections of the goods in accordance with Rule 61 of the Public Procurement Rules, 2026.

45. Socio-economic development.

45.1 In accordance with Rule 63 of the Public Procurement Rules, 2026, preference may be granted to small and medium enterprises and marginalized groups in accordance with the policies notified by the Federal Government.

46. Environmental objectives

46.1 As per Rule 64 of the Public Procurement Rules, 2026, the procuring agency may seek to procure goods with a reduced environmental impact throughout their life cycle when compared to goods services with the same primary function that may otherwise be procured.

Bid Data Sheet

Bids Data Sheet (BDS)

The following specific data for the procurement of Goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

BDS Clause Number
ITB Number
Amendments of, and Supplements to, Clauses in the Instruction to Bidders

A. Introduction

BDS Clause Number 1
ITB Number 1.1

Name of Procuring Agency: **GT&GE Division, NESPAK (Geomatics & GIS Section,)**

The subject of procurement is: **Procurement of High-Performance Computing, Software and Geospatial Data Acquisition Equipment for Digital Twin Development**

Period for Provision of Goods:

Extension Period (if applicable):

Expected commencement date: **Monday, December 7, 2026**

BDS Clause Number 2
ITB Number 2.1

Source of funds [Enter source of funds]

Financial year for the operations of the Procuring Agency: **2026-27**

Name and identification number of the Contract: **P190185**

Identification Number:

BDS Clause Number 3
ITB Clause Number 3.1

Eligible Bidder [Enter eligibility of bidder]

JV/Consortium or Association Allowed: **No**
Number of JV/Consortium Members: **Nil**
see section of eligibility criteria.

B. Bidding Documents

BDS Clause Number 4

ITB Clause Number 4.1

Eligible goods and related services [Enter requirements for eligible goods and related services, if any]

ITB Number 8.1

The Bidders may seek clarifications through **EPADS v2.0** : Clarification Date: Monday, November 16, 2026
Pre-Bid Meeting: Friday, November 13, 2026 02:30 PM
Venue: GT&GE Division NESPAK House, 1-C, Block-N, Model Town

ITB Number 8.2

The Bidders may seek clarifications through **EPADS v2.0** : Clarification Date: Monday, November 16, 2026
Pre-Bid Meeting: Friday, November 13, 2026 02:30 PM
Venue: GT&GE Division NESPAK House, 1-C, Block-N, Model Town

ITB Number 8.3

The Bidders may seek clarifications through **EPADS v2.0** : Clarification Date: Monday, November 16, 2026
Pre-Bid Meeting: Friday, November 13, 2026 02:30 PM
Venue: GT&GE Division NESPAK House, 1-C, Block-N, Model Town

ITB Number 8.5

Pre-bid meeting will be/will not be held [Tick the appropriate] If yes write down the time, and date of the pre-Bid meeting:
[The meeting should take place not later than one weeks before the deadline for Bid submission.]

C. Preparation of Bids

BDS Clause Number 5
ITB Number 10.1

The Language of all correspondences and documents related to the Bids shall be in: **English**

List of documents required along with the bid: No

BDS Clause Number 6
ITB Number 11.1

Documents required / not required with bid submission [enter list of documents] Samples required / not required with the bid [Enter the names and number of samples]
Items/Lots and their related documents:
See section items and Lots

BDS Clause Number 7
ITB Number 12.1

Items / Lots Specifications:

see section of items specifications.

BDS Clause Number 8
ITB Number 15.6

The price shall be **Fixed**.

BDS Clause Number 9
ITB Number 16.1

Currency of the Bids shall be : **PKR**

BDS Clause Number 10
ITB Number 17.1

The Bids/Bid Validity period shall be: **180 Days**

BDS Clause Number 11
ITB Number 18.1

The amount of Bid Security shall be as defined in Bid Security Section for items and lots given in **BDS 6**
Instrument of Bid Security shall be in the Name of : **GT&GE Division, NESPAK**
The Bid Security shall be in the form of: **Pay Order, Call at Deposit, Demand Draft**

ITB Number 18.2

The address for submission of original bid security is [Insert the address for bid security submission]

D. Submission of Bids

BDS Clause Number 12
ITB Number 20.1

Bid shall be submitted online on EPADS v2.0 whereas hard copy of the bid security should be submitted to the following;

GT&GE Division NESPAK House, 1-C, Block-N, Model Town before bid submission deadline.

Bids that are not submitted on EPADS v2.0 shall be disqualified.

The deadline for Bids submission is: **Thursday, November 19, 2026 11:00 AM**

Day *:* ***Thursday***

Date: ***Thursday, November 19, 2026***

Time *:* ***11:30 AM***

E. Opening and Evaluation of Bids

BDS Clause Number 13
ITB Number 23.1

The Bids opening shall take place on **EPADS v2.0**.

Day *:* ***Thursday***

Date: ***Thursday, November 19, 2026***

Time *:* ***11:30 AM***

ITB Number 29.2

The procuring agency shall consider the following:
lump sum bid basis; or
items wise; or
Lot wise (contracts),

ITB Number 30.1

BDS Clause Number 14
ITB Number 31.1

Domestic Preference [applicable / not applicable]

ITB Number 31.2

Selection technique adopted will be:
The Procuring Agency shall use any of the following evaluation techniques for determination of successful bid.

Least Cost Base Selection (LCBS)
Quality and Cost Based Selection (QCBS)
Quality Based Selection (QBS)
[Insert the Evaluation Technique]

Selection technique adopted will be: **Least Cost Based Selection (LCBS)**
see Evaluation Criteria

F. Review of Procurement Decisions

BDS Clause Number 15
ITB Number 41.1

Grievence against this procurement shall be submitted online on EPADS v2.0.

Arbitrator shall be appointed by mutual consent of the both parties.

ITB Number 42.2

The Address of PPRA Grievance Redressal Appellate Committee to submit a copy of grievance:

Grievance Redressal Appellate Committee,
Public Procurement Regulatory Authority
1st Floor, G-5/2, Islamabad, Pakistan
Tel: +92-51-9202254

Eligibility Criteria

All Active Taxpayers shall be eligible to participate in the procurement process, unless expressly excluded or otherwise restricted under the Eligibility Criteria specified by the Procuring Agency.

Required Registration
NADRA CITIZENSHIP (CNIC/NICOP)
FBR (NTN)
FBR (GSTN)
Punjab (PRA)

Evaluation Criteria

Eligibile bidder(s) with substantially responsive bid(s) offering **Least Cost Based Selection (LCBS)** shall be consider for the award of contract(s).

Least Cost Based Selection (LCBS)

Weightage

Technical Evaluation %
100

Technical Marks	100
Passing Marks	**80**
Qualifying Criteria	
Relevant experience of the supply of survey equipment/software/computer in the last (05) Five Years (Quantitative)	20
Authorized Distributor for Lots 3 to 10 (Quantitative)(Doc Required)	20
Meet the given/required Minimum Specifications against each Lot (Quantitative)(Doc Required)	50
Pre-Bid Meeting (Qualitative)(Doc Required)	10

Items/Lots

Lot Title : Lot 1: ITM-01 — High-Performance Workstation PC

Bid Security : 63000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
High-Performance Workstation PC	Computer workstation	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years
Monitor	Computer workstation	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years

Lot Title : Lot 2: ITM-02 — Data Processing Software Package for Digital Twin / GIS

Bid Security : 135000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty

DJI Terra Flagship — Perpetual License (latest version) — as per detailed specifications	Enterprise system management software	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years
DJI Modify Flagship — Perpetual License (latest version) — as per detailed specifications	Enterprise system management software	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years
Agisoft Metashape Professional Edition — Perpetual License (latest version) — as per detailed specifications	Enterprise system management software	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years
BricsCAD Ultimate — Perpetual License (latest version) — as per detailed specifications	Enterprise system management software	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years
Vendor training of the Procuring Agency's officials on the four software items — as per detailed specifications	Enterprise system management software	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	--	--

Lot Title : Lot 3: ITM-03 — 3D Terrestrial Laser Scanner

Bid Security : 450000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
3D Terrestrial Laser Scanner	Lasers	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years
High-performance laptop (32 GB RAM, 1 TB SSD, 12 GB RTX GPU, Windows 11 Pro) for scanner field control and point-cloud processing — as per detailed specifications above	Lasers	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years
Vendor training of the Procuring Agency's officials on scanning, registration and point-cloud processing — as per detailed specifications	Lasers	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	--	--

Lot Title : Lot 4: ITM-04 — DJI Matrice 400 Enterprise RTK Drone System

Bid Security : 150000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty

DJI Matrice 400 Enterprise Aircraft with Intelligent Charging Case — as per detailed specifications	Target or reconnaissance drones	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years
D-RTK 3 Multifunctional Base Station, complete with accessories and soft carrying case	Vehicular global positioning system GPS	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years
DJI Matrice 400 Intelligent Flight Battery (TB100C or equivalent)	Rechargeable batteries	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 4/Qty	4 / Qty	Manufacturer Authorization form	1 Years
High-Altitude Propellers (additional set, for operation in thin-air/high-elevation terrain)	Propeller or prop shaft	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years

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DJI AP100 Parachute (or equivalent certified parachute recovery system compatible with DJI Matrice 400)	Parachute equipment	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years
Vendor training of the Procuring Agency's officials on data acquisition and processing for the UAV system — as per detailed specifications	Executive coaching service	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	--	--

Lot Title : Lot 5: ITM-05 — DJI Matrice 4E Mapping/Survey Drone System

Bid Security : 90000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
DJI Matrice 4E — Fly More Combo (Aircraft, Remote Controller, 1× Intelligent Flight Battery, Charger & Charging Hub, microSD Card, 3 Pairs of Propellers, Aircraft Carrying Case) — as per detailed specifications	Target or reconnaissance drones	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Additional Intelligent Flight Battery for DJI Matrice 4E, over and above the battery included in the Fly More Combo	Rechargeable batteries	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 2/Qty	2 / Qty	Manufacturer Authorization form	1 Years
Compatible Parachute Recovery System for DJI Matrice 4E (e.g., AVSS PRS-M4S / ParaZero SafeAir M4, or equivalent ASTM F3322-compliant system)	Parachute equipment	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years
Vendor training of the Procuring Agency's officials on data acquisition and processing for the UAV system	Executive coaching service	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	--	--

Lot Title : Lot 6: ITM-06 — Differential GPS (DGPS) System

Bid Security : 75000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
Differential GPS (DGPS) System (Base + Rover, RTK-capable), including 02 Data Controllers/field software per Set — as per detailed specifications	Vehicular global positioning system GPS	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 2/set	2 / set	Manufacturer Authorization form	1 Years
Vendor training of the Procuring Agency's officials on data acquisition and processing for the DGPS system — as per detailed specifications	Executive coaching service	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	--	--

Lot Title : Lot 7: ITM-07 — Single Beam Dual Frequency Echo Sounder (Survey-Grade Bathymetry, Turnkey Solution)

Bid Security : 195000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty

Single Beam Dual Frequency Echo Sounder (SOUTH SDE-19D or equivalent), turnkey bathymetric survey solution integrated with existing DGPS RTK — as per detailed specifications	Echo sounder	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years
Rigid Inflatable Boat (RIB), aluminium or fibreglass hull, 3.3 m to 4.5 m, with outboard engine, transducer mounting bracket and safety accessories — as per detailed specifications	Inflatable rubber boat	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years
Vendor training of the Procuring Agency's officials on data acquisition and processing for the echo sounder system — as per detailed specifications	Executive coaching service	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	--	--

Lot Title : Lot 8: ITM-08 — Side Scan Sonar System (Turnkey Solution with Laptop and External Power)

Bid Security : 150000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty

Side Scan Sonar System (500 kHz, 150 m single-side range), complete with towfish, tow cable, deck unit/terminal, positioning interface, acquisition and processing software, and accessories — as per detailed specifications	Acoustic sensors	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years
Laptop for acquisition support and side scan sonar post-processing (32 GB RAM, 1 TB SSD, 8 GB RTX GPU, Windows 11 Pro) with 2 TB portable SSD — as per detailed specifications	Notebook computer	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years
External battery power system (LiFePO4, minimum 1,500 Wh, 220 V AC and 24/12 VDC outputs) with charger and cables for field operation — as per detailed specifications	Rechargeable batteries	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years
Vendor training of the Procuring Agency's officials on data acquisition and processing for the side scan sonar system — as per detailed specifications	Executive coaching service	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	--	--

Lot Title : Lot 9: ITM-09 — DJI Power 2000 & 100W Foldable Solar Panel × 4; and 360° Camera Kit (DJI Osmo 360 II)

Bid Security : 27000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty
DJI Power 2000 Portable Power Station with 100W Foldable Solar Panel × 4, complete with cabling and rugged transport case — as per detailed specifications	Portable generator maintenance and or repair service	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years
360° camera kit (DJI Osmo 360 II, latest, or equivalent) with combo kit, car mount and bike mount — as per detailed specifications	Digital cameras	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Any	1 Years

Lot Title : Lot 10: ITM-10 — Handheld SLAM Laser Scanner (Lixel L3 or equivalent) with Processing Software Bundle, Backpack, Vehicle & Drone Mounts and Training

Bid Security : 270000 PKR

Item	UNSPSC	Delivery Schedule	Quantity	Manufacturer / Dealer Authorization	Warranty

Handheld SLAM LiDAR spatial scanner (Lixel L3 or equivalent), complete with standard battery, charger, accessories and case — as per detailed specifications	Lasers	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years
Additional batteries for the handheld SLAM scanner, compatible with the offered unit — as per detailed specifications	Rechargeable batteries	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 3/Qty	3 / Qty	Manufacturer Authorization form	1 Years
SLAM backpack carrying system, vehicle mount and drone mount for the handheld scanner (one of each) — as per detailed specifications	Tool bags	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	Manufacturer Authorization form	1 Years
LixelStudio (or equivalent) point-cloud processing software — perpetual licence, latest version, with one year of updates — as per detailed specifications	Graphical user interface development software	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/license	1 / license	Manufacturer Authorization form	1 Years

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Lixel CyberColor LCC Studio Premium (or equivalent) 3DGS processing software — perpetual licence, latest version, with one year of updates — as per detailed specifications	Graphical user interface development software	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/license	1 / license	Manufacturer Authorization form	1 Years
Vendor training of the Procuring Agency's officials on data acquisition and data processing (scanner and software bundle) — as per detailed specifications	Executive coaching service	**Address:** GT&GE Division NESPAK House, 1-C, Block-N,Model Town **Schedule:** 90 Days **Quantity:** 1/Qty	1 / Qty	--	--

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Related Services of Goods:

No

Items/Lot Specification

Lot Title : Lot 1: ITM-01 — High-Performance Workstation PC

Item: High-Performance Workstation PC

UNSPSC: Computer workstation

Specifications / Requirements:

• Processor: AMD Ryzen Threadripper PRO 9955WX (16-core / 32-thread, socket sTR5, 4.5 GHz base / 5.4 GHz boost, 350W TDP) or equivalent workstation-grade processor • Motherboard: WRX90-chipset workstation motherboard (e.g., ASUS Pro WS WRX90E-SAGE SE or equivalent), supporting 8-channel ECC DDR5 memory and PCIe 5.0 • RAM: 128 GB DDR5-6400 ECC RDIMM, populated as 8×16 GB across all 8 memory channels to achieve full rated memory bandwidth • GPU: NVIDIA GeForce RTX 5080 (or equivalent), 16 GB GDDR7, CUDA-enabled, suitable for AI-based point-cloud classification, photogrammetric processing, and Gaussian Splatting / NeRF-based 3D reconstruction workloads • Storage: 1× 2 TB NVMe SSD (primary); plus secondary storage comprising 2× 2 TB NVMe SSD (4 TB total) and 2× 2 TB HDD (4 TB total) • Power Supply: 1600W, 80+ Titanium certified (e.g., Corsair AX1600i or Seasonic Prime TX-1600 or equivalent), with native support for latest-generation GPU power connectors • Liquid Cooling: sTR5-specific all-in-one liquid cooler, minimum 360mm radiator (e.g., Arctic Liquid Freezer III Pro 420 sTR5 or Silverstone XE360-TR5 or equivalent) • Chassis: full-tower case supporting E-ATX/SSI-CEB motherboards, with adequate clearance for a 420mm radiator and a 1600W power supply (e.g., Fractal Design Define 7 XL or Lian Li V3000 Plus or equivalent) • Monitors: 02 (two) 27" 4K UHD borderless displays with built-in speakers • Input Devices: wireless, rechargeable mouse and keyboard set • Genuine licensed 64-bit Operating System (Windows 11 Pro for Workstations or equivalent, with Linux compatibility) and essential productivity software • Onboard minimum 2.5 GbE networking; USB 3.2/Thunderbolt connectivity for high-speed data transfer from survey instruments • Certified/validated compatibility with major GIS, photogrammetry, point-cloud, and Digital-Twin processing software referenced at ITM-02 • Minimum 3-year comprehensive on-site warranty with next-business-day support

Item: Monitor

UNSPSC: Computer workstation

Specifications / Requirements:

Monitor: 01 (one) 27" 4K UHD borderless displays with built-in speakers

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Lot Title : Lot 2: ITM-02 — Data Processing Software Package for Digital Twin / GIS

Item: DJI Terra Flagship — Perpetual License (latest version) — as per detailed specifications

UNSPSC: Enterprise system management software

Specifications / Requirements:

• Item 1 — DJI Terra Flagship (latest version): 01 Perpetual License. Top-tier DJI Terra edition providing the complete Standard toolset (2D orthomosaic/TDOM, DSM, photogrammetric 3D mesh reconstruction, DJI LiDAR point-cloud processing) plus Gaussian Splatting-based photorealistic 3D reconstruction, cluster computing, and advanced power-infrastructure inspection workflows

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Item: DJI Modify Flagship — Perpetual License (latest version) — as per detailed specifications

UNSPSC: Enterprise system management software

Specifications / Requirements:

• Item 2 — DJI Modify Flagship (latest version): 01 Perpetual License. Full-tier point-cloud/mesh editing, cleanup, and terrain-generation tool, complementing DJI Terra output within the Digital Twin reconstruction workflow

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Item: Agisoft Metashape Professional Edition — Perpetual License (latest version) — as per detailed specifications

UNSPSC: Enterprise system management software

Specifications / Requirements:

• Item 3 — Agisoft Metashape Professional Edition (latest version): 01 Perpetual License. Survey-grade photogrammetry suite with ground control point (GCP) referencing, DEM/orthomosaic generation, multispectral and LiDAR data support, Python scripting/automation, and export to standard GIS/CAD formats

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Item: BricsCAD Ultimate — Perpetual License (latest version) — as per detailed specifications

UNSPSC: Enterprise system management software

Specifications / Requirements:

• Item 4 — BricsCAD Ultimate (latest version): 01 Perpetual License. All-in-one CAD/BIM bundle combining BricsCAD Lite, Pro, BIM, and Mechanical functionality on the native DWG platform, for 2D drafting, 3D modeling, and BIM deliverables derived from survey and Digital Twin data

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Item: Vendor training of the Procuring Agency's officials on the four software items — as per detailed specifications

UNSPSC: Enterprise system management software

Specifications / Requirements:

• All four software items shall be genuine, latest-version Perpetual Licenses, each supplied with a minimum 1-year vendor support entitlement covering the latest patches/updates, and accompanied by official training material • The combined software suite shall support an interoperable Digital Twin workflow across UAV photogrammetric/LiDAR data (via DJI Terra/Modify), independently processed photogrammetric datasets (via Metashape), terrestrial laser scan point clouds, and CAD/BIM deliverables (via BricsCAD) • Support for common point-cloud, GIS, CAD, and BIM interchange formats across the suite (e.g., LAS/LAZ, E57, shapefile, geodatabase, IFC, DWG/DXF) • Vendor training and orientation for the Procuring Agency's officials to be provided upon delivery, covering all four software items and the end-to-end Digital Twin data-processing workflow (data import, processing, editing, and deliverable generation)

Lot Title : Lot 3: ITM-03 — 3D Terrestrial Laser Scanner

Item: 3D Terrestrial Laser Scanner

UNSPSC: Lasers

Specifications / Requirements:

• Terrestrial laser scanner: Trimble X9 Premium configuration (or equivalent survey-grade scanner of any leading OEM), self-levelling and self-calibrating (automatic dual-axis calibration), requiring no target-based setup for standard registration • Scan rate up to 1,000,000 points per second (1 MHz), effective scanning range of up to 150 m, range accuracy of approximately 2 mm • Wide field of view suitable for rapid, near-full-dome capture; integrated dual-axis compensator with tilt-compensation range of ±10°, and laser pointer for field georeferencing • IP55 ingress-protection rating; operable at temperatures from -20°C to 50°C and at altitudes up to 2,000 m • Integrated HDR panoramic camera for true-colour point cloud capture • Integratable scanning module software (Item A): Trimble Perspective (or equivalent) in-field scanning and registration software,

providing real-time scan control, in-field point-cloud registration, and quality-control workflows, seamlessly integrated between field and office • Office processing software (Item B): Trimble RealWorks (or equivalent) point-cloud processing software, for registration refinement, cleaning, classification, and export to standard CAD/GIS/BIM formats • Supplied complete with 3 standard rechargeable Li-ion batteries, plus 03 (three) additional batteries (6 total), to support extended field operations • Heavy-duty survey tripod (e.g., Gitzo Systematic Tripod or equivalent) and complete accessories: scan targets, hard carrying case, soft carrying case, SD card and card reader, battery charger, and connecting cables • Laptop (Qty 01): high-performance laptop for in-field scan control/registration and office point-cloud processing — Intel Core Ultra 9 / AMD Ryzen 9 (HX class) or higher; 32 GB DDR5 RAM (expandable to 64 GB); 1 TB NVMe SSD; NVIDIA RTX discrete GPU with minimum 12 GB VRAM, compatible with the offered scanning and point-cloud software; 16" display (minimum 2.5K, 500 nits); Windows 11 Pro; Wi-Fi 6 or later, USB-C/USB-A and Ethernet; minimum 2-year warranty (e.g., Lenovo Legion Pro 5i or HP Omen Max 16, or equivalent) • Minimum 1 TB cloud storage entitlement (or equivalent local storage provision) for reality-capture data management, where offered by the manufacturer • Vendor training for the Procuring Agency's officials to be provided upon delivery, covering field scanning operation (data acquisition), in-field registration workflow, and office-based point-cloud processing • Minimum 2-year manufacturer's warranty, with local/regional authorized service and calibration support • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: High-performance laptop (32 GB RAM, 1 TB SSD, 12 GB RTX GPU, Windows 11 Pro) for scanner field control and point-cloud processing — as per detailed specifications above

UNSPSC: Lasers

Specifications / Requirements:

• Laptop (Qty 01): high-performance laptop for in-field scan control/registration and office point-cloud processing — Intel Core Ultra 9 / AMD Ryzen 9 (HX class) or higher; 32 GB DDR5 RAM (expandable to 64 GB); 1 TB NVMe SSD; NVIDIA RTX discrete GPU with minimum 12 GB VRAM, compatible with the offered scanning and point-cloud software; 16" display (minimum 2.5K, 500 nits); Windows 11 Pro; Wi-Fi 6 or later, USB-C/USB-A and Ethernet; minimum 2-year warranty (e.g., Lenovo Legion Pro 5i or HP Omen Max 16, or equivalent) • Minimum 1 TB cloud storage entitlement (or equivalent local storage provision) for reality-capture data management, where offered by the manufacturer

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Item: Vendor training of the Procuring Agency's officials on scanning, registration and point-cloud processing — as per detailed specifications

UNSPSC: Lasers

Specifications / Requirements:

• Vendor training for the Procuring Agency's officials to be provided upon delivery, covering field scanning operation (data acquisition), in-field registration workflow, and office-based point-cloud processing • Minimum 2-year manufacturer's warranty, with local/regional authorized service and calibration support • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Lot Title : Lot 4: ITM-04 — DJI Matrice 400 Enterprise RTK Drone System

Item: DJI Matrice 400 Enterprise Aircraft with Intelligent Charging Case — as per detailed specifications

UNSPSC: Target or reconnaissance drones

Specifications / Requirements:

• Enterprise flagship RTK drone platform equivalent to DJI Matrice 400 (or equivalent of any leading OEM), with forward flight time of up to 59 minutes and hover time of up to 53 minutes • Maximum payload capacity of up to 6 kg, supporting up to 7 simultaneous payloads (e.g., LiDAR, PPK/RTK photogrammetric camera, thermal/zoom payloads) for multi-sensor mapping and inspection missions • Integrated triple-layer obstacle-sensing suite combining rotating LiDAR, six-direction mmWave radar, and full-color low-light vision sensors, providing power-line-level obstacle detection at flight speeds up to 25 m/s • RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm

(vertical); hovering accuracy of ±0.1 m with RTK enabled • IP55 ingress-protection rating; rated operating temperature range of -20°C to 50°C, suitable for high-altitude/harsh-terrain survey operations • High-bandwidth enhanced video transmission system (e.g., O4 Enterprise or equivalent) with a minimum unobstructed range of 20 km, and airborne relay transmission capability for beyond-line-of-sight operations in complex terrain • Intelligent flight battery system rated for a minimum of 400 charge cycles, with dedicated intelligent charging case supplied for field charging and transport • D-RTK 3 (or equivalent) multifunctional base station supplied complete with tripod, mounting accessories, and soft carrying case, providing high-precision RTK positioning reference and signal relay functionality • 04 (four) additional intelligent flight batteries to be supplied, over and above any battery included with the base aircraft package • 01 (one) additional set of high-altitude propellers to be supplied, for improved performance during survey operations at high elevation/thin-air sites • 01 (one) DJI AP100 Parachute (or equivalent certified parachute recovery system) compatible with the procured aircraft, for regulatory compliance and safety during flights over people/infrastructure and BVLOS operations • Complete with remote controller, standard propellers, and manufacturer's standard accessories; interoperable with the Digital Twin data-processing software at ITM-02 • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning, safe-flight practices and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02) • Minimum 1-year manufacturer's warranty, with option for extended care/service plan • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: D-RTK 3 Multifunctional Base Station, complete with accessories and soft carrying case

UNSPSC: Vehicular global positioning system GPS

Specifications / Requirements:

• Enterprise flagship RTK drone platform equivalent to DJI Matrice 400 (or equivalent of any leading OEM), with forward flight time of up to 59 minutes and hover time of up to 53 minutes • Maximum payload capacity of up to 6 kg, supporting up to 7 simultaneous payloads (e.g., LiDAR, PPK/RTK photogrammetric camera, thermal/zoom payloads) for multi-sensor mapping and inspection missions • Integrated triple-layer obstacle-sensing suite combining rotating LiDAR, six-direction mmWave radar, and full-color low-light vision sensors, providing power-line-level obstacle detection at flight speeds up to 25 m/s • RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm

(vertical); hovering accuracy of ±0.1 m with RTK enabled • IP55 ingress-protection rating; rated operating temperature range of -20°C to 50°C, suitable for high-altitude/harsh-terrain survey operations • High-bandwidth enhanced video transmission system (e.g., O4 Enterprise or equivalent) with a minimum unobstructed range of 20 km, and airborne relay transmission capability for beyond-line-of-sight operations in complex terrain • Intelligent flight battery system rated for a minimum of 400 charge cycles, with dedicated intelligent charging case supplied for field charging and transport • D-RTK 3 (or equivalent) multifunctional base station supplied complete with tripod, mounting accessories, and soft carrying case, providing high-precision RTK positioning reference and signal relay functionality • 04 (four) additional intelligent flight batteries to be supplied, over and above any battery included with the base aircraft package • 01 (one) additional set of high-altitude propellers to be supplied, for improved performance during survey operations at high elevation/thin-air sites • 01 (one) DJI AP100 Parachute (or equivalent certified parachute recovery system) compatible with the procured aircraft, for regulatory compliance and safety during flights over people/infrastructure and BVLOS operations • Complete with remote controller, standard propellers, and manufacturer's standard accessories; interoperable with the Digital Twin data-processing software at ITM-02 • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning, safe-flight practices and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02) • Minimum 1-year manufacturer's warranty, with option for extended care/service plan • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: DJI Matrice 400 Intelligent Flight Battery (TB100C or equivalent)

UNSPSC: Rechargeable batteries

Specifications / Requirements:

• Enterprise flagship RTK drone platform equivalent to DJI Matrice 400 (or equivalent of any leading OEM), with forward flight time of up to 59 minutes and hover time of up to 53 minutes • Maximum payload capacity of up to 6 kg, supporting up to 7 simultaneous payloads (e.g., LiDAR, PPK/RTK photogrammetric camera, thermal/zoom payloads) for multi-sensor mapping and inspection missions • Integrated triple-layer obstacle-sensing suite combining rotating LiDAR, six-direction mmWave radar, and full-color low-light vision sensors, providing power-line-level obstacle detection at flight speeds up to 25 m/s • RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm

(vertical); hovering accuracy of ±0.1 m with RTK enabled • IP55 ingress-protection rating; rated operating temperature range of -20°C to 50°C, suitable for high-altitude/harsh-terrain survey operations • High-bandwidth enhanced video transmission system (e.g., O4 Enterprise or equivalent) with a minimum unobstructed range of 20 km, and airborne relay transmission capability for beyond-line-of-sight operations in complex terrain • Intelligent flight battery system rated for a minimum of 400 charge cycles, with dedicated intelligent charging case supplied for field charging and transport • D-RTK 3 (or equivalent) multifunctional base station supplied complete with tripod, mounting accessories, and soft carrying case, providing high-precision RTK positioning reference and signal relay functionality • 04 (four) additional intelligent flight batteries to be supplied, over and above any battery included with the base aircraft package • 01 (one) additional set of high-altitude propellers to be supplied, for improved performance during survey operations at high elevation/thin-air sites • 01 (one) DJI AP100 Parachute (or equivalent certified parachute recovery system) compatible with the procured aircraft, for regulatory compliance and safety during flights over people/infrastructure and BVLOS operations • Complete with remote controller, standard propellers, and manufacturer's standard accessories; interoperable with the Digital Twin data-processing software at ITM-02 • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning, safe-flight practices and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02) • Minimum 1-year manufacturer's warranty, with option for extended care/service plan • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: High-Altitude Propellers (additional set, for operation in thin-air/high-elevation terrain)

UNSPSC: Propeller or prop shaft

Specifications / Requirements:

• Enterprise flagship RTK drone platform equivalent to DJI Matrice 400 (or equivalent of any leading OEM), with forward flight time of up to 59 minutes and hover time of up to 53 minutes • Maximum payload capacity of up to 6 kg, supporting up to 7 simultaneous payloads (e.g., LiDAR, PPK/RTK photogrammetric camera, thermal/zoom payloads) for multi-sensor mapping and inspection missions • Integrated triple-layer obstacle-sensing suite combining rotating LiDAR, six-direction mmWave radar, and full-color low-light vision sensors, providing power-line-level obstacle detection at flight speeds up to 25 m/s • RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm

(vertical); hovering accuracy of ±0.1 m with RTK enabled • IP55 ingress-protection rating; rated operating temperature range of -20°C to 50°C, suitable for high-altitude/harsh-terrain survey operations • High-bandwidth enhanced video transmission system (e.g., O4 Enterprise or equivalent) with a minimum unobstructed range of 20 km, and airborne relay transmission capability for beyond-line-of-sight operations in complex terrain • Intelligent flight battery system rated for a minimum of 400 charge cycles, with dedicated intelligent charging case supplied for field charging and transport • D-RTK 3 (or equivalent) multifunctional base station supplied complete with tripod, mounting accessories, and soft carrying case, providing high-precision RTK positioning reference and signal relay functionality • 04 (four) additional intelligent flight batteries to be supplied, over and above any battery included with the base aircraft package • 01 (one) additional set of high-altitude propellers to be supplied, for improved performance during survey operations at high elevation/thin-air sites • 01 (one) DJI AP100 Parachute (or equivalent certified parachute recovery system) compatible with the procured aircraft, for regulatory compliance and safety during flights over people/infrastructure and BVLOS operations • Complete with remote controller, standard propellers, and manufacturer's standard accessories; interoperable with the Digital Twin data-processing software at ITM-02 • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning, safe-flight practices and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02) • Minimum 1-year manufacturer's warranty, with option for extended care/service plan • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: DJI AP100 Parachute (or equivalent certified parachute recovery system compatible with DJI Matrice 400)

UNSPSC: Parachute equipment

Specifications / Requirements:

• Enterprise flagship RTK drone platform equivalent to DJI Matrice 400 (or equivalent of any leading OEM), with forward flight time of up to 59 minutes and hover time of up to 53 minutes • Maximum payload capacity of up to 6 kg, supporting up to 7 simultaneous payloads (e.g., LiDAR, PPK/RTK photogrammetric camera, thermal/zoom payloads) for multi-sensor mapping and inspection missions • Integrated triple-layer obstacle-sensing suite combining rotating LiDAR, six-direction mmWave radar, and full-color low-light vision sensors, providing power-line-level obstacle detection at flight speeds up to 25 m/s • RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm

(vertical); hovering accuracy of ±0.1 m with RTK enabled • IP55 ingress-protection rating; rated operating temperature range of -20°C to 50°C, suitable for high-altitude/harsh-terrain survey operations • High-bandwidth enhanced video transmission system (e.g., O4 Enterprise or equivalent) with a minimum unobstructed range of 20 km, and airborne relay transmission capability for beyond-line-of-sight operations in complex terrain • Intelligent flight battery system rated for a minimum of 400 charge cycles, with dedicated intelligent charging case supplied for field charging and transport • D-RTK 3 (or equivalent) multifunctional base station supplied complete with tripod, mounting accessories, and soft carrying case, providing high-precision RTK positioning reference and signal relay functionality • 04 (four) additional intelligent flight batteries to be supplied, over and above any battery included with the base aircraft package • 01 (one) additional set of high-altitude propellers to be supplied, for improved performance during survey operations at high elevation/thin-air sites • 01 (one) DJI AP100 Parachute (or equivalent certified parachute recovery system) compatible with the procured aircraft, for regulatory compliance and safety during flights over people/infrastructure and BVLOS operations • Complete with remote controller, standard propellers, and manufacturer's standard accessories; interoperable with the Digital Twin data-processing software at ITM-02 • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning, safe-flight practices and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02) • Minimum 1-year manufacturer's warranty, with option for extended care/service plan • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: Vendor training of the Procuring Agency's officials on data acquisition and processing for the UAV system — as per detailed specifications

UNSPSC: Executive coaching service

Specifications / Requirements:

• Enterprise flagship RTK drone platform equivalent to DJI Matrice 400 (or equivalent of any leading OEM), with forward flight time of up to 59 minutes and hover time of up to 53 minutes • Maximum payload capacity of up to 6 kg, supporting up to 7 simultaneous payloads (e.g., LiDAR, PPK/RTK photogrammetric camera, thermal/zoom payloads) for multi-sensor mapping and inspection missions • Integrated triple-layer obstacle-sensing suite combining rotating LiDAR, six-direction mmWave radar, and full-color low-light

vision sensors, providing power-line-level obstacle detection at flight speeds up to 25 m/s • RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm (vertical); hovering accuracy of ±0.1 m with RTK enabled • IP55 ingress-protection rating; rated operating temperature range of -20°C to 50°C, suitable for high-altitude/harsh-terrain survey operations • High-bandwidth enhanced video transmission system (e.g., O4 Enterprise or equivalent) with a minimum unobstructed range of 20 km, and airborne relay transmission capability for beyond-line-of-sight operations in complex terrain • Intelligent flight battery system rated for a minimum of 400 charge cycles, with dedicated intelligent charging case supplied for field charging and transport • D-RTK 3 (or equivalent) multifunctional base station supplied complete with tripod, mounting accessories, and soft carrying case, providing high-precision RTK positioning reference and signal relay functionality • 04 (four) additional intelligent flight batteries to be supplied, over and above any battery included with the base aircraft package • 01 (one) additional set of high-altitude propellers to be supplied, for improved performance during survey operations at high elevation/thin-air sites • 01 (one) DJI AP100 Parachute (or equivalent certified parachute recovery system) compatible with the procured aircraft, for regulatory compliance and safety during flights over people/infrastructure and BVLOS operations • Complete with remote controller, standard propellers, and manufacturer's standard accessories; interoperable with the Digital Twin data-processing software at ITM-02 • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning, safe-flight practices and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02) • Minimum 1-year manufacturer's warranty, with option for extended care/service plan • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Lot Title : Lot 5: ITM-05 — DJI Matrice 4E Mapping/Survey Drone System

Item: DJI Matrice 4E — Fly More Combo (Aircraft, Remote Controller, 1× Intelligent Flight Battery, Charger & Charging Hub, microSD Card, 3 Pairs of Propellers, Aircraft Carrying Case) — as per detailed specifications

UNSPSC: Target or reconnaissance drones

Specifications / Requirements:

• Compact enterprise mapping/survey drone equivalent to DJI Matrice 4E (or equivalent of any leading OEM), foldable, with all-up weight under 1.3 kg (with propellers and battery) • Mapping-optimized 4/3-inch, minimum 20 MP effective-resolution wide camera with mechanical shutter (eliminating rolling-shutter distortion during forward flight), minimum 0.5-second capture interval, and RAW (DNG) image output directly compatible with photogrammetric processing pipelines • Support for multi-directional survey capture modes (minimum 3-directional ortho and 5-directional oblique in a single pass), improving mapping efficiency and 3D model quality with fewer flights • On-board rough point-cloud generation capability to plan autonomous close-range 3D modeling flight routes • Flight endurance of up to 49 minutes per battery cycle; capable of covering large mapping areas (multiple km²) in a single flight • RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm (vertical) • Enhanced video transmission system with a minimum unobstructed range of 12 km • Ground Sample Distance (GSD) of approximately 1.2 cm/pixel at 120 m flying altitude using the wide-angle camera • Supplied as 01 (one) complete Fly More Combo package, comprising: aircraft, remote controller, 1 intelligent flight battery, charger and charging hub, microSD card, 3 pairs of propellers, and aircraft carrying case, as standard package contents per combo • 02 (two) additional intelligent flight batteries to be supplied, over and above the battery included in the Fly More Combo • 01 (one) compatible parachute recovery system, ASTM F3322-22 / EASA MOC 2512 (or equivalent) certified, providing automatic and manual deployment capability for regulatory compliance and safety during flights over people/infrastructure • Flight-planning and data-capture workflow interoperable with the Digital Twin data-processing software at ITM-02 (e.g., via DJI Terra and/or DJI Modify or equivalent) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02) • Minimum 1-year manufacturer's warranty, with option for extended care/service plan • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: Additional Intelligent Flight Battery for DJI Matrice 4E, over and above the battery included in the Fly More Combo

UNSPSC: Rechargeable batteries

Specifications / Requirements:

• Compact enterprise mapping/survey drone equivalent to DJI Matrice 4E (or equivalent of any leading OEM), foldable, with all-up weight under 1.3 kg (with propellers and battery) • Mapping-optimized 4/3-inch, minimum 20 MP effective-resolution wide camera with mechanical shutter (eliminating rolling-shutter distortion during forward flight),

minimum 0.5-second capture interval, and RAW (DNG) image output directly compatible with photogrammetric processing pipelines • Support for multi-directional survey capture modes (minimum 3-directional ortho and 5-directional oblique in a single pass), improving mapping efficiency and 3D model quality with fewer flights • On-board rough point-cloud generation capability to plan autonomous close-range 3D modeling flight routes • Flight endurance of up to 49 minutes per battery cycle; capable of covering large mapping areas (multiple km²) in a single flight • RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm (vertical) • Enhanced video transmission system with a minimum unobstructed range of 12 km • Ground Sample Distance (GSD) of approximately 1.2 cm/pixel at 120 m flying altitude using the wide-angle camera • Supplied as 01 (one) complete Fly More Combo package, comprising: aircraft, remote controller, 1 intelligent flight battery, charger and charging hub, microSD card, 3 pairs of propellers, and aircraft carrying case, as standard package contents per combo • 02 (two) additional intelligent flight batteries to be supplied, over and above the battery included in the Fly More Combo • 01 (one) compatible parachute recovery system, ASTM F3322-22 / EASA MOC 2512 (or equivalent) certified, providing automatic and manual deployment capability for regulatory compliance and safety during flights over people/infrastructure • Flight-planning and data-capture workflow interoperable with the Digital Twin data-processing software at ITM-02 (e.g., via DJI Terra and/or DJI Modify or equivalent) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02) • Minimum 1-year manufacturer's warranty, with option for extended care/service plan • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: Compatible Parachute Recovery System for DJI Matrice 4E (e.g., AVSS PRS-M4S / ParaZero SafeAir M4, or equivalent ASTM F3322-compliant system)

UNSPSC: Parachute equipment

Specifications / Requirements:

• Compact enterprise mapping/survey drone equivalent to DJI Matrice 4E (or equivalent of any leading OEM), foldable, with all-up weight under 1.3 kg (with propellers and battery) • Mapping-optimized 4/3-inch, minimum 20 MP effective-resolution wide camera with mechanical shutter (eliminating rolling-shutter distortion during forward flight), minimum 0.5-second capture interval, and RAW (DNG) image output directly compatible with photogrammetric processing pipelines • Support for multi-directional survey

capture modes (minimum 3-directional ortho and 5-directional oblique in a single pass), improving mapping efficiency and 3D model quality with fewer flights • On-board rough point-cloud generation capability to plan autonomous close-range 3D modeling flight routes • Flight endurance of up to 49 minutes per battery cycle; capable of covering large mapping areas (multiple km²) in a single flight • RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm (vertical) • Enhanced video transmission system with a minimum unobstructed range of 12 km • Ground Sample Distance (GSD) of approximately 1.2 cm/pixel at 120 m flying altitude using the wide-angle camera • Supplied as 01 (one) complete Fly More Combo package, comprising: aircraft, remote controller, 1 intelligent flight battery, charger and charging hub, microSD card, 3 pairs of propellers, and aircraft carrying case, as standard package contents per combo • 02 (two) additional intelligent flight batteries to be supplied, over and above the battery included in the Fly More Combo • 01 (one) compatible parachute recovery system, ASTM F3322-22 / EASA MOC 2512 (or equivalent) certified, providing automatic and manual deployment capability for regulatory compliance and safety during flights over people/infrastructure • Flight-planning and data-capture workflow interoperable with the Digital Twin data-processing software at ITM-02 (e.g., via DJI Terra and/or DJI Modify or equivalent) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02) • Minimum 1-year manufacturer's warranty, with option for extended care/service plan • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: Vendor training of the Procuring Agency's officials on data acquisition and processing for the UAV system

UNSPSC: Executive coaching service

Specifications / Requirements:

• Compact enterprise mapping/survey drone equivalent to DJI Matrice 4E (or equivalent of any leading OEM), foldable, with all-up weight under 1.3 kg (with propellers and battery) • Mapping-optimized 4/3-inch, minimum 20 MP effective-resolution wide camera with mechanical shutter (eliminating rolling-shutter distortion during forward flight), minimum 0.5-second capture interval, and RAW (DNG) image output directly compatible with photogrammetric processing pipelines • Support for multi-directional survey capture modes (minimum 3-directional ortho and 5-directional oblique in a single pass), improving mapping efficiency and 3D model quality with fewer flights • On-board rough point-cloud generation capability to plan autonomous close-range 3D modeling flight routes • Flight endurance of up to 49 minutes per battery cycle; capable of

covering large mapping areas (multiple km²) in a single flight • RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm (vertical) • Enhanced video transmission system with a minimum unobstructed range of 12 km • Ground Sample Distance (GSD) of approximately 1.2 cm/pixel at 120 m flying altitude using the wide-angle camera • Supplied as 01 (one) complete Fly More Combo package, comprising: aircraft, remote controller, 1 intelligent flight battery, charger and charging hub, microSD card, 3 pairs of propellers, and aircraft carrying case, as standard package contents per combo • 02 (two) additional intelligent flight batteries to be supplied, over and above the battery included in the Fly More Combo • 01 (one) compatible parachute recovery system, ASTM F3322-22 / EASA MOC 2512 (or equivalent) certified, providing automatic and manual deployment capability for regulatory compliance and safety during flights over people/infrastructure • Flight-planning and data-capture workflow interoperable with the Digital Twin data-processing software at ITM-02 (e.g., via DJI Terra and/or DJI Modify or equivalent) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02) • Minimum 1-year manufacturer's warranty, with option for extended care/service plan • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Lot Title : Lot 6: ITM-06 — Differential GPS (DGPS) System

Item: Differential GPS (DGPS) System (Base + Rover, RTK-capable), including 02 Data Controllers/field software per Set — as per detailed specifications

UNSPSC: Vehicular global positioning system GPS

Specifications / Requirements:

• Multi-frequency, multi-constellation GNSS receivers, configured as base and rover (RTK-capable) • Horizontal accuracy ≤ 10 mm + 1 ppm; vertical accuracy ≤ 15 mm + 1 ppm (RTK mode) • 02 (two) Data Controllers/field software per Set, with GIS/CAD export capability • Radio and/or network (NTRIP) correction capability • Complete with tripods, poles, additional batteries (08), and carrying cases • The solution shall be compatible with in-house available equipment (Trimble and South) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering field operation, base/rover setup, data acquisition, post-processing and export of

survey data • Minimum 2-year manufacturer's warranty • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: Vendor training of the Procuring Agency's officials on data acquisition and processing for the DGPS system — as per detailed specifications

UNSPSC: Executive coaching service

Specifications / Requirements:

• Multi-frequency, multi-constellation GNSS receivers, configured as base and rover (RTK-capable) • Horizontal accuracy ≤ 10 mm + 1 ppm; vertical accuracy ≤ 15 mm + 1 ppm (RTK mode) • 02 (two) Data Controllers/field software per Set, with GIS/CAD export capability • Radio and/or network (NTRIP) correction capability • Complete with tripods, poles, additional batteries (08), and carrying cases • The solution shall be compatible with in-house available equipment (Trimble and South) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering field operation, base/rover setup, data acquisition, post-processing and export of survey data • Minimum 2-year manufacturer's warranty • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Lot Title : Lot 7: ITM-07 — Single Beam Dual Frequency Echo Sounder (Survey-Grade Bathymetry, Turnkey Solution)

Item: Single Beam Dual Frequency Echo Sounder (SOUTH SDE-19D or equivalent), turnkey bathymetric survey solution integrated with existing DGPS RTK — as per detailed specifications

UNSPSC: Echo sounder

Specifications / Requirements:

• Single-beam, dual-frequency digital echo sounder equivalent to SOUTH SDE-19D (or equivalent survey-grade instrument of any leading OEM), for high-precision bathymetric depth measurement • Dual-frequency configuration (typical high frequency 200 kHz / low frequency 24-33 kHz, consistent with SOUTH's SDE series), with depth accuracy of approximately ±1 cm ±0.1% of depth value • Rugged stainless-steel (e.g., 316L) hull, minimum IP67-rated for water/dust resistance and sustained field deployment • Wireless connectivity (WiFi to tablet/controller, Bluetooth to GNSS receiver) plus wired RS232/serial interface, with built-in Web UI for configuration • Turnkey solution: the echo sounder shall integrate directly with the Procuring Agency's existing DGPS RTK equipment (refer ITM-06) via Bluetooth/serial connection, for real-time RTK/tide-corrected, georeferenced soundings, with no additional third-party positioning hardware required • Supplied complete with transducer, mounting pole/bracket, all necessary interface/communication cables, Calibration & Aux Gear: Bar-Check, Calibration Plate, Sound Velocity Profiler (SVP), Safety Equipment, and rugged carrying case, forming a complete, field-ready bathymetric survey system • Bundled hydrographic survey/data acquisition software (Windows-based professional program and/or Android field app) for real-time depth logging, echogram display, and export to standard formats (e.g., NMEA0183, DESO25, XYZ, or equivalent) for GIS/CAD post-processing • Lightweight and compact form factor, suitable for standard vessel mounting as well as USV (unmanned surface vehicle) deployment for remote/shallow-water survey areas, where required • Rigid Inflatable Boat (RIB) (Qty 01): survey/work boat with aluminium or fibreglass (GRP) rigid hull, 3.3 m to 4.5 m overall length, with heavy-duty Hypalon/PVC inflatable tubes, minimum 4-person capacity, transom suitable for outboard engine, and a transducer mounting arrangement/bracket compatible with the offered echo sounder; supplied complete with outboard engine of suitable rating (4-stroke), fuel tank, paddles/oars, foot pump, anchor with rope, repair kit, lifejackets for all occupants, and transport/storage cover; minimum 1-year warranty • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering installation on the survey boat, field operation, bathymetric data acquisition, and post-processing/export of depth data • Minimum 1-year manufacturer's warranty • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Item: Rigid Inflatable Boat (RIB), aluminium or fibreglass hull, 3.3 m to 4.5 m, with outboard engine, transducer mounting bracket and safety accessories — as per detailed specifications

UNSPSC: Inflatable rubber boat

Specifications / Requirements:

• Single-beam, dual-frequency digital echo sounder equivalent to SOUTH SDE-19D (or equivalent survey-grade instrument of any leading OEM), for high-precision bathymetric depth measurement • Dual-frequency configuration (typical high frequency 200 kHz / low frequency 24-33 kHz, consistent with SOUTH's SDE series), with depth accuracy of approximately ±1 cm ±0.1% of depth value • Rugged stainless-steel (e.g., 316L) hull, minimum IP67-rated for water/dust resistance and sustained field deployment • Wireless connectivity (WiFi to tablet/controller, Bluetooth to GNSS receiver) plus wired RS232/serial interface, with built-in Web UI for configuration • Turnkey solution: the echo sounder shall integrate directly with the Procuring Agency's existing DGPS RTK equipment (refer ITM-06) via Bluetooth/serial connection, for real-time RTK/tide-corrected, georeferenced soundings, with no additional third-party positioning hardware required • Supplied complete with transducer, mounting pole/bracket, all necessary interface/communication cables, Calibration & Aux Gear: Bar-Check, Calibration Plate, Sound Velocity Profiler (SVP), Safety Equipment, and rugged carrying case, forming a complete, field-ready bathymetric survey system • Bundled hydrographic survey/data acquisition software (Windows-based professional program and/or Android field app) for real-time depth logging, echogram display, and export to standard formats (e.g., NMEA0183, DESO25, XYZ, or equivalent) for GIS/CAD post-processing • Lightweight and compact form factor, suitable for standard vessel mounting as well as USV (unmanned surface vehicle) deployment for remote/shallow-water survey areas, where required • Rigid Inflatable Boat (RIB) (Qty 01): survey/work boat with aluminium or fibreglass (GRP) rigid hull, 3.3 m to 4.5 m overall length, with heavy-duty Hypalon/PVC inflatable tubes, minimum 4-person capacity, transom suitable for outboard engine, and a transducer mounting arrangement/bracket compatible with the offered echo sounder; supplied complete with outboard engine of suitable rating (4-stroke), fuel tank, paddles/oars, foot pump, anchor with rope, repair kit, lifejackets for all occupants, and transport/storage cover; minimum 1-year warranty • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering installation on the survey boat, field operation, bathymetric data acquisition, and post-processing/export of depth data • Minimum 1-year manufacturer's warranty • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Item: Vendor training of the Procuring Agency's officials on data acquisition and processing for the echo sounder system — as per detailed specifications

UNSPSC: Executive coaching service

Specifications / Requirements:

• Single-beam, dual-frequency digital echo sounder equivalent to SOUTH SDE-19D (or equivalent survey-grade instrument of any leading OEM), for high-precision bathymetric depth measurement • Dual-frequency configuration (typical high frequency 200 kHz / low frequency 24-33 kHz, consistent with SOUTH's SDE series), with depth accuracy of approximately ±1 cm ±0.1% of depth value • Rugged stainless-steel (e.g., 316L) hull, minimum IP67-rated for water/dust resistance and sustained field deployment • Wireless connectivity (WiFi to tablet/controller, Bluetooth to GNSS receiver) plus wired RS232/serial interface, with built-in Web UI for configuration • Turnkey solution: the echo sounder shall integrate directly with the Procuring Agency's existing DGPS RTK equipment (refer ITM-06) via Bluetooth/serial connection, for real-time RTK/tide-corrected, georeferenced soundings, with no additional third-party positioning hardware required • Supplied complete with transducer, mounting pole/bracket, all necessary interface/communication cables, Calibration & Aux Gear: Bar-Check, Calibration Plate, Sound Velocity Profiler (SVP), Safety Equipment, and rugged carrying case, forming a complete, field-ready bathymetric survey system • Bundled hydrographic survey/data acquisition software (Windows-based professional program and/or Android field app) for real-time depth logging, echogram display, and export to standard formats (e.g., NMEA0183, DESO25, XYZ, or equivalent) for GIS/CAD post-processing • Lightweight and compact form factor, suitable for standard vessel mounting as well as USV (unmanned surface vehicle) deployment for remote/shallow-water survey areas, where required • Rigid Inflatable Boat (RIB) (Qty 01): survey/work boat with aluminium or fibreglass (GRP) rigid hull, 3.3 m to 4.5 m overall length, with heavy-duty Hypalon/PVC inflatable tubes, minimum 4-person capacity, transom suitable for outboard engine, and a transducer mounting arrangement/bracket compatible with the offered echo sounder; supplied complete with outboard engine of suitable rating (4-stroke), fuel tank, paddles/oars, foot pump, anchor with rope, repair kit, lifejackets for all occupants, and transport/storage cover; minimum 1-year warranty • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering installation on the survey boat, field operation, bathymetric data acquisition, and post-processing/export of depth data • Minimum 1-year manufacturer's warranty • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Lot Title : Lot 8: ITM-08 — Side Scan Sonar System (Turnkey Solution with Laptop and External Power)

Item: Side Scan Sonar System (500 kHz, 150 m single-side range), complete with towfish, tow cable, deck unit/terminal, positioning interface, acquisition and processing software, and accessories — as per detailed specifications

UNSPSC: Acoustic sensors

Specifications / Requirements:

• Hardware and Software Image Balancing: supports both hardware- and software-based image balancing • Water Imaging: supports imaging applications for underwater/water environments • 4K High Definition Display: supports 4K high-definition display for clear and detailed visualization • Data Port: 100M Ethernet port provided for high-speed data communication • Navigation Display Software: standard navigation display software supported • Output Data Format: output data provided in GDSS (XTF) format • Work Frequency: operates at a working frequency of 500 kHz • Signal Type: supports Chirp and Continuous Wave (CW) signal types • Signal Bandwidth: provides a signal bandwidth of 100 kHz • Maximum Range (Single Side): maximum operating range of 150 m on a single side • Horizontal Beam Angle: 0.4° • Vertical Beam Angle: 50° • Vertical Track Resolution: 0.75 cm • Transducer Fixed Angle: fixed at 15° • Standard Accessories: security electrical cable, air transport box, towfish, and navigation data acquisition software • Display & Control Terminal: includes a display and control terminal for system operation and monitoring • Optional Accessories: measuring-rod mounting bracket for satellite positioning equipment available as an optional accessory • Wet End Size: 660 mm × 110 mm (Length × Diameter); Wet End Weight: 6.6 kg • Work Mode: designed for fixed installation operation • Power Supply: operates on 220 VAC / 24 VDC; Maximum Power Consumption: 37 W • Integrated or interfaced GPS/positioning for geo-referenced imagery • Laptop (Qty 01) for acquisition support and post-processing of side scan sonar data (mosaicking, target/obstruction detection, XTF/sonar data handling): Intel Core Ultra 7/9 or AMD Ryzen 7/9 (or higher) processor; minimum 32 GB DDR5 RAM (expandable to 64 GB); minimum 1 TB NVMe SSD; NVIDIA RTX discrete GPU with minimum 8 GB VRAM; 15.6" to 16" Full HD+ (or better) anti-glare display of minimum 400 nits for field use; Windows 11 Pro; RJ45 Ethernet (or certified adapter) for the sonar's 100M Ethernet port, plus USB-A, USB-C, HDMI and Wi-Fi 6 or later; battery of minimum 70 Wh; fully compatible with the offered sonar acquisition and processing software (including any required licence dongle); supplied with a 2 TB portable external SSD for data backup and a protective carry bag; minimum 2-year warranty • External battery power system (Qty 01) for field operation: portable LiFePO4 power station with pure-sine-wave 220–240 V AC output of minimum 1,000 W and a regulated 24 VDC (or 12 VDC) output as required by the offered sonar, sized to run the complete system (sonar topside/deck unit about 37 W, laptop, display and control terminal, and GNSS/positioning equipment) continuously for not less than 8 hours (indicative minimum capacity 1,500 Wh); with AC/DC charger, solar-charging input, protective cables, fuse/protection and carrying case; minimum 2-year warranty • Turnkey solution: the system shall be supplied complete, installed, configured and commissioned with all

cables, connectors, mounting brackets for a survey boat, software licences, and navigation/GNSS interfacing, so that the Procuring Agency can start a survey on delivery; including on-site demonstration, acquisition and processing training of officials, and a test survey with data-processing demonstration at acceptance • Complete with tow cable, deck unit/interface, and carrying/transport case • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering system deployment from the survey boat, sonar data acquisition, and post-processing (mosaicking, target detection) on the supplied laptop • Minimum 1-year manufacturer's warranty • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: Laptop for acquisition support and side scan sonar post-processing (32 GB RAM, 1 TB SSD, 8 GB RTX GPU, Windows 11 Pro) with 2 TB portable SSD — as per detailed specifications

UNSPSC: Notebook computer

Specifications / Requirements:

• Hardware and Software Image Balancing: supports both hardware- and software-based image balancing • Water Imaging: supports imaging applications for underwater/water environments • 4K High Definition Display: supports 4K high-definition display for clear and detailed visualization • Data Port: 100M Ethernet port provided for high-speed data communication • Navigation Display Software: standard navigation display software supported • Output Data Format: output data provided in GDSS (XTF) format • Work Frequency: operates at a working frequency of 500 kHz • Signal Type: supports Chirp and Continuous Wave (CW) signal types • Signal Bandwidth: provides a signal bandwidth of 100 kHz • Maximum Range (Single Side): maximum operating range of 150 m on a single side • Horizontal Beam Angle: 0.4° • Vertical Beam Angle: 50° • Vertical Track Resolution: 0.75 cm • Transducer Fixed Angle: fixed at 15° • Standard Accessories: security electrical cable, air transport box, towfish, and navigation data acquisition software • Display & Control Terminal: includes a display and control terminal for system operation and monitoring • Optional Accessories: measuring-rod mounting bracket for satellite positioning equipment available as an optional accessory • Wet End Size: 660 mm × 110 mm (Length × Diameter); Wet End Weight: 6.6 kg • Work Mode: designed for fixed installation operation • Power Supply: operates on 220 VAC / 24 VDC; Maximum Power Consumption: 37 W • Integrated or interfaced GPS/positioning for geo-referenced imagery • Laptop (Qty 01) for acquisition support and post-processing of side scan sonar data (mosaicking, target/obstruction detection, XTF/sonar data

handling): Intel Core Ultra 7/9 or AMD Ryzen 7/9 (or higher) processor; minimum 32 GB DDR5 RAM (expandable to 64 GB); minimum 1 TB NVMe SSD; NVIDIA RTX discrete GPU with minimum 8 GB VRAM; 15.6" to 16" Full HD+ (or better) anti-glare display of minimum 400 nits for field use; Windows 11 Pro; RJ45 Ethernet (or certified adapter) for the sonar's 100M Ethernet port, plus USB-A, USB-C, HDMI and Wi-Fi 6 or later; battery of minimum 70 Wh; fully compatible with the offered sonar acquisition and processing software (including any required licence dongle); supplied with a 2 TB portable external SSD for data backup and a protective carry bag; minimum 2-year warranty • External battery power system (Qty 01) for field operation: portable LiFePO4 power station with pure-sine-wave 220–240 V AC output of minimum 1,000 W and a regulated 24 VDC (or 12 VDC) output as required by the offered sonar, sized to run the complete system (sonar topside/deck unit about 37 W, laptop, display and control terminal, and GNSS/positioning equipment) continuously for not less than 8 hours (indicative minimum capacity 1,500 Wh); with AC/DC charger, solar-charging input, protective cables, fuse/protection and carrying case; minimum 2-year warranty • Turnkey solution: the system shall be supplied complete, installed, configured and commissioned with all cables, connectors, mounting brackets for a survey boat, software licences, and navigation/GNSS interfacing, so that the Procuring Agency can start a survey on delivery; including on-site demonstration, acquisition and processing training of officials, and a test survey with data-processing demonstration at acceptance • Complete with tow cable, deck unit/interface, and carrying/transport case • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering system deployment from the survey boat, sonar data acquisition, and post-processing (mosaicking, target detection) on the supplied laptop • Minimum 1-year manufacturer's warranty • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: External battery power system (LiFePO4, minimum 1,500 Wh, 220 V AC and 24/12 VDC outputs) with charger and cables for field operation — as per detailed specifications

UNSPSC: Rechargeable batteries

Specifications / Requirements:

• Hardware and Software Image Balancing: supports both hardware- and software-based image balancing • Water Imaging: supports imaging applications for underwater/water environments • 4K High Definition Display: supports 4K high-definition display for clear and detailed visualization • Data Port: 100M Ethernet port provided

for high-speed data communication • Navigation Display Software: standard navigation display software supported • Output Data Format: output data provided in GDSS (XTF) format • Work Frequency: operates at a working frequency of 500 kHz • Signal Type: supports Chirp and Continuous Wave (CW) signal types • Signal Bandwidth: provides a signal bandwidth of 100 kHz • Maximum Range (Single Side): maximum operating range of 150 m on a single side • Horizontal Beam Angle: 0.4° • Vertical Beam Angle: 50° • Vertical Track Resolution: 0.75 cm • Transducer Fixed Angle: fixed at 15° • Standard Accessories: security electrical cable, air transport box, towfish, and navigation data acquisition software • Display & Control Terminal: includes a display and control terminal for system operation and monitoring • Optional Accessories: measuring-rod mounting bracket for satellite positioning equipment available as an optional accessory • Wet End Size: 660 mm × 110 mm (Length × Diameter); Wet End Weight: 6.6 kg • Work Mode: designed for fixed installation operation • Power Supply: operates on 220 VAC / 24 VDC; Maximum Power Consumption: 37 W • Integrated or interfaced GPS/positioning for geo-referenced imagery • Laptop (Qty 01) for acquisition support and post-processing of side scan sonar data (mosaicking, target/obstruction detection, XTF/sonar data handling): Intel Core Ultra 7/9 or AMD Ryzen 7/9 (or higher) processor; minimum 32 GB DDR5 RAM (expandable to 64 GB); minimum 1 TB NVMe SSD; NVIDIA RTX discrete GPU with minimum 8 GB VRAM; 15.6" to 16" Full HD+ (or better) anti-glare display of minimum 400 nits for field use; Windows 11 Pro; RJ45 Ethernet (or certified adapter) for the sonar's 100M Ethernet port, plus USB-A, USB-C, HDMI and Wi-Fi 6 or later; battery of minimum 70 Wh; fully compatible with the offered sonar acquisition and processing software (including any required licence dongle); supplied with a 2 TB portable external SSD for data backup and a protective carry bag; minimum 2-year warranty • External battery power system (Qty 01) for field operation: portable LiFePO4 power station with pure-sine-wave 220–240 V AC output of minimum 1,000 W and a regulated 24 VDC (or 12 VDC) output as required by the offered sonar, sized to run the complete system (sonar topside/deck unit about 37 W, laptop, display and control terminal, and GNSS/positioning equipment) continuously for not less than 8 hours (indicative minimum capacity 1,500 Wh); with AC/DC charger, solar-charging input, protective cables, fuse/protection and carrying case; minimum 2-year warranty • Turnkey solution: the system shall be supplied complete, installed, configured and commissioned with all cables, connectors, mounting brackets for a survey boat, software licences, and navigation/GNSS interfacing, so that the Procuring Agency can start a survey on delivery; including on-site demonstration, acquisition and processing training of officials, and a test survey with data-processing demonstration at acceptance • Complete with tow cable, deck unit/interface, and carrying/transport case • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering system deployment from the survey boat, sonar data acquisition, and post-processing (mosaicking, target detection) on the supplied laptop • Minimum 1-year manufacturer's warranty • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Item: Vendor training of the Procuring Agency's officials on data acquisition and processing for the side scan sonar system — as per detailed specifications

UNSPSC: Executive coaching service

Specifications / Requirements:

• Hardware and Software Image Balancing: supports both hardware- and software-based image balancing • Water Imaging: supports imaging applications for underwater/water environments • 4K High Definition Display: supports 4K high-definition display for clear and detailed visualization • Data Port: 100M Ethernet port provided for high-speed data communication • Navigation Display Software: standard navigation display software supported • Output Data Format: output data provided in GDSS (XTF) format • Work Frequency: operates at a working frequency of 500 kHz • Signal Type: supports Chirp and Continuous Wave (CW) signal types • Signal Bandwidth: provides a signal bandwidth of 100 kHz • Maximum Range (Single Side): maximum operating range of 150 m on a single side • Horizontal Beam Angle: 0.4° • Vertical Beam Angle: 50° • Vertical Track Resolution: 0.75 cm • Transducer Fixed Angle: fixed at 15° • Standard Accessories: security electrical cable, air transport box, towfish, and navigation data acquisition software • Display & Control Terminal: includes a display and control terminal for system operation and monitoring • Optional Accessories: measuring-rod mounting bracket for satellite positioning equipment available as an optional accessory • Wet End Size: 660 mm × 110 mm (Length × Diameter); Wet End Weight: 6.6 kg • Work Mode: designed for fixed installation operation • Power Supply: operates on 220 VAC / 24 VDC; Maximum Power Consumption: 37 W • Integrated or interfaced GPS/positioning for geo-referenced imagery • Laptop (Qty 01) for acquisition support and post-processing of side scan sonar data (mosaicking, target/obstruction detection, XTF/sonar data handling): Intel Core Ultra 7/9 or AMD Ryzen 7/9 (or higher) processor; minimum 32 GB DDR5 RAM (expandable to 64 GB); minimum 1 TB NVMe SSD; NVIDIA RTX discrete GPU with minimum 8 GB VRAM; 15.6" to 16" Full HD+ (or better) anti-glare display of minimum 400 nits for field use; Windows 11 Pro; RJ45 Ethernet (or certified adapter) for the sonar's 100M Ethernet port, plus USB-A, USB-C, HDMI and Wi-Fi 6 or later; battery of minimum 70 Wh; fully compatible with the offered sonar acquisition and processing software (including any required licence dongle); supplied with a 2 TB portable external SSD for data backup and a protective carry bag; minimum 2-year warranty • External battery power system (Qty 01) for field operation: portable LiFePO4 power station with pure-sine-wave 220–240 V AC output of minimum 1,000 W and a regulated 24 VDC (or 12 VDC) output as required by the offered sonar, sized to run the complete system (sonar topside/deck unit about 37 W, laptop, display and control terminal, and GNSS/positioning equipment) continuously for not less than 8 hours (indicative minimum capacity 1,500 Wh); with AC/DC charger, solar-charging input, protective cables, fuse/protection and carrying case; minimum 2-year warranty • Turnkey solution: the system shall be supplied complete, installed, configured and commissioned with all cables, connectors, mounting brackets for a survey boat, software licences, and navigation/GNSS interfacing, so that the Procuring Agency can start a survey on delivery; including on-site demonstration, acquisition and processing training of officials, and a test survey with data-processing demonstration at acceptance • Complete with tow

cable, deck unit/interface, and carrying/transport case • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering system deployment from the survey boat, sonar data acquisition, and post-processing (mosaicking, target detection) on the supplied laptop • Minimum 1-year manufacturer's warranty • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Lot Title : Lot 9: ITM-09 — DJI Power 2000 & 100W Foldable Solar Panel × 4; and 360° Camera Kit (DJI Osmo 360 II)

Item: DJI Power 2000 Portable Power Station with 100W Foldable Solar Panel × 4, complete with cabling and rugged transport case — as per detailed specifications

UNSPSC: Portable generator maintenance and or repair service

Specifications / Requirements:

• Model: DYM2000L / DYM2000H • Cell Chemistry: LFP (Lithium Ferrophosphate) battery chemistry • Battery Capacity: 2048 Wh, providing a high-capacity portable power supply for various electrical and electronic equipment • Cycle Life: maintains more than 80% of original capacity after 4,000 complete charge/discharge cycles under specified laboratory test conditions • Net Weight: approximately 22 kg; Dimensions: 448 × 225 × 324 mm (L × W × H) • Number of Ports: 4 AC output ports, 4 USB-C ports, 4 USB-A ports, 2 SDC ports, and 1 AC input port • Maximum Operating Altitude: suitable for operation at altitudes up to 5,000 m • AC Output: DYM2000L provides 100–120 V AC up to 25 A; DYM2000H provides 220–240 V AC up to 13.6 A, 50/60 Hz (varies by country/region) • AC Output – Bypass Mode: DYM2000L 100–120 V AC up to 12 A; DYM2000H 220–240 V AC up to 10 A • USB-A Output: 5 V/3 A, 9 V/2 A, 12 V/2 A, max 24 W per port; supports QC 2.0 / QC 3.0 fast-charging • USB-C Output: 5–28 V, C1/C2 ports up to 140 W each, C3/C4 ports up to 65 W each (140 W requires PD 3.1-compatible equipment and EPR-compliant cable) • SDC Output: two ports, 9–28 V DC, max 12 A, compatible with a range of accessories • AC Input: DYM2000L 110–120 V AC max 15 A; DYM2000H 220–240 V AC max 10 A • SDC Input: two ports, 32–58.4 V DC, max 60 A, compatible with various accessories • Operating Temperature: power supply -10°C to 45°C; recharging 0°C to 45°C; storage -10°C to 45°C • Wi-Fi: 802.11 b/g/n, 2.4000–2.4835 GHz, transmitter power below 20 dBm • Bluetooth: 5.0, 2.4000–2.4835 GHz, transmitter power below 7 dBm • Complete with 4 × 100W Foldable Solar Panels, cabling, and rugged

transport case • Minimum 1-year manufacturer's warranty • DJI Osmo 360 II (latest model, or equivalent) 360° camera (Qty 01) with the manufacturer's combo kit (including camera, charging case/batteries and standard accessories of the combo): dual 1/1.1-inch square sensors with HDR (about 14.5 stops of dynamic range); 8K 360° video at up to 60 fps; 120 MP photos (HDR and RAW); 10-bit recording; replaceable lenses; built-in storage of about 105 GB plus microSD slot; waterproof to about 10 m without a case; weight about 183 g; complete with a car mount (suction-cup/windshield type) and a bike mount (handlebar/frame type), compatible with the camera, for vehicle- and bicycle-mounted site documentation; manufacturer's warranty of minimum 1 year • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: 360° camera kit (DJI Osmo 360 II, latest, or equivalent) with combo kit, car mount and bike mount — as per detailed specifications

UNSPSC: Digital cameras

Specifications / Requirements:

• Model: DYM2000L / DYM2000H • Cell Chemistry: LFP (Lithium Ferrophosphate) battery chemistry • Battery Capacity: 2048 Wh, providing a high-capacity portable power supply for various electrical and electronic equipment • Cycle Life: maintains more than 80% of original capacity after 4,000 complete charge/discharge cycles under specified laboratory test conditions • Net Weight: approximately 22 kg; Dimensions: 448 × 225 × 324 mm (L × W × H) • Number of Ports: 4 AC output ports, 4 USB-C ports, 4 USB-A ports, 2 SDC ports, and 1 AC input port • Maximum Operating Altitude: suitable for operation at altitudes up to 5,000 m • AC Output: DYM2000L provides 100–120 V AC up to 25 A; DYM2000H provides 220–240 V AC up to 13.6 A, 50/60 Hz (varies by country/region) • AC Output – Bypass Mode: DYM2000L 100–120 V AC up to 12 A; DYM2000H 220–240 V AC up to 10 A • USB-A Output: 5 V/3 A, 9 V/2 A, 12 V/2 A, max 24 W per port; supports QC 2.0 / QC 3.0 fast-charging • USB-C Output: 5–28 V, C1/C2 ports up to 140 W each, C3/C4 ports up to 65 W each (140 W requires PD 3.1-compatible equipment and EPR-compliant cable) • SDC Output: two ports, 9–28 V DC, max 12 A, compatible with a range of accessories • AC Input: DYM2000L 110–120 V AC max 15 A; DYM2000H 220–240 V AC max 10 A • SDC Input: two ports, 32–58.4 V DC, max 60 A, compatible with various accessories • Operating Temperature: power supply -10°C to 45°C; recharging 0°C to 45°C; storage -10°C to 45°C • Wi-Fi: 802.11 b/g/n, 2.4000–2.4835 GHz, transmitter power below 20 dBm • Bluetooth: 5.0, 2.4000–2.4835 GHz, transmitter power below 7 dBm • Complete with 4 × 100W Foldable Solar Panels, cabling, and rugged

transport case • Minimum 1-year manufacturer's warranty • DJI Osmo 360 II (latest model, or equivalent) 360° camera (Qty 01) with the manufacturer's combo kit (including camera, charging case/batteries and standard accessories of the combo): dual 1/1.1-inch square sensors with HDR (about 14.5 stops of dynamic range); 8K 360° video at up to 60 fps; 120 MP photos (HDR and RAW); 10-bit recording; replaceable lenses; built-in storage of about 105 GB plus microSD slot; waterproof to about 10 m without a case; weight about 183 g; complete with a car mount (suction-cup/windshield type) and a bike mount (handlebar/frame type), compatible with the camera, for vehicle- and bicycle-mounted site documentation; manufacturer's warranty of minimum 1 year • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Lot Title : Lot 10: ITM-10 — Handheld SLAM Laser Scanner (Lixel L3 or equivalent) with Processing Software Bundle, Backpack, Vehicle & Drone Mounts and Training

Item: Handheld SLAM LiDAR spatial scanner (Lixel L3 or equivalent), complete with standard battery, charger, accessories and case — as per detailed specifications

UNSPSC: Lasers

Specifications / Requirements:

• Handheld SLAM LiDAR spatial scanner (Qty 01), Lixel L3 or equivalent survey-grade handheld mobile scanner: minimum 16-channel LiDAR (minimum 320,000 points/second; higher-channel models acceptable), scanning range of not less than 120 m • Accuracy (manufacturer-specified): relative accuracy of 5 mm or better and absolute accuracy of 2 cm or better after post-processing; real-time absolute accuracy of 2.5 cm or better; point-cloud thickness of 5 mm or better • Integrated RTK/GNSS module for georeferencing and levelness optimisation, compatible with standard survey poles, with built-in display of minimum 4.3 inches showing real-time point cloud, trajectory and coverage • Imaging: three cameras of minimum 50 MP, 4K HDR, for true-colour point clouds and textured mesh, with support for 3D Gaussian Splatting (3DGS) output and export of point cloud (LAS/E57 or equivalent), mesh and colour data • Internal storage of minimum 1 TB; weight not exceeding 2.5 kg including battery; minimum 100 minutes operating time per battery; IP54 or better; operating temperature of -20°C to 50°C • Supplied complete with the standard battery plus 03 (three) additional batteries (Qty 03),

fast charger, survey-pole/handle mounting accessories, a SLAM backpack carrying system (ergonomic padded frame with quick-attach scanner mount, for hands-free walking surveys), a vehicle mount (roof-rack/bracket type for car or pickup-based mobile mapping), a drone mount (vibration-damped, quick-release adapter for carrying the scanner on a heavy-lift UAV such as the DJI Matrice 400 or equivalent, payload capacity of not less than 2.5 kg), all fixing hardware, USB/communication cables, and rugged transport case • Processing software bundle (Qty 01 seat of each, perpetual licence, latest version, from the scanner manufacturer), comprising: (a) LixelStudio (or equivalent) — desktop SLAM point-cloud processing: one-click SLAM solving with automatic loop closure, PPK/RTK-aided georeferencing, multi-scan map fusion, automated quality report with checkpoint analysis, measurement, sectioning and volume tools, coordinate-system support, and export to LAS/LAZ, E57, RCP and CAD/BIM/GIS-compatible formats; and (b) Lixel CyberColor LCC Studio, Premium tier (or equivalent) — 3D Gaussian Splatting reconstruction and editing, Map Fusion, HD Enhancement, ground–aerial map fusion and aerial reconstruction, and export to .lcc, .ply, 3D Tiles/.usd and .obj mesh. Both packages shall be explicitly supported for the offered scanner model and shall run on the workstation offered at Lot 1; bidders shall submit the manufacturer's written confirmation of compatibility, licence type and update entitlement (minimum one year of updates) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery, covering (a) data acquisition: scanner operation, handheld, backpack, vehicle- and drone-mounted capture, RTK/control-point workflow and field quality checks; and (b) data processing: SLAM processing, georeferencing, point-cloud/mesh/3DGS generation and export using the supplied software bundle • Minimum 2-year manufacturer's warranty, with local/regional authorized service and calibration support • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: Additional batteries for the handheld SLAM scanner, compatible with the offered unit — as per detailed specifications

UNSPSC: Rechargeable batteries

Specifications / Requirements:

• Handheld SLAM LiDAR spatial scanner (Qty 01), Lixel L3 or equivalent survey-grade handheld mobile scanner: minimum 16-channel LiDAR (minimum 320,000 points/second; higher-channel models acceptable), scanning range of not less than 120 m • Accuracy (manufacturer-specified): relative accuracy of 5 mm or better and absolute accuracy of 2 cm or better after post-processing; real-time absolute accuracy of 2.5 cm or better; point-cloud thickness of 5 mm or better • Integrated RTK/GNSS module for

georeferencing and levelness optimisation, compatible with standard survey poles, with built-in display of minimum 4.3 inches showing real-time point cloud, trajectory and coverage • Imaging: three cameras of minimum 50 MP, 4K HDR, for true-colour point clouds and textured mesh, with support for 3D Gaussian Splatting (3DGS) output and export of point cloud (LAS/E57 or equivalent), mesh and colour data • Internal storage of minimum 1 TB; weight not exceeding 2.5 kg including battery; minimum 100 minutes operating time per battery; IP54 or better; operating temperature of -20°C to 50°C • Supplied complete with the standard battery plus 03 (three) additional batteries (Qty 03), fast charger, survey-pole/handle mounting accessories, a SLAM backpack carrying system (ergonomic padded frame with quick-attach scanner mount, for hands-free walking surveys), a vehicle mount (roof-rack/bracket type for car or pickup-based mobile mapping), a drone mount (vibration-damped, quick-release adapter for carrying the scanner on a heavy-lift UAV such as the DJI Matrice 400 or equivalent, payload capacity of not less than 2.5 kg), all fixing hardware, USB/communication cables, and rugged transport case • Processing software bundle (Qty 01 seat of each, perpetual licence, latest version, from the scanner manufacturer), comprising: (a) LixelStudio (or equivalent) — desktop SLAM point-cloud processing: one-click SLAM solving with automatic loop closure, PPK/RTK-aided georeferencing, multi-scan map fusion, automated quality report with checkpoint analysis, measurement, sectioning and volume tools, coordinate-system support, and export to LAS/LAZ, E57, RCP and CAD/BIM/GIS-compatible formats; and (b) Lixel CyberColor LCC Studio, Premium tier (or equivalent) — 3D Gaussian Splatting reconstruction and editing, Map Fusion, HD Enhancement, ground–aerial map fusion and aerial reconstruction, and export to .lcc, .ply, 3D Tiles/.usd and .obj mesh. Both packages shall be explicitly supported for the offered scanner model and shall run on the workstation offered at Lot 1; bidders shall submit the manufacturer's written confirmation of compatibility, licence type and update entitlement (minimum one year of updates) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery, covering (a) data acquisition: scanner operation, handheld, backpack, vehicle- and drone-mounted capture, RTK/control-point workflow and field quality checks; and (b) data processing: SLAM processing, georeferencing, point-cloud/mesh/3DGS generation and export using the supplied software bundle • Minimum 2-year manufacturer's warranty, with local/regional authorized service and calibration support • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: SLAM backpack carrying system, vehicle mount and drone mount for the handheld scanner (one of each) — as per detailed specifications

UNSPSC: Tool bags

Specifications / Requirements:

• Handheld SLAM LiDAR spatial scanner (Qty 01), Lixel L3 or equivalent survey-grade handheld mobile scanner: minimum 16-channel LiDAR (minimum 320,000 points/second; higher-channel models acceptable), scanning range of not less than 120 m • Accuracy (manufacturer-specified): relative accuracy of 5 mm or better and absolute accuracy of 2 cm or better after post-processing; real-time absolute accuracy of 2.5 cm or better; point-cloud thickness of 5 mm or better • Integrated RTK/GNSS module for georeferencing and levelness optimisation, compatible with standard survey poles, with built-in display of minimum 4.3 inches showing real-time point cloud, trajectory and coverage • Imaging: three cameras of minimum 50 MP, 4K HDR, for true-colour point clouds and textured mesh, with support for 3D Gaussian Splatting (3DGS) output and export of point cloud (LAS/E57 or equivalent), mesh and colour data • Internal storage of minimum 1 TB; weight not exceeding 2.5 kg including battery; minimum 100 minutes operating time per battery; IP54 or better; operating temperature of -20°C to 50°C • Supplied complete with the standard battery plus 03 (three) additional batteries (Qty 03), fast charger, survey-pole/handle mounting accessories, a SLAM backpack carrying system (ergonomic padded frame with quick-attach scanner mount, for hands-free walking surveys), a vehicle mount (roof-rack/bracket type for car or pickup-based mobile mapping), a drone mount (vibration-damped, quick-release adapter for carrying the scanner on a heavy-lift UAV such as the DJI Matrice 400 or equivalent, payload capacity of not less than 2.5 kg), all fixing hardware, USB/communication cables, and rugged transport case • Processing software bundle (Qty 01 seat of each, perpetual licence, latest version, from the scanner manufacturer), comprising: (a) LixelStudio (or equivalent) — desktop SLAM point-cloud processing: one-click SLAM solving with automatic loop closure, PPK/RTK-aided georeferencing, multi-scan map fusion, automated quality report with checkpoint analysis, measurement, sectioning and volume tools, coordinate-system support, and export to LAS/LAZ, E57, RCP and CAD/BIM/GIS-compatible formats; and (b) Lixel CyberColor LCC Studio, Premium tier (or equivalent) — 3D Gaussian Splatting reconstruction and editing, Map Fusion, HD Enhancement, ground–aerial map fusion and aerial reconstruction, and export to .lcc, .ply, 3D Tiles/.usd and .obj mesh. Both packages shall be explicitly supported for the offered scanner model and shall run on the workstation offered at Lot 1; bidders shall submit the manufacturer's written confirmation of compatibility, licence type and update entitlement (minimum one year of updates) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery, covering (a) data acquisition: scanner operation, handheld, backpack, vehicle- and drone-mounted capture, RTK/control-point workflow and field quality checks; and (b) data processing: SLAM processing, georeferencing, point-cloud/mesh/3DGS generation and export using the supplied software bundle • Minimum 2-year manufacturer's warranty, with local/regional authorized service and calibration support • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Item: LixelStudio (or equivalent) point-cloud processing software — perpetual licence, latest version, with one year of updates — as per detailed specifications

UNSPSC: Graphical user interface development software

Specifications / Requirements:

• Handheld SLAM LiDAR spatial scanner (Qty 01), Lixel L3 or equivalent survey-grade handheld mobile scanner: minimum 16-channel LiDAR (minimum 320,000 points/second; higher-channel models acceptable), scanning range of not less than 120 m • Accuracy (manufacturer-specified): relative accuracy of 5 mm or better and absolute accuracy of 2 cm or better after post-processing; real-time absolute accuracy of 2.5 cm or better; point-cloud thickness of 5 mm or better • Integrated RTK/GNSS module for georeferencing and levelness optimisation, compatible with standard survey poles, with built-in display of minimum 4.3 inches showing real-time point cloud, trajectory and coverage • Imaging: three cameras of minimum 50 MP, 4K HDR, for true-colour point clouds and textured mesh, with support for 3D Gaussian Splatting (3DGS) output and export of point cloud (LAS/E57 or equivalent), mesh and colour data • Internal storage of minimum 1 TB; weight not exceeding 2.5 kg including battery; minimum 100 minutes operating time per battery; IP54 or better; operating temperature of -20°C to 50°C • Supplied complete with the standard battery plus 03 (three) additional batteries (Qty 03), fast charger, survey-pole/handle mounting accessories, a SLAM backpack carrying system (ergonomic padded frame with quick-attach scanner mount, for hands-free walking surveys), a vehicle mount (roof-rack/bracket type for car or pickup-based mobile mapping), a drone mount (vibration-damped, quick-release adapter for carrying the scanner on a heavy-lift UAV such as the DJI Matrice 400 or equivalent, payload capacity of not less than 2.5 kg), all fixing hardware, USB/communication cables, and rugged transport case • Processing software bundle (Qty 01 seat of each, perpetual licence, latest version, from the scanner manufacturer), comprising: (a) LixelStudio (or equivalent) — desktop SLAM point-cloud processing: one-click SLAM solving with automatic loop closure, PPK/RTK-aided georeferencing, multi-scan map fusion, automated quality report with checkpoint analysis, measurement, sectioning and volume tools, coordinate-system support, and export to LAS/LAZ, E57, RCP and CAD/BIM/GIS-compatible formats; and (b) Lixel CyberColor LCC Studio, Premium tier (or equivalent) — 3D Gaussian Splatting reconstruction and editing, Map Fusion, HD Enhancement, ground–aerial map fusion and aerial reconstruction, and export to .lcc, .ply, 3D Tiles/.usd and .obj mesh. Both packages shall be explicitly supported for the offered scanner model and shall run on the workstation offered at Lot 1; bidders shall submit the manufacturer's written confirmation of compatibility, licence type and update entitlement (minimum one year of updates) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery, covering (a) data acquisition: scanner operation, handheld, backpack, vehicle- and drone-mounted capture, RTK/control-point workflow and field quality checks; and (b) data processing: SLAM processing, georeferencing, point-cloud/mesh/3DGS generation and export using the supplied software bundle • Minimum 2-year manufacturer's warranty, with local/regional authorized service and calibration support • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan,

and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: Lixel CyberColor LCC Studio Premium (or equivalent) 3DGS processing software — perpetual licence, latest version, with one year of updates — as per detailed specifications

UNSPSC: Graphical user interface development software

Specifications / Requirements:

• Handheld SLAM LiDAR spatial scanner (Qty 01), Lixel L3 or equivalent survey-grade handheld mobile scanner: minimum 16-channel LiDAR (minimum 320,000 points/second; higher-channel models acceptable), scanning range of not less than 120 m • Accuracy (manufacturer-specified): relative accuracy of 5 mm or better and absolute accuracy of 2 cm or better after post-processing; real-time absolute accuracy of 2.5 cm or better; point-cloud thickness of 5 mm or better • Integrated RTK/GNSS module for georeferencing and levelness optimisation, compatible with standard survey poles, with built-in display of minimum 4.3 inches showing real-time point cloud, trajectory and coverage • Imaging: three cameras of minimum 50 MP, 4K HDR, for true-colour point clouds and textured mesh, with support for 3D Gaussian Splatting (3DGS) output and export of point cloud (LAS/E57 or equivalent), mesh and colour data • Internal storage of minimum 1 TB; weight not exceeding 2.5 kg including battery; minimum 100 minutes operating time per battery; IP54 or better; operating temperature of -20°C to 50°C • Supplied complete with the standard battery plus 03 (three) additional batteries (Qty 03), fast charger, survey-pole/handle mounting accessories, a SLAM backpack carrying system (ergonomic padded frame with quick-attach scanner mount, for hands-free walking surveys), a vehicle mount (roof-rack/bracket type for car or pickup-based mobile mapping), a drone mount (vibration-damped, quick-release adapter for carrying the scanner on a heavy-lift UAV such as the DJI Matrice 400 or equivalent, payload capacity of not less than 2.5 kg), all fixing hardware, USB/communication cables, and rugged transport case • Processing software bundle (Qty 01 seat of each, perpetual licence, latest version, from the scanner manufacturer), comprising: (a) LixelStudio (or equivalent) — desktop SLAM point-cloud processing: one-click SLAM solving with automatic loop closure, PPK/RTK-aided georeferencing, multi-scan map fusion, automated quality report with checkpoint analysis, measurement, sectioning and volume tools, coordinate-system support, and export to LAS/LAZ, E57, RCP and CAD/BIM/GIS-compatible formats; and (b) Lixel CyberColor LCC Studio, Premium tier (or equivalent) — 3D Gaussian Splatting reconstruction and editing, Map Fusion, HD Enhancement, ground–aerial map fusion and aerial reconstruction, and export to .lcc, .ply, 3D Tiles/.usd and .obj mesh. Both packages shall be explicitly supported for the offered scanner model and shall run on the

workstation offered at Lot 1; bidders shall submit the manufacturer's written confirmation of compatibility, licence type and update entitlement (minimum one year of updates) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery, covering (a) data acquisition: scanner operation, handheld, backpack, vehicle- and drone-mounted capture, RTK/control-point workflow and field quality checks; and (b) data processing: SLAM processing, georeferencing, point-cloud/mesh/3DGS generation and export using the supplied software bundle • Minimum 2-year manufacturer's warranty, with local/regional authorized service and calibration support • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Item: Vendor training of the Procuring Agency's officials on data acquisition and data processing (scanner and software bundle) — as per detailed specifications

UNSPSC: Executive coaching service

Specifications / Requirements:

• Handheld SLAM LiDAR spatial scanner (Qty 01), Lixel L3 or equivalent survey-grade handheld mobile scanner: minimum 16-channel LiDAR (minimum 320,000 points/second; higher-channel models acceptable), scanning range of not less than 120 m • Accuracy (manufacturer-specified): relative accuracy of 5 mm or better and absolute accuracy of 2 cm or better after post-processing; real-time absolute accuracy of 2.5 cm or better; point-cloud thickness of 5 mm or better • Integrated RTK/GNSS module for georeferencing and levelness optimisation, compatible with standard survey poles, with built-in display of minimum 4.3 inches showing real-time point cloud, trajectory and coverage • Imaging: three cameras of minimum 50 MP, 4K HDR, for true-colour point clouds and textured mesh, with support for 3D Gaussian Splatting (3DGS) output and export of point cloud (LAS/E57 or equivalent), mesh and colour data • Internal storage of minimum 1 TB; weight not exceeding 2.5 kg including battery; minimum 100 minutes operating time per battery; IP54 or better; operating temperature of -20°C to 50°C • Supplied complete with the standard battery plus 03 (three) additional batteries (Qty 03), fast charger, survey-pole/handle mounting accessories, a SLAM backpack carrying system (ergonomic padded frame with quick-attach scanner mount, for hands-free walking surveys), a vehicle mount (roof-rack/bracket type for car or pickup-based mobile mapping), a drone mount (vibration-damped, quick-release adapter for carrying the scanner on a heavy-lift UAV such as the DJI Matrice 400 or equivalent, payload capacity of not less than 2.5 kg), all fixing hardware, USB/communication cables, and rugged transport

case • Processing software bundle (Qty 01 seat of each, perpetual licence, latest version, from the scanner manufacturer), comprising: (a) LixelStudio (or equivalent) — desktop SLAM point-cloud processing: one-click SLAM solving with automatic loop closure, PPK/RTK-aided georeferencing, multi-scan map fusion, automated quality report with checkpoint analysis, measurement, sectioning and volume tools, coordinate-system support, and export to LAS/LAZ, E57, RCP and CAD/BIM/GIS-compatible formats; and (b) Lixel CyberColor LCC Studio, Premium tier (or equivalent) — 3D Gaussian Splatting reconstruction and editing, Map Fusion, HD Enhancement, ground–aerial map fusion and aerial reconstruction, and export to .lcc, .ply, 3D Tiles/.usd and .obj mesh. Both packages shall be explicitly supported for the offered scanner model and shall run on the workstation offered at Lot 1; bidders shall submit the manufacturer's written confirmation of compatibility, licence type and update entitlement (minimum one year of updates) • On-site vendor training for the Procuring Agency's officials, to be provided upon delivery, covering (a) data acquisition: scanner operation, handheld, backpack, vehicle- and drone-mounted capture, RTK/control-point workflow and field quality checks; and (b) data processing: SLAM processing, georeferencing, point-cloud/mesh/3DGS generation and export using the supplied software bundle • Minimum 2-year manufacturer's warranty, with local/regional authorized service and calibration support • Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Price Schedule

For Individual Items

#	Item Title	Quantity	Unit Price (PKR)	Total Price (PKR)	Delivery Location	Delivery Period / Year	Country of Origin
1							
2							

For Lots

#	Lot Title	Total Lot Price (PKR)	Country of Origin
1	[Lot 1 Title]		

PUBLIC PROCUREMENT REGULATORY AUTHORITY
(PPRA)
EPADS

General Conditions of Contract

A. General

1. Definitions

1.1 Unless the context otherwise requires, the following terms whenever used in this Contract shall have the same meaning and shall be interpreted as indicated

a. “Applicable Law” means the laws and any other instruments having the force of law in the Government’s Country, or in such other country as may be specified in the Special Conditions of the Contract (SC), as they may be issued and in force from time to time;

b. The “Arbitrator” is the person appointed with mutual consent of both the parties, to resolve contractual disputes as provided for in the General Conditions of the Contract GCC Clause 35 hereunder.

c. “Authority” means Public Procurement Regulatory Authority.

d. The “Commencement Date” is the date when the Supplier shall commence execution of the contract as specified in the SCC.

e. “Completion date” means the date of completion of the Contract by the Bidder as certified by the Procuring Agency.

f. “Procuring Agency” means:-

a. any Ministry, Division, Department or any Office of the Government;

b. any authority, corporation, body or organization established by or under a Law or which is owned or controlled by the Government;.

g. “The Contract” means an agreement enforceable by law;

h. “The Contract Price” means the price payable to the Bidder under the Contract for the full and proper performance of its contractual obligations;

i. “Ancillary Services” means those services ancillary to the provision of Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Bidder covered under the Contract;

j. “GCC” means the General Conditions of Contract contained in this section;

k. “SCC” means the Special Conditions of Contract by which the GCC may be amended or supplemented;

l. **“**Day” means calendar day unless indicated otherwise.

m. “Defective Goods” are those goods which are below standards, requirements or specifications stated by the Contract.

n. “Delivery” means the transfer of the goods from the supplier equipment, machinery, and /or other materials which the Supplier is required to supply to the Procuring Agency under Contract.

o. “Effective Date” means the date on which this Contract comes into force and effect.

p. “Force Majeure” means an unforeseeable event which is beyond reasonable control of either Party and which makes a Party’s performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

For the purposes of this Contract, “Force Majeure” means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of a Party, and which makes a Party’s performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances. and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood, epidemics, or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by Government agencies.

q. The Bidder” means the individual or corporate body whose Bids to provide the Goods has been accepted by the Procuring Agency;

r. “The Project Site,” where applicable, means the place or places named in Bids Data Sheet and technical Specifications;

s. “Government” means the Government of Pakistan;

t. “Subcontractor” means any entity to which the Bidder subcontracts any part of the Goods.

u. The “Services” means the work to be performed by the Bidder pursuant to this Contract and as prescribed in the Specifications and Schedule of Activities included in the Bidder’s Bids;

v. “Party” means the Procuring Agency or the Bidder, as the case may be, and “Parties” means both of them;

w. “Foreign Currency” means any currency other than the currency of the country of the Procuring Agency;

x. “Completion Date” means the date of completion of the contract by the Bidder as certified by the Procuring Agency;

y. “In Writing” means communicated in written form with proof of receipt;

z. “Local Currency” means the currency of Pakistan;

a. “Origin” means the place where the Goods were mined, grown, or produced or from which the Services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially recognized new produce results that is substantially different in basic characteristics or in purpose or utility from its components.

b. “Specification” means the Specification of the Goods and performance of incidental services in accordance with the relevant standards included in the Contract and any modification or addition made or approved by the Procuring Agency.

c. “Procuring Agency” means: -
any Ministry, Division, Department or any Office of the Federal Government;
any authority, corporation, body or organization established by or under a Federal Law or which is owned or controlled by the Federal Government;

2. Application and Interpretation

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

2.2 In interpreting these Conditions of Contract headings and marginal notes are used for convenience only and shall not affect their interpretations unless specifically stated; references to singular include the plural and vice versa; and masculine include the feminine. Words have their ordinary meaning under the language of the Contract unless specifically defined.

3. Applicable Law

3.1 The contract shall be governed and interpreted in accordance with the laws of Pakistan, unless otherwise specified in SCC.

4. Governing Language

4.1 The Contract as well as all correspondence and documents relating to the Contract exchanged between the Bidder and the Procuring Agency, shall be written in the **English language** unless otherwise stated in the **SCC**. Supporting documents and printed literature that are part of the Contract may be in another language provided these are accompanied by an accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the Contract, this translation shall govern.

5. Notices

5.1 Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile to such Party at the address specified in the **SCC**.

6. Standard

6.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, the American Standards (such as ACI, IEEE, ASME, etc.) or the Pakistani standards such as PSQCA Such standards shall be the latest issued by the concerned institution.

7. Delivery/Location

7.1 The Goods shall be delivered to such locations as the Procuring Agency may approve and as specified in SCC.

8. Authorized Representatives / Authority of Member in charge

8.1 Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Procuring Agency or the Bidder may be taken or executed by the officials specified in the **SCC**.

B. Commencement, Completion, Modification, and Termination of Contract

8. Effectiveness of Contract

8.1 This Contract shall come into effect on the date the Contract is signed by both parties and such other later date as may be stated in the SCC.

9. Commencement of the Contract

9.1 The Bidder shall confirm availability of Key Experts and begin carrying out the Services not later than the number of days after the Effective Date specified in the SCC.

10. Program

10.1 Before commencement of the Contract, the Bidder shall submit to the Procuring Agency for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.

11. Starting Date/Expiration Date

11.1 The Bidder shall start carrying out the Services Five (05) days after the date the Contract becomes effective, or at such other date as may be specified in the **SCC.**

11.2 Unless terminated earlier pursuant to Clause **GCC 16** hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SCC.

12. Entire Agreement

12.1 This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.

13. Modification

13.1 Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any Bids for modification or variation made by the other Party.

13.2 In cases of any modifications or variations, the prior written consent of the Procuring Agency is required.

14. Force Majeure

14.1 Definition

For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

14.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract in so far as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

14.3 Extension of Time

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure. However, such period shall not exceed sixty (60) days.

14.4 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Bidder shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

15. Termination

15.1 By the Procuring Agency

The Procuring Agency may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (e) of this Clause. In such an occurrence the Procuring Agency shall give at least thirty (30) calendar days' written notice of termination to the Bidder in case of the events referred to in (a) through (d); at least sixty (60) calendar days' written notice in case of the event referred to in (e);

a. If the Bidder fails to remedy a failure in the performance of its obligations hereunder, as specified in a notice of suspension;

b. If the Bidder becomes (or, if the Bidder consists of more than one entity, if any of its members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;

c. If the Bidder fails to comply with any final decision reached as a result of arbitration proceedings;

d. If, as the result of Force Majeure, the Bidder is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days;

e. If the Procuring Agency, in its sole discretion and for any reason whatsoever, decides to terminate this Contract;

15.2 By the Bidder

The Bidder may terminate this Contract, by not less than thirty (30) calendar days' written notice to the Procuring Agency, in case of the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause.

a. If the Procuring Agency fails to pay any money due to the Bidder pursuant to this Contract and not subject to dispute within forty-five (45) calendar days after receiving written notice from the Bidder that such payment is overdue.

b. If, as the result of Force Majeure, the Bidder is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days.

c. If the Procuring Agency fails to comply with any final decision reached as a result of arbitration.

d. If the Procuring Agency is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Bidder may have subsequently approved in writing) following the receipt by the Procuring Agency of the Bidder's notice specifying such breach.

C. Obligations of the Bidder

16. General

16.1 Standard of Performance

1. The Bidder shall deliver the product and carry out the Services with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Bidder shall always act, in respect of any matter relating to this Contract or to the Services, as a faithful adviser to the Procuring Agency, and shall at all times support and safeguard the Procuring Agency's legitimate interests in any dealings with the third parties.

16.2 Law Applicable to Goods

The Bidder shall deliver the goods in accordance with the Contract and in accordance with the Law of Pakistan and shall take all practicable steps to ensure that any of its Experts and Sub-Bidders, comply with the Applicable Law.

17. Conflict of Interests

17.1 Bidder Not to Benefit from Commissions and Discounts.

The remuneration of the Bidder shall constitute the Bidder's sole remuneration in connection with this Contract or the Services, and the Bidder shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Bidder shall use their best efforts to ensure that the Personnel, any Subcontractors, and agents of either of them similarly shall not receive any such additional remuneration.

17.2 Bidder and Affiliates Not to be Otherwise Interested in Project

The Bidder agree that, during the term of this Contract and after its termination, the Bidder and its affiliates, as well as any Subcontractor and any of its affiliates, shall be disqualified from providing Goods for any project resulting from or closely related to the Services.

17.3 Prohibition of Conflicting Activities

Neither the Bidder nor its Subcontractors nor the Personnel shall engage, either directly or indirectly, in any of the following activities:

a. during the term of this Contract, any business or professional activities in the Government's country which would conflict with the activities assigned to them under this Contract;

b. during the term of this Contract, neither the Bidder nor their Subcontractors shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract;

18. Confidentiality

18.1 Except with the prior written consent of the Procuring Agency, the Bidder and the Experts shall not at any time communicate to any person or entity any confidential information acquired in the course of the contract.

19. Insurance to be Taken Out by the Bidder

19.1 The Bidder(a) shall take out and maintain, and shall cause any Subcontractors to take out and maintain, at its (or the Subcontractors', as the case may be) own cost but on terms and conditions approved by the Procuring Agency, insurance against the risks, loss or damage, and for the coverage, as shall be specified in the SCC; and (b) at the Procuring Agency's request, shall provide evidence to the Procuring Agency showing

that such insurance has been taken out and maintained and that the current premiums have been paid.

20. Bidder's Actions Requiring Procuring Agency's Prior Approval

20.1 The Bidder shall obtain the Procuring Agency's prior approval in writing before taking any of the following actions:

(a) appointing such members of the Personnel not provided by the Bidder;

(b) changing the Program of activities; and

(c) any other action that may be specified in the SCC.

21. Reporting Obligations

21.1 The Bidder shall submit to the Procuring Agency the reports and documents in the numbers, and within the periods as prescribed by the Procuring Agency.

22. Liquidated Damages

22.1 If the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring Agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in **SCC** of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the performance security (or guarantee) specified in **SCC**. Once the said maximum is reached, the Procuring Agency may consider termination of the Contract pursuant to **GCC Clause 16.**

22.2 Correction for Over-payment

If the Intended Completion Date is extended after liquidated damages have been paid, the Procuring Agency shall correct any overpayment of liquidated damages by the Bidder by adjusting the next payment certificate. The Bidder shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in SCC.

22.3 Lack of performance penalty

If the Bidder has not corrected a Defect within the time specified in the Procuring Agency's notice, a penalty for Lack of performance will be paid by the Bidder. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as specified in the SCC.

23. Performance Guarantee

23.1 The Performance Security (or Guarantee) shall be provided to the Procuring Agency no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form acceptable to the Procuring Agency as specified in SCC, and denominated in the types and proportions of the currencies in which the Contract Price is payable as specified in the SCC.

23.2 Within Seven (07) days from the issuance of acceptance letter from the Procuring Agency, the successful Bidder shall furnish the Performance Guarantee in shape of ------- at the discretion of the PA in the amount **specified in SCC.** In case the amount of Bids security is equal or greater than

23.3 The proceeds of the Performance Guarantee shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

23.4 The Performance Guarantee shall be denominated in the currency of the Contract, or in a freely convertible currency acceptable to the Procuring agency and shall be in the acceptable form as specified in SCC.

23.5 The Performance Guarantee will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless otherwise **specified in SCC.**

23.6 The bid security of the successful bidder shall not be substituted with the Performance Guarantee.

24. Fraud and Corruption

24.1 The Procuring Agency requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the Bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

25. Sustainable Procurement

25.1 The Bidder shall conform to the sustainable procurement contractual provisions, if and as specified in the SCC.

D. Bidder's Personnel

26. Description of Personnel

26.1 The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Bidder's Key Personnel. The Key Personnel listed by title as well as by name are hereby approved by the Procuring Agency.

27. Removal and/or Replacement of Personnel

27.1 Except as the Procuring Agency may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Bidder, it becomes necessary to replace any of the Key Personnel, the Bidder shall provide as a replacement a person of equivalent or better qualifications.

27.2 If the Procuring Agency finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Bidder shall, at the Procuring Agency's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Procuring Agency.

27.3 The Bidder shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

E. Obligations of the Procuring Agency

28. Assistance and Exemptions

28.1 The Procuring Agency shall use its best efforts to ensure that the Government shall provide the Bidder such assistance and exemptions as specified in the SCC.

29. Change in the Applicable Law

29.1 If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the related Services rendered by the Bidder, then the remuneration and reimbursable expenses otherwise payable to the Bidder under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred in the SCC.

30. Services and Facilities

30.1 The Procuring Agency shall make available to the Bidder and the Experts, for the purposes of the Services and free of any charge, the services, facilities and property described , at the times and in the manner specified in the SCC or terms of reference.

30.2 In case that such services, facilities and property shall not be made available to the Bidder, the Parties shall agree on (i) any time extension that it may be appropriate to grant to the Bidder for the performance of the Services, (ii) the manner in which the Bidder shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Bidder as a result thereof.

F. Payments to the Bidder

31. Contract Price

31.1 The price payable shall be in Pakistani Rupees unless otherwise specified in the SCC. Prices charged by the Supplier for Goods delivered under the Contract shall not vary from the prices quoted by the Supplier in its Bid.

32. Terms and Conditions of Payment

32.1 Payments will be made to the Bidder according to the payment schedule stated in the SCC and as per actual invoice submitted by the Bidder.

32.2 Unless otherwise stated in the SCC, the advance payment shall be made against the provision by the Bidder of a bank guarantee for the same amount, and shall be valid for the period stated in the SCC. Any other payment shall be made after the conditions listed in the SCC for such payment have been met, and the Bidder have submitted an invoice to the Procuring Agency specifying the amount due.

33. Currency of Payment

33.1 Any payment under this Contract shall be made in the currency(ies) specified in the SCC.

G. Quality Control

34. Identifying Defects

34.1 The principle and modalities of Inspection of the Goods by the Procuring Agency shall be as indicated in the SCC. The Procuring Agency shall check the Bidder’s performance and notify him of any Defects that are found. Such checking shall not affect the Bidder’s responsibilities. The Procuring Agency may instruct the Bidder to search for a Defect and to uncover and test any service that the Procuring Agency considers may have a Defect. Defect Liability Period is as defined in the SCC.

35. Correction of Defects, and

Lack of Performance Penalty

35.1 The Procuring Agency shall give notice to the Bidder of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.

35.2 Every time notice a Defect is given, the Bidder shall correct the notified Defect within the length of time specified by the Procuring Agency's notice.

35.3 If the Bidder has not corrected a Defect within the time specified in the Procuring Agency's notice, the Procuring Agency will assess the cost of having the Defect corrected, the Bidder will pay this amount, and a Penalty for Lack of Performance.

36. Taxes and Duties

36.1 A Supplier shall be entirely responsible for all taxes, duties, fees, etc., incurred until delivery of the contracted Goods to the Procuring Agency.

H. Settlement of Disputes

37. Alternate Dispute Resolution

37.1 Upon the commencement of the Procurement Contract, any disputes arising between the contracting parties shall be resolved in accordance with Rule 66 of the Public Procurement Rules, 2026.

37.2 The procuring agency may refer the matter to the Chief Justice Islamabad High Court or Managing Director PPRA or the Secretary Ministry of Law & Justice for appointment of Arbitrator.

37.3 The fee for the Arbitrator shall be specified in Pak Rupees as determined by the appointing authority which shall be borne and shared equally by the contracting parties.

38. Change Orders

The Procuring Agency may at any time, by a written order given to the Supplier, make changes within the general scope of the Contract in any one or more of the following:

a)Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Procuring Agency;
b)The method of shipment or packing;
c)The place of delivery; and/or
d)The Services to be provided by the Supplier.

39. Contract Amendenments

39.1 Subject to GCC Clause 32, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

40. Sub-Contracts

40.1 The Supplier shall consult the Procuring Agency in the event of subcontracting under this contract if not already specified in the Bid. Subcontracting shall not alter the Supplier's obligations.

Special Conditions of Contract

SECTION VIII. SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

Number of GC Clause

Amendments of, and Supplements to, Clauses in the General Conditions of Contract

Number of GC Clause 1

Definitions

The Procuring Agency is: **GT&GE Division, NESPAK (Geomatics & GIS Section,), Sr. GIS Analyst GT&GE Division NESPAK House, 1-C, Block-N, Model Town**

The Supplier is:

The title of the subject procurement is: **Procurement of High-Performance Computing, Software and Geospatial Data Acquisition Equipment for Digital Twin Development**

Number of GC Clause 3

Applicable/Governing Law:

The Contract shall be interpreted in accordance with the laws of Islamic Republic of Pakistan

Number of GC Clause 4

Language:

The language of the Contract, all correspondence and communications to be given, and all other documentation to be prepared and supplied under the Contract shall be in **English.**

Number of GC Clause 5

Notices:

The addresses for the notices are:

The Authority:

GT&GE Division, NESPAK (Geomatics & GIS Section,), Sr. GIS Analyst
GT&GE Division NESPAK House, 1-C, Block-N, Model Town
+92-345-201-0107
ch.ahsanlatif.1990@gmail.com

Contractor/ Bidder:

[Name, address and telephone number].

The Contractor/ Bidder’s Representative(s)

[Name, address, telephone number and e-mail address]

Number of GC Clause 7.1

The Authorized Representatives are:

For the Procuring Agency:

GT&GE Division, NESPAK (Geomatics & GIS Section,), Sr. GIS Analyst
GT&GE Division NESPAK House, 1-C, Block-N, Model Town
+92-345-201-0107
ch.ahsanlatif.1990@gmail.com

For the Bidder:

Name: ……

Designation: ……..

Address: ……..

Number of GC Clause 8

Effectiveness of the contract

Number of GC Clause 9

Commencement of Contract:

Number of GC Clause 11.2

Expiration of Contract:

Number of GC Clause 15

Termination

In the event of termination of the contract due to any reason as already defined in the General Conditions of Contract, the Bidder shall be responsible for providing to the Authority the Goods till the time of alternate arrangements.

Number of GC Clause 17

Conflict of Interest:

The Procuring Agency reserves the right to determine on a case-by-case basis whether the Bidder should be disqualified from providing goods or services due to a conflict of a nature described in Clause GCC 17**.**

Number of GC Clause 22

Liquidated Damages

If the Bidder fails to provide services as required under the contract or in case of any data loss/data breach or any incident compromising the data security or other such failures related to any services, the Bidder shall pay to the Procuring Agency as Liquidated Damages at a rate of **0.50%** to **10.00%** of the Contract value, in accordance with the extent of performance failure & the cost of investigating such incidents as judged by the

Authority.

Number of GC Clause 23

Performance Guarantee:

Instrument of Performance Guarantee shall be in the Name of : **NESPAK PVT LIMITED**

The amount of performance guarantee shall be **10.00%** of the contract price in acceptable form of **Pay Order, Demand Draft**

Number of GC Clause 32

Payment terms:

Payment will be made to the Bidder against the procured Goods and services according to the actual invoice or running bills submitted by the Bidder against the services provided within the time given in the conditions of the contract.

Number of GC Clause 33

Currency of Payment:

All the payment to be released to the contractor/Bidder shall be in Pakistani Rupees.

Number of GC Clause 34

Identifying Defects:

The Authority reserves the right at any time to inspect the premises of the provider to inspect the goods and monitor the goods being provided.

Inspections & Tests Requirements

For being Brand New, bearing relevant reference numbers of the equipment (Certificate from supplier)

For the Country of Origin as quoted by the Supplier (Certificate from manufacturer)

Delivery & Documents

Copies of the Supplier’s invoice showing Goods’ description, quantity, unit price, and total amount;

Manufacturer’s or Supplier’s Valid Warranty Certificate;

Number of GC Clause 37

Following is the guidance for Dispute Resolution

(a) For Contracts to be entered with foreign Contractor/ Service Provider:

All disputes arising in connection with the present Contract shall be finally settled under the Rules of Conciliation and Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with said Rules.

(b) For Contracts to be entered with nationals of Pakistan:

i. If any dispute of any kind whatsoever shall arise between the Authority and the Bidder in connection with or arising out of the Contract, including without prejudice to the generality of foregoing, any question regarding its existence, validity, termination and the execution of the Contract – whether during developing phase or after their completion and whether before or after the termination, abandonment or breach of the Contract – the parties shall seek to resolve any such dispute or difference by mutual diligent negotiations in good faith within 14 (fourteen) days following a notice sent by one Party to the other Party in this regard.

ii. At future of negotiation the dispute shall be resolved through mediation and mediator shall be appointed with the mutual consent of the both parties.

iii. At the event of failure of mediation to resolve the dispute relating to this contract such dispute shall finally be resolved through binding Arbitration in accordance with GCC clause 38.

iv. The cost of the mediation and arbitration shall be shared by the parties in equal proportion however the both parties shall bear their own costs and lawyer's fees regarding their own participation in the mediation and arbitration. However, the Arbitrator may make an award of costs upon the conclusion of the arbitration making any party to the dispute liable to pay the costs of another party to the dispute.
v. Arbitration proceedings as mentioned in the above clause regarding resolution of disputes may be commenced prior to, during or after completion of the contract.

Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree that the Authority shall pay the Bidder any monies due to the Bidder.

Rules of procedure for arbitration proceedings:

Any dispute between the Authority and a Bidder who is a national of the Islamic Republic of Pakistan arising in connection with the present Contract shall be referred to adjudication or arbitration in accordance with the laws of the Islamic Republic of Pakistan including Arbitration Act 1940, however above provision shall prevail in referring the case to the Arbitrator.

Place of Arbitration and Award:

The arbitration shall be conducted in English language and place of arbitration shall be at Islamabad. The award of the arbitrator shall be final and shall be binding on the parties.

Bid Securing Declaration

Form 9: Bid Securing Declaration

Date: *[insert date (as day, month and year)]*

Bid No.:***P190185***

Alternative No.: **[insert identification No if this is a Bid for an alternative]**

To: **GT&GE Division, NESPAK (Geomatics & GIS Section,), Sr. GIS Analyst GT&GE Division NESPAK House, 1-C, Block-N, Model Town**

We, the undersigned, declare that:

We understand that, according to your conditions, Bids must be supported by a Bid Securing Declaration.

We accept that we will be blacklisted and henceforth cross debarred for participating in respective category of public procurement proceedings for a period of (not more than) six months, if fail to abide with a bid securing declaration, however without indulging in corrupt and fraudulent practices, if we are in breach of our obligation(s) under the Bid conditions, because we:

1. have withdrawn or modified our Bid during the period of Bid Validity specified in the Form of Bid;

2. Disagreement to arithmetical correction made to the Bid price; or

3. having been notified of the acceptance of our Bid by the Procuring Agency during the period of Bid Validity, (i) failure to sign the contract if required by Procuring Agency to do so or (ii) fail or refuse to furnish the Performance Security or to comply with any other condition precedent to signing the contract specified in the Bidding Documents.

We understand this Bid Securing Declaration shall expire if we are not the successful

Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight (28) days after the expiration of our Bid.

Signed: [insert signature of person whose name and capacity are shown] In the capacity of
[insert legal capacity of person signing the Bid Securing Declaration]

Name: [insert complete name of person signing the Bid Securing Declaration]

Duly authorized to sign the Bid for and on behalf of: [insert complete name of Bidder]

Dated on day of , [insert date of signing]
Corporate Seal (where appropriate)

Contract Form

SECTION IX: CONTRACT FORMS

THIS AGREEMENT made the _____ day of _____ 20_____ between **GT&GE Division, NESPAK (Geomatics & GIS Section,), Sr. GIS Analyst GT&GE Division NESPAK House, 1-C, Block-N, Model Town**

(hereinafter called "the Procuring Agency") of the one part and *[name of Bidder]* of *[city and country of Bidder]* (hereinafter called "the Bidder") of the other part:

WHEREAS the Procuring Agency invited Bids for provision of goods, viz., **Procurement of High-Performance Computing, Software and Geospatial Data Acquisition Equipment for Digital Twin Development (*P190185*)** and has accepted a Bids by the Bidder for the provision of Goods in the sum of *[contract price in words and figures]* (hereinafter called "the Contract Price").

NOW THIS CONTRACT WITNESSETH AS FOLLOWS:

1. In this Contract words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Contract, In the event of any ambiguity or conflict between the Contract Documents listed below, the order of precedence shall be the order in which the Contract Documents are listed below:-

1. This form of Contract;
2. the Form of Bids and the Price Schedule submitted by the Bidder;
3. the Schedule of Requirements;
4. the Technical Specifications;
5. the Special Conditions of Contract;
6. the General Conditions of the Contract;
7. the Procuring Agency's Letter of Acceptance; and
8. [*add here: any other documents*]

3. In consideration of the payments to be made by the Procuring Agency to the Bidder as hereinafter mentioned, the Bidder hereby covenants with the Procuring Agency to provide the Goods related services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Procuring Agency hereby covenants to pay the Bidder in consideration of the provision of Goods and the remedying of defects therein, the Contract Price or such other sum as may become payable under the

provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Contract to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed, delivered by _____the _____ (for the Procuring Agency)

Witness to the signatures of the Procuring Agency:

……

Signed, sealed, delivered by _____the _____ (for the Procuring Agency)

Witness to the signatures of the Bidder: ……

Integrity Pact

Integrity Pact

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

Contract Number: Contract Value: Contract Title:

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 or any administrative subdivision or agency thereof or any other entity owned or controlled by it (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, fee 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 consultations 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, representative or warranty.

[Name of Supplier] accepts full responsibility and strict liability for making and false declaration, not making full disclosure, misrepresenting fact 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 right 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.

Performance Guarantee Form

Performance Guarantee Form

To: **GT&GE Division, NESPAK (Geomatics & GIS Section,), Sr. GIS Analyst GT&GE Division NESPAK House, 1-C, Block-N, Model Town**

WHEREAS *[name of Bidder]* (hereinafter called "the Bidder") has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated *[insert date]* for provision of Goods*(*hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Bidder shall furnish you with a Bank Guarantee by a reputable bank for the sum specified therein as security for compliance with the Bidder's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Bidders guarantee:

THEREFORE, WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Bidder, up to a total of *[amount of the guarantee in words and figures]*, and we undertake to pay you, upon your first written demand declaring the Bidder to be in default under the Contract and without cavil or argument, any sum or sums within the limits of *[amount of guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the: *[insert date]*

Signature and seal of the Guarantors

_____

[name of bank or financial institution]

_____

[address]

_____

[date}

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

Annexure

BoQ Digital Twin Equipment

Information (Read-Only)

See Form Under Additional Forms and Documents: **BoQ Digital Twin Equipment** (page number: 114)

PUBLIC PROCUREMENT REGULATORY AUTHORITY (PPRA) EPADS

Procurement Forms

PUBLIC PROCUREMENT REGULATORY AUTHORITY
(PPRA)
EPADS

PUBLIC PROCUREMENT REGULATORY AUTHORITY
(PPRA)
EPADS

Additional Forms and Documents

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED (NESPAK)

BILL OF QUANTITIES (BoQ)

Procurement of High-Performance Computing, Software and Geospatial Data Acquisition Equipment for Digital Twin Development

Advertised through the E-Pak Acquisition and Disposal System (EPADS) in accordance with the Public Procurement Rules, 2026 (S.R.O. 1658(I)/2026)

NIT / Tender No.	[_____]
Procuring Agency	National Engineering Services Pakistan (Pvt.) Limited (NESPAK) — Geomatics & GIS Section, GT&GE Division
Mode of Procurement	Single Stage – Two Envelope Procedure (Rule 27(b), Public Procurement Rules, 2026) — Technical Proposal (Envelope-I) and Financial Proposal (Envelope-II) to be submitted separately and concurrently through EPADS, clearly marked accordingly
Basis of Bidding & Award	Lot-wise / Item-wise. Each item listed in Section 2 constitutes a separate, independent BoQ (Lot). Bidders may quote for any one, more than one, or all Lots. Each Lot shall be technically and financially evaluated, and may be awarded, independently of all other Lots.
Pre-Bid Meeting	November 12, 2026 (Thursday) at 1100 hrs, at NESPAK Head Office, Lahore. Attendance is optional but recommended; queries raised shall be clarified in writing through EPADS to all participating bidders on an equal-opportunity basis, in accordance with Rule 38 of the Public Procurement Rules, 2026 — see Section 5.
Estimated Cost	Not disclosed (for internal use of the Procuring Agency only)
Bid Security / EMD	Three percent (3%) of the estimated value per Lot (within the 5% ceiling of Rule 36 of the Public Procurement Rules, 2026), in the form of Call Deposit Receipt (CDR) / Pay Order (PO) / Bank Guarantee, in the name of National Engineering Services Pakistan (Pvt.) Limited — see Section 3 for mandatory submission procedure.
Performance Guarantee	Ten percent (10%) of the Bid/Contract Amount per Lot, in the form of Bank Guarantee/CDR, furnished only by the successful/qualified bidder, in accordance with Rule 51 of the Public Procurement Rules, 2026; valid until expiry of the Warranty Period (which commences from the date of delivery); additional to, and separate from, the Bid Security — see Section 4.
Bid Validity Period	Minimum six (6) months (180 days) from the date of opening of bids, in accordance with Rule 37 of the Public Procurement Rules, 2026
Supplier Authorization (Lots 3 to 10)	Bidders for Lots 3, 4, 5, 6, 7, 8, 9 and 10 must be authorized vendors/dealers of the respective OEM, supported by a valid Manufacturer Authorization Form (MAF) specific to this tender and Lot, submitted with the Technical Proposal (see the eligibility clause in each Lot)
Delivery Period	90 days from the date of issuance of purchase order / signing of contract, DDP at [site/office location], for each Lot unless otherwise extended in writing
Liquidated Damages (LD)	0.5% of the bid amount of the Lot per day of delay, per Lot, chargeable after expiry of the 90-day delivery period (subject to the ceiling in Section 6) — see Section 6
Publication Date	November 5, 2026 (Thursday) on EPADS and in two national dailies, one English and one Urdu — Rule 18
Bid Submission Deadline / Opening	November 19, 2026 (Thursday), at 1100 hrs — bids opened through EPADS not less than thirty (30) minutes after the deadline (Rule 40); response time not less than ten (10) days for national competitive bidding (Rule 19)

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1. Scope of Procurement

The Procuring Agency intends to procure high-performance computing hardware, data-processing software, and geospatial/hydrographic survey equipment required for the development of a Digital Twin. The requirement is divided into ten (10) independent Lots as detailed in Section 2, each comprising a separate, self-contained Bill of Quantities with its own technical specifications, unit, and quantity.

Procurement shall be conducted under the Single Stage – Two Envelope Procedure in accordance with Rule 27(b) of the Public Procurement Rules, 2026. Each bidder shall submit separately a Technical Proposal (Envelope-I), containing technical specifications, compliance statements, manufacturer's authorization, datasheets, and all supporting documents excluding price, and a Financial Proposal (Envelope-II) containing the priced Lot-wise Bill of Quantities. Envelope-I shall be opened first through EPADS at the time and date notified (Rule 40), while Envelope-II remains unopened. The Technical Proposals shall be evaluated, without reference to price, against the criteria in the bidding documents, and the technical evaluation report shall be published on EPADS before the Financial Proposals are opened (Rule 48). Envelope-II (Financial Proposal) of only those bidders whose Envelope-I is found technically responsive — on a Lot-by-Lot basis — shall be opened through EPADS within the bid validity period, in accordance with Rule 27(b)(iv); Financial Proposals of technically non-responsive bidders, in respect of the relevant Lot(s), shall remain unopened.

As each Lot is a separate and independent BoQ, bidders may quote for any one, more than one, or all Lots. Each Lot shall be technically and financially evaluated on its own merits, entirely independent of the outcome of any other Lot, and the Procuring Agency shall not be bound to award all Lots to a single bidder or to accept a bidder's quotation for any Lot merely because it was accepted for another.

The Tender Document shall be available free of cost on EPADS immediately after publication of the procurement notice, in accordance with Rules 17(5) and 34(3) of the Public Procurement Rules, 2026.

2. Bill of Quantities (Lot-wise)

The Bill of Quantities is organized into ten (10) independent Lots below. Each Lot includes its own technical specifications and its own self-contained BoQ table; certain Lots comprise more than one line item, each of which shall be priced individually within that Lot. Rates shall be quoted in Pakistani Rupees (PKR), inclusive of all applicable taxes, duties, freight, insurance, delivery, installation, commissioning, and training, unless otherwise specified by the Procuring Agency. A bidder not wishing to bid for a particular Lot may simply leave that Lot's BoQ table blank; this shall not affect the responsiveness of bids submitted for other Lots. Quantities shown are indicative for advertisement purposes and shall be confirmed/finalized by the Procuring Agency prior to publication.

Specifications stated below are generic and functional in nature, in accordance with Rule 17 of the Public Procurement Rules, 2026 requiring the widest possible competition. Where a reference brand/model is cited to establish a technical baseline (as permitted under Rule 17(4), where essential to complete an otherwise incomplete specification and after recording specific justification in writing), the words "or equivalent" apply, and bidders may offer an equivalent or superior make, duly substantiated with technical literature. The parameters of equivalence are the specifications stated for the respective Lot.

2.1 BoQ – Lot 1: ITM-01 — High-Performance Workstation PC

This item constitutes an independent Lot. It shall be technically and financially evaluated, and may be awarded, separately and independently of all other Lots in this Bill of Quantities.

- Processor: AMD Ryzen Threadripper PRO 9955WX (16-core / 32-thread, socket sTR5, 4.5 GHz base / 5.4 GHz boost, 350W TDP) or equivalent workstation-grade processor
- Motherboard: WRX90-chipset workstation motherboard (e.g., ASUS Pro WS WRX90E-SAGE SE or equivalent), supporting 8-channel ECC DDR5 memory and PCIe 5.0
- RAM: 128 GB DDR5-6400 ECC RDIMM, populated as 8×16 GB across all 8 memory channels to achieve full rated memory bandwidth
- GPU: NVIDIA GeForce RTX 5080 (or equivalent), 16 GB GDDR7, CUDA-enabled, suitable for AI-based point-cloud classification, photogrammetric processing, and Gaussian Splatting / NeRF-based 3D reconstruction workloads
- Storage: 1× 2 TB NVMe SSD (primary); plus secondary storage comprising 2× 2 TB NVMe SSD (4 TB total) and 2× 2 TB HDD (4 TB total)
- Power Supply: 1600W, 80+ Titanium certified (e.g., Corsair AX1600i or Seasonic Prime TX-1600 or equivalent), with native support for latest-generation GPU power connectors
- Liquid Cooling: sTR5-specific all-in-one liquid cooler, minimum 360mm radiator (e.g., Arctic Liquid Freezer III Pro 420 sTR5 or Silverstone XE360-TR5 or equivalent)

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- Chassis: full-tower case supporting E-ATX/SSI-CEB motherboards, with adequate clearance for a 420mm radiator and a 1600W power supply (e.g., Fractal Design Define 7 XL or Lian Li V3000 Plus or equivalent)
- Monitors: 02 (two) 27" 4K UHD borderless displays with built-in speakers
- Input Devices: wireless, rechargeable mouse and keyboard set
- Genuine licensed 64-bit Operating System (Windows 11 Pro for Workstations or equivalent, with Linux compatibility) and essential productivity software
- Onboard minimum 2.5 GbE networking; USB 3.2/Thunderbolt connectivity for high-speed data transfer from survey instruments
- Certified/validated compatibility with major GIS, photogrammetry, point-cloud, and Digital-Twin processing software referenced at ITM-02
- Minimum 3-year comprehensive on-site warranty with next-business-day support

Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
High-Performance Workstation PC — as per detailed specifications above	No.	1			

2.2 BoQ – Lot 2: ITM-02 — Data Processing Software Package for Digital Twin / GIS

This item constitutes an independent Lot. It shall be technically and financially evaluated, and may be awarded, separately and independently of all other Lots in this Bill of Quantities.

- Item 1 — DJI Terra Flagship (latest version): 01 Perpetual License. Top-tier DJI Terra edition providing the complete Standard toolset (2D orthomosaic/TDOM, DSM, photogrammetric 3D mesh reconstruction, DJI LiDAR point-cloud processing) plus Gaussian Splatting-based photorealistic 3D reconstruction, cluster computing, and advanced power-infrastructure inspection workflows
- Item 2 — DJI Modify Flagship (latest version): 01 Perpetual License. Full-tier point-cloud/mesh editing, cleanup, and terrain-generation tool, complementing DJI Terra output within the Digital Twin reconstruction workflow
- Item 3 — Agisoft Metashape Professional Edition (latest version): 01 Perpetual License. Survey-grade photogrammetry suite with ground control point (GCP) referencing, DEM/orthomosaic generation, multispectral and LiDAR data support, Python scripting/automation, and export to standard GIS/CAD formats
- Item 4 — BricsCAD Ultimate (latest version): 01 Perpetual License. All-in-one CAD/BIM bundle combining BricsCAD Lite, Pro, BIM, and Mechanical functionality on the native DWG platform, for 2D drafting, 3D modeling, and BIM deliverables derived from survey and Digital Twin data
- All four software items shall be genuine, latest-version Perpetual Licenses, each supplied with a minimum 1-year vendor support entitlement covering the latest patches/updates, and accompanied by official training material
- The combined software suite shall support an interoperable Digital Twin workflow across UAV photogrammetric/LiDAR data (via DJI Terra/Modify), independently processed photogrammetric datasets (via Metashape), terrestrial laser scan point clouds, and CAD/BIM deliverables (via BricsCAD)
- Support for common point-cloud, GIS, CAD, and BIM interchange formats across the suite (e.g., LAS/LAZ, E57, shapefile, geodatabase, IFC, DWG/DXF)
- Vendor training and orientation for the Procuring Agency's officials to be provided upon delivery, covering all four software items and the end-to-end Digital Twin data-processing workflow (data import, processing, editing, and deliverable generation)

Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
DJI Terra Flagship — Perpetual License (latest version) — as per detailed specifications above	License	1			
DJI Modify Flagship — Perpetual License (latest version) — as per detailed specifications above	License	1			
Agisoft Metashape Professional Edition — Perpetual License	License	1			

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Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
(latest version) — as per detailed specifications above					
BricsCAD Ultimate — Perpetual License (latest version) — as per detailed specifications above	License	1			
Vendor training of the Procuring Agency's officials on the four software items — as per detailed specifications above	Lot	1			

2.3 BoQ – Lot 3: ITM-03 — 3D Terrestrial Laser Scanner

This item constitutes an independent Lot. It shall be technically and financially evaluated, and may be awarded, separately and independently of all other Lots in this Bill of Quantities.

- Terrestrial laser scanner: Trimble X9 Premium configuration (or equivalent survey-grade scanner of any leading OEM), self-levelling and self-calibrating (automatic dual-axis calibration), requiring no target-based setup for standard registration
- Scan rate up to 1,000,000 points per second (1 MHz), effective scanning range of up to 150 m, range accuracy of approximately 2 mm
- Wide field of view suitable for rapid, near-full-dome capture; integrated dual-axis compensator with tilt-compensation range of ±10°, and laser pointer for field georeferencing
- IP55 ingress-protection rating; operable at temperatures from -20°C to 50°C and at altitudes up to 2,000 m
- Integrated HDR panoramic camera for true-colour point cloud capture
- Integratable scanning module software (Item A): Trimble Perspective (or equivalent) in-field scanning and registration software, providing real-time scan control, in-field point-cloud registration, and quality-control workflows, seamlessly integrated between field and office
- Office processing software (Item B): Trimble RealWorks (or equivalent) point-cloud processing software, for registration refinement, cleaning, classification, and export to standard CAD/GIS/BIM formats
- Supplied complete with 3 standard rechargeable Li-ion batteries, plus 03 (three) additional batteries (6 total), to support extended field operations
- Heavy-duty survey tripod (e.g., Gitzo Systematic Tripod or equivalent) and complete accessories: scan targets, hard carrying case, soft carrying case, SD card and card reader, battery charger, and connecting cables
- Laptop (Qty 01): high-performance laptop for in-field scan control/registration and office point-cloud processing — Intel Core Ultra 9 / AMD Ryzen 9 (HX class) or higher; 32 GB DDR5 RAM (expandable to 64 GB); 1 TB NVMe SSD; NVIDIA RTX discrete GPU with minimum 12 GB VRAM, compatible with the offered scanning and point-cloud software; 16" display (minimum 2.5K, 500 nits); Windows 11 Pro; Wi-Fi 6 or later, USB-C/USB-A and Ethernet; minimum 2-year warranty (e.g., Lenovo Legion Pro 5i or HP Omen Max 16, or equivalent)
- Minimum 1 TB cloud storage entitlement (or equivalent local storage provision) for reality-capture data management, where offered by the manufacturer
- Vendor training for the Procuring Agency's officials to be provided upon delivery, covering field scanning operation (data acquisition), in-field registration workflow, and office-based point-cloud processing
- Minimum 2-year manufacturer's warranty, with local/regional authorized service and calibration support
- Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
3D Terrestrial Laser Scanner (Trimble X9 Premium or equivalent), complete with integratable field-to-office	No.	1			

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Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
scanning/processing software, 6 batteries total, heavy-duty tripod, and full accessories — as per detailed specifications above					
High-performance laptop (32 GB RAM, 1 TB SSD, 12 GB RTX GPU, Windows 11 Pro) for scanner field control and point-cloud processing — as per detailed specifications above	No.	1			
Vendor training of the Procuring Agency's officials on scanning, registration and point-cloud processing — as per detailed specifications above	Lot	1			

2.4 BoQ – Lot 4: ITM-04 — DJI Matrice 400 Enterprise RTK Drone System

This item constitutes an independent Lot. It shall be technically and financially evaluated, and may be awarded, separately and independently of all other Lots in this Bill of Quantities.

- Enterprise flagship RTK drone platform equivalent to DJI Matrice 400 (or equivalent of any leading OEM), with forward flight time of up to 59 minutes and hover time of up to 53 minutes
- Maximum payload capacity of up to 6 kg, supporting up to 7 simultaneous payloads (e.g., LiDAR, PPK/RTK photogrammetric camera, thermal/zoom payloads) for multi-sensor mapping and inspection missions
- Integrated triple-layer obstacle-sensing suite combining rotating LiDAR, six-direction mmWave radar, and full-color low-light vision sensors, providing power-line-level obstacle detection at flight speeds up to 25 m/s
- RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm (vertical); hovering accuracy of ±0.1 m with RTK enabled
- IP55 ingress-protection rating; rated operating temperature range of -20°C to 50°C, suitable for high-altitude/harsh-terrain survey operations
- High-bandwidth enhanced video transmission system (e.g., O4 Enterprise or equivalent) with a minimum unobstructed range of 20 km, and airborne relay transmission capability for beyond-line-of-sight operations in complex terrain
- Intelligent flight battery system rated for a minimum of 400 charge cycles, with dedicated intelligent charging case supplied for field charging and transport
- D-RTK 3 (or equivalent) multifunctional base station supplied complete with tripod, mounting accessories, and soft carrying case, providing high-precision RTK positioning reference and signal relay functionality
- 04 (four) additional intelligent flight batteries to be supplied, over and above any battery included with the base aircraft package
- 01 (one) additional set of high-altitude propellers to be supplied, for improved performance during survey operations at high elevation/thin-air sites
- 01 (one) DJI AP100 Parachute (or equivalent certified parachute recovery system) compatible with the procured aircraft, for regulatory compliance and safety during flights over people/infrastructure and BVLOS operations
- Complete with remote controller, standard propellers, and manufacturer's standard accessories; interoperable with the Digital Twin data-processing software at ITM-02
- On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning, safe-flight practices and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02)
- Minimum 1-year manufacturer's warranty, with option for extended care/service plan
- Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

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Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
DJI Matrice 400 Enterprise Aircraft with Intelligent Charging Case — as per detailed specifications above	Set	1			
D-RTK 3 Multifunctional Base Station, complete with accessories and soft carrying case	No.	1			
DJI Matrice 400 Intelligent Flight Battery (TB100C or equivalent)	No.	4			
High-Altitude Propellers (additional set, for operation in thin-air/high-elevation terrain)	Set	1			
DJI AP100 Parachute (or equivalent certified parachute recovery system compatible with DJI Matrice 400)	No.	1			
Vendor training of the Procuring Agency's officials on data acquisition and processing for the UAV system — as per detailed specifications above	Lot	1			

2.5 BoQ – Lot 5: ITM-05 — DJI Matrice 4E Mapping/Survey Drone System

This item constitutes an independent Lot. It shall be technically and financially evaluated, and may be awarded, separately and independently of all other Lots in this Bill of Quantities.

- Compact enterprise mapping/survey drone equivalent to DJI Matrice 4E (or equivalent of any leading OEM), foldable, with all-up weight under 1.3 kg (with propellers and battery)
- Mapping-optimized 4/3-inch, minimum 20 MP effective-resolution wide camera with mechanical shutter (eliminating rolling-shutter distortion during forward flight), minimum 0.5-second capture interval, and RAW (DNG) image output directly compatible with photogrammetric processing pipelines
- Support for multi-directional survey capture modes (minimum 3-directional ortho and 5-directional oblique in a single pass), improving mapping efficiency and 3D model quality with fewer flights
- On-board rough point-cloud generation capability to plan autonomous close-range 3D modeling flight routes
- Flight endurance of up to 49 minutes per battery cycle; capable of covering large mapping areas (multiple km²) in a single flight
- RTK GNSS positioning accuracy of 1 cm + 1 ppm (horizontal) and 1.5 cm + 1 ppm (vertical)
- Enhanced video transmission system with a minimum unobstructed range of 12 km
- Ground Sample Distance (GSD) of approximately 1.2 cm/pixel at 120 m flying altitude using the wide-angle camera
- Supplied as 01 (one) complete Fly More Combo package, comprising: aircraft, remote controller, 1 intelligent flight battery, charger and charging hub, microSD card, 3 pairs of propellers, and aircraft carrying case, as standard package contents per combo
- 02 (two) additional intelligent flight batteries to be supplied, over and above the battery included in the Fly More Combo
- 01 (one) compatible parachute recovery system, ASTM F3322-22 / EASA MOC 2512 (or equivalent) certified, providing automatic and manual deployment capability for regulatory compliance and safety during flights over people/infrastructure
- Flight-planning and data-capture workflow interoperable with the Digital Twin data-processing software at ITM-02 (e.g., via DJI Terra and/or DJI Modify or equivalent)
- On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering UAV flight operation, mission planning and data acquisition, and processing of the acquired data in the Digital Twin software (ITM-02)

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- Minimum 1-year manufacturer's warranty, with option for extended care/service plan
- Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
DJI Matrice 4E — Fly More Combo (Aircraft, Remote Controller, 1× Intelligent Flight Battery, Charger & Charging Hub, microSD Card, 3 Pairs of Propellers, Aircraft Carrying Case) — as per detailed specifications above	Set	1			
Additional Intelligent Flight Battery for DJI Matrice 4E, over and above the battery included in the Fly More Combo	No.	2			
Compatible Parachute Recovery System for DJI Matrice 4E (e.g., AVSS PRS-M4S / ParaZero SafeAir M4, or equivalent ASTM F3322-compliant system)	No.	1			
Vendor training of the Procuring Agency's officials on data acquisition and processing for the UAV system — as per detailed specifications above	Lot	1			

2.6 BoQ – Lot 6: ITM-06 — Differential GPS (DGPS) System

This item constitutes an independent Lot. It shall be technically and financially evaluated, and may be awarded, separately and independently of all other Lots in this Bill of Quantities.

- Multi-frequency, multi-constellation GNSS receivers, configured as base and rover (RTK-capable)
- Horizontal accuracy ≤ 10 mm + 1 ppm; vertical accuracy ≤ 15 mm + 1 ppm (RTK mode)
- 02 (two) Data Controllers/field software per Set, with GIS/CAD export capability
- Radio and/or network (NTRIP) correction capability
- Complete with tripods, poles, additional batteries (08), and carrying cases
- The solution shall be compatible with in-house available equipment (Trimble and South)
- On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering field operation, base/rover setup, data acquisition, post-processing and export of survey data
- Minimum 2-year manufacturer's warranty
- Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
Differential GPS (DGPS) System (Base + Rover, RTK-capable),	Set	2			

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Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
including 02 Data Controllers/field software per Set — as per detailed specifications above					
Vendor training of the Procuring Agency's officials on data acquisition and processing for the DGPS system — as per detailed specifications above	Lot	1			

2.7 BoQ – Lot 7: ITM-07 — Single Beam Dual Frequency Echo Sounder (Survey-Grade Bathymetry, Turnkey Solution)

This item constitutes an independent Lot. It shall be technically and financially evaluated, and may be awarded, separately and independently of all other Lots in this Bill of Quantities.

- Single-beam, dual-frequency digital echo sounder equivalent to SOUTH SDE-19D (or equivalent survey-grade instrument of any leading OEM), for high-precision bathymetric depth measurement
- Dual-frequency configuration (typical high frequency 200 kHz / low frequency 24-33 kHz, consistent with SOUTH's SDE series), with depth accuracy of approximately ±1 cm ±0.1% of depth value
- Rugged stainless-steel (e.g., 316L) hull, minimum IP67-rated for water/dust resistance and sustained field deployment
- Wireless connectivity (WiFi to tablet/controller, Bluetooth to GNSS receiver) plus wired RS232/serial interface, with built-in Web UI for configuration
- Turnkey solution: the echo sounder shall integrate directly with the Procuring Agency's existing DGPS RTK equipment (refer ITM-06) via Bluetooth/serial connection, for real-time RTK/tide-corrected, georeferenced soundings, with no additional third-party positioning hardware required
- Supplied complete with transducer, mounting pole/bracket, all necessary interface/communication cables, Calibration & Aux Gear: Bar-Check, Calibration Plate, Sound Velocity Profiler (SVP), Safety Equipment, and rugged carrying case, forming a complete, field-ready bathymetric survey system
- Bundled hydrographic survey/data acquisition software (Windows-based professional program and/or Android field app) for real-time depth logging, echogram display, and export to standard formats (e.g., NMEA0183, DESO25, XYZ, or equivalent) for GIS/CAD post-processing
- Lightweight and compact form factor, suitable for standard vessel mounting as well as USV (unmanned surface vehicle) deployment for remote/shallow-water survey areas, where required
- Rigid Inflatable Boat (RIB) (Qty 01): survey/work boat with aluminium or fibreglass (GRP) rigid hull, 3.3 m to 4.5 m overall length, with heavy-duty Hypalon/PVC inflatable tubes, minimum 4-person capacity, transom suitable for outboard engine, and a transducer mounting arrangement/bracket compatible with the offered echo sounder; supplied complete with outboard engine of suitable rating (4-stroke), fuel tank, paddles/oars, foot pump, anchor with rope, repair kit, lifejackets for all occupants, and transport/storage cover; minimum 1-year warranty
- On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering installation on the survey boat, field operation, bathymetric data acquisition, and post-processing/export of depth data
- Minimum 1-year manufacturer's warranty
- Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
Single Beam Dual Frequency Echo Sounder (SOUTH SDE-19D or equivalent), turnkey bathymetric survey solution integrated with existing DGPS RTK — as per detailed specifications above	No.	1			

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Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
Rigid Inflatable Boat (RIB), aluminium or fibreglass hull, 3.3 m to 4.5 m, with outboard engine, transducer mounting bracket and safety accessories — as per detailed specifications above	No.	1			
Vendor training of the Procuring Agency's officials on data acquisition and processing for the echo sounder system — as per detailed specifications above	Lot	1			

2.8 BoQ – Lot 8: ITM-08 — Side Scan Sonar System (Turnkey Solution with Laptop and External Power)

This item constitutes an independent Lot. It shall be technically and financially evaluated, and may be awarded, separately and independently of all other Lots in this Bill of Quantities.

- Hardware and Software Image Balancing: supports both hardware- and software-based image balancing
- Water Imaging: supports imaging applications for underwater/water environments
- 4K High Definition Display: supports 4K high-definition display for clear and detailed visualization
- Data Port: 100M Ethernet port provided for high-speed data communication
- Navigation Display Software: standard navigation display software supported
- Output Data Format: output data provided in GDSS (XTF) format
- Work Frequency: operates at a working frequency of 500 kHz
- Signal Type: supports Chirp and Continuous Wave (CW) signal types
- Signal Bandwidth: provides a signal bandwidth of 100 kHz
- Maximum Range (Single Side): maximum operating range of 150 m on a single side
- Horizontal Beam Angle: 0.4°
- Vertical Beam Angle: 50°
- Vertical Track Resolution: 0.75 cm
- Transducer Fixed Angle: fixed at 15°
- Standard Accessories: security electrical cable, air transport box, towfish, and navigation data acquisition software
- Display & Control Terminal: includes a display and control terminal for system operation and monitoring
- Optional Accessories: measuring-rod mounting bracket for satellite positioning equipment available as an optional accessory
- Wet End Size: 660 mm × 110 mm (Length × Diameter); Wet End Weight: 6.6 kg
- Work Mode: designed for fixed installation operation
- Power Supply: operates on 220 VAC / 24 VDC; Maximum Power Consumption: 37 W
- Integrated or interfaced GPS/positioning for geo-referenced imagery
- Laptop (Qty 01) for acquisition support and post-processing of side scan sonar data (mosaicking, target/obstruction detection, XTF/sonar data handling): Intel Core Ultra 7/9 or AMD Ryzen 7/9 (or higher) processor; minimum 32 GB DDR5 RAM (expandable to 64 GB); minimum 1 TB NVMe SSD; NVIDIA RTX discrete GPU with minimum 8 GB VRAM; 15.6" to 16" Full HD+ (or better) anti-glare display of minimum 400 nits for field use; Windows 11 Pro; RJ45 Ethernet (or certified adapter) for the sonar's 100M Ethernet port, plus USB-A, USB-C, HDMI and Wi-Fi 6 or later; battery of minimum 70 Wh; fully compatible with the offered sonar acquisition and processing software (including any required licence dongle); supplied with a 2 TB portable external SSD for data backup and a protective carry bag; minimum 2-year warranty
- External battery power system (Qty 01) for field operation: portable LiFePO4 power station with pure-sine-wave 220–240 V AC output of minimum 1,000 W and a regulated 24 VDC (or 12 VDC) output as required by the offered sonar, sized to run the complete system (sonar topside/deck unit about 37 W, laptop, display and control terminal, and GNSS/positioning equipment) continuously for not less than 8 hours (indicative minimum capacity 1,500 Wh); with AC/DC charger, solar-charging input, protective cables, fuse/protection and carrying case; minimum 2-year warranty
- Turnkey solution: the system shall be supplied complete, installed, configured and commissioned with all cables, connectors, mounting brackets for a survey boat, software licences, and navigation/GNSS interfacing, so that the

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Procuring Agency can start a survey on delivery; including on-site demonstration, acquisition and processing training of [__] officials, and a test survey with data-processing demonstration at acceptance

- Complete with tow cable, deck unit/interface, and carrying/transport case
- On-site vendor training for the Procuring Agency's officials, to be provided upon delivery/commissioning, covering system deployment from the survey boat, sonar data acquisition, and post-processing (mosaicking, target detection) on the supplied laptop
- Minimum 1-year manufacturer's warranty
- Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
Side Scan Sonar System (500 kHz, 150 m single-side range), complete with towfish, tow cable, deck unit/terminal, positioning interface, acquisition and processing software, and accessories — as per detailed specifications above	No.	1			
Laptop for acquisition support and side scan sonar post-processing (32 GB RAM, 1 TB SSD, 8 GB RTX GPU, Windows 11 Pro) with 2 TB portable SSD — as per detailed specifications above	No.	1			
External battery power system (LiFePO4, minimum 1,500 Wh, 220 V AC and 24/12 VDC outputs) with charger and cables for field operation — as per detailed specifications above	No.	1			
Vendor training of the Procuring Agency's officials on data acquisition and processing for the side scan sonar system — as per detailed specifications above	Lot	1			

2.9 BoQ – Lot 9: ITM-09 — DJI Power 2000 & 100W Foldable Solar Panel × 4; and 360° Camera Kit (DJI Osmo 360 II)

This item constitutes an independent Lot. It shall be technically and financially evaluated, and may be awarded, separately and independently of all other Lots in this Bill of Quantities.

- Model: DYM2000L / DYM2000H
- Cell Chemistry: LFP (Lithium Ferrophosphate) battery chemistry
- Battery Capacity: 2048 Wh, providing a high-capacity portable power supply for various electrical and electronic equipment
- Cycle Life: maintains more than 80% of original capacity after 4,000 complete charge/discharge cycles under specified laboratory test conditions
- Net Weight: approximately 22 kg; Dimensions: 448 × 225 × 324 mm (L × W × H)
- Number of Ports: 4 AC output ports, 4 USB-C ports, 4 USB-A ports, 2 SDC ports, and 1 AC input port
- Maximum Operating Altitude: suitable for operation at altitudes up to 5,000 m

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- AC Output: DYM2000L provides 100–120 V AC up to 25 A; DYM2000H provides 220–240 V AC up to 13.6 A, 50/60 Hz (varies by country/region)
- AC Output – Bypass Mode: DYM2000L 100–120 V AC up to 12 A; DYM2000H 220–240 V AC up to 10 A
- USB-A Output: 5 V/3 A, 9 V/2 A, 12 V/2 A, max 24 W per port; supports QC 2.0 / QC 3.0 fast-charging
- USB-C Output: 5–28 V, C1/C2 ports up to 140 W each, C3/C4 ports up to 65 W each (140 W requires PD 3.1-compatible equipment and EPR-compliant cable)
- SDC Output: two ports, 9–28 V DC, max 12 A, compatible with a range of accessories
- AC Input: DYM2000L 110–120 V AC max 15 A; DYM2000H 220–240 V AC max 10 A
- SDC Input: two ports, 32–58.4 V DC, max 60 A, compatible with various accessories
- Operating Temperature: power supply -10°C to 45°C; recharging 0°C to 45°C; storage -10°C to 45°C
- Wi-Fi: 802.11 b/g/n, 2.4000–2.4835 GHz, transmitter power below 20 dBm
- Bluetooth: 5.0, 2.4000–2.4835 GHz, transmitter power below 7 dBm
- Complete with 4 × 100W Foldable Solar Panels, cabling, and rugged transport case
- Minimum 1-year manufacturer's warranty
- DJI Osmo 360 II (latest model, or equivalent) 360° camera (Qty 01) with the manufacturer's combo kit (including camera, charging case/batteries and standard accessories of the combo): dual 1/1.1-inch square sensors with HDR (about 14.5 stops of dynamic range); 8K 360° video at up to 60 fps; 120 MP photos (HDR and RAW); 10-bit recording; replaceable lenses; built-in storage of about 105 GB plus microSD slot; waterproof to about 10 m without a case; weight about 183 g; complete with a car mount (suction-cup/windshield type) and a bike mount (handlebar/frame type), compatible with the camera, for vehicle- and bicycle-mounted site documentation; manufacturer's warranty of minimum 1 year
- Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
DJI Power 2000 Portable Power Station with 100W Foldable Solar Panel × 4, complete with cabling and rugged transport case — as per detailed specifications above	Set	1			
360° camera kit (DJI Osmo 360 II, latest, or equivalent) with combo kit, car mount and bike mount — as per detailed specifications above	Set	1			

2.10 BoQ – Lot 10: ITM-10 — Handheld SLAM Laser Scanner (Lixel L3 or equivalent) with Processing Software Bundle, Backpack, Vehicle & Drone Mounts and Training

This item constitutes an independent Lot. It shall be technically and financially evaluated, and may be awarded, separately and independently of all other Lots in this Bill of Quantities.

- Handheld SLAM LiDAR spatial scanner (Qty 01), Lixel L3 or equivalent survey-grade handheld mobile scanner: minimum 16-channel LiDAR (minimum 320,000 points/second; higher-channel models acceptable), scanning range of not less than 120 m
- Accuracy (manufacturer-specified): relative accuracy of 5 mm or better and absolute accuracy of 2 cm or better after post-processing; real-time absolute accuracy of 2.5 cm or better; point-cloud thickness of 5 mm or better
- Integrated RTK/GNSS module for georeferencing and levelness optimisation, compatible with standard survey poles, with built-in display of minimum 4.3 inches showing real-time point cloud, trajectory and coverage
- Imaging: three cameras of minimum 50 MP, 4K HDR, for true-colour point clouds and textured mesh, with support for 3D Gaussian Splatting (3DGS) output and export of point cloud (LAS/E57 or equivalent), mesh and colour data
- Internal storage of minimum 1 TB; weight not exceeding 2.5 kg including battery; minimum 100 minutes operating time per battery; IP54 or better; operating temperature of -20°C to 50°C

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- Supplied complete with the standard battery plus 03 (three) additional batteries (Qty 03), fast charger, survey-pole/handle mounting accessories, a SLAM backpack carrying system (ergonomic padded frame with quick-attach scanner mount, for hands-free walking surveys), a vehicle mount (roof-rack/bracket type for car or pickup-based mobile mapping), a drone mount (vibration-damped, quick-release adapter for carrying the scanner on a heavy-lift UAV such as the DJI Matrice 400 or equivalent, payload capacity of not less than 2.5 kg), all fixing hardware, USB/communication cables, and rugged transport case
- Processing software bundle (Qty 01 seat of each, perpetual licence, latest version, from the scanner manufacturer), comprising: (a) LixelStudio (or equivalent) — desktop SLAM point-cloud processing: one-click SLAM solving with automatic loop closure, PPK/RTK-aided georeferencing, multi-scan map fusion, automated quality report with checkpoint analysis, measurement, sectioning and volume tools, coordinate-system support, and export to LAS/LAZ, E57, RCP and CAD/BIM/GIS-compatible formats; and (b) Lixel CyberColor LCC Studio, Premium tier (or equivalent) — 3D Gaussian Splatting reconstruction and editing, Map Fusion, HD Enhancement, ground–aerial map fusion and aerial reconstruction, and export to .lcc, .ply, 3D Tiles/.usd and .obj mesh. Both packages shall be explicitly supported for the offered scanner model and shall run on the workstation offered at Lot 1; bidders shall submit the manufacturer's written confirmation of compatibility, licence type and update entitlement (minimum one year of updates)
- On-site vendor training for the Procuring Agency's officials, to be provided upon delivery, covering (a) data acquisition: scanner operation, handheld, backpack, vehicle- and drone-mounted capture, RTK/control-point workflow and field quality checks; and (b) data processing: SLAM processing, georeferencing, point-cloud/mesh/3DGS generation and export using the supplied software bundle
- Minimum 2-year manufacturer's warranty, with local/regional authorized service and calibration support
- Eligibility — authorized vendor: the bidder shall be an authorized vendor/dealer of the manufacturer (OEM) of the offered equipment/software for supply and after-sales support in Pakistan, and shall submit with the Technical Proposal a valid Manufacturer Authorization Form (MAF) / authorization letter issued by the OEM or its authorized regional distributor, specific to this tender and to this Lot, confirming the bidder's authority to supply, install, commission, train and provide warranty support. Bids without a valid authorization shall be treated as non-responsive for this Lot

Description of Item	Unit	Qty	Unit Rate (PKR)	Amount (PKR)	Remarks
Handheld SLAM LiDAR spatial scanner (Lixel L3 or equivalent), complete with standard battery, charger, accessories and case — as per detailed specifications above	Set	1			
Additional batteries for the handheld SLAM scanner, compatible with the offered unit — as per detailed specifications above	No.	3			
SLAM backpack carrying system, vehicle mount and drone mount for the handheld scanner (one of each) — as per detailed specifications above	Set	1			
LixelStudio (or equivalent) point-cloud processing software — perpetual licence, latest version, with one year of updates — as per detailed specifications above	License	1			
Lixel CyberColor LCC Studio Premium (or equivalent) 3DGS processing software — perpetual licence, latest version, with one year of updates — as per detailed specifications above	License	1			
Vendor training of the Procuring Agency's officials on data acquisition and data processing (scanner and software bundle) — as per detailed specifications above	Lot	1			

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3. Special Instructions on Submission of Bid Security

To preserve the confidentiality of the Bid Price until the opening of the Financial Proposal (Envelope-II), in line with the intent of Rule 27(b) of the Public Procurement Rules, 2026, Bid Security shall be submitted as follows:

- A photocopy of the Bid Security instrument (Pay Order / CDR / Bank Guarantee / Cheque) shall be enclosed with the Technical Proposal (Envelope-I), for the sole purpose of demonstrating that Bid Security in the prescribed form has been arranged. The amount/value field on this photocopy shall be concealed/redacted (e.g., blacked out or covered) so that it is not legible.
- The ORIGINAL Bid Security instrument, with the amount/value fully visible, shall be enclosed only with the Financial Proposal (Envelope-II). Where bids are submitted through EPADS, the redacted copy shall be uploaded with the Technical Proposal, and the original instrument shall be delivered and held in the manner prescribed in the Tender Document for Envelope-II.
- A bid in which the ORIGINAL Bid Security instrument is found enclosed with the Technical Proposal (Envelope-I), or in which the amount/value on the photocopy enclosed with the Technical Proposal is visible/legible in any manner, shall stand disqualified and shall be rejected as non-responsive, without further reference to the bidder.
- Bid Security shall be furnished per Lot bid for, in the name of National Engineering Services Pakistan (Pvt.) Limited, at the rate specified in the particulars table above, in accordance with Rule 36 of the Public Procurement Rules, 2026 (not exceeding 5% of the estimated value of procurement up to PKR 250 million, and 2% above PKR 250 million).
- Bid Security of unsuccessful bidders shall be returned promptly after award of the respective Lot(s). Bid Security of the successful/qualified bidder shall be retained until furnishing of the Performance Guarantee under Section 4, upon which it shall be released.

4. Performance Guarantee

In addition to, and separate from, the Bid Security submitted at the time of bidding, the successful/qualified bidder for each awarded Lot shall be required to furnish a Performance Guarantee, as expressly provided in the bidding documents under Rule 51 of the Public Procurement Rules, 2026, as follows:

- The Performance Guarantee shall be equivalent to ten percent (10%) of the Bid/Contract Amount of the respective awarded Lot, in accordance with Rule 51 of the Public Procurement Rules, 2026.
- The Performance Guarantee shall be furnished in the form of a Bank Guarantee or CDR from a scheduled bank in Pakistan, in the name of National Engineering Services Pakistan (Pvt.) Limited, within [03] days of issuance of the Letter of Acceptance / Notification of Award.
- The Performance Guarantee shall be demanded only from the successful/qualified bidder (i.e., after evaluation and prior to or upon contract signing) — not from all bidders at the time of bid submission.
- The Performance Guarantee shall remain valid until the expiry of the Warranty Period applicable to the respective Lot, and shall be retained by the Procuring Agency for that full duration and released only upon satisfactory completion of the Warranty Period. The Warranty Period shall commence from the date of delivery of the respective Lot.
- Failure of the successful/qualified bidder to furnish the Performance Guarantee within the stipulated period shall constitute sufficient grounds for annulment of the award, forfeiture of the Bid Security, and award of the respective Lot to the next most advantageous bidder, in accordance with the terms of the bidding documents and the Public Procurement Rules, 2026.

5. Pre-Bid Meeting

A Pre-Bid Meeting shall be held as per the date, time, and venue specified in the particulars table above. Formal requests for clarification of the bidding documents may also be submitted through EPADS up to three (3) days prior to the bid submission deadline, and shall be answered through EPADS within two (2) days (Rule 38).

- Prospective bidders may attend the Pre-Bid Meeting to seek clarification on the technical specifications, terms, and conditions of the bidding documents. Attendance is optional and shall not affect a bidder's eligibility to submit a bid.
- Any clarification or additional information arising from the Pre-Bid Meeting that becomes necessary for bidding or bid evaluation shall be communicated in writing through EPADS, on an equal-opportunity basis, to all bidders participating in the procurement proceedings, in accordance with Rule 38 of the Public Procurement Rules, 2026.
- Where clarifications issued pursuant to the Pre-Bid Meeting necessitate any change, addition, modification, or deletion to the bidding documents, such changes shall be published through EPADS in a manner similar to the original publication, and, if warranted, the bid submission deadline may be extended, after recording reasons in writing, in accordance with Rule 39 of the Public Procurement Rules, 2026, allowing bidders sufficient time to incorporate such changes.

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- Minutes of the Pre-Bid Meeting shall be recorded and circulated to all prospective bidders who attended, and published through EPADS.

6. Delivery Period and Liquidated Damages (LD)

- The delivery, installation, and commissioning period for each Lot shall be ninety (90) days from the date of issuance of the purchase order / signing of the contract, unless otherwise extended in writing by the Procuring Agency.
- In the event a Supplier fails to deliver, install, and commission any Lot within the stipulated delivery period of 90 days, Liquidated Damages (LD) shall be charged at the rate of 0.5% (zero point five percent) of the bid amount of the respective Lot per day of delay, for each day of delay beyond the expiry of the delivery period, computed separately for each Lot, in accordance with the Liquidated Damages clause of the General Conditions of Contract (GCC) forming part of the bidding documents (Rule 34(4)(l)), read with Rule 51 (Performance Guarantee) of the Public Procurement Rules, 2026.
- LD shall be deducted from the Supplier's pending payments and/or encashed from the Performance Guarantee applicable to the relevant Lot, and shall not relieve the Supplier of its obligation to complete delivery, installation, and commissioning of that Lot.
- The aggregate amount of LD for any Lot shall not exceed 10% of that Lot's total contract value. Where cumulative delay reaches this ceiling, the Procuring Agency reserves the right to terminate the contract in respect of that Lot, forfeit the corresponding Performance Guarantee, and procure the item from an alternate source at the defaulting Supplier's risk and cost, without prejudice to any other remedy available under the Public Procurement Rules, 2026 and the General/Special Conditions of Contract.
- As this Bill of Quantities is structured on a Lot-wise/item-wise basis, LD shall be assessed and applied independently against each Lot; delay in the delivery of one Lot shall not trigger or affect LD assessment against any other Lot delivered within its own stipulated period.

7. General Terms and Conditions

- This BoQ shall be read in conjunction with the Instructions to Bidders, Bid Data Sheet, General/Special Conditions of Contract, and Evaluation Criteria issued as part of the bidding documents, in accordance with Rules 34 and 41 of the Public Procurement Rules, 2026.
- Rates quoted shall remain firm and fixed throughout the bid validity period (minimum six (6) months) and contract duration, unless otherwise specified.
- Conditional bids shall not be entertained. A bid that is conditional or qualified in any manner — including any condition, reservation or deviation relating to the technical specifications, quantities, prices (e.g., price variation, exchange-rate or tax escalation clauses), payment terms, delivery period, warranty, bid validity or any other term of the bidding documents, whether stated in the Technical Proposal, the Financial Proposal or any covering letter — shall be treated as non-responsive and rejected, without further reference to the bidder. Bidders shall quote firm, unconditional rates in Pakistani Rupees against each line item of the Lot(s) bid for, as per the terms of the bidding documents
- Bidders must submit manufacturer's authorization/dealership certificates and technical datasheets/compliance statements against each Lot for which they are bidding.
- Delivery, installation, commissioning, and training (where applicable) shall be the responsibility of the successful bidder for each awarded Lot.
- The Procuring Agency reserves the right to increase/decrease quantities, reject any or all bids (Rule 45), or cancel the procurement proceedings (Rule 46), in accordance with the Public Procurement Rules, 2026.
- As each item constitutes a separate, independently evaluated Lot/BoQ, the Procuring Agency reserves the right to accept or reject any one or more Lot(s) at the evaluation/award stage independently of the outcome of any other Lot, and to award different Lots to different bidders, without assigning any reason and without being bound to award all Lots to a single bidder.
- Warranty, after-sales service, and availability of spare parts/local technical support shall be evaluated as part of the technical evaluation criteria for each Lot, in accordance with the evaluation criteria published in the bidding documents (Rules 41 and 42 of the Public Procurement Rules, 2026). The Warranty Period of each Lot shall commence from the date of delivery.
- The technical evaluation report shall be published on EPADS before the Financial Proposals are opened, and the final evaluation report shall be announced and published on EPADS and the PPRA website prior to award of the procurement contract (Rule 48). The contract shall be awarded only after the grievance periods under Rule 65 have been exhausted (Rule 49).
- Any complaint regarding the eligibility parameters, evaluation criteria, or other terms and conditions prescribed herein may be lodged in writing with the Procuring Agency's Grievance Redressal Committee (GRC) not later than two (2) days prior to the bid submission deadline. After bid submission, complaints may be lodged within seven (7) days of

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announcement of the technical evaluation report and within five (5) days of issuance of the final evaluation report. The GRC shall decide within ten (10) days, and an appeal may be filed before the Appellate Committee of the Authority within ten (10) days of the GRC decision, all in accordance with Rule 65 of the Public Procurement Rules, 2026.

- All disputes shall be subject to the jurisdiction of courts at Lahore, Pakistan.

8. PPRA Rule Cross-Reference Summary

The following table summarizes the principal provisions of the Public Procurement Rules, 2026 (S.R.O. 1658(I)/2026) applied in this Bill of Quantities, for ease of reference.

Rule	Subject	Application in this Tender
Rule 7 & 8	Integrity Pact & e-Procurement	Integrity Pact as per standard bidding documents where value exceeds prescribed limits; procurement carried out through EPADS
Rule 17	Specifications	Generic, non-brand-specific specifications; "or equivalent" used only where a reference brand is essential, with written justification and defined parameters of equivalence
Rule 18 & 19	Publication & Response Time	Publication on EPADS/PPRA website and in two national dailies (English and Urdu); response time not less than 10 days for national competitive bidding
Rule 27(b)	Single Stage – Two Envelope Procedure	Overall bidding procedure for this tender; Financial Proposals opened through EPADS only for technically accepted bids
Rule 34	Bidding Documents	Contents of bidding documents; published on EPADS free of cost immediately after the procurement notice
Rule 36	Bid Security	Not exceeding 5% of estimated procurement value (up to PKR 250 million) per Lot; 3% adopted for this tender
Rule 37	Bid Validity	Minimum six (6) months from bid opening, as specified in particulars table
Rule 38	Clarifications	Requests via EPADS up to 3 days before the deadline; response within 2 days to all participating bidders
Rule 39	Extension of Time for Submission of Bids	Applicable, with written reasons and EPADS publication, if clarifications necessitate additional time
Rule 40	Submission and Opening of Bids	Submission and opening on the same date; opening through EPADS not less than 30 minutes after the deadline
Rule 41 & 42	Evaluation Criteria & Evaluation of Bids	Unambiguous criteria forming part of the bidding documents; evaluation strictly in accordance with those criteria; conditional or qualified bids are not entertained and are rejected as non-responsive (Rules 42(1), 44 and 45(1)(a))
Rule 45 & 46	Rejection of Bids / Cancellation	Procuring Agency's right to reject all bids or cancel the procurement
Rule 48 & 49	Evaluation Reports & Acceptance	Technical evaluation report published before financial opening; final evaluation report published before award; award after grievance periods lapse
Rule 51	Performance Guarantee	Not exceeding 10% of contract amount; 10% adopted; demanded from successful/qualified bidder only; valid and retained through warranty period (commencing from date of delivery)
Rule 65	Redressal of Grievances	GRC (outside members); complaint 2 days before deadline, 7 days after technical report, 5 days after final report; GRC decides in 10 days; appeal in 10 days

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