

CORRIGENDUM

REQUEST FOR PROPOSAL

Installation & Commission of Automated Spectrum Management Software(s) (ASMS) for Technical (Engineering) Analysis on a turnkey basis

Further to "Tender Notice" published on PPRA website No. TS514506E & advertisement in the daily "Business Recorder" and "Roznama 92 News" on 09-07-2023. All concerned are hereby informed that para 3 of published advertisement and its **CORRIGENDUM** has been amended as under: -

Particulars	Previous Date	Revised Date
Bid Submission Closing: Time / Date	1100 hrs/12-09-2023	1100 hrs / 20-10-2023
Bid Opening: Time / Date	1130 hrs / 12-09-2023	1130 hrs / 20-10-2023

2. All other information and Terms & Conditions published vide earlier advertisement remains unchanged.

Project Director (ASMS Procurement) Frequency Allocation Board (FAB)

Plot no. 112, Sector H-10/4, Islamabad
Ph. No. (+92-51) 9257041, Fax (+92-51) 9257058
Email: projectasms@fab.gov.pk , Website: www.fab.gov.pk



Government of Pakistan
Frequency Allocation Board (FAB)

CORRIGENDUM

Reference Tender Notice as per PPRA website No. TS514506E and Advertisement published in the Daily Newspaper **Business Recorder** and **Roznama 92 News Islamabad** on July 9, 2023, No. PID (I) 146/23 to install and commission an **Automated Spectrum Management Software(s) (ASMS) for Technical (Engineering) Analysis on a turnkey basis**. All prospective bidders are hereby informed that the last date of bid submission is extended on the request of prospective bidders as follows:

Particulars	Original Date	Revised Date
Bid Submission Closing: Time / Date	1200 hrs / 16-08-2023	1100 hrs / 12-09-2023
Bid Opening: Time / Date	1230 hrs / 16-08-2023	1130 hrs / 12-09-2023

The above amendment may also revise in the bidding documents. All other terms and conditions will remain the same.

Project Director (ASMS Procurement)
Frequency Allocation Board (FAB)

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REQUEST FOR PROPOSAL/ BIDDING DOCUMENTS

**PROCUREMENT OF AUTOMATED SPECTRUM
MANAGEMENT SOFTWARE(S) FOR TECHNICAL
(ENGINEERING) ANALYSIS**

**Government of Pakistan
FREQUENCY ALLOCATION BOARD
Plot No. 112, H-10/4 Islamabad
Phone No. 051-9257314, Fax No. 051-9258400**

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SECTION-I
INSTRUCTIONS TO BIDDERS

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Instructions to Bidders

A. Introduction

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|---|---|
| 1. Source of Funds | 1.1 Frequency Allocation Board, hereinafter referred to as “the Procuring Agency” will complete the project through FAB Budget funds. |
| 2. Eligible Bidders | <p>2.1 This Invitation of Bids is open to all suppliers from eligible source countries with local representation through a company/ firm with office(s) in Islamabad/ Rawalpindi, duly registered with Security Exchange Commission of Pakistan (SECP) and on FBR Active Tax Payer List for income and sale tax purposes.</p> <p>2.2 Bidders should not be 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.</p> <p>2.3 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Government of Pakistan or any organization / body / entity established or controlled by Federal / Provincial Government.</p> |
| 3. Eligible Software Solution and Services | <p>3.1 All software solutions and related services to be supplied under the contract shall have their origin in eligible source countries for procurement, and all expenditures made under the contract will be limited to such software solutions, services and related hardware.</p> <p>3.2 For purposes of this clause, “origin” means the place where the software solutions are manufactured or produced / developed, or the place from which the related services are supplied to major parts of the world.</p> <p>3.3 The origin of software solutions and services can be distinct from the nationality of the Bidder.</p> |
| 4. Cost of Bidding | 4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Procuring Agency named in the Bid Data Sheet, hereinafter referred to as “the Procuring Agency” will in no case be |

responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. The Bidding Documents

- 5. Content of Bidding Documents**
- 5.1 The software solutions required, bidding procedures, and contract terms are prescribed in the bidding documents. In addition to the Invitation for Bids, the bidding documents include:
- (a) Instructions to Bidders (ITB)
 - (b) Bid Data Sheet (BDS)
 - (c) General Conditions of Contract (GCC)
 - (d) Special Conditions of Contract (SCC)
 - (e) Technical Specifications
 - (f) Bid Form and Price Schedules
 - (g) Form of Contract Agreement
 - (h) Performance Security Form
 - (i) Bank Guarantee for Advance Payment Form; and
 - (j) Developer's / Manufacturer's Authorization Form
- 5.2 The Bidder is expected to examine all instructions, forms terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in the rejection of its bid.
- 6. Clarification of Bidding Documents**
- 6.1 A prospective bidder requiring any clarification of the bidding documents may notify the Procuring Agency in writing or through email at the Procuring Agency's address (projectasms@fab.gov.pk). The Procuring Agency will respond in writing to any request for clarification of the bidding documents, which it receives no later than 15 days prior to the deadline for the submission of bids prescribed in the BDS. Written copies of the Procuring Agency's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective bidders that have received the bidding documents.
- 6.2 The Bidder may visit and examine the site subject to prior clearance / permission from the Procuring Agency, where the solutions are to be installed and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering

into a contract. The costs of visiting the site shall be at the Bidder's own expense.

6.3 The Bidder's designated representative is invited to attend a pre-bid meeting, which will take place at the venue and time stipulated in the **BDS**. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. The Bidder is requested, as far as possible, to submit any question in writing or through email, to reach the Procuring Agency not later than 3 working days before the meeting. It may not be practicable at the meeting to answer questions received late, but questions and responses will be transmitted as indicated hereafter. Minutes of the meeting, including the text of the questions raised and the responses given, together with any responses prepared after the meeting will be transmitted within seven (7) working days to all the bidders. Any modification of the bidding documents listed in ITB Sub-Clause 5.1, which may become necessary as a result of the pre-bid meeting shall be made by the Procuring Agency **exclusively through the issue of an Addendum** pursuant to ITB Clause 7 and not through the minutes of the pre-bid meeting as PPRA Regulations.

7. Amendment of Bidding Documents

7.1 At any time prior to 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, may modify the bidding documents by amendment.

7.2 All prospective bidders that have obtained the bidding documents will be notified of the amendment in writing either in writing or by email, and the same will be binding on them. Bidders are required to immediately acknowledge receipt of any such amendment, and it will be assumed that the information contained therein will have been taken into account by the Bidder in its bid.

- 7.3 In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Procuring Agency, at its discretion, may extend the deadline for the submission of bids in which case, the Procuring Agency will notify all bidders in writing or by email of the extended deadline as per PPRA Rules.

C. Preparation of Bids

- 8. Language of Bid** 8.1 The bid prepared by the Bidder and all correspondence and documents related to the bid exchanged by the Bidder and the Procuring Agency shall be written in English language.
- 9. Documents Comprising the Bid** 9.1 The bid submitted by the Bidder shall comprise the Bid Form duly completed and signed by the Bidder, together with all Attachments identified in ITB Sub-Clause 9.2 below.
- 9.2 Each Bidder shall submit with its bid the following attachments:
- (a) Attachment 1: Bid Security
A bid security furnished in accordance with ITB Clause 13.
- (b) Attachment 2: Power of Attorney
A power of attorney, duly notarized, indicating that the person(s) signing the bid has(ve) the authority to sign the bid and that bid is binding upon the Bidder during the full period of its validity in accordance with ITB Clause 14.
- (c) Attachment 3: Bidder's Eligibility and Qualifications
Documentary evidence established in accordance with ITB Clause 2 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted.

The documentary evidence of the Bidder's eligibility to bid shall establish to the Procuring Agency's satisfaction that the Bidder, at the time of submission of its bid is eligible as defined in ITB Sub-Clause 2.1. The Bidder(s) shall provide an affidavit on stamp paper that the Bidder is eligible as defined in ITB Sub-Clause 2.2 and 2.3.

The documentary evidence of the Bidder's qualifications to perform the contract, if its bid is accepted, shall establish to the Procuring Agency's satisfaction that the Bidder has the financial, technical, development, procurement, shipping, installation and other capabilities necessary to perform the contract, and, in particular, meets the

experience and other criteria outlined in the **BDS**.

Bids submitted by a joint venture of two or more firms as partners shall comply with the following requirements:

- (i) The bid shall include all the information required as described above for each joint venture partner.
- (ii) The bid shall be signed so as to be legally binding on all partners.
- (iii) One of the partners responsible for performing a key component of the contract shall be designated as leader, this authorization shall be evidenced by submitting with the bid a power of attorney signed by legally authorized signatures.
- (iv) The leader shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture, and the entire execution of the contract, including payment, shall be done exclusively with the leader.
- (v) All partners of the joint venture shall be liable jointly and individually for the execution of the contract in accordance with the contract terms.
- (vi) A copy of the agreement entered into by the joint venture partners shall be submitted with the bid.

In the case of a Bidder who offers the software solutions under the contract that the Bidder did not develop/ manufacture or otherwise produce and/or install, the Bidder shall (i) have financial and other capabilities necessary to perform the contract; (ii) have been duly authorized by the manufacturer or producer / developer of related software solutions to supply and/or install that item in the Procuring Agency's country; and (iii) be responsible for ensuring that the manufacturer or producer / developer complies with the requirements of ITB Sub-Clause 2.1 and meets the minimum criteria listed

for an individual Bidder for that item.

(d) Attachment 4: Eligibility and Conformity of the Facilities

Documentary evidence established in accordance with ITB Clause 3 that facilities offered by Bidder in its bid are eligible and conform to the bidding documents.

The documentary evidence of the eligibility of the facilities shall consist of a statement on the country of origin of the software solutions offered, which shall be confirmed by a certificate of origin issued at the time of shipment.

The documentary evidence of the conformity of the facilities to the bidding documents may be in the form of literature, drawings and data, and shall furnish:

- (i) a detailed description of the essential technical and performance characteristics of the solutions;
- (ii) a list giving full particulars, including available sources, of all solutions / data, necessary for the proper and continuing functioning of the facilities for the period named in the **BDS**, following completion of solutions in accordance with provisions of contract; and
- (iii) a commentary on the Procuring Agency's Technical Specifications and adequate evidence demonstrating the substantial responsiveness of the solutions to those specifications. Bidders shall note that standards for the software solutions designated by the Procuring Agency in the bidding documents are intended to be descriptive (establishing standards of quality and performance) only and not restrictive.

10. Bid Form

10.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding

documents, indicating the software solutions to be supplied, a brief description of the software solutions, their country of origin, quantity, and prices.

11. Bid Prices

- 11.1 Unless otherwise specified in the Technical Specifications, bidders shall quote for the entire solution on a “single responsibility” basis such that the total bid price covers all the Contractor’s obligations mentioned in or to be reasonably inferred from the bidding documents in respect of the design, manufacture, including procurement and subcontracting (if any), delivery, installation of the solutions and the related hardware. This includes all requirements under the Contractor’s responsibilities for testing, pre-commissioning and commissioning of the solutions and, where so required by the bidding documents, the acquisition of all permits, approvals and licenses, etc.; the operation, maintenance and training services and such other items and services as may be specified in the bidding documents. Items against which no price is entered by the Bidder will not be paid for by the Procuring Agency when executed and shall be deemed to be covered within the overall quoted prices of other items.
- 11.2 The bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the software solution(s) and the related hardware it proposes to supply under the contract.
- 11.3 Bidders shall give a breakdown of the prices in the manner and detail called for in the Price Schedules, in the following manner:
- Separate numbered Schedules shall be used for each of the following elements. The total amount from each Schedule (1 to 4) shall be summarized in a Grand Summary (Schedule 4) giving the total bid price(s) to be entered in the Bid Form.
- Schedule No. 1 Software solution(s) including all the main systems, subsystems, license(s) and any other accessories.
- Schedule No. 2 Incidental / Installation & integration Services including all the required hardware (computers with requisite operating system supporting the ASMS

solution and the database).

Schedule No. 3 Maintenance Services / contract (for the period specified in BDS)

Schedule No. 4 Grand Summary (Sum of Schedule Nos. 1 to 3)

- 11.4 Prices indicated on the Price Schedule shall be inclusive of all the taxes, duties, freight and transportation charges for the destination.
- 11.5 Bidders are required to quote the price for the commercial, contractual and technical obligations outlined in the bidding documents.
- 11.6 The term DDP (Delivered Duty Paid), shall be governed by the rules prescribed in the current edition of Incoterms published by the International Chamber of Commerce, Paris.
- 11.7 The Bidder's separation of price components in accordance with ITB Clause 11.3 above will be solely for the purpose of facilitating the comparison of bids by the Procuring Agency and will not in any way limit the Procuring Agency's right to contract on any of the terms offered.
- 11.8 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 quotation will be treated as non-responsive and will be rejected.
- 12. Bid Currencies** 12.1 Prices shall be quoted in Pak Rupees.
- 13. Bid Security** 13.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, a bid security in the amount specified in the Bid Data Sheet. Pursuant to ITB Clause 9, Bid Security will be submitted by the Bidders along with Financial Bids in accordance with ITB Clause 16. Furthermore, the Bidder shall provide an affidavit stating that the Bid Security of amount specified in the Bid Data Sheet has been furnished without specifying the amount.
- 13.2 The bid security is required to protect the Procuring

Agency against the risk of Bidder's conduct, which would warrant the security's forfeiture, pursuant to ITB Clause 13.7.

13.3 The bid security shall be in Pak. Rupees and in the form of a Pay Order or Bank / Demand Draft to be submitted in favour of Procuring Agency. Bid Security shall remain valid till validity of the bid.

13.4 Any bid not secured in accordance with ITB Clauses 13.1 and 13.3 will be rejected by the Procuring Agency as non-responsive, pursuant to ITB Clause 22.

13.5 Unsuccessful bidder's bid security will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity prescribed by the Procuring Agency pursuant to ITB Clause 14.

13.6 The successful Bidder's bid security will be discharged upon the Bidder signing the contract, pursuant to ITB Clause 31, and furnishing the performance security, pursuant to ITB Clause 32.

13.7 The bid security may be forfeited:
(a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or

(b) In the case of successful Bidder, if the Bidder fails:

(i) To sign the contract in accordance with ITB Clause 31; or

(ii) To furnish performance security in accordance with ITB Clause 32.

(c) If the successful bidder withdraws its bid, the Procuring Agency will have the right to award the

contract to the next lower bid without retendering, to save time and cost, or if it deems appropriate and/or necessary, the tender may be floated again.

14. Period of Validity of Bids

14.1 Bids shall remain valid for the period specified in the Bid Data Sheet after the date of bid opening prescribed by the

Procuring Agency, pursuant to ITB Clause 17. A bid valid for a period less than six (6) months shall be rejected by the Procuring Agency as non-responsive.

14.2 In exceptional circumstances, the Procuring Agency may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing or email. The bid security provided under ITB Clause 13 shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.

15. Format and Signing of Bid

15.1 The Bidder shall prepare original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID" as appropriate. In the event of any discrepancy between them, the original shall govern.

15.2 The original and the copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.

15.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

15.4 The bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

D. Submission of Bids

16. Sealing and Marking of Bids

16.1 The bids are required to be submitted as per PPRA rules "Single stage, two envelopes procedure". The original and all copies of the Technical Bid shall be placed in a sealed envelope clearly marked "Technical Bid" and the original and all copies of the Financial Bid in a sealed

envelope clearly marked “Financial Bid” and warning: **“DO NOT OPEN WITH THE TECHNICAL BID”**. Both envelopes shall be placed into an outer envelope and sealed.

- 16.2 The inner and outer envelopes shall: -
- (a) be addressed to the Procuring Agency at the address given in the **BDS**, and
 - (b) bear the contract name indicated in the **BDS** and the statement “DO NOT OPEN BEFORE [date],” to be completed with the time and date specified in the **BDS**, pursuant to ITB Sub-Clause 20.1.
- 16.3 The inner and outer envelopes shall also clearly indicate the name and address of the Bidder.
- 16.4 If the outer envelope is not sealed and marked as required by ITB Sub-Clause 16.2 above, the Procuring Agency will assume no responsibility for the bid’s misplacement or premature opening. If the outer envelope discloses the Bidder’s identity, the Procuring Agency will not guarantee the anonymity of the bid submission, but this disclosure will not constitute grounds for bid rejection.

17. Deadline for Submission of Bids

- 17.1 Bids must be received by the Procuring Agency at the address specified under ITB Sub-Clause 16.2, not later than the time and date stated in the **BDS**.
- 17.2 The Procuring Agency may, at its discretion, extend this deadline for submission of bids by amending the bidding documents in accordance with ITB Sub-Clause 7.3, in which case all rights and obligations of Procuring Agency and bidders will thereafter be subject to the deadline as extended.
- 17.3 If the deadline for submission of bids is extended by the Procuring Agency, then the bidder who has already submitted/sent their bids through courier which reach the Procuring Agency by due date, will be allowed to withdraw and resubmit the bid.

18. Late Bids

- 18.1 Any bid received by the Procuring Agency after the bid submission deadline prescribed by the Procuring Agency, pursuant to ITB Clause 17, will be rejected and returned unopened to the Bidder.

19. Modification and Withdrawal of Bids

- 19.1 The Bidder may modify or withdraw its bid after submission, provided that written notice of the modification or withdrawal is received by the Procuring Agency prior to the deadline prescribed for bid submission.
- 19.2 The Bidder's modifications shall be prepared, sealed, marked and dispatched as follows:
- (a) The Bidders shall provide an original and the number of copies specified in the **BDS** of any modifications to its bid, clearly identified as such, in two inner envelopes duly marked "BID MODIFICATIONS—ORIGINAL" and "BID MODIFICATIONS—COPIES." The inner envelopes shall be sealed in an outer envelope, which shall be duly marked "BID MODIFICATIONS."
 - (b) Other provisions concerning the marking and dispatch of bid modifications shall be in accordance with ITB Sub-Clauses 16.2, 16.3 and 16.4.
- 19.3 A Bidder wishing to withdraw its bid shall notify the Procuring Agency in writing prior to the deadline prescribed for bid submission. The notice of withdrawal shall be any letter signed by the bidder or the authorized representative.
- 19.4 Bid withdrawal notices received after the bid submission deadline will be ignored, and the submitted bid will be deemed to be a validly submitted bid. No bid may be modified after the deadline for submission of bids, as specified in BDS.
- 19.5 No bid may be withdrawn in the interval between the bid submission deadline and the expiration of the bid validity period specified in ITB Clause 14. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security, pursuant to ITB Sub-Clause 13.7.

E. Opening and Evaluation of Bids

- 20. Opening of Technical Bids by the** 20.1 The Procuring Agency will open the sealed bids in public, including withdrawals and modifications made pursuant to

Procuring Agency

ITB Clause 19, in the presence of bidders' designated representatives and anyone who choose to attend, at the time, date, and location stipulated in the **BDS**. The bidders' representatives who are present shall sign a register evidencing their attendance.

20.2 Only the Technical bid shall be opened by the Procuring Agency. The Financial Bid shall remain sealed and deposited with the Procuring Agency.

20.3 Envelopes marked "WITHDRAWAL" shall be opened first and the name of the Bidder shall be read out. Bids for which an acceptable notice of withdrawal has been submitted pursuant to ITB Clause 19 shall not be opened.

20.4 The bidders' names, bid modifications and withdrawals, the presence (or absence) of bid security, and any such other details as the Procuring Agency may consider appropriate, will be announced by the Procuring Agency at the opening. Subsequently, all envelopes marked "MODIFICATION" shall be opened and the submissions therein read out in appropriate detail. No bid shall be rejected at bid opening except for late bids pursuant to ITB Clause 18.

20.5 The Procuring Agency shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with ITB Sub-Clause 20.4.

20.6 Bids not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances.

20.7 Evaluators of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded.

21. Clarification of Bids

21.1 During technical bid evaluation, the Procuring Agency may, at its discretion, ask any Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the price or substance of the bid shall be sought, offered or permitted.

22. Preliminary Examination of Bids

22.1 The Procuring Agency will examine the technical bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in

order.

22.2 The Procuring Agency may waive any minor informality, nonconformity or irregularity in a bid that does not constitute a material deviation, and that does not prejudice or affect the relative ranking of any Bidder as a result of the technical and commercial evaluation, pursuant to ITB Clauses 23 and 24.

22.3 Prior to the detailed evaluation, the Procuring Agency will determine whether each bid is of acceptable quality, is complete and is substantially responsive to the bidding documents. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions and specifications of the bidding documents without material deviations, objections, conditionalities or reservations. A material deviation, objection, conditionality or reservation is one (i) that affects in any substantial way the scope, quality or performance of the contract; (ii) that limits in any substantial way, inconsistent with the bidding documents, the Procuring Agency's rights or the successful Bidder's obligations under the contract; or (iii) whose rectification would unfairly affect the competitive position of other bidders who are presenting substantially responsive bids.

22.4 If a bid is not substantially responsive, it will be rejected by the Procuring Agency, and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

23. Technical Evaluation

23.1 The Procuring Agency will carry out a detailed evaluation of the bids determined to be substantially responsive in order to determine whether the technical aspects are in accordance with the requirements set forth in the bidding documents. In order to reach such a determination, the Procuring Agency will examine and compare the technical aspects of the bids on the basis of the information supplied by the bidders, taking into account the following factors:

- (a) Overall completeness and compliance with the Technical Specifications, quality, function, operation of any process control concept and training included in the bid. The bid that does not meet minimum acceptable standards of completeness, consistency and detail will be rejected for non-responsiveness. The bidder must submit a Para wise compliance table to the technical specifications. The compliance must have

only two columns; Compliance and Non-compliance. All non-compliance entries must be supported by suitable remarks. Any ambiguous or blank entry would be considered as non-compliant.

- (b) Achievement of specified performance criteria by the facilities/ solution(s).
- (c) Type, quantity and long-term availability of mandatory and recommended solutions and maintenance services.
- (d) The bidder will have to demonstrate the features/ functions / capabilities of the solutions during the process of technical evaluation, if required.
- (e) Certification for capability of the bidder duly certified by the Original Equipment Manufacturer (OEM) to integrate the offered system with the existing setup (Spectrum Monitoring Hardware and existing data base). The bidder must have to submit the certificate of technical cooperation from the OEM of existing setup (Existing Spectrum Monitoring Hardware) for the integration of offered system with existing setup.
- (f) References of similar systems installed by the bidder for other customers in the field of spectrum management.
- (g) Bidders' capability to provide an end-to-end system and service delivery at all levels.
- (h) The bidder must provide certification that the software solutions provided would be of latest version.
- (i) The Procuring Agency has the right to increase or decrease the number of licenses of software solutions at any stage during the entire bidding process as per requirement.
- (j) The evaluation criteria for evaluation of technical bids as per the bidding document would be as under:

Description	Maximum Marks for Evaluation
Technical evaluation / compliance	45

References of similar systems installed by the Bidder for telecom regulators	10
Demonstration of offered Solution	20
Level 3 after sales support	10
Financial Standing of the Bidder	5
Training	10
<p>Maximum Marks Obtainable = 100 Minimum marks for qualification = 70 <u>Technical criteria evaluation constitutes 65% of the cumulative evaluation. Financial evaluation will constitute the remaining 35%</u></p>	

23.2 After the technical evaluation is completed, the Procuring Agency shall notify those bidders whose proposals did not meet the technical specifications or were considered non responsive to the bidding document, indicating that their Financial Bids will be returned unopened after completing the selection process. The Procuring Agency shall simultaneously notify the bidders whose bids were found responsive as described in clause 23.1, indicating the date and time set for opening the Financial Bids. The opening date shall not be sooner than one week after the notification date. The notification may be sent by registered letter and electronic mail.

**24 Opening of
Financial Bids and
Commercial
Evaluation**

24.1 The Financial Bids shall be opened publicly in the presence of the Bidder's representatives who choose to attend. The name of the bidder, the bid prices including shall be read aloud and recorded when the Financial Bids are opened. The Procuring Agency shall prepare minutes of the public opening.

24.2 The evaluation committee will determine whether the Financial Bids are complete, correct and without any computational errors. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between subtotals and the total price, the unit or subtotal price shall prevail, and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the Bidder does not accept the correction of errors, its bid will be rejected.

24.3 The comparison shall be, on the total price in Price Schedule No.4 Grand Summary (Total of Schedule Nos. 1 to 3), for delivery at final destination to the Procuring Agency and inclusive of all foreign and local taxes, duties, freight and Insurances including but not limited to delivery, installation, testing and training.

24.4 The Procuring Agency's evaluation of a bid will take into account, in addition to the bid prices indicated in Price Schedule Nos. 1 through 4, the following costs and factors that will be added to each Bidder's bid price in the evaluation using pricing information available to the

Procuring Agency, in the manner and to the extent indicated in ITB Sub-Clause 24.5 and in the Technical Specifications:

- (a) the cost of all quantifiable deviations and omissions from the contractual and commercial conditions and the Technical Specifications and other deviations and omissions;
- (b) compliance with the time schedule called for in the Form of Contract Agreement and evidenced as needed in a milestone schedule provided in the bid;
- (c) the projected operating and maintenance costs during the life of the facilities;
- (d) the functional guarantees of the facilities offered;
- (e) the extra cost of work, services, facilities, etc., required to be provided by the Procuring Agency or third parties;

24.5 Pursuant to ITB Sub-Clause 24.4, the following evaluation methods will be followed:

(a) **Contractual and commercial compliance**

The evaluation shall be based on the evaluated cost of fulfilling the contract in compliance with all commercial, contractual and technical obligations under this bidding document.

(b) **Time schedule (program of performance)**

The software solutions covered by this bidding are required to be shipped and installed, and the facilities shall have the pre-commissioning completed within the **time schedule** specified in the **BDS** after the effective date specified in the Form of Contract Agreement. The goods covered under this invitation are required to be delivered (shipped) within the range of weeks, acceptable to the Procuring Agency. Within this acceptable range, an adjustment per week, as specified in the **Bid Data Sheet**, will be added for evaluation to the bid price of bids offering deliveries later than the earliest delivery period specified in the Schedule of Requirements. No credit will be given for earlier

completion.

(c) **Operating and maintenance costs**

(i) Since the operating and maintenance costs of the facilities being procured form a major part of the life cycle cost of the facilities, these costs will be evaluated according to the principles given in the **BDS** the cost of maintenance services for the period of operation stated in the **BDS** and based on prices furnished by each Bidder in Price Schedule No. 3. Such costs shall be added to the bid price for evaluation. However, the maintenance contract will be dealt separately and accepted cost will be paid to the Bidder on yearly basis.

(ii) The Bidder has to provide guaranteed after sales service with replacement / provision of upgraded version / patches of software solutions in Pakistan for a period of at least five (05) years.

(d) **Work, services, facilities, etc., to be provided by the Procuring Agency**

Where bids include the undertaking of work or the provision of services or facilities by the Procuring Agency in excess of the provisions allowed for in the bidding documents, the Procuring Agency shall assess the costs of such additional work, services and/or facilities during the duration of the contract. Such costs shall be added to the bid price for evaluation.

(e) **Deviation in payment schedule**

(i) Bidders shall state their bid price for the payment schedule outlined in the SCC. Bid will be evaluated on the basis of their base price. Bidders are, however, permitted to state an alternative payment schedule and indicate the reduction in bid price they wish to offer for such alternative payment schedule. The Procuring Agency may consider the alternative payment schedule offered by the selected Bidder.

(ii) The SCC stipulates the payment schedule offered by the Procuring Agency. If a bid

deviates from the schedule and if such deviation is considered acceptable to the Procuring Agency, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared with those stipulated in this invitation, at the average rate per annum prevalent in Pakistan.

24.6 Any adjustments in price that result from the above procedures shall be added, for purposes of comparative evaluation only, to arrive at an “Evaluated Bid Price.” Bid prices quoted by bidders shall remain unaltered.

24.7 Formula for financial scoring is that the lowest bidder gets 35 points and the other bidders score 35 x the ratio of the lowest bid divided by the quoted price.

Example:

Value quoted by the lowest bidder =A

Value quoted by the second lowest bidder =B

Value quoted by the third lowest bidder =C

Financial scoring of lowest bidder will be = 35

Financial scoring of second lowest bidder will be =
(A/B) x (35)

Financial scoring of third lowest bidder will be = (A/C)
x (35)

Technical scoring out of 100 =A

Carried forward and prorated technical scoring = A x
0.65

Points obtained in the detailed technical evaluation will be carried forward for further financial evaluation. Tender will be awarded to the responding organization with maximum accumulative points (Technical score + Financial score)

24.8 If two or more bidders have quoted the same financial proposals, then the contract will be awarded to the one who has scored highest in technical evaluation. In the event that there is more than one qualified bidder i.e., they have equal score of qualification in technical evaluation and have quoted equal prices in financial bid, the tied qualified bidders shall be notified by FAB and they will have to submit revised financial proposals in

compliance with the RFP. The revised bid amount must be either equal to the original submitted bid or less than previous bid amount. The revised financial proposal shall be submitted in a sealed envelope that is securely closed and it is not possible to be opened without visual evidence thereof.

25. Contacting the Procuring Agency

- 25.1 No Bidder shall contact the Procuring Agency on any matter relating to its bid, from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Procuring Agency, it should do so in writing.
- 25.2 Any effort by a Bidder to influence the Procuring Agency in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

F. Award of Contract

26. Post Qualification

- 26.1 The Procuring Agency will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated substantially responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB Clause 9.2 (c) and (d).
- 26.2 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, pursuant to ITB Clause 9.2, as well as such other information as the Procuring Agency deems necessary and appropriate.
- 26.3 An affirmative determination will be 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 Procuring Agency will proceed to the next lowest evaluated substantially responsive bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.

- 27. Award Criteria** 27.1 Subject to ITB Clause 29, the Procuring Agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and matches the technical criteria set by the Procuring Agency and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.
- 28. Procuring Agency's Right to Vary Quantities at Time of Award** 28.1 The Procuring Agency reserves the right at the time of contract award to increase or decrease, the quantity of software solution(s), number of licenses, services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.
- 29. Procuring Agency's Right to Accept any Bid and to Reject and or All Bids** 29.1 The Procuring Agency reserves the right to accept or reject any (or all) bid(s), and to annul the bidding process and reject all bids at any time prior to contract award, without incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Procuring Agency's action.
- 30. Notification of Award** 30.1 Prior to the expiration of the period of bid validity, the Procuring Agency will notify the successful Bidder in writing by registered letter or by email or facsimile that its bid has been accepted.
- 30.2 The notification of award will constitute the formation of the Contract.
- 30.3 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 32, the Procuring Agency will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 13.
- 31. Signing of Contract** 31.1 At the same time as the Procuring Agency notifies the successful Bidder that its bid has been accepted, the Procuring Agency will send the Bidder the Contract Form provided in the bidding documents incorporating all agreements between the parties.
- 31.2 Immediately on receipt of the Contract Form, the

successful Bidder shall sign and date the contract and return it to the Procuring Agency.

32. Performance Security

32.1 Within seven (07) days of the receipt of notification of award from the Procuring Agency, the successful Bidder shall furnish the performance security in accordance with the conditions of contract, in the Performance Security Form provided in the bidding documents, or in another form acceptable to the Procuring Agency.

32.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 31.2 or ITB Clause 32.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Procuring Agency may make the award to the next lowest evaluated substantially responsive Bidder or call for new bids.

33. Corrupt or Fraudulent Practices

33.1 The Procuring Agency requires that Bidder/Suppliers/Contractors, observe the highest standard of ethics during the procurement and completion of such contracts, in pursuance of this policy, the Procuring Agency: -

(a) Defines, for the purposes of this provision, the terms set forth below as follows:

“Corrupt and fraudulent practices” in respect of the procurement process, shall be either one or any combination of the practices including,

(i) “coercive practices” which means any impairing or harming or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;

(ii) “collusive practices” which means any arrangement between two or more parties to the procurement process designed to stifle open competition for any wrongful gain, and to establish prices at artificial, non-competitive levels;

(iii) “corrupt practices” which means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the

acts of another party for wrongful gain;

(iv) “fraudulent practices” which means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation; and

(v) “obstructive practices” which means harming or threatening to harm, directly or indirectly, persons to influence their participation in a procurement process, or affect the execution of a contract;

(b) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

(c) Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a government-financed contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government Financed contract.

SECTION-II
BID DATA SHEET

Bid Data Sheet

The following bid-specific data for the software solutions to be procured shall amend and/or supplement the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in the ITB.

INTRODUCTION	
ITB 1.1	<u>Name of the Procuring Agency:</u> Frequency Allocation Board (FAB), Islamabad, Pakistan.
ITB 1.1	<u>Name of Project:</u> Procurement of Automated Spectrum Management Software(s) for Technical (Engineering) Analysis.
ITB 1.1	<u>Name of Contract:</u> Supply, Installation and Commissioning of Automated Spectrum Management Software(s) for Technical (Engineering Analysis).
ITB 6.1	For <u>Clarification of Bid Purposes</u> only, the Procuring Agency's address is: Attention: Project Director (ASMS Procurement) Address: FAB Headquarters, Plot No. 112, Sector H-10/4 Islamabad City: Islamabad ZIP Code: 44000 Country: Pakistan Telephone: 051-9257041/ 03095065676 Electronic mail address: projectasms@fab.gov.pk
ITB 6.3	<u>Venue, Time and Date of Pre-Bid Meeting:</u> A pre bid meeting will take place at the above address at 1100 hours local time on 25 th July, 2023.
ITB 8.1	<u>Language of Bid:</u> "English"
ITB 9.2	<u>Qualification requirements for bidders, including members of joint ventures, Sub contractors or vendors:</u> Technical: The documentary evidence of the Bidder's qualifications to perform the contract, if its bid is accepted, shall establish to the Procuring Agency's satisfaction that the Bidder has at least five (5) years of experience in designing, integrating, supplying, deploying and

	<p>commissioning systems similar in nature and size to that as required by these bidding documents. The documents attached to its bid must also furnish the list of customers and software tools supplied along with evidence of the performance of such systems previously delivered by the Bidder. The bidder has to provide a certificate of compatibility / interface with the existing spectrum monitoring systems installed at FAB (<u>Annex-A</u>).</p> <p>Financial: The bidder shall include, in its bid, financial statements of the last five (5) years demonstrating its financial capacity to carry out its obligations under the contract and the list of customers to whom such software tools have already been supplied.</p>
<p>BID PRICE AND CURRENCY</p>	
ITB 11.3	<p>a. The bidder would be responsible for the Maintenance and Operational services for initial 1 (one) year period under warranty without any cost to the Procuring Agency. The cost of any updates/ patches is covered under the warranty.</p> <p>b. Maintenance cost for five (5) years, subsequent to expiry of initial 1 (one) year warranty period, is required to be submitted separately (as per Schedule No. 3 of ITB Clause 11.3). Such costs shall be added to the bid price for evaluation; however, the maintenance contract would be dealt separately. The acceptance of the maintenance contract is at the discretion of the Procuring Agency and cost would be paid on yearly basis in 5 equal installments. The bidder is required to include the cost of patches/ updates and boarding, lodging and travel expenses of the maintenance staff for the whole period of maintenance contract. Maintenance and Operational services during the whole period of the maintenance contract will be binding on the bidder as a part of contract, if the maintenance contract was acceptable/ required by the Procuring Agency. The Maintenance cost should include, in addition to the periodic updates to the primary software solutions, the periodic updates (no older than a maximum of 6 months) for digital mapping data (Pakistan and AJK & GB). The updates of digital mapping data must include:</p> <ul style="list-style-type: none"> • Digital Terrain Model (DTM) • Digital Elevation Model (DEM) • Building Vectors • Clutter/ Land usage Models

	<ul style="list-style-type: none"> • Satellite Image • Additional Vectors (Roads, Railways, places etc)
ITB 11.4	<p><u>Named Place of Destination:</u> FAB Headquarters Islamabad.</p> <p>The prices quoted shall be including all foreign & local costs, taxes, duties, freight and insurances.</p>
ITB 11.7	The price shall be fixed.
ITB 12.1	<u>Currency:</u> Pak Rupee.
BID PREPARATION AND SUBMISSION	
ITB 13.1	<u>Amount of Bid Security:</u> 5% of total bid value.
ITB 14.1	<u>Bid validity period:</u> 6 Months.
ITB 15.1 & 19.2	Original and 05 number of copies of bids.
ITB 16.2 (a)	Same as in ITB 6.1
ITB 16.2 (b)	Supply, Installation and Commissioning of Automated Spectrum Management Software(s) for Technical (Engineering Analysis).
ITB 17.1	<p><u>The Deadline for the Submission of Bids:</u></p> <p><u>Date:</u> 12th September, 2023 Time: 1100 Hours (local time)</p>
ITB 20.1	<p>Location is same as in ITB 6.1.</p> <p><u>Date:</u> 12th September, 2023 Time: 1130 Hours (local time)</p>
BID EVALUATION	
ITB 24.3	<u>Destination:</u> FAB Headquarters, Plot No. 112, Sector H-10/4 Islamabad.
ITB 24.5 (b)	<p><u>Time schedule:</u></p> <p>Time for completion is 06 (six) months after award of contract (date of signing the contract by the Procuring Agency and the Contractor).</p>
ITB 24.5 (b)	For delays beyond the delivery date, an adjustment of one percent (0.5%) for each week will be added to bid price for evaluation purpose.
ITB 24.5 (c)	Maintenance Services costs, for the following 5 (five) years after completion of warranty period of initial 01 (one) year, including but not limited to repair, replacement, troubleshooting / configuration of software tools, database solution and periodic updates (no older than a maximum of 6 months) for digital mapping data will also be included

	and submitted separately as specified in ITB Clause 11.3. However, to enter into the maintenance contract will be at the discretion of the Procuring Agency.
CONTRACT AWARD	
ITB 32	<u>Amount of performance security:</u> 10% of the contract price to be given in the shape of a Bank Guarantee of a AAA rated scheduled bank located in Pakistan, and valid for 60 days beyond the completion of contract period.

SECTION-III

GENERAL CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

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General Conditions of Contract

1. Definitions

1.1 In this Contract, the following terms shall be interpreted as indicated;

- (a) "The Contract" means the agreement entered into between the Procuring Agency and the Contractor, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- (b) "The Goods" means all of the automated spectrum planning and management software(s), equipment and/or other materials, which the Contractor is required to supply to the Procuring Agency under the Contract.
- (c) "The Services" means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, customization, provision of technical assistance, training, and other such obligations of the Contractor covered under the Contract.
- (d) "GCC" means the General Conditions of Contract contained in this section.
- (e) "SCC" means the Special Conditions of Contract.
- (f) "The Procuring Agency" means the organization purchasing the Goods, as **named in SCC**.
- (g) "The Procuring Agency's country" is the country **named in SCC**.
- (h) "The Contractor" means the individual or firm supplying the Goods and Services under this Contract.
- (i) "The Project Site," where applicable, means the place or places **named in SCC**.
- (j) "Day" means calendar day.

2. Applications

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

- 3. Country of Origin**
- 3.1 All Goods and Services supplied under the Contract shall have their origin in the countries and territories eligible under the rules of the Government of Pakistan, as further elaborated in the SCC.
- 3.2 For purposes of this Clause, "origin" means the place where the Goods were developed / produced, or from which the Services are supplied. Goods are developed / produced when, through manufacturing, processing, or substantial and major assembly /integration of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components
- 3.3 The origin of Goods and Services is distinct from the nationality of the Contractor.
- 4 Standards**
- 4.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin. Such standards shall be the latest issued by the concerned institution.
- 5 Use of Contract Documents and Information; Inspection and Audit by the Bank**
- 5.1 The Contractor shall not, without the Procuring Agency's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Procuring Agency in connection therewith, to any person other than a person employed by the Contractor in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.
- 5.2 The Contractor shall not, without the Procuring Agency's prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.

- 5.3 Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Procuring Agency and shall be returned (all copies) to the Procuring Agency on completion of the Contractor's performance under the Contract if so, required by the Procuring Agency.
- 5.4 The Contractor shall permit the Procuring Agency to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Bank, if so required by the Government.
- 6 Patent Rights**
- 6.1 The Contractor shall indemnify the Procuring Agency against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Procuring Agency's country.
- 7 Performance Security**
- 7.1 Within seven (7) days of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring Agency the performance security in the amount **specified in SCC**.
- 7.2 The proceeds of the performance security shall be payable to the Procuring Agency as compensation for any loss resulting from the Contractor's failure to complete its obligations under the Contract.
- 7.3 The performance security shall be denominated in Pakistani Rupees and shall be in one of the following forms:
- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable AAA rated scheduled Bank located in Pakistan, in the form provided in the bidding documents or another form acceptable to the Procuring Agency; or
 - (b) a cashier's or certified check.

- 7.4 The performance security will be discharged by the Procuring Agency and returned to the Contractor not later than sixty (60) days following the date of completion of the Contractor's performance obligations under the Contract, including any warranty obligations, unless otherwise **specified in SCC**.
- 8. Inspections & Tests**
- 8.1 The Procuring Agency or its representative shall inspect and/or test the Goods to confirm their conformity to the Contract specifications.
- 8.2 The inspections and tests may be conducted indoor or outdoor (if applicable).
- 8.3 Should any inspected or tested Goods fail to conform to the Specifications, the Procuring Agency may reject the Goods, and the Contractor shall either replace the rejected Goods or make modifications / alterations necessary to meet specification requirements free of cost to the Procuring Agency.
- 8.4 The Procuring Agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Procuring Agency's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Procuring Agency or its representative prior to the Goods' shipment from the country of origin.
- 8.5 Nothing in GCC Clause 8 shall in any way release the Contractor from any warranty or other obligations under this Contract.
- 9. Packing**
- 9.1 Should be good enough to avoid any loss or damage to the Goods.
- 10. Delivery and Documents**
- 10.1 Delivery of the Goods and the details of shipping and/or other documents to be furnished by the Contractor in accordance with the terms specified in SCC.
- 11. Insurance**
- 11.1 All insurances up to testing and acceptance of the delivered goods shall be the responsibility of the Contractor.
- 12. Transportation**
- 12.1 The Contractor is required under the Contract to

transport the Goods to the Procuring Agency's destinations where ever the installations are required, including insurance and storage, as shall be specified in the Contract, shall be arranged by Contractor, and related costs shall be included in the Contract Price. All foreign and local transportation costs (if any) shall be included in the Bid and borne by the Bidder.

- 13. Incidental Services** 13.1 The Contractor shall be required to provide the following services, including additional services, if any, specified in SCC:
- (a) performance or supervision of on-site installation / commissioning and/or start-up of the supplied Goods;
 - (b) furnishing of tools required for assembly, installation, customization and/or maintenance of the supplied Goods;
 - (c) furnishing of a detailed operations and maintenance manual for each appropriate unit / module of the supplied Goods;
 - (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Contractor of any warranty obligations under this Contract; and
 - (e) training of the Procuring Agency's personnel on-site, during installation, commissioning, assembly, start-up, operation, maintenance, and / or repair of the supplied Goods.
- 14. Software Patches** 14.1 **As specified in SCC**, the Contractor is required to provide / install patches pertaining to software tools developed from time to time by the Contractor, to cater for any bug or add some feature / improvement to the software tools.
- 15. Warranty** 15.1 The Contractor warrants that the Goods supplied under the Contract are new, unused, of the most

recent or current versions, and that they incorporate all recent improvements in design and operation unless provided otherwise in the Contract. The Contractor further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship or from any act or omission of the Contractor, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination. The Contractor will be responsible for the remedy of any kind of malfunctioning/ crash of the software tools during the entire period of warranty free of cost.

- 15.2 This warranty shall remain valid for twelve (12) months after the Acceptance Certificate from the Procuring Agency.
- 15.3 The Procuring Agency shall promptly notify the Contractor in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the Contractor shall, with all reasonable time, repair or replace the defective Goods or parts thereof, without costs to the Procuring Agency.
- 15.5 If the Contractor, having been notified, fails to remedy the defect(s) within one month, the Procuring Agency may proceed to take such remedial action as may be necessary, at the Contractor's risk and expense and without prejudice to any other rights which the Procuring Agency may have against the Contractor under the Contract.

16. Payment

- 16.1 The method and conditions of payment to be made to the Contractor under this Contract shall be **specified in SCC.**
- 16.2 The Contractor's request(s) for payment shall be made to the Procuring Agency in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and by documents submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the Contract.

- 16.3 Payments shall be made promptly by the Procuring Agency, but in no case later than sixty (60) days after submission of an invoice or claim by the Contractor.
- 16.4 The currency in which payment is made to the Contractor under this Contract shall be **in Pakistan Rupees only.**
- 17. Prices**
- 17.1 Prices charged by the Contractor for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Contractor in its bid.
- 18. Change Orders**
- 18.1 The Procuring Agency may at any time, by a written order given to the Contractor, make changes within the general scope of the Contract in any one or more of the following:
- (a) designs, or specifications, where Goods to be furnished under the Contract are to be specifically developed 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 Contractor.
- 18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Contractor's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Contractor for adjustment under this clause must be asserted within thirty (30) days from the date of the Contractor's receipt of the Procuring Agency's change order.
- 19. Assignment**
- 19.1 The Contractor shall not assign/ sub contract, in whole or in part, its obligations to perform under this Contract.
- 20. Delays in the**
- 20.1 Delivery of the Goods and performance of

- Contractor's Performance**
- Services shall be made by the Contractor in accordance with the time schedule prescribed by the Procuring Agency as specified in SCC.
- 20.2 If at any time during performance of the Contract, the Contractor or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Contractor shall promptly notify the Procuring Agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Contractor's notice, the Procuring Agency shall evaluate the situation and may at its discretion extend the Contractor's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.
- 20.3 Except as provided under GCC Clause 24, a delay by the Contractor in the performance of its delivery obligations shall render the Contractor liable to the imposition of liquidated damages pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 20.2 without the application of liquidated damages.
- 21. Subcontracts**
- 21.1 The Contractor shall notify the Procuring Agency in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Contractor from any liability or obligation under the Contract.
- 21.2 Subcontracts must comply with the provisions of GCC Clause 3.
- 22. Liquidated Damages**
- 22.1 Subject to GCC Clause 24, if the Bidder 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. Once the maximum is reached, the Procuring Agency may consider termination of the Contract pursuant to GCC Clause 23.

23. Termination for Default

23.1 The Procuring Agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Contractor, may terminate this Contract in whole or in part:

(a) If the Contractor fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Agency pursuant to GCC Clause 20; or

(b) If the Contractor fails to perform any other obligation(s) under the Contract.

(c) If the Contractor, in the judgment of the Procuring Agency, has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For The Procuring Agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Bidder, may terminate this Contract in whole or in part:

(a) If the Bidder fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Agency pursuant to GCC Clause 20; or

(b) If the Bidder fails to perform any other obligation(s) under the Contract.

(c) If the Bidder, in the judgment of the Procuring Agency, has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this clause: “corrupt and fraudulent practices” in respect of the procurement process, shall be either one or any combination of the practices including, -

(i) “coercive practices” which means any impairing or harming or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;

(ii) “collusive practices” which means any arrangement between two or more parties to the procurement process designed to stifle open competition for any wrongful gain, and to establish prices at artificial, non-competitive levels;

(iii) “corrupt practices” which means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;

(iv) “fraudulent practices” which means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation; and

(v) “obstructive practices” which means harming or threatening to harm, directly or indirectly, persons to influence their participation in a procurement process, or affect the execution of a contract;

23.2 In the event the Procuring Agency terminates the Contract in whole or in part, pursuant to GCC Clause 23.1, the Procuring Agency may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Contractor shall be liable to the Procuring Agency for any excess costs for such similar Goods or Services. However, the Contractor shall continue performance of the

Contract to the extent not terminated.

- 24. Force Majeure**
- 24.1 Notwithstanding the provisions of GCC Clauses 20, 21, 22 and 23, the Contractor shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 24.2 For purposes of this clause, " For the purposes of this clause, "Force Majeure" means war or hostility, acts of public enemy, civic commotion, sabotage, Act of state or direction from Statutory Authority, pandemic, epidemic, quarantine restriction, strikes and lockouts, fire, floods, natural calamities or any Act of God or any such event which is beyond the reasonable control of parties and makes their obligatory performance impossible or so impractical under the circumstance or any other material event that could reasonably be considered to be a force majeure event by reason that it is beyond the control of the party affected but does not include financial hardship, inability to pay or fluctuation in exchange rates.
- 24.3 If a Force Majeure situation arises, the Contractor shall promptly notify the Procuring Agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring Agency in writing, the Contractor shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 25. Termination for Insolvency**
- 25.1 The Procuring Agency may at any time terminate the Contract by giving written notice to the Contractor if the Contractor becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Contractor, provided that such termination will not prejudice or affect any right of action or remedy which has

accrued or will accrue thereafter to the Procuring Agency.

26. Termination for Convenience

26.1 The Procuring Agency, by written notice sent to the Contractor, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Procuring Agency's convenience, the extent to which performance of the Contractor under the Contract is terminated, and the date upon which such termination becomes effective.

26.2 The Goods those are complete and ready for shipment within seven (07) days after the Contractor's receipt of notice of termination shall be accepted by the Procuring Agency at the Contract terms and prices. For the remaining Goods, the Procuring Agency may elect:

(a) to have any portion completed and delivered at the Contract terms and prices; and/or

(b) to cancel the remainder and pay to the Contractor an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Contractor.

27. Settlement of Disputes

27.1 If any dispute or difference of any kind whatsoever shall arise between the Procuring Agency and the Bidder in connection with or arising out of the Contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation within thirty (30) days. Accordingly, if the parties have failed to resolve their dispute or difference by such mutual consultation, then the matter / dispute shall be referred to the Executive Director FAB who shall finally decide the matter within thirty (30) days.

27.2 If the parties are not satisfied with the decision of the Executive Director FAB, then either the

Procuring Agency or the Bidder may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

27.2.1 Any dispute that has not been resolved by applying the mutual consultation or that is not pending before the Executive Director FAB may become the subject of arbitration or litigation by either party under the applicable laws of the Islamic Republic of Pakistan. The location of arbitration shall be in Islamabad. The courts of competent jurisdiction in Islamabad shall have the exclusive authority to try and adjudicate upon the matters or disputes arising out of or in connection with this Contract. The Parties shall be responsible for their dispute resolution costs unless the competent forum decides otherwise.

27.2.2 Arbitration proceedings shall be conducted as specified in the SCC.

27.3 Notwithstanding any reference to arbitration herein,

(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and

(b) the Procuring Agency shall pay the Contractor any monies due to the Contractor not effected under arbitration.

28. Governing Language	28.1	The Contract, including all the correspondence and other documents pertaining to the Contract shall be written in English language.
29. Applicable Law	29.1	The Contract shall be interpreted in accordance with the laws of Pakistan.
30. Notices	30.1	Any notice given by one party to the other pursuant to this Contract shall be sent to the other

party in writing or through fax or by email, and confirmed in writing to the other party's address **specified in SCC.**

- 30.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
- 31. Taxes and Duties** 31.1 Contractor shall be entirely responsible for all taxes, duties, license fees, and other such levies imposed inside and outside the Procuring Agency's country.
- 32. Secrecy** 32.1 The Contractor shall undertake that any information about the sales /purchase of the software tools under this contract shall not be communicated to any person other than the Contractor, his representatives and developer of the software tools, or to any press or agency not authorized by the Procuring Agency to receive it. Any breach of this undertaking shall be punished under *the Law of Pakistan*.
- 33. After Sales Support** 33.1 The Contractor certifies to provide continue follow on maintenance / patches support for the five (05) years even after expiration of the warranty period.
- 34. Training** 34.1 Local training will be conducted within the premises of HQs FAB as follows:
- a. Four weeks local training will be conducted on the software solution being procured.
 - b. Relevant syllabus for the above-mentioned trainings will be provided by the contractor, four weeks in advance of commencement of the training.
- 34.2 01-week additional training for six officers of the Procuring Agency at bidder's local premises in case of a foreign bidder / software developer
- 35. Financial Position** 35.1 The bidder must demonstrate that it has the liquid assets, unencumbered real assets, lines of credit and other legal financial means to meet the cash flow requirements of the project.
- 35.2 The audited balance sheets of the bidder duly audited by the certified CA firm for the last five years must be submitted with the bid from which the purchaser shall evaluate the soundness of

- bidder's financial position.
- 35.3 The purchaser reserves the right to reject the bids of bidders with an unacceptable financial position.
- 36. Completion of the Facilities**
- 36.1 The bidder must demonstrate that the Spectrum Management solution/ Database/ Digital Maps as requested vide Para-1 of Section-I (Invitation for Bids) have been upgraded/ updated to its latest versions as per the details given in Section-VI (Technical Specifications).
The bidder must demonstrate that the Spectrum Management System has been fully integrated and interfaced with existing monitoring system/ hardware of FAB.
- 36.2
- 36.3 The requisite training as per the requirement specified in GCC Clause 34 has been imparted.
- 37. Operational Acceptance**
- 37.1 The bidder must demonstrate that all the Spectrum Management solution/ Database/ Digital Maps as requested vide Para-1 of Section-I (Invitation for Bids) are fully operational.
- 37.2 The functions/ tasks/ outputs/ results of the upgraded/ updated system are in accordance with the requirements specified for each tool in Clause-2 of Section-VI (Technical Specifications).

SECTION-IV
SPECIAL CONDITIONS OF CONTRACT

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Special Conditions of Contract (SCC)

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 General Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

1. Definitions (GCC Clause 1)

GCC 1.1 (f)—The Procuring Agency is: Frequency Allocation Board (FAB)

GCC 1.1 (g)—The Procuring Agency's country is: Islamic Republic of Pakistan

GCC 1.1 (h)—The Contractor is: The Company supplying the Goods and Services

GCC 1.1 (i)—The Project Site is: FAB Headquarters, Sector H-10/4, Islamabad

2. Country of Origin (GCC Clause 3)

All countries except Israel.

3. Performance Security (GCC Clause 7)

GCC 7.1—The amount of performance security, as a percentage of the Contract Price, shall be: ten percent (10 %).

4. Inspections and Tests (GCC Clause 8)

GCC 8.1— Acceptance Tests will be performed by the Contractor, according to the Acceptance Testing Plan devised by the Procuring Agency, against each essential requirement, indoor and outdoor (if required) at the locations planned by the Procuring Agency. The Contractor shall provide all necessary equipment and other items of any nature required to carry out the Acceptance Tests. At the conclusion of the acceptance tests, the Procuring Agency representatives will issue an acceptance tests report, with remarks. The Contractor shall fix the first ones within one (1) week of the delivery of the report, while he will have three (3) weeks to clear the remarks. Within seven (7) days of the successful completion of the Acceptance Tests, the Procuring Agency shall issue a Provisional Acceptance Certificate, which will state the Acceptance Date.

GCC 8.3- The Procuring Agency shall appoint an Inspecting Committee to inspect and test the Goods to be delivered by the Contractor under the Contract. The inspection shall be carried out at the locations planned by the Procuring Agency, before the Goods are finally accepted. The Inspecting Committee shall have the authority to reject any supplies, which are found to be malfunctioning or otherwise not in conformity with the requirements of this Contract. If any module of the Goods is rejected Contractor shall be liable to the Procuring Agency for any cost of removal, correction or replacement. The Inspecting Committee will issue “Inspection Certificate” to all the Goods after which those will be processed for acceptance.

5. Packing (GCC Clause 9)

Not applicable: no additional requirements.

6. Delivery and Documents (GCC Clause 10)

For Goods supplied from abroad:

The Contractor shall keep the Procuring Agency informed regarding all details and dates related to shipment arrival in Pakistan and delivery dates, ensuring that these matches with the Procuring Agency's desired dates.

The Goods must be delivered at the premises of Frequency Allocation Board, Islamabad.

Documents: The following documents must be delivered at the premises of Frequency Allocation Board Headquarters, Plot No. 112 Sector H-10/4 Islamabad.

- (i) Copies of the Contractor's invoice showing Goods description, quantity, unit price, and total amount.
- (ii) Receipt issued by the Procuring Agency, certifying that the Goods have been received at the delivery point as specified above.
- (iii) Inspection certificate, issued by the nominated inspection agency, and the Contractor's factory inspection report.
- (iv) Certificate of origin.

7. Insurance (GCC Clause 11)

GCC 11.1—The bidder (Contractor) shall be responsible for the insurance of Goods up to the successful acceptance testing of these Goods.

8. Incidental Services (GCC Clause 13)

GCC 13.1— After sales service for all updates / developments, components, etc (complete functioning) for a period of 05 years.

9. Software Patches (GCC Clause 14)

GCC 14.1—Contractor shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods to ensure unhindered operation/ functioning, under the Contractor's liability for the entire duration of the warranty. Any updates and patches shall be supplied as promptly as possible, but in any case, within one (1) month of placing the order and arrangement of payment modalities.

GCC 14.1 — the Contractor is required to provide / install patches and updates pertaining to software solutions developed from time to time, to cater for any bug or add some feature / improvement to the software tools, under the Contractor's liability for the entire duration of the warranty free of cost.

10. Warranty (GCC Clause 15)

GCC 15.2—The warranty period shall be 12 months from date of acceptance of the Goods. The Contractor shall, in addition, comply with the performance and/or consumption guarantees specified under the Contract. If, for reasons attributable to the Contractor, these guarantees are not attained in whole or in part, the Contractor shall, at its discretion, either:

- (a) make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense. The Contractor will be responsible for the boarding, lodging and travel expenses of the maintenance staff during the warranty period.

GCC 15.4 & 15.5—The period for correction of defects in the warranty period is fifteen (15) days from the return date of the defective Goods in the Contractor's premises. Including transport, the repair time duration shall not exceed thirty (30) days.

11. Payment (GCC Clause 16)

GCC 16.1—The method and conditions of payment to be made to the Contractor under this Contract shall be as follows:

- (i) **Advance Payment:** Ten (10) percent at the time of award of contract against bank guarantee.
- (ii) **Payment on Delivery:** Thirty (30) percent of the Contract Price shall be paid within fifteen (15) days of delivery of Goods and submission of delivery documents specified in GCC-10, and upon submission of claim and in the form provided in the bidding documents or any other form acceptable to the Procuring Agency.
- (iii) **On Commissioning:** Forty (40) percent of the Contract Price shall be paid after issuance of Operational Acceptance Certificate by the Procuring Agency, within thirty (30) days of the “Payment Request” received from the contractor, along with signed installation / commissioning report, signed by the Procuring Agency based on installation / commissioning plan prepared by the Procuring Agency.
- (iv) **On Training:** Ten (10) percent of the Contract Price shall be paid within fifteen (15) days of “Payment Request” after completion of training, provision of associated manuals by the Contractor and issuance of satisfactory training report by the Procuring Agency.
- (v) Remaining Ten (10) percent will be paid within 30 days after the “Payment Request” received from the contractor. The requirement for this payment shall be initiated after completion of warranty period.
- (vi) **All Payments shall be made in Pakistan Rupee.**

12. Prices (GCC Clause 17)

Not applicable

13. Delays in the Contractor’s Performance (GCC Clause 20)

GCC 20.1 – The time for the completion of the facilities including delivery of Goods, training and performance of services under the contract shall be 06 (Six) months from the date of award of contract.

14. Liquidated Damages (GCC Clause 22)

GCC 22.1—Applicable rate: 0.5% (one percent) of the Contract Price per week will be deducted for liquidated damages, if the Contractor fails to attain completion of facilities or any part thereof, within the time for completion.

Maximum deduction: Ten percent (10 %) of the Contract Price

15. Settlement of Disputes (GCC Clause 27)

GCC 27.2.2—The rules of procedure for settlement of dispute as per GCC sub-section 27.

16. Applicable Law (GCC Clause 29)

GCC 29.1—The Contract shall be interpreted in accordance with the laws of the Islamic Republic of Pakistan.

17. Notices (GCC Clause 30)

GCC 30.1—Procuring Agency address for notice purposes:

Project Director (ASMS Procurement)
Frequency Allocation Board,
Plot No. 112, Sector H-10/4,
Islamabad - Pakistan.
Phone: 051-9257041
Email: projectasms@fab.gov.pk

Contractor's address for notice purposes:

SECTION-V
TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

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GENERAL REQUIREMENTS AND INFORMATION

1 GENERAL:

1.1 Introduction:

- 1.1.1. Pakistan Telecommunication (Re-Organization) Act - 1996 gives exclusive authority to FAB for allocation of radio frequency spectrum to all public and private operators of radio-based services in Pakistan. FAB acquired an automated spectrum management and monitoring system in the year 2000, which helped in the allocations, assignments and allotment of frequency. To cater for ever increasing demand of spectrum, it is now inevitable to acquire an advance Automated Spectrum Management System (ASMS) to carry out spectrum assignment & management, interference analysis, coordination & notification activities in Pakistan.
- 1.1.2. The Monitoring Stations established in different major cities throughout the country cover the Monitoring domain of FAB whereas the National Control Center (NCC) setup at HQs FAB is primarily configured to take care of frequency management portion besides being the centralized hub of all the monitoring stations for verification of authorized spectrum users. NCC was equipped with above mentioned specialized spectrum management software tools procured for automated spectrum management and frequency planning which require replacement with new and latest state of the art software(s).
- 1.1.3. In recent years the speed of technological advance and the growth in services are getting increasingly reliant upon radio frequency spectrum. This has placed a considerable pressure on the frequency management process thereby making spectrum management more and more important. The past few years have also seen considerable advancements in the radio communications leading to the emergence of many advanced wireless-based technologies such as WiFi 6E, LTE, 5G, IoT, NGSO constellations, SRDs, PPDR etc. These technologies also necessitate the introduction of new services in the frequency bands which were traditionally being used for less spectrum efficient technologies. Therefore, it is a major challenge for FAB to assign, manage and monitor these growing networks and services for which procurement of new automated spectrum management software(s) is required.
- 1.1.4. These Technical Specifications explain the requirements of new required Automated Spectrum Management Software(s) (ASMS) for Technical (Engineering) Analysis.
- 1.1.5. Bidders are required to provide a compliance list clearly responding to each of the required items mentioned under Subsections of Section 2 to 2.8.

1.2 Minimum Basic Requirements

- 1.2.1 The induction of a new and up to date Automated Spectrum Management Software(s) (ASMS) to cater for technical (engineering) analysis of different applications of frequency assignments for the frequency range 9KHz to 300GHz. The detailed requirement will be elaborated in succeeding sections.

- 1.2.2 The new ASMS system can be modular or integrated.
- 1.2.3 The bidder is required to provide guarantee with regards to the integration of all future upgradation / updations of ASMS as and when introduced by itself, for a period of five (05) years after completion of the Warranty Period.
- 1.2.4 Successful Bidder has to guarantee for the compatibility of the offered/ proposed ASMS with the existing monitoring equipment of FAB and other leading OEMs as mentioned at 2.9.
- 1.2.5 The successful bidder will be required to extract data from existing database (MS-SQL) to compatible formats (for e.g., XLXS) with their proposed/ offered ASMS to be used for frequency planning and interference analysis of new requests. A solution will be provided by the bidder to develop a mechanism for periodic extraction of data from the existing database (MS-SQL) to a format compatible for frequency selection and interference analysis on their proposed new ASMS and maintenance of the said database.
- 1.2.6 Evidence for the previous such projects in other countries must be provided by the bidder. Due preference will be given to well established/ reputed systems in use with other regulatory bodies of the world or well-known telecom and broadcasting service providers.
- 1.2.7 The bidders are required to provide the list of their intellectual / business partners, location of their offices / software development facilities in all countries including Pakistan.
- 1.2.8 The bidders are required to ensure the availability of high-quality training and support services for the planning and evaluation tasks of all radio services.
- 1.2.9 The proposed ASMS will be required to operate on a user-friendly latest operating system.
- 1.2.10 The minimum functional requirements of the ITU-R Recommendation SM.1370-2 are required to be fulfilled. In order to best meet spectrum management tasks following functions are mandatory: -
 - a. Frequency selection.
 - b. Technical Engineering Analysis
 - c. Interference analysis based on Electromagnetic Compatibility (EMC), Intermodulation effects and Propagation Models (LF to EHF)
 - d. ITU coordination and notification with access to BRIFIC
 - e. Interface with existing Monitoring Systems of FAB
 - f. Geographic Information System (GIS) with latest advanced maps
 - g. Access to existing database of FAB
 - h. System security

1.2.11 The spectrum management system is required to provide general open interface functions for import/export of application data using a variety of standardized interface.

1.3 Administrative Functions:

Minimum functional requirements are as listed below (non-exhaustive list) and any features over and above the requirement, will be given preference based on their utility to FAB:

1.3.1 **Language ability:** The system should support English language.

1.3.2 **Reporting and printing:** The system should provide report generation of all the technical analysis and printing.

2 Detailed Requirements:

2.1 General Requirements: An integrated or modular solution to provide the following, covering all frequency bands i.e., LF, MF, HF, VHF, UHF, SHF & EHF (described in succeeding sections);

1. Interference free and optimized spectrum usage.
2. The solution must have a comprehensive library of wave propagation models for the entire frequency range (LF to EHF)
3. It must support all relevant tasks for coverage prediction interference assessment, channel assignment to national and international coordination process.
4. It must be fully automated and user friendly. It should be able to assist the user to perform respective engineering or analysis tasks.
5. Details of complex calculations to be pre-defined, the user can simply follow the procedures.
6. Ability to analyze the whole frequency range (inter and intra-service). Process the incoming request accurately and in time.
7. A comprehensive toolbox for analysis by the user. A comprehensive e- Library of Wave propagation models (e.g. ITU-R P.533, P.370, P.1546, P.452, P.530, P.1812, P.618, Free Space, Okumura-Hata, Aeronautical, 3GPP-LTE (Urban/Rural) etc.)
8. Antenna Recommendation Library for;
 - a. Fixed Services (ITU F.699-8, F.1245-3, HCMFX, ESTI PP and PMP)
 - b. Land Mobile (HCM Models)
 - c. ITU-R Rec-533-14, ITU-R P.617-4 and ITU-R P.526-15
 - d. ITU-R P.1336-45
 - e. ITU-M.2101 (5G-Beam forming)
 - f. Option to manually insert antenna parameters and patterns.
 - g. Updated on regular basis (e.g., related to 5G models like ITU P.1411- 11 and ITU P.1238-11) and fully compliant with ITU recommendations.
9. Inter and Intra interference analysis, visualization of all channels and their quality. Graphical display of the interference on the map.
10. Support for ITU coordination and notification
 - a. Access to BRIFIC

- b. Automated generation of notice in appropriate format for terrestrial services.

2.2 Database Requirement

1. A comprehensive solution is required to facilitate the periodic importation of data from the existing database, which should be considered the primary database. The continuous updates of the main database, linked to FAB's online application portal, must be taken into account by any database solution. This entails importing data from the existing/main database at regular intervals to ensure the proposed software solution's database remains up to date. The extracted data should be capable of supporting technical analysis tasks such as frequency selection and interference analysis.
2. Database administration defines the operations (read, write, modify) that each user can perform on each object in the database. If a user performs an operation to which the user is not entitled, the database cancels that operation.
3. The database should allow concurrent access by multiple users, enabling simultaneous retrieval of information.
4. The database will handle and resolve conflicts arising from multiple users attempting to access the same data item.
5. The system should possess a robust and adaptable query engine that enables users to efficiently query the database and perform statistical analyses across numerous fields (queries), regardless of technical or geographical location, without imposing constraints or requiring specific development of the solution.
6. The system shall use client-server architecture with a central spectrum management database with periodic update mechanism as detailed in 2.2 (1) above.
7. The database to provide a variety of relational table structures and database procedures for storage, access and administration of the following different types of data needed for spectrum management:
 - a. Fixed Site Data (Coordinates, height etc.)
 - b. Equipment Data - Characteristics (Manufacturer, Serial Number, etc.)
 - c. Equipment Data - Settings (Power, Elevation, Height, etc.)
 - d. Frequency Assignment / Co-ordination
 - e. In addition to the technical configuration of an individual device (such as a transmitter or a receiver), it is essential to integrate entire networks into a unified application comprising numerous sites equipped with multiple devices deployed across various locations, utilizing a range of frequencies and employing dedicated antenna patterns.
 - f. Links with one-to-one relation between transmitters and receivers must be described, also point-to-multipoint structures.
8. The bidder shall provide following documents:
 - a. Software Architecture.
 - b. Database Design.
 - c. ER Diagram.
 - d. Application Manuals.

- e. Video Tutorials.
9. Backend Administration module:
 - a. Administration access to control the permissions for each use and module.
 - b. User Access Logs Reporting.
 - c. Database auditing ensuring data integrity and security.
 10. Database Encryption Techniques:
Detail information be shared for encryption techniques implemented in the system
 11. Database Backup:
Detail information to be shared for implementation of backup policy for routine backup activity of ASMS database.
 12. The solution should be in compliance with ISO 27001 certification.

2.3 Geographical Information System (GIS):

Digital Mapping data for accurate prediction of coverage and interference. The digital mapping package to include the following elements;

- a. Digital Terrain Model (DTM)
- b. Digital Elevation Model (DEM)
- c. Building Vectors
- d. Clutter/ Land usage Models
- e. Satellite Image
- f. Additional Vectors (Roads, Railways, places etc)
- g. 2D/3D maps of all the area of Pakistan, AJ&K and GB.
- h. Digital terrain model/digital mapping at a resolution of 50m in urban and 100m rural areas of Pakistan, AJK and GB.
- i. GIS must support progressive zoom functions
- j. GIS must be able to provide a detailed view of a terrain profile, taking into account the curvature of the earth and the height parameters for each surface layer (clutter layer).
- k. The following features are also required:
 - Modification/Adjustment of the icons of loaded stations.
 - Show/hide all receivers
 - Show/hide all transmitters
 - Show/hide all links
 - Show/hide a single link/sender/receiver
 - The GIS must show the direction of each antenna directly on the map
 - GIS must include a distance measurement tool
 - GIS must be able to display the active map in both a window showing a general view and a larger detailed view.

2.4 Radio frequency planning, selection and interference analysis of LF/MF and HF broadcast transmitter sites

Radio frequency planning and coordination of LF/MF&HF broadcasting transmitter sites. Following are the main functions / features that are required:

- a. Graphical user interface
- b. Various map projections
- c. Display of stations and calculation results on maps
- d. Enhanced ground wave calculation
- e. Sky wave calculation
- f. Mixed wave / fading zone calculation
- g. Contour and interference calculations
- h. Various multiple interference calculation algorithms
- i. Network analysis
- j. Daytime and seasonal effects
- k. Interface to BR IFIC
- l. DRM calculations

2.5 Radio frequency planning and coordination of analogue and digital FM and TV broadcast transmitter sites (VHF/ UHF):

Minimum requirements are as follows:

- a. Graphical user interface
- b. Planning and analysis of sound and television broadcasting networks AM, FM, DVB-T/T2, T-DAB and DRM.
- c. Raster and vector data handling
- d. Terrain based propagation models including diffraction effects (Epstein-Peterson, Okumura-Hata, Longley-Rice, IRT-Models etc)
- e. Contour and interference calculations
- f. Various multiple interference calculation algorithms, including computation of intermodulation products between newly introduced transmitters and the existing.
- g. Interference calculation between Aeronautical and FM Broadcasting stations
- h. Graphical representation of most suitable frequency spot for assignment
- i. Interface to BR IFIC.

2.6 Planning, selection and interference analysis of land mobile services (VHF/ UHF).

Frequency assignment and interference analysis for all land mobile services.

Minimum requirements are as following: -

- a. In-built features like equipment, antenna data etc. of known vendors.
- b. Conformance to latest ITU/ ETSI regulations and standards.
- c. Conformance to all relevant propagation models.
- d. Display of station, calculation results on integrated maps.
- e. The software should preferably be capable of exporting all the outputs/ results of analysis to Microsoft Excel, Access or other commonly used formats as a built-in feature.

- f. Required to carry out detailed interference analysis against existing assignments.
- g. Incorporates latest ITU-R Recommendations and shall accommodate future enhancements as well.
- h. Operable on a Computer System with latest commercial operating system.
- i. Required to handle Raster and Vector data.

2.7 Additional Requirements for Section 2.4, 2.5 and 2.6 above:

In addition to the requirements outlined in Section 2.4, 2.5 and 2.6 above, the ASMS are required to include all functions and features that are currently available in the latest updated versions. Bidders have to submit a function list within the proposal. Major additional requirements are summarized as following: -

- a. Conformance to latest ITU/ ETSI regulations and standards.
- b. Conformance to all relevant propagation models.
- c. Extensive Transmitter database system.
- d. The software may preferably be capable of exporting results of analysis to Microsoft Excel, Access or other commonly used formats as a built-in feature.
- e. Coordination capability according to international agreements i.e., GE06 etc.
- f. Required to carry out detailed interference analysis.
- g. Incorporates latest ITU-R Recommendations and shall accommodate future enhancements as well.

2.8 Microwave Link Planning and Interference Analysis (SHF/EHF)

Design, optimize and comprehensive network planning tasks of Point-to-Point (PTP) and Point-to-Multipoint (PMP) microwave links with interference analysis of new/ proposed microwave links against existing links. Major requirements are summarized as follows: -

- a. Powerful database containing sites, links, receivers, transmitters, antennas, devices, ITU/ETSI frequency plans.
- b. Advanced map handling / network viewing.
- c. Interactive link engineering environment.
- d. Advanced planning window
 - i. Enhanced handling
 - ii. Clearance of Fresnel zone
 - iii. Reflection points determination
- e. Advanced profile handling
 - i. Change / save / import / export profile
- f. Link analysis
 - i. Free space, atmospheric absorption, clear air fading, obstruction loss
 - ii. Rain attenuation calculation according to ITU-R Recommendations
- g. Dispersive fade margin, outage due to dispersive fade margin.
- h. Area-wide field strength coverage prediction.
- i. Availability calculations considering rain fading and multipath propagation based on worst month and annual statistics.

- j. Interference analysis calculation for both Point-to-Point and Point-to-Multipoint links.
- k. Microwave link reports creation.
- l. Latest propagation analysis, rain attenuation and interference analysis models based on latest ITU-R Recommendations and can accommodate future enhancements as well.
- l. Raster and Vector data handling.
- m. In-built features like equipment, antenna data etc. of known vendors.
- n. To plan links for frequency range of minimum 100 GHz and above.
- o. The software tool is required to operable on a PC with latest commercial operating system.
- p. In addition to its current operational capabilities, the following functions are desirable: -
 - i. Passive /reflector back-to-back link profile
 - ii. Input threshold degradation value
 - iii. High Low Clash detection
 - iv. Use of ATPC & XPIC
 - v. Use of the parameters VSWR, F/B Ratio, MTBF, Modulation etc in calculations of planning and analysis
 - vi. User facilitation functions like link duplication
 - vii. Independent calculations of Carrier to Interference Ratios, based on co- and adjacent- channel protection ratios
 - viii. Optimization of Microwave network planning. This should include automatic channel assignment as well as other optimization tips/suggestions.
- 9. Design, optimization and comprehensive network planning tasks of Point- to-Multi-Point (PtMP) microwave links including the following functions: -
 - i. Line-of-Sight Check
 - ii. Sites, frequencies and sectors optimization
 - iii. Capacity forecast and analysis
 - iv. Availability studies and link budget calculation
 - v. Network design
 - vi. C/I prediction and interference calculation
 - vii. Equivalent PFD calculation
 - viii. Propagation prediction models conforming to ITU-R recommendations
 - ix. Integrated point-to-point design and analysis
 - x. Flexible report generation
- q. Coordination and interference analysis of Terrestrial Fixed Links and Satellite Earth Stations including all essential and applicable calculations.

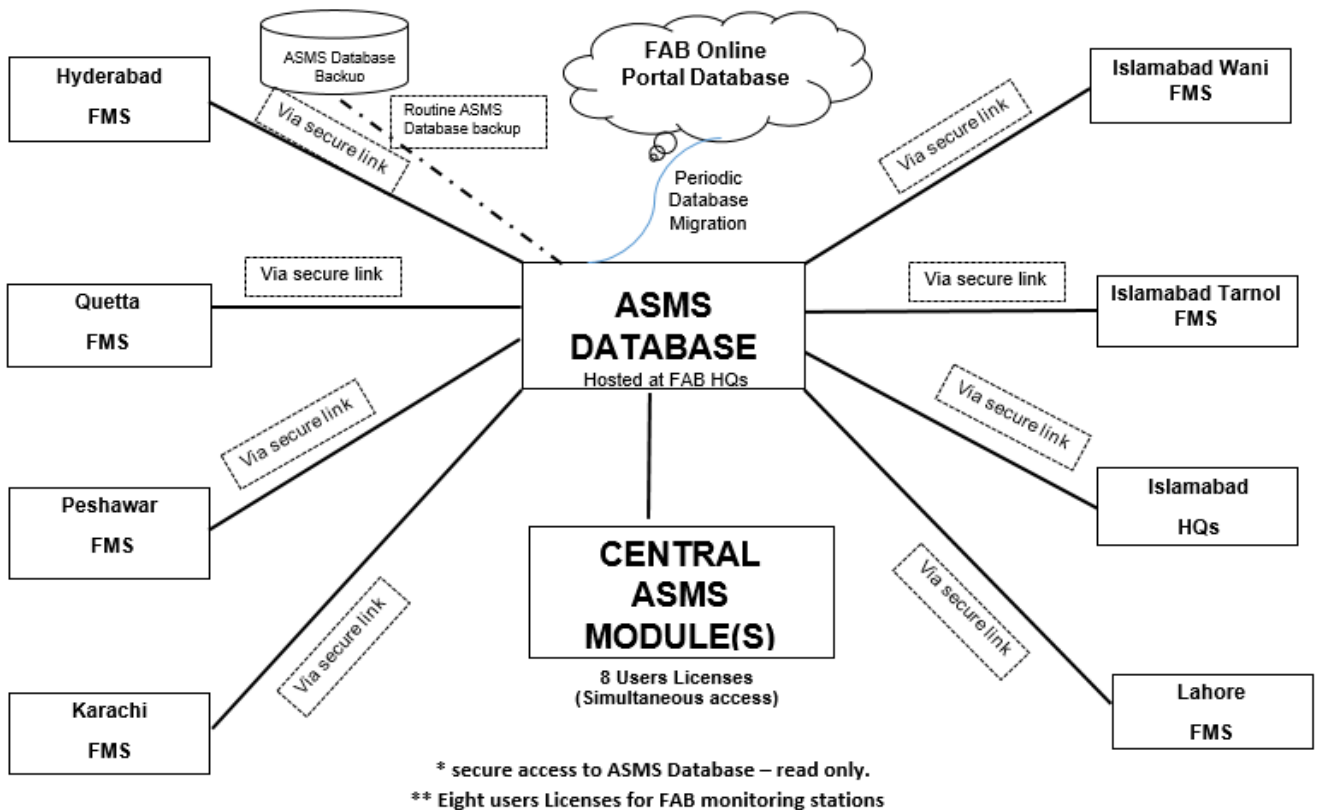
2.9 Interface to Radio Monitoring System

- i. An interface module is required to connect existing 8 x FAB radio monitoring stations/ systems to the central database. This module must determine legal/illegal status of a station. It should also be able to correlate spectrum monitoring occupancy data with the

recorded licensee information in the database for identification of any violations in assigned parameters of a station.

ii. The system should be able to connect and not limited to the following OEMs monitoring equipment: Rhodes and Schwarz, Keysight, LS Telcom, TCI, Narda, Keysight

iii. The bidder has to ensure connectivity of ASMS central software hosted at FAB HQs with FAB country-wide Frequency Monitoring Stations (FMS) via secure link as depicted below:



2.10 Number of users/ licenses

The bidder must provide simultaneous access to 08 x users for utilizing the software solution(s) and access from 08 x monitoring stations to the proposed Database solution. i.e. total 16 licenses.

2.11 Reporting

ASMS must be able to produce a number of standard documents (notices, invoices, letters, reports in text and graphic format), which will be made available through the report processing function. In addition, the system must be equipped with all the necessary tools for the production of customized reports using simple commands given by the operator.

2.12 System and Audit

The system shall include sophisticated security features to define user roles and access rights and ensure only controlled access to the central database. Access rights are configurable by the system administrator. Besides, each confirmed action of a user is logged in the database. Before deployment of the final & tested version of the application, the bidder shall hire

services of third party through NTISB to carry out the penetration testing, source code review and security audit of the developed application to identify the vulnerabilities. The third party shall certify that there are no known vulnerabilities and issues in the application, all security preventive measures are ensured against any un-authorized access / hacking.

3. Software Acceptance Test (SAT)

The supplier shall conduct a comprehensive Software Acceptance Test (SAT) to demonstrate that the software meets the specified requirements and functions as intended. The FAT shall be conducted at the supplier's facility before the delivery or deployment of the software.

4. Installation and Training Services

The bidder shall guarantee the following tasks for a successful installation of the ASMS at FAB HQs:

- 4.1 Successful bidder has to install the ASMS at HQ FAB in Islamabad and the interface module as described in Section 2.9 at the mentioned monitoring stations across Pakistan.
- 4.2 The bidder has to quote for the installation services that will be carried out within HQs FAB premises in Pakistan.
- 4.3 The bidder is required to offer a comprehensive 04 weeks training program at Procuring Agency's office in Islamabad with complete training facility with real time analysis and planning for relevant service applications in the premises of FAB. One-week additional on-site training to be arranged for six officers of the Procuring Agency in case the bidder is a foreign company.
- 4.4 Training/ testing of the ASMS at HQs FAB prior final handing over of system.
- 4.5 Bidder has to provide a reference list for similar training programs and also provide details of the experience and recourses available in that respect.

5. Warranty and Maintenance Services

The bidder will provide one year warranty and free of cost service, maintenance support for the ASMS. However, a separate bid is required to be provided with the same bids for five (05) years subsequent services / maintenance contract which will be dealt independently as per the discretion of FAB. The travel, boarding and lodging costs of the maintenance staff during the whole period of maintenance are required to be included in the maintenance cost. The maintenance services shall include at least the following:

- 5.1 Regular updates/ patches for the ASMS.
- 5.2 Regular update of calculation parameters, propagation models and enhancements in the Graphical user interfaces as and when improved internationally.
- 5.3 Support and emergency hotline for fault rectification.
- 5.4 Regular updates of the integrated GIS (maps) for Pakistan and AJ&K and GB.
- 5.5 To ensure efficient and smooth connectivity with country-wide Monitoring stations.
- 5.6 Support for periodic database migration from (Online Portal) to ASMS database.

SECTION-VI
SAMPLE FORMS AND PROCEDURES

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1. Bid Forms and Price Schedules

1.1 Bid Form—Single Stage Bidding

Date: _____
IFB No: _____

Procurement of ASMS for Technical (Engineering) Analysis

To: xxxxxxxxxxxx
Frequency Allocation Board

Headquarters, H-10/4
Islamabad

Dear Sir,

Having examined the bidding documents, the receipt of which is hereby acknowledged, we, the undersigned, offer to design/ develop or offer existing software, test, deliver, install, pre-commissioning and commission the Facilities under the above-named Contract in full conformity with the said bidding documents for the sum of *[amount of local currency in words]*, *[amount in figures]* or such other sums as may be determined in accordance with the terms and conditions of the Contract. The above amounts are in accordance with the Price Schedules attached herewith and are made part of this bid.

We undertake, if our bid is accepted, to commence the Facilities and to achieve Completion within the respective times stated in the bidding documents.

If our bid is accepted, we undertake to provide an advance payment security and a performance security in the form, in the amounts, and within the times specified in the bidding documents.

We agree to abide by this bid, which consists of this letter and Attachments 1 through *[number]* hereto, for a period of *[number]* days from the date fixed for submission of bids as stipulated in the bidding documents, and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

Until a formal contract is prepared and executed between us, this bid, together with your written acceptance thereof and your notification of award, shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this _____ day of _____, 2023_____

[signature]

In the capacity of _____
[position]

Duly authorized to sign this bid for and on behalf of _____
[name of Bidder]

Copy No -----

[Address, Telephone, Fax, Email]

Schedules of Rates and Prices**Schedule No. 1. Software Solutions/ Tools**

S.No		Unit Price	Total Price
1.	Radio frequency planning, selection and interference analysis of LF/MF and HF broadcast transmitter sites.		
2.	Radio frequency planning and coordination of analogue and digital FM and TV broadcast transmitter sites (VHF/ UHF).		
3.	Radio frequency planning, selection and interference analysis of land mobile services (VHF/ UHF).		
4.	Design, optimize and comprehensive network planning tasks of Point-to-Point (PTP) and Point-to-Multipoint (PMP) microwave links with interference analysis of new/ proposed microwave links against existing links.		
5.	Support for ITU coordination and notification with access to BRIFIC and automated generation of notices in appropriate format for terrestrial services.		
6.	Digital mapping data for accurate prediction of coverage and interference with up-to-date Digital Terrain Model, Digital Elevation Model, Building Vectors, Satellite image etc.		
7.	Hierarchical data management with task-oriented information access. Extraction of data from existing database (MySQL) to compatible formats (for e.g., XLXS) to be used for frequency planning and interference analysis of new requests.		
8.	Interface to 8 x monitoring stations/ existing monitoring equipment for accessing the proposed Database Solution		
Total (to Schedule No. 4 Grand Summary)			

Name of Bidder

Signature of Bidder

Schedule No. 2. Installation and Integration Services

Item	Description	Qty.	Unit Price	Total Price
				Local
TOTAL (to Schedule No. 4. Grand Summary)				

Name of Bidder _____

Signature of Bidder _____

Schedule No. 3. Maintenance Services

Item	Description	Price Per Year	Total Price

Name of Bidder _____

Signature of Bidder _____

Schedule No. 4. Grand Summary

Item	Description	Total Price	
		Foreign	Local
	Total Schedule No. 1. Software Tools		
	Total Schedule No. 2. Installation & Integration Services		
	Total Schedule No. 3. Maintenance Services		
TOTAL (to Bid Form)			
		Name of Bidder _____ Signature of Bidder _____	

2. Bank Guarantee for Advance Payment

To: Frequency Allocation Board (FAB), Islamabad.

Purchase of Goods/Services

Gentlemen:

In accordance with the payment provision included in the Special Conditions of Contract, which amends clause 16 of the General Conditions of Contract to provide for advance payment, (name and address of supplier) (hereinafter called "the Supplier") shall deposit with the Procuring Agency a bank guarantee to guarantee its proper and faithful performance under the said Clause of the Contract in an amount of (amount of guarantee in figures and words).

We, the (bank or financial institution), as instructed by the Bidder, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to the Procuring Agency on its first demand without whatsoever right of object on our part and without its first claim to the Bidder, in the amount not exceeding (*amount of guarantee in figures and words*).

We further agree that no change or addition to or other modification of the terms of the Contract to be performed there under or of any of the Contract documents which may be made between the Procuring Agency and the Bidder, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition, or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment received by the Bidder under the Contract until (*date*).

The courts of competent jurisdiction in Islamabad shall have the exclusive authority to try and adjudicate upon the matter or disputes arising out of or in connection with this contract.

Yours truly,

Signature and seal of the Guarantors

(Name of bank or financial institution)

(address)

(date)

3. Developer's / Manufacturer's Authorization Form

(see Clause 5.1 (l) of the Instructions to Bidders)

To: Project Officer, Frequency Allocation Board (FAB), Islamabad

WHEREAS (*name of the Developer / Manufacturer*) Who are established and reputable developers/manufacturers of (*name and/or description of the Goods*) having factories at (*address of factory*)

Do hereby authorize (name and address of Agent) to submit a bid, and subsequently negotiate and sign the contract with you against ITB No. (reference of the Invitation to Bid) for the above Goods/ Services developed/manufactured by us.

We hereby extend our full guarantee and warranty as per clause 15 of the General Conditions of Contract for the Goods offered for supply by the above firm against this invitation for Bids.

(Signature for and on behalf of the Manufacturer)

Note: This letter of authority should be on the letterhead of the Developer / Manufacturer and should be signed by an authorised signatory of the Developer / Manufacturer. It should be included by the Bidder in its bid.

4. Performance Security Form

To: Frequency Allocation Board (FAB), Islamabad.

WHEREAS (name of Bidder) (hereinafter called “the Bidder”) has undertaken, in pursuance of Contract No. (reference number of the contract) dated _____2023 to supply (description of Goods/Services) (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 Bidder a guarantee:

THEREFORE, WE hereby affirm that we, the (Bank or Financial Institution), on behalf of the supplier, agree unconditionally and irrevocably a Guarantee, equivalent to (*amount of the guarantee in words and figures*) and undertake to pay you, upon your first written demand declaring the Bidder to in default under the Contract and without civil 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.

The courts of competent jurisdiction in Islamabad shall have the exclusive authority to try and adjudicate upon the matter or disputes arising out of or in connection with this contract.

This guarantee is valid until the _____ day of _____ 2023.

Signature and seal of the Guarantee

(Name of bank or financial institution)

(address)

(date)

5. Contract Form

THIS AGREEMENT made the _____ day of _____ 2023 between (name of Procuring Agency) of (country of Procuring Agency) (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 certain Goods, viz., (*brief description of Goods/Services*) and has accepted a bid by the Bidder for the supply of those Goods/services in the sum of (contract price in words and figures) (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSED AS FOLLOWS:

1. In this Agreement 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 constructed as part of this Agreement, viz:

- (a) The Bid Form and the Price Schedule submitted by the Bidder;
- (b) The Schedule of Requirement;
- (c) The Technical Specifications;
- (d) The General Conditions of Contract;
- (e) The Special Conditions of Contract; and
- (f) The Purchaser’s Notification of Award

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/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 the Goods/Services 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 Agreement 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 01 _____

Signed, sealed, delivered by _____ the _____ (for the Bidder)

Witness 02 _____

6. Form of Completion Certificate

Date: _____
IFB No: _____

[Name of Contract]

To: *[Name and address of Contractor]*

Dear Ladies and/or Gentlemen,

Pursuant to GCC Clause 36 (Completion of the Facilities) and GCC Clause 8 (Inspections & Tests) of the General Conditions of the Contract entered into between yourselves and the Procuring Agency dated *[date]*, relating to the *[brief description of the Facilities]*, we hereby notify you that the following part(s) of the Facilities was (were) complete on the date specified below, and that, in accordance with the terms of the Contract, the Procuring Agency hereby takes over the said part(s) of the Facilities, together with the responsibility for care and custody and the risk of loss thereof on the date mentioned below.

1. Description of the Facilities or part thereof: *[description]*
2. Date of Completion: *[date]*

However, you are required to complete the outstanding items listed in the attachment hereto as soon as practicable.

This letter does not relieve you of your obligation to complete the execution of the Facilities in accordance with the Contract nor of your obligations during the Defect Liability Period.

Very truly yours,

Title
(Project Officer)

7. Form of Operational Acceptance Certificate

Date: _____
IFB No: _____

[Name of Contract]

To: *[Name and address of Contractor]*

Dear Ladies and/or Gentlemen,

Pursuant to GCC Clause 37 (Operational Acceptance) and GCC Clause 8 (Inspections & Tests) of the General Conditions of the Contract entered into between yourselves and the Employer dated *[date]*, relating to the *[brief description of the Facilities]*, we hereby notify you that the Functional Guarantees of the following part(s) of the Facilities were satisfactorily attained on the date specified below.

1. Description of the Facilities or part thereof: *[description]*
2. Date of Operational Acceptance: *[date]*

This letter does not relieve you of your obligation to complete the execution of the Facilities in accordance with the Contract nor of your obligations during the Defect Liability Period.

Very truly yours,

Title
(Project Officer)

EXISTING FAB MONITORING SYSTEMS

Sr	Monitoring Facilities	Monitoring Equipment	Software package	Manufacture
1	Fixed Satellite Monitoring System	Signal analyzer FSIQ26	ARGUS Software package Version 4.0	R&S
2	Fixed MF/HF Monitoring System	EK895 Receiver EBD 060 Digital Processing Unit & EH 010 HF DF Convertor Direction Finding	ARGUS Software package Version 4.3	R&S
3	Fixed V/UHF Monitoring System	ESMC & ESMC-FE Receivers EBD 190 Direction Finding	ARGUS Software package Version 4.3	R&S
4	Mobile Monitoring System (MMS)	ESMC Receivers EBD Direction Finding	ARGUS Software package Version 4.3	R&S
		ESMD Receiver Broadband Direction Finder (DDF255)	ARGUS Software package Version 5.4.1	R&S
5	Mobile Microwave Monitoring System (MMMS)	Signal analyzer FSIQ 26	ARGUS Software package Version 4.0	R&S
		ESMD Receiver	ARGUS Software package Version 5.4.1	R&S
6	Handheld Monitoring System	PR-100	PR View Version 4.2.0	R&S
		DDF 007	RAMON Version 5.16.1.36954	R&S
		Realtime Spectrum Analyzer (Model N9963B)	Keysight	Keysight
7	Specialized Network Scanner	TSMQ	ROMES Version 18.1	R&S
		TSMW	ROMES Version 18.1 QualiPoc 18.1.0.47 Network Problem Analyzer Version 18.1	R&S
		TSME6	Smart Analytics Version 22.3 Smartone Expert Version 22.3 QualiPoc 22.3	R&S